LISBON
AESOP ANNUAL CONGRESS '17

SPACES OF DIALOG
FOR PLACES OF DIGNITY:
Fostering the European
Dimension of Planning
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AESOP

BOOK OF PROCEEDINGS

TÉCNICO LISBOA

IGOT Instituto de Geografia e Ordenamento do Território
UNIVERSIDADE DE LISBOA

FACULDADE DE ARQUITETURA
UNIVERSIDADE DE LISBOA

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In an uncertain world that is rapidly changing economically, socially and culturally, cities and territories have become the common ground for resilient breakthroughs in the policies and practices of planning and design.

These extreme times urge us to shift towards renewed actions in urban and less urbanised territories. Societal changes, disparities in population growth and incomes and consequential impacts on the sustainability of social services and labour markets, climate change and extreme natural events, complex social-economics trends, challenge us to debate and seek paths that lead to a progressive common future.

The planning and urban minded communities are invited to join efforts under the flag of the next congress topic – SPACES OF DIALOG FOR PLACES OF DIGNITY: Fostering the European Dimension of Planning.

A few of the ideas we may want to provide a platform for discussion include developing people's wellbeing, promoting integrated and flexible planning approaches, encouraging collective engagement in urban and environmental management, inclusiveness and multiculturalism.

From one of the most western cities in Europe we believe that we may address potential European urban futures and the need for opening effective dialogue and cooperation with other corners of the globe.

We look forward to welcoming you in Lisbon and engaging with you in discussing these challenges.

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José Manuel Simões **|** IGOT-ULisboa
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LISBON AESOP ANNUAL CONGRESS 2017

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TRACKS

T01 | PLANNING THEORY: CONCEPTUAL CHALLENGES AND PLANNING EVALUATION

CO-CHAIRS: TORE SAGER; ALESSANDRO BALDUCCI; JOÃO CABRAL

When the goal is to create and design places of dignity, this should be reflected both in planning processes and in the substantive content of plans. Is there a process-product gap in planning that makes comprehensive evaluation difficult? Or do planners have instruments to align physical changes with the values strived for in the participative and dialogical planning process? Planning theorists need to analyse whether it is possible to design processes with space for dialogue as well as agonism. Can a European dimension of planning be carved out from the borderland of the two concepts?

Neoliberalism shifts the border between public and private space. In doing so, it tends to expand consumer space and narrow citizen space. However, dignity is not found in consumerism, but in a society whose institutions do not humiliate or repress people. How can planning theory contribute? The austerity policies and the increased inequalities associated with neoliberalism also shift the border between spaces of dialogue and agonism. How does this affect the creation of places of dignity? Can planning theory help to counteract the idea of second-class citizens in the political turmoil of Europe of today?

Several central concepts in the planning disciplines are notoriously hard to define (such as the public interest). The notion of a particular European dimension of planning is likely to pose new conceptual challenges. Is there a planning theory of the Global South? If yes, how does it contrast with ideas of what is typically European? It is an aim to get the masses out of poverty. Is it also everywhere an aim to let the masses live in democracy? Is there a trade-off to be made between the two ends? Does neoliberalism make things worse on both accounts? Nearly everything written on neoliberalism in planning theory is on the negative side, even if neoliberal ideas have been embraced by social-democratic governments as well as right-wing regimes. Does this mean that planning theorists are producing ideology? Should they?

The challenges for planning theory are also associated with the competence for integrating alternative and activist planning approaches. How can the concepts of common good and spatial justice be applied for understanding geographical variations and the role of space and place in planning processes? How can comparative planning theory contribute for an understanding of the role of a state increasingly engaged with the extended reproduction of capital through ‘productive’ consumption?

ID 117 | FROM DIVERSITY AND HYBRIDITY TO EQUALITY AND UNIFORMITY IN IMPLEMENTATION OF REGIONAL PLANNING STRATEGIES, RPS, IN NORWAY

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ABSTRACT: This paper is built on institutional theory and strategic planning theory, in order to grasp the two main questions: (1) How is the Regional Planning Strategy (RPS) as a new tool in the Planning and Building Act (PBA) understood and implemented in practice, and consequently how is this implementation to be understood as an institutional change of the regional planning system? (2) How is the strategic orientation understood and implemented? Strategic regional planning is institutionalized into the Norwegian planning system in a new two-step model: (a) regional planning strategy (RPS) and (b) various types of regional (strategic) planning tailored to each individual regional challenge. The basis for our analysis is a study of the implementation of the RPS in all Norwegian counties. We find that the translation, contextualization and re-contextualization of the PBA regarding how to implement the RPS is clearly diverse in 2011/12, the first time they make such documents. Even a hierarchical mode of implementation of a new element in the PBA seems to enjoy great freedom in terms of translation and re-contextualization between tiers. The implementation praxis of both central and regional government level contributes to the hybridity of the planning system by (a) the already established side-by side logics of negotiated policy development in a networked governance system and a planning authority and government logic of decision-making, and (b) by the main re-contextualization of the RPS from a planning strategy to a plan. However, the second time, in the beginning of the next election period, the variation has disappeared. The professional and political ambition or competence to oppose, to choose their own way to make RPS, seems to have disappeared.

1 INTRODUCTION

The main goals for, and the intentions behind, inserting a new tool, the Regional Planning Strategies (RPS) into the regional planning system was to make the political priorities for regional planning more targeted, and increase regional planning's efficiency and flexibility (Miljøverndepartementet, 2007–2008). These were heavily debated issues within the former PBA and its practices (cf. Falleth and Johnsen, 1996; Higdem, 2001; Asmervik and Hagen, 2001; Vike, 1995; Røsnes, 2001). Additionally it was important to establish the principle that regional elected bodies must have responsibility for the development of the region. In short, ""the planning strategy shall give an account of important regional development trends and challenges, assess long-term development potentials and determine which issues are to be addressed through further regional planning"" (PBA 2008). Finally, the RPSs were understood as a better instrument for implementing the central state's policies and a tool for coordination between the major planning actors of the region (Miljøverndepartementet, 2004). The inspiration for the RPS came from Denmark, Norway's neighbor country – ref Ot prop nr. 32 2007–2008. However, the Norwegian system departs from the Danish by introducing planning strategy also on the regional level, and in a somewhat different manner than the municipal planning strategies in both countries. We have not been able to find literature that provides evidence that a similar tool at the regional level is provided for in a planning-law. Therefore, we may regard the Norwegian Regional Planning Strategy and the consequences for regional planning, as unique in an international context.

Figure 1 describes the new regional planning system from 2008. The RPS is a tool defined as a strategy of the planning activities, not a plan, and now the only mandatory element in the regional planning-system. The adoption box in the top right corner is now removed; the county council now finally adopts the RPS. The mandatory comprehensive county plan has been removed and replaced by deliberate regional planning related to vital challenges defined in the RPS. The idea is to give priority to planning by necessity rather than planning by duty. The RPS shall also contain an overview of how the prioritized planning challenges will be followed up. The RPS is to be prepared in close cooperation with the municipalities, the county governor, regional state and other state bodies. The county council may also invite other

organizations and institutions to participate in the preparations of the RPS. The King's approval implies a commitment from the central government to regional planning, which influences the aim of increased efficiency of regional planning. When the approval is given, the Ministry of Local Government and Modernization (MLGM), in cooperation with the other ministries, has assessed that the RPS does not counteract the central Government's goals. Moreover, equally as important, the approval commits the central and the regional state bodies to the coming planning activities. This approval was removed before the second round, but all state bodies still have to participate in and be obliged to the RPS.

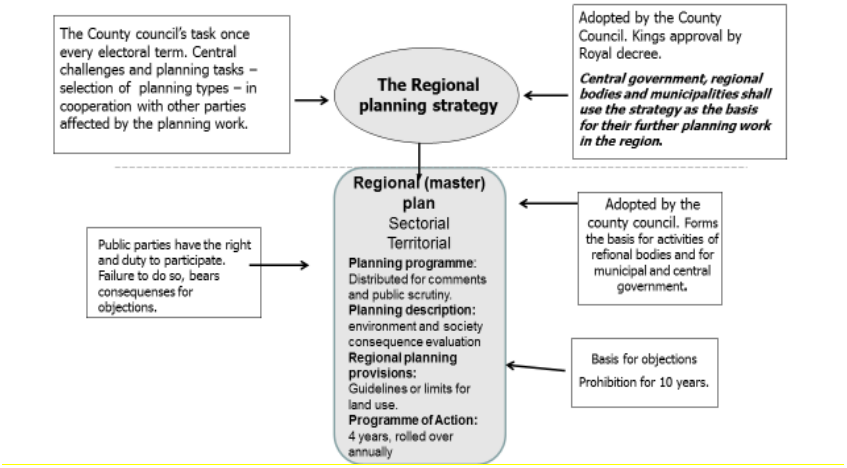

Figure 1: The Regional Planning System of Norway (Higdem, 2012).

The data is based on the study of these documents: (1) the PBA of 2008 with changes, preparatory work to the act and the guidance material to the RPS; (2) the all RPSs developed in 2011/12 and 2015/16, and the case papers following the discussion and the adoption of the RPS; (3) the "National Expectations of Local and Regional Planning" and the central state's letters of final approval to each RPS. We have also done some interviews with planners. In order to classify the RPSs, we have developed a criteria-list. A completed list for the RPSs in all counties are enclosed.

2 IMPLEMENTATION BY CONTEXTUALIZATION AND TRANSLATION

Our analyze is built on institutional theory and strategic planning theory, in order to grasp the two main questions: (1) how is the RPS as a new tool understood and implemented in practice, and (2) how is the strategic orientation understood and implemented? As a point of departure, we use the concept of regional planning doctrine (Friedman & Weaver, 1979), where planning systems are composed of a certain type of procedural praxis as well as a certain type of substantial orientation. The PBA is overall attributed to sustainable development as a main ideological or value assumption – as to the regional substantial orientation of planning. The result of planning is consequently supposed to make societal development more sustainable. Secondly, the procedural orientation in the PBA is (a) oriented towards the regional (and local) elected councils as the planning authority and actors; and (b) the RPS is institutionalized in the PBA as a new procedural praxis where the focus is on the strategic perspective, in order to develop a more flexible and political focused regional planning. Since the RPS is to be co-developed between public actors at different tiers and levels, there clearly are situations of multi-level governance and networks in the RPS. It is also possible to include civil actors and interests in the development of the RPS, as a networked multi-actor system, addressed by both planning and institutional scholars (cf. Healey, 1998; Sagalyn, 2007; Bevir et al., 2003; Rhodes, 1991; Sørensen and Torfing, 2007). As such, we initially argue that the planning-system is a hybrid system comprising different, but side-by-side logics of steering and directing (Mahony and Thelen, 2010).

Institutionalizing a new regional planning model in the PBA as a new praxis of the regional and local planning authorities, is clearly a top-down hierarchical process. In Norway, the first interpretation stage is derived from the Danish model of municipal planning strategies by reforming it to the concept of RPS, as a "master version" (Røvik, 1998). In this top-down chain of translation within a hierarchical structure, there is

presumably limited freedom of translation. There will be room for local adjustments, according to Røvik, but the central government (in this case) may develop mechanisms to control the implementation. The chain of interpretation will develop sequentially as a stimulus-response situation, where the contextualization of a model will proceed in steps from one hierarchical level to another. The possible translators are multiple even in a hierarchical public order (Røvik, 1998; Hardy et al., 1998). Hence, ideas and discourses about how this new element of RPS is to be understood and handled in praxis will presumably take many forms, will be contextualized, and even re-contextualized (Røvik, 1998) into a new framework at several stages. The room for regional contextualization and interpretation will not least depend on the central government's management and control mechanisms, as the "National Expectations of Local and Regional Planning", and the final approval. In addition, the RPS does influence how the regional planning system is perceived and how it works in practice as a further regional institutionalization of a certain regional planning practice. This implies that we may find diverse forms of RPSs and hence forms that may add to the hybridity of the regional planning system of Norway.

3 STRETIC PLANNING (STP) – RETURNED IN A NEW VERSION, OR ALWAYS BEEN THERE?

The RPS itself is not a strategic plan, but we would argue that it is expedient to regard RPS as a partial strategic plan, STP. There is an increasing European interest in strategic spatial planning (cf. Faludi, 2000; Albrechts, 2004, 2012; Friedmann, 2004; Healey, 2007, 2009; Balducci et al.2011; Gallent and Morphet, 2010; Albrechts and Balducci, 2013; Gunn and Hillier, 2013; Mäntysalo et al., 2015; Schmidt and Well [eds.], 2016);Van den Broeck, 2013). The STP has to some extent had a subordinate and fuzzy position, both as practice and in relation to other planning theories. A typical presentation of the praxis situation of STP in the EU countries is:

> *"Revival of Strategic Planning – In a number of western European countries strategic spatial planning evolved in the 1960s and 1970s towards a system of comprehensive planning—the integration of nearly everything—at different administrative levels. In the eighties when the neo-liberal paradigm replaced the Keynesian-Fordist one, and when public intervention retrenched in all domains (Martinelli, 2005), Europe witnessed a retreat from strategic spatial planning fueled not only by the neo-conservative disdain for planning, but also by postmodern skepticism, both of which tend to view progress as something which, if it happens, cannot be planned (Healey, 1997). Instead, the focus of urban and regional planning practices shifted to projects (Secchi, 1986; Motte, 1994; Rodriguez & Martinez, 2003), especially for the revival of rundown parts of cities and regions, and on land use regulations. (Albrechts, 2009)."*

The same picture is confirmed when we turn to planning theory. Most of the classical books and journal articles, from the '70s up to the 2000s deal with strategic planning to a rather small extent (Hudson, 1979; Allmendinger, 2009). One striking example is that the planning theory "Bible" from 1996, Explorations in Planning Theory (Mandelbaum [ed.], 1996), consisting of over 500 pages with 25 different contributions of planning theory, has hardly given strategic planning any attention at all. Another example is that STP is not mentioned at all in the frequently used SITAR-model (Hudson, 1979). By the turn of the '90s, STP got a renaissance in practical planning. The EU launched many STP processes, such as the ESDP – European Spatial Development Perspective – document in 1999, a legally non-binding document forming a policy framework for all tiers of public administration with a planning responsibility. Now in the 2000s, the EU has developed, adopted and implemented a number of other strategic documents. There seems to be a general perception in planning research that we are about to see a new style of strategic planning; i.e. a combination of traditional and new approaches to planning of sustainable development, regional development and "new" regional politics based on the contemporary development of critical thinking and practical experiences in Europe (cf. Newmann, 2008; Albrechts, 2006a, 2006b; Healey, 2006a, 2006b, 2007; Albrechts and Mandelbaum, 2001; Tewdwr-Jones, 2012; Xu & Yeh, 2011).

In Norway, however, the STP has been present without any interruption, both in the field of practice (Kommunal- og regionaldepartementet, 2001; Kommunal- og arbeidsdepartementet, 1997) and in the theory debates (Amdam and Veggeland, 1998, 2011). By 2015, the central government defined the counties' paramount task as the strategic and direction-setting function related to regional planning (Kommunal- og moderniseringsdepartementet, 2015). STP has since the '70s increasingly been used

synonymously with long term societal planning locally and regionally. In this sense, the Norwegian STP situation seems to be more similar to that of the United States, cf. Kaufman and Jacob's classic journal article from 1987 (Kaufman & Jacobs, 1987)where they claim that STP had been a part of planning education for decades, and that most practitioners trained as planners view the approach as "old wine in new bottles".

Even though strategic planning has not been given that much attention in the mainstream practice and theory debate, it is a concept that over the years has attracted many different definitions and interpretations. Strategic planning has, to a varying degree, been widely used in the business sector, and therefore continuously influenced the public sector (cf. Albrechts, 2001; Dimitrou and Thompson [eds.], 2007; Vasilevska and Vasic, 2009; Bryson, 1988). Luigi Mazza has therefore concluded, with the following sigh of the heart ""If strategic planning is everything, maybe it is nothing"" (Mazza, 2013). In our opinion, Patsy Healey's definition from 1997 assimilates in a good manner many of the definitions that abound in planning theory (Healey, 1997:): ""A social process through which a range of people in diverse institutional relations and positions come together to design plan-making processes and develop contents and strategies for the management of spatial change."" An opportunity for ""… building new ideas … and about building processes that can carry them forward."" Vasilevska and Vasic (2009) underlines that a new strategic planning will not represent a return to comprehensive planning, since the STP must contain priorities and strategic choices. This understanding of STP coincides with the Norwegian RPS concept. It expresses an ambition to renew the well-meaning comprehensive planning model to models more characterized by flexibility and ability to think and act politically and strategically in collaboration with others.

4 THREE ANALYTICAL ELEMENTS FOR ASSESSING RPS – FRAMING, STORYTELLING AND CO-PRODUCTION

When we in this paper use strategic planning theories in our RPS analysis, we do this by picking out two main elements of STP, namely framing and storytelling. These two elements contribute to different STP focuses, but also overlap; storytelling is not least an effective framing activity. The RPS is a tool of political direction setting within a networked governance perspective. It is therefore appropriate to link the concept of meta-governance (Sørensen and Torfing, 2005, 2007) to the understanding. The RPS and concept of strategic planning may add to the understanding of storytelling. Framing is also linked to the degree of the central government's ability or wish to direct the counties' limits of translation in the implementation process of the RPS, as described by Røvik (1998). When a problem is framed in such a way that a particular planning activity becomes the logical solution, this framing is a strategic activity. It draws up the mental map for planning, and enables particular policy issues to be managed (Dewulf et al., 2009).

We are facing many different framing processes within RPS. One main framing process is PBA, both the relevant sections and the guidance booklet on the RPS (Miljøverndepartementet, 2012). Another is the "National Expectations to Local and Regional Planning" (Miljøverndepartementet, 2011). The regional planning authorities also conduct their own framing processes by adding their own professional and political assessments and priorities into the RPS about what should be considered as the main regional development trends and vital challenges, long-term development potentials and goals, which issues are to be addressed through further regional planning and implementation. Thus, both national and regional planning authorities have explicit framing ambitions (Rein and Schön, 1993). This fact that planning practice reflects the context of power relations, as well as carrying power itself, is termed by Healey "embedded framing" (Healey, 1997). RPS, like strategy planning in general, revolves around inviting stakeholders to rewarding and stimulating dialogues about the present and the future of the region. Framing performs a narrative function, which is crucial for planning and policy (Jensen et al., 2013; Laws and Rein, 2003; Healey, 1997; Mäntysalo et al., 2015). All participants in the RPS-processes participate actively, though not always intentionally, in construction of specific frames. It is a goal for regional planning authorities through sense making, to draw up mental maps for planning, and enable particular policy issues to be managed (Dewulf et al., 2009). In this sense, framing can also have a mediating role, as it can build bridges between the numerous regional planning actors and their preferred actions (Laws and Rein, 2003). However, framing may also trigger conflicts; both RPS and STP are fundamentally political processes.

Throgmorton (1992:17) emphasizes that good planning is “”… persuasive storytelling about the future, and that planners are future-oriented storytellers who write persuasive texts that other people read (construct and interpret) in diverse and often conflicting ways.”” Storytelling is both a model of the way planning is done, and a model for the way planning could or should be done. Storytelling is an important aspect of everyday planning practice (Van Hulst 2012), whether intentional or not (Asmervik and Hagen, 2001). We choose to understand and analyze RPSs as storytelling – about the past, the present and the future, about vital challenges, who should participate in the planning process, and in what manner. Storytelling is a planning method that needs to be developed in praxis, through praxis (cf. Flyvbjerg, 1991; Hillier, 2002; Healey, 2009; Throgmorton 1992). Planning fundamentally revolves around the successful use of language – the oral, the written, the maps and images (Hellspong, 1992, 1995; Ramirez, 1995a, 1995b; Asmervik and Hagen, 2001).

Storytelling is closely linked to key planning concepts like dialogical planning, collaborative planning, and communicative planning (Healey, 1997; Forester, 1999; Sager, 2013; Harper and Stein, 2012). These concepts and related theories are obviously also relevant in the analysis of RPS. Patsy Healey (2006b:542) has introduced the concept relational complexity to focus on how complex and demanding dialogue and cooperation in strategic planning can be: “” ‘Relational complexity’ is therefore decidedly not ‘comprehensive’ in its approach. It needs to be highly selective, focusing on the distinctive histories and geographies of the relational dynamics of a particular place. It may recognize borders and cohesions, but also the tensions, exclusions and conflicts which these generate.”” As long as RPS is a new procedural praxis characterized by multi-level governance and networked multi-actor system (Bevir et al., 2003; Veggeland, 2003; Higdem, 2015; Higdem and Sandkjær Hanssen, 2014), relational complexity appears to be a useful analytical concept, both for the storytelling, and hence also for RPS.

Another appropriate concept introduced into the strategic planning by (Albrechts, 2012) is coproduction. The term has been used for many years in different contexts and in different intellectual traditions, from coproduction in the delivery of services to coproduction as a political strategy (Mitlin, 2008). It underlines the importance of inviting citizens and grassroots organizations for a more substantive engagement (Le Galés, 2002; Higdem, 2014). It goes right to the core of both RPS that all public bodies and all community organizations both should and must participate and contribute to more innovative and transformative practices (Albrechts, 2006a).

5 RPS DOCUMENTS FIRST AND SECOND ROUND

The two main dimensions of how the counties have implemented the RPSs are (1) whether, or to what degree, the counties have complied with the PBA’s provisions of the RPS, and (2) whether, or to what degree, the counties have addressed, answered and complied with the National Expectations of the RPS. Table 1 shows the implementation status for the first round with RPS. The two dimensions (axes) constitute (1) the “master model” of how a RPS is to be understood and implemented – the procedural and model side, and (2) the substantial side, meaning the central governments expectations’ of what policy themes the RPS shall encompass and assess. In the scheme below, the two dimensions are the two axes that form the four-field table below (Table 1). Accordingly, the two axes make four possible adaptations when implementing the RPS. Complying with the law’s provisions are the law-abiding counties, whereas the disobedient deviate, or have vital shortcomings, from these. On the “National Expectation” axis, the loyal are counties that address, answer to, comply with national policy, and are loyal to it. The independent are those that contextualize the national policy expectations within their own regional context and frame of interpretation and translation. Consequently, four different types of adaptations occur. We have denoted the four types as follows: the challengers, the loyal, the heretical and the translators. There are different degrees and sorts of adaptations within each main type, since there is a continuum along both axes. Consequently, the four types are ideal types. There are RPSs in each group, which illustrate the vast diversity of implementation practices in this first round in 2011/12. The combination loyal/disobedient we have denoted as the challengers; they challenge what the RPS is meant to be according to the PBA and the guidance booklet, even though they are loyal to the national framing when it comes to the National Expectations. In this category, we find four counties. The loyal are the counties that comply both with the law and with the National Expectations. We have classified six counties as loyal. These RPSs are executed “straightforwardly” without, for different reasons, challenging national state policy or national framing. However, we find that there are many forms of loyalty. For instance, a county may be loyal to the

National Expectations but simultaneously raise critical questions to these and demand a closer dialogue with the central government.

Planning and building act (PBA) / National expectations	The disobedient	The law-abiding
The loyal	**The challengers: 4 counties**	**The Loyal: 6 counties**
The independent	**The heretical: 2 counties**	**The translators: 6 counties**

Table 1: RPS first round 2011/2012. The counties four types of adaptations to implementation

The translators are the independent/law-abiding ones, meaning that the execution of the RPS is according to the PBA-framing, but they are independent from the National Expectations. Their picture of the actual challenges for the county are more influenced by their own analyses and understandings, by their own framing, rather than the National Expectations. An example from two counties in the middle of Norway may illustrates that translation is the dominant view regarding the National Expectations. By way of introduction to this view in the RPSs, they refer to the Government Cabinet's own directive stating: The Government Cabinet has in earlier directives on regional planning, stated that the goals and directions the central state points at will not be equally important in all counties and municipalities. Therefore, the main issues for the county and municipal planning are the counties and the municipalities own policy. Thereafter the counties interpret the power of direction of the National Expectations, and the counties' own legitimate execution of discretion as follows: The Government Cabinet therefore expects that those who participate in the planning processes develop good comprehensive solutions in a regional and local perspective. Consequently, the Cabinet paves the way for local and regional competence represented by the local and regional political bodies and the elected representatives to practice the necessary discretion, and provide for local and regional added value.

The independent also tend to offer the central government policy advice or demands based on their assessment of the regional development challenges ahead. The policy recommendations come on issues where the central state holds the authority, such as policy means and measure for agriculture, fishery or employment.

The heretical, which comprise only two counties, comply neither with the PBA's provisions of a regional planning strategy nor with the National Expectations. They define their own political and planning methodological reality. The challengers and the heretical share a characteristic, which is to develop a strategic plan (STP), rather than a strategy of the regional planning to come (RPS). Six of 18 counties continue a planning praxis where the county council develops a regional policy for central areas (or themes). We also experience examples where central actors such as the county politicians, the county as an organization, the municipalities and the regional partnerships utilize the goals and strategies of the RPS as a planning document in their own planning (Bråtå et al., 2014; Higdem and Hagen, 2015). The two types separate on a central provision of the PBA; the challengers have also worked out an overview of which plans are to be made during the four-year period to come, which is a planning strategy.

Our research gives us a completely different implementation picture for the second RPS round, four years later. It seems that all counties choose to be loyal to both the law and the national expectations. Most of the counties have made well written and well-designed documents which do not oppose to anything at all; not when it comes to political content, not when it comes to planning and governance processes. The most eye casting is a professional and political cleverness, a sort of streamlining. There is no visible resistance in the RPS-documents against laws and national expectations. There are few examples of bold and surprising analyzes and political goals. At the same time, both legislative texts and National expectations are basic vague; it is not difficult to write texts that not are provocative. The counties seem to choose an adaptive non-confronting strategy where they use those parts of the national texts that politically suit them best? One exception is Oppland County that use one RPS page to formulate counter-exceptions to the government.

6 THE RPS PROCESSES FIRST AND SECOND ROUND

We find, both in the first RPS round and the second, that all counties overall comply with the PBA regarding how the RPSs are worked out, meaning the processes of developing the RPS. However, our data show that the counties strive to meet the expectations of parallelism, as the guidance booklet recommends. Parallelism implies that the county and the municipalities develop their planning strategies simultaneously in an open and reciprocal cooperation. Our findings, in short, indicate that there is a reasonably good level of communication and interaction between the county, the regional state bodies and the local municipalities regarding the development of the RPS. As we have pointed out earlier, the central government frames the RPS in terms of the PBA and the National Expectations. From then on, the national state bodies take no part in the RPS development. As Langset and Nilsen (2013) have also found, developing the RPS simultaneously and interacting with the municipal planning strategies is a task that few, if any of the counties are able to execute. In this matter, the coherence between county and municipal levels is weak.

When analyzing the letters of final approval from the first RPS round, we find that the dialogue between county and the central level is missing in the process, even in cases where the county's RPS either challenges national policy or criticizes lack of national coherence between goals. In addition, our data suggest that dialogue is missing between the different ministries in the process. At the central government's level, the letter of final approval seems to be constructed as a relay without inter-ministry coordination, which could have made the approval more coherent. As a by-product, the ministries might achieve coordination on some issues. It is too early to catch up in our research the consequences of replacing final approval with mandatory dialogue.

The RPSs are storytelling documents that essentially are political texts and to a limited extent juridical texts. The legal aspect was severely weakened in the first round in that the central government approved all RPSs, also the RPSs from the heretical counties. When the Central Government chooses not to use the policy instrument to invalidate a RPS, their remaining possibility is to convince all RPS participants through different storytelling methods that they should obey the national government signals? Our research question is, have the PBA, the guidance material to the RPS and the National Expectations functioned as persuasive storytelling (Throgmorton, 1992)? The loyal and the translators might probably answer yes, the challengers and the heretical no. This indicates that if the central government wants greater impact, it must improve its storytelling skills, its rhetorical competence (Hellspong, 1992, 1995; Ramirez, 1995a and 1995b; Pålshaugen, 1995). Therefore, it seems unwise for the national state to reject dialogue in the RPS process? However, it might be wise to replace final governmental approval with mandatory dialogue for the regional state agencies.

The storytelling recognition is equally important for regional planning authorities and all those who participate in the RPS work in each county. It is all about convincing through dialogue about what the key trends and challenges are, what the long-term development potentials are, how these should be addressed through further regional planning, and finally the choice of planning process. Obviously, the PBA, the National Expectations and the dominant planning theories and models are concerned with dialogue, co-development, co-production, et cetera. We have so far not studied this closely. However, we notice that many counties have had broad, inclusive RPS-processes, characterized by an aim to take collaborative responsibility for their own regional development. At the same time, the regional planning authorities and the regional societies challenge the national state authorities to participate with more commitment. We have discovered many good attempts to independent storytelling in many RPSs in the first RPS round. Not at least among the translators, the challengers and the heretical. The second round RPSs are characterized, as mentioned earlier, with pedagogical documents and broad dialogical processes. The ambitions is clearly that many ought to read, understand, be convinced and join the follow-up processes.

7 THE MODEL OF STP – THE MODEL OF RPS

When comparing the RPS and the STP, we rely on the following 7-stage model (Sorkin, Ferris, and Hudak; 1984): 1. Scan the environment. 2. Select key issues. 3. Set mission statements or broad goals. 4. Undertake external and internal analyses. 5. Develop goals, objectives, and strategies with respect. 6. Develop and implement plan to carry out strategies. 7. Monitor, update, and scan. The RPS has a 3-stage

model, cf. PBA § 7-1: (1) Give an account of important regional development trends and challenges. (2) Assess long-term development potentials and goals and determine which issues are to be addressed through further regional planning. (3) Construct an overview of how the prioritised planning functions shall be followed up and the arrangements for public participation in planning work. Figure 2 shows the similarities and differences between a STP-process and a RPS-process. Stages 1 and 2 are identical for the RPS- and STP-model, and then they separate. Where the STP- process continues through setting goals – undertaking analysis – developing strategies – implementation, the RPS adds a stage Plan for Planning.

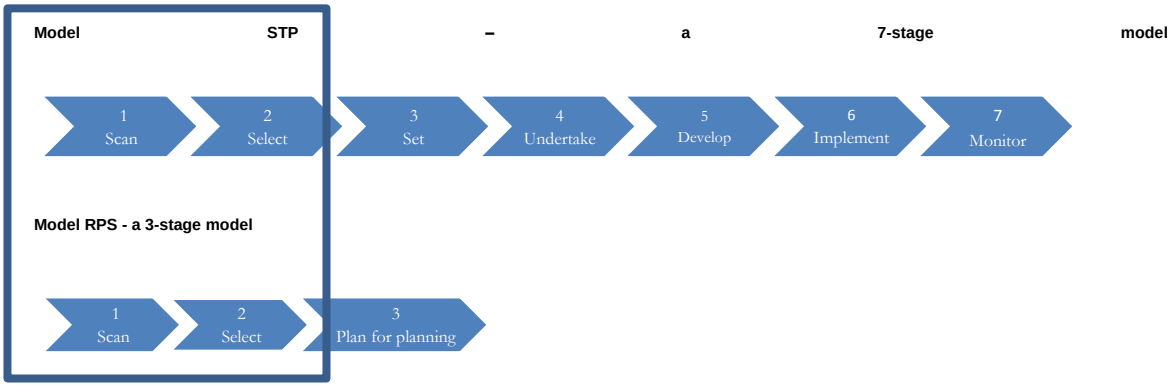

Figure 2: The RPS- and STP-model. Differences and similarities. Based on Sorkin, Ferris, and Hudak (1984) and PBA § 7-1

Our findings, both from first and second round, are unequivocal regarding that all RPSs are strategic processes and documents. Many different actors have participated, and the regional planning authorities have confirmed priorities and conclusions regarding vital challenges and planning needs. This supports what we argued in the introduction that it is expedient to regard RPS as a STP. Both in the first and second round the counties chose to address the challenges - long-term development potentials – goals in different ways. The county can choose to act without planning, or with planning either as a non-PBA plan (strategies) or a PBA plan. There are three main types of such PBA plans - inter-municipal plan, regional plan for a specific theme, sector or geographical area and the former mandatory comprehensive regional plan the county plan.

In the first RPS round the two heretical counties have developed a STP/a county plan, rather than a RPS. The 16 other counties have implemented the RPS in accordance with PBA. In the second round all the counties have made a RPS, but five have chosen to stick to a comprehensive county plan. In addition, many of the RPS documents have a length and a thematic with that reminds of a planning document. One county clearly underline that they regard the RPS to be the comprehensive, long-term planning document in their county. There are more use of non-PBA plans /strategies in the second round than in the first round. Regional plans are tempting to avoid because of the demanding participations regulations. We consider all this to be within the scope of action the counties have got from government.

8 DISCUSSION - CONCLUSION

There were vital differences in how the counties in Norway have implemented the RPS in the first round 2011/12, while it seems almost no differences in the second round. Regarding the two national state framing parameters – complying with the RPS and complying with the National Expectations to the regional and local planning, we find RPSs in all four of our ideal types: The loyal, the translators, the challengers and the heretical in the first round. All acted loyal in the second round.

What does this variety in the first round tell us? First, the variety confirms the already vast evidence in the literature of the challenges concerning top-down implementation (cf. Hill, 2013; Røvik, 1998). Since this hierarchy consists of regional publicly elected bodies with a certain degree of autonomy from the central government (the counties and the municipalities), the counties feel free to translate the PBA into their own

regional context. In the case of RPSs, the translations and contextualization is to be assessed along the two axes. Firstly, the degree of regional adjustment is given by law, which should imply a relatively narrow degree of regional freedom in how to implement the RPS as a planning strategy. As we have seen, this fact does not hamper a third of the counties' regional contextualization and translation. For most of these, we understand the translation as path-dependency (Scharpf, 1997), since these RPSs mostly continue the county planning tradition, as the RPS is contextualized and formed as a long-term plan. Of course, such adaptation also illustrates a need for comprehensive regional planning, which is downplayed in today's PBA. These counties have made a short cut by using the RPS as the overall and comprehensive strategic plan, and translated the PBA to make it useful for their own needs or demands. Therefore, we argue that the new regional planning system in its realization may not fulfil the intended consistency between strategies for planning and the planning itself, and hence contribute to a hybridization. Now, the central government also advances such hybridization by the latest amendments in the PBA, from 2014. Now the PBA also instructs that long-term development goals be stated in the RPS for the future.

Complying along the other axis, the National Expectations of Planning is quite another story. The counties of Norway have since the late 1990's been expected to develop a regional policy based on the region's own challenges and resources, what is called the regime shift from a national allocation or re-distribution of resources for regional development, to a more endogenous and regional resource-based approach (Amdam and Bukve, 2004), in collaboration with both public and private actors. This is continuously underlined in several white-papers (Kommunal- og Regionaldepartementet, 2001, 2002, 2013); and by 2015, the counties' paramount task is the strategic and direction-setting function related to regional planning – to comprehensively assess and contextualize the many central state priorities in the actual regional challenges (Kommunal- og moderniseringsdepartementet, 2015). Therefore, the counties' re-contextualization of the National Expectations was anticipated. The interesting findings here lie in the government's response. We find that the letters of final approval miss contextualization, meaning they show a narrow interpretation of the regional freedom (and expectation) to assess the national goals into the actual regional situation. The central government is torn between the notion of (and need for) flexibility in planning and the need for control or direction setting in policy- and strategy making. The control however was not stricter than that all the RPSs were approved.

This is the first round, the findings correspond with our chosen theories, the findings confirm that the regional political level is about to reinforce their own role as a regional development actor. Many counties evade the national framing and storytelling processes. They use regional co-production to make own plans, to tell own regional stories, to create their own regional political frames for regional development. None of the RPSs is disapproved by the government, which means that this seems to function both for the regional and national authorities.

Why is the second round picture so different? We have to go more deeply in to the RPS – processes, not least to interview participants in these co-production processes. One possible explanation is that the cause of diversity in the first round is due to lack of understanding of what the new tool RPS is supposed to be. There was lack of knowledge and incompetence more than the academic and political independence we met in the RPS from the first round. Now in the second round the planners, politicians and other process participants have learned their RPS lesion1.

Another possible explanation is that both the PBA and the National expectations are that invite to a broad room for different interpretations. The linguistic formulations are vague; the political priorities are few and weak. The framing is open and broad. It is easy for the counties to be loyal, if they choose to be loyal. It is obvious that in the second round almost all counties are loyal; they have no need to highlight disagreement. This is a possible third explanation. Norway is characterized by a professional and politically united storytelling about which challenges and development trend are valid and important. All ongoing governance processes, all plan making on national – regional – local level, all this co-production leads to a basic united dominant view of the present and the desired future. Disagreement comes later, in the follow up and implementation process.

1 Still at least five of the counties do not use updated Plan and Building (PBA) law paragraphs in their RPS

9 FOOD FOR THOUGHT

The main goals for, and the intentions behind, inserting a new tool, the Regional Planning Strategies (RPS) into the regional planning system was to make the political priorities for regional planning more targeted by focusing on important regional development trends and challenges, assess long-term development potentials and goals and determine which issues are to be addressed through further regional planning.

What we experience in the second round, however, is that the RPSs represent an almost identical story about the present and the future as we find in National Expectation, in the PBA (Planning and Building Act). We read about the same challenges, the same development goals. Few counties make clear thematic and political priorities. It is not in the RPSs most of the counties signal their own political priorities, as the intention with RPS is.

Alternatively, maybe this is a correct expression for that Norwegian government and the counties are largely unanimous, about the present situation, and about the years to come.

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ID 1016 | THE RETURN OF PUBLIC PLANNING IN A POST-POST-POLITICAL MEMPHIS

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ABSTRACT: In the US Old South, a context that is characterized by major social and racial gaps and the worship of individual freedoms, planning has always faced significant challenges. Especially in the last couple of decades, the growth of electoral consensus in favor of a political establishment that is clearly against the very existence of any form of public spatial planning – perceived as an unbearable interference with the freedom to dispose of private property by legitimate owners – has favored the establishment of neoliberal planning methods and contents. This is true also for the southern city of Memphis, west Tennessee, the 'northern capital' of the Delta region, whose history has been shaped by king Cotton. However, in Memphis, that in many ways represents the full accomplishment of what in the literature is defined as a post-political city, i. e. the substantial death of a political debate able to reflect social conflicts together with basic forms of public welfares, few signs of interest in traditional forms of planning, i. e. an effort by public institutions to govern spatial dynamics in the name of the 'public interest,' are appearing. Surprisingly, the very actors that have played a major role on the post-political stage, are today taking a

stand against the lack of rules and boundaries for individual and corporate freedom in the real estate sector. This paper discusses the nature of this emerging paradox, presenting the very first outcomes of a case-study research project, carried out by the Department of City and Regional Planning (CRP) at the University of Memphis, TN, with the purpose of contributing to the planning theory debate on possibilities of planning resistance and/or renaissance in the face of neoliberal challenges.

1 INTRODUCTION

In the famous US TV series named Parks & Recreation, where the vice-director of the Parks and Recreation Department of an imaginary US town, the good will and optimism of the leading character, committed to the provision of the best possible service to citizens, clashes against her boss' believe that public government is a waste of tax-payers money and his dream to have the entire public parks system privatized and managed for profit. One might believe that the paradox of having a vegan managing a butcher shop is just a comical trick suited for TV; on the contrary, every American knows that reality has surpassed fiction. Almost half of US citizenry, which – especially after the 2016 Presidential election – is gaining a significant portion of the country's political power, that believes in a governmental model that is almost negation of itself, and is based on the substantial idea of dismantling every form of public planning, in the European sense of it (Trapenberg Frick, 2013).

In this perspective, the city of Memphis, the only democratic Hub in the republic state of Tennessee –a State that in 2011 has abolished the State Planning Department, which for many years had been the only professional support for most of TN towns totally lacking planning capacity – is starting to show some countertrends. As a matter of fact, the local debate is displaying a growing interest in a form of 'public planning' inspired by the value of social justice to overcome the historic dominance of total individual and corporate freedom of action (especially on the real estate sector).

This paper discusses the nature of this emerging interest in public planning, presenting the very first outcomes of a research project, carried out by the Department of City and Regional Planning (CRP) at the University of Memphis, TN that has focused on the motivations that led to it as well as the difficulties and contradictions faced by public planning within a traditional anti-planning context. The research has been conducted through a hybrid methodological approach which mixes:

- The case-study approach (Yin 2013), developed through a variety of qualitative methods (demographic and spatial analysis, in-depth interviews with key informants, archival research, GIS mapping, participant observation of planning-related events);
- An engaged-scholarship approach (Boyer, 1990; Ashley & Vos, 2015), based on which long-term community-university partnerships carry out research that is meant to advance disciplinary knowledge while addressing the most oppressing local planning issues.

2 HIDEOUS PLANNING

In general, in the history of US public institutions the very concept of what is 'public' is significantly different from its European counterpart, with evident effects on the functional, social, and aesthetic aspects of cities as well as on the ability for public bodies to impacts them (Fairfield, 2010).

Since the first days of colonization, the US socio-political system was established on the worship of every form of individual freedom connected with the dream that individual talents can lead toward social upward mobility in a land of great opportunities –, in open contrast with the ancient system of the British colonizer, which was based on a system of birth-related privileges (Warner, 1995). From the perspective of this paper, this premise is strongly related with a planning tradition that is strongly influenced by the need of protecting the individual freedom of not just owning as much property as one can afford but also disposing it with plain autonomy (Kayden, 2009). This does not mean that US Planning has not been able to generate examples of "public city," i. e. portions of the built environment that embodies a 'public' meaning and/or pay a 'public' function, being owned or not by a 'public' agency; nor it means that there are not examples of planning regulations over private property owners. It does mean, though, that all these examples are both qualitatively and quantitatively very different from the European cousins.

Memphis can certainly be taken as an example: the city was founded at the beginning of the XIX century by freemasons and real estate investors, with the hope of making profit out of the creation of a fluvial commercial hub along the Mississippi River, half way from New Orleans and St Louis (Sigafoos 1979). Thanks to the capital connected to the commercialization of 'king cotton,' grown in large quantities in the entire Mid-South Region, the City has successfully and continuously expanded over the centuries, with the result that Memphis is today one of the less dense US metro area (just to have a European comparison: 4 times larger than Milan, with less than a half of the population).

Since the 1947 Comprehensive Plan inspired by the City Beautiful Movement (Memphis City Beautiful Commission, 1947) until the last officially adopted Comprehensive one (Memphis & Shelby County Office of Planning & Development, 1981), Memphis planning history is full of tools and strategies meant to stimulate new developments, with a focus on the construction of public infrastructures that they need to be fully functional, with a lack of expectation that local government might provide public goods, spaces and services. In Memphis, 'Public' planning, i. e. the act of public agencies to govern urban spatial dynamics, has been challenged on many fronts.

First, within the normative framework that characterizes most of the Old South, unlike what happens along the two coasts, urban planning is not one of the compulsory activities of local governments and there a general lack of public planning culture. For the most part, public bodies engage in the preparation or in the update of building codes without the kind of general vision of development that comes with genuine comprehensive planning. Moreover, there is a substantial lack of norms through which real estate developers are forced to pay for the infrastructural, environmental, and social costs associated with the new developments they are profiting from. Very much like it worked in Italy before the Ministerial Decree n°1444 in 1968, Public bodies are expected to cover the costs associated to the provision of services such as parking, public spaces, transit, etc. thanks to increases of property taxes associated to the new development (except for public schools that are funded through a direct fee on residents). From a European perspective, this system seems to be conceived to favor private and corporate interests in the real estate sector but has a very limited capacity to shape vibrant, layered, and well 'served' neighborhoods and cities. On the contrary, from the perspective of the average mid-southern resident, whose maximum living aspiration is the maximization of privacy and quality of their individual housing unit (Putnam, 1995), this is a hideous system that forces households to pay taxes for their properties that are higher in Memphis than on unincorporated land (land that belongs to a county but is not included in a municipal boundary). For this reason, since the '60, many middle and middle-upper urban residents, mostly with white skin, in the search for 'more fiscal freedom' and willing to put more distance between themselves and the inner-city black communities, have continuously moved immediately out of the City boundary. The City government, in an effort not to lose its precious tax base (and therefore its ability to perform a basic level of services), has responded with a strategy that has encouraged and certainly not discouraged urban sprawl: periodic forced annexation of developed land to the city boundary with the consequent imposition of city taxes on residents that lacks any sense of belonging to the urban community (more data can be found at https://www.shelbycountytn.gov/2954/Annexations). The outcome of such a strategy is a highly sprawled and racially segregated city, that often lacks basic city services (public spaces, transit, security services, etc.) and even the basic qualities of a functional and pleasant urban environment (sidewalks, parks, street appliances, etc.); a city with a dying 'hearth,' i. e. with most the inner-city neighborhoods in extreme social, physical and economic decline.

3 BACK TO A POST-POLITICAL CITY

When the last Comprehensive Plan was officially adopted by the City in 1981, there was still not a clear strategy against urban sprawl: the plan contains a general development vision that still considers urban development occurring in non-developed land as a positive economic engine. It indicates priority governmental actions but does not contains clear and effective land use restrictions. The plan identifies the revitalization of the urban core – mostly Downtown – as an absolute priority but does not identify the connection between downtown decline and urban sprawl and does not indicate local government's responsibilities for revitalization. In the 1977, following the example of many other US Cities facing sprawl and internal decline, the City helped establishing what then has become a completely independent revitalization non-governmental agency called Center City Commission (today Downtown Memphis Commission, DMC) in charge of carrying out direct physical improvements and, mostly, of attracting private investments to Downtown through incentives. In its strategic plan from 2013, the DMC explains

how the agency “is funded with an additional fee on Downtown commercial properties and with direct contributions of Downtown real estate investors; DMC is not funded by any city or county taxes” (DMC 2013, p. II). The necessity is to reassure city and county residents that they are not paying for what in a European perspective can be described as an important public effort: resuscitate a portion of the city that holds enormous historic and cultural values for the entire city and region.

Downtown investors have received significant incentives with almost no land use constrictions. In particular, the City has offered a red-carpet treatment to private investors that have developed hot real estate spots along the river (both north and south of Downtown), which are today sites for luxury houses with a direct view on Mississippi sunsets. The consequence is the growth of urban spaces with a public appearance but owned and managed by private hands seeking to raise (or keep) the value of their real estate investments.

In addition to all of this, the City has also managed to redevelop all the public housing complexes that were built during the New Deal era all around Downtown. Due to decades of disinvestment and lack of maintenance, public housing all around the US had become the symbol of ‘concentrated poverty,’ to be considered the main cause of inner city decay. To address such an issue, the US federal government created special funding programs, HOPE VI and, later, Choice Neighborhood, to replace public housing with privately owned and managed ‘mixed-income’ developments. Since 1995, the City of Memphis has used both federal programs to redevelop all its public housing complexes, replacing two thirds of public housing residents with middle-class ones and transferring most of the affordable housing business – through the federally funded section 8 voucher program – from public to private hands (Saija 2017).

Looking at all these strategies together, the overall effort of central city revitalization is perfectly aligned with the global neoliberal trend according to which local governments progressively should resign their responsibilities to produce or shape the ‘public city’ to focus on provisions and services that guarantee the flourishing of entrepreneurial freedoms and profits (Harvey 2007), especially order and security (Tulumello 2017). One of the main occupations of the local government in the shaping the of Urban environment in the last thirty years still reflects the model opposed by planners in Cleveland in the 70s (Krumholz 1982): the use, in a more or less direct way, of tax-payers’ money to attract and keep private corporations under the idea that they are going to provide jobs for the local workforce. Too bad that fiscal incentives or other kinds of support (such as various kind of urban improvements) are often provided without any formal agreement on the way jobs created (salaries & benefits, residency and socio-economic status of the employees, etc.) or any other guarantees of a ‘public’ redistribution of the corporate profit made through such a public support. In other words, Memphis public bodies have intensively used governmental power for “creating the sorts of physical conditions which can best serve industrial growth, also attempt to maintain the kind of "business climate" that attracts industry: for example, favorable taxation, vocational training, law enforcement, and "good" labor relations.” (Molotch 1976, p. 312).

From a European perspective, in such a context, the lack of public planning is counterbalanced by the extraordinary planning capacity of non-public players. Since the 80s, decision-making, investments, service provision, and urban revitalization efforts have been in the hands of a complex socio-economic system made by:

1. The philanthropic community, which captures a significant amount of private money before it goes into the public budget as tax-dollars. Private foundations, considered more financially reliable and transparent than public bodies, receive private donations that are eligible for tax breaks and manage them with full independence from the public decision-making system;
2. The private development sector, made of private developers as well as professional design, engineering, and planning firms, that sees the growing financial investments in inner-city neighborhood as an additional area of profit;
3. The non-profit community, made of organizations that receive and manage funds coming from different sources for the implementation of projects that are in line with their specific mission. In all the US cities, the non-profit sector plays a very significant economic role, and not only because it carries the responsibility of providing many services that in most European countries would be provided by public agencies (health care, education, social services, etc.). There is a specific type of no-profit that plays a special role in inner-city revitalization, the Community Development Corporation (CDC), a community-based “legally incorporated, non-profit agency empowered to purchase, develop and manage residential

and commercial property, or to provide loans and technical assistance to other organizations doing these same things" (Robinson 1996, p. 1652).

Many scholars have studied the type of alliance that is frequently established between the first two types of actors as well as local politicians and the media, describing it as a 'growth-machine coalition' pursuing "a constantly rising urban-area population – a symptom of a pattern ordinarily comprising an initial expansion of basic industries followed by an expanded labor force, a rising scale of retail and wholesale commerce, more far-flung and increasingly intensive land development, higher population density, and increased levels of financial activity" (Molotch 1976, p. 310). Other uses the expression "Urban Regime" to indicate the fact that informal partnerships between City Hall and the business elite in Urban Context are the mechanism through which decisions are made effectively even in the face of the many limits of US governmental powers (Stone 1989). More recently, scholars have introduced the concept of Post-political City, to indicate the ability of the development coalition, encompassing both economic and political powers, to kill every real social conflicts while erasing the very political essence of urban debates (MacLeod, 2011; Swyngedouw, 2010).

Within the Growth Machine and the Urban Regime frameworks, CDCs are frequently described as the only type of urban development actor that can play a counteracting role, with the potential (and sometime the ability) to break the monopoly of urban 'growth machines' and 'regimes' in the urban development business (Berndt 1977, Bratt 1989, Medoff & Sklar 1994, Robinson 1996) while advancing the interests of low-income inner-city residents. In the transition toward the Post-Political city, scholars have questioned the ability of CDCs to play a real counterbalancing role in the game of urban development in the absence of a real social conflict and clear political debate, it is difficult to have CDC (Stoeker 1997).

Memphis, very much like many other American cities, for decades has been characterized by a level of interplay between these three types of development actors and local officials that remind of these characterizing Molotch's Growth Machine (1976), Stone's Urban Regime, and, since 1991, a post-political city. In 1991, Memphis citizens, 55% of them were blacks (today they are 63%), elected the first black Mayor of Memphis, defeating an opponent who had been Mayor for 10 years and campaigned as an administrator who could attract business. The new Mayor and, even more, his appointed head of the Housing and Community Development Division (HCD) were both successful black leaders embodying the American myth of self-made men able to make their way out of poverty to a full commitment toward black empowerment. They both promised a new season of policies focused less on tourism and business and more on social programs, on city's public schools, and, most importantly, on inner-city revitalization. Public declarations seemed to imply a break into the 'Urban Regime' that had ruled the City for decades, but initial research outcomes show that it might have really meant a change in the [color of the skin of the] actors involved in informal relationships without really changing the nature of the decision-making method. For instance, the intensive use of HOPE VI funds by HCD – in partnership with the local Housing Authority – to redevelop public housing complexes can be interpreted as a neoliberal use of governmental powers (and money) to advance entrepreneurial 'freedom' (and profit) while generating 'post-political consensus' (MacLeod, 2011; Swyngedouw, 2010) pursued by a strong populist leader advocating for relocation, redevelopment, and privatization policies that are 'good for everybody.' The same leader that has proactively used tax payers money to attract in Memphis a number of private corporations such as Electrolux, BassPro, and others. For decades, almost the totality of planning-related decisions made by the City were led by HCD and its director, in the absence of an updated Comprehensive Plan, in the face of a very week Land Use and Planning Department, and with City Council acting as an uncritical enabler. Moreover, the 2007-08 recession, related to the housing bubble associated with urban sprawl, has further weaken Memphis' public planning: at that time, most of the salaries of the City of Memphis Planning Department's employees were being paid by the fees collected through the development process (mostly related to subdivision requests and new constructions). The collapse of the development sector then caused the failure of the Planning Department's budget and the consequent reduction of its workforce by almost 50% (from 250 to 130 units) in only one year.

What is even more indicative of the post-political nature of city planning in Memphis, is the big role played by the private foundations in the Community Development field; an interest that has always been carried out with a high level of independence from the public sector, especially after the 2007-08 recession. Based on the data, it is evident that the endowments of the private foundations involved in the community development field have not been impacted by the recession as much as the private development sector and the City Planning Department, as further sign that most of the weight of the recession has been

carried out by the shoulders of the public sector and the low- or middle-income sections of the population, without really impacting the richer strata, who are usually in the position of making donation to the philanthropies. These were, however, forced to rethink on how to make their investments in community development and inner-city revitalization more strategic, in the face of a significant increase of poverty rates, housing vacancies, fiscal delinquency, and street crime within the inner-city loop (source: US Census 2001-2010). The immediate outcome of the recession was not only the significant increase of the classic symptoms of urban blight but also the reduction of the capacity of the extremely large number of Memphis CDCs of counteracting those symptoms.

To enhance of level of efficacy in the Community Development sector, between 2007 and 2009 foundations have come together forming what they called the Greater Memphis Partnership, hired a Planning Firm from St. Louis – EDAW Inc. –, and led to the finalization of a Strategic Plan for the Memphis Metro Area named Greater Memphis Neighborhood: A Blueprint for Revitalization (Greater Memphis Partnership, 2009). The Plan identifies priority areas and priority actions to by undertaken. Despite the fact that the document mentions the involvement of the main public agencies, "the city contributed to the process with a symbolic token, just to be able to say that had a horse in the race."(key informant interview carried out by the author) The whole plan was funded by philanthropic foundations with the purpose of prioritizing Community Development investments, allowing the philanthropic community to act in full coordination and synergy. Three inner-city neighborhood were selected as investments areas and foundations were led to prioritize their funding toward CDCs and organizations operating there. Today, these three neighborhoods have received the most investments for revitalization amongst the totality of inner-city neighborhoods.

In synthesis, Memphis urban dynamics of the past decades are characterized by the complete lack of rules for new developments, the absence of any meaningful attempt to limit sprawl, the privatization of what was left of public services' provision (public housing, public spaces, etc.), and a process of inner-city revitalization led by a non-public system based on a solid dependence of CDCs from philanthropy. Successes in the inner-city revitalization process, in particular, might led neoliberal supporters to argue that planning without a public power – where major decisions do not engage, not even within a regimental framework, elected officials – is possible and might even look successful. Is that really the case?

3 MEMPHIS 3.0: CHANGE OF DIRECTION?

Some of the most recent events in Memphis might start to provide a partially negative answer to such a question.

Paradoxically, the very system of actors that have de factu replaced the lack of public planning over the past decades, are today showing clear signs of interest in restoring the planning functions of the main public bodies, while asking public officials to take more responsibility toward spatial governance: private foundations and the major CDCs have clearly expressed, over the past couple of years, the importance to have a strong an well-functioning public sector if the persistent city decline is to be really faced. Despite the sign of revitalization of few inner-city neighborhoods, city leaders agree on the fact that none of their efforts neither HCD aggressive approach to development has really changed the fact that the city is in a lagging status that seems to be impossible to overthrow. In their new discourses in support of a stronger public sector, the issue of social justice makes a recurrent appearance, in a city where 26.2% of residents live in poverty (a % that is almost twice the US average and one and a half higher that the average of the Metro Area; source Delavega 2016). We do not know whether this means that the richer residents are progressively realizing that they cannot live their entire life in their luxury homes out east or along the river and they want a city to live in where they can feel safe and comfortable. What we know is that the very philanthropy managing the wealth that does not get through the public treasury, after the Blueprint planning experience, has decided to significantly invest planning process that, unlike the Blueprint one, are have the capacity of strengthening the capacity of the two main local public bodies: Shelby County and the City of Memphis.

They started with supporting the preparation of the Mid-South Regional Greenprint and Sustainability Plan, "designed to enhance regional sustainability by establishing a unified vision for a region-wide network of green space areas, or Greenprint, which serves to address long-term housing and land use, resource conservation, environmental protection, accessibility, community health and wellness, transportation

alternatives, economic development, neighborhood engagement, and social equity in the Greater Memphis Area" (Memphis-Shelby County Office of Sustainability, 2014, p. 9). For the preparation of the plan, Shelby County Government was awarded a $2,619,999 Sustainable 61 Communities Regional Planning Grant from the United States Department of Housing and Urban Development (HUD). The philanthropic community was instrumental in funding the preliminary steps that had allowed the County to be successful in such a high competitive federal program. Moreover, despite the official focus was supposed to be on green infrastructure, the plan clearly tries to address their connections with all the other areas of intervention that usually characterize a Comprehesive Plan. Its main contributors admit that in an ideal world Greenprint planning should have followed a Comprehensive planning process. However, they think that in many ways the very Greenprint, with its high ambitions, has played the role of forerunner: it has, for the first time, shown to the 'public' and, in particular, to many important local players the legitimacy and the importance of a well-run public planning process.

The Greenprint, published in 2014 after a long process and the engagement of more than 50 stakeholders, is in the process of being successfully implemented, thanks to the immediate financial engagement of the philanthropic community: the main local foundations have been proactive in supporting the physical execution of the most important sections of the new green infrastructures: in some cases they have directly bought the land and led the construction works to then donate the final result to the City – this is the case of the Memphis greenline, for instance – or to ad hoc non-profit – this is the case of the Wolf-River Greenway, donate to the Wolf-River Conservancy –. The tangible successes of the Greenprint and the general enthusiasm generated in the pubic opinion, has played a key role in the will of the City of Memphis to create a position for a Bikeway/Pedestrian Coordinator, which has helped generating more than 71 miles of new bike lanes since 2010, more than doubling the previous 63 miles already existent (Smiley et al. 2016).

Most of all, the Greenprint has reached its declared goal of triggering a new Comprehensive Planning process of the City of Memphis, the first one in more than 40 years. In this process, the main private foundations have, again, played a major role; they have funded with almost 2 million the first three years of the process called Memphis 3.0. This amount has covered, amongst other things, the totality of the salaries of 5 new planners hired by the Planning and Department of the City of Memphis to run the process, under the promise of future stabilization of their salaries with public funds.

Scholars that are familiar with the literature on planning in a neoliberal era, the idea that public planners are, de factu, on private foundations' paychecks could be interpreted as a clear sign that public bodies are under the complete influence of the local business elite. This interpretation could be confirmed by the fact that, one year into the process, the founders have explicitly requested to be part of a Memphis 3.0 Advisory Board, a committee of 'wise' individuals that can suggest and lead the process through the 'right' steps. Morevoer, there are very few doubts on the expectations that the Memphis' commercial elite has from the process; expectations that are summarized by the title of a public seminar organized by the Memphis Chamber of Commerce on February 2017: Why Comprehensive Planning is Good for Business: 10 years after the recession and decades of incentives and actions in favor of a good business climate (total freedom of action of the private sector, especially in the real estate sector), Memphis is still a city that grows physically but not in terms of tax base. What is gain by the suburbs is lost by the inner-city neighborhood and viceversa, in a zero-sum game; a game that is unsustainable not only for low-income residents but also for the commercial elite, which is seeking a drastic change of direction. In this scenario, Memphis situation could be labeled as a paradox (Rushing 2009): in a context where the public hand still lacks of resources and spatial governance capacity and where the broad socio-cultural system is indifferent, if not clearly hostile, to the very concept of Planning, here is the business elite that is strongly contributing, at least in this phase, to a change of mindset. From all our interview with stakeholders, it appears that they all genuinely hope in a real "inner-city revitalization," referring not just to the physical structures but also communities: it is almost like the private sector is advancing the hypothesis that financial growth is not possibile without a certain amount of socio-cultural fairness, which can only be systematically addressed by a strong and affective public sector. One could advance the hypothesis that, after trying to act independently through the Blueprint, they are all realizing of the necessity to have capable public actors, which are "not kept hostages by private corporations and able to pursue courageous choice."

Whether this is a temporary phase or the appearance of a new paradigm of possibilities for public planning in the reign of neoliberal culture the future can only tell.

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ID 1356 | 'DECISION NOT TO DECIDE': A NEW CHALLENGE FOR PLANNING

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1 INTRODUCTION

Urban planning developed during the twentieth century under conditions of strong national welfare states and relatively weak civil societies (Davies, 2001). The need to protect the public interest and guarantee its rights led to the establishment of hierarchical planning systems throughout the developed world. Planning mechanisms were designed to guarantee equal allocation of resources and appropriate infrastructure for various sectors (Dean, 2011, Piketty, 2014). In the urban realm in recent years, the unprecedented scale of urban transformation and the weakening of the social, economic, and political frameworks that constitute the background for planning, has meant that the impact and the pressure of direct cooperation of interest groups on urban space has considerably increased (Alexander, 2002; Kolossov, 2005). Planners and politicians have to cope with interest groups characterised by diverse institutional structures, access to resources, and inconsistent territorial interests; a particular challenge to the planning system is posed by groups committed to non-liberal values and concepts.

Indirect cooperation reflects similarities in the way people ‘read’ and interpret urban space, direct cooperation reflects economic interests and social organisation, and both can evoke planning policy issues (Fischer, 1982, Alexander, 2002; Kolossov, 2005). While many of these issues, such as the buying of land by purchasing groups or Gated communities, are addressed by an authoritative pronouncement and clear-cut decisions to create an official groundwork of action, there are many others that planning policy makers avoid or refrain from addressing. Both adopting a stance and choosing to abstain from doing so have far-reaching ramifications for society. The difficulties of liberal planning when faced with implementing what is defined as “the politics of accommodation” (Lijphart, 1968; Davies, 2001), and in resolving spatial conflicts between groups and individuals in diverse democratic societies, will be discussed in this paper. In order to explain the ways individuals incline towards and cooperate with groups to claim space, the research will use the themes of social relations and control mechanisms to examine the effects of organisation in housing. The themes of group behaviour in urban space and the policy of non–decision will elaborate the way different groups adopt different strategies to claim space. Hence, the research will examine the ramifications of 'Non-decision making' (NDM) for autonomous individuals and groups who organise neighbourhood change.

The case studies that have been selected are interesting because they function somewhat as ‘limit cases’ that demonstrate the ramifications of NDM for neighbourhoods changed by different levels of cooperation. They are therefore very different: The type of state in which planners operate, the relationship between civil society organisation to the state or municipality and the role of religious activists (Imams in Whitechapel and Rabbis in Zangwill Street) are very different in both locales. On one hand there is the

ideological power of Imams in relatively secular multi-cultural London. On the other, the city of Jerusalem, Israel's capital and its largest municipality, is subject to fundamental social and political conflicts. Jerusalem is ethno-nationally divided and contested. However, both Whitechapel Road in East London and Zangwill Street of Kiryat-Ha'Yovel, Jerusalem, make interesting case studies for examination of the ability of cohesive communities to operate local housing markets in order to wrest control of space from other groups, thereby creating a 'contiguous' community space. Capturing the value of development relies on housing provision that is mostly built and marketed to attract new types of resident to areas of renewal, and to change an area's homogeneous composition. The need to absorb growing populations creates pressures in particular parts of the city, and on existing local populations. While the hierarchy of London property values remains firmly in place, with inner areas of West London at the peak, it is East London that has seen the most accelerated price rises since 2000. As an effect of serial displacements, middle-income buyers out-compete lower-income groups in both the home owner and rental sectors in London's cheaper housing markets (Hamnett, 2004). Similar to this process and based on the British Mandate system, Israeli planning is characterized by a centralized and hierarchal structure. In West Jerusalem urban planning preserved the liberal trend to unite various population groups for the creation of a common Israeli culture. According to this view, the Haredi community had not been considered as a singular entity that required a special urban space, but instead as part of the wider Israeli melting pot. Consequently, Haredi territory has been restricted by land uses which contradict its nature, and every contact bears the seeds of a territorial struggle with neighbouring populations over living space (Shilhav & Friedman, 1985). High population density and increased prices for flats in Haredi enclaves has stimulated a constant migration of population from the Haredi enclaves. The "Haredification" of Jerusalem [a process whereby non-Haredi populations are replaced by Haredi] can be linked to every aspect of life and decision-making in the city (Hasson, 1996). The influx of Haredi into secular neighbourhoods has caused friction and bitter struggles over the city's character.

Most empirical research overlooks the contribution of policy makers to such processes as NDM and argues that where there are no planning decisions, there are no planning events to investigate---or so it would seem. The analysis of NDM seems to oblige the analyst to provide an explanation for things that do not happen, and researchers have argued that there is simply no reasoned and reliable way to construct such explanations (Crenson, 1971; Sturzaker, 2009; Palmer, 2014). The present study attempts to find a way to do so, contending that in order to examine these processes, one must refer to the social system that drives the local process and the set of values from which it draws its strength. This paper thus examines how groups holding different values adopt strategies to claim territory, identifying the collective features of the referred groups and their urban expression, while also considering the role of planning in the process.

2 THEORETICAL BACKGROUND

'Non-decision making' (NDM) is defined as 'the practice of limiting the scope of actual decision-making to 'state' issues by manipulating the dominant community values, myths, and political institutions and procedures' (Bachrach & Baratz, 1963; Kamuzora, 2006), a result of a lack of public policy or, alternatively, a clear choice of public policy (Dye, 1999; Akindele and Olaopa, 2004). A complete view of power must include, according to Lukes' 'second face of power', a consideration of action as well as inaction, and covert and latent, as well as overt, conflict (Lukes, 1974, 1977; Groarke,1993; Béland, 2016). Following Dye's definition of public policy as including not only what governments choose to do, but also what they choose not to do, it is common to distinguish between (1) the absence of a decision in a situation of clear opposition to a proposed policy even though the alternative does not have a large coalition of supporters; (2) an auditing body's criticism of the authorities for neglecting their responsibilities, and for refraining from providing optional actions through NDM; (3) inaction arising from a desire to protect interests by preventing changes in existing policies. Although these classifications cannot be absolute in today's complex realities, NDM is, in fact, a specific form of decision on the part of policy-makers - "The decision to avoid addressing the issue" - and its outcome is identical with that of the decision not to decide. Frequently, the desire of a population to live together leads to a refraining from the making of a decision. In disputes of principle, the moral and political legitimacy of NDM policy stems from its ability to allow the preservation of a democratic system, rather than from its ability to bring about willingness to make mutual compromises. Likewise, an issue which is not relevant to most of the population, not germane to the character of the state, or whose economic aspect is of negligible weight relative to the other aspects, has decreased chances of being

decided upon. These characteristics also affect the level of resources dedicated to accumulating knowledge and consequently reduce the chances for the making of a decision in the long term. Hence, this research will examine the ramifications of NDM for neighbourhoods changed by different levels of cooperation.

The effect of cooperation on urban structure was considered by Du Bois (1899) in The Philadelphia Negro, which examines the demographics of black Americans, and later by the Chicago School (Park, 1936). The School examined spatial competition between groups as an ecological process and developed an invasion–succession model to describe collective behaviour. According to this view, spontaneous social gathering is a means by which individuals improve their ability to cope with the challenges of urban life (Hawley, 1950; Back 1996). Alongside the creation of cultural dominance within the defined enclave, the isolated territories serve as a protective niche enabling conservation of lifestyles and cultures (Boal, 2008; Mehlhorn, 1998). Purposive and relatively structured forms of collective behaviour are social movements. The distinctly political character of these groups of individuals gathered together with the common legitimate purpose of expressing subjectively felt discontent in a public way, makes these social movements modern (Haferkamp and Smelser, 1992). These urban residential dynamics are often explained by referring to economic factors (Kasarda, 1972; Speare, 1974) or to a mixture of economic and non-economic factors (Borjas, 1998; Clark and Withers, 1999; Fossett 2006). In the case of the latter, ethnic relationships, family lifestyle or life-cycle features are usually added to the basic set of economic factors (Feitelson, 2011; Johnston et al., 2007); the economic factors blur the impact of the non-economic factors, especially of self-identity, on spatial organization.

As opposed to indirect collaboration, a collective that has gathered in a given place and time creates direct cooperation, something that is defined as group behaviour (Anderson & O'Dowd, 1999; Saegert & Winkel, 1990). Clear authority reaches consensus, defines rules and creates an organised segregated pattern. As characterised by purchasing organisation and gated communities, this organised behaviour reinforces traditional communities where religion is a social cement (Bankston & Zhou, 1995). Many of these communities attempt to revive old traditional lifestyles by using modern mechanisms that reinforce compliance due to identification, rather than out of fear or under explicit threat (Castells, 1997). An individual’s needs become congruent with the group’s interests, and individuals are expected to concede their free will and to subordinate their interests to those of the group, even in cases where they are indifferent or even harmed by them (Riesebrodt, 2002). In terms of leadership, territorial concentration facilitates its control of the members' daily lives, so preserving the community's identity and maintaining its cohesion. When the group members realise they are more likely to achieve their goal when acting in a co-ordinated way rather than individually, they may use the territory as a base for offensive actions against “others” (Taylor & Moghaddam, 1994; Boal, 2008) and expand their enclave’s borders through group action (Granovetter, 1978; Lalonde and Cameron, 1994). The borders thus created, whether they are weak or strong (Paasi, 1996), rigid or flexible, gateways or barriers (Altvater, 1998, Newman, 2003), represent economic, political, cultural or social asymmetries between communities (Giddens, 1984). Planning, in this respect, lies on the seam between charting national policy and the pressures of diversified urban politics; it therefore seeks to weaken the spatial pattern of segregation as well as the boundaries between groups (Healey, 1997).

3 METHODOLOGY

The research is based on "real data" information provided anonymously by the people themselves in Kiryat-Ha’Yovel (2009) and Whitechapel (2011-12) at the level of individual families and flats, sections, and buildings. As the author speaks Bengali and Hebrew, she was able recruit assistance from local interviewers and gather rich and sometimes controversial data by this means.

The Whitechapel neighbourhood's collected data are part of a more in-depth survey. Together with a local interviewer, a young male from the Bangladeshi community (who has requested anonymity), the author conducted a door-to-door survey and interviewed 4656 families living in 3186 flats. Whitechapel's households were asked to identify themselves as well as the flat's former dwellers, going back to at least 1995. Several researchers stress that the identity of previous residents is important for traditional families (Waterman and Kosmin, 1988), a conclusion confirmed by this research. Identification of past and present residents of Whitechapel Road allowed the study to identify the flats' dwellers between 1995 and 2012 and

recognise the Bangladeshi Sylheti as the dominant group. The research area of Whitechapel Road contain 642 families living in 63 buildings.

In Kiryat-Ha'Yovel, all 653 buildings were surveyed. In each building/section, representatives of the building committee or the long-standing residents were asked about the identity of the residents of the building, and whether they rented or owned their flat. From the data collected in this manner, a map of the population distribution was created, from which a secondary map was derived for each discrete population group. The population distribution of the Kol-Torah community was particularly marked because it was prominently congregated in the large residential buildings on Zangwill Street. In consequence, the dynamics of residence on the street were then examined at the individual flat level. Although co-operation was limited, most of the new residents indicated that they belonged to Kol-Torah community, based in the adjoining neighbourhood of Bayit-Ve'Gan, and gave their date of entry into the new flat. Zangwill Street contains 347 flats in nine residential buildings with 46 separate entrances.

All other questions asked - both in Whitechapel Road and Zangwill Street - are related to the present occupants in order to reconstruct the dynamics of population replacement. 268 veteran residents of Whitechapel Road (who sold their flats between 2004 and 2012) and 246 veteran residents of Zangwill Street (who sold their flats between 2002 and 2010) were identified and interviewed. They provided information about the price and the month/year of the sale. In addition, they were asked about the approximate number of families of "others" (e.g., not Bangladeshi in Whitechapel Road, and not from Kol-Torah in Zangwill Street) still residing in the building at the moment of a sale. 84% of the ex-owners of Whitechapel Road, and 76% of the ex-owners of Zangwill Street were willing to reply to these questions. Cross-checks with data supplied by real-estate agencies and websites increased the percentage of cases for which the price and the number of secular tenants are both available to 98% (Whitechapel Road) and 88% (Zangwill Street). The market price of a flat at the moment of the sale was estimated on the basis of cross-referenced data provided by local realtors, Zoopla and Rightmove for Whitechapel, and three of the main realtors working in Kiryat-Ha`Yovel. They produced information on population exchanges and explained dynamic processes, making it possible to estimate residential markets in the research areas.

The characteristics of all flats and households were organised as a high-resolution layer for each case study, in which every record is related to its corresponding building. GIS layers for Whitechapel Road were provided by the ordnancesurvey.co.uk/opendatadownload/products.html and updated to 2016. The Zangwill Street data was integrated into the area's GIS layers pertaining to topography, roads, land parcels and buildings, as provided by Jerusalem Municipality and updated to 2004. This spatial-temporal GIS facilitated investigation of the residential micro-dynamics of the case studies, while referring to residents' identities and the turnover of flats, also spotlighting group organisation and leadership rules behind these processes.

In addition, 41 interviews in Whitechapel and 30 in Kiryat-Ha'Yovel were conducted with key figures from various fields. Those involved with the communities were interviewed about spatial relations between the individual and the community, and the economic aspect of the institutions (Jamme Masjid, East London Mosque and Kol-Torah yeshiva) in regard to housing. Functionaries in Tower Hamlets Council and Jerusalem Municipality were interviewed regarding the capabilities and limitations of the planning system in the encounter between population groups. Residents from various "other" population groups were interviewed about activities in public and private spaces. The information was cross-checked with blogs, articles, and internet sites, which offered a range of different types of knowledge and perspectives on the communities. Observing these conflicts in Whitechapel Road and Zangwill Street will enable us to explain the idea of "Terrain of Inaction".

4 THE CASE STUDIES

London's East End developed gradually from medieval times, and from around 1890 became associated with poverty, overcrowding, disease and criminality (Palmer, 1989). Despite a massive gentrification process, some parts of the East End continue to contain some of the most deprived areas in Britain (Kintrea et al, 2008; Dustmann and Theodoropoulos, 2010). Today, the large number of 61 religious institutions in the study area reflects diversity within the population: the area is populated by Muslims, Hindus and Christians of African, British, South-Asian, East-Asian and European origin.

Whitechapel Road (Figure 1) is a part of the historic Roman Road from London to Colchester. Now, there are notable numbers of office buildings and several institutions along the road, such as the Whitechapel Art Gallery, the East London Mosque and the established street market next to Whitechapel tube station selling a range of authentic Asian food and clothes. Towards the end of the 20th century, the street, along with the nearby Brick Lane, became the centre of the British Bangladeshi community. Most of the residents along the road live in and above shops in houses divided as flats, both in private ownership and renting.

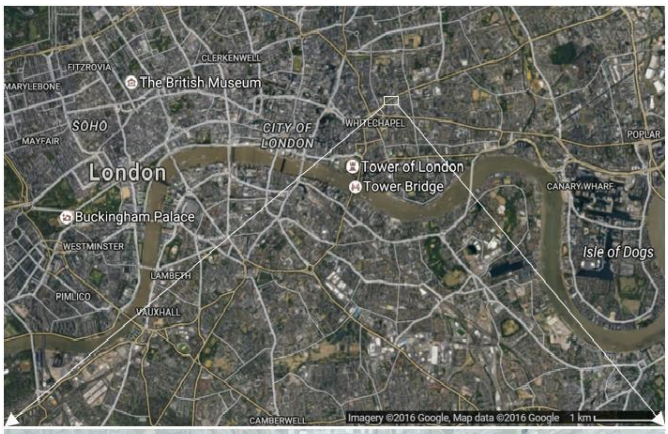

Figure 1: (a) Map of Central London with Whitechapel Road marked. (b) The research area of Whitechapel Road

Kiryat-Ha'Yovel is a Jewish neighbourhood in south-west Jerusalem (Figure 2a), populated by secular Jewish along with National-Religious and Haredi populations, including members of the Sephardic sects, the Chabad-Hassidic community, and Lithuanian sub-sects classified by national origin: Israeli, American, French and Sephardi-Lithuanian. In recent years, Israeli-Lithuanian Haredi of Kol-Torah have been purchasing flats on Zangwill Street, the north-eastern boundary of Kiryat-Ha'Yovel (Figure 2b). Zangwill Street is composed of nine large housing complexes. Originally, most of the flats in the street were about the same size – 48-55 sq. m. (2.5 rooms), though some of them have been enlarged. Kol-Torah Yeshiva was founded in 1939 by German immigrants who arrived in Israel following the 'Kristallnacht' pogrom, and although its scholarly trend was not initially militantly ultra-orthodox, it changed over the years. Today Kol-Torah is considered one of the most important yeshivas of the Torah world, and the secular and the national-religious residents of Kiryat-Ha'Yovel are concerned about its impact on public spaces, and its possible ramifications.

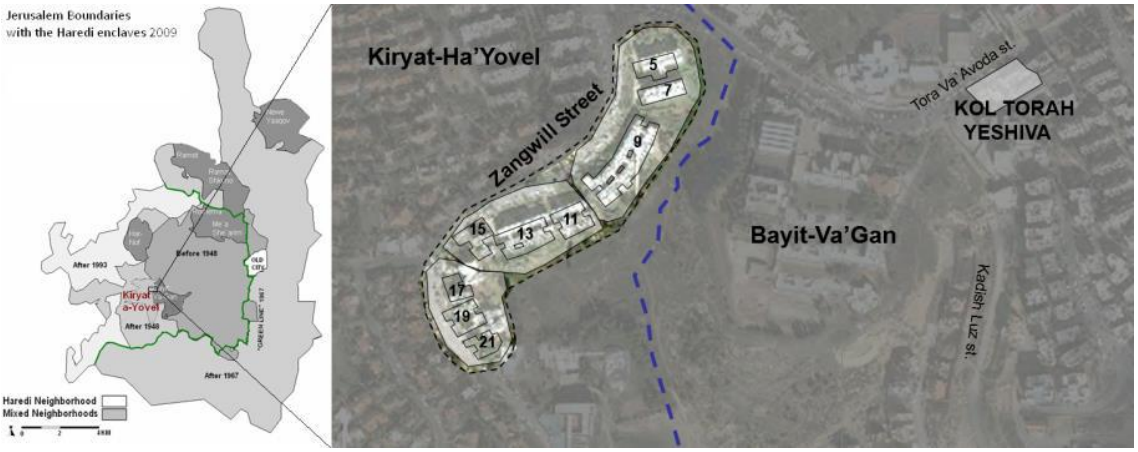

Figure 2: (a) Map of Jerusalem with the Haredi enclaves, Zangwill Street marked. (b) Zangwill Street on the border with the adjoining Haredi neighbourhood of Bayit-Ve'Gan

Both Whitechapel Road and Zangwill Street were established and populated over a long period as a result of many individual decisions. Whitechapel Road and Zangwill Street provide empirical evidence that different population groups, practicing different lifestyles, values and levels of organisation, can create and sustain the same residential patterns within opposite market-price situations. The differences between spontaneous enclaves, represented by Whitechapel Road, and organized enclaves, represented by Zangwill Street, give rise to two fundamental questions. First, what kind of day-to-day residential mechanism sustains the initial structure of these enclaves? Secondly, in respect of the housing market, what is the rule of the market price in maintaining the enclaves? The next section of this article deals with these questions and reveals the social apparatus that drives the observed orders.

5 TERRAIN OF INACTION

5.1 THE RELATIONSHIP BETWEEN CIVIL-SOCIETY ORGANISATIONS AND THE MUNICIPALITY

BANGLADESHI-MUSLIM COMMUNITY – SYLHETIS

While untrained eyes might see the Bangladeshi-Muslims as a homogeneous Sunni population, a closer look reveals a complex communal structure, run by precise rules and conventions. Clans play a central role in the Bangladeshi community, politics and identity formation, providing both a system of rights and social support (Eade and Garbin, 2001). Desai (2011) explains that a Bangladeshi community from Sylhet, a district in north-east Bangladesh, can form a largely homogeneous community. Despite identification with the clan being intense and overt, and a tendency to marry inside the community, Sylheti are highly integrated within general society.

In addition to their spiritual role, Imams (religious leaders) have a central position in the organization of communal daily life. In terms of leadership, social dependencies are a means for preserving the community's structure (Forman, 1989). Interviewees indicate that encouragements from the local Imam in respect of socialization and deep solidarity with the community’s values and needs have motivated collective behaviour. Mamun Rahman explained: "our Imam emphasizes the individualism of the community members creates a society that is ever richer in capacities for communication for preserving the community's coherence" (June 15, 2014). Belonging and residing in the group's territory is a source of "social capital", mutual assistance and support for individuals. The individuals’ intense awareness of identity motivates them to cooperate in order to maintain their community identity and congregate in a voluntary territorial separation of clans into an enclave of sorts in a free market (Glynn, 2006).

Bangladeshi rates of unemployment are typically high and many live on means-tested benefits. In 2011, nearly half (48%) of British Bangladeshis between the ages of 16 to 64 were reported to be employed, and there is overcrowding in housing (Garbin, 2005). JRF (2015) indicates that British Bangladeshis have the highest overall relative poverty rate of any ethnic group in the UK with 65% of Bangladeshis living in low-income households. Although the older generation is employed mainly in the distribution, hotel and restaurant industries (ONS, 2008), the newer generation is making significant progress at schools compared with other ethnic minority groups and many aspire to professional careers (Rezaul, 2007).

The London Borough of Tower Hamlets houses 18% of the UK’s Bangladeshi population (32% of the borough population), most of them Bangladeshi-Muslims, who are the area’s older and best-established ethnic minority. The majority of the councillors in Tower Hamlets are of Bangladeshi descent and part of the Labour Party. As of 2009, 32 of the total 51 councillors were Bangladeshi (63%), 18 were White (35%) and 1 Somali (2%). The first Bangladeshi mayor in Tower Hamlets was Ghulam Murtuza, and the first directly elected mayor was the Bangladesh-born British former solicitor and politician, Lutfur Rahman. In addition, large numbers of people from the Bangladeshi community have been increasingly involved with local government, through consultation, participation and engagement.

THE HAREDI COMMUNITY OF KOL-TORAH

The Haredi population is distinguished by internal, nuanced distinctions among its sub-groups, expressed in different values and normative behaviour. Common to all is the great importance given to holy studies, which is expressed in an individual's social status: a "scholar" who refrains from general education but invests and succeeds in his holy studies gains a high social status (Gonen, 2006). The community's leaders regulate a system of control and supervision, prevailing mainly in the Israeli-Lithuanian Haredi community, making the individual dependent on the community (Friedman, 1991). The Israeli government provides stipends to the study institutions directly, but these funds are fully regulated and distributed by the Rabbis exclusively: small living stipends are given to each Torah student family (Gonen, 2006). This phenomenon reinforces an individual's solidarity with the community's values, limiting their economic development (Friedman, 1991). An increase in the strength of the Haredi communities has become highly important when socio-economic issues, such as marrying young and having high fertility rates – some 6% annually – (Berman and Klinov, 1997), exacerbate the growing pressure of the Haredi population on urban space. Despite the state's allocation of land for constructing Haredi neighbourhoods, official solutions were inadequate to meet demand, and Haredi pressure on the enclaves increased. Nowadays, when housing enhancers and young families have difficulties realising their preferences to live within their own communities, the importance of group behaviour has increased. This is particularly relevant to the Israeli-Lithuanian Haredi community of Kol-Torah, which is interested in creating territorial continuity in Kiryat-Ha'Yovel neighbourhood in Jerusalem.

In recent years the number of Haredi related to the Kol-Torah community in key positions on Jerusalem's City Council has increased. Thus, Rabbi Lapolianski served as Mayor of Jerusalem (2003-2008), and his deputies were Rabbi Maklev, who held the Construction and Planning Portfolio since 1993, and Rabbi Pollak, who was chairman of the Construction and Planning Committee (2003-2008). The current Deputy Mayor is Rabbi Pindrus. Characterized by a well-coordinated institutional structure, organized funding and members' strong commitment, Kol-Torah turns to group action and mobilises dedicated manpower and significant resources to create processes of cultural and social introversion and territorial spread, accompanied by the exclusion of the existing local population.

Despite differences in relationships between civil-society organisations (including religious ones) and the state or municipality in both locales and the role of religious activists - Imams in multi-cultural London and Rabbis in the ethno-nationally divided city of Jerusalem - there is a deep resemblance in the social and cultural roots behind urban segregation in both cities. In both communities, individuals are usually born, raised, married and live within their community. They are largely young populations, characterized by high birth rates. An individual's life is centred on the institutions of higher religious studies that also provide social services, including children's education and basic welfare. Despite the economic status of most of the individual members tending to be very low, the economic power of each community as a whole is considerable: many communities maintain financial resources and services composed of donations and taxpayer money through state support for religious institutions (Hasson, 1996; DCLG, 2010).

Another resemblance arises from the outcomes of demographic, social, and economic pressures that have limited the involvement of leadership in the communities' daily lives. In recent years, the 'leftovers' of both communities are driven to establish residences far from the original group enclave, and the geographic separation that is created between the generations threatens community continuity. In the case of the Bangladeshi community, significant numbers of British Bangladeshis move out from Whitechapel to Birmingham, Oldham, Luton, Burnley and Bradford. The population living in the original enclave is aging, and elsewhere, the lifestyle in the new communities tends to adapt itself to the new conditions of life. An individual's identification with community and the desire to raise children in a homogeneous cultural and religious environment evokes conscious moral recruitment. For the Kol-Torah community, the ability of the leadership to enforce group discipline for continued residence within the community has been weakened, and thus motivated Rabbis Elyashiv and Auerbach to organise top-down group action to expand the original living space of the group. The expressive incentive for the group's members is that they would help out in the process of trying to attain the group's goals. Clear-cut monitory mechanisms ensure compliant behaviour, allowing the leadership to impose discipline and organise matters in accordance with its preferences.

5.2 THE EFFECTS OF ORGANISATION IN HOUSING

COLLECTIVE BEHAVIOUR OF THE SYLHETI COMMUNITY

Although a Bangladeshi Sylheti community has lived in the Whitechapel neighbourhood for decades, only the recent experience of gentrification and 21st-century migration - first from Ireland, Greece and Austria, and since May 2004 also from Eastern Europe - followed by significant socio-economic change and physical renewal, motivated a collective behaviour process along Whitechapel Road. Examining the occupation process of Whitechapel Road by Bangladeshi Sylheti people between 1995 and 2012 (Figure 3a-b) can indicate the abilities and limitations of a non-organised community in the creation of a defined enclave within a free market.

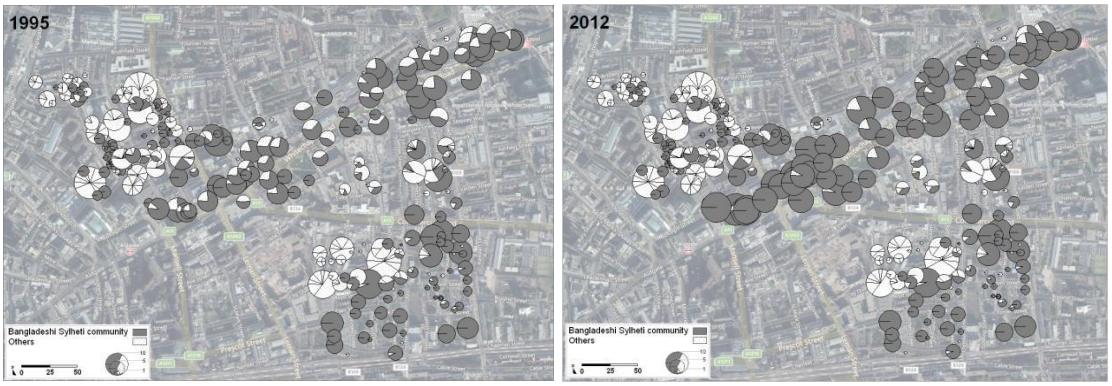

Figure 3a-b: Spatial intervention of Sylheti community to Whitechapel Road 1995 and 2012

Despite the area already being occupied by group members, a clear behavioural code enabled a non-organised bottom-up process that created high confidence among residents regarding the group identities of newcomers and veteran residents. The intensive daily contacts between members of the same group resulted in enhanced information flows between individuals. The intra-group information flow freezes established residential patterns: a high percentage of families reside in flats vacated by householders of their own group (Tables 1 and 2). The probability of replacing a family belonging to a different group is calculated as DReplacing_NOT_D/NOT_DLeft, where DReplacing_NOT_D denotes the families of a group D that replaced families of other groups, and NOT_DLeft denotes the overall number of families of other sects that left their flats. The probability of leaving a flat is calculated as DLeft/DOccupied, where DOccupied is the number of flats occupied by families belonging to a group D in the beginning of the year. Tables 1 and 2 present these probabilities by groups for ownership and renting. The replacement of a tenant of the same group is a strong candidate mechanism for gaining cultural dominance in time.

The transfer of flats to Bangladeshi newcomers, both owned and rented, is significantly higher than with other groups. It seems that other groups (mainly Eastern European) also apply this mechanism, which can be viewed as a powerful generative order, organizing residential patterns through the long term. This practice creates a residential continuum in respective buildings. Bangladeshi families can thus be assured that the level of community members in their building will not decrease following some instance of non-standard residential behaviour by one of them.

Period (Ownership)	Bangladesh	East-European	India, Pakistan, Sri Lanka	East Asian Pacific
1995-2012	0.99	0.27	0.38	0.18

Tables 1: Averaged probability to replace the family of the other sect in a flat, Whitechapel Road

Period (Renting)	Bangladesh	East-European	India, Pakistan, Sri Lanka	East Asian Pacific
1995-2012	0.66	0.48	0.31	0.19

Tables 2: Averaged probability to replace the family of the other sect in a flat, Whitechapel Road

Data obtained from local estate agents (Claremont, Lourdes (since 2005), Chase Evans, Falcon (since 2010)) and former residents enabled reconstruction of the gradient of prices and an examination of the market dynamic as of 1995 (Figure 4):

1. Intensify: two flats purchased randomly by Sylhetis above market price (1st significantly above the market price, 2nd slightly over)
2. Sustain: after the purchase of flats 3, as the number of Sylheti inhabitants increased, prices fell far below market level and stabilised around 75% of the market price. An internal-market had emerged, and Whitechapel Road became identified with the Sylheti population. Prices inside the community territory decline, creating a property line along the road.

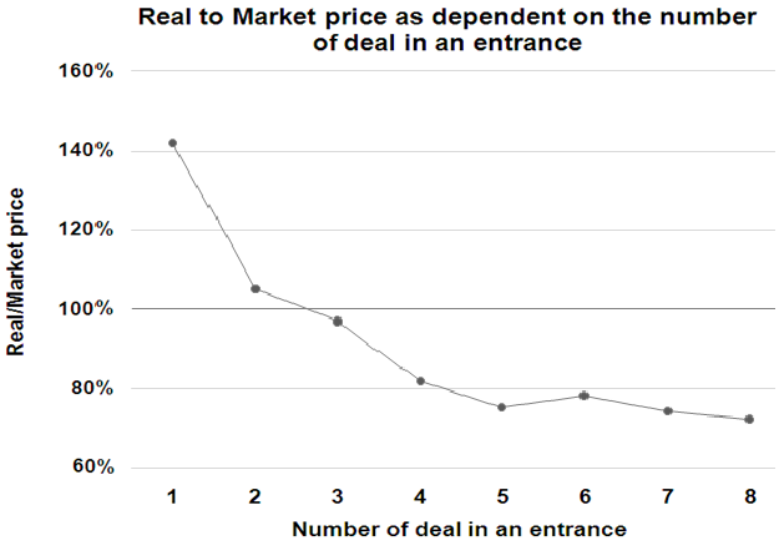

Figure 4: Average selling price to market price ratio as dependent on the sequential number of flats among those sold by the veteran Sylheti community.

Twenty-one interviewees explained the need to preserve the identification of the road with the Sylheti community as a reaction to the gentrification process: Saba (53), preoccupied with a possible loss of individual cultural identity and the uprootedness of a society that is more and more similar to a market in which nothing prevents the stronger from dominating the weaker: "I am worried about an oncoming blending of local culture, as other multinational chains follow Starbucks into the area and attempt to gentrify it with their bland corporate décor and homogenous facades. We must defend our area and culture from taking over". Puja (34) adds: "I see Shoreditch, about a mile from here, that every venue have the same hipster formula applied. There's no place for identity anymore". Abida (26) claims: "It feels that the East-End becomes a playground for the rich and Japanese. We are worried that property prices soar pushing us, the original residents, out. We'd better sell inside.". As of 2002, indirect collaborations had succeeded in strengthening the Sylheti presence on Whitechapel Road. Collective behaviour thus attracted Sylheti newcomers. The area designated as Sylheti territory was marked by its own market prices, increasing the community members' sense of place, and improving their ability to cope with local challenges.

GROUP ACTION OF THE "KOL-TORAH" COMMUNITY

In order to understand how group action works, this research examined the rapid occupation of Zangwill Street by the Kol-Torah community between 2002 and 2009. The rapid process indicated the abilities of an organised community when it competes with non-organized individuals. Figure 5a,b illustrate the two stages in the group's penetration:

1. Lone pioneers identify flats for sale and enter them gradually (2002–2004).
2. Massive penetration turns a 'non-hostile' into a 'friendly' area (2005–2007).

The rapid movement patterns were well planned. The designated area was marked by the leaders of the community. In 2002, three Kol-Torah families purchased flats in different housing projects. By 2004 a few Kol-Torah families were living in Zangwill Street.

Figure 5a,b: Spatial intervention of Kol-Torah to Zangwill Street 2002 and 2008

Data obtained from local estate agents (Bunin, E. May 14, 2009; Stern, S. May 14, 2009; Sternberg, C. May 17, 2009) and former residents enabled reconstruction of the gradient of prices and an examination of the market dynamic as of 2002:

1. Penetration: two flats purchased by Kol-Torah above market price.
2. Before “tie-break”: flats 3 and 4 purchased below market price.
3. Emergence of an internal-market: Zangwill Street becomes identified with Kol-Torah community. Flats switch hands rapidly, from secular population to Kol-Torah. Prices inside the community territory rise again, creating a property line around/within its boundaries. According to realtors, the community organisation provided financial support to the Kol-Torah “spearhead”. The first secular residents to sell their flats received approximately 20% more than the market price.

Until 2005, some 35% of the purchased flats were randomly distributed between the buildings. As the number of Kol-Torah inhabitants increased, prices declined and even fell below market level, but when the street became more popularly accepted, prices rose again (Figure 6).

As of 2006, Haredi direct collaborations had succeeded in strengthening the Haredi presence on Zangwill Street. Group actions motivated by ideological practices expanded the group's territory while segregating the group from other Haredi and the veteran population of the neighbourhood.

Figure 6: Average selling price to market price ratio as dependent on the sequential number of flats among those sold by the veteran to Kol-Torah, for each section.

Thus, in both areas the communities were able to create and maintain a homogenous segregated pattern. The realtor Andy Masey described how processes within the Sylheti community affected prices: "Sylhetis want to live together, and Whitechapel Road is the living room of the community. Everything is happening there and it is highly important to keep the road as Sylheti. People live there mainly in ownership and transfer flat[s] within the family. Other people described the area as 'dodgy' and avoid it. Actually, if the prices are much lower than the area, people avoid even viewing a flat there". While this process in Whitechapel Road happened in more than a decade, inner pressure inside the Sylheti community expedited this process. Today, the Sylheti community has succeeded in dominating Whitechapel Road, and almost all the 642 families living there belong to the Sylheti community.

Similarly, almost all the 347 families living in Zangwill Street belong to the Kol-Torah community. Single flats that still belong to secular residents are either publicly owned or business locations (i.e., a dental clinic) . The realtor Shlomo Stern described the inner-communities market within the Kol-Torah community: "When an area is designated as Haredi, demand increases. People fear that flats will be 'snapped up', and that they will lose the opportunity to live among friends, so that they must wait for another area to be "kosher", perhaps farther away. This causes housing prices to rise. The market which drives the price rise here is not secular or mixed, but within the Kol-Torah community itself. So ultimately the buyer is the one who receives more from the community's funds ."

Analysing the 'substantive micro-politics' of planning (Flyvbjerg and Richardson, 2002: 53) behind the unfolding of societal events shows that while the borders created from the Sylheti's collective behaviour (Figure 3a-b) are weak and flexible with other communities living nearby, the borders resulting from Kol-Torah's group action is clear and defined (Figure 5a,b).

5.3 POTENTIAL FOR NDM

WHITECHAPEL ROAD: NATURAL DYNAMIC FOR INACTION

Sylheti individuals, holding a more or less generally accepted set of shared beliefs, including common discontents over both the gentrification process and the recent arrival of Dhaka Bangladeshis into the area, gathered around their common purpose of preserving identification of the road with the community. An important insight from Bachrach and Baratz's work is that in order to explore the role of power (1963) it is important to understand that the deliberation of issues within the formal decision making chamber is only part of the process. This has considerable methodological implications with respect to the creation of relatively structured forms of collective behaviour.

As a sociocultural movement, the Sylheti community developed strategic views to deal with conflict, and made use of legitimate and accepted forms of collective action, such as public demonstrations, recruitment and bloc voting in attempts to increase their numbers along Whitechapel Road. As part of this effort, Lutfur Rahman was elected as a Labour Councillor for the Spitalfields and Banglatown ward from 2002 to 2014. He was re-elected at the 2014 mayoral election, but reported by his agents as being personally guilty of diverting over £3.6 million of grants to charities run by Bangladeshis and Somalis in a way that constituted electoral bribery, spiritual intimidation of voters, postal vote fraud, fraudulent registration of voters, illegal payment of canvassers (BBC, 23 April 2015) and of establishing a "culture of cronyism" at the council. John Biggs, elected on 2015 as the Executive Mayor of Tower Hamlets, said that "too many people have been squeezed out of the borough by the unaffordability of housing".

Although Tower Hamlets politics may operate its own special eco-system (The Guardian, 10 June 2015), the driving force of the succession process in Whitechapel Road is competition for housing between newcomers and the local Sylheti population. This process, moderated by the exchanging of flats inside the community, involves a chain reaction, with each preceding immigrant wave moving outwards and being succeeded by more recent, poorer immigrants. Since the final pattern of segregation along the road is seen as a natural equilibrium, the desire to live together leads to refraining from making a decision. Martin Ling, the Interim Housing Strategy & Partnerships Manager of the London Borough of Tower Hamlets explained: "Sylheti segregation along Whitechapel Road is natural. It is not relevant to most of the population and its economic aspect is close to zero compared to the other major planning aspects, such as affordable housing and further improving the quality of the environment".(Ling, M. 24 June 2014). Thus, the moral and political legitimacy of NDM regarding Sylheti segregation along Whitechapel Road stems

from an ability to allow the preservation of a democratic planning system rather from an ability to bring about willingness to make mutual compromises.

ZANGWILL STREET: A DELIBERATE DECISION FOR NDM

Beyond the analysis of conflicts and the study of hidden forces that constrain the agenda, Lukes (1974: 24) argues that Bachrach and Baratz's conceptualisation of non-issues within a conflict focus misses the potential power of actors, in particular the state, to shape people's perceptions and interests through the operation of an ideological hegemony (1974: 18-20). In the context of Haredi opposition to a proposed policy, as the number of the Kol-Torah's representatives and their influence on the legislature increases, their ability to state NDM and claim resources increases accordingly. Since public resources are limited, the uncompromising need of the Haredi sub-sects for segregation institutes and encourages activism in contravention of planning permission regulations. Rabbi Elyashiv's instruction "Don't give in even if you break the law" encouraged the group's members to achieve their sectorial goals through construction in violation of a permit/without a permit and anomalous use/change of designation (Katz, 2009). Although the municipality`s Department of Licensing and Supervision was aware of the illegal activity taking place, it was powerless to enforce planning laws in the Zangwill Street area (T. Katz, May 29, 2008) .

Organized non-Haredi efforts began in August 2008, when the haredification process in Zangwill Street was at its height, and the non-Haredi population saw other parts of the neighbourhood as under threat. The direct cooperation of the Haredi with their community created pressure on the residents, who were exposed to limitations such as restrictions on traffic on the Sabbath and holidays. Some non-Haredi residents decided to establish a voluntary group named 'Action Committee to Preserve the Character of Kiryat-Ha'Yovel' (Nahum-Halevi, 2009). The committee criticised the authorities for neglecting their responsibilities by stating NDM, and refused to accept the renunciation of the authorities from what they saw as their role. The secular presence in public space was intended to influence residents to refrain from selling their flats to Haredi and to present a united front to influence the municipal decision-makers to defend "their rights" and stop sectarian allocations of public resources. In collaboration with the community council, the legal adviser to the municipality, and municipal planning institutions, the committee demanded that planners intervene in the development of the neighbourhood and promoted legal action to prevent the unlawful allocation of public resources to the Haredi.

In practice, a broad coalition of various Haredi sectors of the city's population has limited the mayor's ability to influence local processes; the office avoided issuing policy interventions in the conflict. Bin-Noon, head of the Municipality's public building division, explained: "We have no full understanding and no ethical value to cope with conflicts between diverse population groups. We are powerless to enforce planning laws in the neighbourhood and avoid intervening in this process". Despite the municipality's support in the initiation of an outline plan that provided a comprehensive planning framework for the neighbourhood and the inclusion of issues of sectarian allocations and illegal activity on the public agenda, the veteran population was unable to protect their living space from being taken over. The haredification process continues to occupy space, claim resources, and affect lifestyle.

To conclude, deep social and cultural roots lay behind Tower Hamlets's and Jerusalem's authority's decisions for refraining from decision making. East End politics have often been complex and fiercely fought outside the political mainstream amid poverty, marginalisation and change, and overlapped with religious issues. Similarly, Israeli society is characterized by substantive rifts and controversies that touch upon the character of the nation, the economic policy, and the "Jewish" identity of the state. The connection between cultural roots and planning is pertinent to policy scholars who wish to study policy issues and debates across countries and policy areas, in terms of both explanatory research and prescriptive policy analysis inspired by culture and policy (Akerlof and Kranton 2010; Béland 2016). In both cases, the desire to cooperate in circumstances riven with a proliferation of rifts is what leads to refraining from making a decision in disputes of principle. While Sylheti segregation along Whitechapel Road was conceived as a natural population dynamic and thus did not require planning intervention, Kol-Torah influenced planning decisions, deploying them for sectoral goals. Unlike the Kol-Torah community, Sylhetis do not intend by these actions to make these practices binding on the general population. The impotence of Jerusalem's system to regulate resources and enforce planning laws weakens the individual's ability to withstand the pressure of the organised group, and the fear of being a minority and the daily restrictions motivated individuals to leave.

6 SUMMARY AND CONCLUSIONS

This paper has examined how the policy maker's 'decision not to decide' affects different levels of internal organization and is reflected in the residential patterns of different population groups in Zangwill Street, Jerusalem, and in Whitechapel Road in East London. Jerusalem is ethno-nationally divided and contested. Particular groups can 'break the law' with some impunity while claiming to 'uphold the law' - this is a feature of contested states. It weakens the autonomy of the state (including planners) vis a vis pro-state grassroots activism, whether that stems from settlers, paramilitaries or ethno-religious groups. Although the situation in London is very different, current planning processes and institutions appear to be unable to balance the competing interests of familial and tribal groups living in western and democratic societies.

This research aims to address the conspicuous dearth of micro-resolution studies that identify the complex residential dynamics of groups, contending that in order to examine residential processes one must refer to the fundamental social structures and values from which affected communities draw their strength. This research is therefore aiming to shed light on the ways in which spatial and cultural logics intersect in the urban realm, to open up the possibility of an integrated understanding of the development of the city. Moreover, it represents a real breakthrough in state-of-the-art analysis of residential dynamics in dense inner-city neighbourhoods with wide-ranging implications for informing planning policy. The motivation of policy makers to adopt the policy of NDM regarding residential behaviour should be combined with theories that underestimate the role of different levels of cooperation in governing segregation processes. Under NDM conditions, housing prices serve the process of creating and maintaining enclaves. A combination of limited range of application, which also affects the economic aspect, as well as the desire to avoid controversy about issues that pertain to state and religion, are what motivate policy makers to refrain from making a decision. By applying temporary and local arrangements in Whitechapel, this option allows policy makers to refrain from making unequivocal decisions regarding potentially inflammatory issues, to avoid institutional discord, and to be at liberty to deal with other issues which are ranked higher on the list of priorities of the city and of the media. In light of the relatively low number of people that would be affected and other pressing issues requiring the attention of politicians, the lack of a decision has not been shown to create any loss. Despite some resemblances, the organised entry into Zangwill Street differs from the classic invasion–succession model, according to which relatively free individuals move spontaneously into areas of higher-status populations, using private capital, and also from racial blockbusting in US cities, which involved planned invasions even if the newcomers were not the planners. In Zangwill Street, the group action was supported by community capital and organised implementation. Direct collaboration of individuals with their leadership has inserted the language of Kol-Torah into Zangwill Street, re-shaped the boundary between acceptable and unacceptable uses.

In-depth door-to-door surveys have indicated the way how, under NDM conditions, housing prices serve the process of creating and maintaining enclaves. The housing prices along the Sylheti enclave of Whitechapel Road are significantly lower than those of similar flats on the road, and are drawn by flexible boundaries. The gradient of prices on Whitechapel Road shows a steep drop in prices, and after that a moderate drop in the wake of the formation of an internal market. Unlike the Whitechapel case, the housing prices in the Haredi enclaves are significantly higher than similar housing in the area, which has drawn the boundaries between identities and provided a particular usefulness to the larger mission of the haredification of Kiryat-Ha'Yovel. The gradient of prices on Zangwill Street shows a moderate drop and after that a rise, in the wake of the formation of an internal market. When the veteran population left, there was a sharp decline in prices. Individual cooperation with the group's action is evident in the dramatic increase in housing prices after the "tie-break". Thus, the creation of an inner community housing market, different from its surroundings, improves individuals' ability to cope with the urban challenges within a defined community space.

Along with the advantages of opting for a NDM policy regarding residential dynamics, there are also significant disadvantages. In the narrow sense, preferring this type of policy concerning residential behaviour and applying an attitude of "natural dynamic" to cases that are not specifically designated as collective behaviour, but also to group action, limits the individual's ability to safeguard their spatial rights and maintain their social practices. In the broader sense, the absence of support from a specific agency responsible for collecting and analysing data about residential behaviour to represent the veteran individual residents, their inherent lack of collaboration and cohesion, weakens their ability - as well as the ability of the authority/council - to identify and cope with group behaviour. This paper accepts that such a state of affairs may be temporary. As stated, the impact and pressure of cooperation - both the range of

application and the economic aspects - emerging between relatively free individuals on neighbourhood structures is rising, evoking planning policy issues that current planning systems cannot address. Thus, the ability of the policy makers to ignore them and avoid making a decision is limited. Because its dimensions are projected to keep growing worldwide, the issue will become more intense and may override the ability of decision makers to employ the benefits of refraining from making a decision.

This study contributes two new ideas to the knowledge base of planning policy. The first is the detailed construction of an explanation for the contribution of policy makers to such processes of NDM, and the second is 'terrain of Inaction'; an idea describing day-to-day residential mechanisms that sustain the initial structure of enclaves in respect of the housing market rule in maintaining the enclaves. As Lukes' framework suggests, providing a framework which accounts for all three levels of power (observable conflict, non-decision making and the shaping of actors' preferences) while integration is still in its early stages, enables us to understand these constraints of power and opens up the potential to debate alternative processes and models of integration. In the absence of a shared civil society, this process can also be seen as a bottom-up reaction to the changing role of public policies in developing cities. The increasing involvement of groups trying to undermining the institutionalised logic of economics, identities, governance and cultural norms could be relevant to many other situations.

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ID 1365 | 'SOCIAL INNOVATION' AND CONTENTIOUS URBAN POLITICS: QUESTIONING THE INNOVATIVE POTENTIAL OF CONTESTED URBAN DEVELOPMENTS IN BERLIN

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1. 'SOCIAL INNOVATION': DEFINING / SITUATING THE CONCEPT

1.1 SOCIAL INNOVATION AS EMERGING CONCEPT IN URBAN STUDIES

The concept of 'social innovation' has gained increasing popularity over the last ten years, both in academia – where it has emerged as a key term in urban studies literature – and in the policy field. The term, which can be inscribed within debate about social change and social transformations (Moulaert et al. 2005: 1969), has been conceptualized according to different scholarly frames, following heterogeneous

disciplinary perspectives. This diversity has fostered a broad application of the term in different domains, but has also led to difficulties in identifying the conceptual boundaries associated with its meaning, which is increasingly perceived as vague and neutral (Grimm et al., 2013; Busacca, 2013).

Discourses about social innovation have been framed in different (not necessarily mutually-exclusive) terms also in urban studies, varying with respect to the object of change, the meaning of innovation, the importance attributed to the social dimension of transformation processes, and its possible fields of application. In this paper, we will focus in particular on the frame that concerns social innovation in (local) territorial development.

Following the 'territorial' approach, emerged in the 1990s, social innovation in and for local development is primarily conceived as a response to social exclusion dynamics and to the difficulties traditional public systems (including welfare ones) face in dealing with changing societal needs and in addressing 'wicked' challenges (Caulier-Griece at al., 2013: 5; Borzaga and Bodini, 2012). It is conceptualized as both the (positive) outcome of social transformation processes and the means through which social improvement can occur. This only takes place "when the mobilization of social and institutional practices succeeds in bringing about the satisfaction of previously alienated human needs, the relative empowerment of previously silent or excluded social groups through the creation of new 'capabilities', and, ultimately, the changes in existing social – and power – relations towards a more inclusive and democratic governance system" (Gonzalez et al., 2010: 54). These conditions refer to what Moulaert et al. (2005: 1976 2010) define as the three main dimensions of social innovation. The product dimension focuses on "innovation in the conceptualization, design, and production of goods and services that address social and environmental needs and market failures" (Nicholls and Murdock, 2012). The process dimension focuses on the redefinition of organizational arrangement and on restructuring of social relations in more socially inclusive terms. This is related to governance innovation, but it also encompasses the reconfiguration of social practices (Howaldt and Schwarz, 2010). The third dimension is more directly related to the empowerment of the actors involved, and it is based on the (progressive) assumption that "individuals and communities can muster the passion and have the capacity to self-organize and self-manage in equitable and inclusive manners" (Swyngedouw and Moulaert, 2010: 221).

Elaboration of this multidimensional understanding of the concept in relation to urban and local development has led to the definition of a broad, comprehensive framework ('Alternative Models for Local Innovation' -ALMOLIN, see Moulaert et al., 2005; Gonzalez et al., 2010), which is conceived both an analytical device, i.e. "a descriptor for a set of practices" and an interpretative-normative framework for fostering transformation.

This addresses social innovation as "an emerging phenomenon, a theoretical construct and an ongoing field of research within a world of social transformation" (Moulaert et al., 2013: 2). In this context, reference to 'social innovation' is explicitly intended to counterbalance narrow technology-centered approaches to innovation policies, by proposing a more open view about human development, empowerment and local mobilization capable of overcoming technocratic approaches to urban planning (Moulaert et al. 2005). At a conceptual level, social innovation emerges from a "progressive vision" (Swyngedouw and Moulaert, 2010: 221) based on solidarity and reciprocity values (Moulaert and Nussbaumer, 2008) that assumes that individuals and communities affected by marginalization and exclusion and suffering from the effects of uneven power allocation in existing political configuration can redefine their position through self-and re-organization. Social innovation therefore takes place through the involvement of new constellations of actors, including representative of civil society associations, institutional actors at different scales, as well as private stakeholders (Cattacin and Zimmer 2016: 23), it develops through the creation of new governance arrangements and it spreads within "networks of co-operation between community agents" (Moulaert et al., 2005: 1977).

While potentially supporting democracy and citizens' empowerment, the broadening of the political arena and the definition of new governance arrangements also present some contradictory tendencies (Swyngdouw 2005: 1992 ff., see next paragraph). On the one hand the inclusion of different actors could contribute to re-define the city as "a terrain of spatially-informed politics" (Dikec, 2002: 94, see also Swyngedow, 2009), by supporting the co-creation of shared and livable space, and by providing (disadvantaged) citizens with "the freedom to make and remake our city and ourselves" (Harvey 2008: 23). On the other hand, the "gradual blurring, if not erasure, of the lines of demarcation between state, civil society and market" (Swyngedouw and Moulaert, 2010: 224) potentially embedded in bottom-up practices is exposed to the fallacies related to the so-called 'democratic deficit' of governance arrangements, e.g. in terms of representation, accountability and legitimacy (see van den Dool et al., 2015: 18 ff.; Swyngedow, 2005: 1999 ff.). This blurring can also lead to the strengthening of "neo-communitarian local regimes within a global neo¬liberal turn" (Gerometta et al., 2005: 2010), while the increasing relevance of private actors may (further) support neo-liberal urban development models (see Swyngedouw et al., 2002; Fainstein, 2014), which aim to convert civil society in a "flanking, compensatory mechanism for the inadequacies of market mechanisms" (Jessop, 2002: 455).

The understanding of social innovation advanced in this framework poses big emphasis on path-dependency and contextual dynamics, thus attempting to go beyond uncritical and ahistorical conceptualizations. Localized contextualization plays a relevant role in defining its critical-realist attitude. More specifically, social innovation is conceived as bearing potential to trigger "the transformation of societal relation in space, the reproduction of place-bound and spatially-exchanged identities and cultures, and the establishment of place-based and scale-related governance models." (Moulaert, 2009: 12).

The local scale is maintained to be the privileged focus for the development of social innovation practices (Moulaert 2009: 16), which develop within constantly ongoing processes of social and political re¬structuring. In order to avoid 'uncritical localism' and the local trap (Purcell 2006), the local scale is conceived as an 'entry point' for action which is embedded in a broader trans-scalar framework of relationships (Gonzalez et al., 2010: 50). In particular, urban neighborhoods are considered as "pivotal sites for initiating and implementing social change that may ripple through the city" (Moulaert, 2010: 5), whereby locally based initiatives are the ones that "can galvanize a range of publics to engage in initiatives that have city-wide impacts on the dynamics of urban cohesion and social development" (ibid.). Social innovation therefore takes place starting from the action of "spatialized urban communities […that have] a powerful, area-based political and analytical meaning as the real life setting where needs resulting from exclusion can be satisfied, where initiatives grow and are established and which serve as springboard for multi-party, multi-governance dynamics" (Moulaert et al. 2010: 7).

The framework highlights the centrality of (local) public and institutional actors along the development of social innovative processes. Unlike other approaches, the local development perspective of ALMOLIN considers forms of grassroots collective action as complementary to the action of the local state, and both "public and private agencies seeking to overcome situations of exclusion" (Moulaert et al. 2005: 1986) as required. Specific attention is provided to interactions among actors and to the 'governance' dimension of social innovation, which "includes the interaction with and the embedding into the political-administrative system of the democratic state of the country where the communities belong", implying that social innovation also "means innovation in representative democracy and governance state institutions" (Moulaert et al., 2005: 1973).

The dimension of governance innovation appears takes a key position in terms of both necessary means and outcome of social innovation processes. As a mediating and empowering factor of social innovation, governance practices are assumed likewise to foster reflexivity as a means for social transformation and to become a reflexive outcome of social transformation.

1.2 CRITICAL ELEMENTS: QUESTIONING THE NORMATIVE ASSUMPTIONS OF 'SOCIAL INNOVATION'

Several points of critique have been raised to 'social innovation' and its use. The concept is often perceived as "poorly defined and demarcated" (Brandsen et al., 2016: 4), and as "stretched in so many directions that it is at a breaking point" (Grimm et al., 2013: 236). As a discourse, it is seen as articulated in ahistorical and uncritical terms (Busacca, 2013), and perceived as deceivingly neutral. Accordingly, it is seen as supporting neo-liberal processes and promoting an increasing centrality of private and entrepreneurial actors in public policies.

Any critique of 'social innovation' as a concept and as a discourse, however, is relative and must be critically related to the area of scholarship and of policy to which it refers. For our purposes, it is important to keep a focus on the features it takes in the area of urban and local development studies.

Reflecting on the general articulation of innovation discourse in the urban domain, Shearmur (2012: 9) argues that "the term, laden with positive normative associations, hides not only a multitude of processes that all lay claim to being innovative, but also gives little indication of why innovation is necessary, whether it is also a good thing, and, if it is a good thing, who benefits from it". This is a good starting point for our discussion. While some of these issues are explicitly addressed in currently prominent models of 'social innovation', questions concerning the intrinsically positive normative value associated to social innovation appear to be justified on the basis of a critical scrutiny of both its analytical and normative assumptions (see Larsson and Brandsen, 2016: 294; Phillis, 2008; Mulgan, 2006).

Considering social innovation as an analytical framework, several critics observe that its comprehensive, holistic character may lend itself to categorizing as 'socially innovative' a broad range of heterogeneous phenomena, differing and diverging in terms of, features, scope etc. In this sense, Jenson and Harrison refers to social innovation as a "quasi-concept, […[making use of empirical analysis and therefore benefitting from the legitimizing aura of scientific methods, but simultaneously characterized by an indeterminate quality that makes it adaptable to a variety of situations and flexible enough to follows the twists and turns in policies" (European Commission, 2013: 16). This, again, entails the risk of an

instrumental use of the 'social innovation' concept, as it may analytically support the legitimization of practices that are not effectively oriented towards socially inclusive change.

Considering social innovation as a normative framework, a set of key normative assumptions can be recognized:

- social innovation involves trust in dialogue and cooperation among parties interacting in a collaborative public sphere. It is premised on an associative understanding of the political arena: the existence of an open public sphere is assumed (cf. Gemerotta et al., 2005) where the re-articulation of interests is possible. Within this collaborative space, "socially innovative experiences can develop, interact and penetrate into urban governance relations" (ibid.: 2008). The right and the capacity to access to the public sphere are seen as requisite;
- social innovation focusses on social needs that have been ignored, neglected, or not effectively addressed by public action;
- social innovation expresses an explicit ethical position of social justice, recognizing social inclusion as a main goal of public action (Swyngedouw and Moulaert, 2010: 222; Gonzalez and Healey, 2005: 2055).

As highlighted by Larsson and Brandsen, these "normative assumptions tend to obscure the dark side of the phenomenon such as failure, political conflict and oppression" (2016: 293) that is necessarily part of social change processes and that are intrinsically related to socio-spatial transformation. As also highlighted by Martinelli, forms of social innovation promoted by community, grassroots and neighborhood initiatives at the local level are often "strongly critical to the system, but [with] no intention to overturn the existing order" (Martinelli, 2010: 35). In this respect, for instance, the territorial approach distances itself from more critical and radical positions (defined by Moulaert et al., 2005 as 'another world is possible' approach: 1977 ff.) based on participatory democracy and collective mobilization. It therefore positions itself in a critical-pragmatist and ethical-reformist tradition enriched with a subsidiarity-based, grassroots-oriented social policy.

While legitimate, this position raises questions concerning the conditions for the realization of an open, collaborative and associative public sphere.

A first question concerns in how far a re-articulation of interests aimed at socially inclusive processes is subject to 'power geometries'. This highlights possible contradictions with respects to the recognition of social initiatives. On the one hand, the relevance of spontaneity, self-organization, grassroots experimentation is recognized in the process, and creative and spontaneous practices are held to have a higher innovative potential. On the other hand, the role of third parties is always conceived as complementary to public action. This contrast with critique of the idea of 'governance innovation' as articulated e.g. by Swyngedouw (2005), when he points out features of 'selective inclusion' of innovative models of governance and their tendency to support non-representational forms of autocratic technocracy and the consolidation of beyond-the-state arenas of power intermediaries. A second question concerns not only understandings of 'social justice' and of 'needs' and 'rights' for and by whom, but also how (ant)agonism is considered and what role it can possible play in their (re-)articulation.

As it apparently skips and/or elides social antagonism as a relevant dimension of analysis, and as it defines itself according to a set of normative principles concerning social and political agency, social innovation discourse incurs the risk of becoming self-referential and self-serving, and the case-studies chosen to make its point of being little more than deductive illustrations of its principles. That carefully chosen case-studies may fit the self-representation of social innovation, however, does not per se redeem it from possibly being counterfactual.

No question that the local-territorial approach to social innovation moves from a critical-progressive tradition which pursues a socially emancipatory project. In order to express its critical potential, however, discourse on social innovation would require to be corroborated, to be exposed to systematic falsification by contrasting its (normative) principles with (analytical) observation of the conditions under which claims for social transformation are raised and social innovation may (or may not) successfully emerge and develop. In order to do so, in other words, the (perfectly legitimate) normativity of social innovation would require to be backed by an adequate critical analytics.

2. SCOPE AND METHODOLOGY OF THE PAPER

In order to position discourse on 'social innovation' in a domain of critical urban research that addresses key challenges of contemporary urban policy, we need, first, to discern reference to the concept within its broader and somehow contradictory scholarly field and, second, to articulate a critical position on the concept within this domain. This means, in particular, addressing in how far the concept of 'social

innovation' is a viable analytical-interpretive contribution to understandings directions of evolution and change in public policy and governance practices and its contradictions and challenges.

Our critical position is therefore based on an attempt at constructing a framework for critical reflection on issues raised by the concept of 'social innovation'. In order to make this possible, we argue that there is need:

- for serious empirical grounding and assessment of discourse on 'social innovation', based on analyses open to recognizing its implications;
- for recognizing contradictions between the analytics and the normativity of 'social innovation' discourse.

We raise these issues also in view of their relevance for empirical research designs: firstly, in the sense that most the empirical case-study material produced by literature on 'social innovation' is framed deductively in a way which tends to sideline issues of domination and hegemony in the framing of policy and governance practices; and, secondly, in the sense that precisely highlighting these aspects is critical to recognizing the potential for rhetoric and manipulation involved in the adoption of 'social innovation' as a policy concept.

The paper accordingly adopts a tentative methodology which does not direct analysis – in somehow deductive ways – towards challenges, conditions and degrees of fulfillment of a normatively predefined understanding of 'social innovation', but frames analysis according to a methodological distinction between the analytical and normative dimensions of the concept:

- firstly, by analytically and interpretively addressing the nature of 'social innovation'– in process and outcomes – in the empirical cases at hand;
- secondly, by assessing in how far this either fits or contradicts – in process and outcomes – normative pre-assumptions of 'social innovation' discourse.

Our approach is therefore tantamount to inserting for heuristic purposes a 'critical wedge' in the contradictions between the analytics and the normativity of 'social innovation'. While it is obvious that normative understandings of the object of 'social innovation' frame action in significant and possibly even progressive ways, we are interested in analyzing the way they are defined and positioned in an arena which is potentially (ant-)agonistic and in which they interact with other understandings. The ensuing question is therefore in how far the outcomes of such interactions are to be understood as 'innovation' and in which sense.

The cases chosen reflect a variety of situations raising the issue of 'social innovation'. Their choice is exploratory and does not aim at a most-similar comparative design. In this respect, our approach is not primarily driven by a logic of comparison, but by a critical interests in the dynamics of innovation and in its contradictions. After a brief introduction to the features of the case, the cases-studies address three main analytical dimensions:

a) the nature of the policy issue, as defined and/or acknowledged within the framework of institutional policy settings and governance practices which define the policy: this entails an analysis of the way specific social needs are selectively defined, recognized and included to become part of the definition of the policy issue, as conveyed by (dominant/hegemonic) narratives and frames;
b) the nature of the policy issue, as re-defined through the emergence and evolution of forms of political contention and (ant-)agonistic social mobilization which articulate, challenge, and possibly contradict the framework of institutional policy settings and governance practices which define the policy: this entails an analysis of the way social claims are defined in a process of contestation and critical re-articulation of the definition of the policy issue, as expressed by (alternative/counterhegemonic) narratives and frames;
c) the nature of actors and of their strategic-relational practices as they develop in the course of the re-articulation of the policy through the emergence of (ant-)agonistic claims.

3. 'SOCIAL INNOVATION' AND CONTENTIOUS URBAN POLITICS IN BERLIN: THREE CASE-STUDIES

In light of our critical discussion, we now explore its application to the analysis of selected case studies currently taking place in Berlin. Our aim is to understand in how far the social innovation framework fits a critical analysis of the way 'needs' and 'claims' emerge and are articulated in socio-spatial transformation processes characterised by different levels of contention and antagonism. The case studies have been

selected – among a broader range of cases analysed[1] – and discussed according to their relevance to the purposes of the paper, in terms of raising questions which challenge both the analytical and the normative dimension of the 'social innovation' framework.

The case-studies are structured as follows. After a brief description of the case and of its evolution, the 'needs' that trigger the development of the transformative dynamics under study are identified and defined, possibly identifying diverging perspectives. Secondly, the object is redefined in terms of 'claims', with peculiar attention to the demands raised by different actors and by forms of mobilisation emerged along the process. Third, strategic and relational patterns developed by involved actors are considered. Finally, some preliminary critical reflections (to be further developed in the next paragraph) are presented.

3.1 DRAGONER AREAL

The Dragoner Areal is a 4.7 ha area located in Kreuzberg, a central neighborhood increasingly interested by gentrification dynamics. The area is owned by the Bundesanstalt für Immobilienaufgaben (BImA, the federal agency in charge for the administration of state-owned property) and hosts a former military barrack (about 82,000 sqm, 10,000 of which listed as heritage site), currently partially vacant and partially rented to small commercial enterprises. The area is one of the last public spaces with a potential for transformation in a neighborhood where – as in whole city – housing demand is constantly increasing and available building

Space is getting scarce. It is therefore particularly valuable for private investors, who tried to purchase it as soon as it was acquired and then auctioned by the BImA in an open highest-bidding procedure. In 2012, an investor bought the area with a plan foreseeing luxury property apartments, but also due to the refusal of local government to change the land use plan – which allowed only commercial uses on the area – it soon withdrew from the contract. In the ensuing months, a growing opposition to the privatization of the area arose, leading to the foundation of Bündnis Stadt von Unten (SvU, literary 'Bottom-up City'), an alliance of local tenants, activists, professionals and citizens opposing the allocation procedure and any form of speculation on the area and demanding its designation for social housing. Nevertheless, BImA started a new bidding procedure, resulting in sale of the area to another investor at double the price. Despite opposition by local government and the campaigns carried out by SvU and other initiatives, the Federal Parliament (Bundestag) approved the sale in 2015. This decision was followed by a further intensification of the initiatives launched by SvU that, in collaboration with other (anti-gentrification) grassroots groups, tried to exert pressure on the Bundesrat (the Federal Council representing German federal states), the vote of which was required in order to legitimize the decision of the Federal Parliament. Thanks also to City of Berlin's influence and to local district's opposition, the Federal Council ultimately voted against sale of the area. Despite initial resistance of the Parliament, in 2015 BImA cancelled the contract with the investors. In the following months, Dragoner Areal was declared a 'redevelopment area' by the Berlin Senate. In 2016 the new red-red-green government of Berlin integrated some of the instances of SvU in the coalition contract, which foresees the implementation of affordable living and working spaces as well as participatory processes including local associations. At the beginning of 2017, following recent political pressures, BImA announced that there is no intention to sell the area in the near future.

As its evolution shows, the Dragoner Areal case bears features of a dispute developing along different dimensions. On the one hand, there is a substantial dispute (cf. Dziedzicki, 2014) over the (future) use of space, which assumes a peculiar symbolic character given that the area is one of the last free spaces with a transformation potential in a neighborhood that has been strongly affected by gentrification dynamics and by privatization processes over the last decade (see, among the others, Holm, 2013). This can be located within a wider discourse about the unequal distribution of citizen rights which takes central place in the contestation of several transformation processes taking place in Berlin. On the other hand, there is a procedural dispute (ibidem) over the way decisions are taken – e.g. about the political value of the allocation procedure – as well as over the legitimacy of different public bodies responsible at different levels for the future development of the area. In order to disentangle these aspects, we consider the objects of dispute from different perspectives, considering claims emerging from different actors during its evolution.

A crucial position is played by the Federal State, the owner of the area, and by BImA, the agency responsible for the administration of federal state properties. The Federal State's interest in selling the area can be referred to a general debt-reduction strategy based on selling state-owned properties to the

[1] The cases presented here are part of an analysis conducted in the framework of a studio held in the B.Sc. in Urban and Regional Planning at TU Berlin in 2016-17, titled 'Facing Urban Conflicts: A Chance for Experimentation? Grassroots Responses to Contested Urban Transformations in Berlin' and further discussed at the joint student workshop Grassroot Innovation and Contested Urban Politics in Milan and Berlin held at Politecnico di Milano in May 2017. We acknowledge the contribution of students involved in collecting data and in analysing the case studies.

highest-bidding investors. The latter have a specific interest in acquiring and developing the area in the most profitable way, and therefore propose plans foreseeing luxury apartments and speculative uses. The highest-bidding allocation procedure is the key mechanism through which these interests are satisfied. When the most profitable conditions cannot be met, as in this case following local authority's refusal to change the building plan, investors loose interest in the area.

In this sense, a relevant role is played by Berlin's state government, the Berlin Senate, and by the District Administration of Friedrichshain-Kreuzberg. Local government faces growing housing demand due to the steadily increase of Berlin population, and has a political interest in providing livable and affordable living and working places in cooperation with district administrative units, as stated by both the Strategy 2030 (Berlin Senatsverwaltung für Stadtenwicklung und Umwelt, 2015) and the coalition contract (Berlin Senatskanzlei, 2016). The Berlin Senate opposed privatization in this case using different strategies. First, it negotiated with BImA and gained pre-emptive right to buy the area to a moderate price. Although this did not impede the second bidding procedure in 2014, this pre-emptive right may play a crucial role in the future resolution of the dispute. Second, opposition to privatization is exerted through planning tools. In a first phase (2013¬2014), the refusal to change the building plan forced the investor to withdraw from the contract. In a second phase (2016), designation as Sanierungsgebiet ('redevelopment area') opened the way to an alternative development of the area, including affordable and social housing, cultural projects and small businesses. Finally, Berlin's Finance Senator brought the instance to the Federal Council, which ultimately put a veto on the sale of the Dragoner Areal.

Finally, need for affordable housing is a key claim of grassroots initiatives involved in the process, which frame it in more critical terms as a claim to the 'right to inhabit', intended as the right to the re-appropriation of the city as a common good, implying inhabitants' collective right to use, produce and occupy urban space in a just, inclusive and sustainable way (cf. Purcell, 2013). This claim works as the focal point around which local initiatives such as Wem gehört Kreuzberg, Recht auf Wohnen and SvU organize their actions. Beside fair access to livable places, these civic initiatives also claim defense of diversity of the urban population and support for low-income and marginalized social groups.

SvU's claims, in particular, cover both the substantial and the procedural dimension of the conflict, insofar as they ask for 100% public property, 100% affordable and social housing to be 100% long-term secured, as well as socially-minded and self-determined administration of the area, proposing a direct involvement of people from the neighborhood. On the one hand, they criticize the allocation procedure established by the law and demand a more inclusive and decision-making process. On the other hand, the initiative and its network are proposing a pilot project for an alternative development of the area capable of including claims by different local stakeholders, including traders currently working on the area, neighbors, and other citizens groups. In pursuing their objectives, SvU used a variety of methods and a broad protest repertoire (neighbourhood activities, demonstrations, gatherings, events and network activities).

Although the conflict has not yet come to an end, it is possible to identify some elements characterizing it which are relevant for the purposes of this paper.

First, the dispute involved public administrations at different scales and led to a confrontation between national and local institutions. This led to a re-articulation of governance relations and to a growing centrality of local actors (both institutional and non-institutional). For the first time, the Bundesrat stopped a planned sale of state-owned property. Multi-level disputes over the decision-making process took place within representative political arenas, but were also strongly influenced by initiatives and campaigns proposed by activist groups. Furthermore, at least in the initial phase of the conflict, actions and initiatives aiming at social innovation were not launched by public actors, but promoted and strongly supported by grassroots movements through the use of a whole repertoire of collective action techniques which pertain more to direct and agonistic democratic action – relegated by territorial social innovation models into the 'another world is possible' tradition (cf. Moulaert et al., 2005: 1977).

Second, contradictions emerged in the way 'needs' are framed and defined at the local scale. The need for 'affordable and social housing', acknowledged by local government as a priority, can be certainly considered as one of the basic alienated needs not currently satisfied by public policies. However, this is strictly intertwined with more radical claims referring to the 'right to inhabit' and the right to accessible living and working place, as well as with structural critique which does not simply propose a redefinition of the role of local communities within the process, but challenge both the political legitimacy of representative institutions and the way decisions are made.

Third, the potentially innovative dynamics developed after failure of the first area sale, in terms of both process and outcome, is strictly related to the contested nature of the process and to initiatives taken outside representative arenas. This allows questioning some of the assumptions previously discussed, and call for recognition of the contribution that (ant-)agonistic practices can bring to the 'social innovation' debate.

3.2 SCHWARZER KANAL

Schwarzer Kanal is a 'radical queer wagon place' (see https://kanal.squat.net/) located on a city-administered lot in the District of Neukölln. The area has been occupied since 2009 by an association formed mostly by non-German activists belonging to discriminated minority groups (including lesbians, trans*persons, people of color, and migrants or refugees with different legal statuses). Currently, it is undergoing major change, since planning foresees a conversion of the area and the installation of the so-called Modulare Flüchtlingsunterkunft (MFU, 'modular refugee housing'). Conflicts emerging on the area raise relevant questions from a social innovation perspective. On the one hand, there is a strongly symbolic political conflict over the right of marginalized people occupying the area to exist and live in the city. On the other hand, this identity-based conflict is strongly intertwined with a conflict over for the use of space, which has been designated as a MFU and is at the same time reclaimed by the groups currently living there.

The Kanal project has been existing in Berlin for 30 years, and it exist in its actual form, as Schwarzer Kanal, since 2003. After having relocated several times, the wagon place was evicted from its last location in 2009. Following a large campaign aimed at gaining public support for a permanent location, they were offered by the Berlin Senate a three year contract for an undeveloped land parcel in Neukölln. When the contract expired in 2012, they started to negotiate over the future of the site with the Berlin Senate and in particular with the Berliner Immobilienmanagement GmbH (BIM, a 100% city-owned company in charge of managing public land). This resulted in an agreement proposal which involved an increase in rent prices and which was considered as 'racist' by activists, since it stated that the contract would be terminated immediately should shelter be given to refugees on the rental space (Scharzer Kanal Activist, interview, January 2017). Since their refusal to sign this agreement, the association has been occupying the space without a contract. The existence of the wagon place was finally put in question in 2015 when, as part of the political response to the massive influx of refugees into Germany, the Scharzer Kanal's site was first considered as a location for a MFU. In 2016 this planning decision was confirmed by the Landesamt für Gesundheit und Soziales (Berlin State Office for Health and Social Affairs, LaGeSo) and by the Berlin Senate. The proposed blueprints called for the entire plot to be cleared for construction but the Schwarzer Kanal, with support from the Neukölln District, was able to negotiate a modified plan allowing the group to retain half of their plot. Construction of the MFU has begun in January 2017.

Actors' needs and claims emerging along the evolution of the conflicts are articulated within heterogeneous and strongly divergent frames.

The Schwarzer Kanal group (officially registered as 'Schwarzer Kanal e.V.') adopts a radical perspective and is primarily concerned with a political struggle for the right of marginalized groups to live in the city. Their focus is on strife for overcoming dominant discrimination patterns, and the space they occupy constitutes the physical site for their resistance practices. They conceive themselves as an experimental, utopian project (Scharzer Kanal Activist, interview, January 2017) based on solidarity and aimed at supporting bottom-up activism, empowerment and self-determination among people who are marginalized in political discourses as people of color, women, lesbian and transgenders. The Schwarzer Kanal activists therefore aim to oppose to both structural racisms and its spatial consequences. From this perspective, the occupation of the space is aimed at counteracting gentrification dynamics, but also at guaranteeing an alternative and safe space for minorities which are excluded by the housing market because of their economic or legal status, or which are de facto marginalized because of their sexual, gender or ethnic-cultural identity. By looking at the conflict about the future use of the area, the Schwarzer Kanal group initially aimed at securing a fair rental agreement, but they were unwilling to accept the conditions posed by the BIM GmbH with respect to the legal status of the occupiers. Currently their main goal is to remain autonomous from the MFU.

A different position is held by the Berlin Senate, whose priority is to manage the refugee crisis and to guarantee access to shelter to those who gained legal refugee status. In this sense, the Senate's aim is to satisfy the needs of incoming refugees, which find their definition and legitimation within a juridical-institutional framework. With respect to the conflict, both left and center-right parties agreed about the need to find a compromise solution with the Schwarzer Kanal. While the conservative party (CDU) saw the refusal of the Kanal to sign the agreement as an opposition to the policy of the Senate, left-wing parties (die Linke, Bündnis 90/die Grünen) tried to define possible synergies between the Schwarzer Kanal and the MFU.

Yet another articulation of interests is defined by BIM GmbH, whose objective is to administer public grounds in the most profitable way. Given that the contested area is part of its portfolio, BIM is responsible for monitoring and executing the construction of the MFU. In line with its role, it does not assume political responsibility over the contested dimension of the area's transformation, and maintains that any aspect regarding refugee housing should be negotiated with the LaGeSo, as provided by a resolution of the Land Berlin.

Finally, the District of Neukölln, responsible as local planning authority, aims at finding a compromise solution and, despite conflicting views among District representatives about the Schwarzer Kanal project, at playing a mediation role in the conflict.

Looking at the position of different actors, it is possible to formulate some preliminary reflections about the social innovation potential of the Schwarzer Kanal initiative. In classical 'social innovation' terms, the project constitutes an attempt to satisfy – through self-organized living and community practices – needs that are "not satisfied by public policy and by the welfare system" (see Moulaert et. al 2005, 2010) and to foster social inclusion of discriminated and marginalized groups. People living in the space would not be indeed able to have access to resources and services (e.g. housing) within a market system, while some of them would be excluded from welfare provisions because of their legal status. Despite its inclusive goals and experimental character, however, the Schwarzer Kanal experience can hardly be seen as an example of social innovation, given the eminently antagonistic character of its claims and of its relationships with institutional actors.

The dispute highlights a conflict between two diverging perspectives on social inclusion and marginalization: on the one hand, the radical call for solidarity by the Schwarzer Kanal; on the other hand, the official refugee housing policy promoted by the Land Berlin. These perspectives develop within incompatible frames and narratives. The frame of the Schwarzer Kanal is defined in radical, antagonistic term. Not only the rights to live, exist and inhabit are fought for through strife and resistance, but the hegemonic status quo is challenged as such, and the 'inclusive' solutions proposed by Berlin's institutions are contested as part of it. The practices carried out by the Schwarzer Kanal take place outside of the political-institutional arena, and institutional arrangements aiming at supporting social inclusion are strongly criticized as discriminatory.

The divergence between these perspectives also leads to divergent claims over legitimacy, which result in radically questioning the legitimacy of the counterpart. On the Schwarzer Kanal 's side, the key claim could be formulated as follows: who has the right to define priorities between different legitimate rights and needs? On the Berlin Senate's side, viceversa, the key claim concerns precisely the legitimacy of institutions to define priorities among rights and needs and the lack of legitimacy of activists' actions as they are meant to satisfy differently defined rights and needs.

3.3 HOLZMARKT

The Holzmarkt is a site on the Spree river waterfront on which a mixed-used project promoted by a coalition of local entrepreneurs is currently under development. Unlike the previous cases, the Holzmarkt project does not directly represent an 'conflict'; however, its meaning and features must be understood against the background of one of Berlin's most contested urban developments, the so-called MediaSpree project (cf. Dohnke, 2013; Gualini, 2015; Scharenberg and Baden, 2009). 'MediaSpree' is the 'brand' for a large 180 ha area along the eastern Spree waterfront, designated since the early 1990s to become one of Berlin's key economic development areas, with mainly high density office development and a vocation to host media-and creative industries. Strongly criticized since the mid-2000s for its speculative character, plans for the area have sparked a broad mobilization led by dedicated local opposition groups, culminating in 2008 in a local consultative referendum calling for revision of the plan and the safeguard of open space access and diversity of uses along the waterfront. Despite massive popular support, the referendum could not significantly hinder its implementation, which has continued since 2010 on a site-by-site basis.

The Holzmarkt project is an attempt at realising some of the movement's claims through an alternative development of a portion of the area. It was initiated in the wake of anti-MediaSpree protests by local entrepreneurs, mostly active in the local club scene developed over years on land leased for 'temporary uses', forced to move their activities following plan implementation in the early 2010s. In 2012, a coalition funded the Holzmarkt Plus e.G. with the aim of proposing an alternative way of living and of creating a community village in Berlin (Holzmarkt 2013). The area was assigned to the Holzmarkt cooperative by a 75¬years building lease by its owner, Stiftung Abendrot, a Swiss pension fund investing in sustainable real estate projects, winner of the open bidding procedure held that year. The ambitious plan presented by the cooperative provides for the realization of an alternative 'urban village', including affordable housing and working spaces, areas dedicated to artists and young creatives, a club, a hotel, a restaurant, a commercial village, and the Eckwert technology center hosting start-ups and student accommodations. It also provides for the realization of a 6,000 sqm public park, to be managed by the civic association Mörchenpark. This will connect the different parts of the village, host public urban gardens, and guarantee open access to the Spree waterfront, in line with the claims of the anti-MediaSpree movement. Since 2013, Holzmarkt organizes art events and festivals hosted in temporary structures and outdoor spaces, constantly changing according to the phases of construction (2015-2017).

The Holzmarkt project is explicitly creative and experimental, and includes a number of innovative elements. As for the physical transformation of space, the Holzmarkt masterplan foresees the realization of

a village to be built to the greatest possible extent with the involvement of local community members and using wood and other sustainable building materials. Temporary structures are foreseen in order to guarantee access to the area throughout different construction phases. The functional mix is intended to support interactions with the neighborhood and to promote spontaneous encounters between users. The project aims therefore to strengthen existing social relations at the neighborhood level and to support the building of a new community, to be jointly constituted by local inhabitants and by new users of the space. The Holzmarkt is conceived as a non-speculative project adopting a low-rent housing policy, guaranteeing affordable working spaces, and enabling the participation of groups (e.g. young professionals, creatives, craftsmen) which cannot access to the high-priced lofts and offices foreseen by mainstream MediaSpree developments. Direct involvement of the neighborhood and of local residents is held as crucial, as far as the design and management of open spaces is entrusted to civic associations. The project proponents also state to support experimentation and innovation with respect to project management and the business model adopted.

The Holzmarkt project formally covers most social innovation dimensions previously discussed, promoting social inclusion and establishing a cooperative internal decision-making structure. In order to better understand how the Holzmarkt Plus e.G. aims to achieve its objectives, we now look to the network of different actors involved in the process and to the way they frame their interests.

The Holzmarkt project is organized in a cooperative structure which “reflects the vision of the project” (Genossenschaft für Urbane Kreativität, 2017). The main actor is Holzmarkt Plus e.G., founded by the promoters of the project. It is responsible for the long-term development of the project implemented on the area. The cooperative includes the initiators, but also creatives, citizens and investors, whose acceptance is approved by the general assembly. All the decisions related to the project are taken by the general assembly, which deliberates with respect to project design and implementation, and which will be in charge for creating a special committee responsible for the selection of the tenants of the new living and working spaces. Both the Mörchenpark e.V., in charge of designing and managing the public and green areas in the Holzmarkt, and the sponsor Genossenschaft für Urbane Kreativität (GuK, ‘Cooperative for Urban Creativity’) have the right to vote in the general assembly. The former is a self-financed civic association, which represents the interests of neighbors involved in the project. The latter, which also has a cooperative structure, is the investment organization financing the project activities.

With respect to future tenants, Holzmarkt Plus e.G. has proposed a model based on three categories: ‘village comrades’, who are shareholders of the GuK (i.e. acquired at least a share of the GuK for 25,000 €) and will constitute the permanent core of the project, also having a voice in the decision-making process; ‘creative residents’, who will have medium-term contract (from 5 to 10 years); and ‘experimenters’, e.g. artists who will have temporary access to affordable working spaces. The organizational structure foresees an autonomous management of project facilities (restaurant, hotel, club etc.) which are run by individual firms under the coordination of the cooperative. Holzmarkt Plus also relies on external experts.

From the perspective of interests and definitions of needs of Holzmarkt Plus e.G., it clearly emerges that the promoters, as they were directly affected by MediaSpree plans, have a clear economic interest in re-activating the area. As entrepreneurs, they pursue a profit-oriented strategy based on a business model which combines autonomy of the project with support of an alternative development model for the area. They demonstratively embrace claims by the Spreeufer für Alle campaign concerning open public space, participatory decision-making, and non-speculative and creative urban environments. Looking at their organizational structure and specific goals, however, it is apparent that they do not frame these claims in critical terms, and that the strongly political and conflictual dimension that was driving the anti-MediaSpree mobilization is neutralized within a sustainable urban development frame strongly relying on the role of ‘creative classes’ in fostering urban experimentation and innovation.

Another relevant actor is the landowner, the Stiftung Abendrot, which bought the area in 2012 and is now supporting the project by leasing the area to the Holzmarkt Plus e.G. for the next 75 years (for around 500,000 Euro per year according to media). The pension fund does not intervene in the decision making process, and has convened with Holzmarkt Plus e.G. that they can buy the area to a fixed price at any moment.

It is interesting to highlight that local institutions are not involved in the project. As declared by one of the main promoters of the project, “the municipalities and the local residents of the neighborhood and/or initiatives don’t play a significant role in the Holzmarkt project” (Husten, interview, January 2017). The Holzmarkt project never really openly seeked active political collaboration with any party, even if they gained support by Bündnis 90/Die Grünen and the Social-Democratic Party.

With reference to the social innovation framework, some reflections can be advanced. The project aims to satisfy local needs related to access to public (open) spaces, affordable working and housing which are basically neglected by MediaSpree plans. With respect to the process dimension, the Holzmarkt proposes

an alternative financing model based on the close involvement of financial operators, local entrepreneurs and members of the local community, as well as on a cooperative organizational structure based on shared responsibilities along the decision-making processes. The project represents the initiative of what we could call a local 'coalition for innovation', and is widely perceived as such.

The frame adopted by the project proponents, however, contains also contradictory aspects. On the one hand, they refer to claims emerged from mobilizations against gentrification, privatization and finance-driven speculation in the area. On the other hand, the project conceives itself as "a group of users [that] formed a cooperative society to be able to plan and develop the area themselves" (Catalyst Studio, 2017), thus recalling an imaginary related to the self-made city and referring to the German tradition of Baugemeinschaften (literary 'building communities': cf. Ring and AA Projects, 2013). In so doing, the business and management model devised for the latter aim appears to dilute the political and contentious dimension of the former.

Furthermore, despite their declared objective not to maximize profits but to support creativity and promote alternative forms of living, their strategies and choices reveal a strong entrepreneurial imprinting, which might significantly constrain the socially inclusive dimension of the project. According to the typologies of tenants foreseen, it is for instance possible to have access to a permanent contract only by acquiring a 25,000 Euro share of the GuK. The short-term, temporary nature of other forms of contracts opens a potential for instrumental uses of the alternative uses of space to which they are dedicated, which might ultimately foster gentrification dynamics already taking place in the neighborhood.

4. DISCUSSION AND CONCLUSIONS

The cases presented do not neatly fit a 'social innovation' paradigm in urban development. This does not mean, in our view, that they are not relevant to a critical engagement with 'social innovation' as scholarly discourse and as social phenomenon. We rather think that – even if ideosyncratically chosen – they stress aspects which may let models of social innovation appear counterfactual and, ultimately, heuristically inadequate.

We have indicated a reason for this in a discrepancy between its analytical and normative frameworks. In order to discuss this, we have chosen three distinctive cases – among a plurality of relevant cases analysed – from a context which presents a distinctive sensibility for social justice and inclusion, a diffuse capacity for civic initiatives, and policy issues demanding proactive change, but which also shows that the subject matter of 'social innovation' is contested, and that actors of 'social innovation' define their subjectivity largely in a process of contestation.

In the case of Dragoner Areal, (potential) elements of innovation are eminently developed through contestation of dominant policy frames. The case does not only show the evident discrepancy of urban policy agendas across different levels of governance, but also the importance of multi-scalar forms of engagement in their contestation. First and almost, however, it highlights the centrality of contentious politics and social mobilization in the process of generating (potential) elements of innovation. It is through the capacity of civic initiatives and social activism to overtly express dissensus and to develop alternative conceptions of policy issues that new alliances are built – which may integrate local government institutions as well as local civic groups – and may result in viable support for 'innovative' solutions. The contentious mobilization of actors is crucial for translating virtual social claims into an effective capacity for collective action.

In the case of Holzmarkt, (potential) elements of innovation result from the strategic-relational capacity of certain actors to build alliances around a selective interpretation of social claims emerged in a process of contentious mobilization. The self-representation of the project relies significantly on its claim to be innovative, and this claim in turn draws its legitimation from reference to claims raised by social mobilization against mainstream development plans in the eastern Spree river area. This however should not blind us to the fact that what characterizes the Holzmarkt project is the outcome of a process of strategic selection and retention from the repertoire of these claims. This means that claims raised by contentious civic groups are selectively retained and 'translated' in a way which makes them viable and system-compatible – not surprisingly, in the form of a (unconventional and 'innovative') business model which rather fits than challenge the overall logic of development. The 'allies' won in the process of translation are defined by the way the 'innovative' character of the project appeals to this system of compatibilities. It is within these hegemonic confines that the project is 'innovative'.

Schwarzer Kanal, finally, can be seen as a case of 'defeat' of social innovation, in as far as divergences in understandings of needs and rights lead to incompatible claims, conveyed by incommensurable frames, and with no instance of mediation being capable, so far, to realize a viable, 'socially innovative' translation. Here, again, the emergence of (potential) elements of innovation is premised on contestation of the existing order. It is only through radical claims that a paternalistic institutional hierarchisation of rights and

needs is challenged and a broader horizon of inclusion is addressed. However, the radicality of these claims vi-a-vis current policy agendas results in unmediated resistance. Notwithstanding the future possibility of negotiated arrangements to settle the issue, the case reminds us blatantly of the struggles over hegemonic understandings of the social order that are involved in phenomena of social change.

In a perspective of taking 'social innovation' discourse seriously, such observations are just a beginning. They hint of relevant areas of social theory and critical thinking which appear to be sidelined in 'social innovation' models. Addressing them, however, is crucial to understanding how far 'social innovation' can contribute to critical research of current challenges and contradictions of urban development or how far it is a normative policy concept premised on a discursive rationalization of such challenges and contradiction.

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ID 1415 | PLANNING THEORY IN THE GLOBAL SOUTH: CIRCULATING TRAVELLING MODELS FROM THE NORTH OR HYBRID ARRANGEMENTS?

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1 INTRODUCTION

The influence of inherited “Western” urban planning models and paradigm for African cities is not yet fully covered in discussions on planning theory. Research has mainly focussed so far on the colonial legacies in Africa, including housing policies and infrastructure systems. The “improvement in sanitary conditions for the white population” (Mabogunje, 1992) and the “segregation according to race” were key elements of colonial planning (Alexander, 1983) and were translated into colonial urban planning laws and urban planning instruments. These are still visible today in post-colonial legislations. For example, the zoning model and separated land uses categories are still the foundation of most planning legislation of the former British colonies (Watson, 2009). Furthermore, “planning education in Africa is firmly ensconced in the traditions and models of Europe” reflecting planning approaches as “colonial-type master planning systems” (AAPS, 2010). These approaches seem to have failed since African cities mainly develop outside formal planning procedures and statutory land use regulations (cf. Watson, 2003; Harrison, 2006).

Some studies have emphasised that in the cities of the global South a new “logic for resource allocation, accumulation and authority” (Roy, 2009) has emerged out of “Western” planning paradigms into the specific socio-spatial constellations of African cities; be it an “unintended outcome” of planning and policy interventions (Watson, 2009) or, on the contrary, a “calculated informality” (cf. Roy, 2009). However, it has to be acknowledged that African cities are shaped both by inherited urban planning ideals and urban planning concepts as well as by the current socio-economic reality.

Dar es Salaam in Tanzania serves as case study for this starting point with currently around 70-80% of informal urbanisation. In this city, the development and shortcomings of the inherited urban planning system will be traced. Based on a review of the historical development of the urban planning system, the first hypothesis is the existence of a continuum of colonial and post-colonial urban planning paradigms and models until today. This is, so the second hypothesis, one main reason for informal urban development as a result of shortcomings of these approaches. Third hypothesis is that although planning approaches has been transferred from the Western world to Africa, the common planning theories are not applicable due to different power relations of the involved actors and the prevailing informal urbanisation outside the statutory planning machinery.

The article is based on two research projects in Dar es Salaam (2010-2013): Regulating Informality – the Influence of Planning Standards on long term Suitability of urban Settlements – the Cases of Dar es Salaam/Tanzania and Durban/South Africa conducted by the author and 2013-2014: Translating Urban Infrastructure Ideals and Planning Models: Adaptation and Creativity in Water and Sanitation Systems in African Cities, conducted by the author together with Dr. Shahadat Hossain, both funded by DFG and under supervision of Prof. Dr. Sabine Baumgart. Another, if not the most important foundation for this paper, is a two years term as senior lecturer at the school of Urban And Regional Planning at Ardhi University in Dar es Salaam (2007-2009).

2 URBAN DEVELOPMENT IN DAR ES SALAAM

Dar es Salaam in Tanzania is one of the fastest growing urban areas in Africa. The population has increased from 100,000 in 1952 to 2.5 million in 2002 and to more than 4.4 million in 2016. In the same way, urban spatial expansion took place. From independence in 1961 when the built-up area had a radius of only 6 km to the 1990s it increases in a finger like shape up to 40 km along the trunk roads into the hinterland. Most of the urbanisation took place informally outside the legal planning framework. Fig. 1 displays the urban area and distribution of planned settlements as well as informal settlements and transformed former villages today to underline the dominance of informal urbanisation. Starting point of this article is the question why informal urban development is the dominant mode of urbanisation despite of detailed urban planning and land use legislation in place. Reasons can be traced in the statutory planning system and its colonial roots. The first level of analysis is the current urbanisation and its urban planning system followed by a deeper analysis of the historical development of the urban planning system in Tanzania. Therefore, to understand the current situation, there is need to analyse the historical development of urban planning, its legislation and the land tenure system. This will provide a sound base to draw conclusions for a discussion on planning theory.

CURRENT URBAN DEVELOPMENT PROBLEMS

The research revealed three major problems of current urban development: the plot size standards, the shortage of building land and the land tenure system. In the last decades, only a few areas were planned for low income residents, the so called high density areas with plot sizes of 400-800 sqm. However, they could not reach the target group because poor settlers could not afford the land prices requested by the Government or were bypassed in the allocation process due to intransparent processes. In some cases, rising land prices on the market even attracted residents to sell their allocated plots since the market value is higher than the governmental fixed price (Scholz et al., 2013). The formal urban planning plot size standards can be seen as one cause for this development. Current formal urban land use planning standards with their large plot sizes based on colonial standards almost hundred years ago are too expensive for the Government to develop and unaffordable for the urban poor. Besides the price for land, costs for infrastructure services are another hindering factor. The large plots reduce the ability of the Government to fulfil its self-given obligation of infrastructure service delivery without user contribution. Kombe (2011) outlined the costs for different infrastructure standards in relation to the plot sizes. He stated that for the formal plot sizes, infrastructure costs are prohibitive for urban poor settlers. The cost of infrastructure services from small plots of 100 sqm to larger plots according to the official land use planning standards (min. 400 sqm), increases by more than three times. This is mainly due to the increased total length of infrastructure service lines such as roads, water pipes, storm water drains, in relation to the number of households being served. It can be concluded that due to high costs for services, the Government cannot afford to issue new building land. Therefore, these planning standards contribute to the shortage of building land. (Scholz et.al, 2015)

The high urban growth rate at about 5% in combination with the low rate of new statutory planned housing areas leads to a serious shortage of building land. Today, the unmet demand for affordable building land is largely covered by the informal land market and most urban inhabitants have to buy plots on the informal land market. There, they can find a place for living in smaller plots with average plot sizes of about 100–200 sqm. However, these areas are not serviced. In exchange they will have to cope with higher costs for services and utilities like urban transport (if located at the periphery) and water from street vendors (if not serviced) or even with higher risks (if located in flood prone areas). (Scholz et al., 2015)

Another factor causing the urban development problems is the land tenure system. During the socialist period of independent Tanzania, land became public in 1967. Actually, it can be said land became under the control of the Government respectively the ruling party in the then one party system (Kironde 1995). When land is needed for public purposes, including new planned residential areas, it can be acquired by the President. If an agreement to acquire the land from the current land holder fails, then compulsory acquisition should take place. Originally, the compensation was made on unexhausted improvements on land only, but since 1995 land has officially a value (Kironde, 2006). However, the value of land is often

under dispute between land holders' expectation and actual compensation paid by the state. Land holders expect compensation based on future land value after being developed while the Government pays only a compensation based on the current value as e.g. agricultural land. The expectation of the higher price is fuelled by the option of the land holder to sell the land on the informal land market for residential purposes to individuals. Also often valuation surveyors estimate total different prices for similar neighbouring plots which leads to mistrust of the compensation model (Mollel and Lugoe, 2007). In the informal land market, land under customary land tenure (former village farm land at the then periphery of the town) is subdivided by the land lord and sold to potential dwellers at market prices which are higher than the official compensation rate. This system works well for both sides because it meets the expectation of a higher price for the land holders and provides access to land for residents what the formal system cannot provide sufficiently. Security of tenure is provided by local officials and witnesses during the selling process undermining the power of statutory urban planning. (Kironde, 1995)

All these three fields, the planning legislation, the planning plot size standards and the land tenure system support the loss of urban development control of the statutory planning system. Three interconnected reasons can be observed. The first is the current high urban growth rate with increasing number of residents which is beyond the capacity of the planning authority to produce new building land due to legal and administrative shortcomings in the planning machinery. Second, the inherited urban plot size planning standards require large plot sizes for housing (the official minimum plot size is 400-800 sqm for high density areas). These standards are today too expensive for the government to acquire land and to service the areas with infrastructure and unaffordable by most social groups (Scholz et al., 2013). And thirdly, loopholes in the customary land tenure system of agricultural land which open the door for land holders to subdivide and sell land on the informal market with illegal land use changes towards residential by-passing the official procedure to acquire land for planned areas by the Government. This factor leads to a hybrid system of urban development in which statutory urban planning plays a minor role and market forces dominate.

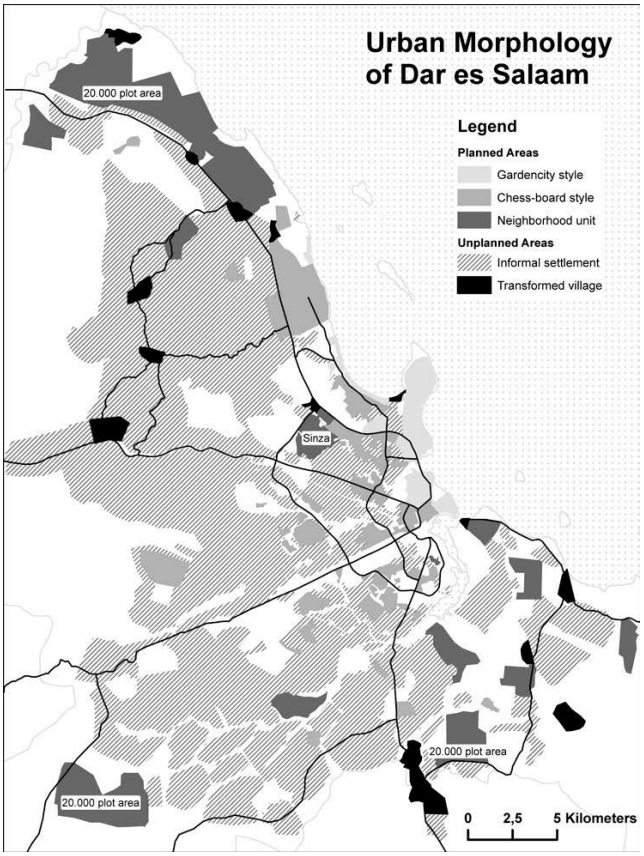

Figure 1 - Urban Development in Dar es Salaam displaying formal and informal areas, Source: Wolfgang Scholz. Cartography: Ines Standfuss

While this analysis provides an explanation of the current problems of the statutory planning system and the dominance of informal urban development, still the underlying causes are open. Therefore, the following questions will be discussed based on an historical analysis of urban development plans for Dar es Salaam.

To which extend is the inherited urban planning system responsible for the current situation?

How can these findings help to develop a planning theory for cities in the Global South like Dar es Salaam?

3 HISTORICAL DEVELOPMENT OF THE PLANNING SYSTEM IN TANZANIA

In order to address these questions, there is a need for a deeper study of the historical development of the urban area and its planning system (planning legislation and underlying planning models). Hypothesis is

that the weakness of the current planning system is rooted in its still dominating colonial past (see hypothesis one and two).

Despite independence in 1961, the planning system with its planning approaches and its urban planning legislation were never changed and adjusted for post-colonial conditions and still reflect imported planning ideals. The Tanzanian Town and Country Planning Act of 1956, CAP 378, which is based on the British Town and Country Planning Act of 1947, is the basis for the comprehensive urban planning legislation until today. (Scholz et.al, 2013)

The planning regulations deal with the use of land and buildings, the intensity of use of land, the size, and form and construction materials of buildings. For public land uses it manages e.g. roads reserves and the protection of natural resources. The land use plans assign separate land uses (i.e. residential, commercial, educational, etc.) for an ordered physical development, as perceived by the statutory planning. The land use categories create distinguished land use pattern by the separation of activities following the principle of an orderly developed town.

COLONIAL AND POST-COLONIAL MASTER PLANS

Germany was the first colonial power in Tanganyika (the continental part of the present United Republic of Tanzania) for about three decades. The Germans laid the foundations of today's urban fabric and the urban planning legislation with the first Building Ordinance in 1891. It organised Dar es Salaam in different areas, along the ocean for Europeans, followed by an area for Arabs and areas for Africans separated from them in the then outskirts. This was the starting point to use planning regulations for racial segregation. In 1914, the German colonial government revised the legislation into a three-zone ordinance: Zone 1 for European style buildings with more costly constructions on large plots, Zone 2 for mixed construction using only permanent materials designated for Asians, and Zone 3 for African style constructions without regulations on small plots. However, the ethnic groups were not mentioned in the Ordinance. The intended segregation by ethnic groups was rather achieved by setting different levels of building standards and plot sizes. So automatically the zones targeted different income groups and thus indirect ethnic groups. The German colonial planning created, therefore, with the three zone model a racial and spatial segregation by building and plot size standards. (Kironde, 2007). The simple plans from this period and the low level of planning intervention goes in line with adaption planning according to Albers (1993) in terms of planning theory.

When the British took over in 1916, the British Colonial Government kept the three zone based segregation practices until 1961. Despite migration restrictions, the British Colonial Government experienced rapid urban growth of the African population increasing between 1938 and 1944 from 26,000 to 40,000. Already at this time, urban growth led to informal settlements with poor living conditions, overcrowding and lack of infrastructures. Informal settlements are, therefore, not a phenomenon of post-colonial times only (Brennan et al., 2007). The emergence of informal settlements, however, is not covered by planning theories.

These first colonial periods clearly display the import of Western planning models and concepts to Africa to achieve the goal of racial segregation by applying different plot sizes, construction and infrastructure standards. The Ordinance and the three zones model was able to hide the political goal behind technical parameters. The hiding of racial segregation by using three zones was successful and therefore deep-rooted in the planning system that it is still undisputed in place in post-colonial Tanzania. The three still existing different colonial plot size standards in Tanzania (named today low, medium and high density areas) for residential areas thus resonate the former colonial principle of racial segregation by zones and even use the same plot size parameters (Scholz et al., 2015). The former racial segregation continues today as a guiding principle along different income groups in the three zones.

PLANNING APPROACHES

A similar process of continuation of colonial principles can be observed in the planning approaches. They still follow mainly the standardised top down master plan approach aiming at a determined controlled urban development over a long fixed period to solve identified urban development problems. This approach is similar to the blue print planning or containment planning period according to Albers (1993) in Europe.

When looking at the master plans for Dar es Salaam from 1949, 1968, 1979 and 1998, again not only an import of Western planning ideals and paradigm can be observed but also the long lasting impact of the planning paradigms, especially of the three zone model.

In the master plan from 1949 by Sir Alexander Gibb and Partners, London the influence of Western planning ideas can be traced. The role of the planner was seen as an objective technician who is aiming at controlled urban development (cf. Alexander, 1983).

“The underlying virtually environmental determinist philosophy was translated into a characteristically physical planning approach, exemplified by its application of somewhat mechanistic Garden City principles, an overriding concern with layout and visual appearance, and its devotion to the arithmetic of prescribed standards and densities” (Armstrong, 1986).

The at this time dominant concern for health called ‘sanitation syndrome’ led to the planning of open spaces as response to the misery conditions in colonial cities. According to Doherty, plans in Tanzania “were not primarily motivated by a desire to house the growing African population, but rather fear of the possible consequences of an outbreak of contagious disease in severely overcrowded and inadequately serviced slum settlements." (Doherty, 1976). Therefore, the population in the congested African areas should be reduced and the strict segregation between racial groups guaranteed by open spaces called 'breeze lanes.' The physical segregation of different racial groups, already introduced by German authorities by plot sizes and building standards, remained unchanged. (cf. Armstrong, 1986) Armstrong (1986) concludes that “The importation of fashionable contemporary western planning ideas, served to further enforce this elite bias. For example, no modification was proposed to the rigorous building code in operation which, by insisting on relatively high standards of space, materials and service provision, continued actively to discourage the extension of African owner-occupation.”

The introduction of the neighbourhood unit, actually a planning concept developed in the 1930's for North American cities, promised a more small scale and community oriented planning approach. Neighbourhood units should be rather self-contained communities with own identity and services in the middle of the unit to cover around 5000 residents. Even today, the neighbourhood concept is the fundamental concept in planning practise and planning education in Tanzania which supports the above formulated hypothesis. The 1949 plan displays clearly the process of importing Western planning models and paradigms to maintain colonial power by urban planning.

With independence in 1961 the population grew to 275,000 from 99,140 in 1952 which is 1/3 higher than the forecast of the plan. Reasons can be seen in the decline in rural areas during and after the Ujamaa period (socialist self-reliance period). Another fuelling factor was the availability of major services exclusively in urban areas, a factor which remained largely until today. Already one third of the population lived in informal settlements at this time (Armstrong, 1986).

After independence in 1961, the colonial planning standards were modified slightly but not fully adjusted to post-colonial socio-economic realities, options and needs. The 1956 Town and Country Planning Law remained in place (amended in 1961) and has been only recently reviewed as Urban Planning Act 2007 but by large the contents have remained the same again (Kombe and Kreibich, 2006). The plot size standards are still far beyond what urban poor dwellers can afford and it does not support an optimal use of scarce resources.

The first plan after independence in 1968 followed officially the ideas of the socialist Arusha Declaration in 1967. It is based on a comprehensive planning approach with a long range scenario plan up to the year 2000 with an estimated population of 2 million (Rondinelli, 1986). The idea was the creation of new centres beyond the existing relatively small urban boundaries to reduce population pressure on Dar es Salaam. This was clearly in accordance with European planning models of sub centres of this time and therefore again an import of Western ideas. Interestingly, the former colonial concept of breeze lanes remained as landscape corridors from the hinterland to the ocean now called 'open space fingers'.

Since the Arusha Declaration features rather anti-urban aspects in favour of rural development, the colonial policy of limited urban growth continued and the existing housing problem should be solved with the use of police and bulldozers in the independent Tanzania (Armstrong, 1986). The 1956 British Colonial Town and Country Planning Ordinance remained in place. The 1968 plan is an example of the evolution of planning as a technical discipline with clear and rigid concepts and again an example of the import of Western planning concepts without adjustments to local conditions. It clearly follows the idea of development planning.

The following 1979 plan was designed during a period of economic decline as result of the 1967 Arusha Declaration and the war with Uganda. Dar es Salaam experienced a growing population with migration from the rural areas, the growth of informal housing areas and stagnation of the economy. Another negative impact for Dar es Salaam was the transfer of the capital to Dodoma in 1973 including the transfer of funds from Dar es Salaam to the new capital and the abolishment of municipalities. Due to this circumstances, “the 1979 Plan is a more down-to-earth document, compared with its ambitious predecessor, lacking many of that plan's grand planning concepts and intended as a professional working document, determinedly pragmatic and flexible, concentrating on the more pressing and detailed concerns

of urban management" (Armstrong, 1986). It also reflects the crisis in urban planning in the 1970's with the shift from long range comprehensive technical planning towards a more pragmatic project based approach. However, the main idea of a master plan as long term development plan remained, while in Europe the planning approaches after the collapse of the rational synoptic planning models have changed more dramatically towards incremental planning. The 1979 plan is therefore still a top-down master plan with some project based approaches for its implementation.

The plan recognised informal settlements and allowed commercial activities even in residential areas. It opened the door for mushrooming informal businesses in the settlements and to cater for the demand of the costumers and to create income generating activities, however it also caused land use conflicts. These developments are still not guided by the formal planning since appropriate planning instruments and procedures are missing to guide commercial activities. (Scholz et al., 2013)

Slum clearance and demolition was given up in favour of regularisation and gradual upgrading. Overall, the plan displays again Western planning ideals following the shift of planning towards more pragmatism and less interventions. However, it could not response to informal urban development and the shortage of housing. Needless to say that the 1956 British Colonial Town and Country Planning Ordinance and its related plot size standards and land use categories were still in place.

In the 1990s when a new master plan was needed, the master plan approach was not seen as suitable anymore. Therefore, UN-Habitat offered financial and technical support to prepare a new approach, the strategic development plan for Dar es Salaam. It should be within Habitats newly launched Sustainable Cities Project using Dar es Salaam as pilot study (Dar es Salaam Sustainable Project, SDP 1992-2003). The strategic urban development plan (SUDP) was considered as a suitable alternative to the master planning approach. UN-Habitat has been promoting it with financial and technical experts, again a huge import of Western planning ideals.

The SDP aimed at strengthening municipal planning and management and improving stakeholders' participation by a collaborative planning approach. However, the SDP acted parallel to the formal planning system since the procedures of the top-down designed Town and Country Ordinance were still in place. Therefore, the SDP did not produce a statutory physical development plan for the city but rather a document with interrelated strategies. Instead of a top-down master plan for a specific period of time, the SDP approach offered development options based on environmental consideration that were prepared by involving experts from academia, local and central government ministries and members of the civil society. A draft SUDP report was prepared in the early 1998.

While the SDP as a planning process can be seen as a success story (despite its dependency of donor funds for the extensive stakeholder involvement), its planning output has not been approved by the Ministry for Land, Housing and Human Settlement Development (MLHHSD). Main critic was the absence of a comprehensive future land use plan since it was not a document with still open final decisions on future land uses. The Ministry was clearly in favour of the old master plan approach and not of planning as a process. Here we can see that the continuing import of Western planning approaches is not fully linked to the political discussion in the country. The top-down master plan approach was still the preferred one by the Ministry while international organisations opt for the new approach and implemented it with the help of financial assistance.

The conflict between process orientated flexible planning and the demand of the authorities for a final land use plan led to the development of new General Planning Schemes (GPS): "combining the advantages of both" (Lupala, 2013). This new planning instrument, the strategic master planning which should combine the advantages of master planning concepts and strategic planning concept like SUDP. Today in Tanzania, urban development plans and detailed planning schemes have to follow documented stakeholder meetings on the one hand and produce planning documents with defined future land uses on the other hand. The statutory planning regulation (Urban Planning Act 2007), allows such hybridisation of planning concepts. The GPS can be understood as the first locally developed planning approach although it is actually a hybrid of imported ones. However for the SDP, the new law came too late, its funding phased out in 2003 and therefore Dar es Salaam was still in need of a new urban development plan.

With the financial support of the World Bank, the Ministry assigned the planning task to an Italian company (Dodi Moss, 2012). While the idea of the strategic master planning is to promote wider participation, the current master planning process continued its earlier tradition and thus limited the planning process only to a few planning experts. Lack of stakeholders' participation is one of the critics of the draft report of the on-going master plan. It did not achieve the desired level of participation process from SUDP and is therefore rather an old fashioned master plan again.

Fig. 2 displays as conclusion the existing continuum of planning approaches from early colonial times up to today. The top-down approach is the dominant way of planning in Tanzania, despite of a short period of the unapproved SDP. The three zone model survived from German colonial times up to today and is still

the undisputed mode of land use planning despite of the changing political and socio-economic environment in Tanzania. Only the racial notion is replace by segregation by income. In all period, informal settlements were part of urban development reality and are clearly not a phenomenon of recent rapid urbanisation only.

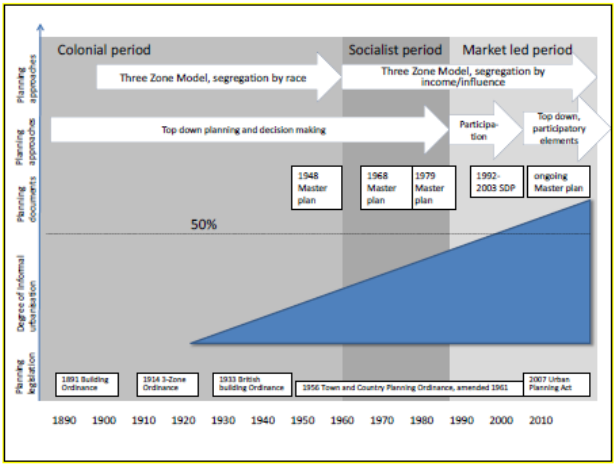

Fig. 2: Overview on Planning Approaches, Instruments and Urban Models in Dar Es Salaam, Source: Wolfgang Scholz

The figure also clearly displays that despite of an urbanisation period of more than hundred years in Tanzania, a locally based planning system and comprehensive model has not been developed with exception of the hybrid approach of GPS. All approaches are imported and run in a parallel way. This is very much in line with the idea of planning approach layers by Selle (1995), however, all layers and planning periods has been developed in Europe locally and in line with the socio-economic conditions and the political development. In Tanzania, all approaches and plans were imported and all of them share the ignorance to deal with the increasing degree of informal urbanisation. The urban area influenced by statutory land use planning is now below one quarter and is not under control of urban planning institutions.

Therefore, Tanzania needs to develop a locally based planning model which reflects the high degree of informal urban development, the dual land tenure system and the relationship of Government and citizens which differ much from Europe where the planning models actually come from.

4 PLANNING THEORY FOR THE GLOBAL SOUTH

The evolution of Western planning theory and planning approaches can be traced by its transfer to Tanzania. During colonial times, planning instruments, methods and paradigms were imported from Europe: Starting from the German “Bauordnung”, which became the basis of urban planning in Tanzania (Kironde 2007) followed by the master plan approach, neighbourhood units and participatory elements.

According to Armstrong (1986), it was the respective “application of fashionable western urban planning ideas” that influenced the plans of Dar es Salaam from 1949 to 1979. This can be stated even up to the 1990s SDP and the current master plan. Obviously, there have been some changes in the urban planning system during the last two decades. The planning system was changing from a rather technocratic to a more participatory and strategic planning approach. Planning has changed from strict master planning to a more flexible strategic planning approach. However, the current master plan seems to fall back into the old approach.

Nevertheless, Dar es Salaam still faces problems with the application of outdated planning legislation which are based on colonial rules for segregation and still reflect a totally different understanding of the size, function and role of the cities. Land use planning standards including land use zoning were based on the model of a small low density, green city with large plots reflecting the ideals of a colonial version of the Garden City. It was combined with ideologies of sanitation and health issues which also asked for low population densities. This model may have been adequate for colonial towns with modest growth that were physically and socially limited through restrictions of migration. However, it cannot cope with the high urban growth rates since independence and, above all, it cannot be implemented by weak public administrations with limited resources (cf. Njoh, 1999 and Payne, 2001). Furthermore, it is hardly suitable for the current process of urbanisation under poverty where the majority of settlers can only afford small plots and where large plots in planned areas lead to high costs for infrastructure supply (Kombe, 2011).

The current informal urbanisation in Dar es Salaam can be seen therefore rather as a result of inappropriate and not applicable planning legislation than as a phenomenon of the African city per se.

However, urban planning is not irrelevant as Berrisford (2013) stated "As competition for land intensifies in Africa's rapidly growing towns and cities, planning laws assume a fundamental importance. They determine how urban growth is managed and directed. In most countries outdated, inappropriate and unintegrated laws are exacerbating urban dysfunction."

Berrisford (2013) therefore stresses "The promotion of "one-size-fits-all" and "model planning laws from outside the continent has not served Africa well." He argues that "more progressive, realistic urban planning in Africa will require a radically different approach to planning law reform. This is essential for sustainable and equitable urban development in Africa."

Watson and Agbola (2013) add

> *"The plans assumed an orderly and law-abiding population that was willing to comply with zoning and building laws and formally employed families. For most inhabitants of African cities, outdated planning laws are an irrelevance – until deployed against them by the vindictive or opportunistic. Most urban development in Sub-Saharan Africa is occurring in a completely non-planned and non-transparent manner – despite the existence of master plans the need for reform can be identified."*

However, current approaches towards a reform of planning tend to focus on the establishment of a parallel system outside the current legal framework (e.g. Sustainable Cities Programmes from UN Habitat, various donor driven small scale case based projects on settlement upgrading, urban management projects) instead of starting from zero to create a new and appropriate planning system which reflects African urban realities, capacities and traditions. Another issue to address is the parallel system of governmental legal procedures, including the planning legislation on the one hand and leaders of the ruling party or neighbourhood committees on the other hand. Both are also dealing with planning-related topics including land management. This parallel system can benefit from loopholes in and failure of the legal planning system and receives, in many cases, a higher degree of trust from local residents due to tradition (Scholz et al., 2015). A new planning system should therefore reflect these political power relations and make use of traditional local leaders by involving them into planning procedures. There is the need to involve all stakeholders including civil society and non-governmental organizations in the development process. If the Western approach of incremental planning is a suitable one is questionable due to the unbalanced power relations of the actors.

Robinson proposes therefore a fundamental shift of the planning legislation. It

> *"should be guided by the legal principle of intra vires (within the legal power) which means you are permitted to do anything except what's specified as not allowed. The prevailing principle of ultra vires (beyond the legal powers) means you can only do what is specifically permitted. A new system of planning law to manage land use in existing and new urban areas (planned and unplanned) should be tailor-made for each country so as to be understood, relevant and enforceable given the decision-making processes and capacities of key role players. Emphasis should be on identification of the absolute minimum of what is NOT permitted in terms of uses and changes of use." (Scholz et al., 2015)*

In order to achieve these goals, there is a need to revise the academic urban planning education as well. In many African countries including Tanzania, the urban planning course design and the underlying urban models including text books have been imported from Europe in the 1970s and 1980s and have not been updated to today´s reality. "The education of these future planners requires thorough reappraisal of existing teaching methods, the introduction of new ones, and remodelled curricula" (Watson and Agbola, 2013).

> *The Association of African Planning Schools (AAPS) has started a process to revise the current planning education at African planning schools. Topics should be informality, access to land, collaboration between planners and communities (Watson and Agbola, 2013).*

However, the authors from AAPS are aware that

> *"On graduation, they (planning practitioners) might be expected to implement outdated planning legislation, or design golf courses or gated communities for the wealthy. But unless planning students are exposed to the prevailing conditions and trends in African cities, and encouraged to consult and interact with local communities to assess how*

planning might best address these, they will merely advance the marginalisation of the planning profession – and of the poor – in Sub-Saharan Africa."

These facts show the need for re-thinking central elements of the statutory land use planning system. The Urban Planning Act in Tanzania is currently under review to take key socio-economic changes into account, particularly the large unplanned parts of cities which could not be governed by the existing instruments and management practices that are in force. However, it is not expected to change the general underlying concepts of colonial legislation and urban models quickly since they are deeply rooted in the legal and institutional set-up of the post-colonial state.

Therefore it is necessary to address the issue from a planning theory prospective as well. The current planning theory approaches are mainly based on European and North American planning situations. Here the planner acts in changing roles as a caretaker of public goods and public interests in an environment of private land ownership and a statutory democratic political system which guarantees the rule of law. The example of Dar es Salaam above, however, displays a different picture. The planner is still part of the formal governmental system; however the relationship between the Government and the citizens is different. From colonial to post-colonial times, the state is a powerful actor who does not depend on the support of the citizens e.g. as taxpayers but rather relies on donors, international organisations, influential persons and groups. Bratton and Logan, (2009) claim that claim that democracy is supposed to mean "power to the people" and not just "a vote to the people". Democracy in Africa remains largely unclaimed. For urban planning it means, participation plays a minor role and the dual land ownership system with public land under the control of the government or the president and customary land tenure under the control of local leaders also changes totally the role and the position of planning in the urban development. Titus Musungu, Physical Planning Dept. Ministry of Lands, Housing and Physical Planning, Nairobi, Kenya, summarised the situation of urban planning in African cities: "The perception of (urban planning) laws is that they only apply to the former colonial core city and not to the recent post-colonial expansions. Land-use regulations are perceived to be only applicable in the colonial city since they are a colonial construct." (own fieldwork of the author, 2013).

Under these conditions, new planning theories compromising the power relations and the land ownership still have to be developed. The long lasting import of planning approaches will not help to overcome the above mentioned urban development problems.

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ID 1419 | DEVELOPING AN ANALYSIS FRAMEWORK OF URBAN MORPHOLOGY STUDY

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1 INTRODUCTION

Urban morphology is the study of the city as human habitat (Whitehand, 2007). Its study is characterized by diverse perspectives. The primary concern of urban morphology is urban form. The spatial layout is the realistic dimension of urban form, and is the tangible results of the social and economic transformation. To understand how the urban form overlap and fit into each other is of crucial importance (Whitehand, 2007). Thus how to deconstruct the urban form into the elements and to explore the relationships between the elements will serve to understand the mosaic of urban form.

Kropf (2005) deemed that generic structure of urban form is a hierarchy of levels related part to whole, which means the urban form has different levels. As Mudon (1997) has pointed out: urban form can be understood at different levels of resolution, commonly corresponding to the building/lot, the street/block, the city and the region. Whitehand (2007) also think the resolution is one of the three components that

constitute urban morphology. Wang and Zhou (2014) divided the urban space into 5 levels of resolution: building, the street, the block, the city and the region, and reckoned that the conception of urban morphology itself contains the relevance and unity of different spatial scales.

The realistic built environment has offered a direct image to reflect the transformations of urban morphology of different levels. At finer levels, large squares, the high-rise buildings has replaced flat houses and courtyards; at relatively high resolution, the newly built-up areas began to emerge, the wider road network for the vehicles has replaced the pedestrian-friendly network; the overpasses and highways which function as a conjunction across the areas or even municipalities can be seen as an intuitive symbol of the integration of the areas into a region, though the overpasses and highways are not necessarily built to help the definite formation of the region. Thus when different scales are concerned, different kinds of transformation in terms of urban morphology should be concerned, as Kropf (2005) pointed out, individual buildings, at one level of scale, do not have the same handling characteristics as a street, at another, or a town as a whole. However, an analytical framework at different levels of urban morphology has not been established yet.

Therefore, this article will commit to develop an analytical framework for the urban morphological study. This framework is established on 3 levels: neighbourhood level, town level and metropolitan region level. The building level is avoided since the building mainly focuses on the architectural characteristic if it is regarded as an individual level, while this framework is an analytical framework for the urban morphology, in which the building could only be regarded as an element at neighbourhood level. The street and block levels are substituted by the neighbourhood level since the block layout is mainly decided by the street network, which means these two are essentially the same, and within one neighbourhood, the block, street usually have certain unitary characteristics, thus should be categorised into one level.

This article is going to answer the questions: how the analytical framework could be established at the neighbourhood, town and metropolitan region level? What are the different focuses at different levels? what are the elements of the different levels, and what are the relationships between the elements? How could the different elements been synthesised into a unified framework?

2 NEIGHBOURHOOD LEVEL

2.1 CONZEN'S THOUGHT

Conzen tried to interpret the development of the urban form from a historical perspective. He thought the city emerged as a result of complex processes - primarily economic, social and political, while the rules and regularities between these processes and the form of a city can be noted in the development of its physical structure (Nikovi ć1 et al., 2014). He has developed a tripartite division of the townscape: the town plan, the building fabric and land utilization (three form complex), they have overlapped, integrated and evolved into the current form.

The land use pattern is the order or spatial development of land use, the elements of this pattern are the individual units of land utilization reflected on discrete plots, the elements of the building fabric is defined as the individual buildings. The town plan is subdivided into three components: the street system, plot pattern and building pattern. The constituent element of the street-system is the street; the element of the plot pattern is the plot and the element of the building pattern is the block-plan of buildings (Kropf, 2009). The plan unit is defined by distinguishing it from its surroundings in terms of its streets, plots and buildings. And the morphological region (landscape unit) is further defined as a region that has a unity characteristic in respect of urban form (characterised by three form complexes). The morphological region serves as the basic unit to illuminate the historical development of an urban area in urban morphology.

The layout of the street system dictates the block system, and the street-block is an aggregate of plots, is a plot or group of contiguous plots bonded partly or wholly by street-lines and forming a discrete part of plot pattern of the town (Comert, 2013). The plot is identified as a unit of land utilization and the building is individual units of land utilization occupying discrete plots. Therefore, the elements of this method is not independent, one does not make sense without another.

2.2 CANIGGIA'S THOUGHT

The Italian thought of urban morphology is developed by Muratori in 1940s, subsequently developed by Caniggia, they also think the city could only be understood from a historical perspective, but they deem that the building typology should be the starting point of the study of urban morphology.

This method analysed the urban morphology as a complex entity split into a hierarchy of different components: elements, structures of elements, systems of structures, and organisms of systems. There is

an interdependent relationship within the hierarchy system. For instance, the individual buildings are related with each other, so do they with their lots. Caniggia applies this to both individual buildings and to the town. When considering the town, the buildings are elements. The structure of elements is an association of buildings or an aggregate which referred to as a tissue. The system of structures is then a combination of tissues forming districts and neighbourhoods. When these are taken together, they formed the settlement of towns. Then all of these get unified and formed as the organism of the town and cities. Urban morphological process could be understood through a typological process, namely, the process of continuous evolution of type over time in an area (Chen, 2010).

With this method, an object of a scale is all objects with a relation of whole to part to objects of the scale immediately smaller (Comert, 2013), which means the urban morphology of a town could only be explained from the buildings. The aggregation of the buildings is urban tissue, Caniggia defined it as the coexistence of several buildings existing in the minds of builders before the act of buildings. Thus, the construction of the architecture and the town reflect the relationship between the different entities in a certain cultural era. In the urban tissue, the lot, route, block could be identified, all characterised with a type nature, and is related to its surroundings at equal/upper/lower scale. The system of structures is then a combination of tissues forming regions or districts, which taken together form the organism of the town (Kropf, 2009).

2.3 PEREIRA'S THOUGHT

Unlike the former two methods focusing on the traditional historical cities, Pereira's focus is on the newly-built urban space. New urban space production features new urban areas being built from scratch and urban regeneration. This urban development process may lead to a careful formalisation of urban space in the building area, creating a vacuum in the borders between buildings, abandoning continuous and subsequent spaces during multiple interventions (Pereira, n.d.). The newly-built area has reduced the town into an urban area which is a juxtaposition of architectural objects, lacking an urban expression to form an urban style.

The form of the town is established in the relation between the outdoors space and buildings, which exist in a given landscape/soil (Pereira, n.d.). Pereira identified the elements of urban form into landscape/soil network, outdoors space network and buildings network, and each network is not independent, instead it is the interaction of the networks that shapes the urban form and dictates the expression of the city.

The landscape/soil set the context of the newly-built. The influence of landscape/soil in morphologic terms mainly concerns location, topography, sun and wind exposure, and soil and subsoil quality and aptitude and landscape composition. When prepare for the new development, the context need to be taken into consideration in terms of building the new order, the context could have already set the limits of the building activity, and identifying the transformations would help to build the compatibility between the future form and the current form.

The outdoor space was analysed into two categories: circulation space and outdoors meeting space. Circulation space is the moving space for the vehicles and pedestrians, it is the network that connects the settlements and other urban areas. It is constituted of a hierarchy system with different access opportunity to the people and other urban spaces connected. It points towards a relationship between the road network, outdoors meeting spaces and buildings in terms of formal and functional integration and spatial distribution of use or omits it, which indicates how this relationship is viewed and defines the dimensions and geometry of the building network (Pereira, n.d.); The outdoors meeting space morphology is delimited by the cultural and functional aspects, and is related to the definition of urban space production in a certain society. The morphological nature of the outdoor meeting space is usually omitted and narrowed into some green space and built outside the urban settlement, which, gradually swallowed by the growing of the settlement. Thus the outdoors meeting space is usually fragmented, cannot comprise a network, do not take the role as a regulator for the building outlines, hence the vertical urban form (Pereira, n.d.).

The buildings are the main element in the outdoors space's vertical component (Pereira, n.d.). The buildings are established as a consequence of the formal definition of the urban outdoors space, or its inducer (Pereira, n.d.). If the buildings act as the inducer of the outdoor space (a prevailing point), the outdoor space is the dependent variable of the buildings, which means the buildings will have more intervention to the outdoor space. While on the contrary, the exterior form of the buildings corresponds to the interpretation of the already established urban outdoors space's form on a planning level and is interpreted by designers when drawing building façades for the decided activities by the programmes (Pereira, n.d.).

3 TOWN LEVEL

3.1 LYNCH'S THOUGHT

Lynch's research on the city is based on a pragmatic psychological perspective, he focuses on how the city's image is cognised by people, namely the imageability of a city. He defines imageability as the quality of physical object which offers the observer a high probability of evoking a strong image, and aims to see how the urban physical environment could be manipulated to the imageability's advantage.

An environmental image could be analysed into three components: identity, structure, and meaning (Lynch, 1960). Identity means the individuality or oneness of the object, by which it could be recognized as a separable entity. Then the structure means the spatial or pattern relation of the object to the observer and to other objects, the object should have some practical or emotional meaning for the observer (Lynch, 1960). The three characteristics make the image workable. Considering the inconsistency and diversity of the meaning for different minds, it is wiser to focus on the physical clarity of the image (identity and structure) and to neglect the meaning respect. Based on the mental maps from different individuals of three main cities, he found the imageability of a physical urban form highly depends on the five elements: paths, edges, districts, nodes and landmarks.

The type of the elements of a certain physical entity is not set in stone. For instance, a road could be regarded as a path or an edge in different circumstances, a train station could be a node or a landmark. The elements need to be patterned together to supply an urban form. In reality, it is not the sole element that offers the way of organizing the image of the city, but the total patterns. Most observers seem to group their elements into intermediate organizations, which might be called complex (Lynch, 1960). The observer senses the complex as a whole, and in the whole, its parts are interdependent and are relatively fixed in relation to each other. The elements in the whole may reinforce each other, resonate so that they enhance each other's power; or they may conflict and destroy themselves, and thus the whole (Lynch, 1960).

3.2 SPATIAL DEVELOPMENT CONCEPT'S THOUGHT

The spatial development concept is based on a system of interrelated and integrated spatial elements which together make up the desired spatial development form for the municipal area (South Africa, Municipality of Mogale CityMunicipality of Mogale City

The essence of the spatial development could be abstracted as: the functional relationships between different spatial locations induces the movement of people, goods and services. The solid, durable movement give rise to specific routes that describe a network of interaction, where the function aggregate offer the people, goods and services to interact intensely gives rise to activity nodes, the intensity of the activity of the nodes gives rise to the development of a hierarchy of nodes of different sizes and importance depending on the level of interaction taking place in a node (South Africa, Municipality of Mogale City, n.d.). In the development of the network and the nodes, some related land use inside the networks and between the nodes are developed and act as the surfaces that tie the system of networks and nodes together.

The elements of a town is strongly related with the type of the society. In agriculture society, the movement network are mostly for the pedestrians, and the nodes are mainly characterised by the residential nodes, agricultural production nodes, several commercial nodes, and the surface are related to the network and the nodes. While in the modern society, the network must accommodate the modern transportation manners, and be capable to deal with the needs of movement produced by the people, goods and services. The activity nodes tend to be diverse, intensified and specialised, including a hierarchy of the residential, industrial, commercial and recreational activity nodes. And hence the modernisation and expansion of the surface. The network of activity nodes is reinforced by a system of activity spines which connect with these nodes. Activity spines can be defined as concentrated urban development along movement routes which are typically also major public transport routes (South Africa, Municipality of Mogale City, n.d.).

3.3 THEORIES OF URBAN STRUCRURE

3.3.1 BURGESS'S CONCENTRIC ZONE THEORY

The model was created in 1925 by E.W. Burgess, Robert Park, and Roderick McKenzie. As a result of examining a number of cities, especially Chicago, Burgess suggested the division of cities into a number of concetric zones which is the competence result of different social groups searching for the best area for their futher development. He pointed out that the typical processes of the expansion of the city can best be illustrated by a series of concentric circles, and as the city grows, each zone must spread and move

outward, encroaching the next one, creating miniature “zones of transition” and setting into motion various land-use successions. Thus it is essentially a growth model concerned with radial expansion as a concomitant process of urban growth (Klaff and Schnore, 1971)

3.3.2 SECTOR THEORY

The Concentric theory of Burgess was based on the conditions of American cities in 1920. Since then, picture of cities had changed and therefore, Homer Hoyt proposed the sector theory in 1939. In this model, Hoyt took “the accessibility caused by transportation routes” into consideration, and concluded urban land use pattern was not in concentric circles, but rather sectors. Thus, the effect of direction and time was added to the effect of distance. Transport corridors, such as rail lines, public transit and major roads, are mainly responsible for the creation of sectors (Sector and Nuclei Urban Land Use Representations, n.d.).

Hoyt's sector model assumes a shape much like that of a pie from which pieces are cut at random. Each of the types of land use is orientated to an important factor in its growth and development, i.e. industry is drawn to railroads and waterways, commercial establishments are drawn to main traffic arteries; while residential areas tend to be situated around the other areas (the low class residential sectors are located around the various manufacturing and functional elements as a matter of convenience to the worker rather than being drawn to the CBD) (Riley, 1958).The model suggests that, over time, high quality housing tends to expand outward from an urban centre along the fastest travel routes (Torrens, 2000).

3.3.3 MULTIPLE NUCLEI THEORY

Following Hoyt's development of a sectorial city, Harris and Ullman introduced a more effective generalization of urban land uses. It was brought forward that many towns and nearly all large cities do not grow around one CBD, but are formed by the progressive integration of a number of separate nuclei in the urban spatial structure.

This model is amongst the most innovative descriptive or analytical urban models (Torrens, 2000). The city's CBD was losing its importance in relation to the rest of the city, it is innovative in its recognition of the city as multi-centered. The novelty in multiple-nuclei theory also lies in its acknowledgement of several factors that strongly influence the spatial distribution of urban activity: factors such as topography, historical influences, and special accessibility (Torrens, 2000).

4 METROPOLITAN REGION LEVEL

The metropolitan region includes the built-up urban area and the economically connected territory to the outside (Definition of Urban Terms, n.d.). It reflects the economic expanse of an urban area and is generally defined by the commuting hinterland of an urban area, and is the product of the industrial society which enables such efficiency of commuting.

There is not a unified theory discussing urban morphology at this level, since at this level, either explanation of the formation or sensing from a physiological perspective is tough. At this macro level, structure is the main focus in terms of urban morphology, thus the elements on this level should be the ones that could influence the changes of metropolitan region structure, the centre and subcentre, the dominant transit and the large-scale projects are those ones.

4.1 CENTRE AND SUBCENTRES

It is undeniable the main driver of the formation of the metropolitan region is the centralisation benefits of a larger modern economy and the decentralisation enabled by the new transportation technology to avoid the disadvantages of over-centralisation from the economy-geography perspective. As urban spatial structure is the spatial miniature of urban economic and social structure, the new spatial structures emerging to facilitate new forms of production (Smith, 2011).

Deconcentration is more difficult to trace in urbanized space, while the concentration of the urbanized space reflect as the urban centres and subcentres. Though the reality is more complex, a simplified picture of metropolitan regions shows a core centre city that is surrounded by its hinterland and is characterised by a clear hierarchical relationship between the core and periphery (Smith, 2011). In this simplified model, the core city is supplemented by the additional centres of various sizes, however, the core city usually are substituted by a city network of several cities with at least two equal or at least comparable cites(Germany, GIZ, 2014), for instance Rotterdam–Den Haag metropolitan region.

The dominant centre(s) of a metropolitan region is(are) characterised by the large amount of producer services, the contradiction between the demand and supply of central offices has promted the

development of other tertiary centres. Besides, the high-tech industry centres, secondary-industrial centre, political and institutional centre, residential centre, retail centres distributed across around the metropolitan areas, some consitituted the subcentres, while some others could also act as a dominant centre. Holly (1993) has concluded four metropolitan forms: monocentered, multinodal, noncentered, multicentered model. And he found the multinodal model has general support in reality. The centers of the metropolitan region are the main concern of his study (even can be seen from the names of the models). Since the layout of the centres and the relations between the (sub)centres constitute the main structure of the metropolitan regions.

The centre of a metropolitan region has experienced significant change in terms of the landscape, the producer industry which is the main industry of the central area is characterised with the skyscrapers in high density and may have more landmarks. While the subcentres would have a totally different built environment either from the centre or between themselves because of the functional differences and the inherent nature of the specialisation. Thus, the urban morphology is absolutely different at the neighbourhood level or urban level because of the spatial structure difference.

4.2 DOMINANT TRANSIT

One of the main purposes of the city is to supply its residents with accessibility. Before the industrial revolution, in which era walking is the only travel mode, cities are all monocentric with a walking accessibility. The modern travel mode enables much longer daily travel distance, promoting the decentralisation of the city, which is a necessary condition for the cities to reach a metropolitan region.
Accessibility is the main reason for the transportation to transform a particular site's form, since higher accessability would attract more development chance for that area, which will change the land use pattern of that area, hence the whole morphology. For instance, the improved accessibility may induce a new shopping mall which will affect the flow of people and the surrouding morphology, and this will in turn enhance the improvement of accessiability of that area. Some of the central areas is developed with certain transportation's development. The term "edge cities "describes the process whereby new commercial centres were created in post WWII USA at the urban fringe, typically near major highway intersections (Smith, 2011). The development of those newly built attractions will change the flow of the people and hence the structure of the metropolitan region.

The modern transportation could act as an impetus of decentralisation. However, since the development of the transportation could not only induce the people to move outwards, but also enhance the accessibility of the traditional centre for the people living in outer fringe, it could also act as a centripetal force for the spatial structure. The dominant mode of the transportation displays its particular network logistics to its affiliated area, thus introduces complementary built-environment forms they encourage, pulling urban development towards certain spatial structures (Smith, 2011).

Thomson proposed urban archetypes that fully embrace the complementary spatial structure for particular transport modes. For rail dominated cities, the complementary spatial strucrue is the monocentric form which provide the high accessbility to the centre, whilst orbital accessibility is poor; while the full motorisation archetype provides high accessibility across the whole city, which encourages a low density dispersed pattern (Smith, 2011). Though the mode is to some extent extreme, some similar examples in the real world could be found. Tokyo metropolitan area, which is underpinned by its rail system, retain its strong centre in the inner city; Copenhagen, with a finger plan supported by the rail system, still shows a more monocentic structure than its European cousins; while Los angles, the car-dominant area, is famous for its non-dominant centre structure and the notorious urban sprawl.

Urban transportation networks have the characteristic of path dependence. Since the development of urban transportation system calls for a great deal of investment, the demolition and reconstruction of the system may more than double the investment, which is almost impossble. Once the dominant transportation system has formed, the development of the other system may have little effect on the whole, the built environment of the area tend to enhance the original dominant system. Therefore, once constructed, the dominant transportation system of a metropolitan region tend to last for a fairly long period, and will structure the metropolitan region in its own way.

4.3 LARGE-SCALE PROJECT

Large-scale project, which is always on the planning agenda of many metropolitan regions, seeks to attract the flows of international investments in the globalization context. These large-scale projects could range from the revitalisation of the traditional city centres (used to be the dominant form in around 1950s) to the focus on the periphery of the city (dominant form of the contemporary world).

The change has displayed the transformation of the backdrop of the integration against which the largescale projects involved themselves in, which could also help to explain the formation of the

metropolitan region. With regard to globalisation, the location preference's change could reflect the changes as how the cities are willing to connect themselves with the global market; With regard to the transport aspect, the preference's change shows the technical advances and the increase of car ownership in the last few decades; with respect to the economic development, the preference's change offers a clue of the transformation of the secondary industry based economy to a tertiary industry based economy and the choice change of those prime offices; with regard to the spatial pattern, the preference's change illustrates the construction of the infrastructure and the government's focus change. All of these changes could all contribute to the location choice changes of the large-scale projects. Those large-scale projects could be regarded as the physical entity that serves to connect the metropolitan region, and promote metropolitan urbanisation, since these large-scale projects are symbols that the city no longer behaves locally limited, and could also act as the combination joint of the metropolitan region, such as an airport.

Though there are extremely changes in terms of the location choice and related built environment, some invariable ingredients could still be found in the large-scale projects. The symbol function which mainly manifests in the architectural excellence is a significant one, another one could be summarised as the expected associated spatial outcome. An airport could be a typical example in explanation, since the airport could act as the anchor in increasing volumes of business travellers, tourists and goods flow through airports, and may lead the hinterland to expand into employment, residential hubs. London has utilised the 2012 Olympic games to "create" its east as a new prosperous hub with the related office, real estate, commercial, tunnel development.

These projects could not only change the morphology of its own area, but also the structure of its own city or even the metropolitan region. The influence of the large-scale projects could be long-term, the prospects of the development could attract subsequent investment, such an area may probably become a subcentre of its situated city and also enhance the role of its situated city in the metropolitan region, thus transform the structure of the metropolitan region.

5 SYNTHESIS AND DEVELOPMENT OF THE FRAMEWORK

5.1 FOCUSES ON VARIOUS LEVELS

After discussing the thoughts at different levels, a synthesis is essential to identify the similarities and differences and helpful to develop a framework in terms of urban morphology (Table 1). At the neighbourhood level, the focus is mainly on the micro level, though Pereira's thought used the terminology urban form, urban style, her focus is still on how could the newly-built pattern be designed into tissue thereby fitting into the existent landscape and form an urban style altogether, thus the terminology used to cut into the urban morphology at this level is pattern; the elements examined by Conzen and Caniggia are building, plot (lot), street (route), block, land use, they see how those elements pattened together, formed different types, then identify the process of morphological changes. In Pereira's thought, buildings and the street system still exist, but she has also emphasized the landscape/soil and the word network, which means that in the newly developed environment, the original landscape of that city and the natural environment should be considered while developing; and the word "network" also reflect the integration focus between the newly-built and the existent entity. The terminology and the elements examined reflect the focus of the this level are the small part landscape of a city and its pattern, type, the formation process of it and the compatible ability with the original part.

At the town level, from the perspective of the terminologies that cut in the urban morphology, the angle of this level is more macro than the neighbourhood level. Though in Lynch's thought, pattern still retains, the meaning has changed, pattern is mainly used to build the identity of the entities so that it could be structured to form the complex, and the whole, thereby developing the whole image of the city. In the spatial development, the focus is on the essence of the spatial development of the town, from a relatively physical and abstract perspective. In Burgess, Hoyt, Harris and Ullman's thoughts, the urban structure has become the focus, which is different from Lynch's thought, although the two structures both means relationship: Lynch's thought's structure mostly focuses on the physical relationship, while the structure of Burgess, Hoyt, Harris and Ullman's thoughts focus on the functional aspect, the physical structure serves as the spatial reflection of the functional structure, this is why the function is the element they examined. In Lynch's thought, paths, edges, districts, nodes and landmarks are the elements which serves to develop the imageability, the elements could also be used to explain the urban morphology, for instance, the landmark could be a drive of the development of the surrounding area, the edge could be seen as an obstacle that block the continuous development, two kinds of urban morphology developed in both sides of the edges. At this level, the mainly focus has developed from the part to the whole, how could the whole been developed and how could the whole run and reflect in spatial dimension.

The metropolitan region, which is a product of the post-industrial society, does not have a unified thought in exploring its morphology. Its focus is so macro that the pattern cannot fit in analysing its morphology,

whereas structure which focus on how the metropolitan region run and the relationships between different parts has been the focus at this level, thus urban structure is the terminology cutting into morphology at this level. The elements examined are the ones that could influence the whole structure of the metropolitan area. At this level, the main focus is absolutely on the whole, how the spatial structure was and evolved into the current one.

Scale	Terminology	Method	Elements examined	Typology
Neighbourhood	Pattern	Conzen	Building, plot ,street, block, land	
	Urban tissue	Caniggia	Building, lot, route, block, land use	
	Urban form, urban style	Luz Valente-Pereira	Landscape/soil, the outdoors space(circulation space network and outdoors meeting space network) and buildings	
Town	Pattern, urban structure	Lynch	Paths, edges, districts, nodes and landmarks	
	Spatial development		Nodes, networks, and surfaces	
	Urban structure	Burgess, Hoyt, Harris and Ullman	Urban function	Concentric, sector, multiple-nuclei
Metropolitan region	Structure		Centre, subcentres, dominant transit, large-scale projects	Monocentered, multinodal, noncentered, multicentered

Table 1 - Synthesis of the different thoughts

5.2 SYNTHESIS AND DEVELOPMENT OF THE FRAMEWORK

After discussing the different focus of urban morphology at different levels. Offering a definition of urban morphology is suitable at this stage, based on the analysis above, urban morphology could be defined as the research to explore the change of physical urban form as the time flows, with different focus of urban form at different levels: at the neighbourhood level, urban form means the patterns and their integration to form an landscape, at the town level, urban form means the formation of the whole and the structure of the whole, at the metropolitan level, urban form means the organisation and structure of different wholes to form a metropolitan region.

Scale	Elements Examined (original)	Elements Transplantability								Element Examined (improved)
Neighbouhood	building, plot, street, block, land use, open space, landscape/soil	building	plot	block	street	land use	open space	\	landscape/ soil	building, plot, street, block, land use , open space, landscape/soil
Town	network (path), edges, districts, nodes, landmarks, urban function	landmark	node	district	network (path)	function	\	edge	natural condition, original urban form	network (path), edges, districts, nodes and landmarks, urban function, natural condition, original urban form
Metropolitan region	centre, subcentre, dominant transit, large-scale projects	large-scale projects	sub-centre/centre	sub-centre/centre	dominant transit	function	\	dominant transit	natural condition, original structure	centre, subcentre, dominant transit, large-scale projects, natural condition, original structure

Table 2 - Elements Transplantability and Analytical Framework

In order to get a systematic framework for the urban morphology analysis, some minor difference of the difference should be neglected, for instance the plot and lot in Conzen and Cannaggian's thought respectively, which means some of the elements could be substituted by one element due to the similarities. Besides, we could observe the transplantability of certain elements at the different levels, such as the street – path/network—dominant transit, such transplantablity ability at different levels could reflect the continuity of the urban form at different levels, and could also act as the complements of the elements of different levels. The transplantability of the elements and the improved analytical framework is shown in table 2.

The elements at a level is not set in stone, for instance, the large-scale projects could also be the nodes at the town level and building at neighbourhood level, the transplantability pattern listed in the diagram is just the one that meets the contrast at each scale. In reality, there could also be some confuse in the identification of the elements, for instance a train station which could be identified as a node at the town level could also be regarded as an edge, since the urban form behind and in front of the train station could be very different; the train station could also be a landmark at the town level, could also be a large-scale projects at the metropolitan level as long as the train station is big enough and has aroused certain developments, could also be a building at the neighbourhood level. Therefore, the framework offer an analytical framework for the urban morphology, and also supply some flexibility for the analysis, the entity could be identified according to the level it stayed in and the function it act in the analysis.

5.3 UTILISATION OF THE FRAMEWORK AND THE SUBSEQUENT RESEARCH

The analytical framework is helpful to detect what kind of elements is the key in studying urban morphology at different levels, though the different focuses of urban morphology has already been identified, with the analytical framework, a clear clue about how could the different focus at different levels be realised in the study of urban morphology could be acquired, and get to know the different elements that is going to research at different levels. For instance, if urban morphology at the neighbourhood level is the research target, the building's pattern should be a key point, which would include the buildings' façade, while at the town or the metropolitan region level, the façade of the buildings cannot be the research focus.

In the following research, the policy will be introduced, and the relationship between the polices and the urban morphology at different levels in China is going to become the research focus. Although the research on the policies and the urban or metropolitan region structure has already had some outcome, such research on neighbourhood level is still absent and is worth researching. And China, as the emerging country in the last few decades, the speed of its urbanisation has dwarfed its counterparts. The urbanisation process also has its own characteristics. But according to the characteristics of the Chinese jurisdictional boundaries, the analytical framework which is based on the western thoughts need to be adapted to the Chinese reality, and then used into the research on policy and morphology.

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ID 1458 | CONFORMANCE VS PERFORMANCE: ZONING OF THE URBAN AGRICULTURAL ZONES IN TAIWAN

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1 INTRODUCTION

1.1 TWO TYPES OF PLANNING

Urban planning is the result of political decision-making, but planning methods or tools cannot act as a panacea for problems in the city of globalisation and urbanisation. In general spatial planning theory, there is two type of planning, conformance-based planning, and performance-based planning. According to Umberto (2008), these two planning models relate to respective cultural assumptions and technical procedures finally producing, in virtue of their juridical effects, different operational consequences on spatial development and on territorial governance. In conforming planning, a normative prescription or standard will be established, end up generating project plans that focus on the adoption of the project. Although material effects of the plan easily to be evaluated, the initial plans may be misread or interpreted in unexpected ways and result in otherwise outcomes. In performing planning, the planner will propose a vision of future spatial development and make future open, then strategic plans produced in the dynamic negotiation of decision making. That make the objectives of the plans remain flexibility but the effects hard to be evaluated (Faludi, 2000; Umberto, 2008). The former was widespread in almost all European countries and the United States, and the latter can be seen in Dutch and United Kingdom, now being increasingly practised across Europe.

1.2 FROM TRADITIONAL ZONING TO PERFORMANCE ZONING

In planning practice, the conformance-based planning is usually implemented as traditional zoning to achieve the planned objectives. Traditional Euclidean zoning separates land uses in a hierarchy based on land use type, dividing residential, commercial, and industrial land uses in prescriptive zones. Under the traditional zoning tools, planners delineate the scope of different land type, establish the category of land

using, and control the intensity of development in an urban area. However, traditional zoning has been actively criticised for its inflexible, narrow focus and blunt approach to land use. After that, the reflection on the use of traditional zoning gradually led to the further development of the various types of land use controls, resulting in the need for zoning to develop in the direction of flexibility, diversity, and localisation.

Because of the rigidity of Euclidean zoning, an alternative to land use control arises from the perspectives of performance-based planning. Performance zoning, a flexible land development method, trying to improve decision making in land use control, building regulation, and natural resource management. In Douglas C., Neil G., and Brendan J.'s view (2006), performance-based approaches are composed of two components: first, criteria that describe the desired end result, and second, methods to define standards used to measure the acceptable limits of impact to ensure the desired end result. Since the early 1950s, performance standards have been employed in land use planning.

To control adverse impacts of industry, the United States adopted industrial zoning through the control of noise, vibration, air pollution, radioactive radiation, glare, humidity, fire, and explosive hazards. Performance standards based on carrying capacity, the threshold of safety, and environmental quality are proposed as a means to replace prescriptive (and permissive) zoning. Then, it has been employed in industrial standards, building codes, design standards, zoning, and entire planning systems (Douglas C. et al., 2006). Industrial performance standards tend to be commonplace in many zoning ordinances today, but the translation of performance-based approaches to other land uses less frequent. Hence, it is required to plan other types land likes the agriculture land in urban development through such practices.

The purpose of this paper is to discuss the phenomenon of the gap between the plan intents and the actual results. With this intention, we conduct a thorough literature study on conformance-based and performance-based planning theories first, present a tendency from traditional zoning to performance zoning. An attempt of conceptualization of the role and functions of the agricultural land in urban areas, useful to frame the discussion, will follow. The article will then focus on the current planning issues of urban agricultural zones in Tainan City, Taiwan. By proposing performance-based land-use control tools on urban farmlands, we believe it could avoid inappropriate land-use damaging the farmland and negative externalities. Finally, a concluding section will sum up the main findings of the article.

2 CONTEXT

2.1 THE URBAN LAND USE PLANNING SYSTEM IN TAIWAN

For the sake of effective land resource management and to pursue sustainable development, land use and development of all land in Taiwan are managed through a varied land use planning and control system (Lin, 2010). The framework of a planning system in Taiwan was first established by the Urban Planning Act of 1939 and its implementation byelaw. After the Amendment of Urban Planning Law in 1973, new regulation for the enforcement was introduced and published as the Regulation for Enforcement (of Urban Planning Law) for Taiwan Province in 1976 (Chen and Chih, 2010). From then on, Taiwan's land use planning system is indeed established (see Figure 1). According to the Urban Planning Law in Taiwan, land use in urban areas is controlled by zoning regulations. By law, any urban land can be planned for any of ten land use zones, which follow: residential zone, commercial zone, industrial zone, administrative zone, cultural and educational zone, landscape zone, reservation zone, conservation zone, agricultural zone, and others. The use zones can also be broken down into sub-zones on the basis of intensity.

Figure 1 - The land use planning system in Taiwan Source: Lin, J. C.-Y. (2010). Planning and development of industrial land in Taiwan.)

However, there are many defects in implementations. First is the poor administration leads to the low land-use efficiency. Second, the strict and rigid regulations limit the flexibility and potential of future land development. Thirdly, the disregard of the environmental carrying capacity in the zoning plan.

2.2 THE IMPORTANCE OF URBAN AGRICULTURE

Urban agriculture (UA) is considered as an important source of food, fuel, and income in developing countries. The concept of urban agriculture arises from the strategy of sustaining Sub-Saharan African (SSA) cities, based on the pursuing of food security. In Smit, Ratta, and Bernstein's point of view (1996), UA refers to an industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city or metropolis, on land and water dispersed throughout the urban and peri-urban area. As practised around the world, urban agricultural activities include horticulture, aquaculture, livestock production, and forestry.

It must be recognised that urban agriculture plays a significant role in the urban ecology system. A rapidly increasing urban population has implications for demand for food, potable water, shelter, transportation and health and recreation services, and will pose additional stress on natural and cultural resources (Quon, 1999). Therefore, in the process of urban planning to consider the principles and location of urban agriculture to ensure that the functions provided by the effectiveness.

The importance of urban agriculture is increasingly being recognised by international organisations like UN-Habitat, OECD (Organization for Economic Co-operation and Development), EU (European Union), and FAO (World Food and Agriculture Organization). According to a global partnership organisation RUAF Foundation (Resource Centres on Urban Agriculture and Food Security), there are several benefits of urban agriculture. The contribution of urban agriculture to food security and healthy nutrition is probably its most valuable asset, also complements rural agriculture and increases the efficiency of the national food system. Through economic impacts, urban agriculture may function as an important strategy for poverty alleviation and social integration. Not to mention the contributions to urban ecology, be a crucial part of the urban environmental management system. In the discussion about the multi-functionality of agricultural, the farm function can be said in three main dimensions. First are the food and economic function, second for the ecological and environmental functions, and third for the social and cultural functions (Lee et al., 2009).

2.3 URBAN AGRICULTURE DEVELOPMENT VS. URBAN AGRICULTURAL LAND DEVELOPMENT

Portugal may be known as an agricultural country, but the intense urbanisation process changed the focus on agriculture since the middle of the XX century. According to the results of the European Union (EU) Farm structure survey (FSS) 2010, the utilised agricultural area (UAA) represents 40 % of the Portuguese territory. From 2000 to 2010, the UAA decreased by 5 %. With the actual reduction of agricultural activity, most shantytowns already transformed in planned urban areas, being the work of the immigrants from former Portuguese-speaking countries in marginal areas.

In Portugal, urban agriculture is seen as green infrastructure. The Portuguese law ("Decreto Regulamentar" nº 11/2009, 29 of May), recognises agriculture as a compatible activity within the green infrastructure mentioning that "green spaces are areas with functions of ecological balance, open air recreation, leisure, sports and culture, agriculture or forestry" (Cancela, 2009).

Different from urban agricultural development in Portugal, the agricultural zone is delineated in urban planning areas in Taiwan. According to Urban Planning Law in Taiwan, urban planning areas can set agricultural zone and conservation zone, to limit their use of building, depending on the topography, using status, or the needs of military security. The meaning is that it does not regulate the necessity of painting the agricultural zone at urban planning area, and does not take into account the local demand for farmland. As shown in Figure 2, we make a thorough inquiry about the growth of Taiwan's urban agriculture zones. In the past sixteen years, the urban planning areas in Taiwan gradually increased, as for the urban agricultural zones continuously decreased then slightly climbed in nearly three years. The proportion of urban planning areas in Taiwan has fallen 21.73% to 20.89% by 0.84% from 2001 to 2016. This situation is known for that the demand and necessity of agricultural land recently reduced, but it still quite extensive in urban planning areas. In Figure 3, at the end of 2016, there were 435 urban planning areas in Taiwan, with a total area of 482,692 hectares, accounting for 13.33% of the total national lands. The urban planning area contains non-urban development areas and urban development areas, the agricultural zones are part of non-urban development areas, reached 100,780 hectares, account for one-fifth of the Taiwan urban planning area. It is crucial that the role and function of rural zones should be clearly defined when establishing the regulation of land use and the strategy of land development.

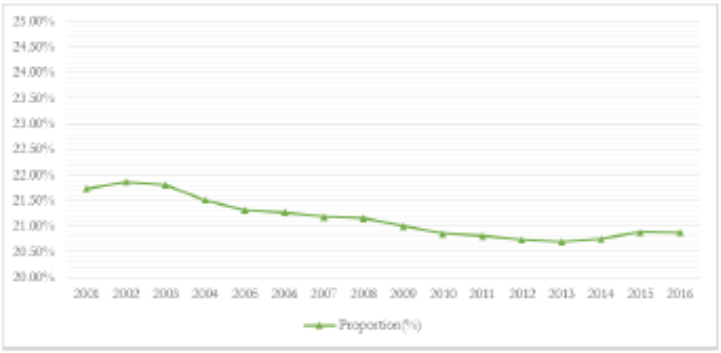


Figure 2 - The growth of Taiwan's urban agriculture zones
(Source: Construction and Planning Agency, Ministry of the Interior, Taiwan.)

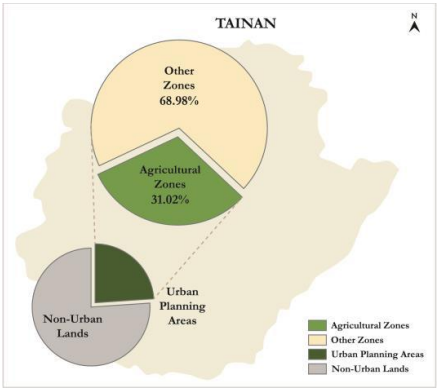


Figure 3 - The proportion of Taiwan's urban agriculture zones in 2016
(Source: Construction and Planning Agency, Ministry of the Interior, Taiwan.)

Owing to the general thinking on sustainable development, planning theory in Taiwan's national development goals have a conversion from economic growth to resource conservation. The National Land Planning Law in Taiwan published in 2016, involving the concept of growth management and emphasising the rehabilitation of land resources. Thus making Taiwan urban planning system has been a significant change towards the performance-based planning. However, nowadays land use control tend to squeeze natural resources areas because of the needs of urban development. This condition may arise many problems of the current land use, results in the gap between the plan intents and the actual results.

Agriculture zones are an important part of the land in Taiwan territory, but it seems that the urban planners have not fully take into consideration for that land use to develop in the past. In the urban context, due to the lack of real guidance of master plan and appropriate management, regulatory ineffectiveness, as a result, the actual use of farmlands usually deviate from the purpose of agriculture. From property market perspective, since the farmland has set to be as reserved land for future urban developments. The expected value of such under-used lands has been increasing. On the other hand, the violation of the zoning ordinance is the most frequent problem encountered that converted farmland into factories or housing illegally. As a result, the poor environmental quality is an inevitable consequence in addition to challenging the land-use regulations.

3 MATERIAL & METHODS

Tainan City is one of the municipalities located in the southern region of Taiwan. The study area of this article is the master plan of Tainan City, which contains the original Tainan City, as shown in Figure 4. After the administrative upgrade of the five cities in 2010, the original Tainan County merged into Tainan City. Since that, the role of original urban agricultural zones become fuzzy. Under the goal of food security and territory use sustainability, this study is to explore the problem of urban development and resource utilisation. It refers to the problem about how to protect the prime farmland and the significant agricultural resources through the location planning and overall development guidance program of the agricultural zone in Tainan's master plan, so as to make the best use of the land.

In the analysis data, this case study used the 2016 Tainan City Fifth Overall Review of Master Plan as the basis for zoning control, with the 2006 National Land-Use Inventory as the basis for the current use of land. In the process of analysis, we first review the history of urban planning and development in Tainan City, understand the position and function of the agricultural zone in Tainan City. Then the GIS overlay analysis is conducted to compare the Tainan City urban agricultural zone with the farmland in National Land-Use Inventory, to find out differences in the area and distribution of land use. Through the case study, the current issue of the agricultural zone in Tainan City urban planning area is discussed, also the lack of planning process. At last, this article is trying to clarify the role of agricultural zone relationship between urban planning and urban development.

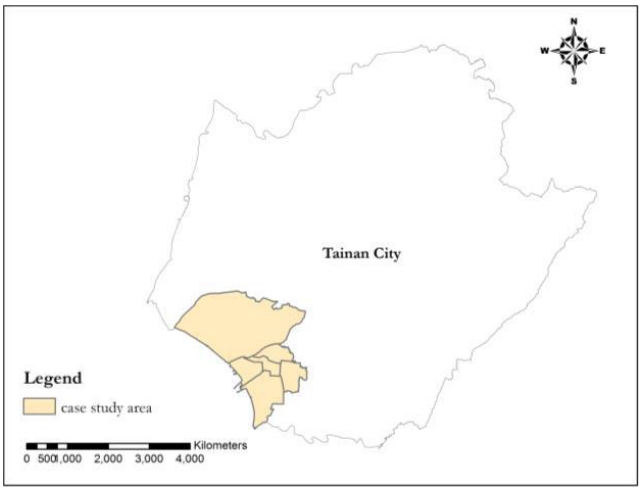


Figure 4 - The scope of study area

4 CASE STUDY

4.1 THE URBAN AGRICULTURAL ZONES IN TAINAN

In the past sixteen years, the percentage of urban agriculture zones in Tainan's urban planning areas gradually decreased, as shown in Figure 5. The trend of development is the same as Taiwan nowadays situation seems that the demand and necessity of agricultural land recently reduced. At the end of 2016, there are 16,285 hectares urban agricultural zones be delineated, accounting for 31.02% of the urban planning areas, as shown in Figure 6. In Tainan, primary industry is mainly distributed in the original Tainan County and the original Tainan City where this paper study for basically see the secondary and tertiary industry as the main function of positioning. By demand prediction for agricultural resources place planning, overall agricultural land needs in Tainan City will reduce in the next ten years. So the existing urban agricultural zones and the newly planned should be defined clear to make sure the farmland function is indeed played.

Figure 5 - The growth of Tainan's urban agriculture zones
(Source: Construction and Planning Agency, Ministry of the Interior, Taiwan.)

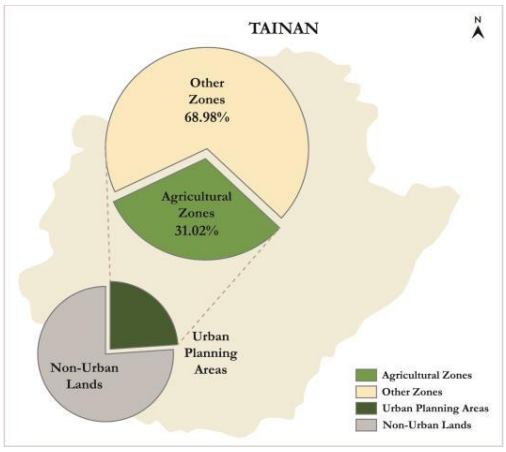


Figure 6 - The proportion of Tainan's urban agriculture zones in 2016
(Source: Construction and Planning Agency, Ministry of the Interior, Taiwan.)

4.2 ZONING IN MASTER PLAN OF TAINAN URBAN PLANNING

In Tainan City, the place for primary industry such as agricultural use mainly locates at the edge of urban areas. According to the 2003 Tainan City Fourth Overall Review of Master Plan, the agricultural zone and conservation zone can be altered after review, if there are needs for overall development in government major public works plan. Comply with this principle, the agricultural region gradually subject to aggression and marginalisation with Tainan city development needs.

According to the 2016 Tainan City Fifth Overall Review of Master Plan, the administrative area of land use project contains North District, Eastern District, Annan District, Southern District, West Central District and part of Anping District in Tainan City, 17,524.94 hectares. In concert with the planning period of Taiwan regional plan, regarding 2026 as the target year. The planned population is set at 1.1 million. After overall review, the land use project delimits 33 categories of zone, and the public facilities land project set 48 kinds of land. The subtotal area of former is 14,183.25 hectares, accounting for 80.93% of the total urban planning area; the latter is 3341.69 hectares, accounting for 19.07%. In Land use zoning map of Tainan (Figure 7) shows the distribution of each zone and the public facilities land. As shown in Table 1, in the urban planning area, Tainan City's zoning includes 4542.61 hectares of the residential zone, 439.34 hectares of commercial zone and 1037.46 hectares of the industrial zone. Among this, the area of the agricultural zone is 5212.92 hectares, accounting for 29.75% of the total planned area.

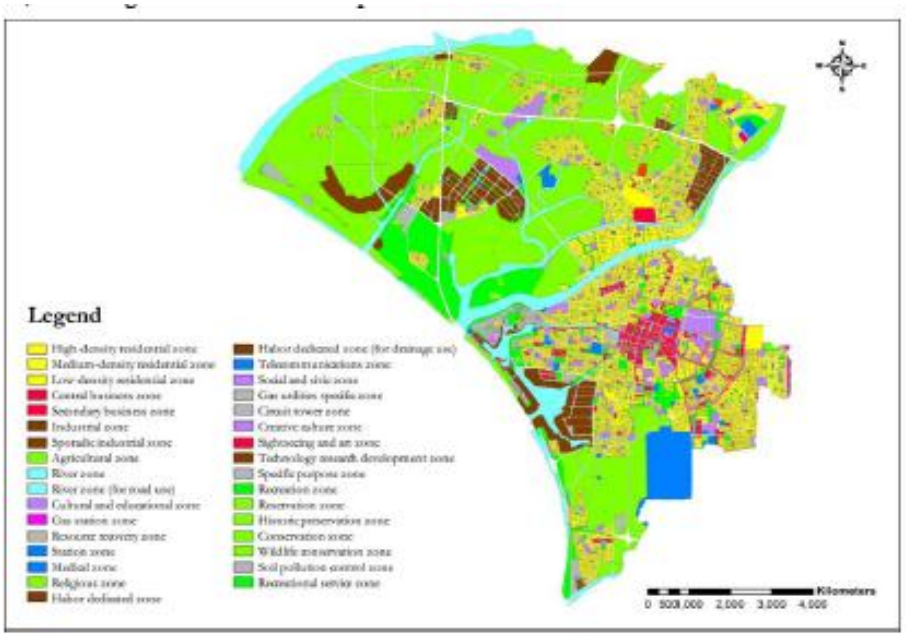


Figure 7 - Land use zoning map of Tainan
(Source: Tainan City major plan 2016)

Land use item	Area (ha)	Proportion (%)	Land use item	Area (ha)	Proportion (%)
High-density residential zone	128.25	0.904	Habor dedicated zone (for drainage use)	0.48	0.003
Medium-density residential zone	1526.29	10.761	Telecommunications zone	7.66	0.054
Low-density residential zone	2888.07	20.363	Social and civic zone	0.08	0.001
Central business zone	220.17	1.552	Gas utilities specific zone	2.32	0.016
Secondary business zone	219.17	1.545	Circuit tower zone	0.02	0.000
Industrial zone	1036.78	7.310	Creative culture zone	30.77	0.217
Sporadic industrial zone	0.68	0.005	Sightseeing and art zone	2.34	0.016
Agricultural zone	5212.92	36.754	Technology research development zone	2.78	0.020
River zone	1170.62	8.254	Specific purpose zone	10.74	0.076
River zone (for road use)	10.78	0.076	Recreation zone	486.00	3.427
Cultural and educational zone	95.54	0.674	Reservation zone	2.71	0.019
Gas station zone	6.12	0.043	Historic preservation zone	26.24	0.185
Resource recovery zone	0.48	0.003	Conservation zone	483.46	3.409
Station zone	3.58	0.025	Wildlife conservation zone	529.19	3.731
Medical zone	0.47	0.003	Soil pollution control zone	35.56	0.251
Religious zone	30.75	0.217	Recreational service zone	3.16	0.022
Habor dedicated zone	9.06	0.064	**Total of land use zoning**	**14183.25**	**100%**

Table 1 - The land use project in 2016 reviewed Tainan master plan
(Source: Tainan City major plan 2016)

Following the Regulation for Enforcement of Urban Planning Law for Tainan City, the agricultural zone delineated to maintain agricultural production. In addition to normative use purpose of food security, agricultural zone only applies for the following use:

- Farmhouse building
- Agricultural output and marketing necessary facilities
- Leisure agricultural facilities
- Rural revitalization related public facilities

However, if the Tainan city government censor approved, may have the following facilities:

- Utility infrastructure
- Earthwork stacking treatment
- Wasted resources recovery
- Storage site
- Parking for motor transportation
- Passenger and cargo terminal and subsidiary facilities
- Car driving training ground
- Social welfare facilities
- Kindergarten
- Gas station
- Outdoor stadiums and sports training facilities with an area under 0.3 hectares
- Temporary facilities for government major public works plan

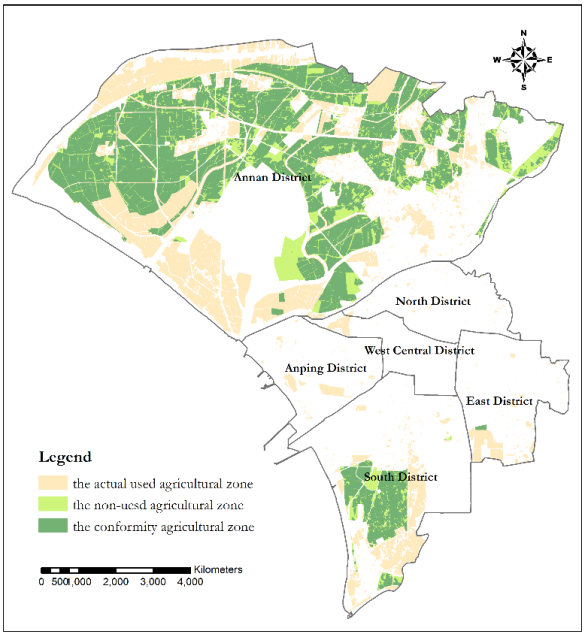
Moreover, before urban plan published, where the land in the agricultural zone is scheduled to be the construction land or has been built for residential use in a legal building base, the building and usage could continue under the relevant regulation.

4.3 EVALUATION THE OUTCOMES OF AGRICULTURAL ZONE IN TAINAN MASTER PLAN

After the merger and administrative upgrade in 2010, the original Tainan Country and Tainan City border facing land consolidation. Initially, the boundary agriculture zones are often used as the isolation areas with other zones and retained as the hinterland of urban development and expansion. However, the principles and objectives of nowadays agricultural zones are not clear enough to make the land resources ineffective.

According to the overlay analysis above the land use zoning control of Tainan master plan and the current use of National Land-Use Inventory, there is a difference between the exact area and the location distribution, as shown in Figure 8. In urban agricultural zones of Tainan City major plan, the current use of agricultural lands is 4058.55 hectares, account 79.02% of the total urban agricultural zones; the current use of non-agricultural lands is 1077.42 hectares, accounting for 20.98% of the total urban agricultural zones. On the other hand, the region not in urban agricultural zones but for farmland use with an area of 2861.56 hectares

To further explore the agricultural location and spatial planning issues, the compliance of urban agricultural zone in Tainan can involve two conditions. One is the plan guide urban agricultural zones through



regular overall review of master plan3 that propose the developmental principle. In this condition, former agricultural zones may transfer into another zone legally. Moreover, the continuous agricultural zones should use for the contained item to achieve conformity. The other is urban agricultural zones that do not be transferred but become non-agricultural lands or the current use of farmland not located in urban agricultural zones. That means modern farming using have a violation or illegal phenomenon, indicating that the planned agricultural zones do not meet the needs of the actual use of agriculture land.

Figure 8 - The conformity of urban agricultural zone in Tainan

According to the Urban Planning Law in Taiwan; the government should overall review the urban plan at least once in three or five years.

By evaluating the conformity of the urban agricultural zone, several questions results from the plan intents and the real results do not meet being noted here. First of all, urban expansion erodes the production function of the agricultural area. When major public works were developing and traffic transportation constructing, the accessibility of outside agricultural area, therefore, be improved. Then originate the needs for contained using item and functional transformation. Second, the contained using item under the Regulation for Enforcement of Urban Planning Law tend to departure from the intent of agricultural purposes. Take Tainan City, for example; the existing contained using items are so loose that do not match agricultural purposes. There is no guidance to improve the necessary, location and size control of land use, leading to the status of agricultural using become fragmented and scattered. The third is the trend of illegal use of farmland to illegal factories. To avoid the violation of land use, department of urban planning should strengthen the statute and strictly banned.

In summary, the phenomenon of current use in urban planning agricultural zones do not meet the original plan will have an adverse impact on the agricultural production environment, green landscape, and living environment also be severely damaged.

5 CONCLUSION

Facing the change of planning thinking in Taiwan, the setting of whole development guiding principles and the proposal of urban plan vision should be taken into consideration seriously. From then till now, Taiwan's urban development and land use control are all conformance-based planning, arise many problems of the current land use, which result in the gap between the plan intents and the actual results.

Given the nowadays urban agricultural zone, take Tainan master plan for a case study, it seems that urban planners in the past have regarded the urban agricultural zone as a preparatory land for urban development. At that point, the performance of urban planning areas tends to violate or alter the ground use due to the weak contained using item. Therefore, in the future urban planning, the role and multi-functionality of urban agricultural should be redefined to maintain the quality of urban living space. The urgent priority is to confirm the value and necessity of existing urban agricultural zone, make sure to protect the vital and sustainable agricultural land resources. Through taking a look at the origin of urban agricultural zone delineating, we wonder that why and where that zone exists in current land use system. The debate tries to seek for the plan intents in the regulation of zoning, as formerly discussed. All of the urban agricultural zones should correspond with the needs and position in future urban agricultural development.

In response to environmental and socioeconomic conditions change, the substantive urban development does not need such amount of agricultural zone that existed. What urban planner can do is to manage the land resource effectively through kinds of control tools. Essentially, performance zoning mechanisms should be established to ensure the multi-functionality of urban agricultural in the development of land use control tools. At the meanwhile, the coordinated sets of measures should be purposed in planning and management of urban agricultural zone to provide government reference.

From the perspective of sustainable development, taking agricultural land resources as green infrastructure, the reduction of energy consumption in urban could be accomplished by a low carbon approach to urban planning. The valuable but not needed agricultural zones in urban planning areas can be used as green space to promote the sustainable use of land resources in Taiwan.

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ID 1464 | ANTHROPOPHAGY IN PLANNING: BUILDING A THEORY FROM THE SOUTH THROUGH | AN ASSOCIATION OF ACTOR- NETWORK THEORY AND HISTORICAL MATERIALISM

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1 INTRODUCTION

The tacit understanding of a singular path to development still permeates the practice of urban planning in both Global South and North, ignoring “the world epistemological diversity [and] the conflictual plurality of the knowledges that inform social practices” (Santos et al., 2004, p. 19). Even when the interest to situate the local within a globalised world is identified, there is little research that investigates local networks, reflecting what Souza (2011) describes as ‘knocking on the doors, but not entering the houses’, as researchers do not delve into the everyday. Even still, when research does investigate the everyday, the natural step is to appropriate EuroAmerican (that is, central) theoretical frameworks to deal with peripheries, disregarding particular socio-spatial features of local practices. So, the tooling is usually inadequate and out of context reflecting a hegemonic ‘central’ process that packs places full of singularities in the category ‘the periphery’.

As a result, short-sighted strategies are not able to encompass micro-scale alternatives that might be brought about from specific socio-spatial practices, thus not challenging the socio-spatial inequalities and inequities deep-rooted in countries of the global South, such as Brazil. Theory and praxis fail to value local initiatives that may lead to local transformation, reinforcing the hegemonic power relations at play in the everyday. The lack of interest in what we will call bottom-bottom tactics (Melgaço, 2016)—those that will happen at a microlocal scale and in the everyday level of a given socio-spatial group—reinforces the 'one solution for all' approach. This phenomenon is even more deleterious in the Global South, where, as already said, EuroAmerican theories are often decontextualised to further explain peripheral phenomena without the due contextualised critical approach.

At LAGEAR (Graphics Laboratory for Architectural Experience) and MOM (Living in Other Ways), two research groups at the School of Architecture at the Universidade Federal de Minas Gerais in Brazil, we have been challenged to deal with rurban communities' everyday socio-spatial practices and we came to understand that the EuroAmerican theoretical framework we always drew from has blurred our view of the communities with preconceived abstract (and prejudiced) universal assumptions of power relations.

This might seem obvious, but is not an easy problem to deal with as socio-spatial postcolonial theories are scarce and come from elite researchers working in EuroAmerican universities (not to mention socio-spatial decolonial theories from Latin American researchers, which barely exist)[1].

In order to cope with such a problem, we started to investigate possible approaches to enlarge our theoretical framework to avoid hegemonic universal assumptions, taking into account microlocal specifics without turning our back to EuroAmerican theories. This has been done in a sort of meta-method, drawing from Oswald de Andrade Anthropophagic Manifesto (1928), which questioned Brazilian cultural dependency.

Andrade (1928) brings the image of the anthropophagic ritual, in which human beings eat others to incorporate their features. In Andrade's Manifesto (1928) Brazilian culture would stop ignoring its roots (Indigenous and African) and be freshly reinvented, departing from the very roots, "eating" and "digesting" a selection of interesting features from abroad. Anthropophagy as a method assumes the richness of intercultural encounters and at the same time avoids dependency on foreign culture. A well-known jargon from Andrade's manifesto (1928) is "Tupi, or not Tupi, that is the question", which acknowledges Shakespeare's relevance and at the same time replaces 'To be' with 'Tupi', dislocating the Shakespearian doubt from a universal being in the world to the Native Brazilian tradition. So, at the same time anthropophagy questions universals and draws from them. The main point, we argue, is the need to keep the theoretical framework in context, always under construction, avoiding abstract hegemonic universal theories that tend to become prescribed top-down truths.

Let us introduce a few critiques raised by decolonial theories in general and then by postcolonial urbanism[2] to explain our proposed anthropophagic method. One of the most important decolonial authors is the Argentinian philosopher Enrique Dussel, exiled in Mexico. His politics and philosophy of liberation focus on a collective, which he calls pueblo (the people), as the subject of democracy (Dussel, 2012). Democracy needs no adjective but to be aware of its subject, the block of people, which is neither a hegemonic block in power nor a class, but a group of different people (defined with Gramsci as the social block of the oppressed) that are usually powerless and misrepresented in the traditional representative democracy. For Dussel (2012), the decolonising turn indicates a new approach to politics taking into account the contradictions within the "block of people" and its potential historical transformations. So, the decolonial theory proposes a theoretical framework to look at oppressed people without preconceived EuroAmerican universals.

Being more specific, a good example is that of African indigenous feminist standpoint[3], claiming that Western gender theories tend "to reduce women and girls' experience to categories of 'victim' and 'other'",

[1] For the postcolonial theories of space see for example Ananya Roy (Professor of Urban Planning, Social Welfare and Geography and inaugural Director of The Institute on Inequality and Democracy at UCLA Luskin), AbdouMaliq Simone (Goldsmiths College, University of London), Ash Amin (Director of Research in the Department of Geography at the University of Cambridge), Jamie Peck (Canada Research Chair in Urban and Regional Political Economy and Professor at the Department of Geography at the University of British Columbia in Canada).

[2] We have no intention to cover decolonial and postcolonial theories but highlight selected aspects that help understanding our proposed method.

[3] Dussel is part of the Group modernidad/colonialidad, one of the most important collectives of thinkers in the first decade of the 21st century, discussing the power relations established from 1492 with the conquest of what came to be known as America. This group departs from the capitalist mode of production and European modernity (trying to construct a local political view rather than adopting the consolidated economic framework), distinguishing itself from postcolonial thinkers—usually coming from British and French colonies in Asia, Oceania and Middle East, drawing from a culturalist perspective and starting their colonial history 300 years after ours—. It is clear that colonization happened in very different ways in each place. Generally, we might say that the main difference, besides the period, is that the earlier

clouding contradictions experienced by girls and women in the construction of their power "via relational world views of motherhood, family, sisterhood and friendship" (Chilisa and Ntseane, 2010, p. 617).

Chilisa and Ntseane highlight that "Western male hegemony enters the school through subjects such as religion and can be typically reinforced through […] culture, embodied in language and rituals, generating multiple centres of oppression for girls/women in the education system and the public space" and that there is a need to explore "ethical and transformative ways of approaching this complexity that can account for how girls and women negotiate and resist patriarchal power" (Chilisa and Ntseane, 2010, p. 617). They claim that their work "explore[s] strategies for decolonising Euro-Western archival knowledge and challenging dominant, patriarchal, colonial research methodologies" while also "outlin[ing] the role of the activist feminist researcher as transformative healer, who resists dominant research discourses in order to develop processes of social justice and healing in the community" (Chilisa and Ntseane, 2010, p. 617).

This seems a good pointer for social research, but if we expand our research scope to socio-spatial practices, considering that space is constituted by and is constitutive of a social group, we need to enlarge our decolonial perspective. Marcelo Lopes de Souza (2006, 2012) proposes a socio-spatial approach he calls estadocrítico (critical of the state) incorporating tactics into strategies. Usually, tactical approaches (the bottombottom) tend to disappear while strategic proposals (top-down or bottom-up) tend to last. The challenge is to incorporate tactics into strategies, bringing bottom-bottom tactics to dialogue with bottom-up strategies, always avoiding the top-down (Gazzola, 2017). For that we might consider different scales (the microlocal and the global) and draw from a postcolonial critique of urbanism formulated by Jamie Peck (2015, p. 166).

> *[…] Postcolonial urbanism had to entail more than turning conventional treatments upside down, flipping over the 'time chart of urban theory' by promoting Southern urbanisms as alternative universals or premonitions of an alt-global norm; instead, the goal was to be one of 'decentring [rather than inverting] the reference points for international scholarship' (pp. 169, 91). Along the way, this would have to involve '"dislocating" the EuroAmerican centre of theoretical production', while recognizing that the regions of the 'centre' may also be 'exceptional from a [truly] global perspective' (ROY, 2009, p. 820; SEEKINGS and KEIL, 2009, p. vi; SHEPPARD, 2014). The project of postcolonial urbanism is consequently marked by an attitude of principled wariness concerning most (if not all) pre-given conceptual or classificatory formulations, especially universals made in the North and masquerading as stylized facts, policy paradigms or conceptual abstractions.*

happened in very different ways in each place. Generally, we might say that the main difference, besides the period, is that the earlier colonisation of America ended up being more devastating of the native culture—by mixing cultures— than the later colonisation of British and French in Asia, Oceania and Middle East—and also Africa—which managed to preserve their dialects and cultural traditions (with much less mixture). The main similarity is the imposition of hegemonic power relations from the colonisers. The example of African indigenous approach might seem questionable, as the African decolonial perspective is very different from the Latin American, being the indigenous in Africa acknowledged as a preserved category oppressed by hegemonic discourses and practices of injustice, while in Latin America, specially in Brazil, the cultural mixture prevails, even if a few indigenous groups also exist. Nevertheless, the feminist perspective of the indigenous in African theory is a good example of a means to approach contradictions beyond reproducing abstract EuroAmerican hegemonic universals, moving towards social justice.

However, we also acknowledge the excessive particularism of Postcolonial studies that frustrates attempts to reconcile the global and the local in research (scales that are only growing apart (Peck, 2015)) and to develop common grounds for Southern urbanism and EuroAmerican theories to dialogue (Peck, 2015; Vainer, 2014). The urban field still lacks methodological strategies that address the local while situating it

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within a macro-structure as a means to overcome the dichotomy and, instead, foster a dialogue between the planetary and the particular (Peck, 2015). This means considering the 'globalising power' but also highlighting peripheral 'counter-narratives' (McFarlane, 2010).

In our research groups, one first attempt to deal with this through a meta-method drawing from anthropophagy was experimented in Ligia Milagres' PhD research (2016). She did two case studies of selforganisation of people in disputes for urban spaces—one in Brazil and one in Germany—not comparing, but highlighting the main issues raised in each. The method assumed the EuroAmerican basis of our socio-spatial theoretical background[1] and instead of trying to avoid that, incorporated it in building a theoretical lens to look at the cases. The lens brought fundamental concepts from anarchy and Marxian theories dealing with socio-spatial issues and had its focus defined according with the local spatial practices examined. After that, little theoretical pointers were drawn from the encounter with the everyday practices, establishing a deeper dialogue between global and local, EuroAmerican and Brazilian. The result is still incipient, but drafts a decolonial theory of self-organization of socio-spatial groups as an open process, not as a finished product, which would not come up to usual socio-spatial EuroAmerican methods. The main difficulties of Milagres' method were raising data within the time frame of the research; not looking at the cases with the colonial perspective of power relations (Quijano, 2000); not polarizing conflicting relations as antagonistic; and not being extremely subjective in the selection of what to consider or not. So, two main challenges need attention: first, to shorten data raising time and, second, to develop a tool to look more objectively to the local practices in order to voice socio-spatial contradictions without ignoring the theoretical lens.

In order to shorten data raising time we had already tried different approaches, extending from semi-structured interviews with a range of selected experts in the community, to photography workshops with a small group of people registering the spaces they like and dislike and projecting the pictures later for public discussion (Kapp and Baltazar, 2014). Regarding information apprehension, the latter is less timeconsuming.

Even if most people are not willing to take pictures, they are often keen to join the projection session. The discussions raised by different views on the places registered are very inspiring as they provide a quick socio-spatial panorama and reveal consensus and contradictions within the community. Nevertheless, researchers may fall into the trap of analysing the outcome from public discussions with a biased viewpoint, assuming power relations according to their cultural background and colonial universals, and polarizing contradictions as antagonisms. So, we also need a tool to analyse data avoiding the above said.

Actor-Network Theory (ANT) seems the best tool for the job (even being European) because it is a sort of meta-method designed against other tooling that departs from power relations, and proposes to look at the connections between humans and non-humans in an unbiased network. Relations will raise from a careful description of such a network (in our case, the socio-spatial relations) with no imposition of the researchers' EuroAmerican theoretical framework (Latour, 2005). According to John Law (1992) ANT researchers should not neglect the existence of a macro-social system that interacts with the micro-social:

> *For instance, we might start with interaction and assume that interaction is all that there is. Then we might ask how some kinds of interactions more or less succeed in stabilising and reproducing themselves: how it is that they overcome resistance and seem to become "macrosocial"; how it is that they seem to generate the effects such power, fame, size, scope or organisation with which we are all familiar (Law, 1992, p. 380).*

ANT simultaneously wards off social and structural determinism (Latour, 1999), taking agency as something that "happens in the 'intra-actions' of everyone and everything involved, and is not an attribute located in the machine (…) neither an attribute located in people. Agency is not a practice separate from the whole interactive process, it always emerges as a hybrid process" (Baltazar and Kapp, 2010). According to Latour (1996 par. 13), "[t]he notion of network helps us to lift the tyranny of geographers in defining space and offers us a notion which is neither social nor 'real' space, but simply associations". He also explains that ANT "is a theory that says that by following circulations we can get more than by defining entities, essences or provinces. ANT is not a theory of the social, it is a theory of a space in which the social has become a certain type of circulation" (Latour, 1999, par.19). Nevertheless, space in ANT is seen as a background, not as an actant in the network (Farías and Bender, 2012; Murdoch, 1998).

Thus, the benefit for researchers to take ANT as a method to construct a socio-spatial network is the possibility of a temporary withdraw from structural assumptions surrounding the work of social research and take 'space' as an actant together with all other human and non-human actants, as it allows for more attention to the relations found on site that are often neglected from a macro scale approach (specially in rurban fragile communities). However, we still have research questions that needs addressing after an

[1] With the exception of Marcelo Lopes de Souza and a few writings of our own group, all the socio-spatial literature we draw from is EuroAmerican.

unbiased understanding of the community as a network, to which ANT alone cannot respond. So, we can still keep the usual theoretical lens to frame research questions and adjust its focus according to the ANT network outcome. For that we draw from Historical Materialism (HM) because Marxian-based theories are usually the grounds of EuroAmerican Critical Urban theories (our known theoretical framework up to now).

It might be argued that constructivist theories such as ANT and Marxian-based theories such as Critical Urban theory are, in the least, antagonistic in nature. That is so, because, generally, while foundations of the latter lie on the existence of macro structures that actively influence the way space is produced, the former utterly negates the existence of such conforming fabric, arguing that reality is socially constructed.

This means that for ANT power lies on asymmetrical interactions between all sorts of actants (both humans and nonhumans) that can be observed in a microscale, while Marxian theories tend to explain the existing power relations on the basis of a macrostructure, such as the capitalist mode of production. Nevertheless, many scholars have already seen the complementarity of these approaches when attempting to bridge macro and micro analysis. For instance, Brenner et al. (2012) discuss the benefits of ANT as a methodological tool to investigate urban issues, as opposed to ANT as an ontology. Thus, while ANT provides an effective tool to quickly map a locality without any pre-judgement of value in the relationships of eventual conflictive parties (but lacks tools to generalise); HM allows for an in-depth critical analysis of co-existing conflicts found on site (despite its difficulty to encompass particular elements essential to understand urban issues at the microlocal scale and its pre-set EuroAmerican perspective of power relations)[1]. Given the timely nature of the topic, this paper will present the association of ANT and HM as an anthropophagic method to uncover socio-spatial practices in the so-called rurban communities in an empirical teaching experiment.

2 AN EXPERIMENT USING THE ANTHROPOPHAGIC METHOD

The crossing of ANT and HM was firstly pursued in Melgaço's PhD research, supervised by Baltazar (Melgaço, 2016), and is being experimented in Lagear and MOM since 2012, with positive prospects. The experiment presented here follows the PhD in an undergraduate course taught by the authors in 2016 to test the method. It responded to a general complaint among students that many of the modules that deal with the urban scale are too abstract, not providing critical and practical tools for the fieldwork and subsequent analysis and discussion of data gathered. It is often the case in design and urban design studios, for instance, that students need to propose interventions to the study area, but these are unsuccessful due to the rushed and biased nature of analysis. Trying to address the difficulty of gathering data, since 2012, we have been trying to adjust ANT as a method also for students to empirically approach urban controversies[2] in different modules at the School of Architecture at UFMG. These modules presented varying degrees of success in problematizing situations—by identifying the issues and naming the main actants involved—and in associating these controversies to the space (and spatial practices) itself. Nevertheless, students still lacked tools for further critical investigation of the issues raised.

To tackle the limitations observed in the previous modules, a 15-hour course 'Spatial practices and the introduction of ICTs in rurban communities' was taught in 2016 to further test and mature our anthropophagic method. The main goal of the course was to allow architecture and urbanism undergraduates to experiment fieldwork by providing them with the necessary tooling to explore empirical research while being able to critically and contextually analyse it. For that, they were given the task to investigate the relationship between existing spatial practices and the way ICTs are being appropriated in rurban communities. The problem was defined enough so that it could be dealt within the timeframe of the course, but it was also open enough so it could generate a varied discussion among the students. The main goal was to look critically to spatial practices but without preconceived ideas of the communities, ergo the suggestion to take ANT as a preliminary approach to the subject (via fieldwork and collection of further information thereafter). ICTs were one of the elements suggested as their recent introduction is bringing important changes to rurban communities. In the case of the two communities investigated during the course, the influence of ICTs can be especially observed among younger generations, who are included in broader socioeconomical-cultural networks that are not geographically bounded.

The introductory class presented the three elements that composed the course: spatial practices, ICTs and the rurban. ANT as a method was also presented to instigate the students to further research this theory.

[1] As in decolonial theories (Dussel, 2012), our anthropophagic method does not ignore the capitalist mode of production but attempts to look not at the economic general aspect of it in a negative critique, but at the political that arises from the block of people and their diverse forms of resistance.

[2] Approach used, for example, by Albena Yaneva in the module "Mapping Architectural Controversies" at the University of Manchester.

During the session, they formed three groups and were given the task to find a rurban community in Minas Gerais as a case study. The aim was to conduct a one-day field work and then understand the spatial elements that compose the rurban, the spatial practices that were to be found there and the role of ICTs in the community's everyday[1]. After understanding how these relations were built locally, they should focus on how they related to the wider socio-political, socio-spatial and socio-technological conjuncture.

We provided a set of literature divided into four categories: methodology, ICTs, spatial practices and the rurban. Every student should read at least one methodology text, choosing among references on qualitative research (Demo, 2013) and ANT as a methodological tool (Law, 1992). In addition, they should ensure that at least one member of the group was responsible for one of the themes, who should read and write a review on the related literature and observe the elements related to the topic during the fieldtrip, using MOM's guide for fieldwork (MOM, n.d.). A google spreadsheet was used for the organisation of the reading schedule, guaranteeing that the groups would have access to all the basic literature given the short timeframe of the course. The literature was discussed during the second and third meetings, with each text presented by those responsible for it and an open discussion that followed. This dynamic allowed all students to get acquainted with the topics of which the others were responsible.

After being exposed to these two sets of bibliography—the first comprised of a theoretical framework based on Marxian authors and the second comprised of ANT as a methodological tool—the students were asked to devise their own plan on how to analyse the case study selected (using either framework or a combination of them). One group decided to visit Noiva do Cordeiro, a matriarchal community, located 100 km from Belo Horizonte, the capital of the state and where our university is located, while two groups chose to visit Arturos, a quilombola[2] community in the metropolitan region of Belo Horizonte. Each group went to the field trip on their own time before the third week of the course, when they presented their preliminary impressions of the visit, exercise followed by discussion. In the final week, students presented their initial analysis, also followed by discussion and questioning. This analysis was further developed for their final written work, due two weeks after the presentation. In the following section, we will unpack the dynamics of the groups in their field work and the methods they used to further analyse the data collected on the field[3].

2.1 A LITTLE ABOUT THE COMMUNITIES CHOSEN FOR RESEARCH

The first group visited Noiva do Cordeiro, a community founded in the 19th century, after newlywed Dona Senhorinha separated from her husband to join Francisco Fernandes. Part of a very traditional catholic society, the couple was excommunicated to the fourth generation and had to settle in the outskirts of Belo Vale, a 7.000 inhabitant city in Brazil in current numbers. Having raised their family isolated from the nearby villages led to very strong bonds amongst themselves. Fifty years later, the marriage between the young Delina with 42 years' older Evangelic pastor Seu Anísio reinforced local prejudice against the community. He instated the Noiva do Cordeiro religion, whose strict rules—daily prayers, fasting and public punishment—led the community to the brink of starvation. In the 1990s, with the minister's death, the community joined to overcome poverty. While men commuted to the capital for work, women organized collectively the reproduction activities in equally collectively owned spaces. This solution freed some women to invest time in productive activities: they run a lingerie factory and a medium scale farm; process some of their feedstock, producing compotes and cheese. The interest in the community raised with the documentary "Noivas do Cordeiro" aired by the Brazilian channel GNT, and since then, they have increasingly received the visit of "social tourists", lay people, researchers and students from all around the country (and the world) interested in their lifestyle. Because of that, they have developed a tourism agenda and no random visits are allowed in the community. The unfolding of social tourism over time led to the creation of a local narrative, told repetitively and edited to please visitors. This means it is hard to obtain spontaneous information.

Group 2 and 3 visited Arturos, located in the outskirts of Contagem, largest industrial complex of the State of Minas Gerais. Similar to Noiva do Cordeiro, Arturos is a familiar community, formed by the descendants of Arthur Camilo Silvério and Carmelinda Maria da Silva. Arthur was the most prosperous sibling of Camilo Silvério da Silva, an African slave from Angola brought to Brazil in the 19th century, and founded the community on the land he acquired in Contagem. After his death, the land was divided into plots for each

[1] Everyday is explored here with Henri Lefebvre as a social level, avoiding a possible hierarchization of spatial relations in scales.

[2] Quilombola is the designation of slave refugees and their descendants that fled the sugarcane mills, farms and smallholdings where they performed various menial jobs to form small villages called quilombos, today a symbol of resistance of the black culture and fight for equality.

[3] It is important to note that the three groups of students showed similar levels of engagement in the course, of exposure to the community and time to produce their final work. They were also encouraged to conduct interviews rather than a photography workshop, as the latter requires prior organisation and at least two visits to the community.

of his siblings, and the community today is formed of eighty families, accounting for more than 500 members (Prefeitura de Contagem, 2011). The older generations value their African heritage, especially through cultural activities such as batuques and congado, local musical traditions, and for their active contribution to the resistance of African culture in Brazil, in 2014, the community was the first recognised as immaterial heritage in the country (IEPHA MG, 2014). The increasing interface of Arturos with the outside, with the younger generations leaving the community to study and work and the introduction of ICTs, are bringing new socio-spatial processes to the community, challenging its traditional form of spatial organisation. Both communities, despite clear distinctions, provide some of the current conflicts faced by the rurban that could be grasped by the student in their research.

2.2 THE DIFFERENT WORK DYNAMICS DEVISED BY THE GROUPS

Each group developed different dynamics to visit the community and analyse the data collected. Group 1's methodology was mainly based on HM. Two main reasons explain such approach: the exposure of students to the community prior to the fieldwork through online material and our own perspective as researchers; and the familiarity of some students with our research methods, as they work as undergraduate researcher assistants at Lagear. Their first impressions were impregnated with preconceived notions of power relations based on socio-economic macrostructures. Fig 1 shows the group's attempt to relate their preliminary perceptions of Noiva do Cordeiro with João Rua's (2006) discussion of urbanities in the rural which was kept in their final work. Although an important exercise of understanding concretely the discussion proposed by the author, it did not allow the group to advance their perception of spatial practices beyond the input from discussions in class and from the literature.

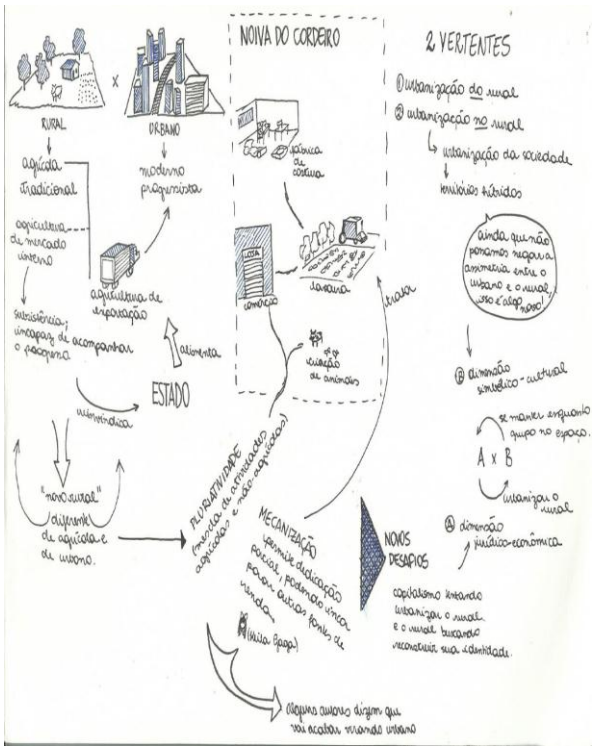

Figure 1 – Group 1's concept and empirical evidence link. Source: Group 1 final essay (unpublished).

Network analysis was introduced later, as a visualisation rather than as a process tool. The hasty attempt to arrive to conclusions by using HM underscored the pre-existence of value judgements and incurred in the group resorting to universals without allowing local actants and their relationships to be revealed by the method. A precarious network resulted, with highlighted elements and connections from previous analysis. Neither the weight of the interactions nor existing power relations that could have projected by a network analysis of the community can be inferred from the graph (Fig. 2).

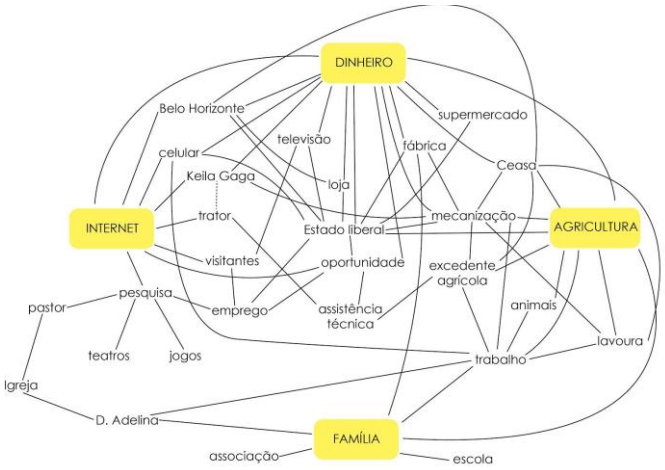

Figure 2 – Group 1 final network. Source: Group 1 final essay (not published).

Groups 2 and 3 departed from a loose attempt to use ANT on the field, but assumed different strategies, especially after the first critique session that followed the fieldtrip. Group 2 did a thorough research online previous to the visit to corroborate their choice of community. According to them, "the analysis of the quantitative data, the history, satellite image and the representativeness of the cultural body were the important information for the final decision to work in Arturos". Students used observation and interviews and secondary sources to define their actants. Despite the desire to use ANT as a process tooling, the group used it "as a means to represent the existing relationships in Arturos" (excerpt from their final work, unpublished), and was presented only at the end as a final product. After the fieldtrip, they soon adopted an unstructured mix of both ANT and HM to organise and analyse their findings, which concealed singular elements of the community that depict its conflicts as a rurban community in the context of an everurbanising society. For instance, they resorted to general actants—family, field, house, access, conviviality, values, religion, cattle—rather than focus on more specific actants, such as Mario, the patriarch of the community. The lack of the particular elements that compose the network led to a misleading construal of the power relations according to their own cultural and social position.

Their rushed construction of the network can be observed by its lack of structure and confusion of elements to be included, which masked existing but invisible power relations (fig. 3). As with group 1, the main actants (highlighted in yellow) were defined by the group, with no clear explanations to their choice of prominent actants. Some elements included, such as 'tradition', are not observable actants. If an ANT processual approach were fully adopted, tradition could have emerged during the critical analysis, as one of the underlying elements that function as a social glue of Arturos, with the use of an HM theoretical framework, for instance. Even though the exercise might have been an attempt to bridge a theoretical framework and a concrete situation, not only the network, but all the analysis of the group was based on general elements thereby with little advancement in critically addressing the questions posed in the course.

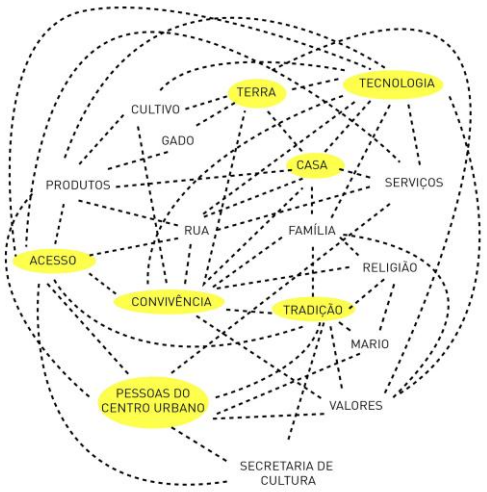

Figure 3 – Group 2 final network. Source: Group 2 final essay (unpublished).

Group 3 also conducted interviews and observation in the community. Differently from group 2, they attempted to use ANT as a tool "to understand the community, […] not assuming what one wants to explain, as it masks the most interesting questions about the origins of power and organisation" (group 3's essay excerpt, unpublished), focussing on the collection of primary data. For the first discussion session, the students built a preliminary network by writing the actants on different post-its and trying to arrange them in a large sheet of paper, which proved to be ineffective.

Without an appropriate tool, the students were unable to compute the amount of information collected (actants + relationships), also inferring local socio-spatial practices from their own standpoint. Let us note

we do not believe in assuming the other's viewpoint, but exercising a critical position is essential to avoid decontextualised, preconceived constructions.

During the discussion in class, this shortcoming was underscored and the group focussed on understanding local elements and micro-relationships from the data collected before making any other assumptions about the community. Their response to the critique was to delve into the ANT method. They used GEPHI, an open source platform to devise and visualise networks, to create a model based on the relationship of the different elements they found on their fieldwork, as it can be seen in Fig. 4. The main benefit of using this software is that it does not organise the network according to relations of power as they are perceived by the researcher. The layout chosen by the group positioned the nodes in accordance to attraction and repulsion calculated by the relations among them (Jacomy et al., 2014). As such, they were able to observe a set of social relations that were not made clear by group 2, especially the roles and levels of engagement of the different generations in the community. By attributing a node to each of the family generations, they were able to analyse and uncover their different responses and interactions with spatial elements, technology, institutions and other individuals and groups.

By exploring the connection between the nodes, this method illuminated power relations that would not be so easily processed otherwise because they are not perceptible on the first sight. The relationships between the nodes also defined different 'clusters' in the network (groups of nodes with a similar pattern of attraction and repulsion), in different colours. This feature revealed that different generations had different relations with the elements in the network, and they were organised in two communities: in one group were located the matriarch and patriarch and their siblings (in orange), but the grandchildren and the greatgrandchildren were located in another one (represented in pink). While the first cluster connected traditional elements, such as the congado and religion; the second cluster connected to recently introduced elements, such as the internet, mobile phones and television (which is quite sensible, if one ponders the relationship between younger generations and technology).

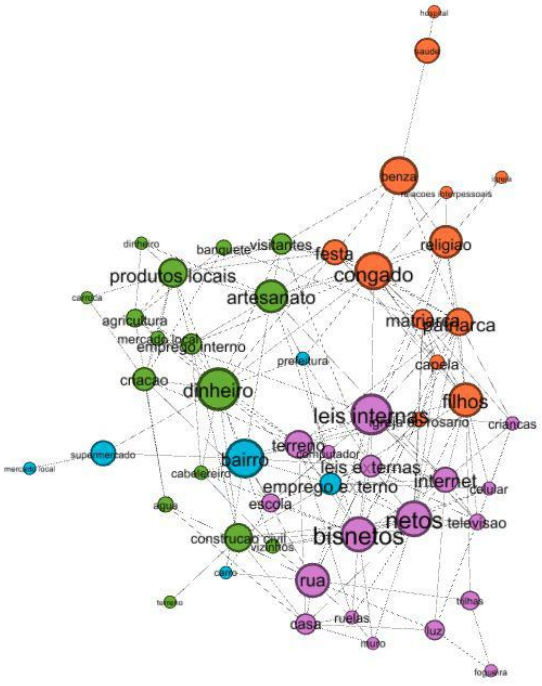

Figure 4 – Group 3 final network using GEPHI software. Source: Group 3 final essay (unpublished).

The most important discovery is that the node they named 'internal laws' is also part of this last cluster. The students understood internal laws as a sort of institution, a set of rules that do not necessarily conform with the formal legal system, one of them being child labour. In Arturos, child labour was never seen as an exploitation of minors, it was rather a means to teach the youngsters the value of work and, most of all, a way to reproduce the community's values and pass it through generations. The fear of being charged with the crime of child labour (something that was never said to the students) might have been the reason for the community to change their posture regarding the education of the youngsters. By doing so, the so-called internal laws, which were introjected in the members everyday, became a visible element in the network developed by the students. Their work did not advance much further than that in the discussion, but this outcome highlights foundations of the relations of production in the community and how those reflect in the space that is being produced in Arturos. By using ANT as a methodological tool to understand the social relations that were present there (or actor-networks, in Michel Callon and Latour's terms (Callon and Latour, 1992)), it was group 3 that was able to unveil expeditiously some of the crucial elements to further understand the community with the theoretical lens based on HM.

3 ANT + HM AS AN AGONISTIC APPROACH TO PLANNING: A PROPER TOOLING FOR THE SOUTH?

So far, we have attempted to provide an anthropophagic method to challenge the shortfalls of our own theoretical production, extensive to the ways we teach future architects and urban planners. This means not only discussing the pedagogical approach but also calling attention to the political implications of the field as we invite students to dwell on the conflicts found on site. As already explained above, ANT enables researchers (and students) to step back from their prejudices to look at the actants and unveil connections and contradictions between them by means of a network. Together with an HM analysis, actants may not be polarised and regarded as antagonists, therefore avoiding the dichotomy friend/enemy (and its antagonism) towards an 'agonistic pluralism', and unveiling that which Chantal Mouffe (2005) discusses regarding political implications. In other words, we should assume the difference between enemy and adversary, being the latter constitutive of a radical democracy. In Mouffe's (2005) words:

> *Conflict, in order to be accepted as legitimate, needs to take a form that does not destroy the political association. This means that some kind of common bond must exist between the parties in conflict, so that they will not treat their opponents as enemies to be eradicated, seeing their demands as illegitimate, which is precisely what happens with the antagonistic friend/enemy relation. (…) If we want to acknowledge on one side the permanence of the antagonistic dimension of the conflict, while on the other side allowing for the possibility of its 'taming', we need to envisage a third type of relation. This is the type of relation which I have proposed to call 'agonism'. While antagonism is a we/they relation in which the two sides are enemies who do not share any common ground, agonism is a we/they relation where the conflicting parties, although acknowledging that there is no rational solution to their conflict, nevertheless recognize the legitimacy of their opponents. They are 'adversaries' not enemies.*

An agonistic (not antagonistic) approach in urban research implies the need to pursue a careful data raising taking into account interactions (conflictual or not) between actants (human and non-humans). This also means a critical perspective that de-naturalizes existing conflicts and questions social relations as contingent constructions of hegemonic practices. If ANT seems a good tool to deal with the first challenge, as it is an attempt to construct an unbiased network of actants, HM still seems a good tool to deal with the second challenge, as it might help dealing with power relations arising from the network (constructing a theoretical lens to be focused according to the network, instead of drawing from universals, as shown by Chilisa and Ntseane (2010). This means to avoid pre-conceived theoretical lenses (those that have also blurred our own critical perspective of the socio-spatial groups we have been working with).

Our anthropophagic method drawing from both ANT and HM is one possible way to approach research agonistically, as it acknowledges the (inevitable) co-existence of conflictive parties without prejudging them before trying to uncover local evidences of the power relations enacted in space. Its preliminary results indicate that it can be a positive asset for undergraduates to grasp local interactions and produce critical socio-spatial analysis that are more context specific and responsible. We use the word responsible here because this method allows them to acknowledge the political dimension of the field while positioning themselves, rather than embodying the universals postulated by EuroAmerican theoretical framework.

This experiment also suggests the positive outcomes for research itself, as it proposes an anthropophagic meta-method to approach a community (mainly a non-organized socio-spatial group) to be able to propose an informed collaboration. This does not mean an imposition from researchers, but a careful first contact to enable the construction of a truly collaborative research relation with the community. A few works state that research might never be pursued by outsiders, the ideal would be that community (indigenous community) undertook their own research, but it would be acceptable a collaboration since the outside researchers respected the indigenous traditions and did not impose their theoretical framework (Smith, 2013, p. 186). Our proposal is not of an outside research, but of a method that only starts with approaching the community with a meta-method to enable further developments. By extending it to undergraduate education, we instigate students to avoid from the onset top-down approaches that often lead to ill-suited responses to local demands, and may continue throughout their professional life.

In order to conclude, we might state that this paper acknowledges the importance (and pervasiveness) of EuroAmerican theories in Southern urban studies, but calls for more context-driven academic production in our countries. For such, it presented an alternative anthropophagic method for studying socio-spatial groups in the context of Brazilian academic production. It draws from ANT to approach a community, systematising it as an agonistic network. It also draws from HM to construct the lens to look at the network adjusting its focus according to the intertwining of unbiased interactions found in the agonistic network and the theoretical framework that sets research questions (which at this stage is still primarily an EuroAmerican framework that needs the anthropophagic approach to purge it of its foreign dominance). It is a work in process that has been furthering, but needs systematisation as it advances (and that is what this paper does).

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ID 1465 | THE PRAXIS OF CREATING LEITBILDER (GUIDING VISIONS) FOR SPATIAL PLANNING PROJECTS IN METROPOLITAN ZURICH

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1 INTRODUCTION

When we think about the future, we automatically conjure up images in our minds. These images can and will shape our future actions. Visions of the future are closely linked to the particular ideals held by each individual and must be seen as closely linked to the associated current technological possibilities (Foraita 2013). Visions of the future also arise with respect to the spatial development of regions and cities. Since the 1950s, visions of how cities and regions should further evolve have increasingly been defined by public-sector experts on architecture and spatial planning, and then documented in so-called Leitbilder (Giesel 2007).

1.1 THE CHANGING MEANING AND FUNCTION OF LEITBILDER

The use of the term Leitbild is on the rise. In the German-speaking world, it has in recent decades been increasingly discussed in the context of spatial planning. Even though the debates among professionals about visions of what should constitute a city had already begun as the discipline of urban design was first taking shape in the last quarter of the nineteenth century, the concept of a Leitbild did not achieve currency until later. According to Kuder (2002) and Naegler (2003), there are two generations of Leitbilder: The first generation of Leitbilder was shaped in the 1940s by the post-war era and did not enter the planning profession until later, in the 1950s. At the time, Leitbilder were virtually equated with the dictatorial past and its authoritarian control mechanisms, from which one distanced oneself a few years later. For a long time, what resulted was criticism that Leitbilder have "a faint military tone" (Adorno, 1967, p. 7) and serve to enable strong figures to assert subjective political vested interests in a democratically constituted but repressively structured age. The second generation of Leitbilder arose mainly when faced with the demands for participation made by a large number of actors and the resulting increase in complexity. Initial attempts were then undertaken to use Leitbilder as a strategic planning tool. This so-called renaissance of Leitbilder in the early 1980s can be explained by the shift to open planning processes, in which a problem-oriented and pragmatic approach was sought.

Literature research shows that the constantly recurring discussion about Leitbilder originates from a mixture of global developments and from local options and constraints: At the centre of the disputes are different interpretations and understandings of the term Leitbild, which elicit imprecision and contradictions. First and foremost, a theoretical debate about Leitbilder in spatial planning takes place in Germany (Engelhardt, 1975; Giesel 2007; Knieling 2000; Kuder 2002; Lendi 1995; Naegler 2003; Sieverts 1998; Streich). But in Switzerland, too, the Leitbild is a topic of growing interest.

1.2 LEITBILDER IN SWISS PLANNING DISCOURSE

Switzerland has been experiencing rapid development of settlements for decades, and this growth has further accelerated in recent years. Whereas the settlement areas expanded nationally by 13 km² per year in the period 1980–2002, to more than 2000 km², this value doubled to 27 km² per year in the period 2002–2008, yielding a settlement area of more than 2500 km² (Müller-Jentsch, Rühli, 2010, p. 3). Due to its high population density (198 inhabitants per km²) and the extreme topography (half of the country is not amenable to settlement), Switzerland has a special need for effective spatial planning.

In 1979, the first building law on spatial planning was formulated, thus increasing pressure on the cantons and municipalities regarding sustainable development of urban areas and settlement in general. The objectives additionally formulated in May 2014 in Article 1 of the Spatial Planning Act (Raumplanungsgesetz; RPG), namely “to direct settlement development inward, with due regard to an adequate quality of living” and “to create compact settlements” (Bundesrat Schweiz, 2014) poses new challenges in this regard for those responsible. Entire city districts are being newly built, and some neighbourhoods are experiencing perceptible densification. More and more people are increasingly using the public realm more intensively. This can lead to conflicts: Different ideals and utilization demands collide with one another.

Swiss spatial planning entails various procedural steps for spatial development and has diverse instruments to manage it: Leitbilder are among the ‘informal’ regulatory planning tools that are primarily used at the beginning of any spatial development. They are ‘informal’ in the sense that they are not regulated by law in an obligatory, legally binding way – although in most cases, as will be seen later, they possess a certain binding character. They aid in pursuing spatial and urban development policies as network policy, act as a mediator between specialist departments, public authorities, and other actors, and act primarily as the basis for other, more binding planning steps, such as the cantonal structure plan.

An initial investigation of metropolitan Zurich shows that the number of Leitbilder that have been created has increased since Article 4 of the Spatial Planning Act was implemented: The production of Leitbilder has, for example, consistently increased in the last 20 years (1996–2016) (fig. 1). Article 4 requires that “those public authorities who are entrusted with planning tasks […] [must] instruct the populace about the goals and course of the planning” and ensure that “[the populace] can contribute appropriately to the planning” (Bundesrat Schweiz, 1979).

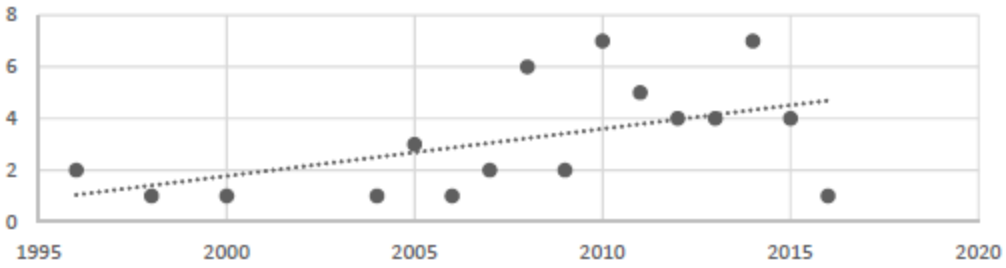

Figure 1: Development in the creation of Leitbilder in metropolitan Zurich (Quantity/Year)

In Switzerland, the theoretical debate on Leitbilder is limited. As a research topic, the Leitbild praxis was first examined in 1970 by the Institute for Local, Regional, and National Planning at the ETH (Schweizer Nationalfonds, 1970). The focus was on the substantive identification of thematic priorities within the compilation of Leitbilder by means of examining six case studies. Nearly 20 years later, Koch (1988) contributed to the urban development discussion by examining the Swiss Leitbilder of the modernist period from 1918 to 1939. In the following years, no one dealt with Leitbilder within a theoretical context. Instead, in the mid-1990s the first brochures were made with instructions and assistance for compiling Leitbilder (Gerber, Michel, 1995; Amt für Raumentwicklung Kanton Uri, 2012). With a focus on the Leitbild as an instrument of spatial planning, they formulate fundamental principles and measures for the treatment of various topics.

It is only in recent years that the discussion about Leitbilder in Switzerland seems to again be gaining interest: At the Zurich University of Applied Sciences (ZHAW), for instance, a research group has studied the planning method of ‘Leitbilder for urban neighbourhood development’ (Institut für Urban Landscape ZHAW, 2012). On the basis of investigations and case studies, the group developed a planning method that combines interdisciplinary content such as urbanism, planning theory, planning procedures, and participation procedures. The study resulted in a vade mecum, a guide for compiling spatial Leitbilder that is intended to support the authorities and technical planners in their work with Leitbilder (Institut für Urban Landscape ZHAW 2016).

On the terminology of spatial Leitbilder in the Swiss context and their transformation over the last 100 years, Martinez (2015) provides in-depth insight. The investigation shows that the development in the importance of Leitbilder and the process of creating them, which began in the 1990s, continues to have its effects even today. For example, Leitbilder are no longer understood solely as a visual representation of a targeted order. Rather, the process that is meant to lead to consensus in selected topic areas is itself the main focus.

As an instrument for design and communication, Leitbilder have adopted many forms in recent years. However, they almost always consist of three components: (1) the Leitbild process, (2) the Leitbild in words and/or images as the product of this process, and (3) the subsequent concretization (Knieling, 2000, p. 8). This paper is based exclusively on the product – the "Leitbild document", and on its contents and formats.

2 RESEARCH INTEREST AND RESEARCH DESIGN

The topic of Leitbilder is by no means uncontroversial, and is in fact controversially discussed in debates on planning theory and social science and in praxis-related spatial planning discourses. Advocates point out that, contrary to earlier times, Leitbilder are no longer static or pictorial and have lost their normative character. Others voice the opinion that Leitbilder are empty formulas that hinder the implementation of planning.

The aim of this study is to build a bridge between the theoretical backgrounds of Leitbilder and their concrete applications in praxis. The content analysis of the Leitbild documents, conducted within a theoretical framework, is intended to provide insight into the Leitbild praxis experienced in the Swiss context by considering the following questions:

a) Function of Leitbilder: What functions are assigned to Leitbilder in today's planning praxis?
b) Binding character of Leitbilder: What tendencies can be observed in the implementation of Leitbilder?
c) Contributions to the Leitbild procedures: What levels of participation can be discerned in Leitbild processes?
d) Pictorial language in Leitbilder: What importance do images have in Leitbild documents? And what are the discernible tendencies regarding the type of images and their application?

The investigation focuses on metropolitan Zurich. Within this geographic boundary, the case studies were selected according to the following parameters: (1) the examples are to be understood as Leitbilder (as processes and concepts that serve to formulate future spatial developments, which are not legally binding, and which are based on the consensus of a group of people), (2) they can be viewed online, and (3) they were developed during the time frame 1996–2016.

The sample contains 50 Leitbild documents. The methodological approach employed here was a summarizing and structuring content analysis as outlined by Mayring (2000): In a first step, evaluation aspects that have been fixed through a reductive process and are theoretically substantiated were applied to the material, in order to ultimately assign, in a second analysis step, the deductively obtained categories in a methodologically sound way. In a third step, the selected Leitbild documents were scrutinized for their suitability with respect to the research question. The case studies that were classified as suitable were recorded using the MAXQDA analysis tool (software for computer-aided qualitative and quantitative data and text analysis) and separated into three time frames (Z1/1996–2002; Z2/2003–2009; Z3/2010–2016). This enables a precise investigation of development trends. In a fourth step, sections of text about a specific topic were assigned to a parent category that serves as the basis for the coding of further differentiations and the structuring of specific groups. Finally, in a fifth and last step these groups were compared within the three time frames (Z1; Z2; Z3) and tendencies were extracted.

3 TENDENCIES IN THE UNDERSTANDING OF LEITBILDER IN PRAXIS

The initial analyses and the findings thus obtained are explained below. The examinations are based on a theoretical framework that serves as an introduction to the individual topics.

3.1 FUNCTIONS OF LEITBILDER

Leitbilder are assigned various functions. The first element that should also be mentioned, which is solely attributed to Leitbilder, is the utopian moment. In Leitbilder, Engelhardt sees "[…] a pioneering and practicable category of utopias geared to positive action" (Engelhardt 1972, p. 169). Streich (1986), by contrast, ascribes normative properties to Leitbilder. He sees their role in the formulation of comprehensive, consolidated, and visually comprehensible target concepts that represent a framework that provides guidance for decisions and evokes sufficiently concrete mental images. He also attributes a kind of quality assurance and control to Leitbilder. After a concrete implementation of planning goals, the Leitbild can, as a superordinate reference system, take over the the task of checking the achievement of goals (ibid.). At the end of the 1990s, Becker observed that Leitbilder are based much more on cooperative and consensus-oriented processes, and that they comprise formulated objectives and principles of action (Becker, 1998). Knieling (2000), too, sees Leitbild processes as procedural components that serve as the basis for further planning steps. In a communicative and open planning process that relies on cooperation among the actors, Leitbilder contribute to the coordination of the collective action (ibid., p. 215). The consensus building takes place not only within the planning team but also beyond it, by involving the public. In this sense, the Leitbild is also an indispensable communication tool for dialogue between the world of politics, administrative authorities, and citizens. (Sieverts 1998, p. 21; Gerber 1995, p. 481). In addition to fulfilling the functions of guidance and communication, one of the tasks of Leitbilder is to provide motivation, since they "[…] [are able] to stimulate engagement and motivate to action" (Kahlenborn, 1995, p. 18). Lastly, Knieling (2000) attributes the functions of reflection, innovation, and marketing to Leitbild processes.

On the question of what functions are assigned to Leitbilder in today's Swiss planning practice, an inductive content analysis was conducted on the topics of function, goal (operational, not substantive) and purpose.

In the 50 case studies examined, all but one author assigned functions to the Leitbild: The analysis shows that in the first time frame (Z1/1996–2002), the normative functions of Leitbilder were predominant (fig. 2). Thus all the Leitbilder (100%) from Z1 were assigned the task of providing guidelines (governing parameters): "With these Leitbilder, additional governing parameters are to be created […]" (Bezirk Einsiedeln, 1996, p. 6). And: "Urban design principles [point] the way for further planning and realization" (Amt für Städtebau Stadt Zürich, 2000, p. 3). Moreover, in three-quarters (75%) of these case studies, the role of serving as the basis (procedural component) for other planning steps is assigned to the Leitbild: "With the goal of maintaining and improving the attractiveness of the old quarter of Wil, the municipal council has […] commissioned the elaboration of appropriate basic principles and governing parameters" (Stadt Wil, 1998, p. 3). And: "With the Leitbild, the intention is to define general basic principles for planning and building development in the perimeter area […]" (Bezirk Einsiedeln, 1996, p. 6).

Although these functions were also regarded as important (35–60%) in two other time frames (Z2 and Z3), guidance and direction attained more importance (about 90–100%) as a task of Leitbilder: "These are the values to be striven for. The concepts that one may never reach, but which can give one orientation" (Gemeinde Zollikon , 2008, p. 13). And: "The Leitbild offers guidance and provides evaluation criteria for future construction projects" (Stadt Zürich, 2011, p. 2).

Communication as a function of Leitbilder is only given attention (almost 30%) in the third time frame (Z3): "[The development concept] is, however, also to be understood as a process and thus as a tool for dialogue" (Gemeinde Wetzikon, 2010, p. 4). And: "As used, the Leitbild should serve as a means of communication and as a basis for the planning and construction standards of the resident community of Cham" (Einwohnergemeinde Cham, 2011, p. 2011).

The functions that imply the cooperation of people (coordination, process orientation, cooperation) are only attributed to a small portion of the Leitbilder (around 10–15%). They first appear in the time from 2003 to 2016 and express themselves, inter alia, as follows: "[The Leitbild serves to] find consensual solutions, and to involve citizens in the planning process from the outset" (Stadt Bülach, 2004, p. 4). And:"[The goal of the spatial development concept] is […] to coordinate and reconcile the main priorities of urban design, open space, and transport" (Gemeinde Wetzikon, 2010, p. 4).

Lastly, the function of promoting identity is attributed to the compilation of Leitbilder in two cases (6%): "[The Leitbild] should create a positive image and become a source of identity" (Amt für Städtebau Stadt Zürich, 2012, p. 3). And: "The participatory process [of creating a Leitbild] supports the culture of togetherness and leads to identification" (Stadt Brugg and Gemeinde Windisch, 2014, p. 10).

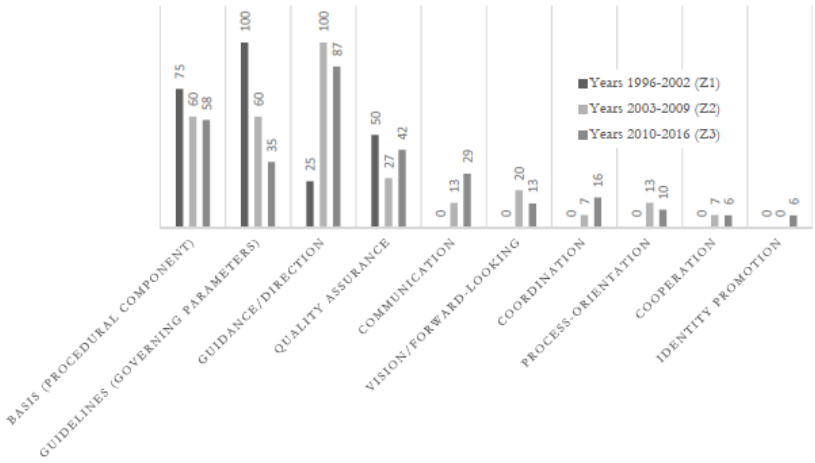

Figure 2: Functions of Leitbilder, as share of codings (%) per time period.

3.2 THE BINDING CHARACTER AND IMPLEMENTATION OF LEITBILDER

Leitbilder are often criticized for the growing discrepancy between vision, planning, and implementation (Burckhardt 1980). According to Streich (1988, p. 73), however, Leitbilder serve the implementation of planning, meaning they provide control and guidance for deriving concrete goals in subsequent planning processes. Hence the implementation of Leitbilder is equated with control and guidance. Dierkes et al. (1992), by contrast, shift the main focus of consideration from aiding control and guidance – for the architectural or spatial-structural implementation of the substantive contents of the Leitbild, for example – to the creative development process for the substantive contents of the Leitbild. For them, the implementation of the Leitbild lies in the process itself. Thus the degree of binding force depends in no small way on the goals formulated in the Leitbild. According to Gruber (1995), a binding character is needed more for generally formulated development goals and concepts than for action guidelines. While the former explicitly establishes a target–means relationship (Lendi, 1995, p. 625 and Knieling, 2000, p. 29), the flexibility to act with regard to problems and situations is more important for the latter. Weeber et al. (1985), too, move away from the definition of a Leitbild as a single, generally applicable concept and speak of Leitbilder (in the plural) as scenarios for spatial developments that exist in parallel.

The question of what models can be identified for the practical implementation of Leitbilder was examined on the basis of the codings implementation/measures/basis/binding character (fig. 3).

The investigation showed that a first group (U1) conceives the implementation of Leitbilder by means of concepts and plans that simultaneously serve to verify if the goals have been achieved. In all the time frames (Z1–Z3), this group is represented most frequently (70–100%) and entails comments like these:

“The evaluation of future building permit applications in the area covered by the Leitbild takes place at the municipal level in accordance with the provisions and recommendations in the enacted Leitbilder” (Bezirk Einsiedeln, 1996, p. 66). And: “[…] the Leitbild [serves] as the basis for the pending revision of the regional structure plan and as a basis for evaluating the proposed revision […]” (Planung Limmattal, 2007, p. 2).

A second group (U2), which conceives implementation as the setting of goals within Leitbild processes, has the lowest representation with approximately 6–7% in the time frames Z2 and Z3. Here, immediate implementation does not seem to be expected. Rather, the process is the focus of the procedure, as attested by the following statements:: “In five workshops between April and October 2010, the community of interest […] has dealt with questions of urban development. The results of the process are visions of the future and sketches dealing with specific subjects and spaces […]”(G RUV, 2010, p. 1). And: “[…] the group [elaborated on] the goals and subgoals for the most important issues and developed ideas for measures and problem-solving approaches […]” (Gemeinde Zollikon, 2008, p. 4).

Finally, in a third group (U3), both of the above-mentioned implementation models (U1 + U2) are combined in one procedure: This group mainly gains importance (23%) in the third time frame (Z3). In this case, the Leitbild creation process includes studies and test planning in which the positive aspects of several scenarios are brought together in one Leitbild, as illustrated by the following quotes: “Together, [we have] continued the initiated cooperative planning process […] and conducted the test plan ‘Leutschenbach-Mitte’, whose synthesis is used as the basis for the new Leitbild. It sets the stage […]” (Amt für Städtebau der Stadt Zürich, 2012, p. 2). And: “Based on the input from the populace and the spatial planning

analysis, […] a thesis paper with objectives […] was developed" (Stadt Brugg and Gemeinde Windisch, 2014, p. 4).

Figure 3: Tendencies in the implementation of Leitbilder, as share of codings (%) per time period

3.3 CONTRIBUTIONS TO THE CREATION OF LEITBILDER

Sieverts (1998) sees the spatial Leitbild as a kind of 'agora' that can engender democratic participation in politics. In the complex undertaking of spatial planning, he thus ascribes a political nature to Leitbilder and sees their task as indispensable in fostering an understanding of correlating actions and objectives (Sieverts, in: Becker, Jessen, Sander, 1998, p. 21).

In Switzerland, Leitbilder are employed at various planning levels: They vary from closed to open procedures. Some are developed by an expert team working without public involvement, whereas others are based on a participatory process where involvement of the populace is at the centre of that process. However, participation can be implemented in different stages: In his multi-stage model, Selle (1996) distinguishes among four levels that build on each other: (1) information for and consultation with those involved (in the process), (2) information for the general public through democratization of the planning, (3) a participation procedure to stimulate motivation and the mobilization of endogenous potential, and (4) cooperation, meaning collective problem handling through synergy effects. Cooperation as the last stage entails a shift of the decision-making process, moving it from within the political-administrative system to the outside, where it is designed by numerous actors.

When considering participation procedures in Swiss planning processes, it is important to remember that the choice of the form and means used to disseminate information and foster participation is at the discretion of the planning authority. The principle anchored in Article 4 of the Spatial Planning Act (1979) – "those public authorities who are entrusted with planning tasks must inform the populace about the goals and course of the planning" and ensure that they "[…] can contribute appropriately to the planning" – is interpreted variously. That is because the term "appropriately" leaves open to a large degree both the practical implementation of participation procedures and the degree of participation.

In order to explore the tendencies of participation procedures in the planning praxis within metropolitan Zurich, a content analysis was undertaken with the following coding: Information/contribution/cooperation/participation/workshop.

The results of the investigation (fig. 4) reveal that a first group of Leitbild documents (25–33%) contain no statements about participation procedures (M1). Time frame Z1 is characterized primarily (50%) by Leitbilder that were developed and concluded with contributions from landowners (M2) and can be recognized by statements like the following: "The affected landowners […] were informed by the building authority about the process of developing the Leitbild; they had the opportunity to submit proposals for creation of the Leitbild" (Bezirk Einsiedeln, 1996, p. 42). And: "The landowners concerned had the opportunity […] to submit proposals […] that [were] taken into account in the pertinent Leitbilder" (Bezirk Einsiedeln, 1996, p. 5).

The landowner-oriented procedures are hardly present (0.03–0.07%) in the following years (Z2 and Z3) and are replaced (29–33%) by self-contained participation procedures conducted among communities of interest (M3): "The work has been supported by a broadly assembled supporting group, in which the parties, the neighbourhood and local associations, and various interest groups were represented" (Stadt Frauenfeld, 2008, p. 5). And: "Around 40 stakeholder representatives participated in […] the two workshops. Remarks, ideas, and feedback were gathered about development scenarios for Wollishofen […]" (Amt für Städtebau der Stadt Zürich, 2011, p. 4).

Distinct tendencies are observable in time frames Z2 and Z3, in which Leitbilder are used as a basis for contributory participation (M4) and therefore the notification and the call for participation are announced in the document itself (7–20%): "With this in mind, I invite you to participate in the planning process, to partake in the discussion and in the decision-making. Share with us your wishes and suggestions for urban

development”(Stadt Luzern, 2007, p. 11). And: “Now, as citizens it is your turn: take part and contribute. Identify the things important to you [and] also any objections.” (Gemeinde Beromünster, 2014, p. 7).

On the other hand, a clear trend in Leitbilder can be observed, in which the participation procedures play an important part in the whole process and are therefore already documented in the Leitbild itself or in a supplementary report (M5): “The results of both participation procedures were summarized in two contribution reports […]” (Stadt Luzern, 2008, p. 7). And: “The team from the ETH led the workshops, prepared them, followed them up, and continually documented the results in this project manual” (ETH Professur für Architektur und Städtebau Christiaanse, 2014, p. 7.

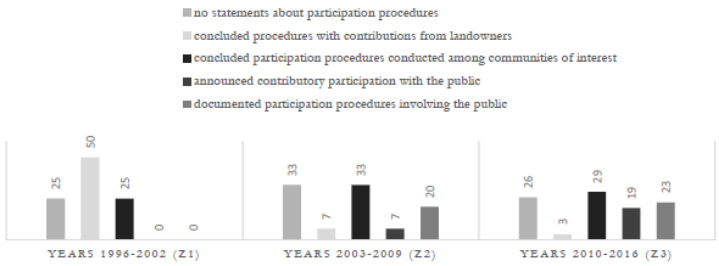

Figure 4: Tendencies of participation procedures in the creation of Leitbilder, as share of codings (%) per time period.

3.4 PICTORIAL LANGUAGE IN LEITBILDER

In the process of designing Leitbilder, textual and visual components interact. Images, as conveyors of knowledge, have the potential to transform information and insights into a form accessible to the senses and thus to present complex topics in a simplified way (Dierkes, Marz, Hofmann 1992; Schuck-Wersig et al. 2014). Yet images also contain codes that are frequently hard for laypeople to decipher, especially when they are abstract and symbolic (Ballstead 1996). When using maps and plans as a means of communication, for example, it can be observed that it is often very difficult for laypeople to decipher (decode) the information, meaning to transfer it to their own world of experience (Rambow 2004; Wissen 2009). Especially when it comes to communicating contributions of spatial planning developments, images are an important means of understanding. These can be fundamentally distinguished as follows: those that portray the existing condition and thus aid the analysis, and those that also portray objectives, strategies, and targeted measures, that is, planning and draft planning.

Part of this final analysis is a consideration of how important images are in the Leitbild documents and what pictorial language is employed for understanding the content.

The investigation of the relationship between text and image reveals that particularly the Leitbilder that were created early-on (Z1) are text-heavy (fig. 5); the documents consist (in terms of graphic space) of about three-quarters text (72%) and roughly one quarter images (28%). In subsequent years the ratio levels out, such that documents from the time frame Z3 already consist of 42% images.

Upon investigation of the types of images and their importance in Leitbild documents, the following can be discerned (fig. 5): Over the entire period of examination (Z1–Z3) and beyond, 2D plans and photographs are the two types of images used most widely. Especially in Z1, they account for the largest share, with 91%. The other types of images (3D visualizations, tables/diagrams, sketched depictions, and photographs that document participation processes in Leitbild developments) first gain importance beginning in Z2 and Z3.

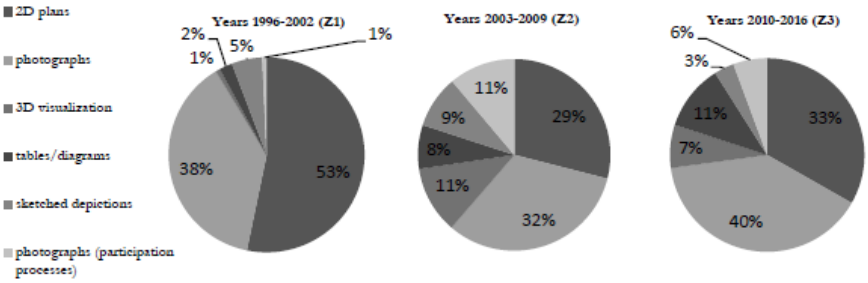

Figure 5: Types of images and graphic share (%) in Leitbild documents

4 CONCLUSION

The integration and function of Leitbilder in the planning structure is largely discussed at the theoretical level. Nevertheless, the praxis involving them is not fully understood because due to their informal character, Leitbilder are used in diverse ways.

The theory-based content analysis aims to extract tendencies in the Leitbild praxis by examining case studies in metropolitan Zurich. The investigation of the functions of Leitbilder shows that the authors primarily assign a normative character to them and view the Leitbilder as guidelines for action that serve as the basis for further planning steps. Leitbilder are also awarded the task of guidance and quality assurance in multi-stage procedures. Statements on the role of the Leitbild as a medium of communication in cooperative processes are rather rare. This is also reflected in the praxis of implementing Leitbilder, where three tendencies (U1/U2/U3) stand out:

U1: In most cases, the planners equate the implementation of Leitbilder with the creation of concepts and plans. This serves to verify if the goals of the formulated fundamental principles have been achieved in the subsequent implementation.

U2: Leitbild procedures that are understood only as a process for setting goals for spatial development are extremely rare. And nevertheless, it can be observed that such procedures are increasingly understood as supplemental to U1.

U3: In this spirit, a new model emerges of a Leitbild consisting of two parts: a normative part and a processual part.

Most Leitbilder are referred characterized as binding for the authorities, which admittedly facilitates their implementation. However, if other legally binding instruments apply – such as a structure plan – Leitbilder lose their distinctive profile vis-à-vis these planning instrument, although theoretically they would clearly be distinguishable. Leitbilder could still be seen much more in a complementary relationship with other planning instruments such as concepts, plans, or programs: While they are increasingly deemed to have a normative content with defined guidelines, the elaboration of scenarios is value neutral, inasmuch as they only portray the various possibilities for future development. Finally, Leitbilder have the potential to create a framework that is comprehensible for all stakeholders, within which a discussion about the future of the built environment can take place. Whether in expert circles or participation procedures: Leitbilder serve as instruments for coordination and communication and can aid in the search for future prospects, ideals, and a high-quality living environment for the consensus of all those involved. Yet this possibility has not yet been fully exploited. The following tendencies can be discerned in the implementation of participation procedures:

M1: About one third of the Leitbilder were developed inside the planning authorities and without public involvement.

M2: Especially in the first years (Z1), Leitbilder are developed with the involvement of the landowners.

M3: Most Leitbilder are developed in the presence of various interest groups, in which, for the most part, members of the local population are represented as a group. These participation procedures commonly take place at the beginning of Leitbild processes and regularly include organized workshops within more or less closed circles. Not until the end of the process is the final Leitbild (document) presented to the public at large and adopted by a legislative consultation process.

M4: In a few solitary case studies, an intention to involve the public in the planning processes is solely declared. In such cases, the Leitbild document forms the basis for discussion.

M5: And lastly: within Leitbild processes, a tendency can be discerned in which the contributions are at the core of the idea finding. In such cases, the Leitbilder document the participation procedures and outcomes.

Lastly, the investigation of the pictorial language of Leitbilder reveals that the development tends to shift from technical/planning-related portrayals to visual/spatial (3D) depictions and diagrams. This enables laypeople to develop a better understanding of future spatial scenarios and thus creates the basis for communication, on a level playing field, between experts and the public.

Among the conflicting priorities of environment, society, and politics, the Leitbild, as an informal instrument, seems to have assumed an important place in the Swiss planning praxis. Spatial planning is influenced from two sides. On the one side, by overarching legal provisions and planning goals at the federal, cantonal, and regional levels, and on the other side, by the concerns, desires, and ideas of the affected population. Here, the compilation of a Leitbild can enable the establishment of an initial basis for defining common goals.

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ID 1480 | PLANNING FOR CREATING A PEACE PARK; PEACE PARK BETWEEN TURKEY AND GEORGIA AS CASE STUDY

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1 INTRODUCTION

There are a whole host of environmental issues for biota along the political borders. Many international borders, not only appear on maps, but are bounded by fences or other obstacles that fragment landscapes and ecosystems. More or less, many international borders have been caused ecological issues including biodiversity reduction; the fragmentation of habitat (particularly for endangered animals which both require wide open spaces to survive and maintain gene pool diversity); habitat destruction through land filling and extensive service roads and invasive vehicular patrolling (Cunningham, 2012).

In these situations removal of border obstacles and creation of designated corridors to facilitate animal movement has sometimes proven to be a worthwhile solution. However, cross border conservation solutions have been used more. Typically solutions like this are called Transboundary Conservation Areas (TBCA's) which is also known as peace park.

Following the World Parks Congress in 2003, a Global Transboundary Protected Area Network was established by International Union for Conservation of Nature (IUCN) and based in South Africa. IUCN defines a Transboundary Protected Area (TBPA) as:

> "an area of land and/or sea that straddles one or more borders between states, sub-national units such as provinces and regions, autonomous areas and/or areas beyond the limit of national sovereignty or jurisdiction, whose constituent parts are especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed cooperatively through legal or other effective means".

In addition to TBCA's, two other types of transboundary areas have been classified. Table 1 quantifies all three typologies (Mayoral-Phillips, 2002).

Transboundary Conservation Areas	Areas that span well-defined borders, within precise and linear concepts of international borders (Krukoski, 1998). Aim: conservation of biodiversity, cultural heritage and economic benefits
Trans frontier Conservation Areas	Areas that span regions where boundaries have not been agreed upon (Krukoski, 1998). Aim: as with TBCA's. In addition to ameliorate tensions related to disputed borderlands
International Peace Parks	Areas that have definite political objectives and are largely symbolic in nature. Objectives: confirm, strengthen, or re-establish good relations with a neighboring state(s); prevent escalation of border disputes; safeguard biodiversity.

Table 1- Typologies of Conservation Transboundary Areas (Source: Singh, 1999)

TBPA itself can be developed based on a wide variety of different cross-boundary arrangements including:ational Park in the USA and the Waterton Lakes National Park in Canada (Mayoral-Phillips,

2002). By the late 1990's there were 136 protected areas, adjoining 112 international boundaries in 98 countries (Ali, 2007).

Although peace parks can be found in various ecoregions of the world, they are mostly categorized based on their location in two groups; terrestrial and marine conserved areas. Waterton-Glacier International Peace Park, The Great Limpopo Transfrontier Park, “W” Transborder Parks, Kavango - Zambezi Transfrontier Conservation Area are the terrestrial cases and Binational Red Sea Marine Peace Park, Iona – Skeleton Coast Transfrontier Conservation Area, and Mnazi Bay-Ruvuma Estuary Marine Park are the Marin TBPA.

Peace parks address ecological degradation and demands cooperation across national and other geopolitical boundaries (Cunningham, 2012). These cross border efforts are instrumental in reunifying artificially-divided landscapes and can facilitate development of coordinated conservation practices. Other benefits of peace parks creation over borders include improved political relationships between countries, increased tourism opportunities, and the involvement of local communities in conservation solutions that will provide direct local benefits (Laverty, 2007). This article aims to envestigate the cooperation between Turkey and Georgia by a transboundary park. Since early 2000th, World Wild Fund for Nature develops concept for establishing Georgia-Turkey cross- and transboundary cooperation for biodiversity conservation and sustainable resource use in South Colchic region (Ajara Autonomous Republic of Georgia and bordering part of Turkey). From Georgian side, apart of Mtirala NP, Machakhela river valley (Machakhel in Turkish) is considered as the key area for development of transboundary activities.

Machakhela is relatively small transboundary river: upper part locates in Turkey – protected area as Camili Biosphere Reserve and middle and lower streams locate in Georgia. The valley is rich not only in biodiversity, but also from a historical cultural viewpoint. The idea of international cooperation and participation to conserve the areas crossed the political border has been discussed for a few years in Turkey and Georgia. However, no survey and assessment has been performed about the possibility of the idea. This article makes attempt to analyze the management and planning strategies of two counties considered for the valley in order to create an international peace park.

2 METHOD AND MATERIALS

The area which is proposed as Transboundary Peace Park in this research is a huge valley with three main landscapes of forest, mountain, and residents located over the international border of Turkey and Georgia, in the northeast of Turkey and southwest of Georgia (figure1). The Turkish part of the site has been known as Camili (Jamili) and the Georgian part is known as Machakheli.

To analyze the current situation of each part, three main factors including biological assessment, Socio-Economic assessment, and planning approaches are considered. To get the information and data, it uses the secondary reports, and available documents and internal sources. After the situation analyses, necessary planning phases are suggested in order to integrate and define the areas as a whole under one main category of International Peace Park.

Figure 1- Location of the site between Georgia and Turkey

2.1 SITUATION ANALYSES OF CAMILI WATERSHED AREA/TURKEY

The Turkish part of the site is situated 25-30 kilometers from Batumi (Georgia), one of the oldest harbors in the Black Sea. Camili Watershed Area and its surroundings have thus been conquered many times throughout history. Since 1925, Camili is included in the Borçka district of Artvin Province in Turkey .It has six villages having both official Turkish and unofficial Georgian names. In 2005, Camili became Turkey's only UNESCO-recognized biosphere reserve (Figure 2). Besause Camili Watershed Area also enters Georgian Borders, the area is defined by open natural borders (7) (Pirselimopglu &et.al, 2008).

Figure 2- Location of the Camili Watershed Area in Turket (Source:UNESCO,2017)

2.1.1 BIOLOGICAL ASSESSMENT OF CAMILI

The Macahel (Camili) river basin (27,000 ha, 400–3415 m) in the province of Artvin borders the state of Georgia on the eastern edge of the Black Sea region. With its Caucasian mixed temperate rain forest and high alpine meadows, the river basin is rich in biodiversity and features many endemic species.

Mount Karçal (3415 m) and neighboring peaks, as high as 2000 m, close off the basin on 3 sides (figure 3). The Karcal Mountains (3,415 metres high), are in northwestern and there are also three main valleys; the Ugur-Maral, Efeler and Duzenli in the area. The area has a very steep land structure. The altitude varies from 400-500 m high in deep valleys to 3500 m in mountain top. Two important rivers at the arena are Ugur and Efeler stream and they have various supporting branches. The most important water source at the area is Karagol River with an area of 10 ha.

The forest at the area has mostly kept their natural qualities. There are a great numbers of trees which are considered monumental in the forest. The area is also very rich for endemic species (71 endemin species) (Teksoz &et al, 2016).

Figure 3- A vast view of the Karçal Mountains (Teksoz &et al, 2016)

Wildlife at the area is very rich. It includes mammals, 90 bird species. It is highly significant part of the bird migration route within the Black Sea Basin. The Karçal Mountains is one of the important habitats of the endemic Caucasian black grouse (Tetrao mlokosiewiczi). It is an important zoo-geographical area for insects-pure Caucsian bee race (8) (Pirselimopglu &et.al, 2008). There also exists a large population of bark beetles that present a threat to the regional forest ecosystems. Important carnivore species in the area include wolf, jackal, red fox, badger, marten and weasel.

2.1.2 SOCIO-ECONOMIC ASESSMENT

Villages at elevations of 500–1000 m in this geographically isolated basin are surrounded by natural and artificial barriers on all sides. The area is with the area of 16.000 hectares includes 6 villages named Camili, Duzenli, Kayalar, Efeler, Maraal and Ugur Villages (population of 1213 people, 268 households). Numerous archaeological sites can be found within Camili, for instance, the Iremit mosque in Maral village, Tamara's cave and an arched bridge at the entrance of Efeler village. Altogether, six villages are located within Camili, and each of these exhibits notable architectural values (figure 4). Old houses that contain four to six rooms and wooden balconies are typical of this traditional style.

Figure 4- A vast view of Camili Village (Kaymaz, 2012)

Natural condition of the area- climate and land structure and dense plants has limited the economic use of the area. Due to the geographical conditions of the area the roads are blocked by snow for 4-6 months in winter. Local people are dependent on nature in order to perpetuate their living. Human-nature relations are built on traditional knowledge and experiences from the past (UNESCO, 2017)

In addition to these natural conditions, limited transport and communication opportunities do not let economic life to grow (Pirselimopglu &et.al, 2008). Income resources at the area are cattle-dealing, bee-keeping, hazelnut and corn growing, fruit and vegetable growing. Camili has a very traditional rural lifestyle with hazelnut farming and honey production as the main economic activities (figure 5).

Figure 5- Traditional lifestyle of people in Camili (Teksoz &et al, 2016)

Cultural, ethnographic and historical values of the area which the locals have produced for centuries (language, folklor, clothing, hand-craft, songs, cuisine, authentic production systems) are important elements to be considered among the objectives of the regional cultural tourism development.

2.1.3 PLANNING APPROACHES IN CAMILI

There are two projects at the area; “Biological Diversity Project (Global Environment Facility supported by World Bank and “Camili and Karagol Forest Ecosystem Protection and Development Opportunities Project” being carried out by The Research Association of Rural Environment and Forestry (RAREF) . In the light of these studies, Decisions were made for protection area and sustainable resources use and Camili-Gorgit (Heba High Plateau) and Camili-Efeler (Findik High Plateau) Nature Conservation Areas (NCA) was established. These Nature Conservation Areas which are connected to the General Directorate of Wild Life do not have borders and Management.

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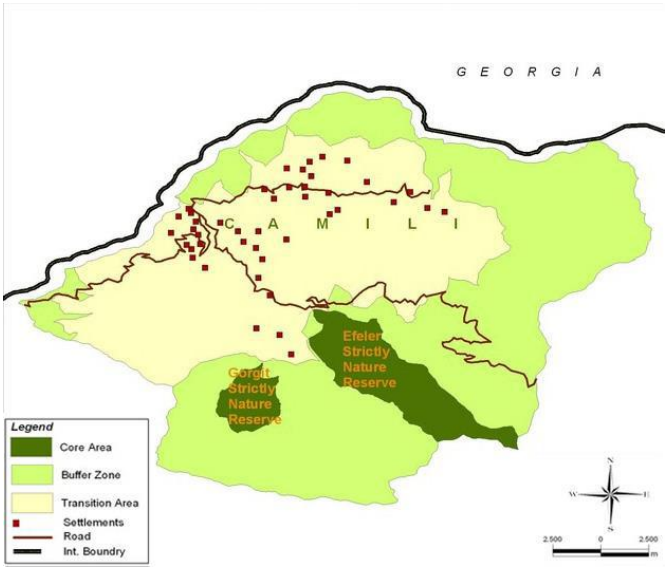
- Camili Biosphere Reserve

In 2005, the area (the part in Turkey) was registered as Biosphere Reserve. The biosphere reserve area with a surface area of 25.222 ha is bordered with Georgia. The area between Black Sea and the high mountains beyond it show mild and humid climate features with subtropical oceanic character (İnandık, 1969). World Wide Fund for Nature (WWF) registered this area as one of the 20 Ecologic Regions. There are also two nature reserve areas Camili-Efeler ve Camili-Gorgit) in the biosphere reserve area (figure 6) (Kaymaz & et al, 2012).



Biosphere reserve area where precipitation is observed in each season according to climate characteristics is rich in terms of hydrographic elements. The water in the area is drained by Efeler, Uğur and Düzenli rivers (Koday& Kaymaz, 2013).

Figure 6- Surface area (terrestrial): 27,152 ha , Core area(s): 2,237 ha , Buffer area(s): 13,731 ha , Transition area(s): 11,184 ha (Source:UNESCO,2017)

Biological Diversity and Natural Resource Management Project (BDNRMP) , which is supported by the GEF between 2000 and 2006, is being carried out in the Camili Biosphere Reserve. The organizations responsible for the application of the management plan are the Republic of Turkey, the Ministry of Environment and Forestry, the General Directorate of Nature Conservation and National Parks, and BDNRMP Camili Project Management (UNESCO, 2017). The forest area is under the authority of Directorate of Forestry and the Two Strict Nature Reserves are managed by the Directorate of National Parks (Ministry of Environment and Forestry, 2014).

After the border is set, the area remained in the north east of Turkey, remote, isolated and set apart from its previous Centrum, Batumi, however governance process helped the conservation of ecosystems. After the border between Turkey and Russia (at that period) was set, the number of brown bears living in the border has increased. This is because there is no human entrance, interference in the region. Entering the area was not possible for foreigners. The permit was removed for Turkish citizens in 2004, but remains obligatory for foreign citizens. This requirement for a permit together with the difficulty to reach the area

has helped to keep the ecotourism activities on a modest level that resulted in the ecosystems to remain undestroyed (Ministry of Environment and Forestry, 2014).

2.2 SITUATION ANALYSES OF MACHAKHELA/GEORGIA

Georgia lies in the west of the southern part of the Caucasus region. Georgia holds the major part of the region's biodiversity with almost all Caucasus eco-systems and habitats represented and a high number of globally threatened species (GEF & NUDP, 2016). Machakhela valley is located in the south of Adjara/Georgia on the border with Turkey (figure 7). Machakhela is considered as the Eco regional Conservation Plan for the Caucasus (ECPC) on the border with Turkey and close to the existing Mtirala National Park and Kintrishi Nature Protected Landscape.

Figure 7- Machakhela is located in the south of the Adjara/Georgia

2.2.1 BIOLOGICAL ASSESSMENTS

Machakhela includes two landscapes: secondary fields (orchards, residential areas) and deciduous forest with evergreen sub-forest. There is a river named Machakhela River that is relatively small trans-boundary river between Georgia and Turkey.

Machakhela valley is home of the unique variety of relic and endemic plants (figure 8). 10,868 ha of Machakhela valley is covered by forests, 75 % of the territory is virgin forests. Most of the territory of the valley is occupied by the Colchis forest communities, which include an understory of evergreen shrubs with various endemic species such as Urgern's Rhododendron, and other common species like Cherry laurel or Caucasus box (Ilia University, 2015). Dominant species are beech, chestnut, oak, spruce, maple, persimmon and etc. Around 200 species of vertebrates' mammals, birds, amphibians, reptiles and fish) are found on the proposed territory.

The area is an important bottleneck for migratory birds (Batumi Flyway) in spring and autumn. Among the species that can be observed are: Imperial Eagle, Lesser Spotted Eagle, Steppe Buzzard, Black Kite, Booted Eagle, etc (GEF & NUDP, 2015).

Figure 8- Vegetation in Ajara PA´s (GEF & NUDP, 2015)

Anthropogenic landscapes are covered with cultural and invasive vegetation, while forested section is mainly covered with local Colchian species. The areas where mature Colchic forest is well preserved are notable for that pristine wilderness and scenic beauty (GEF&UNDP, 2015). Colchic forests provide an important habitat for large mammals, including brown bear, golden jackal, European lynx, European roe deer, wild boar, and wolf.

2.2.3 SOCIO-ECONOMIC ASSESSMENT

In the area, old traditions are well preserved, and it has good connection with neighboring Protected Area in Turkey. Cultural and historical heritage including the medieval Tskhemlari Bridge, and many other arch bridges, the Gvara Fortress (6th-7th century AD), different churches and monasteries, and other ethnographic attractions such as an old wine press.

Popular festivals and celebrations are also part of the cultural richness of Machakhela region that are worth mentioning, such as the popular Machackhloba Festival held in the second half of September (UNDP & GEF, 2016).

Eight inhabited villages are in the area of influence of the Machakhela National Park with 3.048 inhabitants. The vast majority of local families keeps their own farm and lives from agriculture and development of local products, which opens a possibility for the development of agro-tourism and rural tourism activities that enable visitors to experience the culture and traditions of local communities while generating additional sources of income for the local population.

The area has specific geographic and climatic conditions. Main part is mountainous and is characterized by small lands. Utilization of new lands is practically exhausted. Agricultural production has predominance, infrastructure is also developed. There are tree tea factories, inert material factories, building blocks manufacturing complex. The lack of agricultural lands does not allow development of large-scale farming. Therefore, mostly small farming is presented. Accordingly, production capacity of industrial sector is insignificant (Gamma Consulting, 2011).

Tourism is the most promising and rapidly developing field of Adjara. But unfortunately, Georgia-Russia conflict of 2008 and later world economic crisis has deteriorated situation in Georgia and among them – Adjara. This adversely affected all sectors of economy, including tourism.

2.2.4 PLANNING APPROACHES OF ADJARA/GEORGIA

Georgia holds the major part of the Caucasus region’s biodiversity with almost all Caucasus ecosystems and high number of globally threatened species (MoEPNR & KfW, 2011). However, Georgia’s biodiversity

is threatened by unsustainable logging of forests, over-grazing of pastures, poaching of wildlife, the cultivation of wetlands, the inappropriate siting of built development, mining and quarrying, and mass tourism. Georgia's main strategy for biodiversity conservation is the development of its network of protected areas (MoEPNR & KfW, 2011).

The Government of Georgia's policies regarding PA development and management are set out in the National Biodiversity Strategy and Action Plan (NBSAP) adopted in 2005. The Eco-regional Conservation Plan for the Caucasus (ECPC) serves as a guiding document for the NBSAP. However, there are weaknesses in the policy framework with regard to the integration of environmental protection goals into national policies, communication between ministries with functions related to natural resources management, and sustainable land management (MoEPNR & KfW, 2011). Since 2008 Georgia has been developing a comprehensive program on protected areas and strong partnerships with international organizations such as World Bank, EU, KfW, IUCN, GEF/UNDP, etc.

Ajara PA´s, are part of an important priority conservation area in the Caucasus Eco-Region and have good opportunities for the development of ecotourism. The two project PA´s are an important priority conservation area in the Lesser Caucasus including; Mtirala National Park (area of 35 000 hectares; 20 000 hectares covered by forest), and Kintrishi Protected Area (GEF & NUDP, 2015). Machakhela, as recently established National Park is still underdeveloped (GEF & NUDP, 2015). Machakhela National Park which joins on the south with the Camili Biosphere Reserve in Turkey creates an excellent opportunity for transboundary cooperation towards a better protection and integrated management of the involved territories (figure 9). Establishment of Machakhela PA will consolidate the network of PAs in the region and fill an important gap in the representation of the forest biome.

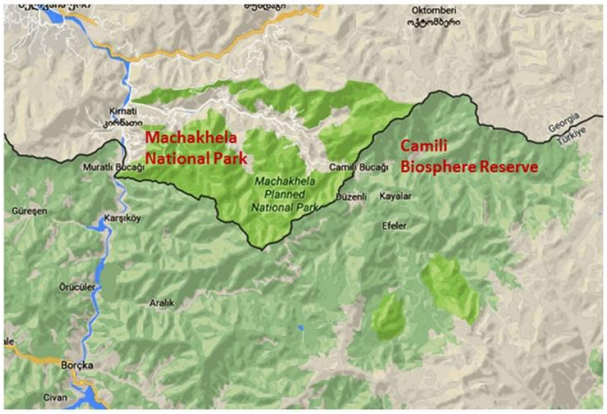


Figure 9- Machakhela Valley crossed the border of Turkey and Georgia and links to the Camili Watershed Area

- Machakhela National Park

The area was first established as a National Park in 2015, becoming part of the system of protected areas of the Autonomous Republic of Adjara. With a total area of 7,359.44 hectares Machakhela National Park is located in the gorge of the Machakhela River in the Adjara Region in Georgia. This park supports contributing of an ecological corridor between the protected areas of south-west Georgia (in particular, Mtirala National Park and Kintrishi state reserve) and protected areas of north-east Turkey in particular, Camili Biospheric Reserve. It is located within the administrative boundaries of the municipalities of Keda and Khelvachauri.

The need for transboundary conservation was indeed recognized as a priority by different experts from the Caucasus region stated by international organizations such as UNDP and IUCN (2013)

Machakhela NP is to establish a transboundary PA as it shares borders with the Turkish PA Camili (figure 10) (UNDP&GEF 2016)

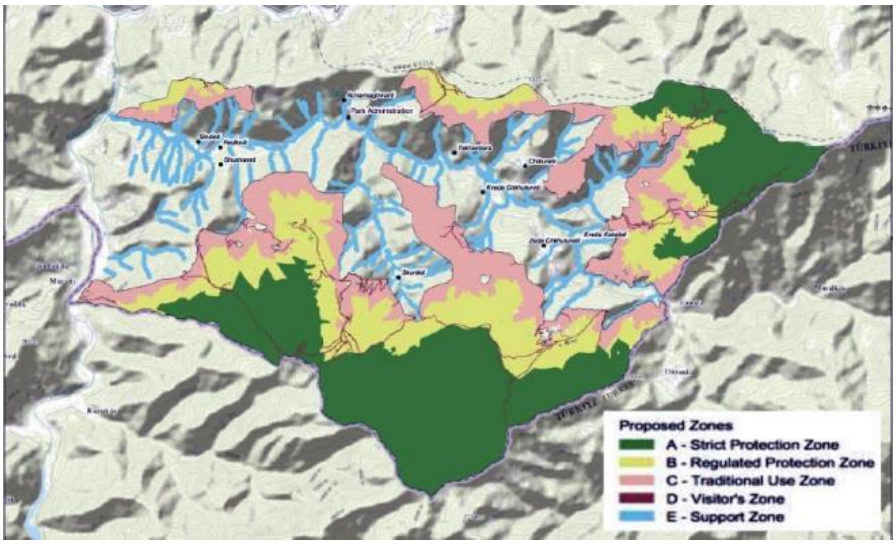


Figure 10- Machakhela NP Zoning Map according to the Law on Protected Areas; Strict protection Zone (Zone A): established to preserve virgin nature and educational activities, Regulated Protection Zone (Zone B): established to protect the living environment, Traditional Use Zone (Zone C): established to conduct economic activities related to the environment protection , Visitor's Zone (Zone D): established to conduct environmental recreational and educational activities (Source: Ilia University, 2016)

Objectives and authorities of in Machakhela National Park in Georgia include:

- Conservation and protection of unique ecosystems;
- Tourism development;
- Creation of an ecological corridor between the protected areas of south-west Georgia and protected areas of north-east Turkey
- Improve socio-economic conditions for local community
- Promoting transboundary cooperation _ linking the Machakhela national park with the adjacent protected areas in Turkey.

Since early 2000th, The World Wide Fund for Nature (WWF) develops concept for establishing Georgia-Turkey cross- and transboundary cooperation for biodiversity conservation and sustainable resource use in South Colchic region (Ajara Autonomous Republic of Georgia and bordering part of Turkey). From Georgian side, apart of Mtirala NP, Machakhela (Machakhel in Turkish) river valley is considered as the key area for development of transboundary activities. Machakhela is relatively small transboundary river: upper part locates in Turkey – protected area as Camili Biosphere Reserve (established within the framework of Global Environmental Facility) and middle and lower streams locate in Georgia. The valley is rich not only in biodiversity, but also from historical cultural viewpoints (WWF et al, 2006).

In addition, Adjara PA´s has a great potential for tourism development that should be addressed some issues like the governance and management structure by facilitating the participation of different administration levels, local communities, private sector, etc. in the PA 'decision-making and a more flexible system of revenue sharing between APA and the PA´s. Agreements should be made in order to allow PA´s to retain a share of income generated from tourism activities (UNDP &GEF, 2016).

3 RESULTS

Part of Machakhela Valley in Turkish territory is called Camili. It has been defined as biosphere reserve by International Union for Conservation of Nature (IUCN) and includes Efeler and Gorgit Strictly Nature Reserve. While, the main part of Machaekhela Valley in Georgia has been considered as National Park by IUCN. It is one of the three Protected Areas in Ajara region of Georgia. Based on the Table 2, each categories has definite objectives and definition. Biosphere reserve is a unique kind of protected area that differs from a national park with different aims. National parks and other kinds of protected natural areas usually are primarily concerned with conservation; however biosphere reserve aims research and sustainable development

Categories	Definition (IUCN)	Primary Objectives (IUCN)
National park	Large natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.	• To protect natural biodiversity along with its underlying ecological structure ; • To supporting environmental processes, • To promote education and recreation.
Biosphere Reserve	Areas which cover a larger area of land, may cover multiple National Parks, Sanctuaries and reserves. It will also include the entire buffer and tourism zones and offers protection to not only the wildlife and flora but to the indigenous people as well. some controlled economic activities will be permitted in these areas - like mining and farming etc.	• To conserve genetic resources, species, and ecosystems; • To do scientific research and monitoring; • To promote sustainable development in communities of the surrounding region.

Table 2- The definitions and aims of Nature Park and Biosphere Reserve in IUCN categories are summarized

The management system of a biosphere reserve needs to be open, not closed, to community concerns; and it needs to be adaptable to changes in local circumstances. While, nation Park allows no human activities inside the buffer or core zone. There may be limited activities (other than tourism) within the tourism zone of a National park. Biosphere reserves are meant to be places where communities can work with the area's land-managing agencies, local governments, schools, and other institutions to design responses to external political, economic, and social pressures that affect the ecological and cultural values of the area.

By considering the Machakhela Valley that covers whole of the areas including villeges, Karcal Mountains, Camili Biosphere Reserve, Machakhela National Park as an international peace park between Turkey and Geogria, the achievements would be:

- to enhance ecosystem integrity and natural ecological processes by harmonizing natural resources management approaches; and facilitate wildlife migration;
- to promote alliances in the management of biological and cultural resources and encourage social, economic and other partnerships among their Governments and stakeholders;
- to foster trans-national collaboration and co-operation in implementing ecosystems and cultural resource management;
- to develop strategies for local communities to benefit from peace parks; benefit from the increased eco-tourism to the area, promote tourism through the loosening of borders; and
- give better knowledge of ecological and socioeconomic dynamics of the area ecological monitoring

4 CONCLUSION

Finally, to create an International Peace Park between two countries of Tukey and Georgia, 6 main phases are suggested in this study.

Phase 1: Analysis of

- Natural environment, climate, topography, ecological systems and natural resource areas (wild life, vegetation, water surfaces) and geology.
- Cultural heritage
- Socio-cultural economic environment, population characteristics, cultural structure, values, human migration, local participation, tourism, economic situation, settlement, infrastructure
- Agriculture/Production systems, capacity building, people-nature relations,

- Demand analysis, residents perception and preferences, Attitudes, stakeholders' interests
- Environmental quality problems
- Institutional structure, existing plan and policies, legal framework, capital, human resources.

Phase 2: To determine the formulation of the plan and planning approaches

- Environment –sustainable development approach carrying capacity.
- Community participation approach- maximum participation of the effected community in the planning process. The determination of choices of policies and plans together with local residents and related civil authorities.
- Constantly overlapping flexible approach –because the planning is an ongoing process .This approach emphasize constant observation and feedback and doing arrangement and corrections

Phase 3: Planning

- Produce plans and suggestions related to planning elements will management plans (including associated programmes) and multi-annual operational business plans for the selected areas in coordination with relevant stakeholders and projects.
- Create geo-referenced base maps for the selected site.
- Carry out baseline surveys (Key Biodiversity Area, land use, socio-economic).
- Delineate the external boundaries of Peace Park.

Phase 4 : Zoning the area that defines: Areas with special potential worth protection (strictly and semi protected), Areas with potential for tourism and recreation like cross border festivals, and multi-purpose protection area will be determined on protection tourism and recreation area.

Phase 5: Integrated Monitoring: After plan prepared according to the suggestions, to witness the application of the plans and the realization.

Phase 6: to observe the situation conflicting with objective, plans produced after plan formulation, policies and suggestions, and doing necessary arrangement and correction and feedback.

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ID 1483 | URBAN REGENERATION AND ITS ROLE ON MARKET SUSTAINABILITY: A CASE STUDY OF MANCHESTER

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1 INTRODUCTION

The role of planning policies in the property market, particularly in regeneration, has been recognised as to shape, regulate and stimulate the market (Adams et al, 2010 & 2015; Jones, 2014). These scholars pointed out the lack of market indicators to evaluate the outcomes of planning and regeneration policies, which shows that the need for regeneration policies to engage with property market still remains neglected and there was little discussion on whether urban regeneration policies encouraged sustainable property markets as important economic institutions.

This paper intends to explore the impact of regeneration policies on the evolution of property market toward a more sustainable level against the conceptual framework with three evaluation indicators identified in this research including market maturity, competitiveness and resilience by looking at how Manchester has been transformed through its regeneration schemes over the past few decades with the effort of all stakeholders and particularly the Manchester City Council by interviewing the council’s leaders and planning officers. Moreover, this paper looks at the feedback and opinions from the developers and planning consultants and the others who have experiences in working with the Manchester City Council for their development proposals to find out what made this city commercially successful and whether it really has profoundly regenerated the city through numerous property developments.

2 WHY MANCHESTER?

The rise of Manchester as the first industrial city in the world, and a successful one, witnessed the prosperity of the United Kingdom with other industrial cities through the industrial revolution. Not only did it claim its success from the industrial revolution; but also Manchester has some unique qualities as a city. Peck and Ward (2002, page 1) describe the special characteristics of Manchester as a city,

> *"Manchester has always been a city of extremes, a city of hard edges. The City has a gritty vibrancy, even on its (many) rainy days. There is here a spirit of dogged independence, sometimes expressed in the form of arrogant exuberance, sometimes as downright indifference to what the rest of the world thinks. Mancunians will always tell you that it happened in Manchester first, though only rarely will you find them patiently attentive to the counter-arguments. The city has always been on a hurried path to (some kind of) improvement, and has little time for those who would put obstacles in the way or get distracted by temporary setbacks. Always a city on the move, it has been in an almost perpetual state of restructuring, right back to its early stirrings as the crucible of industrial capitalism. Talk of revolution, like the drizzle, is nearly always in the air."*

After the Second World War, the effect of deindustrialisation process on this post-industrial city has been catastrophic. Job losses saw people move out of Manchester and the pace of population decline was alarming. By 2001, Manchester saw its population halve since 1931. From the late 1970s, the disparity between the London and the north opened up dramatically partly because governments ceased trying to spread economic growth more widely among cities (Martin, 1988; Rodrı´guez-Pose and Gill, 2005; Pike and Tomaney, 2009, page 20; Martin et al, 2015).

In this context, Manchester faced many difficult urban problems, such as high unemployment rate, empty mills and factories and a crisis of losing its residents over time in the 1970s (Young et al.). Manchester looked like a shrinking city with no hope and future at that time. However, since the 1980s Manchester has undergone a shift in governance and has developed a series of selling, marketing and branding strategies to reimage the city (Young et al., 2006). After 70 years of constant decline, the population data of the 2011 Census showed that Manchester has become the third fastest growing city in England and Wales, with an increase of 19% of its population (Manchester City Council, 2016). This impressive figure means that in the last 10 years Manchester has attracted more inhabitants than any other metropolitan area outside London (Ortiz-Moya, 2015). This city seems to have changed its fate and turned its fortune around.

In several literatures, the role of Manchester City Council (MCC) has been suggested to be quite significant and dominant for the transformation of Manchester (Cochrane et al., 1996, page 1327), particularly as an exemplar in physical regeneration from the 1990s (While et al., 2004, page 557). One of the tactics MCC used was to embrace the idea of entrepreneurism. Manchester has become one of the most widely cited examples of entrepreneurial urbanism (Ward, 2003), which includes "urban development as the process of urban entrepreneurialism" (Harvey, 1989) and requires more state intervention most conveniently through regeneration initiatives. The general frame for Harvey's account is the relation between capitalist development and the social and the physical landscapes of urbanization. Urbanization, Harvey argues, is "both product and condition of ongoing social processes of transformation" (Harvey, 1989a:3). Within this general context Harvey's specific focus is the reorientation in attitudes to urban governance since 1970s in the advanced capitalist economies. Drawing on a range of diverse sources and observations Harvey argues that, in short, "the 'managerial' approach (to urban governance) so typical of the 1960s has steadily given way to initiatory and 'entrepreneurial' forms of action in the 1970s and 1980s' (Harvey, 1989a:4).

The idea behind urban regeneration initiatives is to fix the mismatches between the post-industrial city and the necessities of the new service economy and, accordingly, cities need to improve their general conditions and recover their 'sense of place' (Ortiz-Moya, 2015). With this in mind, Manchester has been through several stages by undertaking flagship developments to construct iconic buildings with a high symbolic value that would transform the face of the city and re-brand its image for investment. A number of key events occurred to assist intentionally or unintentionally in this process of city transformation. Firstly, during the era of the Central Manchester Development Corporation (CMDC) between 1988 and 1996, the southern part of Manchester city centre was redeveloped, the public realm improved and office space increased. This coincided with a period of strong economic growth in Manchester during the 1990s.

The IRA Bomb in 1996 formed part of the drive to carry out the physical renewal that had been planned during the 1990s. Manchester Millennium Limited (MML), a public-private partnership (PPP) between the city council and local businesses was set up, to lead the post-bomb regeneration. According to the news report (BBC, 2006), MML attracted £83m of public sector funding, a combination of government and European money and £30m from the Millennium Commission for Urbis, the Exchange Square museum conceived as a showcase for inner-city life as well as a total of £500m of private sector cash was brought in between 1996 and 1999.

Following developments completed during this time, Manchester city centre now offers one of the largest office markets outside London. Swinney and Sivaev (2013) noted that the number of private sector jobs in Manchester city centre increased by 39 per cent between 1998 and 2008. The MCC committee report (2012) on the progress and impact of City Centre Regeneration initiatives on economic growth in the city centre stated that demand for office space was so high that there was a shortage of office space, with prices higher than regional and national averages.

Given many achievements accomplished by the effort of MCC, however, as Ortiz-Moya (2015) observed, Manchester is still suffering the problems derived from its shrinkage process hidden behind its recently achieved population growth. Deas and his colleagues (1999) also questioned that the tactics MCC employed over the years did not pursue more broadly-based goals for regeneration, for example, their strong emphasis on economic growth, almost at the expense of any consideration of wider distributional effects and the single-minded focus on securing property developments.

So far, property developments are deemed as a subject and tool for the delivery of regeneration initiatives promoted by the entrepreneur-like MCC as a means of state intervention. Since the late 1970s, the prevalence of neoliberalism has been evident in the urban policies of the UK governments, which is rooted in the belief of a free-market mechanism. Any state intervention would only be expected when there is evidence of market failure that only could be corrected by the power of the state. However, the movement of entrepreneurial urbanism enphasising on urban governance in the advanced capitalist economies, seems to move away from this belief and provides the governments with a justifiedground to intervene in the market at a substantial scale under the name ofregeneration. This peculiar phenomenon strikes one to explore the impact ofregeneration policy on property market by looking at this interesting case, thecity of Manchester.

3 THE CONCEPTUAL FRAMEWORK ON MARKET SUSTAINABILITY

Through reviewing the relevant literature, a conceptual framework is developedto explain the relationships between urban policies, regeneration initiatives, economic sustainable development and sustainable regeneration propertymarkets. There are few essential elements identified to evaluate the level ofmarket sustainability in property, involving the state of market maturity,resilience and competitiveness for long-term investment or economiccompetitiveness as illustrated in the following diagram. This conceptualframework provides a foundational structure for the research design of thispaper. These three factors are discussed closely in relation to the context ofeconomic sustainability in urban policy (Keogh and D'Arcy (1994); Adair et al.(1999); (Jones & Evans 2013); Martin (2012); Rogers (2012); (Adair et al.,

2002;Couch, 2003; Porter, 2005; Hutton, 2008; Tallon, 2010).

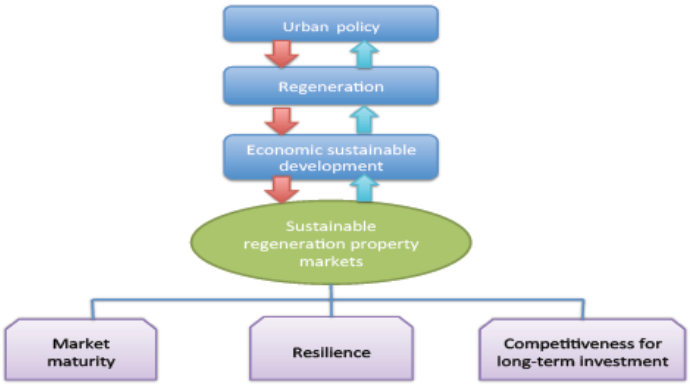

Table 1 Conceptual framework on sustainable regeneration property markets

As the concept of sustainability has been emphasised progressively, the UK government has also integrated the goal of sustainability into urban regeneration policies. The UK sustainable development policy in 2005 has called for 'a sustainable, innovative and productive economy that delivers high levels of employment; and a just society that promotes social inclusion, sustainable communities and personal wellbeing' (DETR, 2005, p. 16).

However, how can one dictate whether a market is sustainable or not? Which criteria or benchmark should one utilise? Is there any applicable assessment model or framework for the definition and implications? These are the questions, which this research intends to investigate.Economic aspects of sustainability are crucial for every inhabitant of the country(Zuleeg, 2010). According to Dárcy (2011), he contends that the operation of thereal property market will have an inevitable impact on the ability of an urbanregion to exploit, maintain or create competitive advantage and thus its ability togenerate high and sustainable economic growth relative to its competitors. Inthis context, this paper argues if a property market would

influence the level ofcompetitiveness and sustainable economic growth, then it also could assume ifthe property market of a city or region which shows sufficient level ofcompetitiveness and sustainable economic growth, would be deemedsustainable. The implications of the market sustainability include a market withcapability of coping with property cycles (Jones and Watkins, 1996, p. 1132),which demonstrate a level of economic resilience.

Based on the literature review on market maturity, economic competitivenessand resilience, the definition of market sustainability in the property sectoradopted in this paper is a property market that indicates its maturity via wellestablishedvalues and transactions; and a city or region which could prove toobtain sufficient level of economic competitiveness and resilience to deal withthe economic cycles over time.

4 MARKET MATURITY

Jones and Watkins (1996) conclude that the establishment of a sustainablemarket occurs when a market is created which 'evidently' meets the long-termneeds and aspirations of consumers by comparing the targeted sub-market tothe mature markets recognised by the market participants including the maininvestors, estate agents and the government registration agents. The market alsoneeds to be viable in its own right to be regarded as being sustainable. Asmentioned above, the implications of the market sustainability include a marketwith capability of coping with property cycles and properties as market productsto have achieved such a level of acceptability that there is an active resale marketas well as the evidence of institutional investors' involvement in tradingproperties in such a market (Jones and Watkins, 1996, p. 1132).

A robust investment structure can help create sustainable regeneration propertymarkets, which are less susceptible to short term economic market cycles andwhich are attractive to private investors with longer-term investment horizons,most notably institutional investors (Parkinson et al. 2010 quoted in Haran et al2011). Following the rationale of the essential role played by institutionalinvestors, one of the aims of this paper is to investigate how urban regenerationpolicies affect the property investment market with a focus upon the factorsinfluencing the behaviour of the institutional investors on their decision-makingprocess.

Research undertaken by Adair et al. (2005) indicates that once a regenerationarea becomes established and rental growth is apparent, competition betweeninvestors is likely to reduce property yields. The findings of the study show thatinvestment property in regeneration areas can outperform national and localbenchmarks, which challenges the perception of lower investment returns inregeneration areas. The analysis also demonstrates that over a long-term periodregeneration areas offer significant investment opportunities. Therefore, tocollect the opinions on the level of trading activities from leading estate agentsand developer are crucial to measure the level of market maturity in thedesignated areas.

These findings confirm that receiving high levels of public sector support andeffective regeneration policies help the regeneration areas mature and createsustainable urban environments capable of meeting private sector investmentgoals (pp. 164-1645). They provide a logical reasoning to interview thecouncillors and planning officers of Manchester City Council.

Jones (2009, p. 2370) contends that the concept of market maturity has closeparallels with the process of the development of a sustainable market in thecontext of regeneration where new land uses are introduced to a locality. Jonesand Watkins (1996) claim that to achieve the state of market sustainability, amarket should be sufficiently mature to overcome the downside effects of theproperty cycle with an active resale market being able to lock-in longer terminstitutional investment, which explains the importance of interviewing majorinstitutional investors.

5 ECONOMIC RESILIENCE

After the credit crunch, questions of regional resilience have gained importancewhen discussing regeneration. Within a conceptual framework of resilience,resilient cities are regarded as places that better cope with the shock of changesto the wider economy and environment (Jones & Evans 2013) which indicatesthe quality of regional economic adaptability to changing circumstances (Hassink2010). In this sense, not only firms and industries but also local and regionaldevelopment policy, and in a broader sense the institutional environment offirms and industries, would affect the dynamism and adaptability of regionaleconomies. A resilient region or city would have to keep altering the markets andlocal political structures to adapt to changing environmental conditions.

Most of the recent uses of the term in regional or urban applications refer to thisidea of the ability of a local socio-economic system to recover from a shock ordisruption. However, the various literatures suggest that

there are manydifferent ways of interpreting resilience and it is necessary to grasp the essentialconcepts of resilience in different disciplines.

For example, Martin (2012) introduced a four-dimension model of regionalresilience based on mainly three interpretations or uses of the term respectivelycalled Engineering Resilience found in physical sciences; Ecological Resiliencefound in ecological sciences; Adaptive Resilience found in complex adaptivesystems theory. He developed this four-dimension model as an attempt toprovide a full meaning to the notion as a description of how regional economiesrespond to recessionary or other such shocks.

There are four contributors of defining resilience. The first is that of resistance,that is the vulnerability or sensitivity of a regional economy to disturbances anddisruptions, such as recessions. The second is that of the speed and extent ofrecovery from such a disruption. Of interest here is whether the speed andextent of recovery are determined by the degree of resistance to the shock in thefirst place. The third aspect concerns the extent to which the regional economyundergoes structural re-orientation and what implications such re-orientationhas for the region's output, jobs and incomes. The fourth dimension concerns thedegree of renewal or resumption of the growth path that characterized theregional economy prior to the shock. In addition, these different aspects ordimensions of regional economic resilience may interact in different ways, toproduce different outcomes of the sort illustrated stylistically.

Martin (2012) then argues that the regional performance of economic growthand the competitiveness can be key factors to examining the level of regionalresistance to a recessionary downturn. He also emphasises how national policymakers respond to a major recessionary crisis can be quite crucial in influencingthe economic resilience of different regions and localities. The specific policiesadopted by the central government will condition the scope for and form of firmbehaviour differently in different regions, especially according to the economicspecialisms of those firms.

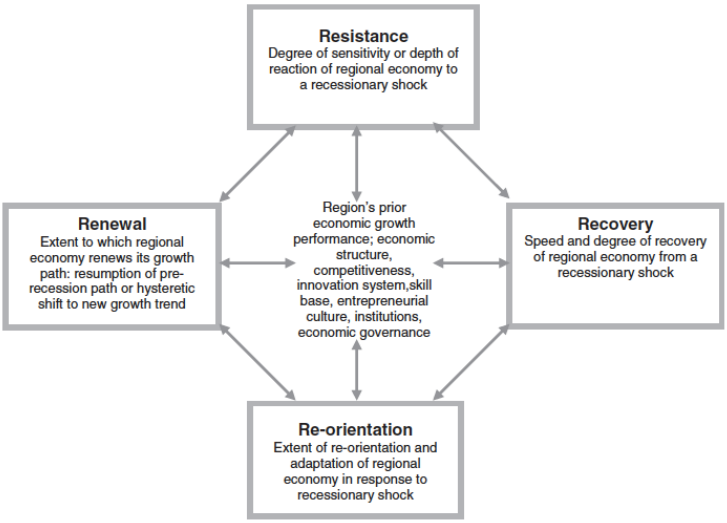

Table 2 Four dimensions of regional economic resilience to a recessionary shock (Martin, 2012)

New tensions have been created in the past decades under the prevalence ofneo-liberal globalisation because its constant pressure to adopting changes andshifts for being universal is likely likewise rendered unstable (Harvey 1989quoted in Rogers 2012, p. 101). Within a broader framework of neo-liberalgovernance reform, the reaction of governing authorities was to address urbanregeneration, not only of the public spaces, streets and architectural forms of thephysical city, but also to reimage the city and manage the public and corporateperceptions of the city in a post-industrial global marketplace by embracing thestrategy of entrepreneurial cities in pursuit of economic growth.

Urban transformations are regarded as the engines of economic growth sincecities are the centres of production, consumption, innovation and accumulationof wealth (Musterd 2003 quoted in Rogers, 2012). These cities and towns thatdemonstrate evidence-based metrics of economic growth are used as case studymodels of successful regeneration.

In this sense, therefore, the concept of resilience is introduced to seek a solutionto ease the tensions created by neo-liberal globalisation in pursuit of economic growth in urban policy.

6 ECONOMIC COMPETITIVENESS

Another issue on market sustainability is economic competitiveness for longterminvestment since the social structuring of markets is generally in responseto the problems of competition and exchange (Fligstein and Dauter 2007, pp.117) and cities seeking to stimulate economic growth have competed with oneanother to attract businesses (Jones and Evans 2011, pp. 68). D'Arcy and Keogh(1999) state that the property market will influence urban competitivenessdirectly and subsequently will affect the sustainability of its economic growth,through the provision of suitable accommodation for economic activity andindirectly through its cumulative contribution to the built environment (p. 917).

The competitive advantages of progressive cities facilitate capturingopportunities for development and attracting pioneering business while othercities are challenged in a competitive global economy. Regeneration andbusiness strategies related to the property sector are two of the most significanttools that cities have employed to overcome physical, environmental, social andeconomic challenges and enhance competitive strength (Adair et al., 2002;Couch, 2003; Porter, 2005; Hutton, 2008; Tallon, 2010).

The principal forms, functions, and policy mechanisms of local and regionaleconomic strategy in advanced western capitalist societies have undergonemajor changes during the last two decades. There have been major shifts incities' roles as subjects, sites, and stakes in economic restructuring and securingstructural competitiveness. These shifts are reflected in increased interest in,and emphasis on the entrepreneurial city at both regional and local levels. Thedistinctive feature of entrepreneurial cities is their self-image as being proactivein promoting the competitiveness of their respective economic spaces in the faceof intensified international and regional competition.

Regeneration projects are commonly associated with gentrification processes, asone of the most significant economic outcomes of regeneration is the increase ofreal estate prices in the regenerated areas or its surroundings (Berényi andSzabó, 2009; Csanádi et al ., 2011).

According to the European experience (Mora and Peña, 2010) two main types ofregeneration operations can be distinguished. The first category shows thatinterventions in central areas such as historic or traditional neighbourhoods andresulting in gentrification processes or new activities and functionalspecialisation. These cases often involve private and public property developersbecoming partners to overcome the economic and legal difficulties that arecharacteristic of such operations. Transfers of public resources to privateoperators often occur in these cases, and the ultimate users and owners are thebeneficiaries of the operation. These operations frequently entail evictions,rising property values and processes of exclusion of the lowest-incomepopulation and of the least competitive activities.

The other type will see the interventions that coordinate various programmesand policies of social and housing improvements in so-called 'vulnerable' or'deprived' areas. These can be considered as involving a 'standardisation'process, since their objective is to mitigate potential social conflicts and toreduce the distance that separates living conditions in the most deprivedneighbourhoods from those of the middle or 'normal' range, especially in termsof housing, public space, education and transport. These operations attract littleinterest from property developers, and are usually carried out by publicauthorities. In these cases the demographic and social composition of the areas isusually maintained, contributing to stability and thus to the consolidation of apre-stratified social space.

It clearly concerns the performance of economies and can at one level be equatedwith the trajectory of the economy in terms of variables such as value added, employment or incomes of the population. Parkinson and Boddy (2004, p. 1)contended that since the 1990s cities have been viewed as 'dynamos of the UKnational economy, vital to the competitiveness of "UK plc"…Cities are nowregarded as economic assets rather than urban liabilities reflected in therenewed investment in cities and growing attraction of urban life, both of whichare vital to economic competitiveness (ODPM 2004b; 2006a).

Globalisation is one of the principal reasons behind the need for cities tocompete, and the impact of globalisation on competitiveness is important inunderstanding urban change and regeneration strategies. In the age of globalcapital flows and globalisation, cities at the global level have to become evermore competitive to secure future growth and the regeneration of urbaneconomies. To this end, cities seek to ensure competitive advantage over theirregional, national, European and global counterparts.

This has implications for urban regeneration in terms of attracting business, residents and tourists to particular cities. Cities have to fight to securecompetitive advantage through attracting international capital (see Hall 2006,pp. 82–84). Place and local context matter in terms of competitive strength, andsome cities offer a better mix of attributes for business and business successthan others (Begg 1999; 2002a; Boddy and Parkinson 2004; Buck et al. 2005).

Deas and Giordano (2002) put forward the ways in which competitive advantagemight be measured. A distinction can be made between competitive assets linkedto contextual factors, and competitive outcomes related to economicperformance. However, these indicators suggested by Deas and Giordano (2002)do

not account for image factors and their impacts on place. Harvey (1989) further contended that the conditions that are important depend on the marketin which a city is attempting to compete. Governance factors are seen as a keycondition for enhancing city competitiveness. The 'organising capacity' or'institutional capacity' of city regions is vital (van den Berg et al. 1997; van denBerg and Braun 1999). Competitive cities have the power to be able to anticipate, respond to and cope with changing intrametropolitan and extrametropolitanrelations (van den Berg et al. 1997).

Business and the private sector more generally appear to gain from acompetitive city through an advantageous business environment, whereas cityauthorities benefit from urban and economic regeneration stimulated bybusiness growth. Evaluating the benefits of inter-city competition on localcommunities is more problematic, particularly if success bypasses excludedcommunities and neighbourhoods within entrepreneurial and 'competitive'cities.

7 RESEARCH METHOD

The aim of this section is to explain the issues surrounding the interview methodused in this research. It is essential to outline the type of interview form deemedsuitable and the analytical approach to analyse the interview data.

8 THE TYPE OF INTERVIEW FORM

This research includes the conduct of semi-structured interviews with openendedquestions. In order to find out how the city of Manchester has beentransformed through its regeneration schemes over the past few decades,it isessential to look at what primary stakeholders in the city and particularly theManchester City Council have done to deliver their vision for the city byinterviewing the council's leaders and planning officers. It is equally important toknow how the key market participants such as the developers, estate agents,institutional investors and planning consultants evaluate the outcomes of theseregeneration schemes made to the city by listening to their views on what madethis city commercially successful and whether the city really has beenprofoundly regenerated through numerous regeneration developments as wellas its impact on the evolution of property market toward more sustainable level.

Following the rationale mentioned above, there have been nineteen interviewsundertaken. These interviewees could be broadly categorized into two groups.The first group aims to focus on the work of the Manchester City Council in theeffort to transform and regenerate the city for a better future. Therefore, theseinterviewees have the representatives including the political leaders andplanning officers from the Manchester City Council as well as from other localauthorities within Greater Manchester. Another group consists of the primarymarket players in the property industry such as the developers, estate agents,institutional investors and planning consultants, who offer their views from thestanding point of the market forces to assess whether the market in Manchesterproved to be regenerated successfully and sustainably after a substantialnumber of regeneration schemes and funding have been placed in Manchestersince the 1980s.

The analytical framework of interview dataInterviews present one of the sensible methods in social science to gaininformation and understanding of social phenomena and attitudes (Walliman,2006:131). These interviews are to investigate five sub-topics identified in thisresearch aiming to find out how regeneration policies affect property market inManchester by understanding the view of interviewees on the relationshipbetween property markets and regeneration policies; how land use regulationsinfluence property market development; implying market maturity, economicresilience and competitiveness on Manchester regeneration property market toassess its level of market sustainability; the role of local government inregeneration; the investment prospect of Manchester regeneration propertymarket.

9 THE ANALYTICAL STRATEGIES

Given the nature of interview data, it seems to be appropriate to use qualitativethematic analysis to forming relevant themes, which reveal the attitudes of theinterviewees and the phenomena they observed regarding the issues aboutregeneration policy and property market in Manchester.

After interviewing a few political leaders and planning officers of the ManchesterCity Council, several themes have been mentioned and emphasised in theinterviews which are summarised as follows.

10 THE RESPONSES ON MARKET MATURITY

After interviewing the developers, estate agents and institutional investors, theyseem to provide evidence that shows a healthy and steady volume of tradingactivities within regeneration property market in the central city of Manchesterat the time of interviews undertaken between June 2016 and May 2017.

Several papers have discussed that investment in regeneration areas wasbelieved to have certain disadvantages associated with the negative impressionof high risk investment for prospective investors. However, among theinterviewees, they claimed that the main concern for developers and investors isnot about whether a development for a potential investment opportunity islocated inside the regeneration area but the image of that city for its futuregrowth in a long-term prospect.

Also, the reports prepared by the agents (could be local one or one that has localknowledge) will be the key information for institutional investors when theycome to investment decisions in cities outside London. They, particularlyinstitutional investors, rely on this information greatly if not entirely because inmost cases, they are not familiar with that city and do not have enoughknowledge about the local market.

From the feedback of the interviewees, they regard there to be no issue ofregeneration stigma for Manchester which could be seen as a sign of marketmaturity because some of these investors, including several institutionalinvestors, demonstrate the positive impression on the buildings located inregeneration areas of Manchester city centre and had invested in regenerationproperties before or still keep the holding.

Another issue of investment in regeneration properties has been debated bysome scholars on the greater performance of regeneration properties in terms ofthe growth of rental and capital values. One of the estate agents said in theinterview that the greater growth in rental or capital values of regenerationproperties could be down to the low initial prices below the average of the otherproperties in the area; this is not necessarily because it shows a strongerdemand or better performance.

Also, he pointed out that a market to become mature is not definitely linked tothe length of the market established. In some cases, a new market could operateand mature within a few years if there is a growing market as a whole and thatcity is booming and certain sub property markets within regeneration areas inManchester have proved to be the case.

One developer suggested that the problem with valuing a regeneration propertyis the difficulty to find good comparative evidence in adjacent areas with similarspecifications since there was no market before. He shared how his companycame to overcome this problem. He said that before his company launches adevelopment project in a regeneration area, they tend to construct a couple ofhouses first and then to see whether these houses could be sold quite easily. Ifthey have been sold successfully, it proves that there is a demand for it and at thesame time, we established the useful comparable.

11 THE RESPONSES ON ECONOMIC RESILIENCE

With regard to economic resilience, one of the leaders for Manchester CityCouncil assures that they constantly follow up the latest updates on the marketand economy. They are clearly aware of the effect of economic cycles on themarket and bear this in mind when giving out the planning permissionsaccordingly. He exclaims that it is important to balance both sides of demand andsupply to retain market resilience particularly within the economic downturn orfinancial crises. He also emphasises the willingness and proactive attitude thatMCC holds to assist the companies and facilitate the market conditions when thecity starts to experience any economic turmoil.

His statement has been supported by other interviewees with positive opinionstowards the city council's endeavour to help the businesses when the economylooks difficult. These tactics include the city council would help with landassembling for any desirable developments and reach out to hear the voices ofbusinesses for better policies and actions.

However, one of the developers points out a different view on the efficiency thatcity council grants the planning permissions. He believes that the city councilcould be more confident to reject the development proposals for over-suppliedsub-markets for example, buy-to-let apartments. He thinks the go-aheadplanning permissions for the city centre apartments show the fear and concernfrom the council for deterring the further investment if they reject theseproposals.

In terms of regeneration property performance during the recession period afterthe credit crunch in 2008, one of the estate agents remarks that the regenerationproperties struggle more than the non-regeneration properties. He thinks this ispartly because the regeneration market seems relatively less well-establishedand demand could disappear faster than others when the economy is lookinggloomy.

Moreover, the downward adjustment of property values in regenerationareas during the 2008 recession also proved to be greater than others.

Major events could change the political and economic agenda and stability of acountry such as Brexit. Following the result of Brexit vote to leave the EU, theimplications and impacts of the Brexit have not been testified but uncertaintieshave made by some of the interviewees very worried about the futureprospective of Manchester, such as the council's leaders, developers and agents.However, even though they are not keen on the leave vote of Brexit, they stillretain a certain degree of optimism for the resilient capacity of Manchester toweather this challenging situation.

12 THE RESPONSES ON ECONOMIC COMPETITIVENESS

Firstly, they stressed that the essence of having a clear and well-defined vision isone of the major elements to the success of regenerating Manchester into amodern and thrilling city and regeneration schemes acted as an assistancevehicle which have been used wisely to deliver the objectives of the definedvision rather than being the centre of the strategic framework to transform thecity for a better position in the global and regional competition.

The purpose of this vision in a broad sense is about aiming is to turn Manchesterinto an exciting city where people want to live and visit, which assists makingtheir city image as a brand. This vision also includes a desire for securing a betterfuture of the city by embracing the ideology of entrepreneurism since the 1980smoving away from the left-wing welfare state approach. One of the crucialreasons for the change of mind is to do with funding. Manchester City Councildeems acquiring regeneration opportunities to be great chances to obtain publicfunding from the central government and the European Union. But they did notjust stop there. They clearly pulled in private-sector partners to undertake theprojects to regenerate the designated areas by offering a lot of assistance toassemble parcels of land and giving prospective developers clear instructions onwhat kind of developments are desirable in certain areas, which provides greatercertainty for obtaining planning permissions.

Another essential element of the success of the city is the endeavour of thecouncil to create an environment where investors feel their money will be safesince they believe Manchester looks promising for long-term economic growthand their investment will produce a good return. To achieve these, the councilbelieves that the population of the city centre should grow; more jobs should becreated; they need to attract more visitors and tourists. As a result, they haveinvested substantial amounts of money in art and cultural sectors such as artgalleries, museums and theatres. They also invested heavily in infrastructure,particularly, the Manchester International Airport and Metro Link.

However, having a well-defined vision and strategies is not enough because theyrely on long-term plans and consistency. The interviewees from Manchester CityCouncil all believe with no doubt that the success of transforming the city hasresulted in a strong leadership and a lengthy time of political stability within thecouncil with dominance of the Labour Party. As one of the political leaders said,"We present ourselves 'Manchester Labour' we present ourselves a politicalparty drawn from Manchester (and) it is all about Manchester… (Mancunians)they are wanting a party (putting) Manchester first".

They measure their success by presenting the figures that show the growth ofpopulation, the growth of economy, the growth of property value, the growth ofjobs and the growth of inward investment in Manchester over these years. Theybelieve that in general, the exercise of regeneration schemes has helped expandthe property market and pushed up the demand and values. By assessing theperformance of property market after several financial crises, such as the creditcrisis in 2007 and 2008, they consider that the market shows resilience andcompetitiveness.

They see Manchester as a brand and promote "Manchester Brand" vigorouslybecause they believe that if they could make the city image competitive it wouldthen be able to sell the city brand to the world; people and investment wouldfollow and inward investment is very significant to keep the economy of the citysustainable.

The efficiency of planning system affects the construction cycles in the propertymarket. An inefficient planning system could prevent prospective developersfrom having new developments in an area with a fear that they would not begranted a planning permission. This factor will influence the competitiveness ofthe market.

With regard to the planning system, the interviewees who are developers wereasked by the question on how efficient it is to obtain a planning permission fromManchester City Council and their experience working with MCC.One developer who is specialized in housing said that it depends on which localauthority and their attitude towards the development proposed. In general,working with MCC has

been a good experience. They are quite approachable andit is clear at an early stage whether the development proposal looks favourableto MCC by speaking to them.

Another developer who had several primary regeneration projects inManchester suggested that even though their experience working with MCC hasbeen a good one because the council is quite efficient to react to a developmentproposal; but one rising concern is that they wish to attract as much inwardinvestment as possible which comes with pressure not being able to decline orreject development proposals when the market is overheated.

There is one developer who has been constructing several mega developments inSpinningfield who claimed that they have a good relationship with MCC but theynever found any major difficulty for obtaining a planning permission with otherlocal authorities because they think if they got the best development proposal foran area, any local authority would love to accept their proposal.

However, a retail developer shared a different view by saying that therelationship with a local authority is the key to obtaining a planning permissionsuccessfully. They normally will work with local property firms who gotconnections with that local authority. However, in general, they consider that ourplanning system is not very efficient and the reform ideas suggested by thecentral government seem to be unworkable with the local plans and procedures.

When discussing about their view on the leadership of MCC, most of them agreedthat the city council has got a strong leadership but one of them raised a concernabout lacking diverse voices from other parties seeming to show one form ofdictatorship. And he also doubted the style of entrepreneurism would fulfill theneeds to tackle certain social issues such as a sharp increase of homeless peoplein the city centre.

In another sign of city competitiveness, some of the institutional investorsclaimed that they would choose Manchester first over other regional cities suchas Liverpool or Sheffield because of its attractive city image and its competitiveposition to draw in businesses and inward investment.

13 CONCLUSIONS

This paper intends to explore the role of urban regeneration policies inestablishing sustainable property market by looking at the case study ofManchester since the 1980s. A conceptual framework is constructed by adoptingthree primary elements relevant to market sustainability established throughthe literature review, including market maturity, economic resilience andcompetitiveness. The discussion of this paper mainly focuses on the findingsfound by the interviews with the political leaders and planning officers ofManchester City Council, developers, estate agents and institutional investors.By interviewing these key stakeholders, one intends to find out any impact ofregeneration policies on property market for its economic sustainabilitymeasured against the conceptual framework of maturity, resilience andcompetitiveness.

As discussed before, the evidence of a mature market involves capability ofcoping with property cycles and properties as market products to have achievedsuch a level of acceptability that the market shows active buying and lettingtransaction and evidence of attracting institutional investors into the said area(Jones and Watkins, 1996).

After interviewing the developers, estate agents and institutional investors, theyseem to provide evidence that shows a healthy and steady volume of tradingactivities within regeneration property market in the central city of Manchesterat the time of interviews undertaken between June 2016 and May 2017.Several papers have discussed that investment in regeneration areas wasbelieved to have certain disadvantages associated with the negative impressionof high risk investment for prospective investors. However, among theinterviewees, they claimed that the main concern for developers and investors isnot about whether a development for a potential investment opportunity islocated inside the regeneration area but the image of that city for its futuregrowth in a long-term prospect.

Another aspect of market maturity discussed in this paper is to investigate howurban regeneration policies affect the property investment market with a focusupon the factors influencing the behaviour of the institutional investors on theirdecision-making process. From the interviews, there is no direct evidence toshow that the overall regeneration policies have influenced the behaviour ofinstitutional investors.

However, the finding of less resilient reaction to the financial crisis in 2007 inregeneration property market shows that the level of market maturity inregeneration areas is still weaker than the non-regeneration market. The reasoncould be the relatively volatile confidence of investors in the regenerationproperties due to its shorter history of the transactions upon which investorswill base their analyses.

In general, the finding of the interviews against the level of maturity inManchester regeneration property market signals a mixed message. On the onehand, the rental and capital values of regeneration properties seem to be in linewith the non-regeneration properties, which means it reaches the maturity level.On the other hand, its level of resilience to weather the financial crisis seems tobe less robust than the non-regeneration market which makes it less mature.This very same point also is shared when discussing the level of economicresilience in the city.

Although the evidence suggests the regeneration market did worse during therecession period, the approach and effort of Manchester City Council tostrengthen the level of economic resilience have received positive feedback. Thisdeems to inject certainty and confidence into the investment environment andhelps to stablise the market.

Further concern on economic resilience is discussed widely among theinterviewees coming from the leave vote of Brexit, which could de-stabilise themarket due to unexpected and expected uncertainty and risks. As a whole, thefinding indicates the multi-layered nature of economic resilience that requiresthe city and city's stakeholders to act co-operatively.

As discussed before, cities secure their economic competitiveness throughattracting business, residents, tourists and inward investment. The findingsindicate that Manchester as a city brand has successfully drawn in morebusiness, residents, tourists and inward investment over the years. This could beconsidered a proof of gaining better economic competitiveness.

The aim of this paper is to explore the impact of regeneration policies on theevolution of property market toward a more sustainable level against theconceptual framework with three evaluation indicators identified in thisresearch including market maturity, competitiveness and resilience inManchester. To conclude the finding of this research, the three indicators havebeen useful to identify the features of regeneration property market against themeasuring dimensions. The interview data shows that Manchester has reachedmaturity in terms of its property values but less mature and resilient whenenduring the financial crisis.

The majority of interviewees confirm that the MCC plays a positive role tofacilitate, assist and stimulate the regeneration market by promoting theentrepreneurial approach to businesses, developments and investment, whichreinforce the economic competitiveness of the city.

As a whole, the evidence indicates that the regeneration policies have broughtsome positive impact on the economic sustainability of regeneration propertymarket in Manchester since the 1980s. However, one should note that thelimitations of this research could be found in certain degree of subjectivity in thisconceptual framework and opinions shared in the interviews.

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ID 1490 | CRITICAL DISTANCE IN URBAN PLANNING. WILL SMART, SUSTAINABLE AND RESILIENT NARRATIVES SAVE OUR CITIES? INSIGHTS FROM DELHI METROPOLITAN AREA

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ABSTRACT: New Delhi is the second largest megacity in the world with a population of 26 million inhabitants (United Nations, 2016). Its metropolitan area its under severe vulnerabilities due to the lack of control of planning instruments on urban transformations. Needs in housing, resources (water and energy), infrastructures, transports, public services (health and education) among others are definitely going beyond local and regional government response capacities (Kapuria, 2014). Planning efforts, polices and regulations seem to have been instrumentalized under distinct historical moments, namely colonization, state control over land and nowadays capitalism and globalization. This leaded to the advent of an unplanned urbanism, with its extreme consequences and risks. It is intended to establish this nexus by revisiting the key planning moments in Delhi along with its different socioeconomic, cultural and political frameworks across time. Finally, we draw conclusions on how contemporary urban development models such as 'sustainability', 'resilience', 'participated governance' or 'smart cities' are being framed, perceived and applied under the context of Delhi urban planning instruments, polices and research. It seems that these narratives are serving as means to achieve specific goals by different drivers and actors. The discourse of sustainability is used to sell gated urbanizations for higher income classes, situated in greened areas, far way from slums and pollution. Resilience and horizontal governance is pursuit by the state as a mean to make citizens resistant and accountable to deal with city problems withdrawing public institutions from its own responsibility. Smart Cities Agenda is based on a huge investment on technologic

information systems (Delhi is home to many ICT companies) on the hope to end mobility and pollution problems, leaving aside the fact that 77% of Delhi population live under poverty, in precarious housing or without infrastructure (sewage systems, water distribution and services) (Kushwaha, 2016). It is intended to highlight the importance of this reflection for a deep rethinking on concepts and practices in urban planning field, specially in what concerns its normative generalization without taking into account the influences and consequences of distinct political, social,

1 INTRODUCTION

New Delhi is the capital of the Indian state situated in the North of India between the states ofHaryana, Uttar Pradesh and Rajasthan. Its designated metropolitan area, Delhi Capital Region (DCR),extends over 1483 km2. Three moments seem to have triggered urban transformation in what concerns itspopulation explosion and urbanization rate. A first moment corresponds to the transference of theadministrative capital from Calcutta to Delhi during the colonial period that attracted population by thecreation of a new institutional and economic dynamism; a second moment corresponds to the Independenceof the country in 1947 and to the partition between Pakistan and India that led to a massive transfer ofpopulations between the two states, with countless Hindu refugees moving to Delhi; finally, its affirmation asan important urban center on a global scale and the polarization of urban-regional development that resultedin the rural exodus and a dramatic growth of the metropolis in the last five decades (Sharma and Joshi, 2015).

From 1.4 million inhabitants in 1950 Delhi population increased up to 18.6 million in 2004 and 25 million in2011 (Mookherjee et al, 2015). These three historical moments of growth and urban expansion alsocorrespond to specific planning policies, plans, regulations and governance frameworks developed underdistinct political social and economic settings, namely colonial planning driven by the interests of the Britishempire, modernist planning powered by post-independence socialist democracy, and, more recently, whatmight be defined as a 'neoliberal planning' moved by global economic liberalization. Through consultation ofthe Delhi Master Plan 2021 (DMP 2021) we found that only 24% of the population lives in considered legalareas, with the remaining 76% of the population living in unauthorized areas. By making a comprehensivereading of planning evolution in Delhi it is possible to establish links between planning options and theproliferation of an informal city (parallel to the planned city) where a network of urban vulnerabilities and‘failures’ settled across time (Bhan, 2013). Firstly the paper establishes this nexus by revisiting key urbantransformations in Delhi relating them with planning options that have emerged in distinct socioeconomic,cultural and political contexts. Secondly some considerations will be made on how contemporary conceptssuch as ‘sustainability’, ‘resilience’, ‘participative governance’ or ‘smart cities’ are being framed, perceived andapplied under the current context. Finally, some conclusions will be made how urban planning practices,polices and regulations can be ‘colonized’, influenced or distorted by different political, economic, andcultural regimes across time and what is the importance of this reflectionnowadays. This preliminary essay resulted from literature review, consultation of planning/policy tools andthe analysis of a set of interviews conducted to researchers from several disciplinary fields and to stateinstitutions related to urban planning.

2 A REVIEW OF PLANNING PRACTICE IN DELHI METROPOLITAN AREA

2.1 THE COLONIAL CITY - THE GARDEN CITY OF THE POWERFULL

In its origins, Delhi corresponds to a set of fortified nuclei or ‘cities’ founded by the Mughal Empire with thecapital city in Shahjahanabad (Old Delhi). It was already possible to observe a social hierarchy ‘embedded’ inits physical structure; in the citadels, at the top, would live the clerics or administrators and in the outskirts, oroutside the walls, in densely built areas, the remaining inhabitants (Blake, 2002). British occupation did noinvert this tendency to urban stratification, on the contrary, it deepened even more. First established in OldDelhi (1803), the British soon started to develop areas outside the walls, such as the Cantonments (areas withmilitary functions) and the Civil Lines (residential areas) initiating a path of physical and social demarcationfrom the Indian population (Guerrieri, 2014). A crucial moment in Delhi history was the decision to transferthe colonial capital from Calcutta to Delhi (1912), due to the partition of Bengal and the rise of nationalistattitude against the British occupation in Calcutta. It became necessary to design a new city, able to ‘performas a political symbol’ and strategically respond to imperial interests of stabilization, a city that would be ableto confirm its importance near the old capital of the Mughal Empire (Ridley, 1998). ‘New Delhi’ Lutyens planwas the first planning instrument that addressed the new capital, embodying the hierarchies of the colonialsystem and India own cast culture, in what appears to be a transference of Ebenezer Howard's city-gardenmovement into the Indian urban context (Sudjic, 2006). In contrast to the densely-occupied 'Old Delhi',where mixed land use coexisted with a large cultural diversity, New Delhi was planned as its opposite, a lowdensitycity with wide avenues to accommodate car traffic,

green areas to combat the extreme climate and anew urban order based on the spatial division of its social structure according to “race, occupational rank,and socio-economic status” (Hall, 1880, p.217 ; Stamp, 2017). Designed as a representation of the colonialpower, the plan clearly demarcated three distinct areas: the government complex, the commercial district andthe bungalows zone. The first typologies constitute institutional and economic enclaves, the last typologycurrently called Lutyens Bungalow Zone (LBZ) being a residential area exclusively for white members of thecolonial government (Jalil, 2011). Colonies were another important typology introduced by the British.Corresponding to the definition of 'neighbourhoods', first served the purpose of housing English settlers buttheir model has been replicated over time, filling the interstices between a colonial and a post-colonial era.They are simultaneously a physical aggregator of the metropolis and a way of housing segregation (Guerrieri,2014). Its important to note how the Garden-City model based on principles of social progress andenvironmental concerns that emerge under a scenario of precarious working an leaving conditions in British industrial cities was appropriated and transfigured into a urban model based on social segregation and therepresentation of colonial power (Choay, 1983, pp. 339). In the 30’s (XX Century), the bipolar nature of thecity becomes clear, with the imperial, comfortable and planned New Delhi on one side, and the congestedOld Delhi on the other side, where informal mixed-use occupations proliferated (dwellings, shops and smallindustrial units), but also diseases (tuberculosis, malaria) leading to a high infant mortality rate (Mehra, 2013).Over population and urban densification coupled with insufficient sanitation structures end up compromisingpublic health. In 1937, Arthur Parke Hume was made responsible for the first attempt to solve theaccelerated city growth through the development of Delhi Improvement Trust (DIT) (Priya , 1993). Thisinstrument was intended to improve road infrastructure, sanitation and waste treatment systems, but above allto eliminate slums by building new neighbourhoods to meet the needs of a homeless population expected torise up to 200 000 in a fifteen year projection (Mehra, 2013). Hume was influenced by the principles ofPatrick Gueddes and advocated a technique of 'conservative surgery' - what may be called today 'tacticalurbanism' -, defending rehousing before demolition, the controlled removal of degraded housing and theorganized extension of informal zones. British Central Government resisted the idea of addressing informalareas through the planning system by opting for an alternative scheme, based on developing newneighbourhoods for high-income classes, in order to finance housing for the poor in a later phase (Legg,2008). This strategy failed to meet its objectives, not only due to continuous delays, but mainly as aconsequence of succeeding events, independence and partition between India and Pakistan (1947), thatleaded to a huge population influx. Overall in the colonial period the urban development model was based onthe interests of the British Empire. Indian people had minimum influence in policy or decision making acrossadministration scales, western city models as garden-city movement were used exclusively under aesthetics ofpower and environmental concerns, aggravating social discrimination processes and generating a bi-polar city,New Delhi (planned for government and administrators) and Old Delhi (not addressed by planning systems).

2.2 THE METROPOLIS OF AN INDEPENDET STATE - THE ‘OFF MODERN’ CITY

As the efforts for a unified India failed, extreme violence and an unprecedented migration of Sikhand Hindu refugees from Pakistan to the capital occurred. The jump from a city to a metropolis seems tohave started here. Between 1941 and 1951 the population increased from 700 000 inhabitants to 1.4 millioninhabitants and the area of the city doubled (Dupont, 2011). The spread of slums and informal areas isparalleled by the lack of multiple infrastructures due to a context of weak regulation and control over theurban form. In response, the first Delhi Master Plan (DMP 1962) was developed has a result of a partnershipbetween Delhi Development Authority (DDA) and the American Ford Foundation that was alreadysupporting the country in the process of institutional modernization and policy development. It is notsurprising that the Ford Foundation was concerned about the deep inequalitiesrelated to cast, religion and ethnic issues, especially if taken into account the role of Communist rule in Chinaand the conflict between Soviet communism and Western democracies in the 50’s (Staples, 1992, p.6).According to Ghosh (2013) the main social policies in the Indian context (including food security, education,job creation, education, health and anti-poverty programs) aimed specific groups with some 'political voice' inorder to control possible social conflicts. This did not allowed the production of a coherent policy of socialand economic development, proving itself susceptible to disputes and disregards of the law (Thynell et al,2010).

DMP 1962 was therefore influenced by the American school of planning in the 1960s, in domains’such as urban regeneration, functional planning or zooning, following also the trends of Indian developmentpolicies in the early decades of the independence (1950s and 1960s) based on an interventionist state andsocial-driven polices able to promote some capital redistribution and economic diversification (Banerjee,2009). The general trends established by the plan included the development of a green belt and seven satellitetowns, called ‘Ring-Towns’, in order to simultaneously divert and contain urban growth by decentralizingpopulation, housing, commerce and industries to the periphery (Ewing , 1969). Furthermore, a new landpolice drove public acquisition of large areas required for houses and other land uses in an attempt to matchsupply and demand without any private assistance (Srirangan, 1997, p. 37). The plan provided also theresettlement for a part of the population in the so-called resettlement colonies, strategically located near newresidential and industrial zones but they lacked infrastructures, quality and appropriate space to accommodateIndian families (Mookherjee, 2015; Thynell et al., 2010). The DDA

purpose, influenced by western modernvision, was to foster ‘flow inducing urban forms’ capable of reversing the concentration trends which wereconsidered responsible for disease outbreaks alongside with the precarious sanitation network. Within thiscontext, English legislation, known as ‘nuisance laws’, was perpetuated with the aim of controlling 'Indianbehaviour'. Also sanctioning proceedings and regulations were set up in order to control the indigenous formof producing city that was imminently informal, constantly negotiated and where the boundaries betweenpublic and private spaces were blurred (Kishore, 2016). Soon the first Master Plan of Delhi became obsolete.In 1971, the growth of the city had already largely surpassed the numbers forecasted. Industries andcommercial spaces had spawned and housing needs increased from 150 000 (in the 1960s) to 380 000 (in the1980s). Approximately 1.5 million people lived in substandard houses or in expanding slums (Priya,1993).The first master plan, DMP 1962, was the object of multiple criticisms: it was accused of miscalculatingthe proposed densities (based on American cities), and it was said to idealize a “model city, prosperous,hygienic, and orderly, but failed to recognise that this construction could only be realised by the labours oflarge numbers of the working poor, for whom no provision had been made in the plans” (Baviskar, 2003,p.91). The American planning team blamed the failure of planning with the overload of bureaucracies,jurisdictions and leadership changes, and also to what they have defined as an Indian ‘repulsion to planning’.On the other side, Indian authorities, refer the ‘plan maladjustment’ to the cultural and social reality of India,its inability to respond to the speed of economic and social transformations that the metropolis was subjectedto, including powerful migratory flows (Banerjee, 2009).The monopoly of public control over land leaded toconstraints regarding the proper development of urban land and plan implementation, causing an inflation of urban land prices and resulting in a constant subversion of DMP 1962 (Srirangan, 1997, p. 53). The expansion of informal areas, the eviction of slums during the state of emergence (1975-77), the proliferationof unauthorized private colonies and, more recently, the expulsion of small industries due to court orders,determined the absence of a specific living, economic and industrial centre, giving rise to mobility problemsand urban pollution proliferation (Véron , 2006). The second and third planning instruments proposed by theDDA in 1985 (National Capital Region Planning Board Act) and in 2001 (Delhi Master Plan 2001) weremainly acts of revision of the first MPD 1962. Modernist planning based on principles of zoning, urbanregeneration and public interest over land was endorsed as a mean to materialize the capital of anIndependent India driven by social polices (housing, food security, education, job creation, provision ofpublic services), concerns on capital redistribution in society and the diversification of economy. If modernistviews were vastly contested in the west for its homogeneous and simplistic views of society and for nothaving prayed attention to the contexts where they were applied, in Delhi its translation traduced in thegeneral failure of planning. Constraints in the proper development of urban land, maladjustments betweenthe plan and Indian cultural reality, the exclusion of the poorest communities through the displacement oftheir dwellings, small industries and commerce and the constant subversion of the plan gave rise to anunplanned city parallel to the planned city in response to population needs.

2.3 THE GLOBAL MEGACITY - THE CITY TO ALL AND TO NONE

The shock in oil prices due to the Golf war forced the country to request for immediate help in1990 to the International Monetary Fund (IMF). In exchange for its loan, the Indian government was obligedto make structural and macroeconomic adjustments, easing the inflow of foreign capital through a newlegislation and police framework. The investment in rural areas fell from 14.5% (before the reforms) to only6% of GDP in 1998, which, together with the liberalization and mechanization of agricultural market,resulted in a decrease of agricultural employment and rural nutrition problems, triggering a massive migrationof population from rural areas to cities in search for employment (Patnaik, 2004). Almost simultaneously deindustrializationoccurred in cities like Delhi due to the growing importance of other Asian countries.Millions of immigrants who arrive everyday in Delhi mainly integrate the low-paid informal economy or seetheir efforts to obtain a job forged (services sector demand is mainly for graduated workers), therebyincreasing the number of slums and worsening the already existing social inequality gap (Ahmad, 2013).

As Mike Davis points out in ‘Planet of Slums’ “the Third World now contains many examples ofcapital-intensive countryside and labour-intensive deindustrialized cities where urbanization” is driven by thereproduction of poverty, not by the supply of jobs” (Davis, 2007, p.16). The most recent National CapitalRegion Plan (NCRP 2021) and Delhi Master Plan (DMP 2021) follow the context of economic liberalizationand the aim of including the metropolis in the global economic circuit. Since 1985 to 1990 police andlegislation changes in India influenced by global institutions as the World Bankand IMF promoted decentralization of urban governance, stimulated multi-sectorial private publicpartnerships (PPP) in urban management and provided a friendly framework for business (low taxes andrelaxed regulations) in order to attract foreign direct investment (FDI) (Dupont, 2011). The most importantspatial expression of these changes in Delhi (National Capital Region) was the proliferation of SpecialEconomic Zones (SEZ), business parks, large real-state developments, shopping malls, public spacerevitalizations and large infrastructures (e.g. tube or highways) financed by private and public budget(Chatterji, 2013). The Asian Games of 1982 and, more recently, the Commonwealth Games of 2010 areparadigmatic examples of a series of World Events that triggered urban large-scale investments and newspatial configurations aiming

to project the city into the global network (Kennedy, 2015). Many of thesetransformations carried out on the name sustainability, modernization, quality of life or environmentalconcerns have contributed to the expulsion of a set of urban realities such as informal areas, rural settlementsor small polluting industries with enormous social consequences. The small industries considered pollutingwere relocated or eliminated from the metropolis centre leading to the loss of two million jobs.

Simultaneously 3 million homes were demolished in exchange for resettlement (only for a portion of eligiblefamilies) in the city outskirts, far away from employment sources (Ahmed, 2011). Currently 77% of thepopulation in precarious housing or without adequate infrastructure (e.g. sewage system) and only 24% of thepopulation lives in legal areas according to DMP 2021. The rise of economic inequalities are mirrored byincreasing social-spatial segregation processes. Public urban investment seems to have been used to attractmore investment and to drive new urbanization processes not to solve structural problems. Theconsideration of cities as 'engines of growth', creating geographic unbalances between urban and ruralterritories (with associated massive migration fluxes) and intensifying urbanization are leading to disruptiveimpacts on resources and environment caring capacities. Delhi is considered to be the most polluted city inthe world especially regarding PM2.5 particles responsible for the increased incidence of lung cancer, heartdisease or bronchitis (Singh, 2016). In what concerns treatment of solid waste, existing landfills are already attheir maximum capacity and 'Waste to Energy Plants' do not have technology to control pollutant emissions(Randhawa, 2016). According to Water police for Delhi - Draft (2011) the current need for water supply isroughly similar to the demand and the access to potable water isn't generalized leading to major scarcityevents that will be aggravated as population increases. If, on the one hand, overpopulation is often targeted asthe main cause of the city's problems, on the other hand, it seems to be what allows the development oflarge-scale urban investments or mega-projects (e.g. World Events). Migrants labour force was the mainbuilder of the metropolis throughout its history, also providing the necessary services for its operation,namely through the informal sector (the most important in Delhi economy) (Srivastava, 2005).

This is the nexus of the 21st century in urban India, a huge population coming from rural areas,incorporating the informal economy based on low-cost labour and expanding the slums. Simultaneouslyoccurs the spreading of special economic zones, luxurious shopping malls, large real estate developments forthe upper and middle class.

3 URBAN PLANNING TODAY: CONCEPTUAL APPROPRIATION(S)

Through a comprehensive reading of the salient features of planning instruments (DMP 2021, NCRP 2021) and from going to the narratives resulted from the interviews we may observe that the structure ofplanning seems to be transiting from a perspective where the state and the 'plan' are the central actors inurban development and on the assurance of public interest (modern planning) to a 'market-driven'perspective based on territorial competitiveness, economic growth and to a standpoint where urbandevelopment results mainly of a negotiation between a range of different actors such as institutions,economic agents, communities and NGO'S has expressed by Awadhendra Sharan (Centre for Study ofDeveloping Societies) in this interview excerpt:

> *"I do not actually see the plan to be a driving force, this idea of long-term planning, this conceptof the plan makes no sense, 'that's gone' (…) Notice who is moving the speech? Certain institutions likeTERI (The Energy and Resources Institute), CSE (Centre for Science and Environment), Ngo's that werenot present in the 1960s (…) other players that must be taken care of are the economic agents that arrangestrategies to raise capital for example from Singapore or elsewhere, the banks, the financial system, theseare powerful actors, who decide what projects to bring or not to Delhi. What I am saying is not thatplanning has disappeared, but the city is much more complex. If we want to look at reality today and tryto understand it, the range of agents is much wider and we have to change our analysis in planning."*

Following the trend of a broad 'negotiation' in what concerns the city's evolution, new instrumentsof participative governance have emerged has part of the urban governance reform introduced by 74 IndianConstitucional Amendment. Although this may mean an increased access from population to decisionmakingprocesses its important to analyse the balance of power relations between different actors specially inthe Indian context where cast, religion, and class are still determinant factors of social conflict andsegregation. Scientific institutions, economic players or political agents may have a higher influence or bemore 'governmentalizing' than other social groups. This is an important factor in a city that has developedmainly through informal processes, mostly due to social marginalization produced by the exercise of planningitself. Also its seems crucial to question if extreme processes of urban vulnerability and the scoop of socialsegregation can be addressed mainly through bottom-up approaches as expressed by Leon Morenas (Schoolof Planning and Architecture - New Delhi) in this interview excerpt:

> *"I believed that bottom-up approaches could work but now I think the system is too big forbottom-up approaches to change anything. Having a community to participate does not imply that peopleaccept their ideas. If you have different castes, for example, what will happen? How can we put the poorto participate? In the processes of public participation what is observed is that it has been used for theprivatization of services and the transformation of citizens into consumers. If you ask me if I have faith inthe decentralization of decision …. no because the experiences show that the poor in any case leavedeceived"*

Market-driven instruments as PPP (to reduce public expenditure) andregulatory incentives to attract foreign capital (FDI) are being generalized in development polices across theworld and also in Delhi Metropolitan Area. The largest urban development program in India "JawaharlalNehru National Urban Renewal Mission" (JNNURM) was based on these procedures. The program mainlyincluded four financing axes; (1) Urban infrastructures and governance (UIG), (2) Urban InfrastructuralDevelopment Scheme for Small and Medium Towns (UIDSSMT), (3) Basic Services for Urban Poor (BSUP)and (4) Integrated Housing and Slum Development Programme (IHSDP). The (3) and (4) allowed thefinancing of rehabilitation or rehousing processes, as well as the development of basic infrastructures (water,sanitation and energy). The main allocation of funding (79%) was mainly done in (2) and (3), the onesresponsible for the development of large urban infrastructures (e.g. fly overs, tube, roads) able to triggerintensive urbanization processes and capital allocation (Kapur, 2013). In fact this strategy is confirmed in theplans has demonstrated in this excerpt of DMP 2021

> *"(...) the basic policy of the Regional Plan - 2021 is aimed at accelerated development of theurban and rural areas. For this, infrastructure has to be substantially upgraded at local and regional level(both by the State and Central Government) in order to induce growth in these areas, specifically inidentified settlements / Metro Centres. It is felt that this will make them more attractive for locatingeconomic and allied activities and for attracting private sector investment"*

In an eminently informal city with severe lack of basic infrastructures, 'urban regeneration funds'seems to be assisting private investment and economic growth in the form of new urbanization, whileexistent urban problems lay somehow forgotten. Rehousing programs are resulting recurrently in thefurthering of population constraints has expressed by Debolina Kundu (National Institute of Urban Affairs)in this interview excerpt:

> *"Basic Services for Urban Poor was a government program that ran from December 2005 -March 2015. It constituted mainly a rehousing program for home provision. But if you go to these citiesmost of the houses are empty because they were built in the outskirts of the city, which resulted in aneconomic displacement. These areas do not have jobs and are not provided with public transport, thedisplacement takes 3-6 hours which creates severe constraints. The problem is that in slums the problemscontinue, there are epidemics, crises related to water scarcity. The supply of drinking water is only madeonce a week by tankers. In what concerns urgent urban interventions we need to act in the provision ofservices, basic amenities and controlling unequal growth, because there are people with a lot of moneyand there are some who have none and this gap is increasing. Measures must be taken because in thefuture this will lead to a severe economic and social crisis."*

If urban investment seems to be used mainly on the development of big infrastructures and thespread of urbanization, its possible to observe the increasing entanglement of the 'private sphere" in the"public sphere". Main services concerning waste, energy, mobility are being privatized and in some urbanareas occurs the 'complete privatization of planning itself' where the sate simple dismisses its role in urbandevelopment or as a public services provider, delivering them to developers.

"By a regulatory quirk, the land around Gurgaon was managed by a single agency, the chiefminister's office in the state of Haryana (…) It meant that developers' plans in Gurgaon could beapproved in a matter of days, not years. The result? Fast-track approvals for office parks, luxurycondominiums, five-star hotels and golf courses. Half of the Fortune 500 companies launched satelliteoffices in the city's gleaming high-rises (…)If you ask a regular person 'Would you want to live in a citythat doesn't have a functioning sewage system or garbage disposal or a good network of roads,' they'dprobably say no," says Rajagopalan. So the developers had to convince potential renters to say yes — byfiling in the gaps in the city's sparse public services themselves. A patchwork of private services emerges,but only within property lines. (Kedmey, 2016, media article)Going again through the reading of MPD 2021 and NCRP 2021 its interesting to note that theconcept of 'sustainable development' constitutes a goal, however is not addressed through a systemicperspective appearing mainly associated with environmental issues and the management of resources such aswater and energy. Each dimension has its own specific and pragmatic approach whether it's the provision ofhousing, transportation, industry, trade and commerce, informal

sector among others, but the trade-offsbetween each one are not deeply explored. More then promoting inclusive development (taking into accountthat the majority of the population is poor, do not have access to basic services such as house, water,electricity) the plans and practices seem to pursuit 'an exportable urban image' (similar to those of thewestern global cities), where concepts are traduced more in 'embellishments' and less in solutions. Aparadigmatic example is the Indian Smart Cities program. Its mainly technology-based and linked toautomation of services such as waste management and mobility. In the case of Delhi Metropolitan Area, itwill be implemented mainly in New Delhi, the part of the city that is better served by services and that isoccupied by 2% of the population, namely ambassadors, public administration and an economic elite. PravinKushwaha (Centre for the Study of Sicence Police, JNU) in this interview excerpt draws attention on theneed to reflect upon the origins of the environmental discourse in India and how it has contributed for socialunrest pointing out the need for addressing sustainability also from the side of social justice:

> *"The environmental movements were moved by the middle class, focused more on thepreservation of nature, excluding people in this process, the discourse was to remove the slums.... Therewas a large slum on the banks of the Yamuna. 400 000 people were removed and then they built a park onits banks. Development has two faces, the physical transformation of the city and another part of theexpulsion (…) The money for smart cities could be to regenerate other areas of the city, but we continuein the game of symbolic urbanism. The discussion on smart cities, has to do with technologies. Thespeech is that of automation, sensors, but this is not the way to understand sustainability. We have tothink about environmental sustainability and social justice. We have to connect the environment issueswith poverty issues without that it is impossible to address the issue of sustainability in South Asia and ofcourse policy, politics is important. We have to question the imagination of sustainability in itself .... wecan not see things on one side (…) It takes morality and ethics. We are doing and selling sustainablebuildings but what does that matter?"*

In what concerns the 'resilience agenda' and also the transition from centralized polices todecentralized community based polices its possible to observe a certain 'precaution' in some academic circlesrelated to the challenges that these transition of concepts and practices may pose to research and society; Therisks of not addressing communities' real problems by imposing pre-definedresearch topics or the risk of 'state withdrawing' by the transference of its one responsibilities andaccountability to communities has pointed out by Suruchi Bhadwal (TERI- The Energy and ResourcesInstitute) and Pravin Kushwaha (Centre for the Study of Sicence Police, JNU) respectively:

> *"There may be some fixed agendas in research and funding. In participatory approaches, whendifferent stakeholders and actors are involved around the topic of resilience, may be the case thatresearchers have a certain agenda but may not be the same agenda has the community. Therefore, has aresearcher or a person who is going to implement a certain project in a certain area, I have the duty tounderstand how to integrate these problems that are not related to research, these topics can't not beignored"*

> *"Community-based polices have sprung up against the idea of state domination in the 1970s,questioning central power... but over time we have noticed that this binary idea of the discourse bottomup/top- down in planning was sharpened, and the promoters of the bottom up advocated thedisengagement of the state (…). I have to say the role of the state is not irrelevant because communitiescan not provide its total security, can not plan for more comprehensive social, economic, political andplanning aspects."*

	Colonialism	Partition and Independence	Globalization
Development model	Colonialist. Moved by British empire interests. Discrimination based on nationality, race, social status or religion	State interventionism as a way of generating redistribution of capital in society and the diversification of the economy.	Neoliberal adjustment introduced in the 90's by FMI. Cities as engines of growth. Imbalance between rural and urban development
Governance and Public Polices	Colonialist-driven. Indian had minimal influence in policy or decision making in central or local government. Top-Down	Social-driven policies (food security, education, job creation, provision of public services) focused on specific groups with some 'political voice'. Top-Down with public consultation	Market-driven policies in several sectors, transportation, water, waste, housing (PPP). Friendly environment to investment through decentralization and deregulation. Top-Down & Bottom up (State withdraw from public assistance)
Urban Planning	New Delhi Lutyens Plan Planning oriented to the symbolic representation of colonial power. Influence of western city models. "Garden City Movement" (Ebenezer Howard)- Lutyens Plan for New Delhi.	Master Plan Delhi 1962, National Capital Region Planning Board Act (1984), Master Plan Delhi 2001 Planning oriented through principles of zoning, functionality, urban regeneration and public land ownership Influence of Ford Foundation, American School of Planning and Indian development policies in the early decades of independence	Master Plan Delhi 2021 Planning oriented to investment and global projection. Preference is given to infrastructures able to follow intensive urbanization processes on behalf of rehabilitation or rehousing processes Influence of IMF and World Bank
Urban Vulnerabilities	Socio-spatial discrimination based on nationality, race, social status or religion Bipolar City - New Delhi (Planned for government and administrators) vs. Old Delhi (not addressed by planning systems). Lack of infrastructures, public services, health issues	Constraints in proper development of urban land. Maladjustment between the plan and the Indian reality. Exclusion of the poorest community's livelihoods through the peripheralisation of their dwellings, small industries and commerce. Subversive City- Expansion of an unplanned city parallel to the planned city in response to population needs. Plus- pollution, mobility issues	Socio-spatial segregation based on income, education, caste and religion. Exclusionary city – Poverty enclaves coexist side by side with wealthy exclusionary enclaves Plus- scarcity of resources and environmental threats.

Figure 1- Synthesis of Delhi urban transformations across time

4 CONCLUDING REMARKS

Plans, policies, legislation, governance models and even knowledge (technical and scientificexpertize) in Delhi urban planning practices have been always convened to materialize normative views bydifferent political, socio-economic, and cultural regimes throughout history. The colonial period influencedthe polarization between a Mughal-city (Old-Delhi) and colonial capital (New-Delhi) promoting a racial andsocial hierarchy in urban development. The post-independence period was marked by the discrepancybetween the rigid modernist plan based on public control over land and the rise of a 'subversive urbanism'emerged from unattended population needs. Finally, the global financial system determined the unbalancebetween urban-rural development and the uneven spatiality's of the metropolis, where poverty enclavescoexist side by side with wealthy exclusionary enclaves. Successive planning models were influenced bydifferent 'agents', first through colonization processes, after through knowledge exchange processes (e.g.American Ford Foundation) and finally through global market liberalization promoted by global institutions.Planning practice have been at a certain degree 'colonized' by distinct interests, has addressed mainly a smallpart of the population and ignored a vast majority of the communities and their livelihoods in the urbandevelopment process. This triggered an insurgent city (with an associated network of vulnerabilities) withwhich 'bridges' have never been truly established. In a globalized word, cities are seen more and more as'engines of growth' and urban planning is increasingly dependent on territorial competitiveness, capitalattraction and market-driven strategies. By this reason vulnerabilities, uneven growth processes or socialspatialsegregation are not exclusive of distant realities but are rising around global cities and territories(Harvey, 2006). Migration is one of the main consequences of unbalanced territories. People who suddenlyare surrounded by deprived conditions such as limited access to housing, employment, 'basic goods' orconstraints in the possibility to participate in decisions related to their leaving spaces are forced to move :Rural migrants in India are expelled to cities due to the lost of their livelihood, refugees have no other optionthan cross oceans to enter Europe and scape war (caused most of the times by political and economicinterests), the population of de-industrialized cities (due to industry dislocation for more 'competitive'countries) have no other option then to leave in search of employment, leaving behind 'ghost cities' and'seeds for the spreading of populist movements' that can thread democratic systems (e.g. Rust Belt Cities inthe U.S). Sassen (2015, p.173) refers to the generalization of "social, economic and biospheric expulsions"and to the importance of looking "at the extremes of a system in order to analyse trends that can be revealedin more moderate ways within the system itself. " In a global world, the growth of socio-economicinequalities, migratory phenomena, environmental impacts (e.g. climate change) or scarcity of resources arenot bounded to national borders. Delhi as an 'extreme' case reminds us about the urgency of criticallyanalysing the growing territorial vulnerabilities or 'geographies of injustice' by first depicting the influence ofthe current development model in public polices, institutions, spatial planning systems but also in knowledgeproduction. Recent economic and ecological crises have demonstrated thatmarket mechanisms, influencing policy options, have undermined 'sustainable development' and thereforeurban planning practices, increasing inequalities and vulnerabilities in territories and cities (Eraydin, A. andTaşan-Kok, 2013). In this context we assist as pointed out by (Ahern, 2013) to the progressive transitionfrom the concept of sustainability, "a fail-safe perspective" to the concept of resilience, a "save to

failperspective", which somehow assumes assumes the disturbances of the world and its consequences as a given(Pizzo, 2013). We can question if accepting resilience as a normative concept is not a risk in itself. In whatconcerns territorial governance attention must be taken in what concerns "informal institutions and opaquenebulous networks of territorial governance" that " may pose a grave challenge to democracy and direct risksto the democratic representation, accountability and transparency of decision processes of fundamentalrelevance to large groups of citizens" (Metzger et al, 2014, p. 2-3). Concluding there is a need to increase'epistemological criticism', considering planning domain not only solution-driven (or a technical or neutralinstrument) but an instrument that also deals with the social construction of urban problems, identifyingplanning failures and depicting trends within knowledge production in what concerns 'normative andhegemonic colonization' of concepts (conceptual normalization) and practices (Public Polices and PlanningInstruments) that can lead to increase vulnerabilities (Sandercock, 1998, p. 4-5). Today, more then ever, onlyby addressing the real impact of the hegemonic and unbalanced 'flux of capital' in the physic, social,environmental, economic, institutional, political and scientific domains that 'build cities and territories' will bepossible to create 'Spaces of Dialog for Places of Dignity'.

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ID 1494 | DECIPHERING PLANNING CONCEPTS FROM A PERSPECTIVE OF LACAN'S FOUR DISCOURSES - A CASE STUDY OF URBAN VILLAGE IN BRITISH PLANNING POLICY

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1 INTRODUCTION

With the explosion of available information in the contemporary age, numerous new planningconcepts are being invented in pursuit of better urban environments. When we read books about future cities,listen to the speeches of renowned architects and urbanists, browse edge-cutting urban design projects or auditdiscussion of urban development, countless new concepts pop up in texts along with models, drawings andvideos such as eco-village, smart city and numerous -isms.

Many concepts in planning are notoriously difficult to define. If we are asked to give a definition ofsmart city, the answers are often curtailed to individual perception. What is the 'smartness' of cities? Optimaltransport, efficient energy consumption, data networking, social networking or even all the above-mentionedcharacteristics? Many planning scholars and practitioners doubt the validity and effectiveness of some planningconcepts, such as public interest (Campbell & Marshall, 2002), smart growth (Downs, 2005) and sustainable development (Marcuse, 1998).

It raises a question for this research: how much can contested planning concepts influence urbanplanning policies and future urban development? This paper tries to open up a new perspective to view thisquestion with the help of Lacan's Four Discourses theory, focusing on a particular planning concept - urbanvillage - in the context of British planning policies.

2 LACAN'S SOCIAL THEORY AND ITS APPLICATIONS

2.1 WHY LACAN'S FOUR DISCOURSES?

The primary reason that this research employs Lacan's Four Discourses theory is that "planning is aform of social action, or a social practice…intervening in the world to protect or change" (Taylor, 1998, p.167). Therefore, the complex social effects behind urban policies and urban development can be decoded withthe tangible analytical tools of the Four Discourses schemata (Lacan, 2007). Lacan's theory offers an insightinto the process of how ideology shapes social reality (Glynos, 2001), and provides scholars in other fields with"a cautionary portrait of thinking-as-it-happens" (Bowie, 1988, p. 133).

The second reason it the comparability between names of planning concepts and master signifiers.Saussure's semiotics divided signs into two components: the signifiers and the signified (de Saussure, 1983[1916]). The signifier is the form of a sign, while the signified is the concept which the sign aims to denote. Inthe boom of the planning concepts, the signs and their meanings do not match each other perfectly since thesignifiers are always assigned with different interpretations. Therefore, I argue that the names of planningconcepts are equivalent to the signifiers in Saussure's theory.

Furthermore, they can be regarded as master signifiers due to their importance in the knowledgebuilding of the planning discipline. Master signifiers, or S1 as Lacan labelled, are the primary points to gatherall different kinds of knowledge and organise them with a loose but necessary structure (Lacan, 1993), and"complex aggregates of ordered words constituting diverse narratives of contestable sets of knowledges andbeliefs" (Bracher, 1988, p. 45). Master signifiers are values and ideals, playing a crucial

role in the building ofknowledge. The names of crucial planning concepts, such as ecocity, sustainable development and smart city, representnew identities of future cities as the primary points in the knowledge network and construct the special orderof the knowledge of urban planning.

Therefore, the social effects in the discussion and implementation of planning concepts can beanalysed according to four fundamental social effects in the schemata: indoctrinating; governing/rationalising;desiring; analysing/subverting. This helps to find the real motivation, targeted audience and actual productionin the discourse of urban planning.

2.2 FOUR DISCOURSES SCHEMATA

In the Four Discourses schemata structure, there are four voids in the diagram namely Agent, Other,Production and Truth (see Figure 1). Four variables are placed in these voids: Master signifier (S1), Knowledge(S2), Divide subject ($) and the unattainable object of desire (a). The four variables and their interpretations inurban planning are comparable according to Lacan's social theory (see Figure 2) These four variables follow aclockwise loop of S1-S2-$-a in the schemata structure so that the change of the positions create four differentdiscourses. This means that names of planning concepts can be examined through four different types of socialeffects behind four types of discourses.

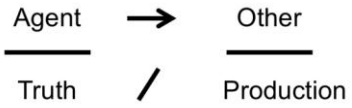

Figure 1 Schemata Structure of Four Discourses

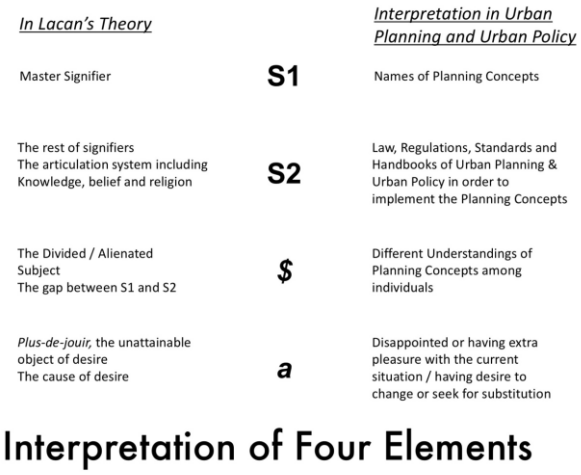

Figure 2 Interpretation of Four Variables from Lacan's Theory to Urban Planning

In most cases, the Agent (master) and the Other (receiver/slave) are explicit to define the type ofdiscourse (Figure 3). The interaction between the Agent and the Other is probed based on the archives,documents and interviews (such as Section 3.3 and Section 3.5.3). The motivation of their actions (Truth) andproductions emerges. It offers a structure to have a look at the hidden factors of each discourse and actions.

Figure 3 The Typical Method to Define the Type of Discourse

In some unusual cases, the production or the truth is easier to define (such as Section 3.4 and Section3.5.2). The discourse might be defined when other voids are confirmed rather than the Agent and the Other,depending on the recourses for analysis (Figure 4).

Figure 4 A Special Method to Define the Type of Discourse

3 APPLICATIONS TO THE BRITISH URBAN VILLAGE CAMPAIGN

3.1 WHAT IS URBAN VILLAGE?

Urban village, an ideal supported by the Prince of Wales, emerged in the UK during the late 1980s andgained increasing popularity in urban development in 1990s. At its peak popularity, it was prioritised in the UKGovernment's core and regional planning guidance and applied to more than 50 urban projects across UK (Biddulph, Franklin, & Tait, 2003). After the mid-2000s, this planning concept became less and less popularafter the shift of British urban policy towards sustainability.

In 1989, the Prince of Wales proposed ten principles to advocate his personal beliefs concerningfuture urban environments in his book A Vision of Britain: a personal view of architecture (The Prince of Wales,1989). In 1990, he called on the Urban Village Group (UVG) - a group of professionals which arepredominantly estate developers, to further develop his notions into the language of architecture and urbanplanning. The UVG published three books about how to build urban villages, organised urban villageconferences and lobbied for a national planning policy.

As the result of the campaign, the urban village concept was included in the national planning policiesin Planning Policy Guidance 1: General Policy and Principles (PPG1) (DoE, 1997) and Regional Planning Guidance for theSouth West (RPG10) (DTLR, 2001). At its most popular time, Biddulph (2000, p. 65) claimed that "urban villagesseem to be everywhere in the UK" and "we claim to build urban villages" instead of "only housing or estates".

However, another new planning concept, millennium village, emerged in the UK in the late 1990s andbecame the UK Government's new development initiative - Millennium Villages and Sustainable Communities in1999 in order to "achieve more integrated sustainable settlements" (DETR, 1999). Urban village was no longerwidely advocated, nor was the UVG, which was later incorporated into the Prince's Foundation for Architectureand the Building Arts in 2003, active anymore.

In 2002, Biddulph, Tait, and Franklin (2002) concluded the urban village ideal was abandoned after 15-year use since the loose nature of the planning concept led to some tensions between stakeholders. The newnational planning policy, Planning Policy Statement 1: Delivering Sustainable Development (PPS1) which replaced PPG1was the official end of the advocation of urban village in UK Government's planning policies (ODPM, 2005).

3.2 SOCIAL POSITIONS TOWARDS URBAN VILLAGE IN BRITISH PLANNING POLICY

Many of people involved in the Urban Village Campaign represented different social positionsdepending on their professions, beliefs and interests. This section categorises them into the following socialgroups depending on their discourse and actions in the campaign for further analysis in Four DiscourseSchemata: The Prince of Wales, the UVG members, Léon Krier, the UK Government, estate developers,rational researchers and pro-Modernist critics (Table 1). Through the analysis of public speeches, governmentaldocuments (planning guidance, funding initiatives and local plans), academic publication and media reports, ituses the analytical schemata of Four Discourses to probes how people in different social positions understoodand reacted to urban village.

Social Positions	Format of Discourse	Sources
The Prince of Wales	Prince's Speeches, Book and Broadcasts	• Records of speeches in DoC Website (http://duchyofcornwall.org/) • A vision of Britain: a personal view of architecture (The Prince of Wales, 1989) • BBC's Broadcast in 1988: HRH the Prince of Wales: *A Vision Of Britain*
Urban Village Theorist – Léon Krier	Krier's Writing & Speeches	• Léon Krier's Published Books, Papers and speeches' transcripts • Email correspondence with Léon Krier • Videos of Krier's Public Speeches
Urban Villages Group (UVG) or Urban Villages Forum (UVF)	Handbook and Report	• *Urban Villages: A Concept for Creating Mixed-Use Urban Developments on a Sustainable Scale* (Aldous, 1992) • *Economics of Urban Villages* (Lichfield & Aldous, 1995) • *Urban Villages and The Making of Communities* (Neal, 2003)
UK Government	Planning Policies	• Planning Policy Guidance (PPG1, 1997) • Planning Policy Statements (Replacing PPG in 2005) • Regional Planning Guidance for the South West (1994 and 2001) • Draft Regional Spatial Strategy for the South West (2006)

Real Estate Developers	Developers' Information Package; Email Corresponding	• Developers' Booklets and Official Websites; • Email corresponding with Morrish Builders
Rational Researchers	Peer-Reviewed Articles; Academic Reports	• Google Scholar • Webofknowledge • Scopus
Pro-Modernist Critics	Blogs; News reports; Magazine articles	• Google Search • ProQuest Search in Newspaper and Magazine Sections

Table 1 Different Social Positions on the Urban Village Campaign

3.3 URBAN VILLAGE – A COMMAND FROM THE PRINCE OF WALES

The urban village concept firstly appeared in the Prince's book A Vision of Britain: "… I am hoping wecan encourage the development of 'urban village' in order to reintroduce human scale, intimacy and a vibrantstreet life" (The Prince of Wales, 1989, p. 14). Essentially, Prince Charles proposed this new concept due to hisdisappointment with the then-ongoing post-war Modernist urban development. He had addressed this issue inthe 1980s through public speeches, TV broadcast and book publishing (Rossiter, 1988; The Prince of Wales,1984, 1989). Nevertheless, his actions attracted severe criticism, especially from Modernist architects (Jencks,1988). His bold proposal of the urban village concept was another attempt to defend his beliefs concerning thebuilt environment.

As the heir to the throne, his will had a huge impact on the established system of the urban planningknowledge. The UK Government, the Town and Country Planning Association (TCPA), the Royal Instituteof British Architects (RIBA) had to react to his urban village ideal. The RIBA strongly rejected Prince's ideal onnew model of urban development (BBC South, 1990), while the UK Government and the TCPA adopted itand reacted positively to the Prince's dream (DoE, 1997; Hardy, 2006). Furthermore, a group of estatedevelopers, bankers and urban planners gathered together to form the Urban Villages Group (UVG) in 1990upon Prince's call for support for the new ideal (Email correspondences with Leon Krier, 21-25 July 2016).The analysis above can be interpreted within the schemata of Master Discourse. The term urban village(S1) is the Agent of the Prince's planning concept or the Master's will, driven by the Prince's opposition toModernist urban development ($). His proposal shook the existing regulations of urban practice and theexisting paradigm of urban research (S2) because of his enormous political influence. After defining these threevariables, we can analyse the social effects between the Prince of Wales and organisations involved in urbanvillage within the schemata of Master Discourse as shown in Figure 5.

Figure 5 Master Discourse of urban village

Usually, the production from organisations, especially the Government's policy documents, isregarded as a reliable resource. However, the schemata of Master Discourse indicate that the production ismerely the unattainable object of desire. This means that the Production of the discourse did not fully conformto the ideal of the Prince of Wales, but reflected the organisations' desire to some extent.After the formation of the UVG upon the Prince's call, the UVG produced a report which I call 'themanifesto of urban village' since it was the first time that the urban village concept was explicitly introduced withdetails of planning and design strategies (Aldous, 1992). It contains some uncertainties and contradictions suchas the

location choice and its relationship to existing urban areas, despite being the first attempt tocomprehensively define urban village. The manifesto tried to make urban village more flexible and versatile so thatit could appeal to more participants' interests and make the possible implementation of the ideal more viable.

The discrepancy was more obvious in the policies of the British planning policies. The UKGovernment incorporated urban village in the mixed-use section which is one of its three approaches in PlanningPolicy Guidance 1: General Policy and Principles (PPG1) (DoE, 1997). The Government used the concept in a lessimportant position as a reaction to the UVG's lobbying. In contrast to PPG1, the Regional Planning Guidance forthe South West (RPG10) emphasises the sustainable character of urban village, denoting that mixed-housing andmixed-use could provide residents with a choice to live, work and use public facilities locally with a reducedtravel need (DTLR, 2001, p. 53). The interpretation of urban village varies from one to another, demonstratingthe conflict between the original ideal of Prince Charles and the explanation in different policy documents.

Though urban village was not understood as the same as the Prince's initial concept, urban policymakers tried to cater to this new ideal for their development objectives. The broad definition in UVG'smanifesto and the contradiction in the planning policies reconfirm that the Master's ideal is difficult toimplement with only the process of imposing a new planning concept to the existing planning system.

3.4 MANIFESTO, HANDBOOKS AND GUIDANCE – POLICIES TO IMPLEMENT THE IDEALS

This section probes the social effects that occurred when the knowledge package of urban village - itsmanifesto, handbooks and planning guidance – were implemented in practical urban projects. The type of thisdiscourse is easy to define since the Agent and the motivation (Truth) are obvious. The agent is the newknowledge package of urban village, and the motivation is to impose the urban village concept in urbandevelopment. Therefore, the discourse is easily defined as University Discourse, as shown in Figure 6.

Figure 6 University Discourse – urban village

It should be noted that the production in Section 3.3 - the knowledge package of urban village -becomes the Agent in this discourse. The key characteristics in this manifesto included mixed-use (buildings,land use and tenure), pedestrian permeability, walking distance size (less than 40 ha area with a population of3,000 - 5,000), public involvement and quality environment (Aldous, 1992). The characteristics of urban villagein PPG 1 are compactness; mixed-function; mixed dwelling types including affordable housing; employment,leisure and community facilities; infrastructure and services; good urban design, public open space and greenspaces; and good access to public transport (DoE, 1997, pp. 3-4). At the regional planning level, RPG10 claimedthat "urban villages may provide a more sustainable model for development in existing urban areas, suburbanareas, urban extensions or new settlements" (DTLR, 2001, p. 53). Compared with the manifesto and handbooksof urban village (Aldous, 1992; Neal, 2003), we find that the UK Government's planning guidance only focuseson some specific aspects of urban village.

According to the diagram of University Discourse, estate developers, urban planners and architectscould choose whatever they like to pursue their own interests for their extra pleasure. Therefore, they held adifferent understanding of urban village or implemented the urban village concept in a different way.For instance, Léon Krier, the master designer of Poundbury, attempted to implement his ideal ofurban quarters instead of urban village, although Poundbury is widely cited as a pilot urban village project. As acrucial founding member of the UVG, Krier was an active participant in the early UVG meetings as the urbantheorist for two years (Thompson-Fawcett, 1998), but was latter excluded from the UVG (Emailcorrespondences with Léon Krier, 21-25 July 2016). In the masterplan of Poundbury, Léon Krier uses urbanquarter as his real design concept: a geographic and social concept of an urban community, with the followingcharacteristics: less than 33ha to guarantee 10-min pedestrian distance; dimensional, geometric and functionalvariety of buildings to create authentic urban community and public realm; mixed use within every quarter(Krier, 1998).

The real estates developers did not care about the original ideal either. For instance, Mr Morrish, theco-director of Morrish Builders, just regarded urban village as a sales premium for good quality master-planningand architecture (Email correspondences with Steven Morrish, 2 August - 9 September 2016) and MorrishBuilders' official website and sales booklets neglected any non-profitable characteristics of urban village such associal housing. The situation is the same for architects who participated in the architectural design in urbanvillage projects. For instance, ESHA Architects followed one design principle of urban village as their startingpoint of affordable housing design "one of the founding principles of the urban village of Poundbury is thatthe social housing is freely intermixed with the private houses and that the two are indistinguishable"[1].

3.5 MODERNISTS' CRITICISM VS. RATIONAL EVALUATION

3.5.1 THE ARCHITECTURAL DEBATES BEFORE THE CAMPAIGN

The debates on urban village cannot be separated from the Prince's early intervention on architecture.Urban village was the Prince's attempt to react to the opinion that it is easier to criticise the defects in Modernisturban development than to build better urban projects (Hebbert, 1996). Since the RIBA's 150th AnniversaryGala speech in 1984, the Prince explicitly criticised some deficiencies of Modernist architecture and expressedhis support to Community Architecture and Traditionalist Architecture[2]. The intervention of the Princeprovoked a popular public debate in which, a barrage of journalists, who had little interest before the Prince'sintervention, escalated into a nationwide discussion (Jencks, 1988, p. 7). The wider debate was successful as thePrince wished to "stir things up [and] throw a proverbial royal brick through the inviting plate glass of pompous professional pride"[3].

Although the failures of the Modernist built environment in the 1970s and 1980s seemed to beunanimous among the Prince, architects and planners (Goldberger, 1988; Hutchinson, 1988; The Prince ofWales, 1989), the opinion on its responsibility and the future approach were extremely divided. For the Princeand his supporters, the key theme was against Modernist Architecture which the Prince was extremelydisappointed with. Aiming to gain extensive supports, the Prince widened his views in his speeches between1984 and 1987 from merely Community Architecture to Traditionalist Architecture, Neoclassical Architecture, Conservation and Partnership (Jencks, 1988). Therefore, Traditionalist, Classicist and Community architects collectively applauded for the Prince' intervention. They believed that the Prince encouraged the public toexpress their opinions against the prevalent ideal among modernist architects within the RIBA.In contrast, Modernist architects and architectural journalists strongly criticised the Prince'sintervention. One strand of criticism questioned the legitimacy and ability of the Prince's intervention. Theybelieved that the Prince's criticism of architects was violating the principles of a constitutional monarchy(Games et al., 1989; Rogers, 1989). The then RIBA president, Maxwell Hutchinson (1988), believed that thearchitecture profession should develop with its rich heritage and enduring strength rather than through theprivileged intervention. Another strand of criticism accounted for different visions for future cities. Themajority of Modernist architects were confident in technological development and believed that architectureshould catch up in the relentless flow of time and evolve with the society (Foster, 1987; Hutchinson, 1988,1989; Manser, 1989; Rogers, 1989). Their opinions of future architecture and cities are so different from thePrince's perspective of learning from the past that their disagreements were inevitable.

[1] ESHA Architects were the coordinating architects in Phrase 1A, and participated in the design of 20affordable housing units in Phrase 2E. Their design statement for Poundbury social housing design was retrieved from http://www.eshaarchitects.co.uk/Poundbury-Affordable-Housing.html on 15 May 2016.

[2] Prince's speeches on Architecture between 1984 and1988 are available in the appendixes of The Prince, The Architects and New Wave Monarchy (Jencks, 1988).

[3] Extracted from the Prince's 'Community Enterprise' speech on The Times/RIBA awards for Community Architecture on 13 June 1986

3.5.2 MODERNISTS' CRITICISM

The debate continued after the Prince shifted his focus from criticism to advocating his beliefs offuture cities - the urban village ideal. Similarly, urban village attracted numerous comments since the ideal was putforward by Prince Charles. Although the Urban Village Campaign technically avoided the mention of the choiceof architectural taste, and instead focused on mixed development – mixed tenure, mixed-use and mixed-scale(Bunting, 1990), urban village projects were associated with anti-Modernist styles in practice such as Vernacularstyle in Poundbury and Lightmoor Urban Village (Dorrell, 2003).

The de facto association with anti-Modernist style attracted severe attacks from Modernist architectsand journalists. Reporting the urban village practice in Hull, Dench (1995) associated the urban village concept with fake historic doors, windows, balconies and pueblos, summarising it as 'theme-park city'. Colin Ward (1992) argued that the urban village manifesto was merely the kind of 'townscape manual' used to be publishedin the 1950s and 1960s. Maxwell Hutchinson claimed that the Prince's 'nostalgic ideal' of the past Golden Eracould only create 'exclusive home for the rich' (Hutchinson's interview in BBC South, 1990) or 'life styles ofthe rich and famous' (Hutchinson, 1989, p. 9). Their writings and speeches pointed out the flaws of urban villageand argued the possibility of creating a new approach based on Modernist rather than Traditionalist or Conservatist, at least looking forwards rather than backwards.

As we can see in the discussion above, Modernist architects and journalists were disappointed withthe urban village ideal (a) and attempted to persuade others to believe in their opinions. They expressed theiropinions to persuade the confused public (this of course included architects and planners) who still did nothave strong stances in the discussion of urban village ($). Many of their criticisms merely served to advance other new terms, like 'theme-park city', 'townscape manual', 'nostalgic ideal' and 'exclusive home for the rich' (S1), which themselves still suffered from a lack of definition/clarity. Their actions conform to the schemata of Analytic Discourse in which there is a deliberate subversion of the prevailing Master Discourse. Therefore, their criticism can be analysed within the schemata of Analytical Discourse (see Figure 7).

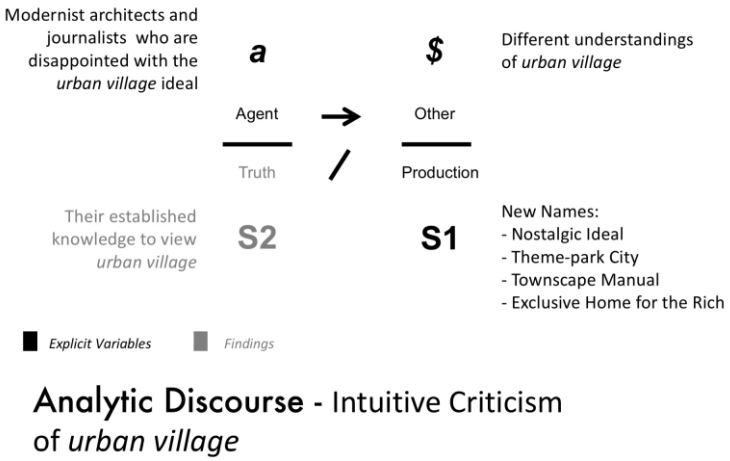

Figure 7 Analytic Discourse – Intuitive Criticism on Urban Village

Similar to the architectural debate before the Prince's proposition of urban village, the key reason thatModernist architects and journalists rejected urban village was that the new ideal was different from Modernistarchitects and journalists' beliefs in future architecture and cities and could not fulfil their own desire ofModernist urban environment. Therefore, they tried to point out its speculative flaws according to theirestablished knowledge (S2). Maxwell Hutchinson believed this type of housing would have to be expensive onsale since the large-scale development was too expensive due to the huge amount of the infrastructure, suchroads and service (Hutchinson's interview in BBC South, 1990). Architect and anarchist thinker Colin Ward(1992) argued that the urban village ideal lacked two key factors: the economic motivation of developers and amotorised suburban hinterland supporting the urban centres. The editorial of the Architects' Journal argued thaturban village had a good imagination for the urban form but a lack of the content and structure for economicactivities (The Editors, 1992). Architectural journalist Matheou (1994) criticised that the publication of Economicsof Urban Villages (Lichfield & Aldous, 1995) was a direct command to the UK Government to make urban villagefeasible. The criticisms of urban village above were from different perspectives, but all tried to argue that urbanvillage was not a feasible solution to future cities.

According to the schemata of Analytical Discourse, the true motivation of their discourse was thattheir established knowledge (S2) had been attacked. As the then RIBA head, Hutchinson needed to speak

outon behalf of the professional society in which Modernist architecture was the mainstream. As an anarchistthinker, Ward was strongly against all kinds of top-down command, especially from the future monarch. Infact, their real motivation made some arguments quite emotional and biased. Hutchinson was blind to the factthat most urban village projects were required to build social housing integrated with private selling products. Ward and the editors of Architect's Journal did not predict the developers' enthusiasm for this ideal.

3.5.3 RESEARCHERS' RATIONAL EVALUATION

Besides Modernist architects and journalists, there was another group who evaluated the urban villageideal, but in a more rational way – an academic approach. This approach is naturally less emotional and lesspersonal than the Modernists' criticism since it needed to collect data as much as possible for comprehensiveevaluations and is under the monitor of peer-review system.

The majority of this group were scholars in urban research and architectural research, who initiallywere sceptical of the urban village ideal ($) and questioned the urban village ideal (S1). How much can urban villagecontribute to urban regeneration (Biddulph, 2003; McArthur, 2000), aesthetics and place-making (Biddulph,2003; Forsyth & Crewe, 2009), and social and environmental sustainability (Brindley, 2003; McArthur, 2000;Thompson-Fawcett, 2000)? Is urban village a fixed planning ideal (Biddulph et al., 2003)? Or does urban villageimprove the emergence of women into the public sphere (Roberts, 1997)? The researchers probed the urbanvillage ideal from the perspective of their expertise, which is different from its original objectives.

Therefore, researchers' evaluations can fit in the schemata of Hysteric Discourse. The two explicitvariables are researchers' initially different understandings of urban village ($) as the agent in the discourse, andtheir questions on urban village (S1) as the receiver in the discourse. The schemata of Hysteric Discourse revealthe true motivation and the real production of the rational evaluations (see Figure 8).

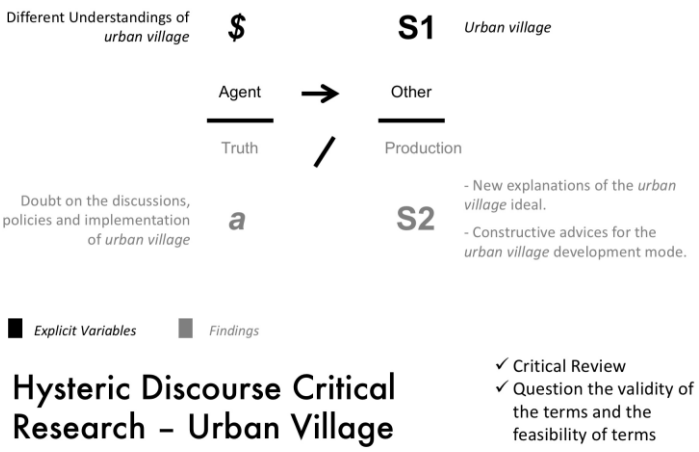

Figure 8 Hysteric Discourse - Rational Evaluations of Urban Village

Hysteric Discourse as Lacan stated, is the real scientific research to produce new knowledge. Onething to emphasise here is that Hysteric Discourse is not necessary to associate with any hysteric symptoms.Rather, it is a unique way to question the ideological environment through asking 'so what' or 'but what about?'(Hillier & Gunder, 2003).

The real motivation (Truth) of the research evaluations were researchers' chances to insert their ownexpertise into the academic discussion, urban policies and practice of urban village (a). McArthur (2000) regardedurban village as a stimulating process of self-sustaining regeneration, while Roberts (1997) used urban village asone of Traditionalist approaches to contemporary urban development. Thompson-Fawcett (2000, p. 287)explained the urban village ideal in the popular context of sustainability, while Franklin and Tait (2002) analysedurban village with a light touch of textual analysis and urban sociology. As analysed above, almost all researchersattempted to reshape urban village in a way with which they were familiar.

Unlike the Modernists' comments, the production of research evaluations was much less emotionalsince they had to follow the academic paradigm of a comprehensive investigation. Although the opinions onurban village were divided among researchers, most of the evaluations agreed with some positive

aspects of theideal. A number of project case studies supported that mixed-use and compactness were generally achieved asthe key feature.

Nevertheless, they pointed out their concerns on other aspects which needed caution, such as thecontext of the dynamic urban processes in contemporary society (Thompson-Fawcett, 1996), the powerfulcapital force and the complexity of the real projects (Thompson-Fawcett, 2000), the fuzzy and ambiguousdefinition (Biddulph et al., 2003; Franklin & Tait, 2002), the danger of regarding pre-industrial urban form asthe only strategy (Roberts, 1997) and the importance of the aesthetic quality rather than the visual style (Forsyth& Crewe, 2009).

Furthermore, the research evaluations provided some suggestions about how to develop better urbanvillage projects. Reviewing the Glasgow Crown Street project, McArthur (2000) suggested transferring resourcesfrom ownership housing to social rented housing to improve social inclusion and social sustainability. The casestudy of London's Docklands suggested that the social activities needed incubated together with the physicalenvironment rather than merely ‘carved up’ by architects and planners (Tait, 2003). Thompson-Fawcett (2003)argued that the survey in Poundbury suggested that the urban village building code needs some flexibility formodification or even reversal in a long-term framework.

The research evaluations linked the ideal with the research areas which urban village did not extensivelytouch upon. Therefore, the evaluations added new thoughts to the urban village ideal, simulated the discussionin a rational way and generated more knowledge for urban village.

4 CONCLUSION

The article reviews the British Urban Villages Campaign to reveal the complex social effects behinda new planning concept – urban village, with the help of Lacan’s Four Discourses social theory. It discloses thatthe praises and objections are not only driven by individual’s judgement of the new planning concept but alsoassociated with the interests (or pleasure) they want to achieve from the standpoint of their social positions.

The statements and policies produced after the Prince of Wales’s call for a new ideal urban village actually didnot follow his original intention, since the UVG members could achieve their own interests to interpret theideal in different ways. The urban practitioners’ actions did not conform to the manifesto, handbooks andguidance of urban village since they wanted to seek their own ‘pleasure’ under the policy package. The real reasonthat the Modernist commenters attacked the new concepts was not the bad quality of urban village, but theconflict between their existing knowledge and the new planning concept. It was difficult to keep urban village ina stable definition since the involvement of different social positions kept the concept changing and evolving.

From the analysis of urban village, this research speculates some characteristics of contested planningconcepts in the planning discourse. Firstly, planning concepts might be understood and reacted differentlydepending on individuals’ social positions. To some extent, their social positions, rather than the quality of theplanning concepts, determine the potential actions towards planning concepts. It explains the uncertainty andmutability of planning concepts keep following the participants’ interests in planning discourse.

Secondly, the more radical the planning concept is, the more divided challenges it might face. Thechallenges of Analytic Discourse are triggered by the changes impacting on an individual’s establishedknowledge. Rigid planning concepts are likely to quickly attract attacks since they are more difficult for othersocial positions (except for the Master) to accommodate the ideal in their own ways of achieving their owninterests. In contrast, flexible planning concepts have the possibility to fit for wider interests, although thedefinition of the ideals might mutate to a degree far away from their origins.

Lastly, the public’s passion on a discussion about new planning concepts does not last long, but urbandevelopment projects need decades to complete and become mature. Many critics and policy-makers wereeager to appropriate new concepts based on their own knowledge system before the popularity disappears (McCann & Ward, 2011). Although a new planning concept might be ephemeral as British urban village whichfaded out after being popularity for nearly 15 years, its legacy remains for a longer time.

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ID 1512 | ESSEX SCHOOL OF DISCOURSE ANALYSIS: A LOGIC-BASED APPROACH TO ONTOLOGICAL INVESTIGATION OF PLANNING

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1 INTRODUCTION

Planning discipline historically emerged to modify the side effects of capitalism. Consequently, the discipline has undertaken a paradoxical role: while planning provides facilities for a better condition of life through provision and distribution of public goods and services, it also facilitates accumulation of capital and market operation (Harvey, 1985). Friedmann (1987) discussed the difficulties that we as planners face to present a definition of the essence of planning discipline. Furthermore, Gunder (2005) through a Lacanian approach illuminated the linguistics reasons for difficulties in presenting a concise definition of planning, specifically where we present contradictory significations for the dominant concepts of planning such as smart growth, sustainability, and public interest. As Gunder and Hillier (2009) argued, it seems planning is signified with a series of terms and phrases which inherently have different and sometimes contradictory significations. This paper suggests that planners require an ontological investigation of planning to respond to a question of the planning functions. An ontological analysis is merely possible on the light of logic. Namely, a logic approach is able to provide a window on ontological studies of the essence of phenomena including planning.

This paper deploys Essex School of Discourse Analysis (ESDA) to explain how an Aristotelian logic-based approach may assist to illuminate the functions and relations of planning. ESDA is based on a Logic Approach of Critical Explanation in social and political theory which has been inaugurated initially in political studies by Laclau and Mouffe (1985); then, developed by their students including Glynos and Howarth (2007). The method is not simply a Discourse Analysis method that focuses on reading texts or considering the language of documents. Instead, it has been applied in policy analysis to investigate how and under which political and social circumstances, a particular policy logically supersedes all other alternatives. In this paper, the logic approach critically analyses how three logics social, political and fantasmatic work to make a planning practice such as an urban growth policy possible.

The paper introduces ESDA as a logic-based approach and presents results of applying ESDA in a comparative study of urban development in two case studies: Western Australia (Perth) and Iran (Tehran). Using this logic approach, the paper analyses the factors inherent in these homologous policies, including oil and mineral exports as economic drivers in both cases. Importantly, the research emphasises the need to understand universal trends and their connections with particular context-dependent issues in order to recognise the rationale behind these policies.

This method is being deployed for the first time in planning by the researcher to explicate the logics which have created Ellenbrook and Parand as extensions respectively within Perth and Tehran metropolitan areas. The method will explain how political and fantasmatic logics are associated with the social logic to make the practices and to maintain them at both the social and psychological levels of different actors in the urban development process. Three logics of social, political, and fantasmatic analyse the impacts of different actors including state, citizens, local institutions, as well as regulations upon the policy of urban growth management.

2 PLANNING AS A JANUS-FACED DISCIPLINE

Retroactively, and with a genealogy investigation into the history of planning, I found that planning emerged with the modern era to pacify the side effects of capitalism (in particular industrial capitalism) (Friedmann, 1987; Harvey, 1985). Planning was largely created as an agent of the state to facilitate market relations, that is, to help in the provision of labour and resources to secure capital formation (Harvey, 1985, 1989; Yiftachel, 1998). In this manner, planning has had to undertake a paradoxical role to achieve these paradoxical aims. Often, planning engages in the promotion of economic growth rather than its initial 'public good' promises such as providing affordable housing. Indeed, planning is entangled in the contradictions of capitalism such as use value versus exchange value, as well as the right to private property against common property rights (Harvey, 2014). Yet, planning is designated to mitigate the adverse effects of these contradictory traits of capitalism.

Therefore, planning can be seen as a Janus-faced discipline. It is necessary to iterate that the problem stems from the essence of planning which operates as an apparatus of the state to adjust the failures of

the market economy, such as providing affordable housing for the poor, or as Harvey (2003) terms it, for labourers. In terms of housing policies, as one of the most important dimensions of planning, Harvey (2014) argues that planning policies aim to provide affordable housing; yet, these policies often result in price rises that make houses unaffordable for low-income groups.

As Lefebvre (2003) stated as a consequence of the contradiction between exchange value and use value in the urban phenomena, and particularly for housing, the function of home-ownership changes to a form of saving as a speculative financial mechanism. This contradiction works as a driver for most housing policies (Harvey, 2014). In particular, neoliberalism as the hegemonic ideology of our time relies on this contradiction through the financial innovative mechanisms, derivatives, alongside housing policies (Harvey, 2014). Harvey (2014, 121) maintained that neoliberalism is characterised via "accumulation by dispossession through debt encumbrancy and debt peonage (and less legal predatory practices) provide a lucrative supplement [intertwined with global financialisation] to boost the overall rate of return on capital". However, this mechanism of the housing and real estate markets halted in the 2008 economic crisis, when the enormous housing bubble burst in many parts of the world (Baker, 2008).

According to the above-discussions, this paper assumes a specific definition of the planning mechanism that presents a Janus-faced discipline for planning in relationship with capitalism, particularly neoliberalism. The research investigates planning practices, policies and plans in relation to the capitalism as a western approach – specifically Anglo Saxon or American approach – of planning. Harvey (cited in Roberts, Hite, & Chorev, 2015, pp. 333-334) argued that many people in non-English speaking countries for example Brazil may think neoliberalism and its crises and failures are "Anglo Saxon disease and have nothing to do with" other cultures and countries; however, neoliberalism as the hegemonic ideology of our time have internationally influenced local planning policies and plans since the 1980s (Harvey, 2014). I investigated how two countries – Australia and Iran – have been influenced by neoliberalism as an ideological framework which raised from western countries since the 1980s.

I have selected to analyse the land supply policies and UGMPs as the subject of this investigation for two reasons. First, because different kinds of housing schemes including land supply and UGMP have been applied as one of the most important tools of the planning function under the hegemony of neoliberalism. Importantly, I have selected to investigate UGMP because since the late 1970s and the rise of neoliberalism, discussions regarding the removal of planning controls, and also the relationship between restricting urban growth management and perceived failures of planning to provide sufficient housing, has widely been one of the most controversial issues of neoliberal planning (Allmendinger, 2016). Second, these practices of planning were my main concern during my work as a planner at the Ministry.

I assume practices of Urban Growth Management (UGM) and the land supply in the fringe areas of cities as a policy rather than as plan. Policy is a problem-solving or problem-oriented process that can be undertaken through deploying different skills and approaches; policy can be implemented in different stages and through the use of different plans such as a town plan, structure plan, comprehensive plan, detail plan, etc. (Patton, Sawicki, & Clark, 2013).

UGMP as a practice of planning often begins with a demographic housing demand forecast and then an economic assessment often resulting in a recognised lack of sufficient housing in the market operation. The increasing population in cities has been one of the determinants of the availability of land supply. In other words, population growth is regarded as a new induced demand; consequently, market reasoning offers an increase in supply of housing to respond to the new demand in the market. Through a series of zoning and land use policies including UGMP, planning is often deployed to resolve these housing market deficiencies (Austin, Gurran, & Whitehead, 2013).

Internationally, planning actors – people, planners, and politicians – accept that urban containment policies make housing less affordable; conversely, new suburbs supply cheaper land and more affordable housing (Gurran, 2008). However, as soon as policies and plans are ratified, high demand is often shaped because people anticipate future increases in property prices (Balchin, Bull, & Kieve, 1988). These newly planned areas turn into ripe areas for market speculation. Indeed, market speculation ends in the over-valued price of assets or a 'housing bubble' (Evanoff, Kaufman, & Malliaris, 2012). Many speculative buyers often do not even intend to reside in their properties, because of the lack of appropriate transport services, and inefficient services and infrastructure (Balchin et al., 2012). Instead, they anticipate increases in property prices in the future, or in the Marxian terminology 'surplus value'. In this manner, housing becomes a speculative investment for one group while an unaffordable, but essential good for another.

Although, buyers may rent out their assets or add value to their lands by building on it, the main motivation for this act is to gain surplus value. Finally, "the pursuit of exchange value destroys access to housing as a use value" (Harvey, 2014, p. 21). Therefore, because of the high prices of houses, many of these new housing areas cannot provide affordable housing for disadvantaged groups. Often, asset speculation causes large numbers of properties to be held idle in the form of empty lands or empty buildings and the over-valued price makes the assets unaffordable for many groups (Healy & Rosenberg, 1979).

Therefore, I realised that the discipline of planning has inherent limitations, including that of many of its functions, roles and responsibilities as well as, its fundamental definition and the role of planners and citizens as actants involved in planning functions. It became clear that a great deal of the planning literature is involved in questioning the essence and ontology of planning, for example, what is planning's purpose? And what are the roles and responsibilities of planning actants? I did not find any research undertaking an Aristotelian ontological investigation of planning to systematically investigate the logics concerning the existence of planning practices, or to reveal why a specific practice of planning exists, or why another kind does not exist. An Aristotelian ontological investigation clarifies the relationships and identifies the causes that bring an entity into existence and I found a lack of Aristotelian ontological investigation on the essence and the existence of the planning practices in the literature. Therefore, discovering the need to undertake an Aristotelian ontological study of planning, I have decided to categorise my research as an ontological investigation on planning that aims to achieve an in-depth understanding of planning practices and their actants. The next section will explain the Aristotelian meanings of ontology and ontological research, what ontological research may reveal about the planning discipline and how it provides a beneficial and essential approach for planning.

3 ARISTOTELIAN ONTOLOGICAL APPROACH

An ontological investigation is involved in "our underlying presuppositions about the way the world goes round" (Glynos & Howarth, 2007, p. ii). This approach can provide a framework to answer questions about "what sorts of things exist … and how they exist" (Glynos & Howarth, 2007, p. 11). The Aristotelian ontological investigation suggests a logic approach to discuss logic of possibility and consequently impossibility of phenomena or practices (Aristotle, 2001[1807]). Therefore, an Aristotelian ontological framework of planning investigation reveals the reasons for the existence of a practice of planning, for example, an UGMP (why the practice exists), and also how and under which conditions a practice is created (for example under neoliberalism).

Discussion and analysis of ontology is possible only in the light of logic. Logic and questions concerning the logical possibility of the existence of objects provides a window on ontological studies of issues, entities, and essences (Jacquette, 2002). Namely, what kinds of logics make a practice possible is the subject of an ontological investigation. Thus, applying a logic framework can provide a systematic ontological study of a practice to find the failures and the causes of the failures.

Therefore, the main questions of an ontological investigation are as follows: What is the essence of a phenomenon (e.g., a planning practice such as UGMP)? How is it created? Where does it locate and why? Moreover, what are the relations of that phenomenon to other beings? The responses to these questions present the logics of possibilities or impossibilities of the phenomenon's existence. In fact, a logical necessity of something inscribes its impossibilities (contingencies) in itself (Jacquette, 2002).

Therefore, "the logic of a practice comprises the rules or grammars of the practice, as well as the conditions which make the practice both possible and vulnerable" (Glynos & Howarth, 2007, p. 136). Laclau (in Butler, Laclau, & Žižek, 2000, p. 283) compared the logic of social and political practices with the rules of the practice of playing chess; namely, with basic entities, rules and relationships we can have "myriad moves at the level of tactics and strategy" (Glynos & Howarth, 2007, p. 136). I have chosen Essex School of Discourse Analysis (ESDA) as a logic-based approach to analyse the logics of possibility of a practice of planning. As explained above, I have chosen the policy of UGMP as a practice of planning to ontologically investigate the logics of this practice. The next section introduces ESDA and explains how this method might be deployed in planning and policy analysis.

4 ESDA AS AN ARISTOTELIAN LOGIC APPROACH

The method was founded by Laclau and Mouffe (1985) and followed by their students in the Essex School of Political Studies. In particular, ESDA approach explores a phenomenon via a focus on specific practices or policies through texts, speeches, rhetoric and interactions or in other words, linguistic/non-linguistic axes (Glynos, Howarth, Norval, & Speed, 2009). Thus, following ESDA, this research endeavours to investigate the mechanism of planning in relation to hegemonic ideology via analysis of urban plans and projects, policies, laws, bylaws, planning codes and contracts, and official reports. It also includes documented speeches or orders of authorities. The following four sub-sections will explain the core arguments and principles of ESDA.

4.1 BEYOND THE DICHOTOMY OF UNIVERSALISM AND PARTICULARISM

The discussion on the dichotomy between universalism and particularism comprises the foundation of this methodology. ESDA's special explanation of the dichotomy is developed from Laclau's (1996) point of view. Following Laclau, Torfing (1999) undertook a genealogical scrutiny of universalism and particularism. He explained how these philosophical terms derived from classical ancient philosophy and the interpretation of the transcendental and immanent notions of god. This paper avoids repeating the long history of these terms. The discussion is limited to what is related to the subject of the research. Briefly, the discourse of modernity replaced the universal rationality of god, as a foundation and reference, by science, that of natural science or 'causal law' (Torfing, 1999). However, in both logics of divine foundation and modernity, a universal transcendental mode of rationality is the foundation of human reason. This displacement of god by human science is encapsulated in Descartes' famous dictum "Cogito ergo sum", "I think therefore, I am". This universality continued with Enlightenment thinkers, such as Hegel and Marx, amongst others, through the hegemonic thoughts of historicism, structuralism and the materialistic approach. Later, post-modernists and post-structuralists challenged this metaphysically privileged universal approach. Thus, with increasing hermeneutical insights in social and political science, the context-dependent and particular approach has gained privilege in many discourses (Flyvbjerg, 2001; Glynos & Howarth, 2007; Torfing, 1999).

Although the hermeneutical critique of positivism, naturalism and structuralism has provided effective insight into social science, close and careful interrogation of this approach shows that particular context-dependent rationality and perspective loses a common ontological ground, which without universal norms and rules will lead to antagonistic clashes between incommensurable identities (Glynos & Howarth, 2007; Torfing, 1999). Indeed, while hermeneutists highlight a number of deficiencies in the scientific paradigm, they replace the subsumptive universalism with a descriptive or normative particularism which still is not fully responsive to social phenomena (Torfing, 1999). Žižek (2008b) as an opposition thinker against hermeneutics, post-structuralist and post-modernist approaches in social studies, criticises these approaches for providing the possibility for distortion of meanings and reducing truth to "one of the style effects of the discursive articulation" (Žižek, 2008b, p. 172). To deny poststructuralism as an appropriate approach, Žižek (2008b, p. 172) argues that "Lacan always insists on psychoanalysis as a truth-experience … [which] has nothing to do with a post-structuralist reduction of the truth-dimension to textual truth effect".

In sum, structuralism, positivism, and naturalism, or the scientific perspective – universalism – are criticised for being reductionist. These approaches universalise theories and generalize scientific laws for particular cases in social science through deductive or inductive modes of reasoning. Universal approaches overemphasise the ideals of prediction and underemphasize contexts and particulars. However, the later approaches including post-structuralism, postmodernism and hermeneutics – particularism – are criticised because they failed to consider different dimensions of phenomena and social and political events and a lack of clear and coherent methodology. In fact, the particularistic approaches fail to see similarities and differences as well as logical universal relations between phenomena due to considering contextdependent descriptions of events. These approaches focus on contextualized self-interpretations, which overemphasise the particularity of context (Glynos & Howarth, 2007).

Laclau, Mouffe and their followers have attempted to find a way beyond this dichotomy. In this regard, ESDA presents a possibility to use both rationalities – universalism and particularism – to investigate social phenomena. Indeed, the method of the logics of critical explanation (Glynos & Howarth, 2007) presents one of these attempts. The turn to the logic approach in political discourse theory responds to the mentioned dichotomy and challenge in contemporary social science.

Torfing (1999, p. 168) states that "the discourse theory of Laclau and Mouffe accepts the chasm between the particular and universal; however, it challenges the idea that a radical choice must be made between universalization of the particular and particularization of the universal". Therefore, one of the fundamental principles of ESDA is the existence of the circular relation between universalism and particularism. "As a consequence, the metaphysical hierarchies privileging either a pure universality or pure

particularism are revealed as political and ideological attempts to arrest the undecidable game between the universal and the particular" (Torfing, 1999, p. 168).

Following the ESDA, it is necessary to accept two assumptions: 1) there are some universal functions, theories and rules to make commensurabilities possible, while 2) these rules may operate quite different in different contexts. First, as a universal theory or "a complete explanation that is not reducible to the contextualized phenomenon", planning ontologically exists and operates in relation to the hegemonic ideology of capitalism (Glynos & Howarth, 2007, p. 83). Second, a context-dependent analysis is "an indispensable element of any properly constituted" research of planning (Glynos & Howarth, 2007, p. 83). Thus, every context presents its own mechanism in a series of complex relations. In this manner, although a counter-logic of the status quo of planning may emanate from a counter-logic to market reasoning/capitalism, it can be as varied as the many cases and practices of planning.

The key methodological response of ESDA is a problem-driven approach or practice of problematisation instead of the technique-driven and purely theory-driven approach (Glynos et al., 2009). However, it avoids any kind of relativism or subjectivism in order to avoid any constraint on the critical evaluations of practices. This means the focus of the methodology is on the empirical problems, retroductive explanations of the identified problems, logics for actions of professional and non-professional actors, articulation of actors and critiques of them (Glynos & Howarth, 2007). Therefore, investigation of a practice (for example UGMP) within more than one case study presents a better and in-depth understanding and analysis of the practice and circular relation between universalism and particularism (Glynos & Howarth, 2007). It shows differences and similarities of a planning practice such as UGMP within different contexts. It clarifies how a universal practice of planning works through different logics in different contexts.

Consequently, I have chosen two diverse case studies to examine how the mentioned universal mechanism of planning works through different contexts and how it causes differing effects which require differing planning practices. I have applied the mentioned method to evaluate the role of ideology in two planning case studies from Australia - Perth and Iran - Tehran.

According to Laclau and Mouffe and following Wittgenstein and Lacan, every social or political practice works based on three logics: the social logics including economic, financial and institutional operations and structures, the political logics, and the fantasmatic logics which support the possibility of a practice (Glynos & Howarth, 2007). The three logics will be explained in the following sections.

4.2 SOCIAL LOGICS

Social logics are not simply equal to social orders; rather, social logics intervene to different degrees in the constitution of every social order (Laclau & Mouffe, 1985). Social logics are not formal logics, or even general dialectical logics or casual logics; rather, social logics imply a “rarefied system of objects, as a ‘grammar’ or cluster of rules which make some combinations and substitutions possible and exclude others” (Butler et al., 2000, pp. 76, 77). Social logics often characterise what has been called ‘discourses’ such as ‘the logic of kinship’, ‘the logic of the market’, and so forth. Laclau (Butler et al., 2000, p. 76) stated that this kind of logic “coincides what in Lacanian theory is called the ‘symbolic’”. Therefore, the symbolic implies all terms of social life, social logics, or social practices. Social logics “characterise practices in a particular social domain, say the practices of consumption and exchange within an economy, or an entire regime of practices, egalitarian policies, Thatcherism, apartheid, or even the audit regime of a particular university” (Glynos & Howarth, 2007, p. 133). Furthermore, “social logics characterise the patterns of established practices by dominant organising principles” such as financial practices “with a whole range of managerial, technological, and economic norms and processes” (Glynos et al., 2012, p. 298).

Every social order has its own political logics in the background. Indeed, political logics extend the ESDA argument beyond social logics to find what kind of power relations construct the current social logics. The next section explains how political logics are involved in a practice.

4.3 POLITICAL LOGICS

Political logics provide the means to explore how social practices are instituted, contested, and defended (Glynos & Howarth, 2007, p. 133). Political logics explain the ways in which actants are involved in a practice and signify the social logic. Political logics can be explained through different logics such as the logics of equivalence and difference, and sameness which are the most important components of political logics. In addition, the Lacanian concepts of identification and identity assist to explain political logics, which are related to the different ways within which a subject is confronted with an identified lack.

The main point of the ESDA methodology is the Lacanian ontological lack – an identified lack in the symbolic order such as lack of affordable housing – that is located at the center of all analyses and logics. The argument is that every hegemonic (dominant) discourse (symbolic order) maintains a lack/a deficiency in the symbolic order. “every symbolic order is penetrated by an impossibility that has to be filled or covered-over for it to constitute itself” (Glynos & Howarth, 2007, p. 14). The lack makes pressure on the symbolic order. Indeed, political logics are the subjects’ struggles over recognition of the pressure of the lack and over filling the lack through signifiers. Laclau (2005) argues that in the case of pressure of the lack, a promising empty signifier[1] emerges (what Lacan termed a master signifier), which “signals the introjection of this signifier as ‘enigma-plus-promise’ that accounts for a common identification (yet) a

[1] To Laclau (1996), this empty signifier promises to make possible the fullness of a lack; for example, ‘Justice for All’ is an empty signifier that promises justice for an unjust situation. An empty signifiers promise a meaning, which make a political struggle possible – “subjects are engaged in a search for identity and a struggle over meaning” (Glynos & Howarth, 2007, p. 131).

common identity" (Glynos & Howarth, 2007, p. 130). This is in itself the cause for another series of struggles between subjects over its meaning. The result of these struggles (political logics) is a new symbolic order (social logic) as a series of signifiers and significations, which are constituted around and in relation to an identified lack.

In order to establish and distinguish a new discursive formation, it is necessary to put limitations and boundaries (e.g. regulations) on the discourse. This is possible by means of political logics including a sameness logic that is referred to the subjects' identification with these new boundaries as signifiers in the symbolic order. It makes collective actions and consequently changes possible. Namely, new discourse

operates via "hypergoods" such as god, justice, democracy, or "self-determining freedom" as boundaries which "are constituted, reproduced, and transformed through political identification and collective mobilisation" (Glynos & Howarth, 2007, pp. 72-73). These boundaries or regulations are compulsory for political identification and power struggles or political oppression. To sum up, through political logics such as logic of difference and equivalence, ESDA explains how individual and collective movements and struggles are shaped to make the practices and discourses possible in a society.

4.4 FANTASMATIC LOGICS

Fantasmatic logics can be explained by drawing on a range of different concepts including ideology, different modes of enjoyment, desire, drive, and the explanations of those feelings and emotions, which assist a particular ideology to act normally and consistently in terms of society's beliefs. These concepts will be explained in this section. According to Glynos and Howarth (2007, p. 15):

> *if political logics are most closely associated with the political dimension of social relations, fantasmatic logics are closely linked to the ideological dimension. More precisely, with the logic of fantasy we aim to capture a particularly powerful way in which subjects are rendered complicit in concealing or covering over the radical contingency*[1] *of social relations.*

In fact, fantasmatic logic reveals our emotional investment in that promise that rewards us with more enjoyment (Žižek, 2008a). If social and political logics provide the reasons and explanations for how practices and policies come into being, fantasmatic logics provide "the means to understand why specific practices grip subjects" (Glynos & Howarth, 2007, p. 145). Fantasmatic logics assist social orders and political practices to appear as normal and natural. Accordingly, "the logic of fantasy provides us with the means to talk about the subject's mode of enjoyment, and thus about the way the ideological and ethical dimensions of socio-political reality are foregrounded or backgrounded" (Glynos & Howarth, 2007, p. 132).

As mentioned, the critical-explanatory concepts of ESDA – social, political, and fantasmatic logics – "are explicitly linked to the 'lack' … in any given symbolic order or the radical contingency at the heart of Being" (Glynos & Howarth, 2007, p. 82). Therefore, all other concepts are meaningful in their relation to this ontological lack. Every symbolic order is ontologically penetrated by a lack or an impossibility. In dislocatory moments such as an economic crisis, the symbolic order "is disrupted by an experience that cannot be symbolized within and by the pre-existing means of discursive representation". As explained, this experience or thing that cannot be symbolised – the Real – creates pressure on the symbolic order. The dislocatory event such as an economic crisis re-activates the contingent foundations of a discourse and makes the lack – the lack of the Real – visible.

Based on the Lacanian concepts, at the moment of dislocation, subjects may react to the event in different ways; how they identify themselves explains the subjects' positions towards contingency and it reveals an ethical dimension in our analysis of the subjective level of the phenomenon. In fact, the dislocation reveals a lack of meaning in the dominant hegemonic discourse and when subjects start to make a new meaning to fill the lack, the lack works as a productive operation. As Laclau (Butler et al., 2000) argued, a unique desire can emerge to fill the lack and to create a new discourse to replace the old one. Facing the symptoms/pressures of the Real – lack – as limitation or failures always causes anxiety for us. The important point is recognising the lack as the cause of our anxiety. However, the subject continuously attempts to replace the lack, and the sense of anxiety that it creates, with enjoyment. Lacan analysed and categorised different psyche statuses to explain how subjects react to the lack – a missing signifier – or misrecognise one of the (main) signifiers. The subject may have different behavioural reactions to fill the lack, deal with it, or avoid it and escape the anxiety. In the Lacanian approach, this categorisation of reactions has a close relation with the ethical position of the subject. Here, just desire and drive which are related to the subject of this paper will be explained.

[1] Radical contingency is the logic of impossibility that is located at any given symbolic order (at the heart of being). It makes pressure on the dominant symbolic order to reveal the hidden logics of impossibility of the symbolic order (Glynos & Howarth, 2007).

Based on the Lacanian attitude, some concepts, particularly desire, drive, and jouissance, assist us to interpret and to analyse how the mode of enjoyment can be categorised. In fact, drive and desire refer to two ways in which "the subject arranges her[his] enjoyment (jouissance)" (Dean, 2012, p. 65).

Lacan explained how drive suggests a potential mode of satisfaction, which provides a way between sublimation and idealisation around an object. Referring to Freud, he explained that "idealisation involves an identification of the subject with the object, whereas, sublimation is something quite different" (Evans, 2006[1996], p. 111). Therefore, "the subject here makes himself [sic] the instrument of the Other's jouissance" (Lacan, 2006, p. 697). Lacan (2008) argued that in capitalism, the capitalist subject puts herself/himself as the object-instrument of the Other[1], which is the market. Then, the subject, through the market, deploys the most appropriate knowledge and technology in order to produce the structure of her/his enjoyment. Indeed, the only knowledge which is allowed is what is related to capitalist production and development. Copjec (cited in Olivier, 2011, p. 29) argued that this produced a surplus of enjoyment that cannot be abided by capitalism:

> *the pleasure that the unconscious sets to work accumulating is a surplus pleasure which has no use for material reward or even well-being; it contributes nothing to the subject's inclination towards survival. This less-than-useless surplus pleasure cannot, therefore, enter the calculus of capitalism except to undermine it.*

In addition, Dean (2012) similarly interpreted the relations between capitalism and drive. To Dean, what is important about the mechanism of drive is the way drive provides the subject with another way to enjoy. Unable to satisfy or maintain desire, the subject enjoys in another way.

Drive is not a quest for a fantastic lost object; it's the force loss exerts on the field of desire. Drives don't circulate around a space that was once occupied by an ideal, impossible object. Rather, drive is the sublimation of desire as it turns back in on itself. (Dean, 2012, p. 173)

The difference between desire and drive can explain the reasons behind the rejection of possible contingency in a hegemonic ideology. In fact, we sublimate a desire for a caring society into several drives. We "renounce any project of a global social transformation, and limit ourselves to partial problems to be solved" (Butler et al., 2000, p. 101). Regarding housing policies specifically UGMP, drive mechanism stimulates actors in subjective level to enjoy from speculative activities on land and circulating around the lack of affordable housing.

5 A NEOLIBERAL PRACTICE OF UGMP LOGICS

Based on the literature review of economics, planning and political studies and also published evidence and analyses of the 2008 economic crisis, the logics of a neoliberal housing policy can be summerised as a 'critical theory of neoliberal UGMP'.

As previously explained, the Lacanian ontological lack in symbolic orders, or what ESDA explains as "ontological incompleteness of social objectivities" (Glynos et al., 2012, p. 298), is the core of this research and is the starting point of a planning practice. The practice, which this research focuses on, is related to the lack of housing. This research considers the lack of housing as a fundamental lack because it "becomes evident in moments of dislocation" (Glynos & Howarth, 2007, p. 129), when the dominant discourse fails to supply (affordable) housing to meet the equilibrium point of the market. Under the ideology of neoliberalism, the invisible hand of the market – the general equilibrium theory of the market – as the basis of market logic is allegedly presented as the best solution for the lack of housing. Contemporary neoliberal planning systems often deploy land supply, different housing schemes and UGMPs when facing this lack.

Thus, social logics, in this research, investigate and reveal the economic, social, institutional and financial logics involved in the above-mentioned policies in the two cases. Flows of money from other market sectors to the construction and housing, higher housing demand, and new governmental and official law, orders, and land use plans are enumerated in social logics. According to the analysis, they may change during the analyses of each historical phase within its cases.

At the first phases of most practices, political logics operate primarily in an institution mode. Political logics "serve to establish and facilitate the operation of innovative social logics" (Glynos et al., 2012, p. 300). Regarding neoliberalism, it "was launched as an attack on socialism/communism, as a statecentric project"

[1] According to Žižek (Butler et al., 2000, p. 133), "'the Other' does not designate merely the explicit symbolic rules, regulations, and social interactions," it also indicates the sets of "unwritten 'implicit' rules" which indeed regulate our actions.

(Davies, 2013, p. 1). The defeat of communism and the Soviet Union as the last important barrier to globalisation (Harvey, 2005) set in motion extreme free market practices in the hope of ongoing capital accumulation and infinite growth. Two logics of articulation and equivalence against socialism/communism have worked to make neoliberal reasoning possible globally. Importantly, the logic of equivalence explains how people come together spontaneously and act automatically in a homogeneous way based on shared economic interests in housing markets.

Furthermore, the logic of difference has had a great impact in making neoliberal housing schemes possible; in particular, through the division of organisations into many sectors including innovative institutions and financial sectors. Indeed, the logic of difference has been applied to institutional modes, which it pre-empts, and reserves the practice through the definition of implementations based on 'privatisation', 'individualism', and 'free market' fantasies and rhetorics (Glynos & Howarth, 2007). As explained, the numerous private and semi-private institutions that operate alongside the state are examples of the function of this political logic.

Within this research, fantasmatic logics focus mainly on the psychoanalytical aspects of the most important contradiction in capitalism – that is, the contradiction between use value and exchange value specifically in housing, which according to Harvey (2014), gave rise to the 2008 economic crisis. Based on the Lacanian concepts previously explained, such as drive, desire, these logics attempt to demystify the root cause of the fallacies and unachievable objectives.

6 TWO CASES FROM AUSTRALIA AND IRAN: ANALYSIS AND RESULTS

To apply ESDA, I divided UGMPs into different historical phases within two cases. A policy may experience many changes from the start point through an evolutionary process. The historical phases clarify how different political, fantasmatic, and social logics operate to make possible the changes in terms of the objectives and process of the policy.

Through retroductive and abductive reasoning, this theory explains the logics including visible and hidden or overlooked logics that make possible a neoliberal housing policy in the form of UGMP. This theory will be examined within two cases to reveal their similarities and differences. The research not only attempts to explain and evaluate social and political phenomena, it also commences to create an alternative approach in planning. The logic explanation intrinsically reveals both the possibility and the vulnerability of the practice. Thus, the examination of the theory in each case uncovers the logic of vulnerability – the contingencies in each case – and may open a discussion about an alternative logic for the current mechanism of each case.

A case study in Perth, Western Australia (WA) was investigated to examine the critical theory of the neoliberal UGMP as a practice of planning, which was suggested above. The theory was examined to reveal to what extent and how neoliberal logics – social, political, and fantasmatic – make possible the development of Ellenbrook. In doing so, over four phases, I investigated and provided an in-depth understanding of the existing ontological roles and functions of planning and its actors in the area in relation to the ideology of neoliberalism to achieve the first aim of this research. To analyse the Ellenbrook case study, the process of policy-making and implementation of the policy were divided into four phases: (1) a venture, (2) a rhetoric of no bust only boom, (3) economic slowdown, and (4) policy's outcomes as a re-emerging the lack. Table 1 summarises the role of the social, political, and fantasmatic logics that ontologically constructed Ellenbrook through four phases of urban growth. Therefore, based on the information, explanation, evidence and analysis, the theory of the neoliberal UGMP created in this research is totally credible for the Ellenbrook development.

Table 1 - The social, political, and fantasmatic logics of the Ellenbrook development (Bahmanteymouri, 2016)

	Phase 1 (prior to 1992) A venture	Phase 2 (1992-2008) Boom time	Phase 3 2008-9 Economic slow down	Phase 4 2010-2015 Outcomes
Social logics	➢ An identified lack of affordable housing ➢ Land supply ➢ UGMPs ➢ The Ellenbrook venture through ALEs and privatisations	➢ ALEs ➢ Speculative activities in property ➢ Regulatory approach to the zoning of land ➢ Design projects ➢ Media and advertising ➢ Innovative financial mechanism	➢ Innovative financial mechanism ➢ Re-emphasis of the increasing land supply as the solution to unaffordability ➢ Provision of affordable rental housing ➢ Not-for-profit housing investment providers as a new market solution	➢ Failures in achieving the initial objectives ➢ Following implementation to solve the lack of affordability: o New land release (village 8) o New housing research o New market-led system of partnership

Political logics	➢ Retreat from professionals and reliance on evidence-based policies ➢ Prediction of further activities in the mining sector ➢ Population projection as a result of increasing immigration ➢ Political techno-logic as the economic impacts assessment that warned of increasing prices in 15 years ➢ Privatisations and ALEs	➢ More mining export and immigration ➢ Political-techno logic of time lag between demand and supply ➢ Neoliberal institutional logics	➢ Global economic crisis as a dislocatory event revealed the lack in the market reasoning and resulted in housing market slump, raising unaffordability and homelessness	➢ Warning from some academics about bubble and economic downturn, malfunction of the market and financial system as well as inefficiency of housing schemes and land release policies ➢ Retreating from professionals and academic
Fantasmatic logics	➢ Without mining there can be no civilisation ➢ The fantasy of Australian dream e.g. the ideology of home ownership leads to a better life, security, and success ➢ With the emergence of neoliberal ideology, homeownership shifted from a social project to an economic special project as a source income and investment	➢ No bust, only boom ➢ Over-attachment to the fundamental fantasy of the free market ➢ Operation of the drive mechanism: more revenue from lots sales and more development	➢ Deployment of fantasies through media and advertising to bring money to the market ➢ Attachment to the fundamental fantasy – the free market	➢ Disavowal mechanism: attract more people into market to safely pass the crisis

A case study from Iran was examined to reveal to what extent the neoliberal logics – the social, political, and fantasmatic – made possible the development of Parand as a new urban area within the Tehran metropolitan area. Similarly, the case was divided into four phases, to provide an understanding of the ontological roles and functions of planning and its actants in the area in relation to the ideology of neoliberalism. To perform an ontological investigation of the Parand case study, the process of policy-making and implementation of the policy was divided into four phases: (1) A defined solution, (2) Economic and political liberation, (3) Political and economic crises, (4) Planning returns and the re-emerging lack. Table 2 summarises the role of the social, political, and fantasmatic logics that have ontologically signified and constructed Parand through four phases.

Table 2. The social, political, and fantasmatic logics of the Parand development (Bahmanteymouri, 2016)

	Phase 1 (Prior to 1998) **A solution**	**Phase 2 (Late 1990s to 2005)** **Economic and political liberation**	**Phase 3 (2005-2013)** **Political and economic crises**	**Phase 4 (2013-2015)** **Planning returns**
Social logics	➢ Informal settlements problem as an identified lack of affordable housing ➢ Land supply policies ➢ *New Town Law* as an UGMP ➢ *Parand Development Plan* for middle income groups	➢ Boom time: economic growth ➢ In 2002 an amendment added to the New Town Law: NTDC land sale to finance compulsory services ➢ The highlighted role of PDC	➢ Dissolving the MPOI as the result of the retreat from experts and professionals and planning as a Western approach ➢ The highest oil revenue in the history of Iran ➢ The highest budget allocation for low-income housing policy ➢ Many innovative fiscal and financial policies and institutions	➢ Return to prudent planning and professionals
Political logics	➢ Population projection as the result of increasing internal emigration ➢ An increase in oil revenue ➢ Equivalence logics: Interior census for getting out of the post-war recession and devastation ➢ Political-techno logic of the market equilibrium ➢ Policies based on the evidence from Western countries ➢ Imperialism	➢ Political maturity and a reformist and moderate government ➢ Political-imperialist logics. International forces in Iran and postcolonial policies in the last years of this phase	➢ Return to the anti-Western/American logics ➢ Housing policy as the engine or complementary growth policy ➢ Increasing global sanctions and isolation ➢ Postcolonial policies ➢ Retreating from economists and critical thinking especially from planning	➢ Negotiation with West, hope for people and change of President
Fantasmatic logics	➢ Misrecognition of the lack ➢ Colonialism and imperialism ➢ Anti-Western and anti-American discourses (1979) resulted in retreating from planning	➢ New roles (fantasies) defined for the town in the revision plan to sell the lands and to attract residents in the area ➢ Drive mechanism	➢ HSK as a pro-poor policy ➢ Mechanism of drive and further development ➢ Fantasies to attract capital such as a reshaping Parand to a metropolitan centre	➢ New government struggles to hinder and overcome the colonial impacts

7 CONCLUSION

ESDA is a logic-based approach that has initially been applied in political studies. The method endeavours to consider hidden immeasurable political and psychoanalytical aspects of social phenomena through the three logics of the social, political, and fantasmatic.

The discernment of social logics enables us to characterise practices or regimes by setting out the rules informing the practice and the kinds of entities populating it; political logics allow us to account for their historical emergence and formation by focusing on the conflicts and contestations surrounding their constitution; and fantasmatic logics furnish us with the means to explain the way subjects are gripped or held by a practice or regime of practices (Glynos & Howarth, 2007, p. 213).

The logic approach is a more inclusive and complicated methodology that takes more aspects of a practice of planning into consideration. The method comprises different theories and concepts from different disciplines to cover political-economic and psychoanalytical aspects while it is equipped by specific tools to analyse the efficiency of the technical, mathematical metrics, as well as the linguistic paradigms that can be deployed as instruments of planning and policymaking. In this regard, this methodology was used in this research as an ontological investigation of phenomena to elucidate which logics work together to make a practice possible and how the practice may continue working despite failures and problems. To present an in-depth understanding of the ontological function of planning and its actants, I applied ESDA as a logic-based approach. ESDA, through a discussion of universalism and particularism, provided a method to place an axiom at the core of the research. The axiom accepts neoliberalism as the hegemonic/universal discourse of the planning function. Then, through retroductive reasoning, a critical theory of neoliberal planning was suggested to resolve which social, political, and fantasmatic logics make a practice of neoliberal planning possible. The theory was examined in the two different contexts of Australia and Iran to see to what extent each case is aligned with the neoliberal discourse.

Based on the critical theory of neoliberal housing policy mentioned above, Table 3 summarises the logics that make possible a practice of neoliberal planning. Overall, the outcomes of examining the theory in the two cases showed that both the Ellenbrook and Parand development have been in alignment with the theory at least at some stages.

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ID 1513 | EXPLORING THE ZONING AND LAND USE MISMATCH – AN EX-POST EVALUATION OF A DETAILED PLAN IN A LAND READJUSTMENT AREA IN TAINAN

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ABSTRACT: Over the past twenty years, planning scholars have paid more attention to evaluation research aslocal governments request performance measurements for future decision making, and as citizens andstakeholders request higher accountability and transparency on policy interventions. Planning evaluation cantake place at three different times: ex-ante, on-going, and ex-post evaluation. The latter two receive relativelylittle attention in the literature due to the lack of resources, the norms of organization culture, and the limitedavailability of data and analytical methods. As the legitimacy of planning and its effects has been increasinglyquestioned in Taiwan, this study takes on the challenge of the ex-post evaluation, to evaluate the effect onplan implementation on the ground in Taiwan, using a case study of a detailed plan of a land readjustmentneighborhood in Tainan City to empirically demonstrate the quantitative evidence for planningimplementation. Due to the regulatory planning system in Taiwanese city

areas, this research takes aconformance-based approach on planning implementation evaluation. The mismatch of land use, built arearatio, and floor area ratio will be analyzed quantitatively for its spatial distribution, patterns of concentration, and potential social-economic factors that may be associated with the implementation. An empiricalassessment of the gap between plan and outcome is the foundation to define the success or failure of the planin its relationship to the urban development process. This study is a significant attempt to provide empiricalevidence on the effect of zoning and the ability of a plan to create change in Taiwan. As New York City'sZoning Resolution reaches its first centennial, this study attempts to join the international dialogue onconnecting planning theory, planning practice, and education.

KEYWORDS: zoning, land use, plan implementation, ex-post evaluation, conformance-based, Tainan

1 INTRODUCTION

Over the past twenty years, planning scholars have paid increasing attention to evaluation research as local governments request performance measurements for future decision-making, and as citizens and stakeholders request higher accountability and transparency for policy interventions. While planning scholars have been committed to identifying the links between planning theory and evaluation, developing assessment approaches and methods, and exploring the factors that lead to the failure of planning implementation, many local governments are trapped in the myth of "new plan syndrome" (Calkins, 1979), devoting resources to making new plans rather than assessing the implementation of previous plans. Many inefficient plans were made due to negligence in evaluating the success of earlier planning implementation. Putting efficiency aside, the gaps between reality and plan, as shown by the variances and the zoning activities mismatches, are important lessons for planning scholars to bridge theory and practice.

Zoning regulations in land use control were first implemented beginning almost fifty years ago in Taiwan, but the concept of Floor Area Ratio (FAR) was not implemented until the late 1990s. These zoning regulations were implemented within the detailed plan system (細部計畫) in Taiwan, and used as a tool to restrict the types and intensity of land use to reach a balance of land use and reduce the negative influences of intensive land use on nearby areas. Despite the zoning regulations, the mismatch of land use, such as industrial use in agricultural zone and mixed use in residential zones, is a common phenomenon. Such uses, which were not originally planned that way, not only showed the poor execution and management of the plan, but also the gap between planning goals and practical requirements. This is the consequence of many reckless plans that did not learn any lessons from previous plans.

The current research takes on the task of the ex-post evaluation, to evaluate the effect of plan implementation on the ground in Taiwan, using a case study of a detailed plan for a land readjustment neighborhood in Tainan City. An empirical assessment of the gap between plan and outcome is the foundation to define the success or failure of the plan, particularly in its relationship to the urban development process. This research is a significant attempt to provide empirical evidence for the effect of zoning and the ability of a plan to create change in Taiwan. As New York City's Zoning Resolution reaches its first hundred years of implementation in the United States, while Taiwan is reaching its fiftieth year, this study attempts to join the international dialogue on the reflective thinking of connecting planning theory, planning practice, and education.

2 LITERATURE REVIEW

Planning evaluation is defined as a systematic assessment of plans, planning processes, and outcomes compared with explicit standards or indicators (Laurian et al., 2010). The significance of evaluation in planning has been expressed in much of the literature. The necessity of the exercise is acknowledged despite its complexity and difficulty. Planning evaluation is believed to contribute to a better planning practice and is important for numerous reasons, including proving legitimacy, improving decision-making, and fostering continuous learning (Oliveira & Pinho, 2010; Guyadeen & Seasons, 2015). The assessment of planning evaluation can be done at three different times: ex-ante evaluation, on-going evaluation, and ex-post evaluation. The latter two have received relatively little attention in the literature due to the lack of resources, the norms of organization culture, and the limited availability of data and analytical methods. Oliveira and Pinho (2010) believed that the exploration of these two dimensions is one of the main issues for future research to focus on.

The approaches to ex-post planning evaluation can be generally assorted into two types: performance-based approach and conformance-based. Both are used to assess the success of the implementation of the plan, but with different orientations. The conformance-based approach considers whether the outcomes adhere to plan policies and objectives, which is a rational approach; the performance-based approach considers if the plan was consulted irrespective of outcomes, which is a communicative approach (Guyadeen & Seasons, 2015). These approaches are based on the different sets of assumptions about the function of plans (Laurian et al., 2010). In other words, a conformance approach is needed if a plan is meant to be implemented; otherwise, the assessment should take a performance approach if a plan aims to frame lower order plans and subsequent implementation decisions (Guyadeen and Seasons, 2015).

Owing to the scarcity of methods in evaluation, some researchers attempted to construct the evaluation structure in on-going and ex-post evaluation practices. Among various efforts, Talen (1996, 2010) in particular, had called for developing both empirical and quantitative evaluation techniques for assessing how successfully the plans were implemented, and made an effort to outline various assessment methods that delineate how one particular aspect of plans—for example, the allocation of public facilities—can be evaluated. Furthermore, Talen (2016) in her most recent empirical conformance-based research has investigated the disconnection between zoning and land use at the parcel level. Her spatial approach using GIS delineates the spatial distributions of land use and zoning mismatches, shows the existence of land use concentrations, and identifies possible factors that contribute to the disconformity.

The legitimacy of planning and its effects on the control of land use has also increasingly been questioned in Taiwan. Lai and Chen (2006) had indicated the evidence by which the zoning regulations have a decisive influence on the distribution of land use. The process of exactly how the zoning regulations impact on the changing of land use has also been discussed. Zhang (2005) tried to build a comprehensive framework of understanding the internal and external factors of the land use change. Tsai (2009) built a model of land use changing over time to explore the factors by which zoning affected that change. Some other factors that can influence the land use distribution had also been discussed in other studies. Using GIS tools, Hsu (2006) discovered some physical factors that can affect the distribution pattern within spatial autocorrelation and spatial regression analysis. Most planning evaluation has aimed at developing ex-ante evaluation systems. The potential factors that contribute to land use occurrence and land use change, as well as the analytical tools used to measure the distribution pattern of land use, have been discussed by planning researchers. However, similar to the planning evaluation literature elsewhere in the world, there is little discussion on the ex-post evaluation, judging how successfully the plan was implemented by assessing planning outcomes. Regardless, by law the land use plan needs to be updated every five years, and no scholarly research in Taiwan has paid enough attention toward assessing the plan implementation evaluation to help planning practitioners to make informed decisions. Such findings motivate the authors to take on the empirical study of disconformity between land use and zoning in Taiwan.

3 METHODOLOGY

The design of a methodology to assess planning evaluation must be clearly linked with planning evaluation theory (Oliveira & Pinho, 2010). Due to the nature of planning law in Taiwan, we took a conformance-based approach on planning implementation evaluation in order to empirically demonstrate the quantitative evidence of planning implementation. In this study, we took a similar approach as Talen (2016) to map and measure the extent of mismatched land use using descriptive statistics and spatial analytical methods. As Talen (2016) suggested, there are four overlapping dimensions of the zoning-land use disconnect that can be considered: temporal, legal, aspirational, and social-economic dimensions. By taking a land readjustment area (a type of planned neighborhood in Taiwan) as the empirical site, we exclude the consideration of the temporal dimension. That is, the disconformity of land use cannot be grandfathered in, because the developments have all happened after the plan implementation. The major consideration and discussion among the zoning-land use gap in this research will be in the legal dimension and the aspirational dimension. In legal terms, the legitimacy of the non-conforming use will be examined according to the practical regulations. For the aspirational aspect, land use goals will be criticized if the mismatch use goes against the goals of the original plan.

To address the inconsistency of land use and zoning first, we obtained three sources of spatial data: land use/land cover, zoning, and parcel data. The land cover satellite imagery and zoning map, last updated in 2012, is made available from the Urban and Rural Development Branch of Construction and Planning Agency of the Ministry of the Interior. The parcel data comes from the Department of Land Administration of the Ministry of the Interior. All the data are converted into ArcGIS in order to overlay with the parcel layer and to be analyzed at the parcel level. Site visits and field observations to document the individual land use in the study area were made between February to April 2017, to verify and update the land use/land cover data. In the following analysis, we employed spatial analysis tools to analyze the distribution pattern of land use and demonstrate the clusters of mismatched use. Basic statistic methods are used to describe the distribution of the on-the-ground land use. To further evaluate the planning outcomes, a spatial analysis tool in GIS was used to quantify the extent of the mismatch use. The original land use shapefile were converted into raster data to characterize the clusters of different types of land use by spatial analyst. Non-conforming use and the extent of clustering in specific categories of land use were identified. Some of potential factors that contribute to the phenomenon of land use/zoning mismatch will be discussed at the end of the paper.

4 EMPIRICAL ANALYSIS

We took a detailed plan of a land readjustment neighborhood in Tainan City as the empirical area to examine the implementation of the detailed land use plan of Taiwan. Huwuiliao land readjustment neighborhood was the 9th readjustment area in Tainan City, where the cadastral patterns of land have been replotted; streets, public facilities, and new subdivisions were built to make the area suitable for new development. Before the replotting and subdivision in 1984, this was an undeveloped area before the execution of the detailed plan, making it ideal to review and measure the planning implementation directly. We excluded the area of east of the highway from this study in order to focus on the mismatch in the area that was zoned for residential use.

The Huwuiliao area had several transformations in its planning history despite its current plan as a low-density residential area. It was first planned for industrial use in 1979, primarily due to its proximity to the highway. However, its undulating terrain proved unsuitable for industry development. The area was rezoned both in 1984 and 1992. With only small portion designated as a commercial zone, the area was mostly zoned for low-density residential to target the high-end single family housing market that was rare in this portion of the city. There are three types of low-density residential zones in Huwuiliao. The first type (LR-1) only allows for residential use, LR-2 allows for certain categories of retail/commercial use for neighborhood services delivery, and LR-3 allows all categories of commercial use except for industry. In the detailed plan (see Figure 1), we can see that those blocks zoned for LR-1 are located either at the inner blocks or the periphery, surrounded by LR-2 and LR-3. The land use layout reveals the intention of the plan to keep the inner parts of the neighborhood for a high-end living environment, and place non-residential activities further outside to maintain the quality of life.

Despite the current zoning categories, “zoning with development condition” has been added as an amendment to reflect the market conditions in 2012. Those blocks zoned with condition of development can be altered to another zoning category by conditions, which means that developers could obtain upzoning for those parcels. By paying a linkage fee, developers can apply for a modification of zoning; for example, making LR-2 upzoned to LR-3, or LR-3 to commercial. Owing to the flexibility of the regulation of the updated detailed plan, we now examine the zoning and land use mismatch in two aspects. One is the mismatch of usage types in legal terms, and the other is the mismatch of using categories that may conflict with the original purpose of creating a high-end residential environment.

Figure 1 -Zoning plan in the case study area Huwuiliao

4.1 DISTRIBUTION OF MISMATCHED USE

To identify the mismatched use, we first used the land use/land cover set to do a preliminary examination on the scale of mismatched land use. We overlaid the land cover data with parcel dataset polygons, then converted the polygons into points to delineate the land use activities at the most detailed level. To distinguish whether the use of land conformed or not with the zoning, three boarder categories of land use were made: residential use, unused, and other use (see Figure 2). In total area of residential zones of in the land use plan is 80.5 hectare. In reality, only 49.5 hectares of land cover, which account for 61.6% of the area, are for residential used. Other 31 hectares of area are covered by non-residential use, including unused area of 17.6 hectares (take over 21.8% of lands) and other land use of 13.4 hectares (take over 16.6% of lands). Table 1 shows the counts of each type of land use activity. Not surprisingly, residential took over 82% of the development activities in the study area. The amount of other use, counted as 534 land covers, takes over 9.21 percent of the total amount of land cover. The unused category, — mostly vacant lots—comprised the rest of the land cover in the area.

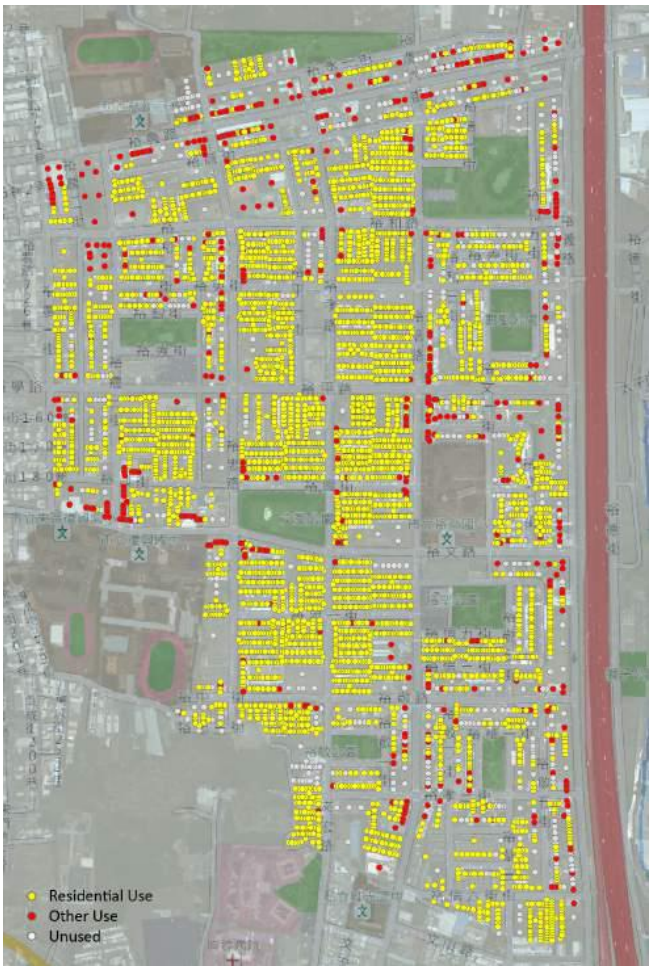

Figure 2 - Location of non-residential use in residential zones

Types of Use	Number	Percentage
Residential Use	4,753	81.93%
Other Use	534	9.21%
Unused	514	8.86%
Total	5,801	-

Table 1 - The number of developments under each type of land use

4.2 CLUSTER

To identify the cluster more clearly without eliminating the spatial feature of the distribution, weintersected the data to grids and set each cell size at 30 square meters. The decision on the grid size was madeby looking at the average block size in the area. Figure 3 shows the scope of the disconformity, including itsextent and spatial clustering in the study area. Around 71 percent of the grids conformed, but almost 13percent of them did not. The share proportion of non-conformed grids are between the interval of 0.00 to0.25 percent and 0.75 to 1.00 percent (see Table 2). It shows that whether or not the use conformed, therewas a tendency to cluster in different types of uses. The aggregation of non-residential land use tended to belocated near main roads, intersections, and the public facilities. Such a phenomenon could be found in thedemonstration of the share of other land use in residential zones (see Figure 3).

Figure 3 - Percentage of non-residential use in the land cover grid analysis (left)
Figure 4 - Frequency of mismatched use categories in residential zones (right)

	Other Use Proportion	Number	Percentage
Conformed	0.00	762	71.02%
Not Conformed	0.00-0.25	114	10.62%
	0.25-0.50	79	7.36%
	0.50-0.75	21	1.96%
	0.75-1.00	97	9.04%
Total		1,073	-

Table 2 - Other use proportion in the grid analysis

The “other use” category can be further subdivided into different sub-categories. By examining themost frequently used in each grid, the different patterns of spatial distribution in various categories of usesappeared (see Figure 4). In Table 3, which shows the count of grids in each category of uses, we can seewhich kind of uses were most frequent. Comparing both the number of land use parcels and the frequency,the extent of clustering in each sub-category can be learned. Office/company and educational use are thehighest concentrated in the sub-categories among “other use”. The other sub-categories, like food, generalretail, and neighborhood services, have more activities by parcel analyses but lower frequency in grid analyses;this shows their relatively even distribution in the community. By contrast, those sub-categories of use withlower count in parcels but higher frequency in grid tend to be aggregated and usually are distributed towardspecific locations (see Table 3).

Categories	Count		Frequency	
	Number of Parcels	Proportion	Number of Grids	Proportion
Residential Use	4,753	(81.9%)	777	(72.4%)
Unused	514	(8.9%)	162	(15.1%)
Office and Company	106	(1.8%)	22	(2.1%)
Educational	85	(1.5%)	25	(2.3%)
Food	74	(1.3%)	13	(1.2%)
General Retail	63	(1.1%)	9	(0.8%)
Industrial Use	58	(1.0%)	19	(1.8%)
Machine and Auto Maintenance	43	(0.7%)	13	(1.2%)
Furniture Retail and Wholesale	31	(0.5%)	10	(0.9%)
Religious Use	24	(0.4%)	10	(0.9%)
Neighborhood Services	22	(0.4%)	1	(0.1%)
Hotel Industry	14	(0.2%)	10	(0.9%)
Medical Use	14	(0.2%)	2	(0.2%)
Total	5,801	-	1,073	-

Table 3 - The frequency of land use category in the grid analysis

5 DISCUSSION AND CONCLUSION

In legal terms, those non-residential uses are not allowed in LR-1 zones, and no industry is allowed inany residential zones. Such non-conforming use could have happened due to the consequence of conditionaldevelopment, or the lack of law enforcement. The condition of development provides developers aconvenient way to upzone the original zoning to a higher density zoning. As a result, not only commercialretails and higher-density residential could be developed in LR-1 zones, but also all commerce and industrycould be permitted in LR-2 and LR-3 zones. Such amendments on the conditional development in thedetailed plan updates could be the result of developers' pressure, but the original purpose of making thisneighborhood a high-quality, low-density environment could be altered as the result of the zoning relaxationvia conditional development.Regarding the aspirational dimension, the actual development conflicts with the stated purpose ofbuilding a high-quality residential environment. Those industrial uses, as well as some others like machine andauto maintenance, seem to be legal. However, resulting pollution could be a nuisance to the quality of life inthe residential environment. Yet to what extent rezoning may jeopardize the quality of life in the study arearequires further study. As the urban theorist Jane Jacobs advocated, these service provisions may add to thediversity of the street life in the neighborhood. It will be critical to identify the factors behind theamendments in each detailed plan update, so that researchers and practitioners can understand the dynamicsof plan implementation as it relates to the market, politics, property rights, local culture, and planningpractices.In relation to Talen's (2016) research, we see similar results. The mismatched uses are spatially clusteredinstead of being random. In this empirical assessment, we have identified the patterns of the gap between theplan and outcomes. Our future research will continue to investigate the case study area through planningdocument analyses and interviews with the government officials, planners, and real estate developers.Understanding the precise reasons for the gap between the plan and the outcome is beyond the scope of thisassessment, but it directs future research to understand the dialectic process between plan and social reality.

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ID 1540 | ON WHAT GROUND STANDS STRATEGIC PLANNING?

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ABSTRACT: We live today in a world where there is enlarged freedom for many of us to invent and reinvent who we are. This freedom, in late capitalist modernity, has also come at a cost. The freedom to invent and reinvent is grounded on an expectation that we can renegotiate the fundamental threads of what we are, and what we are known as. This freedom has spread beyond the individual to our institutions, political parties, and of course public persons. No longer is it possible to say definitively what or who someone is, nor is it possible to hold them to account for who or what they said they are or would be. Such holding to account would be tantamount to a reduction of their liberty. This paper explores what impact this lack of saying, and lack of accountability for what was said has on strategic plans. Starting from Hannah Arendt's discussion of the loss of the public realm, we explore the consequences for strategic planning of this capacity to reinvent ourselves and consider how in this pluralist and individualised world a collectively arrived at vision of the future might be grounded and survive beyond the next saying of ourselves.

KEYWORDS: Heidegger, Arendt, Ontology of planner

1 INTRODUCTION

A strategic plan for a city or metropolitan region is a spatial expression of the public will which endures over time. Albrechts' (2006: 1152) definition serves well: 'Strategic spatial panning is a transformative and integrative, (preferably) public-sector-led, socio-spatial process through which a vision, coherent actions, and means for implementation are produced that shape and frame what a place is and what it might become'. Strategic planning: the making of visions, aligning policies to planned outcomes and the taking of actions in accordance with those visions; is a critical part of the project of planning. It is where the 'will to improve' (Li, 2007) in planning is most clearly situated. But more fundamentally it is the place where

communities can imagine that they have a say over what future they produce, and the opportunity to produce it.

Despite its importance, or perhaps because of it, in many places strategic planning has become deeply politicised, with plans being changed regularly in accordance with the current political climate, the latest technological developments, and the problems of the day. An example would be in the state of Victoria, Australia where since the release of the strategic plan Melbourne 2030 in 2002, there have been two subsequent major revisions (in 2008, and 2014). Under these conditions of constant updating and change there is little possibility for the material realisation of one vision or another. Whatever stable ground strategic plans of the past found (as they appear to have in places like Copenhagen), it seems to have been lost. It would be easy to conclude that nowadays strategic plans are more about keeping the guess about what will happen accurate or up to date, and less about creating some kind of realised future. If that is true then the real purpose of strategic planning has indeed been lost.

This paper however argues that although it is true that strategic planning has in some sense lost its footing, there is a possibility to regain it. Although this loss of footing may have been driven at times by a kind of politics subscribing to neo-liberal ideology (e.g. of Hayek, 1960), it began much earlier and involves an ontological shift of a kind to which Hannah Arendt refers. ((Arendt, 1998). Arendt posits that the public realm has been replaced by a social world. In the social world, it is necessary to 'say oneself' constantly. Unlike the public realm this saying doesn't stick. There is no-one to hold one to account for what was said. Although it remains true that when what is said, and what is done are in constant alignment, we can still become known as someone, the only one we are accountable to for that appears to be ourselves.

Strategic planning is about transformation, and we argue that fundamentally the transformation is one of who a community is being. Transformation in being comes about through authentic dialogue, combined with changes to the materiality of the world, which are achieved in accordance with particular rationalities, that together embed transformed practices or ways of living (Low & Sturup, 2017). This kind of transformation requires not only authentic consultation to develop the strategic plan, but actual implementation of material changes to give the plan effect. It also requires that the material changes embed the rationalities of the strategic plan, in other words the reason for doing it needs to be delivered, not just the object. This takes time. The conversation about why something is being done needs to be maintained, with integrity, throughout the lifecycle of the thing delivered. Without the public realm it is much more difficult to maintain these conversations. We believe it is possible to create sufficient ground for this kind of transformation, but it will take a new kind of advocacy.

The next section of this paper reviews the philosophical discussions within which our thinking about this problem are placed. We begin with a discussion on the relationship between different kinds of being in Heidegger's thought and the concept of fabrication of the world in Arendt's. In this discussion we consider how these ideas inform the notion of strategic planning as transformation, and particularly how what is thus required includes fabrication of both rationalities, and their material expression in order to embed the planned future into structure of our lives. Our discussion then turns to consideration of Arendt's theory about the destruction of the fabricated world and the public realm, and its replacement with the 'social'. The following sections will consider some evidence for both the need for transformation as the basis for successful strategic planning, and evidence for the loss of the public realm. We will conclude the paper with a discussion of what this means for strategic planning.

2 DIFFERENT KINDS OF BEING AND THE FABRICATION OF THE WORLD

What something is and the way something occurs are two sides of the same coin. They happen together, if something ceases to be it cannot occur, if something doesn't occur as that something it is not that something. This is both completely obvious and entirely not obvious. We can understand the first part easily enough, but the second part goes against our idea (and indeed our experience) that we can be something different than how we apparently occur. For example we can be a 35 year old, female, neurologist, acknowledged by our peers as at top of our field, but occur for great aunt Mildred as 'the little girl that likes honey oat cookies'. The resolution to this apparent contradiction can be found in the truth that what we 'are' isn't fixed. Thus whatever we may be in our own occurring, we are also 'the little girl that likes honey oat cookies', and indeed it would not be unusual to find ourselves in the presence of great aunt

Mildred with a craving for, or indeed eating, honey oat cookies. Critically this demonstrates that being is multiple, and that does not in any way reduce the 'reality' of what something is.

Heidegger positions himself as the philosopher of the 'everyday' - one who looks at the everyday experience, from an everyday perspective, which is a phenomenological perspective (see for example Heidegger, 1962: 163-168). In his work we can observe three different types of being (relationships between what something is and how it occurs). He notices that much of what we experience and on which we confer being is fabricated for our use. To see this we only have to name the entities we encounter, houses, plans, organisations, strategies and so forth, but also all the tools we use and the objects around us, hammers, books, paper, laptops. The mode of being of these items is what Heidegger terms 'ready-to-hand' (zuhanden); they have their being as useful for us (Heidegger, 1962: 98).

Another sort of being Heidegger reserves for those objects to which we have not attributed a being for our use. Such being he terms 'present-at-hand' (vorhanden, Heidegger, 1962: 103). These present-at-hand entities, or objects, are thing-like. Entities that are ready-to-hand typically become thing-like when they are broken, as with a broken hammer which devolves to pieces of wood and metal (see Mulhall, 2013: 58). Thus it is not that some things are 'ready-to-hand' and others are 'present-at-hand' rather a particular thing may be occurring/and thus being 'ready-to-hand' at one moment but could at another moment be occurring/and thus being 'present-at hand'. Many planners will understand the truth of this, because they actively alter the occurring of things all the time. The approach of the scientific gaze renders things 'thing-like' (objects subject to objective analysis), under this gaze things occur as 'objects' and we become a thing that is observing them.

Finally, in turning to the matter of the relationship of how those that are aware of being (Dasein – the one that is there) are to others of its kind, Heidegger insists that we must not make the mistake of starting from an isolated 'I'. To characterise this relationship Heidegger introduces another term marking a mode of being, Being-with (Heidegger, 1962: 154, 157). Being-with is the kind of being we share collectively with those which occur as also creating an occurring world: our fellow Daseins. Collectively those which create an occurring world come to an agreement about that which 'is' sufficient to allow society to function. This collective, agreed 'is-ness' is the always already world, the creation of das Man (the 'they')[1]. The market is perhaps now its most familiar manifestation, an occurring world in which we find ourselves dissolved, being without intent. Entities which occur as capable of being-with are provided room to present themselves 'as they are', or at least as they would occur for themselves.

In Heidegger's terms, then, the being of the world, or the is-ness of the world, is given by its occuring. Being occurs as ready-to-hand, present-at-hand, or being-with. For example something like the environment can occur as present to hand (Vorhandene) when it occurs as 'that which we are in', or as ready to hand (Zuhandene) when we search the Amazon for cancer curing plants, or able to create its own occurring world (to be-with) when an environmentalist experiences it as itself. However we are also given being by the occurring of the world. When the environment is present to hand so to are we, when it is an object of exploitation so are we, when it can create it is experienced as itself, so to are we. That is to say what occurs (the occurring of everything) is perfect correlation with the being to which it occurs. Who we are being provides a world view from which what it is logical, necessary or possible to do is derived, and with which our actions are in perfect accord. When we learn to distinguish the world in particular configurations, they are said to have 'become' something, for example a planner.

Arendt (Arendt, 1998) posits that, at least in the past, the world could be understood as fabricated by humans (the one that is there). In this discussion she is pointing to the phenomena that Heidegger observed, albeit from only one direction – the creation of the world, rather than including in the world who we are being. In her view fabrication is the act of bringing into being an object which is already envisaged, an object which is designed to hold an envisagement of the world through its existence (Arendt, 1958). Such objects include tables, institutions, and persons of historical significance. Arendt considers this fabrication critical to the human condition, because it is these fabrications which hold us apart, make us distinct, or distinctive, giving us distinctive differences. Not only giving us identity (when we fabricate

[1] In German 'man' is the neuter 'one' as in what 'one thinks' – man glaubt, but when capitalised as Man by Heidegger it usually translated as 'the they'.

ourselves) but also giving us a way to see the world which is shared, and embedded enough so we can function without having to invent everything all the time.

Taken this way, Arendt could be taken to be talking about the process through which humans in a society create shared understandings of what things are. That if we are viewing a table as ready to hand, there is a generalised understanding of what that means one can do. For example sit at it, put things on top of it, not stand on it. Alternatively if we are viewing a table as present at hand, then it is an object to be moved around, not bumped into, judged by its aesthetic value.

Like Heidegger, Arendt suggests that these generalised understandings are reached through the development of a 'conversation of the they', a thrown way of being. This they-ness to use Heidegger's term is the way everyone understands something. It is the automatic mode of being, into which all inauthentic beings can be pulled (for more on this see (Low & Sturup, 2017)), but it can be transformed if a person does the work of thinking through for themselves what being to attribute to something (and thus themselves). We are arguing that an effective strategic plan generates a way of being in the world which is held in the automatic interpretations that arise in relation to the fabricated world. It becomes part of the thrown way of being. Because in that way what there is to do is automatic. Each person doesn't have to generate the being over and over.

Importantly Arendt suggested that the fabricated world needs a ground on which to be maintained. She suggested that in the past there has been a public realm in which humans can fabricate themselves as public beings, beings which they come to be known as, and have a kind of historical longevity. This public realm is also the space in which humans come to create and maintain the distinction between one another.

3 THE LOSS OF THE PUBLIC REALM

The public realm was the place where a person could fabricate themselves in some sort of permanent way. The promise of the public realm was posterity, it provided the space whereby one could speak oneself into existence, and be held to account for that speaking. Acting and speaking in the public realm needed to be in alignment, so that the observed would be interpreted as who they were speaking themselves to be. Arendt's (1958) proposal is that the public realm has been replaced with a 'social' world. The social world is one that allows complete and ongoing creation of the self, without any prior envisaging of who we might be. It is a world which displaces any relationship between the social self and the fabricated world in which human society functions and is maintained with any longevity. As a result we obtain freedom to construct and reconstruct ourselves, but we also lose the capacity to maintain that self except in the moment of our saying it. The world no longer maintains the identity we constructed for ourselves. If we wish to maintain an identity without the effort of saying it, our only choice is to choose an acceptable label, so that we end up feeling as though we were constructed by something other than ourselves.

In losing the public realm we have lost the space that held our self-constructions beyond the moment of our speaking them. Accordingly we have also lost the space that held our social-constructions beyond the moment of our saying them. The social self is constructed, but in such a way that any accountability or authenticity for that self lies at a place so removed from us that we might as well be something external to ourselves or something that we cannot control (the other). Although some argue that the lynchpin of liberal democracy, namely the nation state and its democratic forums, which provide a means for the formation of the long term public interest remain intact (Streeck, 2014: 40), it seems increasingly the case that they are becoming empty shells, unfilled by any who is willing to speak themselves into existence, and none that would hear them even if they did.

4 EVIDENCE OF THE PROBLEM

Arendt (1958: 55) argues that the public realm has been lost. She foresaw consequences which we increasingly see appearing. 'Only the existence of a public realm and the world's subsequent transformation into a community of things which gathers men together and relates them to each other depends entirely on permanence. If the world is to contain a public space, it cannot be erected for one

generation and planned for the living only; it must transcend the life-span of mortal men'. Individualization and privatization results in a condition of 'worldlessness'.

To live together in the world means essentially that a world of things is between those who have it in common, as a table is located between those who sit around it; the world, like every in-between, relates and separates men at the same time. The public realm, as the common world, gathers us together and yet prevents our falling over each other, so to speak. What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, but the fact that the world between them has lost its power to gather them together, to relate and to separate them (Arendt, 1958: 43-44).same time. The public realm, as the common world, gathers us together and yet prevents our falling over each other, so to speak. What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, but the fact that the world between them has lost its power to gather them together, to relate and to separate them (Arendt, 1958: 43-44).same time. The public realm, as the common world, gathers us together and yet prevents our falling over each other, so to speak. What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, but the fact that the world between them has lost its power to gather them together, to relate and to separate them (Arendt, 1958: 43-44).

These things that Arendt is referring to were fabricated, created by humans with the purpose of holding certain world views. Wagner (2012: 65) identifies such fabrications that emphasised, variously, structure and social class, system and function, culture and nation, and procedure, law and state presenting 'objectivist pictures of society that rested on the idea of strong ties between human beings guaranteeing coherence and a stable socio-political order'. Beginning in the late 1960s, he argues, the cogent critique of each one of these pictures made any idea of a stable collective order increasingly untenable, so that 'the emergence and assertion of the individual as a being without pre-determined strong connections to or within collectivities has moved to the centre of sociological interest'. Thus, from a sociological perspective, Wagner is reflecting on the same tendency that Arendt observed earlier from a political-philosophical perspective, the replacement of a public realm with a social one.

We can see the results today in flash mob behaviour where collective expression – be it condemnation, approbation or just assembly – comes and goes in a flash beyond which little endures. In the 'social' world gone is the 'communistic fiction' (in Arendt's term) that there is a natural harmony of interests in society, whether that be expressed through the 'workers' political party or through the invisible hand of the market – or, one might add, through some sort of pluralistic process (Arendt, 1958: 43-44).

Under these circumstances, the worldhood of planning has 'splintered' (Graham and Marvin, 2001) there is no ground upon which to create a collective vision, and nothing to 'hold' it in existence. Planners are thrown back on their own resources of interpretation and judgement to create a vision even while acknowledging its illegitimacy. The alternative is to attempt to create an expression of collective need and the long term public welfare, even while at the same time there seems no solid ground upon which to maintain this collective understanding. In the social world each person retains the right to their own world view, and to change that construction on a daily or hourly basis, even our mode of construction acknowledges this as tweeting has replaced even the news sound bite as the preferred vehicle for our construction. In such conditions, agreement to a collective world view - let alone one that extends into a time frame relevant to planning horizons - seems impossible.

While it seems as though we have lost the public realm, and that there is thus no ground upon which to build strategic planning, there are places in the world which seem to have managed to plant and grow fruit from their strategic plans. One such place is Copenhagen where the strategic five finger plan of 1947 seems to have survived various iterations. We observe that it survives through a deeply embedded set of rationalities which manifest themselves both in the statements of people doing planning, and the understanding of fabrications being undertaken. For example when Copenhagen sought to expand the urban fabric into Ørestad it was understood that a rail line would be required because 'no-one would develop high density living without access to a railway'. Consequently the Copenhagen metro was built. This logic continues in the development of the outer ring tram project, and anticipated extensions of the metro to Nordhavn.

There are many such examples, such as London's seemingly sacrosanct 'green belt'(Thomas, 1970), or the Randstad in the Netherlands (Salet, Bertolini, & Giezen, 2013), although few have been analysed in terms of the position held in this article. Although the foundations of these strategic principles may have

been laid at a time when the public realm gave them stability, what holds them in place now? Perhaps they too are under increasing threat, remaining only because they are deeply embedded unconsciousness. Perhaps their guardians understand this at some level and thus resist subjecting them to conscious consideration. More likely in our view, there is some insight to be gained from the way that these strategic principles are manifest both in the (un)conscious use of rationalies, the types of knowledge brought to bear on them, and in the built fabric of cities.

5 DISCUSSION

Built into the definition of strategic planning is the notion of transformation, or put another way, the idea of an authentic construction of something. We have shown that it is in the fabrication of things, and their associated occurring that we construct what is and what we are. Whatever might be said today about the prescriptions of Howard (1946), Le Corbusier (1971), Geddes (1968), Jacobs (1963) and others of their times, they each spoke themselves and a new world into existence. This is the essential importance of strategic planning, it is a fabrication that reminds us of our capacity to invent the future, and indeed the world.

Our capacity to invent the world arises in being-with. When others are present this implies the need to develop a socially constructed understanding of what is there. This agreed world, is what Heidegger called 'the they', the world that we by default find ourselves in if we do not invent who we are. The thrown world is very like the 'social' world that Arendt refers to. The one in which, rather than distinguishing ourselves within, we merge into. 'absorption in "the they" means that it is dominated by the way things are publicly interpreted' (Heidegger, 1962: 264). We are always immersed in an ocean of public communication in which 'proximally and for the most part Dasein is absorbed in the "they" and is mastered by it' (Heidegger, 1962: 210). This idea approximates that of 'stories' or 'storylines' about which much has been written in the planning literature (Hajer, 1995; Sandercock, 2003). To find truth in these stories requires that we are reminded that they are stories and that we are the story teller.

But being-with is the kind of being that creates choice in how the world is constructed. Heidegger (1962: 165) suggests a possibility for authenticity, 'a clearing away of concealments and obscurities' which makes possible a self-invention. Taken together with Arendt's ideas of fabrication – the embedding of notions of what something is within the material things this suggests that strategic planning will be most effective when it combines the social construction of what is desired (perhaps through consultative planning), with appropriate constructions in our cities. As we have noted above, this fabrication needs time. Time in which the rationalities for what we are doing can become embedded in that which we create, what being it is granted and how it is then used.

We have seen that the social realm (for all the promise of freedom that it fulfils) is not very good at holding things constant. What then are our options? Can we renew the public realm or can we create a new kind of public realm that consciously holds particular 'sayings' of the world to account. There are of course good reasons to have reduced the public realm. Doing so has broken apart old conceptions of many labels (woman, man, landholder, lord, etc) and given us freedom to create our own conceptions of the groups to which we belong – indeed of what we are. But we have lost a significant level of stability in the process. Could we reinvent that stability for just some 'authentically' generated social realities? Doing so would require a new level of engagement by those who generate the plan. Not only would they be required to be consulted, but they would need to become the 'owners' of the plan, the custodians of the rationality, the logic behind what will be done. Like the one that holds the board in place while the other hammers it into place, those that agitate for something would need to hold it steady until it will stand up on its own. This would require a new set of skills, and a longevity for groups that protest.

6 CONCLUSION

In this paper we have demonstrated the occurring world is based on the three types of being; being present at hand, being ready to hand and being with. We have seen that strategic plans should be created in the plurality of beings which have the capacity to generate an occurring world. Those with whom it is possible to be with. We have seen that this being with can result in a social world, one in which it is

possible to merge and lose oneself. But we have also seen that we retain the capacity for authenticity. We can create an occurring world which aligns our experience and in which we can express some generated self. This fabrication of ourselves requires no more nor less than our willingness to speak it, and a set of people to listen to it. This can be done in a social world, indeed we are freer to do so than ever, because the social world does not hold us to account. Tomorrow we can say ourselves anew and who would gainsay us? If we are no more than who we say we are, why not change that as we would?

The public realm, the realm we have lost, is the place where what we say develops an existence of its own. In losing it we have lost the ability to fabricate a world that lasts beyond the saying of it. The institutions which used to hold the world in some sense fixed, that mediated which sayings would last and which would not, have disappeared. Nothing lasts, all is mutable, 'all that is solid melts into air' (Berman 1982). The lack of a public realm expands the complexity of planning, because the public realm is what provides the ground for a lasting collective vision. Just as we seem on the edge of solving the question of how to create a valid, pluralist vision, the ground in which such a vision could be planted and expected to grow has blown away like so much dust. The question then becomes who will hold the vision while it is fabricated into the entities occurring as present to hand, and ready to hand. Who will generate the stories of what is present to hand and what is ready to hand that will fix a certain occurring into what is fabricated? Since we have lost the institutions of nation states, and liberal democracy, we can no longer rely on the old structures of the public realm. Perhaps instead coalitions brought into existence for the purpose of creating a vision, must also take up the burden of carrying that vision, and ensuring it is embedded in an occurring world that lasts beyond one human saying.

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ID 1543 | SHAPING SPACES OF INTERACTION FOR SUSTAINABILITY TRANSITIONS

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1 INTRODUCTION

Cities are complex environments where different actors and stakeholders co-exist and learn how tolive together. Within these complex environments, different types of citizens initiatives are arising that weconsider to be important starting points for achieving urban transformations to sustainability (Niki Frantzeskakiet al., 2016). These kind of initiatives, typically enacted by social entrepreneurs, civic volunteers, local activists,freerange civil servants etc., are challenging the traditional ways of city making through which urban services,spaces and buildings are usually developed through policy and planning. They seem to stimulate the rise ofseveral new types of interactions between citizens, entrepreneurs and freerange civil servants but so far arehardly facilitated and linked to urban planning in a systematic way. Such interactions can be considered astransformative social innovations (Avelino & Wittmayer, 2016) that redefine the relations and interactionsbetween actors to realize sustainable alternatives contributing to wider transitions. These transformativeinitiatives can be nurtured, developed, replicated, or complemented in protected environments and are oftenseen as part of a broader transition movement (Gorissen, Vrancken, & Manshoven, 2016). Thosetransformative initiatives are triggering the rise of spaces for the interaction between different stakeholders inurban environment, which is a key element of particpatiory city making. This paper aims to explore the role ofplanning in participatory city making. It connects complexity in planning and transition theory in order todescribe the space of the interaction between the different urban stakeholders.

2 TRANSITIONS IN CITY MAKING

Participation and interaction of different actors and stakeholders has always been a hot topic in planning research. The discussions about the necessity to include more actors in the planning process resulted in governance replacing government in planning discourses and practices. Following different paradigmsemerged; such as traditional public administration, new public management and networked governance(Hartley, 2005). Consequently, new approaches were developed, i.e. the inclusion of private actors in differenttypes of collaboration and partnerships in "making" the urban realm or in providing urban public services (R.C. Holland, 1984). Emphasis arose on the emerging role of citizens and communities in city making, this spreadduring the XXI century (Majamaa, 2008; Zhang & Kumaraswamy, 2011). What these diverse approaches havein common, is the willingness to open-up the decision making process to different stakeholders. While theseapproaches are developed in practice, also the academic discourse is repositioning the role of planning,highlighting how they moved from a technocratic practice to a communicative practice where planning isintended to enhance reaching consensus in decision making processes. Different modes of planning emergedfrom theories about urban and regional regimes (Hamilton, 2004), discoursive and collaborative governance(Forester, 1989; Healey, 2007), relational geographies (Massey, 2005), agonism and institutional ambiguity(Bäcklund & Mäntysalo, 2010), and theories of spatial complexity (Portugali, Benenson, & Omer, 1994).

In the last years, there is a growing interest among planners to address complexity and its ongoingfluidity, openess, non-linearity and unpredictable development, considering this to be more in line with thereality of cities' development (Boelens & Roo, 2014; Roo & Boelens, 2014). Here, planners are questioningabout

the role of their discipline within processes in which the system well as the sub-systems that acts inparallel, is co-created by a variety of actors (Boonstra & Boelens, 2011; Byrne, 1998; Urry, 2003).

Such discourse is grounded in complexity theory, which in turn has its roots in general system theory(Von Bertalanffy, 1968). Complexity theory arose during the 90s (Holland 1995; Kauffman 1993, 1995),focusing on how systems co-evolve. It focuses on complex systems that are open, interact with theirenvironment and constantly evolve and unfold over time (J. H. Holland, 1995; Holling, 1987; Kauffman, 1995;Prigogine & Stengers, 1984). As highlighted by Rotmans and Loorbach (2009), the literature within the maincategory of complex sytems identifies the spacial cases of complex adaptive systems: “These are systems thathave the capacity to change and learn from experience. They are able to respond to and adjust themselves tochanges in their environment. What makes a complex adaptive system special is the set of constantly adaptingnonlinear relationships. Complex adaptive systems contain special objects - agents - that interact with eachother and adapt themselves to other agents and changing conditions” (Rotmans and Loorbach, 2009 p.186).

Complex adaptive systems are indeed described through unique elements, such as co-evolution (Mitleton-Kelly,2003), emergence (Goldstein, 1999) and self-organization (Bak, 1999; Prigogine & Stengers, 1984).Next to planning theory, transition research is another field that discusses the co-evolving dynamicsin complex systems. It is an interdisciplinary field that takes complex systems theory as a starting point.Transition theory attempts to better understand the behavior of complex systems that run through cycles ofrelatively long periods of equilibrium, order, and stability interspersed with short periods of instability andchaos. Transitions are described as societal changes that involve a variety of actors (Geels, 2011), consisting ofdifferent patterns (De Haan & Rotmans, 2011; Geels & Schot, 2007), various phases (Grin, Rotmans, & Schot,2010) and high levels of co-evolution, complexity, and uncertainty (Geels & Schot, 2010; Rotmans & Loorbach,2009). One of the main analytical frameworks on transitions is the Multi-Level Perspective (MLP). It describes three levels of structuration and stability: niche, regime and landscape. The regime concept has been describedas a set of rules and practices carried by different social groups (Geels, 2002). The niche concept refers tospaces for innovations. The landscape concept is seen as an exogenous, wider context. Transitions areunderstood as “outcomes of alignments between developments at multiple levels” (Geels & Schot, 2007, p.399). Geels and Schot also highlighted how alignments are always enacted by social groups, and it is throughtheir activities that different levels of structuration (i.e. niche, regime) are continuously reproduced (Wittmayer,Avelino, Steenbergen, & Loorbach, 2016). The regime is said to “orient and coordinate the activities of thesocial groups that reproduce the various elements of socio-technical systems” (Geels, 2011; p. 27). In atransition perspective, cities are complex systems where the actions and interactions of different stakeholdersgenerate structural changes. These changes are the results of both top-down activities and bottom-up emergentactions that generate self-organised adaptations of the system that are not necessarily under people’s directcontrol (Cozzolino, 2015), but influenced by the dynamics happening between actors and agency in city making.

Those adaptations of the system take place at the urban level in a space where a variety of actors interact, heredifferent transformative initiatives can be referred to as niches within a dominant regime because of the strongtransformative power that they have. This space is defined as the space of interaction in transitions.A specific focus on actors and agency dynamics in transitions has been developed in the field of thegovernance of transitions (N. Frantzeskaki, Loorbach, & Meadowcroft, 2012; Grin et al., 2010). Differentapproaches have been described and developed in this field with transition management as an important one.Transition management has been described as the “attempt to influence the societal system into a moresustainable direction” by exploring future options through “searching, learning and experimenting” (Rotmans& Loorbach, 2010, pp. 108–109). Transition management is based on five guidelines that are partly descriptive,in the sense of basic principles, and partly prescriptive, in terms of rules for management (see Rotmans &Loorbach, 2009) for targeted interventions in complex systems, as cities, to influence the speed and directionof emerging transition dynamics towards more sustainable futures. The past few years a growing literature hasemerged specifically addressing urban sustainability transitions and a particular form of transitions in whichcities are simultaneously the places of experiments and niches for broader societal transitions as well as subjectsof transitions themselves (Niki Frantzeskaki et al., 2016). This perspective leads to new approaches to urbantransition management as a multi-actor process of experimentally developing new and sustainable urbanregimes (Loorbach et al 2016). This approach implies new roles and tools for policy-makers and planners towork in a more organic, emergent yet selective and long-term focused way.

3 THE SPACE OF INTERACTION

During the last years, in the time of the implementation of austerity policies, in many cities differenttypes of transformative initiatives are arising. Even though such initiatives have different natures (i.e. top-down,bottom-up) statuses (i.e. formal, informal, etc.), purposes and aims (i.e. business oriented, and current existing regime. They are creating new visions and actions, they attract attention and foster the riseof new type of coalitions between the urban stakeholders (public administration, citizens, third sector, privateentrepreneurs). As highlighted in the previous paragraph, the groups of stakeholders acting in urban contextsare diverse. Generally, four type of actors are identified, the public and the private sector, the citizens' initiativesand the third sector. This paper takes special interest in the relationship between two of these groups: the publicand the citizens' initiatives, which can be organised in different types of groups (i.e. associations, NGOs,informal groups, etc.). The reason for this special interest in these two stakeholders is that in an urban contextthe public sector is obviously playing a crucial role and, on the other hand, the term citizens allows for theinclusion of a broad range of types of stakeholders.

The emergence of the new coalitions higlited bevore give rise to the space of the interaction betweenthe different stakeholders; where the diverse sub-systems can find the opportunity to emerge, co-evolve andself-organise. The possible collaboration (or participation) between these different city makers is exploredaccording to the description of the space of the interaction as represented in Figure 1. Such spaces are learningenvironments that can force an adaptation of the existing contextual conditions. We define the space ofinteraction of participatory city making by means of four quadrants, represented by two axes: (1) the citizensgovernmentaxis; and (2) the axis of the internal and the external way of working of the two groups ofstakeholders.

In the space of interaction (Figure 1) the outside of the four coloured quadrants represents theboundaries of the existing regime, where the mainstream sub-cultures and rules are grounded. Within each ofthe quadrants, new transformative initiative can develop or arise as niches, represented in the figure by theblack dots in the white circle. These niches are challenging the usual way of working of the system and theyintroduce new ways of working to the regime. They pressure the existing regime to change its ways of workingbut at the same time they receive pressure from the regime. Sometimes niches arise from the external way ofinteracting with other stakeholders, other times they develop within a specific organisation or social group. Intransitions, while niches develop, scale and spread, they replace the existing regime. The interaction betweenthese niches and the regime, both on the government and citizen side, internally and externally, is whatconstructs the 'space of interaction'. The interaction sometimes arise between groups of stakeholders as awhole, other times they are triggered and forced by specific actors within the existing groups. The latter areactors, often represented by freerange civil servants or by specific active citizens, that are trying to facilitate therise of experimental environments. They battle the cultural and practical resistance existing both in the way ofworking of the public administration and that of the citizen initiatives.

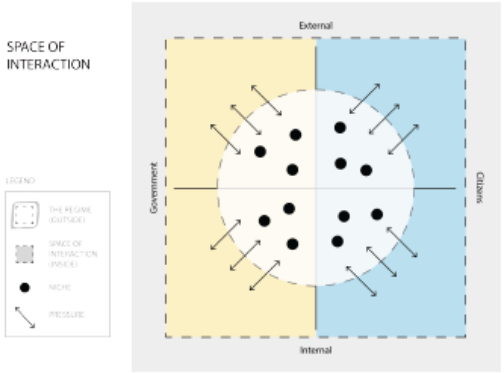

Figure 1 – Niches development within the space of interaction of Participatory City Making

Almost everything that it has been written about Neoliberalism in planning theory is on the negativeside, despite few voices outside of the box that have tried to shift the attention on other issues (Stefano Moroni,2016). Neoliberalism has been addressed as the cause of the shift of the border between public and privatespaces, tending to expand consumer space and narrow citizens' space (Roivainen, 2002). The figure abovehighlights how the picture is much more complicated, as already Mantysalo started to explore (Mäntysalo,2016). Indeed, the consumers space do not correspond only to the citizens' space, but to the regime space, thatcan be found on both government and citizens side. The consumer space is shaped by those actors that areresisting to the changes that the transformative initiatives are trying to make. However, the citizens' space canbe found where the niches are arising. Citizens and government become producer of services, while acting andexperimenting new practices (Puerari, 2016). While experimenting

with transformative initiatives, they conquerspace where they can interact with government and making pressure to the current regime.

In a transition management perspective, the interaction between the different urban stakeholders thatare collaborating to make such transformative initiatives work, is a starting point for governance interventions.Through transition arenas (Loorbach, 2007) or urban transition labs (Nevens, Frantzeskaki, Gorissen, &Loorbach, 2013) actors representing such initiatives are brought together with entrepreneurial policymakersand other societal actors to develop shared startegies, visions and plans. But more ofthen than that, societalinitiatives are experimenting with new practices often acting with reference to the dominant cultural, practicaland normative conditions, but not necessarily in conformity with them (see the concept of nomotropism in:Chiodelli & Moroni, 2014; Conte, 2000) or in a structured way seeking to contribute to a long term systemicchange. Besides targeted governance interventions aimed at guiding and accelerating transitions, we thus arguethat there is a much broader dynamic of unstructured interactions between citizen initiatives and policy thatcould offer a basis for contributing to desired sustainability transitions. To explore this potential and possiblyincrease its contribution to wider societal changes, we seek to better understand why and how such initiativesemerge and subsequently interact with policy to move forward.

4 DISCUSSION

The fields of complexity in planning and transition management form the basis to conceptualise the space ofinteraction as represented in Figure 1. In this article the values of combining the two fields have been presentedfor two stakeholders' perspectives: government and citizens' initiatives. There are three main notions that comeforward from the combination of the two fields for the two stakeholders that are discussed below.

The first notion is that there is a shift from the focus on the dichotomy between government andcitizen initiative towards a focus on niches and regimes irrespective of their traditional function of citizen orgovernment. This shift from public administration versus the public towards the niches versus regime has beenrepresented in the figure by a shift from a horizontal dichotomy towards an omnidirectional one. This showsthe value of the combination of transition management and planning because it provides a different lens forlooking at the different stakeholders or possible partners to involve.

This also brings forward the second notion, namely the consequence for participatory approachesbetween different stakeholders as also advocated by complexity theory in planning. It suggests that there is aneed for approaches that recognize this second dichotomy and that are able to include both niche and regimeactors from both citizen initiatives and government. Approaches that are able to bridge the gap between nicheand regime, rather than government and citizen initiative; or, leastwise approaches that acknowledge thedifferences within each 'traditional' group of stakeholders.

This relates directly to the third notion: the three potential directions towards more participatoryapproaches in the space of interaction of city making. One can think of approaches that enable the niches toincrease their pressure on the regime, to increase their influence and expand their reach. On the other hand,one can also think of approaches that lower the pressure of the regime on the niches, ones that give more spaceto niches and liberty to develop. The last potential direction for more participatory methods would be the onethat is most in line with participatory thinking (Björgvinsson, Ehn, & Hillgren, 2010) and would be based onexchange. These approaches would foster the exchange and bridge or even diffuse the borders between nichesand regime.

In this way does the conceptualisation of the space of interaction open up our understanding ofmulti-actor governance and introduces a more nuanced understanding of how government and society interact.It does however not explicitly address the types of interaction that would be most suitable to empower (ordisempower) related to achieving specific urban goals. Taking a transition management approach for examplewould imply starting from a normative agenda containing long-term sustainability goals (such as achieving ashift to renewable energy, changing urban mobility systems or decentralizing specific social services) and thenstrengthening initiatives that contribute to such goals. However, as transitions imply structural changes andpower shifts, this approach is also political: it implies institutional changes that not necessarily are desired byincumbent actors or structures. The space of interaction in this way also

represents that more informal waysthrough which ultimately existing policies and institutions might be disrupted and transformed.

5 CONCLUSIONS AND FUTURE RESEARCH

The notions listed above provide a new perspective to reflect upon potential roles of planners infacilitating, empowering and guiding transformative social innovation in cities. We here formulate threeconsiderations but emphasize that these are not yet translated into practical tools or methods. But we do arguethat our perspective necessitates a more fundamental reflection upon the roles and attitudes of planners,shifting from coordinators or semi-controlled planning processes producing policies and projects towardsidentifying potential societal challenges and emerging alternatives that can be synthesized, strengthened andempowered to more effectively contribute to desired urban transitions.

The first consideration descends directly from the first notion. Indeed, planners, in order to createand design places for dignity, should go beyond a dichotomy between public and the private space of citizens,embracing the fact that niches and regime are part of both groups. The lens described in this paper allow tothink differently about what the space for citizens' action and influence is. The perspective changes: niches ofnew coalitions and initiatives can be found on both the government and the citizens side.

Hence, the second consideration is that the space of passive consumerism can be found on bothsides. Stakeholders acting in conformity the dominant cultures and practices, resting to innovation and changes,are spread around the two groups of stakeholders. Planning should acknowledge this difference and approachthe issue in alternative ways.

This leads to the third consideration, namely the necessity for planning to enable the emergence, selforganizationand co-evolution of the system. Although, within complex systems, it is impossible to predict andto guide the emergent nature of cities with perfect solutions, planning should be able to generate the conditionin which the stakeholders can act and interact producing new coalitions and niches within the system. Asintentional action, planning gives rise to variations in the systems that remains unpredictable, its interventioncan foster the emergence of certain conditions, thorugh which an adaptable complex systems is better suitedto deal with (S. Moroni, 2015).

Further research and action is required, however, in order to identify how planning can contribute tocreate the condition for the self-organisation, and adaptation of the system to arise. The next envisioned stepwill be the analysis of the transition dynamics happening within a specific city in order to first identify thebarriers and mechanisms that are shaping the space of the interaction between the stakeholders in a specificcase studies. Interviews with different actors and urban stakeholders will be carried out, as well as co-creativeevents that will be useful to understand existing problems and dynamics. Then, a further step will be taken inorder to overcome the identified barriers through participatory design methods (Björgvinsson, Ehn, & Hillgren,2012), aimed to experiment what could be the conditions that could foster the emergence of the conditionsmentioned above.

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ID 1565 | CRITITQUE OF EVERYDAY LIFE AND POST-POSITIVIST PLANNNING

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1 EVERYDAY LIFE RESEARCH, UNSETTLED ROUTINES, AND PLANNING

Lefebvre´s books on the 'Production of Space', 'The Right to the City' and the 'Urban Revolution'have been widely discussed in planning theory, and are constantly referred to in (scholarly-activist) planningpractice, e.g. in the urban protests against massive gentrification and in recent solidary struggles against postpoliticalregimes heralding austerity policies. However, Lefebvre´s (2014) century-long oeuvre on the 'Critiqueof Everyday Life' spanning from (1) his analysis and observations of rising fascism in the 1920s/1930s; (2)the post-WWII urban modernization and the 'internal colonization' of everyday life routines in France andEurope in the 1940s/1950s; and (3) the advent of paradigmatic shifts between production and consumptionin the city in the 1960s/1970s towards the era of global urbanization; has received few attention in the realmof urban studies, and even less so in planning. This is remarkable, as this three-volume work conveys severalinsights on un- and resettlement of urban routines useful to understand present changes mediated throughevеryday life in contemporary cities.

In a context of a felt unsettling of urban and national routines, particularly marked by the years2011 and 2016, this paper pays tribute to Lefebvre´s complex spatial understanding of the critique ofeveryday life as an analytical perspective to detect, identify and qualitatively understand changes on the micro-, meso- and macro-levels of society. Then, focus will be set on the time span since the early 1980s to highlightcontributions from social, political and cultural theory that have engaged with a more contemporary (spatial)critique of everyday life. These shifts in theorizing the city are connected to the contemporary critique of theearlier generation of post-positivist planning accounts and pave the way to (loosely) start thinking aboutconceptualizing a more recent generation of planning theories much more interested in affective, agonistic, performative, insurgent, relational and counter planning approaches, and thus, in the nitty-gritty political,cultural and social nuances of an updated spatial critique of everyday life.

2 THE CRITIQUE OF EVERYDAY LIFE

One of global capitalisms' most powerful modes of expansion is urbanization (Lefebvre, 2003(1970)), implying an understanding of cities and urban space as key sites that catalyse growth, competitionand individual freedom (Molotch, 1976). It is the ambivalent nature of processes of urbanization, and theuneven interplay between nation states and cities, that make the city a key field to understand, analyse andinterpret different formants of capitalism, its inherent contestations, pitfalls and collapse (Schmid, 2005).Cracks, fractures, ruptures and the perpetuated crises at the heart of the current flexible capitalism get firstvisible in cities, mediated through processes of urbanization, yet contested through acts of urban resistance(Lehtovuori, 2010; Mayer, 2013).

While developing and following academic training schemes that would often deal with abstractspace, the spatial arts have tended to neglect an understanding of the city as lived space (Tornaghi andKnierbein, 2015). Lived space is a contested and yet hopeful space characterized as much by affect,experience and sets of values, as by rational decisions and interest based struggles. But what exactly is thiseveryday life about, and how does it spatially manifest? How can the city as lived space be connected to astudy of changing everyday life patterns? What can planners learn from scrutinizing everyday life? Livedspaces in the city are those places, where everyday life routines unfold and where new patterns and ways ofliving gain momentum. The minutiae of everyday life, however, are understood as a messy field, as there areeveryday conflicts (e.g. exclusion, segregation and discrimination). Empirically speaking, spatial patterns ofeveryday routines become fundamentally unsettled (e.g. through everyday contestations) even beforeparadigmatic socio-political shifts gain momentum, when emancipatory movements grow and politicalmobilization starts to unfold out of unbearable everyday life conditions (Goonewardena et al., 2008).

Schmid (2005, p. 10f.) locates the emergence of critical urban studies with the rise of the crisis ofthe city in the 1960s which signified a loss of everyday qualities of life caused by massive Fordist urbanexpansion schemes (based on street infrastructure construction and related suburbanization as a spatial modelto sustain the dominant expansion of car producing industries). Lefebvre has detected this crisis somewhatearlier, by studying the emerging industrialization-urbanization of France before and after the Second WorldWar, where cities were organized as a type of 'new colonies', with those colonized living a commodified lifein the banlieue, and those colonizing occupying cities' social and material centralities.

The city and the urban thus can be analysed as a palimpsest of constant crises of capitalism and ofdiverse attempts to overcome these crises through collective forms of self-organization. This new type ofurban crises peaked at a moment when the impacts of capitalisms' changing strategies were increasingly felt ineveryday life, culminating in the wide social mobilization and urban resistance movements of the late 1960s,and the related global movement of the New Left. Some critics argue that the global social movements of2011, the "year of dreaming dangerously" (Žižek, 2012), can be interpreted in a similar way, as nowneoliberalization's impacts on contemporary everyday life routines had become unbearable in the directaftermath of the global financial crisis of 2008 (Kaika and Karaliotas, 2017). The seismic precursors of thesetypes of general paradigmatic shifts and civic upheavals (as in 1968, 2011) can be detected through a constantempirical monitoring of changing patterns of urban lived space, and often happen with a relevant delay afterthe introduction of new modes of urban restructuring (e.g. in France after the Marshall plan restructuring in1950s/60s; worldwide after the introduction of neoliberal ways of urban policy making in the 1970s/80s).

An important point here is to stress that these types of more paradigmatic 'urban crises' rathermark an understanding of the urban as (1) a social, political and cultural culmination point of crises atdifferent scales and in different fields and as (2) crisis machine in which modes of de-and reterritorializationare ventured as constantly changing, adapted, invented or renewed modes of (flexible) capitalism'saccumulation strategies inscribed into spaces, societies, ecologies and cultures through an effort of seizing,capturing and high-jacking the meaningful patterns and practices of everyday life, and as (3) a catalyst forsocial self-organization to overcome the constant pitfalls, aporia and fragmentations inherent in flexiblecapitalism, taking forms of response, resistance, struggle, detour, and counter cultures in the city.

Following changing urban patterns, phenomena and practices through the lens of everydaynessthus is a key entry point not just to understand urban life, but also to retrace how we gain knowledge abouturban change and transitions, and how the social urban world is constituted: "Everyday life may be familiar tous, but this does not mean that it is understood. Analysing the everyday may bring out the extraordinary inthe ordinary (…)" (Elden, 2004, p. 111).

2.1 LEFEBVRE'S CENTURY-LONG OEUVRE (UNTIL 1991)

The lived urban spaces of the city are key lenses to develop such a dynamic understanding, as herethe socio-material impact of structural changes, but also the acts of resistance and of new paths of action getvisible. However, some linguistic nuances need to be acknowledged, as Lefebvre (1988, p. 78) has delineated:"The word everyday [quotidien] designates the entry of daily life [vie quotidienne] into modernity (…) theconcept of 'everydayness' [quotidienneté] stresses the homogeneous, the repetitive, the fragmentary in everydaylife". Shields works with Lefebvre's distinction and explains that there is a notion of the banal, trivial andrepetitive quality of social life under capitalism in which "these terms were … used to refer to theuncatalogued, habitual and routine nature of day-to-day living rather than used critically to refer to thealienated, dry "everydayness" of daily life" (Shields, 1999, p. 66). In the lived spaces of the city, everyday life(now reinterpreted as a theoretical tool of critique as it bears the dialectic of the ordinary and the alienated)inscribes itself into the material arrangements of the urban fabric. Any attempt to intervene into the urbanfabric (e.g. through planning, design), vice versa, means to unsettle urban everyday routines and practices, andthus, everyday life. Through spatial interventions proponents of the spatial arts may shape new chances andopportunities and an enhanced quality of life; yet their spatial interventions may also tend to contribute toaccelerating processes of spatial alienation, for instance through paving spatial strategies for gentrification,displacement and dispossession. This way, on the contrary, quality of life is further diminished for those whohave fewer resources (money, power, voice, networks, etc.) at their disposal. This way, planners may sharpenthe social divide, by contributing to the uneven development

inherent in capitalist urbanization patterns.Smith's (2010 (1984)), uneven development has been an important concept as regards, as it is based on aconception of deep space which refers to "(…) the space of everyday life in all its scales from the global to thelocal and the architectural, in which (…) different layers of life and social landscape are sedimented onto andinto each other. Deep space is quintessentially social space: it is physical extent fused through with socialintent" (ibid., p. 214). Any study of everyday life draws near to acknowledging the uneven distribution ofaccess and resources to pursue a decent everyday life that is visible not just with regard to unevendevelopment between global North and South, between European North and South, between nation's mayorcities and their hinterlands, but first and foremost – as Lefebvre has it – between the urban centre and a city'speriphery, a process of urbanization that Lefebvre referred to as the internal colonization.

As follows, main arguments that have characterized the scientific reflection of everyday life inrelation to uneven development of urban space, will be gathered. Limits of such an endeavour issue a doubton "the uniqueness of urban milieus for studying everyday life", as this has been "sociologically challenged"(Kalekin-Fishman, 2013, p. 721) e.g. by everyday life studies in rural areas. While acknowledging that everydaylife and lived spaces are not limited to the study of the city, this research focuses on urbanization as 'thick'empirical source of possibilities to study deep space and to engage with everyday life (as both an investigation ofthe ordinary and of alienation). Yet the spatiality of everyday life has often only been randomly treated as aproblematique in urban studies and planning theory accounts, in order to understand the everyday life not as itappears (on the surface, as visual reality), but in a more 'geological' way of approaching social theory:Everyday life forms the social magma that is both producing material surfaces and their slow, but continuouschange, and from time to time, visible material and embodied eruptive moments (and rapidly changing urbanlandscapes) of social transformation.

Lefebvre has not developed a philosophy of everyday life, but a social theory of the critique ofeveryday life, by promoting a critical spatial understanding of the changing social world under capitalism. Theearly parts of his overall oeuvre focused on everyday life, a threat that would run through all different aspectsof his work, sometimes implicitly, sometimes more explicitly. Lefebvre's oeuvre on everyday life was initiatedin the 1920s/1930s when he started to prepare the first out of three volumes of "Critique of Everyday Life"1946, to be followed by vol. II (1961) and vol. III (1981) (Lefebvre, 2014). While France entered a phase ofrapid modernization after the Second World War, "Lefebvre progressively recoded his initial concept of'everyday life' into a range of spatial and urban categories" (Ross, 1995, p. 150, cited by Shields, 1999, p. 39).

In the post-Second World War phase, it was seemingly accompanied by Lefebvre's utopian vision that (French) society would reconstruct a better (socialist) future (overcoming pitfalls of capitalist organization),whereas his later works concentrated on the analysis why and how capitalism was able to survive. At thatpoint, Lefebvre did not go along with Marx' understanding that capitalism would die any more, rather theopposite: Following Rosa Luxemburg's early enquiry of why and how the capitalist mode of production wasable to continue, Lefebvre (1988, p. 80) attempted "to answer not only how capitalism survives, but also howit is able to grow: (…) it could integrate an industry. It integrated agriculture, it integrated the .. city, itintegrated space; and it produced what I call la vie quotidienne".

With the increasing urbanization of ways of living, "a realm that is essential to everybody butbecomes increasingly deficient for its users as social space is integrated ever more directly into processes ofcapital valorization" (Ronneberger, 2008, p. 135). These findings marked a key shift in Marxist approaches tounderstand space and the city: "Whereas the economic had long played an overarching role under capitalism,the everyday was now acquiring the same significance" (ibid.), thus opening critical spatial inquiry to a rangeof disciplinary and cross-disciplinary endeavours ever since. Soja states that "what Lefebvre was doing wassubstituting everyday life for the workplace as the primary locus of exploitation, domination and struggle; andredefining social transformation and revolution as intrinsically more socio-cultural (and less economistic)"(ibid., 1996, p. 41). He "envisioned the emergence of a new revolutionary subject that would revolt not onlyagainst the exploitation of labour-power, but against the destruction of its entire living environment", statesRonneberger (2008, p. 135). In this sense, "urban struggle, not class struggle" became "the motor of history,urban praxis and not industrial praxis, the new local of revolt" (Merrifield, 2002, p. 117). By the late 1980sand shortly before his death, Lefebvre adds another level of interpretation as "it is at this moment thattechnical revolution substitutes itself for social and political revolution, while capitalism seizes the groundthat had escaped it in large part until then: everyday life"

(Lefebvre, 1988, p. 79), thus shedding light on theemergence of the dominance of technocratic thought over social and political concerns.

2.2 CRITIQUE OF EVERYDAY LIFE (AFTER 1991)

While Lefebvre's project remains one of the most important "diagnosis of modern everyday lifeand a reclamation of its critical potential" (Highmore 2002, p. 225), many traces in his work have beenreferenced and used by feminists, post-colonialists, art historians, aesthetic theorists, architects, humangeographers, urban planners, urban activists over the last couple of decades (Shields, 1999). During the late1980s and 1990s, however, research on everyday life started to fade. Yet, in the new millennium, publicationssuch as "The Everyday Life Reader" (Highmore, 2002), "Philosophizing Everyday Life" (Roberts, 2006),"Space, Difference, Everyday Life" (Goonewardena et al., 2008), the "Sociology of Everyday life" (Kalekin-Fisherman, 2013) and the first one-volume edition of Lefebvre's threefold critique of everyday life (ibid.2014) mark a renewed attention for de-everydaying the familiar, and connecting it to space. Highmore's(2002) work offers a potential to bridge the emerging gap of understanding and theorizing the everyday thatLefebvre's death in 1991 has left. Another vanguard contribution that actively revisits the notion of theeveryday by launching a critique of the modernist and Western version of social theory based on bigcollective organization and grand-scheme revolution is Bayat's (2010, p. 11) work "Life As Politics: HowOrdinary People Change the Middle East". His considerations raise a fundamental critique to the Westernconcept of 'public space' (as a modernist institution to which only a few have institutional access), while hisintellectual focus remains on the spatial praxis and lived spaces of ordinary people.

2.3 TOWARDS A CONTEMPORARY CRITIQUE OF EVERYDAY LIFE

The most ambitious part of everyday life research is to overcome attempts of banalization whichstate that everyday life is all and nothing. Highmore (2002, p. 4) emphasizes that "the problem with theeveryday is that its contours might be so vague as to encompass almost anything (or certain aspects ofeverything)", and continues to shed light on this challenge: "taken as an amorphous whole, work on everydaylife might suggest that any fixing (especially in time and space) of the everyday is going to hamper discussionand perhaps limit the productivity of enquiry" (ibid., p. 37). To set up and offer a dynamic frame for situatingscientific attention back on everyday life studies in the spatial arts, as follows, six aspects of everyday lifeenquiry have been synthesized to allow for a more in-depth understanding of contemporary globalurbanization processes under capitalism, and its implications for planning: (A) Everyday life's uncannycharacter; (B) Everyday life as colonization, (C) Feminist perspectives on space beyonddomination/marginalization, (D) Post-colonial everyday life research (E) Urban resistance as 'quietencroachment of the ordinary' and (F) Everyday life as spatial praxis and social action.

(A) Everyday life's uncanny character: Lived space analysis involves an understanding of "the everydayas a problematic, a contested and opaque terrain, where meanings are not to be found ready-made"(Highmore, 2002, p. 1). A wider conception would start from an understanding of the ambiguous, ambivalentand antagonistic character of everyday social relations and their spatial manifestations, because "the everydaydoes not supply happy endings or even happy beginnings" (ibid., p. 8) This points to the messy minutiae ofeverydayness: ordinary urban life bears certain uncanny and scary features that prevent any delving inromantic ideas of the ordinary as a field of urban enquiry. In "attempting to reveal the unconscious or nonapparentstructures of everyday life" deep aspects can be uncovered "that are relentlessly gothic in theirdimensions" (ibid.): For Freud it is the almost inevitable tragedy of loss, forbidden love and death anxiety,which lurks bubbling under the everyday. For Marx, everyday capitalism is a catastrophic engine devouringmaterial and human resources and structured across class antagonisms" (cf. ibid.).

(B) Everyday life as colonization: A study of new forms of colonialisms can be facilitated through thestudy of fetish and colonial relations in everyday practice and objects. Another aspect strongly related tounderstanding everyday life as a fetishized form of how capitalism was able to spatially grow and expand, is tolink everyday life research to a spatial investigation of power relations. Effective power relations occupy theterrains of everyday life, resulting in the finding that "ideologies reside in precisely those places where they arenot perceived to be (or perceived at all)" (Highmore, 2002, p. 7), for instance, in the ordinary act of shoppinggroceries. Lefebvre considers the relation between power and the ordinary

not just at different scales, butwith emphasis on their mutual entanglements. In this sense, the study of spatial patterns of urban everydaylife is a useful resource to potentially identify structural aspects through (1) the study of fetishized forms ofdomination visible in public and private ways of living (e.g. as commodification of public space; or as regardsthe introduction of new products that transform everyday life, e.g. smart phones); (2) analysing practices ofcolonization that materially sediment as contested spatial relations between (social, physical, geographical,cultural, political) peripheries and centres; (3) an enquiry into power relations which structure urbanizationprocesses and urban development policies, while studying those spatial contestations which bear the capacityto transgress (e.g. action-based) practices of resistance towards continuous achievements of emancipation.

(C) Feminist Perspectives on Space Beyond Domination: Feminist spatial debates have encouraged a wideractivation of urban research perspectives in a threefold way: (1) to recognize, relocate and re-centre spacesand groups at the margin as agents for resistance and radical change; (2) to develop new subject-objectrelations as regards how researchers study urban everyday life thus articulating the social relations betweenresearchers, and between researchers and those researched; and (3) to emphasize the role of the body in theproduction of space, thus linking to cognate emphasis on non-representational theory, performativity,passions, and embodied space. Yet it needs to be acknowledged, that in the study of social difference in thecity, “everyday life can both hide and make vivid a range of social differences” (Highmore, 2002, p. 2).

(D) Post-Colonial Everyday Life Research: Particularly post-colonial accounts rooted in cultural studieshave added more dimensions to a renewed critique of everyday life: (1) the dialectics of difference andcommonality as an inseparable relation in lived space (Highmore 2002); (2) the radical change of positionalityto choose marginality as a position to start research from (Soja 1996) and (3) the chronopolitical focus on ‘the‘art of practicing the now’ (Thrift, 2008). Present forms of emancipation and empowerment are performed bythose social movements studied by activist-scholars interested in how everyday life patterns become unsettledand resettled in historical moments. These may relate to the emerging moments in which a European-centricmodel of exclusive urban modernity is deconstructed through a post-colonial critique to shape a path forwardtowards a worlded theory of urbanization, thus showing a changed understanding of global issues of publicconcern. However, it is not enough to develop postcolonial theories from the standpoint of the Westernscholarly tradition and focus on neo-colonial patterns in Western societies. Western scholars also need toradically learn from cities and colleagues from other urban and world regions both as regards the way howthe spatial analysis is framed, and as well regarding the empirical phenomena at hand and respectivetheorizations for the fields of urban studies and planning theory.

(E) Resistance as ‘Quiet Encroachment of the Ordinary’: What happens when everyday life is conceivedfrom non-Western theories and empirical findings? Bayat’s work focusing on everyday life basedtheorizations combines an empirical contribution relating to the micro-scale of urban research claiming toanalytically expand the notion of everyday forms of urban resistance with a fundamental critique of themodern conception of Western ‘social movements’ and of public space as an institution of (Western) bourgeois modernity which many of the urban subaltern – especially in contexts of authoritarian state rule –seek to avoid or circumvent. Empirical research from Middle Eastern cities has shown that new global urbanrestructuring is affecting these places and has pushed people living in informality further towards the margins.

Neoliberal modernity and its pace of global restructuring has brought (additional) masses of people into newsocio-spatial peripheries from which they now take (mass) action to improve their lives on their own. Tostudy neoliberal modernity through the prisms of social non-movements, as Bayat (2010) has it, has reaffirmed theneed for a politicization of registering the everyday: “the insistence that non-Western lives impact at the levelof everyday life in the West is an important aspect of many recent forms of political culture (…) whathappens at the level of micro-culture also reverberates at a more global level” (Highmore, 2002, p. 18).(E) Everyday Life as Action: One of the key sources to acknowledge Lefebvre’s critique of theprevailing abstract philosophies in the 20th century has been an understanding of everyday life as a philosophy ofpraxis, in which praxis can be considered to be a vehicle to embed conceptions of (present) time(s) intospatial analysis of changing patterns of lived space. Space, in this sense, needs to be understood as “anensemble of a plethora of societal actions” (Schmid, 2005, p. 300) mediated through both individual andcollective (everyday) social relations that are in a constant interplay in the self-creation of human beings. Butwhich relevance then has the study of everyday life and lived space, if all niches can

be fruitful? The study ofchanging everyday life would cut across all these three fields, as (a) a study of action and praxis of the worldman has shaped; (b) a study of the experience, affect and altering potential of the lived social space; and (c) asa critique of abstract philosophy. Because “to study philosophy as an indirect criticism of life” as Lefebvre (2014, p. 272) put it “is to perceive (everyday) life as direct critique of philosophy.” But why, Shields asks, didLefebvre opt into an investigation of life becoming seemingly boring under capitalism? Shields (1999, p. 67)emphasizes that such a scrutiny “indicates a domination of areas of human activity and relationships whoserichness, if revealed, could become the basis for a reconstruction of human society”. This way, lived spacesbecomes an intriguing subject allowing for constant crossovers for (ex-post oriented) social, cultural andpolitical research in connection to (ex-ante oriented) perspectives into future planning praxis and theories, asit includes both the analysis of structural conditions and the impetus to sketch ways of action forward.

3 A NEW GENERATION OF POST-POSITIVIST PLANNING THEORIES?

As follows, an initial attempt to loosely rethink selected contemporary planning approaches will bepresented, that stems from empirical public space research and the renewed critique of everyday life assketched in rough contours above. Social change of the past 50 years, but also of the past decade, their spatialcauses, side-effects and implications indicate a need to connect planning endeavours again to much morebasic questions about whether, if and how planners intervene in everyday life conditions, and how planningcontributes to a (re)production of everyday life patterns (seen as ordinary-alienated dialectics). As many urbansocieties are increasingly characterized by uneven development patterns, and the general level of socioeconomicwell-being for bigger parts of the urban population has been constantly eroded, times for keepingplanning in the safe-haven of apolitical thought have long passed by. But what is the societal role thatplanners can fill in order to address these pressing challenges? Many would argue that these are structuralproblems that planners are unable to address as this is out of their field of expertise. Others would suggestthat planning should focus on a more liberal tradition to spatially promote growth and help the state toorganize the conditions for that growth in order to provide prosperity and progress. Others would contest,that more of the same will only enlarge the divides and reproduce structural constraints based on thedisruption of equity, equality and emancipation. In the light of the current increase in de-democratization ofpolitical ways of decision-making (post-political condition); new nationalisms and xenophobia visible throughantagonistic public space contestations (anti-pluralist condition) and an increased financial capitalism thatdisempowers and dispossesses (commodification-through-crisis condition)—all transitions that constantlyproduce severe restrictions on the ability to access everyday life’s opportunities—planners cannot shy awayfrom their responsibility to think about how they (re)organize space and thus power relations, and how theyframe their own positionality in a spatial field characterized by constant struggles between politics and thepolitical. With communities evicted and displaced, jobs lost, pensions evaporated, cost of living rising,citizens harassed and killed by the police, and with no effective or available democratic process to hold backand reverse these trends, planners often have to refocus on a task that has been deemed forgotten: to providemore basic and decent human living conditions, to propose alternative ways of urbanization and developmentthat politically intervene into the cracks and crises of the current capitalist model and to propose spatialentries into how democracies can be constantly renewed.

Critique of Everyday Life	Urban Studies	Political Science	Planning Theory
3.1. *Public space under siege. On urban restructuring.*	postFordism, birth of neoliberal urban policies, social inequality	governmentality, neoliberalization and postFordism	Planning as governmentality
3.2. *The body under pressure. On politics of affect.*	embodied space: role of body politics, embodied space occupations	politics of affect, non-representational theory, performativity	Performative planning
3.3. *Contested modern public space. On everyday mass action.*	everyday urbanism, ordinary city, critique of modern Everyday Life	postcolonial accounts: social non-movements, everyday mass action	Insurgent Planning
3.4. *Lived space dialectics. On combined activism.*	emancipation, housing and public space: anti-eviction and de-commodification action	right to the city, feminist, Marxist and postmodern critique of everyday life	Relational planning
3.5. *Urban resistance. On increasing social inequality.*	struggles against de-politicisation of public space, weakness of representative democracy	presentist democracy, dissent vs. consent, marginalization vs marginal positions	Counter hegemonic planning

3.6. *Urban emancipation. On consent and dissent.*	the post-political and its discontents, struggles against disenfranchisement	post-foundational thought, politics of dissent, passion and politics	Agonistic planning

Table 1 – Transfers between Urban Studies, Political Theory and Planning Theory

From this perspective, urban studies may serve as a field bridging empirical insights from publicspace research based on an (empirical, detailed, precise) critique of everyday life to the fields of socio-politicaland socio-cultural theory, from which many planning theorists draw their insights. This concluding part,therefore, does not offer a systematic reading of all post-positivist accounts in the Anglo-Saxon world, it israther a plea to (re)connect the field of planning to a deep reflection about those recent approaches inplanning that seek to render a relation between planning, everyday life and lived space, and thus preciselyaddress the respective societal, cultural and political context of a given planning situation. Some of potentialapproaches have been gathered in table 1 and will be briefly sketched as follows.

3.1 PUBLIC SPACE UNDER SIEGE. ON URBAN RESTRUCTURING.

This section combines three parts which (1) address different interpretations of patterns of urbanrestructuring (e.g. postfordist, neoliberal), (2) offer a political science-inspired reading of Foucault's theory ofgovernmentality as an explanatory frame for a historical analysis of urban restructuring and neoliberalization,and (3) establish a connection to understanding planning as gouvernmentality. Critique of everyday life isaddressed here with a focus on power relations and on an understanding of planning as governmentality:practices shaping the actions of others and strategies for the management of a population with the aim toshow the unwitting effects of these regimes of practices on everyday life, yet to break free of the commonsenseacceptance of categories such as the ordinary, to open up ways of thinking differently (compare Huxley,2002, pp. 145-146). Hence, although power is an omnipresent dimension in human relations, and thus, inspace, power in a society is never a spatially fixed and closed regime, but rather an endless and open set ofsocial relations. The governmentality focus helps to explain how actually existing neoliberal urbanizationcame into being initially as a way of thinking in economics, and later as a practice of governing throughplanning which managed to literally transform the experience of societies, mediated through everyday life.

3.2 THE BODY UNDER PRESSURE. ON POLITICS OF AFFECT.

This second approach offers (1) an entry perspective into conceptions of space that discuss socialrelations through aspects of body, performance and action, thus promoting an understanding of embodiedprotest as an affective form of staging dissent and thereby shaping 'the political' in the city. It furtherconnects (2) 'the political' to considerations of the role and meaning of 'affect' to access a wider strand of(feminist) thought in political theory. Theories of affect address the minds' power to think (reason) and thebody's power to act (passion) (Hardt, 2007). They force us constantly to pose the problem of the relationshipbetween mind and body with the assumption that their powers constantly correspond in some ways (cf. ibid.,7). In this vein, affection assigns a relational moment, through which the capacity to act is decreased orincreased through the encounters between bodies, affected or/and affecting each other. Non-representationaltheory (Thrift, 2008) includes much of the non-intentional and non-discursive aspects of everyday life into anunderstanding of space and links this to the way politics and the political work beyond reason, using acombination of reason and passion, of thinking and acting. Thrift used the concept of "performance" tounderstand "the art of producing the now", the urban present conditions of everyday life (Dirksmeier andHelbrecht, 2010). Finally, (3) a transfer will be established between considerations linking embodied spaceconceptions, politics of affect and a more recent strand in planning theory, that is, performative planning.Recalling on Lefebvre's urge to centre praxis as any point of departure for further theoretical reflection,performative planning reconstitutes public space as a realm where praxis and theory meet. It thus meansmore than physical design; it is also concerned with social settings and activities (Altrock and Huning, 2015).

3.3 CONTESTED EVERYDAY SPACE. ON EVERYDAY MASS ACTION.

In the past decades, alternative urbanisms have enriched the spectrum of public-space-focusedplanning interventions (e.g. everyday urbanism, ordinary city, insurgent planning, insurgent public space,guerrilla urbanism, etc.). Many of these contributions stress the relevance of lived space dimensions forplanning, albeit in nuanced ways. While (1) urban studies scrutinize approaches to adopt, appropriate and act(in) public space through changing everyday practices, (2) political scientists are currently discussing thetheory of “social non-movements” (Bayat, 2010), as sketched above. Planning theorists link Bayat’s positionto (3) insurgent planning with a post-colonial focus on the everyday dimension of urban space. Miraftab (2009)has revised Western notions of radical planning by elaborating this concept: Practicing insurgent planningacknowledges what the hegemonic drive of neoliberal capitalism tries to obscure: the oppositional andtransformative practices that citizens and marginalized populations invent day-by-day outside globalcapitalism’s definition of inclusion. Insurgent planning approaches strip ‘democracy’ and ‘inclusion’ of theirformalistic elements, recognizing the ability of counter-hegemonic movements to choose own ways ofconstituting their collectivities and their participation.

3.4 LIVED SPACE DIALECTICS. ON COMBINED ACTIVISM.

In the context of the introduction of neoliberal urban policies in very different urban contexts,many cities around the world witness an increase in urban inequalities which is visible and can be analysed atthe interface of public space and housing research. As a case study, struggles and resistances to push for theright to housing and for public space to reinstitute democratic decision making in praxis have beensuccessfully intertwined. Housing rights movements have brought silences and absences that exist in theprivate realm into the public debate, and have simultaneously re-framed what was considered as individualand personal failure a structural problem of public concern (Garcia-Lamarca 2017). These empirical findingsecho (2) the feminist critique that public space debates often do not include the fates of the so-called urbansubaltern, the marginalized and disenfranchised urban populations for whom to become public wouldpotentially pose a threat: this relates for example to a whole range of professions working in grey legal andlabour conditions, such as nannies, housekeepers, gardeners, etc (visible in the private households). Thiscritique sheds a light on the private-public relation vice versa, as it criticizes the silences and absences inpublic space that get visible once we carefully realize an ethnography of the living and working conditions ofun(der)paid labour and its reproduction in the private realm. These considerations are linked (3) to theconcept of relational planning which stems from the family of approaches that coin public space as relational(Tornaghi and Knierbein, 2015), where feminist approaches need to be integrated into planning for relationalpublic space. These approaches include (a) transdisciplinary approaches to city making; (b) context-specific,people-centred urban development tactics; (c) social space based conceptions of public space and urbancultures to conceptually recover the lived spaces in the city; (d) a focus rather on ‘inclusion through action’(performative, material) then on ‘participation through discourse‘ (communicative, symbolic); (e) alternativedevelopment paths beyond top-down modes of territorial urban restructuring.

3.5 URBAN RESISTANCE. ON INCREASING SOCIAL INEQUALITY.

This section is an attempt to better understand that the current waves of urban protests areinherently linked to rapidly changing structural conditions and the decline of (national) democracies. It offers(1) an insight into youth’s struggles in public space against a new tech- and expert-led gentrification and tracesof a qualitatively new contestation unfolding around the use of public sports grounds. In San Francisco, techworkersfrom the Silicon Valley and related IT areas are not just the new gentry to habit the houses whereformer communities of colour (Afro-American and Hispanic-Americans) have been displaced throughmassive gentrification along the google bus routes, but the city authority also facilitates that new IT relateddwellers (particularly young white affluent men) are offered to ‘hire’ a sports pitch for money, a public spacewhich is already a lived space for young people who grew up using the pitch in an manner inclusive tonewcomers (Maharawal, 2017). This empirical case is (2) discussed against theories that point to the currentconjuncture of post-politics in seemingly democratic societies while emphasizing the omnipresent democraticdeficits of state governance: Rancière (2010, p. 60) states that democracy (…) is the constituent power of“those who have no part – which does not mean the ‘excluded’ but anyone whoever”. Lorey (2014) expandson this thought as a critique of representative democracy as a form of

bourgeois democracy by developingthe concept of ‘presentist democracy’ which she claims has been globally practiced through the principle ofhorizontality in the recent civic uprisings. For her, the modern promise of coming democracy has remainedunfulfilled, as the political democracy remains separated from an achievement of claims of social equality.This debate is transferred (3) to the planning field by elaborating on what Purcell denominates as counterhegemonic planning, by asking: How planners can best resist neoliberalization? For Purcell (2009, p. 141)“democratic resistance to neoliberalism must explicitly and directly challenge the foundations of theneoliberal project”. Purcell (2009) concludes that planners must learn from counter-hegemonic movements’struggles, and must make it their business to actively nurture them, for they offer a way out of the wildernessof neoliberalism: “Reclaiming power through political mobilization is our best hope for creating moredemocratic, more just, and more civilized cities.“ (ibid., p. 160)

3.6 URBAN EMANCIPATION. ON CONSENT AND DISSENT.

This last part connects (1) post-foundational thought in urban and planning theory (Wilson andSwyngedouw (2015, p.6): “in post-politics, political contradictions are reduced to policy problems to bemanaged by experts and legitimated through participatory processes in which the scope of possible outcomesis narrowly defined in advance.” Post-foundational thought characterizes processes of post-politicization withthe following aspects: (a) depoliticization; (b) disappearance of the political; (c) erosion of democracy; (d)weakening of the public sphere; (e) politics of ethnicized and violent disavowal; (f) exclusion and containmentof different political-economic models (ibid). To keep liberal democracy alive—Mouffe (2013) states—,dissent needs to be cultivated within agonistic struggles (by adversaries), to prevent that political passions aremisguided into extremist political forms of agonistic struggles (between enemies). Agonistic struggles are thuspart of the constant renewal of the balance between equality and freedom, whereas antagonisms prioritizefreedom over equality. Current modes of post-positivist planning (3), however, are heavily consensus-based,while dissent is not actively cultivated in planning schools (Purcell 2009). Formal participatory modes ofcommunicative and collaborative planning tend to use consensus-building and majority-decisions, while(in)advertently flattening the contradictory voices of minority or marginalized groups. This situation calls fora more radical and egalitarian democratic thought in planning. Consensus-based liberal planning approacheshave been criticized for they may silence out citizens and leave reasoning about decisions to managers,politicians and experts in processes of multilevel governance. Hillier (2002) has thus been advocating adissent-based conception of agonistic planning, and has simultaneously asked what Mouffe’s agonisticdemocracy would look like at an urban scale of decision-making. Yet while agonistic planning has beenintroduced, the power of public space research to understand the link between politics and passions inplanning, that is a key aspect linking to current everyday life transitions, still remains to be explored in depth.Albeit not new, the claim for a re-democratization of planning as spatial praxis seems all to urgent, as in timesof increasing everyday life restrictions and threats to democratic ways of living “it is a question of a slow, butprofound modification of the everyday—of a new usage of the body, of time and space; of sociability;something that implies a social and political project; more enhanced forms of democracy, such as directdemocracy in cities” (Lefebvre 1988, pp. 86f) that planners do need to engage with. This concerns as wellinnovative ideas about a “definition of a new citizenship; decentralization; participatory self-management(…)—that is, a project for society that is at the same time cultural, social and political” (ibid.).

If there is a new generation of post-positivist planning accounts that actively makes use of arenewed critique of everyday life, then this critique must work to reconnect political, social and culturaltheory to planning praxis, with a strict focus on the ambivalent dialectics inherent in lived space.

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ID 1571 | SYSTEMATIC SHARING OF EXPERIENCES AND KNOWLEDGE OBTAINED IN PILOT PROJECTS

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ABSTRACT: Pilot projects are implemented in order to obtain knowledge and experiences that can be reused lateron – either in other pilot projects, in large-scale projects or even in the legislature. In this paper, we address the question of efficient and effective distribution of insights between pilot projects. We present detailed considerations on the required structures to share the experiences and knowledge obtained by evaluations of the stages of a pilot project. Foremost, a systematic interaction between project participants and a central collection of experience is required. The collection should be publicly and freely available. By establishing such structures, the reuse of existing knowledge and experiences is significantly simplified. A common structure for pilot projects, for example, allows for information sharing between equal stages of pilot projects. Given that the obtained knowledge and experiences of these individual stages are easily accessible, the hampering need to review a comprehensive final project report is eliminated. For future pilot projects as well as large-scale projects, the cost associated with reusing existing experiences and knowledge is reduced and the cost-benefit ratio improves. We exemplify this by investigating systematic information sharing between equally structured pilot projects. To that end, we present the relevant background on knowledge management as well as project structuring – two complementary parts for the success of pilot projects – and contribute their systematic linkage for an efficient and effective reuse of knowledge and experiences.

1 INTRODUCTION

Spatial planning often has to deal with novel challenges where no experiences or knowledge pre-exist – neither specific nor general. In such scenarios, it is common scientific practice to create a model and test a hypothesis on it. Models reduce the complexity of reality and are simplified projections of real systems or issues they help to understand. Simplification is characterized by illustration, reduction and pragmatism. If a developed model turns out to be too simplistic with respect to a specific aspect, e.g. because it abstracts certain aspects too much, it is usually refined. Afterwards, examination is repeated on the more elaborate model that, in turn, might reveal decisive weaknesses in a different aspect. Then, the process is repeated. After the model's accuracy was assessed positively and if obtained results are promising, real-world tests are conducted.

In spatial planning, however, this approach is usually destined to fail as the model cannot be refined to a level that allows for sufficient certainty. Spatial planning activities are always embedded into a socio-cultural environment. They involve many participants that are linked by complex structures. Neither the participants nor the structures can be captured appropriately in a simplifying model. Therefore, spatial planning implements pilot projects – small-scale, short-term real-world studies. They constitute the preferred instrument approach for novel challenges in spatial planning.

Pilot projects are an important research tool in urban and regional planning in particular. For these planning activities, the objective is to reproducibly obtain novel, reusable knowledge and experiences. Within a single pilot project, various regions or municipalities carry out different, individual (sub-)projects in a definite period of time. Academic and/or private institutions scientifically monitor pilot (sub-)projects in order to identify the generally valid results that highly qualify for reuse [Gilcher and Steinebach, 2016a].

The importance of monitoring already indicates the significance of its result: project evaluations. In previous work, these evaluations were presented in a final report that focused on determining the following two aspects:

i. Were the initial (sub-)project goals achieved?
ii. Are there results that can be reused on a larger-scale?

However, our monitoring experience [Gilcher and Steinebach, 2016b] revealed that this overall evaluation of an entire pilot project does not necessarily cause reuse of knowledge and experiences in subsequent (pilot) projects. The final report is a too large unit to share knowledge efficiently. Among the main reasons, we noticed that a comparison of existing final reports with an ongoing (pilot) project is associated with too much effort. I.e. the cost-benefit ratio becomes negative. Therefore, we established a common structure for pilot projects in previous work [Gilcher and Steinebach, 2016a]. This work introduces six stages every pilot project will experience. The common structure already reduces the cost of sharing knowledge. To that end, we aim at intermediate evaluations of projects at the end of each stage.

In this paper, we contribute detailed considerations on the required structures to efficiently and effectively share the experiences obtained by these intermediate project evaluations. Foremost, a systematic interaction between project participants and a central collection of experience is required and the collection should be publicly and freely available.

By establishing such structures, reusing existing knowledge and experiences is significantly simplified – the complete final report need not be reviewed. For future pilot projects as well as large-scale projects, the cost associated with reusing existing experiences and knowledge is reduced causing the cost-benefit ratio to improve. We show that structuring pilot projects into stages and systematically linking them to knowledge management activities is decisive for pilot projects' success to achieve efficient and effective distribution of knowledge and experiences.

2 BACKGROUND

2.1 PILOT PROJECTS IN GERMAN SPATIAL PLANNING

Experimental research in the form of pilot projects is particularly useful if current or potentially future research questions cannot be adequately clarified in a different way. Furthermore, pilot projects are initiated for urgent current challenges in order to develop transferable solutions for other regions or municipalities facing the same issues. They are specifically designed for such a challenge and evaluated with respect to it. In order to do so, a detailed evaluation is carried out to determine whether the originally defined objectives have been achieved and whether the results can be reused on a larger scale. Pilot projects differ from classic product- and result-oriented research assignments that primarily include a reflected conception and systematic preparation as well as evaluation of existing experience knowledge. In contrast, pilot projects support the process-accompanying analysis of research questions and objectives, implementation strategies as well as the realization of measures. Thus, pilot projects are rather process- than product-oriented.

Within a single pilot project, various regions or municipalities carry out different (sub-)projects in a definite period of time. During this period, the exchange of experiences and knowledge between the participants of the pilot project as well as a reporting of current pilot projects is organised. In this way, the process orientation is evident. The selection of pilot projects aims to ensure a preferably safe generalizability and transferability of the obtained results to other regions and municipalities with similar challenges [Steinebach, 1992; Wiechmann et al., 2012; Gatzweiler and Runkel, 1997].

Academic or private institutions scientifically monitor pilot projects in order to identify these generally valid and thus reusable results [Gilcher and Steinebach, 2016a]. Continuous evaluation of the activities implemented in the (sub-)projects is most important. Therefore, cooperation between science and the executing local stakeholders is a priority task. The role of academia is strengthened compared to established conception processes of the federal government and the federal states of Germany [Einig, 2011].

In previous work, we identified a common structure for pilot projects to efficiently share knowledge [Gilcher and Steinebach, 2016a]: identification of a novel challenge, project initiation and public bidding, applications of potential participants, evaluation of applications by the initiator, execution, final evaluation.

Each stage of a pilot project is briefly described in the following in order to conclude a first contribution of this paper: a pilot project's lifecycle resemble the non-iterative waterfall model.

1. (Identification of a new challenge) The federal government or states apply pilot projects if a novel challenge of spatial planning is identified and its research questions cannot be answered in a different way. Such a kind of challenge is characterized by a significant impact on spatial planning, e.g. demographic change, economic structural change, sustainable development, climate change and climate protection as well as environment protection. These challenges have several consequences at federal, federal state, regional as well as municipal level and solutions to rise to them have to be found [Gilcher and Steinebach, 2016a].

2. (Project initiation and public bidding) The application process consists of two stages. In the first stage, meaningful project outlines have to be submitted for each project proposal. The received project proposals are evaluated according to various criteria – e.g. quality of the approach, innovativeness, qualification of the partners, application potential, applicability of the results for other German municipalities as well as transferability. The received and peer review-enabled project proposals are evaluated according to the listed criteria, potentially with the help of external reviewers. Based on the reviews, the project ideas deemed appropriate for funding are selected. In the second stage of the application process, the promoter asks the applicants of positively evaluated project proposals, to submit an official application for funding. In a final evaluation, it will be decided if the project is to be funded [Gilcher and Steinebach, 2016a].

3. (Applications of potential participants) A pilot project public bidding attracts many applicants from the various stakeholders that are envisioned to take part. Depending on the public bidding, it is possible that stakeholders apply individually or in groups [Gilcher and Steinebach, 2016a].

4. (Evaluation of the applications by the initiator) The initiator evaluates the received applications on the basis of various criteria. Most important among them are an application's innovativeness in the proposals to cope with the novel challenges researched in the project. Furthermore, if the municipality can serve as a comprehensive example [Gilcher and Steinebach, 2016a].

5. (Execution) During the execution of the pilot project in the selected municipalities, research questions are examined and strategies as well as measures are implemented. To ensure the process-orientation, a collaboration of the participants, an exchange of experiences between collateral pilot projects, and a continuous communication of running pilot projects to an expert audience take place [Gilcher and Steinebach, 2016a].

6. (Final Evaluation) A pilot project is completed by a final presentation and a final report written by the academic or private institution entrusted with the scientific monitoring. Furthermore, generally applicable criteria have to be identified and transferred to large-scale problem solutions.

These stages are in a sequence and each stage is executed only once during the life of a pilot project. I.e. unlike the refinement of a model in other scientific fields, no iteration takes place within a single pilot project. Thus, the lifecycle of a pilot project resembles a waterfall-model. The waterfall model was first defined by Dr. Winston Royce in 1970 in the context of software development [Royce, 1970]. However, it is more generally applicable and its fundamental insights on sequential, non-iterative processes are transferable to other scientific disciplines such as the urban and regional planning context of this paper. The model takes its name as the progress is seen as flowing steadily downwards (like a waterfall) through the different stages (figure 1). The number of stages varies depending on the project, but there is a clear

transition from one stage to the next that appears if a stage is finished. Thus, requirements for the next stage are known before entering it. Each stage has a predefined start and end point and proceeds in order without any overlapping. Originally, feedback to previous stages of the process may only be applied to the immediately preceding stage, yet, in spatial planning's pilot projects this is not the case. As this is a linear model, it is easy to implement and thus many projects besides software development and spatial planning contexts follow this waterfall lifecycle model. A further benefit is the minimal amount of resources required for its implementation as it is neither iterative nor has overlapping stages. For pilot projects, this also allows for different stages to be executed by different stakeholders as outlined in the brief descriptions above. However, these two properties also impose weaknesses. Foremost, the waterfall model is unsuitable for projects with many unpredictable factors that require more flexible adaptations. Furthermore, errors in early stages are oftentimes only visible at the end of a project – another fundamental similarity between pilot projects and the development of systems that we utilize for this contribution.

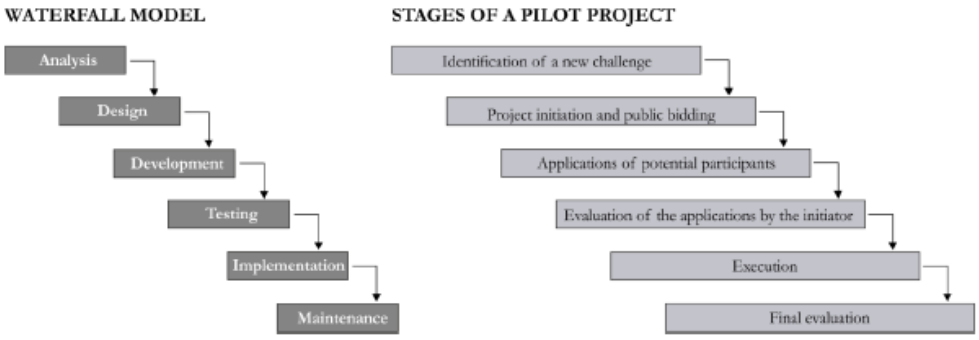

Figure 1: Waterfall lifecycle model. Its original context is the development of software systems, yet, the lifecycle model's properties also hold in pilot projects that are structured into self-contained stages, too.
Source: Own illustration, based on [Royce, 1970].

3 KNOWLEDGE MANAGEMENT

The main aim of pilot projects is the reusability of previously obtained experiences and knowledge in future (pilot) projects as well as spatial planning practice and potentially even legislation. However, so far the existing experiences and knowledge are not saved in a format or a central place that allows for efficient and effective sharing. The final report is a too large unit to efficiently share knowledge. Comparison of existing final reports with an ongoing pilot project's setting is associated with too much effort. I.e. the cost-benefit ratio becomes negative. Therefore, the reutilisation of the experiences and knowledge is not guaranteed. Therefore, we aim to develop a structure to store knowledge and experiences centrally and to make it easier available. The established stages of a pilot project process are one part of the foundation to achieve this goal. In the following, we turn to the second part that is crucial in our context: knowledge management. It consists of the three fundamental aspects (a) knowledge, (b) knowledge management, and (c) the knowledge management process. We first define these and then contribute their integration into the waterfall lifecycle model of pilot projects in Section 4.

a) Knowledge is defined as facts, information, and skills acquired through experience or education. Furthermore, knowledge is the theoretical or practical understanding of a subject. It is an immaterial good, whose value is increased through use and sharing. Thus, it can only be assessed in retrospect. It is more complex than unvalued information and cannot be easily stored and processed due to these factors defining its value.

Various kinds of knowledge can be differentiated. They are designated by contrasting conceptual pairs. These are e.g. implicit and explicit, demonstrative and intuitive, individual and organisational. In the case of knowledge management, the differentiation in implicit and explicit knowledge is the most significant. Implicit knowledge is not publicly accessible individual knowledge that it is only accessible to the organisation. Generally, accessible knowledge is referred to as explicit knowledge.

b) Knowledge management tries to turn implicit knowledge into explicit knowledge and vice versa. Hence, we share this goal with knowledge management. It demands structured dealing with the development, distribution and utilisation of knowledge. In current times, efficient and effective processes implementing these management tasks are ever more important as the amount of knowledge increases rapidly but also

becomes obsolete faster. Furthermore, a stronger trend towards specialization in professional environments requires adaptable and convertible knowledge. Basically, the resource knowledge should be consciously used as a capital to realize competitive advantages.

Theoretically, the implementation of knowledge management promises various advantages that we also aim to achieve for pilot projects: less effort for searching knowledge; better application of existing knowledge; more time for generating novel ideas and innovations as reliable foundations are reused; better internal and external communication; quicker project activities and better collaboration with partners by transparency of structured and current knowledge. The actively pursued tasks of knowledge management are the expansion, utilisation as well as protection of knowledge in an organisational unit. These processes take place on a superior meta-level. In spatial planning these levels are nationwide, regional, municipal or – as in our forthcoming example of sharing between two consecutive pilot projects – project-based.

c) As in every planning and implementation process, four fundamental aspects have to be observed in knowledge management: purpose definition, situation analysis, deduction of measures based on a nominal-actual-comparison, and a success monitoring Note, that we can find these four aspects reflected in our six stages of a pilot project as well. Probst, Raub and Romhardt differentiated these four aspects in order to implement phases of knowledge management [Probst et al., 1999]. Their method of knowledge management includes eight phases, six of them form the key process of knowledge management. Two phases build an orienting and coordinating frame of this key process. The division of the key process of knowledge management is briefly explained in the following as well as depicted in figure 2 (cf. denotation in parentheses). This is the foundation to integrate the phases of knowledge management into the pilot project lifecycle.

(knowledge objective) The first step is the definition of knowledge goals. They state, which abilities should be established on which level. Normative (influencing the business culture), strategic (aim for future competence requirements) and operative (target on specific implementation) knowledge goals can be differentiated.

(knowledge identification) The identification of knowledge aims on getting an overview of internal and external data, information and skills.

(knowledge acquisition) Knowledge acquisition means the acquisition of external knowledge carrier or even the acquisition of knowledge products like e.g. software or patents. In this way, the own body of knowledge can be extended. Thus, existing knowledge gaps can be closed and the setup of future or current required competencies accelerated.

(knowledge development) Knowledge development is an additional phase to knowledge acquisition. The knowledge that cannot be covered by the acquisition of knowledge has to be developed internally.

(knowledge sharing) Knowledge has to be divided and distributed, if it should be used consciously or unconsciously. But knowledge should not be distributed randomly. Groups or individuals should rather have an access to that knowledge relevant to their specific task.

(knowledge utilisation) Knowledge utilisation is the productive application of organisational knowledge.

(knowledge preservation) To obtain valuable experiences, a process of selection has to be created as well as appropriately saved and updated afterwards.

(knowledge evaluation) The evaluation of the achievement of the knowledge goals is the focus of the last step.

It is suggested in [Probst et al., 1999] that these phases are processed in a circular flow, starting with the definition of the knowledge goals. The results of the knowledge evaluation are then feed back into the knowledge objectives. In reality, the individual phases are strongly interconnected (see figure 2), i.e. a multitude of different orders of these phases is possible. We will use this degree of freedom when we incorporate knowledge management into the phases of pilot projects. This is in particular necessary as the waterfall lifecycle model is non-iterative. I.e. we cannot feed back into the objectives of the same project. Thus, we will focus our illustration on the sharing of knowledge between two consecutive pilot projects.

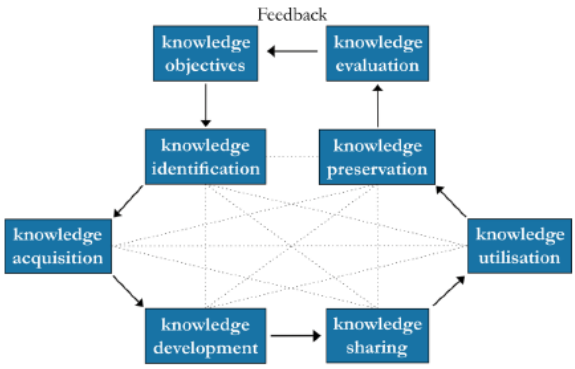

Figure 2: Phases of the knowledge management process. Source: Own illustration, based on [Probst et al., 1999].

4 STRUCTURE TO EFFICIENTLY SHARE EXPERIENCES AND KNOWLEDGE OBTAINED IN PILOT PROJECTS

The goal of our work is to provide means to centrally store (preserve) and efficiently share experiences and knowledge obtained in a pilot project. To achieve this, we aim to create a novel structured approach, derived from the stages of pilot projects' common waterfall lifecycle and the phases of knowledge management. To that end, we also identify the parts of knowledge management that need to be transferred into a central, external and independent infrastructure being accessible to any pilot project. We start with an analysis of the management process that is targeted towards the requirements of pilot projects.

The definition of the knowledge management process has various strengths. It structures this management process into logical phases that can be taken within the stages of a pilot project. Moreover, it offers approaches for interventions and it provides a proven search grid for the causes of so-called knowledge problems – two further features that can be used by pilot projects. At the same time, it is emphasized that the individual phases interact with one another and that phases of the process may not necessarily be considered isolated. As pilot projects are non-iterative and have a definite end, we will investigate this last aspect in order to preserve knowledge beyond a pilot project's life. In this context, the planning principles and processual method in spatial development processes have to be the focus. Therefore, the stages of a pilot project are the guiding principle for the integration of the lifecycle of knowledge management.

Knowledge management is a cross-sectional task that undergoes all stages of a development process – in our context, this is the development and execution of a pilot project captured in the waterfall model. The organisational structure of the development process has to support activities that identify, share, use as well as preserve and evaluate relevant knowledge and experiences. In a pilot project, these tasks may be split between the different participants, depending on the current phase. For example, all the tasks need to be executed by the project initiator in stage 4 (Evaluation of the application by the initiator). Yet, in stage 5 (Execution), the scientific monitoring should be responsible for identification and evaluation and the pilot municipality should accomplish use of existing knowledge. We propose that preservation and sharing are to be provided by a central, external and independent infrastructure.

To achieve this in an efficient and effective way, several aspects have to be considered. Identification of knowledge is currently the most time-consuming task. A structured and consequent approach to this challenge, pursued from the start, may extend the initial phase of the project implementation. Holistic approaches are necessary, if knowledge should be handled in a structured way. Punctual activities are not effective. The organisational structures – planning and project implementation processes – must allow a structured handling of knowledge. If knowledge and information are easily accessible for the planning and project implementation, this potential drawback can be mitigated.

Until now, the elements of knowledge management were only deployed in the final stage of pilot projects when the projects lifecycle reached its end. I.e. its unit of operation was the project's final evaluation report. It is the final evaluation report's purpose to identify, distribute and preserve the knowledge and

experiences gained in the pilot project. This procedure was supposed to ensure that these have after-effects on planning practice and were transferred to municipalities that strongly resemble the pilot municipality. However, observations of current pilot projects [Gilcher and Steinebach, 2016b] reveal that existing knowledge and experiences are not necessarily used effectively and efficiently. Comparison if the extensive evaluation report of a previous pilot project with a current one corresponds to the time-consuming knowledge management phase aiming to identify internally or externally available knowledge. Given the definite duration of a pilot project that causes time restrictions and the lack of automation to assist with this task, this phase cannot be executed exhaustively. Knowledge and experiences remain unrecognized and are often just taken into account later, e.g. in the final evaluation of the current pilot project. Therefore, we propose that each stage of a pilot project undergoes its individual knowledge management process. This is possible, as the stages of a pilot project are strictly separated from each other and proceed in one direction of succession – i.e. we make use of the properties of the waterfall lifecycle model and the fact that each phase ends with an evaluation. The advantage of our proposition is that only small parts of the pilot project lifecycle have to be completed before the obtained knowledge and experiences can be stored and shared. When smaller units of a pilot project undergo the process of knowledge management, knowledge and experiences gained in a single stage can be collected, stored and shared. These smaller units of information are also easier to compare and thus the knowledge identification, acquisition, and utilisation become a less time-consuming task. Therefore, their potential to be reused in future pilot projects as well as further planning practice is improved as the cost-benefit ratio improves significantly. This also allows reuse of current insights as the pilot project providing them need not be terminated yet.

The development of this structure, integrating the phases of a knowledge management process into the individual stages of a pilot project, is key to achieve this goal. Figure 3 illustrates the structure on the example of two consecutive pilot projects. Pilot project 1 integrates parts of a knowledge management process (blue) into its project stages. Relevant phases to be executed are knowledge objectives, knowledge identification knowledge acquisition (for the purpose of presentation this is assumed to be internal only), knowledge development, and knowledge evaluation. These phases have been rearranged to suit the pilot project's stage. Most importantly, the two phases knowledge preservation and knowledge sharing have been moved into a novel sharing infrastructure that exists outside of and thus independently from the pilot project's lifecycle. It is supposed to persistently store the results of knowledge evaluation and potentially knowledge development, too. This central infrastructure should be used by all pilot projects for knowledge preservation and knowledge sharing. This is illustrated by the consecutive pilot project 2. It has its own knowledge management process (green), uses the central infrastructure. Most importantly, the knowledge utilisation if pilot project 2 should use results from pilot project 1. Moreover, knowledge identification and acquisition can make use of the centrally available source for knowledge and experiences for this stage of a pilot project. This scheme repeats in every phase of the waterfall lifecycle (not depicted).

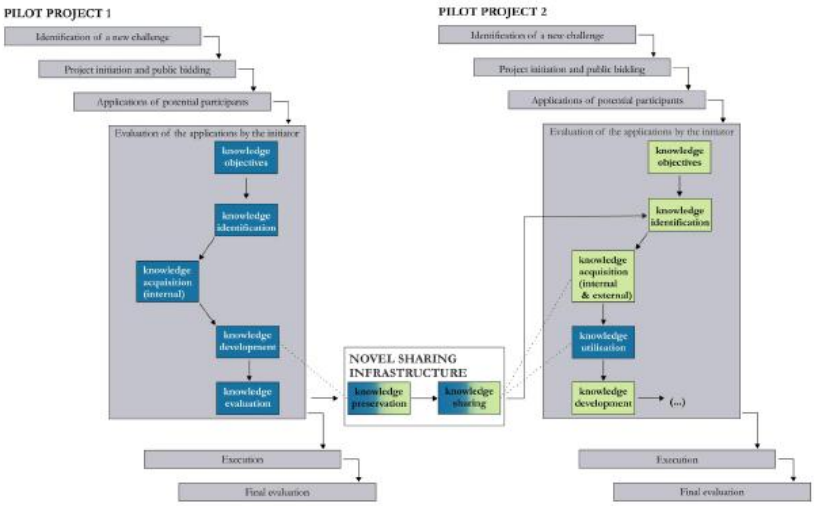

Figure 3: Integration of knowledge management into the waterfall lifecycle of pilot projects.
Source: Elena Gilcher.

5 CONCLUSION

In this paper, we identified the lifecycle of a pilot project to correspond to the waterfall lifecycle model of development projects. This categorisation of the proceedings of pilot projects allows for reuse of known properties of a waterfall lifecycle. Most notable is the non-iterative nature of these projects that manifests in non-overlapping subsequent stages that do not incorporate feedback. As we aim for the efficient and effective sharing of knowledge and experiences, the latter property is very important. It contrasts to the fundamental feedback step of the knowledge management process we propose to integrate into pilot project stages. To that end, we present the concepts to overcome this mismatch and to integrate knowledge management into the lifecycle of pilot projects. As mentioned, this integration repeats for every stage in order to reduce the unit of sharing from a comprehensive final project evaluation report to smaller pieces of information. This should reduce the effort of knowledge identification, acquisition and utilisation. I.e. it improves the cost-benefit ratio of these steps of knowledge management and makes them attractive for pilot projects. In this paper, we presented the required background and contributed a theoretical solution for this integration of knowledge management into pilot project stages. Moreover, we exemplified the knowledge preservation and sharing via a novel, external sharing infrastructure on the example of two consecutive pilot projects. In the future, we aim for investigation of benefits of digitalisation and automatization to further simplify the tasks knowledge identification and acquisition. We plan to implement our concepts in a small scale and test it on data from pilot projects we monitored in the past.

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ID 1598 | PLANNING ETHICS IN MAJOR TRANSPORT SCHEMES: REFRAMING THE CHALLENGE

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1 INTRODUCTION

This paper revisits the various visions of justice in transport planning, with a focus on major schemes, and the role played by transport planners. Whereas extensive discussion has taken place in the case of urban schemes affecting particular communities, less attention has been paid to major planning concepts at the

metropolitan, regional, national or international level, beyond the well-known discussion on ´´megaprojects´´.

The paper elaborates on the merits and limitations for transport of the distributional, participatory and social/recognition dimensions of justice, and their disappointing limited influence in decision making at these planning levels.

The paper opens in section 2 with a description of the various perspectives of justice in contemporary political philosophy, and how they have been received by the planning community within the general discussion on planning ethics. Section 3 reviews the differences of transport with other dimensions of spatial planning, and suggests that its comparatively high degree of autonomy facilitates the analysis of the planning cycle in this sector. Section 4 analyses different approaches to justice from transport planning, highlighting their similitudes and differences compared to other planning sectors, and advances a conceptual framework for the analysis of justice in transport planning. Section 5 applies this framework to three case studies: the Trans-European Transport Network, the Spanish National Transport Plan 2005-2020 and Madrid Chamartín redevelopment project2, defining their respective decision-making environment, the prevailing justice concept, and the legitimation process for the planning concept. Section 6 concludes suggesting that, although far from being mainstreamed, transport planning is making efforts to assume its complexity, and to adapt its practice to the interrelated justice requirements at the normative (procedural), descriptive (distributional) and cultural (recognition and participation) levels. A pragmatic practice is emerging, probably as a reaction to increasing criticism from the economic community (which attempts to address transport from the classical utilitarian approach) on the one side, and to unsatisfactory results of the autonomous practice, on the other side.

2 PLANNING ETHICS AND JUSTICE

In her extensive review of how ethics are being integrated within planning practice, Hendler (1995) suggests that planning ethics “is based on notions of inclusiveness, communication and equity”. These notions can be seen as a reflection of the evolution of contemporary discussion on justice within political philosophy: the “political turn” from Rawlsian’s distributive justice to Young’s or Fraser’s widening of justice to political participation and communicative action, and the “cultural turn”, to take into account the challenges of an increasingly multicultural and global context. (Benhabib, 1992, Agra, 2008).

From this perspective, equity has been mainly associated to distributional justice, along the traditions of the liberal and the communitarian approaches to the distribution of goods. For the liberal approach, equity is mainly dealing with equal opportunities, so that everybody can have the opportunity to gain access to competences and means acquired through education and other public goods; inequalities as justified as long as they result in a social benefit, with a priority for those that are worse off. As we will see, distributional justice understood as “accessibility to” provides an appealing justification for transport planning to understand itself as a facilitator of distribution, by taking “accessibility” from a purely physical basis. The communitarian criticism to the liberal concept of justice in Rawls and Dworkin as a good with a priority to other goods, and the need to adopt a broader perspective based on the social background of the self (Taylor, 1991).

The position of the critical theory towards distributive justice is partly anticipated by the communitarian perspective. As Walzer (1983) puts it, the objective of justice is more related to domination than to inequality. Incidentally, Walzer’s view of distribution of different goods in their own “spheres” has been appealing to transport planners, eager to keep the autonomy of their discipline (Martens et al, 2012). However, the enlargement of the concept of justice is more ambitious in I.M Young (1990), as she points out three dimensions not considered by the distributional paradigm: structures and procedures for decision making, division of labour, and culture; the ideal of justice would therefore be liberation, rather than equity. Young’s criticism towards the distributional paradigm is shared with N. Fraser (1997): the challenge is to address the ideals of redistribution with those of social recognition, and this can be made through parity of participation.

The challenges of social recognition can be difficult to accommodate with those of economic distribution. The focus on minority groups can be seen as independent and not conflicting the distributional paradigm

(e.g. Kymlicka, 1995). Groups' specific rights have also been inspiring transport planners' criticism of the "average user" paradigm and the customization of the transport system to different social groups.

This quick review has put in evidence three major components within justice: the distributional, the procedural, and the social-cultural. All of them have informed planners' approaches to justice. Uitemark and Nichols (2017, p.38-39) provide a simplified overview of these approaches, along two variables: on the one side substantive conception of justice and on the other side, engagement with communities. The first variable would differentiate among planners focusing on procedure (e.g. the traditional rationalist approach to planning or alternative approaches such as collaborative planning), and those with a strong substantive conception of justice (e.g. the Fainstein's (2010) views on "the just city" or Soja's approach to advocacy planning). Likewise, the second variable would relate to the relationship between planners and marginalized communities, particularly on the leading or supporting role of the former vis-a-vis the latter.

The nature of planners' engagement with communities raises the debate on the actual relevance to be given to the views of the marginalized, at the core of the well-known controversy between Habermas and Foucault. From Habermas's perspective, the merits of the "archeology of knowledge" practiced by Foucault to understand the Lifeworld would be dubious: the position of the marginalised, of those without power or conventional knowledge- so important for Foucault- does not provide particularly valuable components for sound social criticism, as Habermas sees it (Cusset, 2007). The justifications of planners have been twofold: on the one hand, on the basis of the virtues of "local knowledge": in spatial planning, the locals have a particular insight of the social-place relationships that cannot be replaced by technical knowledge, no matter how specialized (Innes, 2004); on the other hand, on the basis of providing a fair balance to a communicative process in which marginalized groups would not be recognised, and would have difficulties to properly participate in the conversation (Healey, 2006).

Notwithstanding these controversies, the case emerges for convergence in practice among planners initially inspired by different views of justice: those with a focus on distributive issues, which could be translated into regular technical tools, for example through a revised concept of the public interest beyond utilitarianism (in the footsteps of Amartya Sen); those with a normative focus on the reform of decision-making institutions and procedures, and those primarily interested in their involvement with marginalized groups through a variety of tools and mechanisms. The prospects for this pragmatic convergence can be better explored within the particular (and maybe parochial) realm of transport planning, as a relative isolated field where these approaches can be better described and analysed.

3 WHAT MAKES TRANSPORT DIFFERENT IN SPATIAL PLANNING

The transport has traditionally enjoyed wide autonomy within the realm of public policies, and has consolidated a particular approach to the planning cycle, compared to spatial planning at large and also with other sectors of public policy strongly linked to physical space, such as water management or energy.

A variety of factors can be mentioned for this autonomy. In first place, the technical/engineering intricacies of the transport system, which makes it easy to engineers to monopolise any discussion by putting forward technical feasibility issues. Technical specialization facilitates the justification for a separate, specialized governance and institutional framework. In some cases, dedicated tax funds or regulations provide the bulk of the funding necessary for system operation, consolidating this autonomy.

This is not to say that the autonomy of transport planning has not often been challenged from different fields. In Western Europe, spatial planning made repeated attempts in the post-war period (1940s-1970s) to integrate transport within a comprehensive planning approach on the basis of optimizing public policies for regional development. In the 1980s, environmental critics suggested to subsume transport within broader public policies favouring sustainable development. More pervasively, critics from the economics field have stressed the virtues of applying the concepts of micro and macro-economics to transport, and to base transport decisions on the same grounds than for any other public policy related to the economy. These critics have stressed the (economic) inefficiencies of decision-making in transport and the virtues of addressing an increasing number of topics in the sector through standard market solutions (e.g. Button, 2010).

Transport has accommodated to critics by developing new micro-disciplines within the sector, sometimes with remarkable success: transport geography emerged in the 1950s with a focus on spatial accessibility; environmental transport studies have flourished with specialized tools for environmental analysis and assessment; transport economics have developed as a specialization in the study of the specificities of transport markets; even social studies have resulted in increasing specialization on the mobility behaviour of particular social groups.

As transport expanded as a discipline, so did the institutional and governance framework, with a variety of governmental agencies, special interest groups, cooperation platforms, and participatory forums. It cannot come as a surprise that this complex network of stakeholders have often been keen in presenting justice as one of the relevant outcomes of transport policies, together with efficiency and development: as a community of interest (and of knowledge) consolidates and gains autonomy, it turns to recognize itself as one of the "spheres of justice" in Walzerian sense.

In fact, justice has gained relevance as the autonomy of transport was challenged on efficiency grounds. Not surprisingly, the ambition for further expansion and sophistication of the transport system was confronted in developed countries since the 1970s with growing evidence (pointed out by economists and also environmentalists) of poor economic returns compared to the investment required. In many cases, schemes moved forward on the basis of justice-related justifications. In most cases, justice is mostly understood as a distributional concept, and "accessibility" is taken as the key public good to be distributed. A participatory concept of justice has also been push forward to justify the involvement of additional social agents in the decision-making process, usually interested in the implementation of apparently inefficient schemes.

Astonishingly, the transport system is sometimes understood by its most enthusiastic supporters as a marginalized subject deserving fair treatment. This position has been explicit in discussions on "value creation" and "value capture", basically supporting the idea that any value created by the transport system (e.g. by the construction of a new infrastructure) should be dedicated to further improve the transport system.

As a result, it can be said that transport has navigated relatively safe the troubled waters of sharp criticism to the role of public policies that have dominated the last decades. In principle, transport policy seemed quite defenceless to the point made by the public choice theory (Niskanen, 1994) about the inevitable trend of most public policies to ever-increasing costs as a result of the ambition of bureaucrats to expand their power, and the willingness of the public to support further public investments to rip their localised benefits while spreading the costs among all taxpayers. Elaborating on a narrow, purely sectoral concept of justice, transport policies received support from many stakeholders. Obviously, the internalisation of justice in transport pays the price of forgetting the comparative virtues of other (or a combination of) public policies to better serve justice. What is interesting for the scope of this paper is to analyse the various ways followed in this internalisation process, and to see how it works in practice. This should facilitate any broader discussion on justice in planning.

4 COMPETING APPROACHES TO JUSTICE IN TRANSPORT PLANNING: AN ASSESSMENT FRAMEWORK

A distributional approach to justice in transport has to answer first to the question of which is the public good(s) to be fairly distributed. In this regard, one well-known discussion among transport planners refers to the differentiation among mobility and accessibility and their respective merits to be considered as public goods. Mobility would be a people-centred concept, referring to the ability of people to change to other places: safety, quality (speed, comfort) and affordability would be key mobility traits from an equity perspective. Accessibility would be a place-centred concept, referring to the facility for one particular place to be reached from other places.

Both concepts are strongly interrelated, and connected to the concept of the transport system as a network (Dupuy, 1991); the personal traits usually associated to mobility would be mainly associated to the requirements for the use of the network (fares and other conditions for use-e.g. owning a driving license-, schedules…); the place-related traits associated to accessibility would refer to the topological and

technical characteristics of the network. Obviously, mobility and accessibility interact as people and places do: whenever people are distributed in particular places and have interests in conducting activities in other places, they may find that their needs are well or poorly served by the transport system).

Di Ciommo and Lucas (2014) provide an inspiring assessment of equity in transport policies. The case study refers to a road-pricing concept to be implemented in the main orbital motorway in Madrid and the resulting gains and losses in accessibility, due to the different disposable income of residents in different parts of the metropolitan area. Lucas et al. (2016) further elaborate on the use of accessibility indexes in the way economic assessment is currently done, providing an "equity assessment" that could be compared to current utilitarian cost-benefit analysis.

The procedural approach to equity in transport would focus on current governance in transport. The analysis of governance in transport has been particularly active from an environmental perspective. In the last decade, the introduction of compulsory Strategic Environmental Assessments (SEA) for certain plans and programmes in the European Union raised significant discussion on the needs for normative reforms in transport planning. A similar interest has arisen in the last years based on the challenges of sustainability and the achievement of the climate change mitigation targets set up at the Paris Summit (COP22). An early and optimistic reflection is provided by Lawrence (2000), showing the potential of environmental assessment procedures to integrate a disparity of concepts and theories in a flexible way; justice-related concerns could therefore find a favourable framework for formalization through environmental assessment procedures. Sager (2009) draws a dimmer picture, stating how the dominance of the neo-liberal paradigm is driving public policy processes throughout Europe back towards a purely utilitarian, efficiency-focused approach, and is transforming the citizen back into a mere customer, a consumer of transport services. A more recent review of procedures in transport planning is provided by Gudmundsson et al (2016), and is related to the need to reform transport planning procedures in order to cope with sustainability challenges and, particularly, with climate change mitigation. The review of the governance system in transport concludes on the need to reform the current dominance of powerful actors, and the need to open up procedures to other policies, overcoming the current isolation and lack of accountability.

The social/cultural perspective of justice can be approached from the perspective of the involvement of marginalised groups, and the relationship established between planners and these groups. The evidence shows a growing presence of reference to "at risk" groups in policy rhetoric. The identification of marginalised groups seems to be unequal, with generalised presence of references to gender issues, and some focus on people with reduced mobility, children or the elderly, whereas considerations to more specific groups, such as those based on low-income, cultural background or lone parents, are less frequent. Elvy (2014) provides a review of 32 Local Transport Plans in Britain, concluding that current efforts to get marginalised groups involved in transport policy are far from satisfactory. Not surprisingly, the consideration of marginalised groups at the regional or national planning level is still scarcer, for the time being.

A framework for the assessment of the consideration of justice within existing transport policies can be established based on the three perspectives of justice presented above, so that they can be explored in each case study. The distributional perspective would focus on the identification of the "public good" provided by the transport policy and deserving distribution, and the place- or people-focus in the consideration of that public good. The procedural perspective reviews whether potential equity-sensitive procedures (mainly SEA) have been followed, and whether other already existing or ad hoc procedures have also been used, as well as whether the transport policy has resulted in a revision and formalisation of procedures. The socio-cultural perspective takes into consideration the identification of marginalised groups, the level of detail in their definition and the approach to integrate the interests of these groups: from top-down approaches without participation to empowering strategies, advocacy approaches or insurgent actions. Finally, an additional analysis category is set up to assess the degree of openness of the transport sector to other public policies as a result of the planning exercise.

5 JUSTICE IN TRANSPORT PLANNING PRACTICE: THREE CASE STUDIES

The case studies selected for this review refer to transport planning at three different scales: European, national and metropolitan. Although not necessarily representative of currently prevailing planning

practices in Europe, they provide useful evidence of the challenges and difficult options planners have to make in the transport sector.

The first case study refers to the approval process that led to the adoption of the revised guidelines of the Trans-European Network for transport (TEN-T) in 2013 (EU, 2013). The revision started with three technical working groups, put in place to provide a sound methodology for the exercise. The revised TEN-T guidelines, approved in 2013, managed to reduce the ambition of the original TEN-T by selecting a reduced or core network, with 2030 as horizon for completion. This reduction served to liberate the EU from getting involved in projects of a purely regional interest, as had been the case in the past, and received sharp criticism from those considering TEN-T as a key policy for regional development. The new TEN-T guidelines provided some additional requests to member states, for critical aspects that- surprisingly- had not been addressed at the European level, including the need for strategic environmental assessment, network vulnerability and adaptation to climate change and contribution to mitigation of greenhouse gas emissions. The new planning narrative strengthened the "transport efficiency" rationale whereas the previous focus on accessibility and territorial cohesion seemed to be relegated. Otherwise, the new planning narrative remained lacking any ambition on the improvement of the planning process itself. The obvious limitations in terms of access of stakeholders to the deliberative process, lack of formalization of consultation and isolation with respect to other policy fields were not even mentioned (Aparicio, 2017).

The Spanish national transport plan 2005-2020 (Plan Estratégico de Infraestructuras y Transporte, PEIT) was presented as an opportunity to replace the short-term programming without formal participatory and approval procedures with long-term strategic planning based on a collaborative, formalized approach. The plan was successful in establishing a consistent methodology, which was subsequently followed by the plan approved by the new government in 2015, and served to introduce SEA in national transport planning, but failed in consolidating a formalized planning procedure (Aparicio, 2007).

Madrid Puerta Norte (MPN) is an ambitious redevelopment project in the north of Madrid, first proposed in 1994. The redevelopment area includes one of the main railway stations in the city (Chamartín) and other public land (such as the depots of the municipally owned urban bus company, EMT), and the northern section of the urban motorway M-30. The total surface involves more than 3 million m2, mostly dedicated to office space. Some densely populated (and mostly low-to-medium income) neighbourhoods within the area or in its vicinity will be deeply impacted by the scheme. The planning concept has been changed at several stages and not agreement has been reached yet among the main stakeholders: the railway company, the real estate developer in charge of the scheme, and the municipality[1]. Transport plays a major role in the project, as the functionality of the railway station for commuter and long-distance trains imposes major limitations on land requirements and what can be done in the vicinity of the terminal, and the impressive addition of office space creates new accessibility pressures on the area. Furthermore, the developer's vision of the area as prime office space raises concerns on social segregation and future displacement of residents and activities. The character of the M-30 section in the area (to be maintained as a motorway, with increased capacity to accommodate additional traffic demand or to be transformed into an urban arterial, giving priority to public transport as main access to the new office space) is another point of controversy. After significant reduction in the amount of office space and high-level housing, and prioritization to certain facilities for current residents, an agreement among stakeholders is expected by the end of 2017.

The table below summarizes the main justice-related components in the three planning processes.

[1] http://distritocastellananorte.com/en/

	TEN-T	PEIT	Madrid P.N.
Distributional perspective	Focus on efficiency and transport operations. Mobility (people and goods) as a public good. Justice-related challenges such as distribution of EU funds, improvement in access to markets for peripheral regions, reduction of accessibility gaps among regions with a trans-border focus.	Focus on accessibility (place-based). Attempt to define a people-based accessibility concept based on sufficiency, not accomplished. Fair distribution of national transport funds among regions. Avoiding transport subsidies to those better off.	Focus on economic development, and railway expansion. Trickle- down economics. Mixed land uses expected to avoid displacement. Quality of life expected to increase for all (newcomers and residents). Distribution of benefits partly dedicated to public space and transport facilities.
Procedural perspective	Formalised EU "co-decision" procedure, complemented by participatory channels (workshops, working groups…) for selected stakeholders. SEA not undertaken. Basic objectives and scope of the revision process decided at the highest political level. Key stakeholders: national governments, European Parliament and European Commission. Interested regions and socio-economic agents through Committee of the Regions and European Economic and Social Committee.	Ad hoc procedure defined by the government, including SEA. Follow up procedure for plan implementation defined. However, these procedures are not formalised. Key stakeholders: national and regional governments; key transport and construction agents.	Formal procedure established in land-use legislation. Participation: increased public participation lately encouraged by mayor. Key stakeholders: private developer, railway company, municipality. Other agents include other land owners, local economic associations, professional councils and residents' associations.
Socio-Cultural perspective	No identification of potentially marginalised groups.	Marginalised agents poorly identified (e.g. environmental NGOs); no particular action with marginalised social groups.	Residents generally lacking public support and self-organizing on a voluntary basis. Particular marginalised groups poorly identified, if at all.
Transport Autonomy	Limited interaction with other EU or national policies. Autonomy is reinforced.	Transport autonomy reduced due to (1) plan formally approved and (2) SEA requirements	Transport autonomy limited by the global concept, although major options proposed by transport planners are seldom challenged.

Table 1 – Assessment of the case studies

As a summary, it can be concluded that the three processes show pervasive difficulties to contain the tendency of transport to high autonomy with respect to other public policies and needs. The three case studies provide different approaches to justice (on distribution in the first case, on procedure in the second case and on participation (in the sense of increasing the consensual basis) in the third case, but it can be said that an effort to better identified the justice challenges at stake can be perceived, and is facilitated by the requirements imposed by the formalised procedures set in place, and the planning effort gains in legitimacy compared to the previous situation. However, the planning process seems still far away from the identification and involvement of marginalised groups.

6 CONCLUSIONS

It is fair saying that none of the case studies reviewed show evidence of taking justice at the core of the planning process, but rather as an additional consideration to be addressed in general, rather than specific terms. Under this framework it is not surprising that technical experts and planners are being asked to "integrate" justice considerations within their approach, rather than undertaking a serious procedure to engage marginalised agents or to reform existing procedures: the vision of planners as facilitators of dialog seem to be absent in these case studies.

The distributive value of the transport scheme is highlighted in all case studies. In all cases, the key stakeholders remain fully confident of the virtues of markets to fairly distribute the benefits, and the capacity of transport to provide those benefits. Past imbalances are expected to be corrected by providing more equal access to the transport system to all relevant actors, thus fostering the expansion of the system. It can be argued the limited capacity of transport to provide significant accessibility gains, and to effectively reduce remaining accessibility gaps once the system has reached a significant level of development, as is the case in Europe: under these conditions, the confidence on the distributional capacities of transport systems seems poorly founded; on the contrary it could be claimed that such focus on “distributing accessibility” is probably a bad (and expensive for the public sector) idea. Following the Rawlsian approach to inequalities, unequal accessibility could be justified by the contribution it provides to society at large, if these benefits are properly redistributed, at their turn: this would require a different approach to transport policy assessment.

Procedures do matter, but they cannot provide for justice on their own, and they can be effective only in the medium and long term. New procedures are difficult to implement and even more difficult to get formalized and enforced by legislation. In the meantime, planning professionals can see an opportunity in exploring and strengthening existing procedures, and making better use of them. SEA offers a good example of the potential and limits of formalised procedures: it was influential in getting the planning process better formalised in Spain (PEIT), but it has been repeatedly avoided by European authorities (TEN-T). All in all, a procedural approach to justice looks like a long-term battle, with limited concrete results in the short and medium term.

Notwithstanding the existence of formalised procedures (as in MPN), public authorities do retain a strong control of the planning process, and can effectively make use of it. Timing is particularly relevant: as long as public authorities do not feel the pressure of self-imposed deadlines, they can try to improve results through extended negotiations: most stakeholders are open to accommodate their goals and strategies to perceived changes in the political environment and priorities. This can be discouraging for the weakest stakeholders, who need quick responses, but there is evidence that quickly agreed deals do not usually take much care of those interests.

The marginalization of social groups remains a major challenge in most transport schemes and policies, and attempts to address them are too weak to be effective. Ironically, the opposite is obvious in some cases: the beneficiaries of transport projects happen to be a minority of privileged social groups, without raising much concern among planners, on the basis of the expected trickle-down effects...

Under the current approach, transport planning processes tend to result in an ever-growing request for scarce resources, with no comparatively reasonable results in terms of justice. There could be a case for further reducing the well-established autonomy of transport policies, encouraging more acute competition among bureaucracies for public resources, as this could provide comparisons among the justice dimension in alternative policies. At any rate, it is fair to say that the concept of justice remains problematic in transport planning, but this should not be surprising for this and for any other discussion dealing with values. Even under this uncertainty, we can agree with Berlin that transport planners and professionals at large, even if they may not fully agree on their visions, they will certainly be able to describe what most of them, in most cases, would easily perceive as outrageous injustice[1].

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[1] “What I mean by "the human horizon" is a horizon which for the most part, at a great many times in a great many places, has been what human beings have consciously or unconsciously lived under, against which values, conduct, life in all its aspects, have appeared to them”. Berlin, Isaiah (1992). Reply to Ronald H. McKinney, "Towards a postmodern ethics: Sir Isaiah Berlin and John Caputo". The Journal of Value Inquiry, 26(4), p. 557-560.

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ID 1600 | IF NEOLIBERALISM IS EVERYTHING, MAYBE IS IT NOTHING? QUESTIONING NEOLIBERAL IDEOLOGY IN SPATIAL POLICIES AND PROJECTS

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1 INTRODUCTION

Neoliberalism is held to be the dominant and pervasive economic policy agenda of our times, apowerful and expansive political rationality of class domination and exploitation, the manifestation of ‘capitalresurgent’. Anderson describes it as ‘the most successful ideology in world history’ (Anderson 2000, 17).This paper tries to demonstrate how the new development project MilanoSesto in the metropolitancity of Milan, Italy – an ongoing large-scale development project of housing, retail, offices, and publicservices, symbolically built on former Falck steelwork industrial areas – can’t be understood as one of theembodiment of current pervasive neoliberal planning practice of the Western societies.

Using this example, it is argued that contemporary transformation projects – and in particular largescaleurban development projects – are the epitome of a set of contradictory processes, but cannot beunderstood as an example of 'actually existing neoliberalism'.

North East Milan is a particularly complex spatial context, one of the former heartlands of westernEuropean Fordism which experienced a significant level of deindustrialization and a reconfiguration ofproduction at the local scale, with the crisis of the Fordist mass production system. In the '90s, North EastMilan was also subject to an intensive process of tertiarisation, triggered by decline in the manufacturingsector and exacerbating some of the structural change processes already initiated in previous years. With adensely populated and infrastructured territory, North East Milan is currently facing a second round ofeconomic restructuring following the economic shock caused by the global financial crisis in 2008.The paper reflects the change of an established sector of the urban region to grasp the socio-spatialrelation and dynamics that characterized the geography of North East Milan during three main, intertwined,phases of capitalist development:

- the long phase of growth and urban expansion;
- the season of the Fordist crisis and the subsequent economic restructuring;
- the current cycle of economic and spatial shrinkage after the 2008 global crisis.

The paper analyses the different construction processes and treatment of problems that define thespace of public policies and private transformation projects, questioning if it can be identified as neoliberalplanning project.

2 DEALING WITH THE CONTESTED AND UNSTABLE CARACHTER OF NEOLIBERALISM

After a long period of constantly hostile critique of the pervasive neoliberalism paradigm incontemporary cities by critical neoliberalism literature(e.g. Peck, 2010; Springer et al., 2016, Rossi, 2017), inthe recent literature a number of authors have focused on the ambiguity and strong contradictions in whatdifferent approaches identify as neoliberal (Venugopal, Storper 2016), also in planning practices (Sager, 2015).Venugopal in particular recognizes that neoliberalism is almost everything, in fact a conceptualproliferation related to neoliberalism critique has led to the over-identification of different sets ofunconnected phenomena under a single misleading label (in which neo-liberalism is confused with classicalliberalism). Oddly there is no contemporary theories or body of knowledge that calls itself neoliberalism, norpolicy makers that implement it. Also in planning practices, advocates of market deregulation, private sectorledgrowth, real estate developers, and any of the components that radical urban theorists call 'neoliberal',define themselves neoliberal. Instead, paradoxically, "neoliberalism is defined, conceptualized and deployedexclusively by those who stand in evident opposition to it" (Venugopal, 2015, 170).

3 ENTANGLED ROUNDS OF SPATIAL RESTRUCTURING IN THE NORTH MILAN URBAN REGION

For much of the last century, North Milan in general, and Sesto San Giovanni in particular,represented a kind of incarnation – the purest – of the Fordist model of development in which the crisis ofthat industrial geography assumed dramatic proportions and visibility. North Milan as an historic region ofthe economic development of Milan and Lombardy, can be interpreted as an enlightening "litmus test",emblematic of the current processes.

In the recent strategic plan of the Metropolitan City of Milan (2016), North Milan is identified withseven municipalities (Cinisello Balsamo, Cormano, Bresso, Cologno Monzese, Sesto San Giovanni, CusanoMilanino, and Paderno Dugnano), in an area of 5,788 hectares with important demographic weight –registering 315,494 inhabitants – and intense economic activities with 120,039 employees. However, the boundaries of North Milan do not exist from the administrative point of view. The geography of NorthMilan as a whole is a policy outcome and was structured in the early twentieth century through a variety ofinvestment decisions and policy agendas imposed from outside and other scales – industrial

decentralization– and by reason of local social processes, for instance the formation of a skilled labour force.

In addition, the northern urban strip of Milan municipality area has been home to the Pirelliindustry from the early twentieth century. Industrial plants were abandoned in the 1980s, and after aninternational urban design competition, Bicocca Project was realized between 1983 and 2008. This is one ofthe largest urban transformation projects in Milan by size (700,000 square meters) with innovative urbanfunctions in culture and knowledge economy such as: the new Milano-Bicocca university, the Pirelli HangarBicocca (Fig. 8) – one of the largest centers of contemporary art in Europe –, research centers, a residentialneighborhood, and the great Arcimboldi theater (Fig. 6).

Looking at the spatial pattern side, two elements generated the North Milan geography:

- the territorial structure formed along the northern axis, governed by an investment of theruling class between the 1800s and the 1900s since the industrial settlements between the northern part ofMilan and the municipality of Sesto San Giovanni (in relation to the railway line) and the location of severalhousing developments for the working class, concerning the municipality of Cinisello in the 1950s andCologno Monzese in the 1960s.
- The spontaneous process of metropolitan integration and the formation of large urban areasfrom east to west, from the Sempione area to the Vimercatese one, with a transverse link in the Milan urbanregion (Fig. 1.X).

The trajectories of three municipalities are essential for the understanding of the nexus between production and spatial patterns.

The historical spatial transformation of Cinisello Balsamo and Cologno Monzese is linked to thelarge-scale heavy industry development of Sesto San Giovanni. Their growth as medium-size urban centers –with the ability to attract not only dormitory suburbs of social housing in Cinisello and self-constructionhousing in Cologno, as well as productive activities – occurred after the Second World war, much later thannearby Sesto San Giovanni. From 1951 to 1971 the population of Cinisello, for instance, increased fromaround 15,000 to more than 77,000. Cologno redefined its urban economic base following the model of theMediaset system suppliers' network in the audiovisual sector.

The process of urbanization is one of the key elements within this broader geography of capitalistsocio-spatial organization (Brenner, 2004). Sesto San Giovanni became the social and productive model ofFordist industry and labour organization. Establishments such as Breda, the Falck steel industry, and theErcole and Magneti Marelli industry have long characterized the country's industrial ethos, marking a materialand symbolic dimension embodying values and social practices closely linked to factory work and workingclass subscriptions to the Italian Communist Party. The myth generated by these labour and industrial spatialpatterns has labelled Sesto San Giovanni as, firstly, the Manchester and, then, the Stalingrad of Italy, but ithas for years hidden deep changes throughout the local society. Consequently, the industrialist culture emphasized this leading role, neglecting and limiting important changes in the social and productionconfiguration of Sesto.

The friction between the image of the autonomous city with a strong identity and that of a Milanesesatellite city would linger and in some ways is still an open question. In fact, the urban and productionrenewal of Sesto San Giovanni and North Milan seems contradictory when compared with Milan.

Thus the crisis of the manufacturing industry in the steel and engineering sector (the last blastfurnace was shut down in 1995) and the redefinition of the Fordist regulation system mainly hit Sesto SanGiovanni – leaving many abandoned industrial buildings and areas – but it also ended up becoming thesymbolic representation of the entire North Milan area, profoundly affecting the local social regulationmechanism. The demise of large industrial manufacturing plants was only one aspect of a more generalprocess of transition of the overall production system, which involved both a deep-seated restructuring of theindustrial manufacturing apparatus, and the emergence of new production patterns, also based on researchand the application of new technologies related to the field of electronics, information technology andmultimedia communication.

After the end of the Fordist/Keynesian cycle, North Milan exploited system-diversified production,with small and medium enterprises specialized in construction and trade and, on the manufacturing level, inengineering and in information and communication technologies.

Furthermore, North Milan's historically varied profile begins to take on a unique role as"policymaker" and its borders became increasingly recognizable in the metropolitan area during the 1900s.The main processes of rescaling (Brenner, 2009) that built this territory up as a recognizable area and that ledto the pioneering role of the North Milan area in local development policies were as follows (BolocanGoldstein and Pasqui, 1999; Pasqui, 2002).

Firstly, on the national level, the recognition of the territory as a "crisis area" according to law236/1993. Labelling North Milan as an industrial area in crisis within a national policy, not only had aninfluence on additional financial resources for the promotion of active employment policies andreindustrialization initiatives, but also a growing inter-relationship between the various municipalities inregards to redefining a development path for the area.

Secondly, on the local level, the establishment in 1996 of the North Milan Development Agency(ASNM), limited company under private law whose shareholders are the main four municipalities (thus a verydifferent structure from the Anglo-Saxon example of Urban Development Corporations); initially a companyfor the management of re-industrialization processes, the ASNM has gradually taken on the role ofaccompanying actor and pioneering promoter of local development, also supporting the drafting of a NorthMilan Strategic Plan.

Thirdly, always on the local level, the practice of sharing policies between local governments andespecially among pro-active mayors directly elected by citizens by the mid-1990s.

Fourthly, at that time on the national level, a different specific programming context – the so-calledprogrammazione negoziata - started up in Italy. This type of negotiated programming had explicit contractualcontent which aimed to reconsider the tools and forms of public intervention in the economy, promotingendogenous economic development in weaker areas of the country (Governa & Salone, 2005).

Together, these processes and policies contributed to shaping North Milan; this territory istherefore the result of a plurality of processes, policies, framing and reframing activities in which a number ofdifferent actors have participated on various levels.

After the decline of the Fordist model and the consequent dramatic de-industrialization, followingthe closure of large scale industry in the steel and metallurgical sectors, the production system has beenseverely weakened by the global financial crisis of 2008, with a 33% decrease in employees in themanufacturing sector between 2001 and 2011 (see Table 1).

The economy of North Milan has undergone a troublesome period. The shifting hierarchies ofinternational economic networks passed it by for the most part, and even multinational companies like Oracle, but also headquarters and large electromechanical manufacturers such as Aab or Alstom industry, which set up business in the area in the early 2000s, partly left Sesto San Giovanni. This shift is partly counterbalanced by a high share of employees in innovative sector (Table 1).

Even the ASNM, after passing under the control of the province of Milan (its majority shareholder), which was subsequently renamed Milano Metropoli Spa, closed in 2013, leaving thirty employees out of work.

	1971. Population	2011. Population	Tot. workers 2001	Tot. workers 2011	Change 2001-2011workers (manufacturing)	Change 2001-2011 workers (commerce)	Change 2001-2011 workers (financial, insurance, real estate, professional)	2011. Share of employees in innovative sector
Milan	1,732,000	1,242,123	688,427	773,571	-23%	5%	5%	0.18
North Milan[2]	324,977	304,601	102,015	108,064	-33%	8%	23%	0.91

Table 1 - North Milan before and during economic crisis: socio-economic data

4 THE UNCERTAIN FATE OF THE LARGE VACANT INDUSTRIAL AREA: THE MILANOSESTO URBAN DEVELOPMENT PROJECT

The project of the former Falck steel industrial area in Sesto San Giovanni is a paradigmatic case of a large scale development project – the most important example of urban transformation and functional renewal – undertaken in the Milan urban region, that traversed the three established periodization of capitalistdevelopment.There is a significant amount of vacant industrial areas in Sesto San Giovanni – around 235hectares, about one fifth of its municipal area – suitable for potential transformation.The entire area subject to intervention– 1,430,000 square meters – is the largest in the Milan urbanregion and maybe the largest regeneration project of former industrial area in Europe.: larger even than thatof Expo, which measures 1.1 million meters square.

- 1980s-1995. Falck industrial activities suspended.
- 1995. First development project by Kenzo Tange commissioned by the Falck company. The project is focused around the realization of theme parks.
- 1997. First land use change in the Sesto land use plan (from industry to services, housing and park).
- 1998. International competition organized by ASNM on “Falck areas urban park” (project winner by Paola Viganò).
- 2000. Falck areas are sold to a local developer (Pasini) for about 190 million euro.
- 2001. Master plan for a business center by a group directed by Mario Botta. The economic functions were strongly pushed forward by a private sector investment with a bank (Banca Intesa).
- 2001. Project proposal by Pasini for a residential project.
- 2004. New land use plan approved, reducing the volumes.
- 2005. Conflict between property owner and public administration. Pasini sells the areas to a national developer (Risanamento, owned by Zunino) for 218 million euro.
- 2006. First Master Plan proposal by Renzo Piano based on previous activities with working groups involving the citizens.
- 2007. Program Agreement between the Municipality and Lombardy region for the environment reclamation.
- 2008. PII (integrated initiative plan) proposal by Risanamento.
- 2009. New land use plan of the Sesto municipality.
- 2010. Risanamento files for bankruptcy.
- 2010. Risanamento sells the areas to a new developer (Sesto Immobiliare, poi MilanoSesto). Value: 405million euro.
- February 2011. New PII proposal based on a revision of Renzo Piano’s Master Plan.
- July 2011. Inquiry into corruption, involving developers and the Municipality.
- September 2011. PII approved with 900,000 of park. Consequently Risanamento Spa is granted double the volumes given to the previous owner.
- 2012. Agreement Programming on the implementation of the City of Health and Research in the municipality of Sesto San Giovanni. The City gives the area to MilanoSesto, owner of Falck areas. Currently MilanoSesto holds the commission for the land reclamation (38 million euro). Following reclamation, the Municipality concedes the area for free to the Lombardy Region, to build the City of Health and Research.
- 2016. Agreement between the developer and Fawaz Alhokair, a Saudi Arabian group. MilanoSesto sells 130,000 (for 500 million euro) to Fawaz for the new development of a shopping center and a leisure park.

The analysis of the complex and yet incomplete progress of the project (Tab. 2) contests theexistence of a pro-growth coalition. Following Storper (2016) it confirms that cities and regions areextensively regulated, especially land use and housing. Instead, we can find a deep-rooted left-wingmunicipality exhibiting a nostalgia for its industrial past and hesitant in defining a strong and shared transscalarpolicy agenda for urban renewal of the historical vacant industrial areas.

Tot. Gross Floor Area Project	**1.012.134**
Gross Floor Area residential	607.280
Housing	485.824
Affordable housing (20% del tot.)	121.456
Tot. GFA retail	max 100.000
Shopping mall	50.000
Medium commercial structures	36.563
Medium commercial structures	3.437
Small commercial structures< sqm. 500	10.000
Tertiary functions	147.853,5
Hotel	27.000
Productive activities	81.000
Other services	49.000,5
Public parking areas	215.488
Public and green spaces	200.098
Schools	43.397
Playgrounds	46.129
Social housing	11.907
Private parking lots	602.409

Table 2 – Former Falck Areas Building Program (MilanoSesto)

Early 2013 was a crucial time, because with a trans-scalar governance process, regional and localgovernments and the private foundation (Besta neurological hospital and Milanese Tumor institute) signedtheir intention to join this project and agreed to search for practical solutions to the implementation thereofby relocalizing the two hospitals in a new City of Health and Research (180,000 square meters).After twenty-one years of expectations, two competitions, the involvement of starchitects (KenzoTange, Mario Botta, Renzo Piano), and the recent new real estate investment by a Saudi Arabian global realestate investor-buyer, and the new manager of the MilanoSesto society Carlo Masseroli – former councilor ofthe past Milanese center-right urban government, identified with a laissez-faire approach in urban policies,labelled 'neoliberal' –, important issues like infrastructure and the high strategic trans-scalar potential of theadvanced services localized in the activities City of Health and Research, but also to the development of theshopping center and leisure park, were not outlined in the local, metropolitan and regional settings of governance.

5 CONCLUSION. NEOLIBERALISM AS AN IDLE LABEL?

A number of authors emphasized the neoliberal character of the urban project transformation forformer Falck areas, similar to other large – scale urban development projects (Baeten, 2012). Notwithstanding these interpretation, it is very hard to recognize a fixed neoliberal strategy in the extended, problematic,former area Falck transformation, such as the reworking of actors, policies institutions and regulatoryframework in order to facilitate market driven land use changes.

The current global socio-economic crisis is related to multiple local events of preceding cyclesunder capitalism and is manifested in a series of socio-spatial effects. Is in the present conjuncture, as it wasin the 1960s and in the late 1990s, North Milan a territory of urban change, experimentation of newrelationships between spatial organization, settlement forms of the new economies and urban developmentthat challenge both the traditional hierarchical urban image and the city/hinterland nexus? How do crisis andausterity mold urban regional geographies? This contribution has showed that in time of austerity NorthMilan is witnessing the emergence of a much greater unevenness in local systems that has

led to thedevelopment of a mosaic of differentiated productions of space, that does not support a claim of removal ofthe public sector from the urban policies and with the imposition of a market ‘attitude’.

In North Milan a number of controversial, entrenched spatial strategies emerge.

Since the 2008 economic crisis, large scale development projects haven’t captured the mostinteresting spatial transformations, in particular in Southern European territories (Knieling & Othengrafen,2016). On the one hand, the effects of the global crisis and the negotiation over land use regulation, aremaking it difficult to carry out large urban transformation projects, such as in Falck areas. Some of those thatare related to vast industrial vacant areas often stagnate due to the difficulties and bankruptcy of real estateinvestors and construction industry developers. There is little chance of investment, especially whencompared to the demand of very large complex developments projects.

The singular large urban transformation project has trans-scalar effects not only redesigning andthe local geography of governance (Büdenbender & Golubchikov, 2017), but also getting stuck in a transscalarterritorial relations system which was profoundly changed as a result of the economic recession.

Nonetheless, large scale development projects are poorly integrated into the wider urban region processesand planning system. As a consequence, their impact on the urban area as a whole and on the areas where theprojects are located remains ambiguous. Place branding in former Falck areas is a crucial example. The label“City of Health and Research” focuses on the representation of healthy space, considered as a permanent,singular, and sanitized image of place, which nonetheless inevitably means highlighting some elements andneglecting others.

Furthermore, the geopolitical domain of transregional policies and governance is remarkablyabsent. Although situated in the heart of the Lombardy region, former Falck areas do not serve as a “model”for border-crossing initiatives and new networks. Despite representing the broadest example of formerindustrial area redevelopment projects, the former Falck areas do not even have strategic priority in national,regional, and metropolitan policies.

To conclude neoliberalism as analytical framework is became inconsistent and useless, a sort of idleand – definitely – mainstream categorization to describe almost every contemporary urban transformations.

Instead of use (again) the neoliberalism as a cover, we have to move toward a deep understandingof the fleeting, complex and nuanced geographical urban processes related to both the role of planning andpolicies (Armondi & Bruzzese, 2017) in contemporary societies.

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ID 1612 | WHEN ACTIVISM MEETS RADICAL POLITICS - LANDSCAPE PLANNING AS A CATALYST FOR TRANSFORMATIVE CHANGE

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1 INTRODUCTION

Planning for radical change has been conceptualized in different ways. A number of strong manifestos for change have been drawn up – for reconsidering the absolute faith in economic growth (Mishan, 1967; Hamilton, 2004), for living inter-culturally (Landry, 2000; Sandercock, 1998, 2003), for creating a more sustainable society (Sachs and Esteva, 2003), for social mobilization (Friedmann 1987), for an urban political ecology (Heynen et al., 2005), for recapturing democracy (Purcell, 2008) and for a more radical planning (Albrechts, 2013, 2015). In the vast literature that has been produced on approaches, forms and contents of radical planning, to our knowledge, there are no examples that discuss planning experiences developed by regional governments inspired by program guidelines explicitly aimed at countering neoliberalism (see also Purcell, 2009 on resisting neoliberalization).

This paper documents a planning/political process – the Territory-Landscape plan-making process developed in Apulia region[1], from 2007 to 2015-that counteracts the pervasive penetration of neoliberal thinking in the urban and regional planning practices. The relevance of this plan is that it parallels the coming into office of a new regional government elected in 2005 on the basis of a reaction against the excesses of a harsh neoliberal policy in Apulia a region that is characterized by a persistent social, economic, cultural and political issue of regional inequality.

The current competences of Apulia region essentially stem from the reform of 1999 that introduced the direct election of regional presidents and the constitutional reform of 2001. Both were approved by the centre-left government under pressure from the Northern League. These reforms furnished Italian regions with greater symbolic recognition, legislative autonomy and the scope for future implementation of fiscal autonomy (Massetti and Toubeau, 2013). As an ordinary-statute region, Apulia, gained "concurrent legislative powers" with the state, inter alia, in the issues of territorial government, management and enhancement of cultural and environmental heritage, infrastructures, protection of health[2]. Even though, as

[1] Apulia, with about 4,1 million inhabitants in an area of 19,347 sq. km., is one of the fifteen ordinary-statute regions that together with five special-statute regions cover all the country and compose the “regional state” of Italy (Groppi and Scattone, 2012). It is located in the southern part of the peninsula, called Mezzogiorno and interested by the social, economic, cultural and political issue of regional inequality that since the late 1800s has been known as “Southern Question”.

[2] Thus it is not possible to understand the Italian planning system and territorial transformations without linking it to regionalisation processes (Gelli 2001), and the consequent progressive differentiation of spatial planning models among regions (Lingua and Servillo, 2014). During all its existence as a unified state, Italy has seen a shifting tension between centralism and regionalism, centripetal and centrifugal forces of politics and administration (King 1987, 327), which have often resolved in failed attempts of institutional reforms (Bull and Pasquino 2007). However, in the recent years, similarly to other Western European countries, Italy faced a trend towards regionalism, i.e. the transfer of state power downwards towards the state’s regional levels (Newman and Thornley 1996, 40).

Hudson (2005, 621) put it, regional authorities claim that "what has been devolved [to them] is responsibility without authority, power and resources."[1]

The Territory-Landscape plan-making process can be considered as an "extreme/deviant case" (Flyvbjerg, 2006, 229) from different points of view. The Territory-Landscape planning process is one among the few radical planning/political processes that have been developed by a Spatial Planning Department of an Italian region. It reflected the radical change in Apulia with the coming into office of a new regional government in 2005. Where the neoliberal policies promoted economic investments wherever they were located, ignoring territory-landscape collective values and fragilities the new government focused on counteracting the pervasive penetration of neoliberal thinking in urban and regional planning practices. Both the planning process and content are atypical, at least with respect to well-established ideas of political participation, the regional tradition of land-use and landscape planning and the Italian national landscape planning practices. Despite its radical approach and antagonistic feature, the Ministry responsible for landscape considered the plan-making method and procedure as a good practice, since it was the first regional plan that it had managed to bring to an end after about ten years from the approval of the new Italian "Cultural Heritage and Landscape Code" (2004) and fifteen from the signature of the European Landscape Convention (Council of Europe, 2000). This is certainly unusual for a Southern Italian region that is used to negative records both on economy (eg. GDP, employment) and natural resources conservation (high rates of illegal buildings and wells), and is considered unable to produce innovation and change.

Besides drawing on documents and other research materials, the case study is based on the personal experience of one of the authors who from 2005 to 2015 was deputy president of the regional government with responsibility for Spatial Planning, Social Housing, Urban Policy, Landscape, and Cultural Heritage. The frame to investigate the case study was developed through a continuous interaction among the authors.

After this introduction the paper analyses the triggers for change, illustrates the search for a new substantial and procedural approach and finally reflects on what could be learned from the case.

2 TRIGGERS FOR CHANGE

In 2005, the Apulia region was preparing itself to undergo a great political change, which would last for the following ten years. Such a change was the result of a process triggered by two opposite tendencies which had begun few years before.

2.1 TOWARDS A NEW IMAGINARY

The first trend concerns a process of constitution of a new local imaginary that, following Castoriadis (1995), we could define as 'radical'. Therefore, radical, in this paper, expresses the unpredictable social process that took place in the region and was characterised by the capacity of the local population of re-appropriating imaginaries enclosing "the emergence of something new" (ibid.,1995) in history, and "a new definition of reality, of what counts and of what does not count – therefore, of what does not exist (or nearly so: what can be counted and what cannot enter into accounting books)" (Clark, 2002).

[1] The Apulia regional budget amounts to about € 13 billion in revenues, of which only € 2 are from autonomous taxation capacity, and € 14 billion in expenditure, of which more than 50% is transferred to the regional healthcare companies. As a "convergence-objective region", Apulia receives a substantial share of European Regional Development Fund (ERDF) and European Social Fund (ESF)3. After the approval of the Community Support Framework 2000-2006, the National Operational Programmes became a "justified exception" to the priority assigned to the Regional Operational Programmes prepared and implemented by the regions3. The proportion of funding directly allocated to and managed by the regions increased from less than 50% in the 1994-1999 cycle to 70%, and this is still the distribution of the 2014-2020 programming cycle. About 65% of the EU cohesion funds managed by the regions are reserved for the five "less developed" southern regions, where a population just under 30% is concentrated.

From a socio-economic point of view, it was produced by a widespread need to dismiss the stigma designating Apulia as a receptor of national funds and exogenous development models and therefore part of a static Mezzogiorno. As such it could be deemed to be unable to become competitive because of its atavistic laziness associated to illegality, the dissipation of public resources and political patronage. As occurred in other Southern Italian regions, the policies of industrial development implemented after WWII had dramatically failed and the local economy had been dominated by the construction sector, agriculture and a labour market based on the very few employment opportunities available in the public administration.

Just like the entire Italian Nation, and despite the surge of neoliberalism, this region of the Italian Mezzogiorno had been living a culturally vital and economically prosperous end of 1900s and beginning of 2000s (QSN, Documento strategico Mezzogiorno: Linee per un nuovo programma Mezzogiorno 2007-2013), determined by the rise of globalisation and the Europeanisation process.

However, in Apulia, such vitality was characterised by unique features. In particular, Europeanisation was perceived and used as the most favourable condition to realise the so many times fought-to and hoped "end of history" of the Mezzogiorno (Viesti, 2003). The rise of the multilevel European governance systems and the new hope for a vital European economy based on small-medium sized enterprises, would eventually terminate the Apulia assimilation to the Italian Mezzogiorno. The myth of creativity and competiveness were assumed as a powerful picklock to shake the Mezzogiorno. Especially in Apulia, a region that has been often represented (and self-represented) as different from the rest of Mezzogiorno, this myth gives the opportunity to the new small and medium sized entrepreneurial class to lead a novel project of regional development.

The image of the 'Apulia of districts' (strengthen by the desire of a local enterprise to be priced in Wall Street) replaced that of a poor agricultural land dominated by several as well as different types of local powerful elites, or mafias. Above all the new wave of entrepreneurialism was trying to build a local network governance based on trust and cooperation rather than political patronage or lobbyism. The emergent multipolar Apulia was looking for something new not necessarily anchored to its past.

On the other hand, if seen from a political and cultural perspective, the radical imaginary was also fuelled by a strong necessity to better understand and valorise the oppressed "local mind" and define a new self-representation of Apulia, to be firmly grounded in the proactive behaviour of its inhabitants and (above all) stakeholders.

In Apulia, just like in the Italian Mezzogiorno, the narrative of crisis and the ghost of being considered an "underdeveloped" local community, or one of the "waste" communities scattered around the world, had not only acted as a social and institutional barrier to radical change, but also as a trigger for local protests against oppression and/or the construction of critical analyses. Mainly based on the intertwinement between the need of survival and ideological belongings, the emergence of such critical analysis had determined a myriad of macro and above all micro political conflicts which in turn had stimulated the construction of social, cultural and political development alternatives, although shared by a relatively small minority if compared to the 4 million inhabitants of the region. The micro-conflicts and the narratives concerning possible alternatives to the idea of a Mezzogiorno as a failed area had shaped a new local storytelling capable of perforating socio-institutional barriers and changing the established collective imaginary.

The pride of being Mediterranean rather than citizens of the Mezzogiorno sketched a sort of third way to be practiced. In effect it stressed that the construction of the Apulian identitarian self was much more necessary than a reference, for example, to sustainability or else. This new consciousness and imaginary were finding a visible place as both a part of a global movement which was fighting to rewrite the history of colonialism and a mere defensive behaviour against the 'discriminatory' tendencies of political movements governing the northern regions (and for some time even Italy as a whole). The main goal of such local thinking was to explain the difference between the Mediterranean and Northern thinking and show its potentialities in terms of an alternative world (Cassano, 2005). Around such desire to re-write the local story rather than abolish it altogether with the Mezzogiorno, a cultural alternative (immaterial) movement emerged. It catalysed several different and yet divided components of a nascent but fragmented civil society including catholic movements, the radical left, local environmentalism and others NGOs. Some of

them established more or less close relationships with a group of intellectuals, academicians and professional from different fields, including urban and regional planning.

Although underrepresented, this civil society grew up and its ideas blew in the region inspiring the old as well as the new generations. As happening all over the world, in Apulia too as a result of the crisis of democratic representation, the existing lively local civil society was slowly coming to the light, or taking its first steps. It promoted another democratic political system: one led by the active citizens/society acting in the sake of the common good. However, it lacked leadership and a clear and catalysing alternative developmental model (Cassano, 2004).

2.2 A NEW (RADICAL) REGIONAL GOVERNMENT

In 2005, opposed by a great part of the general staff of the Italian centre left, Nichi Vendola, a politician of the so called radical left, i.e. Partito della Rifondazione Comunista (Party of the Communist Re-foundation), surprisingly won the Apulia regional primaries and then became president of the regional government. This was the first direct participation of the Left in the government of this region in the past uninterruptedly governed by centre and right political coalitions. The new government was able to propose a different vision of fulfilment and hope, which offered conviction and steadfast commitment (see also Amin and Thrift, 2013, 184): the president was re-elected in March 2010, and thus his government became the most enduring in the history of the region.

The reasons for this unexpected election are manifold. Their roots are in the social, cultural and economic processes outlined in the previous paragraph combined with the widespread mistrust in the local political leadership in both the well-established right and centre-left wing, equally considered in some way responsible for the effects of more and more aggressive neoliberal public policies and the dismantlement of the welfare state.

Vendola was deeply rooted in the regional context, ever engaged in the most important local emancipatory struggles, and well known as vice-president of the anti-mafia parliamentary committee. He was able to turn discontent into a new hope in an enlighted political leadership and radically different social, economic, environmental and cultural policies directed not by a clientelistic machine but entrusted to competent members of politics and civil society. He was strongly supported by political, social and cultural movements, more or less organised in "Civic participation committees", and spontaneously born anywhere in Apulia out of already active civil society groups on local political-administrative issues (Romano, 2005).

Merging in unique manner leadership and participationistic rituals (Romano, 2009), he expressed a radical alternative to the centre-right managerial, technocratic, efficiency-oriented style of government of the president that had ruled from 2000 to 2005 and who lost the 2005 elections (Gelli, 2006).

Leaving aside the controversial issue of the actual results of the implemented policies, the new government offered the perspective for a radical change from the historical condition of marginality to a new identity based on its Mediterranean vocation and from the well-rooted practices of clientelism to unconventional grassroots democracy (Duran, 2015, 251-252). It proposed an alternative model of development focused on the enhancement of regional resources: social capital, especially youth, and considered culture and environment as common goods (Damiani, 2011). The “Programmatic statements” specified the initiation of "a new development cycle based on the strengthening of tangible and intangible resources, set up by women, men, youth, and cultural and environmental heritage of the territory (...) ". In a region with a history of exogenous socioeconomic dominations and dependencies, this is a demanding challenge, which requires many and differentiated instruments to be implemented, including new planning tools, as the “Programmatic statements” clarify. For those parts of the Apulia society who had opposed regional spatial planning policies that had used the unemployment blackmail as a weapon to build consensus on their affairs, destroying common goods for the benefit of economic powers and worsening social and environmental injustices, the establishment of a new government that critically challenged such practices, was seen as a sort of achievement of the impossible.

2.3 A LANDSCAPE-TERRITORY PLAN AS CATALYST FOR TRANSFORMATIVE PRACTICES

The decision to initiate a new Territory-Landscape Plan (T-LP) must be seen against the background of political and cultural climate sketched above. In Italy, landscape planning has been traditionally confined in a sector and island vision: detached from the complex and conflictive transformations of the territory. The plan, for the first time in Italy, according to the European Landscape Convention (ELC), extends landscape policies to the entire territory, including urban and rural areas, outstanding as well as everyday or degraded landscapes, abandoning the traditional focus on “natural beauty” or extra-urban spaces of landscape protection (Gambino, 2015).

The T-LP is a statutory spatial planning instrument, legally required by the State Legislative Decree No. 42 of 2004 (amended in 2006 and 2008), known as the “Cultural Heritage and Landscape Code” (Code). This combines the principles of ELC with the Italian legal system of landscape protection. The Code provides that all the Italian regions approve a landscape plan that must contain binding rules aiming at preserving the parts of landscape protected by national laws or decrees, to be concerted with the Ministry responsible for landscape.

However, the Apulia regional government did not promote the T-LP because the approval of such instrument became compulsory for Italian regions. Actually the Code does not imply any sanction for the Regions that do not respect this obligation. In this sense, the decision to carry out the plan relies on the voluntary agreement of the regional government’s members, with the support of parts of civil society and intellectuals from different fields. The new Italian landscape legislation and the concept of landscape as defined by the ELC were considered levers to start the construction of a new history in the interpretation and development of regional territory. The plan was looked upon as a unique opportunity to change the local culture and practices of territorial transformation in line with the political vision and programmatic declarations.

The main arguments for the government’s decision to take the landscape plan as a spearhead for its transformative ideas are manifold. They are generally related to the political vision that dissociated itself from the so-called ‘emulative paradigm’ (Bevilacqua, 2000), or rather, from the passive acceptance of an exogenous development model, and searches a foundation for a new development model fuelled by its endogenous cultural and natural resources.

The territory-landscape concept served this purpose. Landscape is not anymore the objective, scenic, spatial framework of a location, but a place constituted through the tangible and intangible social and cultural practices that shape the land (Owig 2007, 581). Perception is an integral part of the concept of landscape, well before the ELC established that "Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”. The perceptive character of landscape implies a ‘cultural image’ or a way of seeing the world, a subjective observation and experience (Cosgrove and Daniels, 1988; Antrop, 2005). Landscape is a polysemic concept that refers both to the material-physical world and to immaterial values and symbols. It is shaped by values, perceptions, practices, knowledge, wishes and needs, which are met by the physical characteristics of geographical space, modify and are modified during the territorialisation processes (Raffestin, 2012). It is the result of this collectively perceivable change or, in other words, the "empirical manifestation of territoriality" (Turco, 2002, 7) and as such is a result of conflicts and compromises.

Apulia varied landscapes have been largely shaped by human labour in the longue durée. The region is characterised by the highest incidence of agricultural land of the Italian regions, the lowest incidence of surface covered by forests, and approximately 900 km of coastline. Thus, in Apulia natural landscapes are rare, while cultural landscapes prevail. These are dynamic social constructions that mirror physical and social change through historical and contextual experience, with important symbolic meanings (Cosgrove, 1984). They are organized at the ‘human scale’, having been ‘built by hand’, and have been historically linked to local society and economy (Selman 2004).

This notion allowed the regional government to intercept the growing social awareness that the post WWII exogenous development models had destroyed in many places the unique intertwining of natural and cultural characters of regional landscapes. Especially in the industrial development poles and in the over-urbanized areas, these development models had produced human and territorial desertification, the

standardization and homogenization of material and immaterial cultures and the consequent loss of local knowledge, experience and skills.

Landscape planning offered arguments in favour of the need of a social reconnection (Selman 2012) of what, in the past decades of intense “modernisation without development” (Sapelli 2005), had been compromised by progressive disconnection and disruption: people’s sensory and social experience of places, attachment to and pride in their living places.

Landscape planning offered the possibility to envision different development perspectives based on the ability to produce, inhabit and transform their own territories by individual subjects acting for the benefit of his/her own well-being, but so contributing also to the good life, without overriding other kinds of goods (Arler, 2011, 497-98). Individual subjects can so be as beneficial in the landscape as those specifically acting in the common good and can contribute to increase the collective well-being and to protect and pass on to future generations a common good such as landscape (Pedroli et al., 2013).

Both the Code and ELC required approving a plan for the entire regional territory, with the selective purpose of improving landscape quality. For the ELC, meeting the ‘‘landscape quality objective’’ involves, for a specific landscape, ‘‘the formulation, by the competent public authorities, of the aspirations of the public with regard to the landscape features of their surroundings’’ (Council of Europe 2000, chap. 1, art. 1, c). This implies that not primarily the experts are to plan and develop landscape, but rather, the people whose daily practices and perceptions shape it (Olwig 2007, 581). This is in tune with the programmatic statement of the regional government, which emphasised the will to “meet the extraordinary demand for public participation” which allowed the election of a 'off-team' president, by raising the skills of citizens in the solution of political and social problems, and citizens’ desire and ability of self-organization and self-narration (Gelli, 2006). It also strengths this programmatic option, as it places this in an international cultural framework of great political potential, thus preventing that it was caught as tied to a closed, narrow perspective, or worse, as a rhetoric.

3 IN SEARCH FOR A NEW APPROACH: CONTENT AND PROCESS

The challenges mentioned above required a great effort to innovate regional, provincial and municipal planning, which cannot be illustrated in this paper. The T-LP is just one of the many new instruments that were approved in the form of laws, guidelines, projects, and documents throughout the administration cycle 2005-2015. The existing fragmented and varied local planning system is still centred on more or less old statutory land use municipal plans. The new regional T-LP could help municipalities (to at least start) to get out of the ditches of an abstract and bureaucratised land use planning and share different ways of interpreting their territory-landscape as a precious common good rather than as a white sheet on which to draw any function or object in return for the promise of some economic investment.

The challenges could not even be met by amending the regional landscape plan which was approved in 2001 in compliance with National Law no. 431/1985. In Puglia it has never been in force a regional territorial plan like those documented in Fabbro (2003). The landscape plan in force lacked any underlying political vision of the landscape role in future regional development. The regional centre-right government had largely entrusted the plan-making process to the technical consultants and regional planning department. They had considered the plan as a mere obligatory fulfilment of the national law.

The plan was reluctantly and hastily approved in 2001, under the threat of the appointment of a state commissioner by the Ministry for Cultural Heritage and Landscape. The plan was based uniquely on the imposition of binding constraints for physical transformation of landscape-protected areas ‘cut out’ according to the national law or the plan itself. These areas were ‘administered’ under the authorities of the Ministry or the Region through landscape authorizations partly devolved to municipalities. How could this plan be used to foster reconnection between territory-landscape and local communities (Selman, 2012)? Moreover, the plan had been progressively socially delegitimized during the implementation by municipal governments, street level bureaucrats, citizens, and entrepreneurs. This was due above all to the out-to date cartographic base maps and wrongly drawn perimeters of landscape-protected areas. Both gave rise, on the one hand, to blatant injustices and huge legal disputes, on the other hand, to widespread infringement of plan’s rules as combined with insufficient controls, corrupt/collusive practices, and the slowness of justice.

3.1 A STRATEGIC PLAN EMBEDDED IN A STATUTORY SETTING

A new plan based on the inspirations and motivations outlined in the previous paragraphs required a strategic approach, intended as a "self-conscious collective effort to re-imagine a (…) territory and to translate the result into priorities for area investment, conservation measures, strategic infrastructure investments and principles of land use regulation" (Healey, 2004, 46). It comprised the building blocks of an 'alternative' strategic (spatial) planning process, since it was conceived as "a democratic, open, selective, and dynamic process" (…), which would have produced "a vision to frame problems, challenges, and short-term actions (…)" (Albrechts, 2004). Landscape intended as an evolution whose collective construction does not cease requires a planning approach that is able to incorporate the before and after that prepare a future which is itself difficult to describe (Raffestin, 2012). The planning process needs to generate collective becomings, with a specific focus on people becoming attached to their living territory-landscape and interested in taking care of it (Metzger, 2013).

Notwithstanding its emphasis on being an instrument (just one of the many) to enable change (Albrechts and Balducci, 2013), the T-LP embodies a regulatory framework designed to prevent the cultural / natural heritage, on whose values the new development vision is based, may be further compromised by the business as usual practices and the neoliberal agenda (Legacy and Leshinsky, 2016). Long-term vision, selective range of objectives and issues, project and action orientation, openness of the plan-making and implementation process, are combined with legal certainty about the boundaries of protected landscapes and clear rules for the authorisation that the Code states for any transformation of them. Both the strategic approach and certainty of rules were emphasised in order to point out the substantial differences from the old landscape plan. So, the tension between the statutory and the strategic characterises the Apulia Territory-Landscape Plan.

As a result, the plan's form, content and process are innovative in comparison not only with the Apulia planning tradition but also with other regional planning experiences in Italy. The T-LP is clearly detached from the still prevailing "urbanism tradition" emphasising the regulative role of plans (CEC, 1997; Espon, 2007). It is different from the late 1990s-early 2000s regional territorial plans that, at least in their intentions, redefined their aims and nature among principles difficult to harmonise such as sustainability, competitiveness, and territorial cohesion (Fabbro, 2003, 58). It is also distant from the first generation landscape plans, which focused on individual landscapes and were designed separately from regional territorial planning (Cinà, 2000; Gambino, 1988). Its innovative characters is noticeable also in comparison with the only other plan approved so far in accordance with the Code by the Tuscany region (Marson, 2016) and with those still in preparation (Magnaghi, 2016; Gambino, 2011; Quaini, 2011; Garau and Pavan, 2010).

The T-L P does not just seek merely for a better integration with other sectoral plans but gives landscape a central role for the envisioning of future regional development and considers territory-landscape heritage as a foundation of a different model of local development and related territorial transformations. This approach seems to be still rare in Europe, were landscape planning generally remains something of a 'Cinderella' activity (Kidd 2013, 378), and is looking for ways to better integrate with statutory planning and go beyond its prevalent interest in distinguished landscapes of special quality and attractiveness (Jorgensen et al. 2015). On the other hand, sectoral integration is not enough, since landscape planning seems anyway to be penalized in favour of other more politically prominent policy areas and to be relegated to single experiences of land owners associations or designated – mainly rural -protected areas. Comparative studies converge in pointing out a few exceptions to this picture, such as Germany and the Netherlands (Kidd, 2012; Voghera, 2011).

The plan is divided into two main parts: the Atlas of Territory-Landscape Heritage and the Strategic Scenario. They can be synthetized as follows.

The Atlas includes the identitarian representations of the regional territory-landscape. These do not reflect a classification of landscapes based on (quantitative and/or qualitative) attributes and scale of values, as in the assessment approach used in most planning experiences in Italy and Europe (Brunetta and Voghera, 2008). The plan represents (with an emphasis on their identitarian characters) the varied of cultural-natural relationships of regional landscape through a systemic 'structural' approach which uses diachronic analyses (in geographical, ecological, anthropological, ethnographical, historical and archeological, and territorial terms) to identify the 'genetic codes' and identities of places which have been refined over time through the development of co-evolutionary relationships between nature and culture (Magnaghi, 2011).

The Strategic Scenario suggests the future organization of landscapes and serves as a point of reference for specific activities, projects and plans which aim to bring Apulian territory closer to the proposed vision through time.

3.2 MULTIPLE ROLES BETWEEN POLITICIANS, PLANNERS, AND ACTIVISTS

The production of the plan lays is closely linked to the profiles and roles of leading actors.

The deputy president, who promoted the plan, before being appointed in this position, was an activist planner. Since the 1980s, together with a small group of planners and some environmentalist associations, she had been challenging regional planning policies, as opposed to most of the professionals who formed, alongside building contractors and politicians, a very powerful lobby determining urban development, usually without any kind of opposition from local populations. For a long time, these saw the land and rural areas as a punishment and working in the building industry as the only opportunity to aspire to enter into the social lift.

The deputy president entrusted the scientific coordination of the plan to an activist planner, founder of an association called “territorialist school”. The territorialist approach, in line with the political vision, is based on a critical analysis of the contemporary ‘metropolis form’ and its impacts on de¬territorialisation, social mobility, the fragmentation of modern urban living, the degradation of public space, the standardisation of landscapes and a functionalist approach to urban development, as the material expressions of Western imperialist rationale, capitalist industrial society and its post-industrial development (Magnaghi, 2005, 7). As a radical alternative, it proposes to promote “self-sustainable local development”. This concept emphasises the balance between three objectives: directing development towards human requirements which cannot be reduced to the material needs, self-reliance and the development of self-government by local society, and enhancing environmental quality (Magnaghi, 2005, IX-X). With reference to the T-LP, the concept implies the ability of local society (and institutions) to rediscover and enhance the local territorial heritage as foundations for an alternative development model, which finds in the reproductive rules of its local resources the self-generating capacity of being durable for the benefit of present and future generations. Being founded on the recognition and appreciation of local territorial identity by local dwellers/producers, and on their ability to (continuously) shape and take care of their living environment, local self-sustainable development requires new forms of participation and learning of local society aiming at increasing their “place consciousness”.

For the first time in the Apulia region the preparation of the plan was assigned to a group of 15 young professionals specialized in different fields, who then became an in-house planning team fully integrated in the organization of the regional planning department.

Planners, in accordance with the political narrative built up by the deputy president, played an important role in the storytelling. Also their storytelling was selective and purposeful; that is, necessarily political (Throgmorton, 2003, 128), i.e. partisan, based on choices that involve values and are contestable. It was not simply persuasive but also constitutive (Throgmorton, 2003, 130). It includes parts that tell the past and parts that are future-oriented: the representation of the criticalities left by the prevailing urban development models in the form of images, maps, diagrams, strengthened the political narrative aiming to demonstrate the urgent need for change such models. Planning knowledge added technical expertise and arguments that helped understand what and why to change. It also provided future-oriented figures/forms/images that enriched the social imaginary and the real and rational works produced by this imaginary. In such a way, the plan documents written or drawn by the scientific coordinator and his young collaborators, and the numerous presentations and discussions of the plan with the public influenced people and culture.

3.3 THE SOCIAL PRODUCTION OF THE PLAN

Both the Atlas and the Scenario were supported by the so called “social production” of the plan, or more specifically the activation and mobilisation of citizens, stakeholders, local administrations, associations since the very beginning of the planning process, in order to bring to the fore patrimonial descriptions, matters, critical situations and to jointly – the regional department together with local institutions and associations -produce “integrated experimental projects” (see below) out of their usual settings.

The engagement of stakeholders and public at large has evolved steadily if sporadically in landscape planning, pushed by the ELC (Selman, 2010) and seems to be limited to experiences at the local scale (Roe, 2013). The plan was participatory in a very unusual way. Besides the promotion of a wide public involvement through hundreds of forum and assemblies, the government and social groups activity interweaved in a peculiar way. Radical change in planning policies (not only in regional landscape planning) was a political perspective that the regional government shared with counter-hegemonic groups that, mostly in isolation, had raised and continued to raise, many local contentious issues and conflicts with/against governmental (state, regional and municipal) decisions that had negative environmental, cultural and socio-economic impacts on their territory. The involvement of these groups was important for the regional government not only in order to enlarge cultural awareness about landscape values or to ensure the social support necessary for the plan to be approved, but also to stir social practices able to defend and promote landscapes as a public good.

The “social production” of the plan was carried out using various tools to involve public and private organizations, institutions, associations, communities and individual inhabitants. Aside from hundreds of informal meetings, thirteen formal conferences were held in several cities to share with local communities landscape knowledge frameworks and planning strategies. In the initial stage of the processes politicians and planners emphasized the negative consequences on the regional territory-landscape of “things” that the myths of economic growth and globalising modernisation have produced: marginal ghetto neighbourhoods lacking primary services and connection with the historical city, low quality, homologated settlements, redundant volumetrically, which have impeded the public use of coastal streams, consumed fertile agricultural land, fragmented open spaces, interrupted ecological continuity and created visual barriers to landscape perception. They projected images and photographs, and set up exhibitions in order to make it evident what many people cannot perceive due to habit, indifference or even insensitivity. In this way, they built a sort of wire that starts from negative situations produced during the recent post WWII decades, and connects them to the future vision and the “integrated experimental projects” mentioned above.

To enlarge public involvement an interactive Internet site made continuously information available on plan-making progress and an on-line “landscape observatory” allowed everybody to point out on interactive maps what they perceived as landscape values to be protected or that have been injured, and what they considered as best and worst practices of landscape transformation to be promoted and replicated. Both tools have been helpful in capturing social meanings and perceptions of landscape. Eco-museums and community mapping were promoted or supported to use the narratives of people who live and work in different areas as a primary information source, and to actively involve people in landscape interpretation, conservation and improvement. A prize was launched for the promotion of best practices in landscape protection and design, and “manifestos” were written for signing agreements with main "landscape producers": farmers, building contractors and renewable energy companies.

The local knowledge provided by the participants in the initial meetings or collected through the on-line “landscape observatory” offered politicians and planners arguments for a radical critique of the bequest that the dominant regional development model had left in specific places. This narrative was essential to rise social awareness of the consequences on the living environment of a development model that, especially in a “less developed” Southern Italian region, has frantically pursued economic growth and globalising modernisation, which has been freed of territorial constraints and even the territory itself, treating it as a mere support for economic processes, as the source of resources to be exploited to produce goods for the market: wasteful use-abandonment, lack of maintenance, consumption of non-renewable resources such as groundwater and soils, land degradation and desertification, biodiversity reduction. Technical planning knowledge had an important role in order to highlight detrimental effects of “business as usual” to place making and so to nurture the collective aspiration for a practice of transformative planning geared to the protection and improvement of territory-landscape understood as a common good to be safeguarded and used to support a development model able to create greater socio-spatial justice and well-being.

On the other hand, “integrated experimental projects” were developed as co-designing experiences aiming at testing the innovative regulatory corpus of the T-LP, which results in the evolution from a restrictive-regulatory tradition to a complex dynamic planning process. Regional planners/politicians did not use a top-down approach in promoting these projects. They grasped stories of innovative experiences, experimentation niches, not yet known to institutions and the general public, which showed new ways to

protect and enhance territory and landscape heritage. They used them purposively as examples of “concrete utopias” and transformed them into "integrated experimental projects" to show how changes consistent with the normative vision were possible. Then these experimental projects were extended in other less vital regional areas through agreements between the region and local public and private actors. European Structural Funds and Agricultural Fund for Rural Development were used to finance experimental projects design and implementation. Thus, Community programming, instead of requiring ‘special’ procedures to allow the approval of single private projects that do not conform to municipal plans, became to be seen as a support for the regional plan's implementation. This contributed to re-legitimizing planning (and the plan) as a process (instrument) useful to improve people well-being and trigger local development.

Each of these experimental projects adopted a coproductive type of approach. Thus, they had also the effect of spreading public involvement on the issues of territory-landscape preservation, improvement and rehabilitation in a number of local contexts, and enabling the region to overcome the difficulty of interacting with citizens which typically concerns the regional planning scale.

Examples of experimental projects carried out during the planning process include the multifunctional agricultural park of Paduli in the lower Salento, the multifunctional park of towers and farmhouses in the area north of Bari, requalification projects for a number of peri-urban, coastal and abandoned areas, the construction of soft mobility and pedestrian paths in parks and tourist areas, ecomuseums and community maps. In some cases the region supported projects already started by local communities, in other cases it promoted new projects in areas without public and private proactive actors, using the formers as concrete practices from which the latters could draw inspiration. For example, the construction of community maps and eco-museums in several municipalities in Valle d’Itria and Capitanata was based on the experience that had been developed in Salento since the beginning of 2000s. The agricultural park of Paduli was founded on the experience that had been involving since 2003 a group of youths in the recovery of an abandoned piece of countryside, and later ten municipalities and local (and external) population, in a process of awareness building. This allowed to transform a forest of centuries-old olive trees from an abandoned and degraded area to a propulsive centre of rural local development where to promote new activities related to place identity, such as specialised crafts, foods, cultural artefacts, recreation and tourism.

3.4 OUTPUT OF THE PLAN

As a result of the “social production” of the plan, the Strategic Scenario includes twelve general aims and specific objectives, and five territorial projects for regional landscape which aim at increasing the value of the territory and landscape heritage which was identified through the above-mentioned identitarian representations. They can be summarised as follows:

- the regional ecological network aims to improve the overall connectivity of the regional ecosystem by a multifunctional reinterpretation of existing biodiversity,historic infrastructures, river systems, marshlands, karst pits and the environmental value of rural landscapes;
- the city-countryside pact aims to improve the quality of life both in rural and urban areas by combining urban and agro-silvo-pastoral policies through the regeneration of urban peripheries and the functional strengthening of periurban agricultural areas and the deep countryside by encouraging an alimentary, recreational, hygienic and enjoyable exchange between the city and the countryside;
- the infrastructural system for soft mobility is structured around the (re)discover and improvement of alternative ways of enjoying the regional territory-landscape through networks of ancient roads, cycle lanes, pedestrian footpaths and greenways, scenic railway with lines which go through or brush areas of outstanding landscape value, multifunctional corridors connecting coastal with inland areas, a multimodal coastal transports including a regional ferry service, interchange nodes near railway stations and docks;
- the integrated protection and improvemet of coastal landscapes includes sixteen coastal landscapes of high naturalistic value which are to undergo improvement policies assuring the general public to enjoy coastal areas or regeneration policies if on states of decay and deterioration. These policies follow a system of actions and projects which specify and territorialise the general objectives of the strategic scenario in coastal areas: for example, to

ecologically improve recently developed tourist settlements with particular regard to beach tourism, to give the coast more depth by creating synergy with inland areas, to safeguard the long-standing alternation of developed areas and open spaces in order to limit the consumption of land and contrast the formation of a continuous linear front all along the coast, to decompress the coast through building and infrastructure delocalisation;

- the territorial systems of cultural heritage management aims to overcome the logic of cultural heritage protection entrusted with the tracing of a safeguard perimeter, and proposes a project for the fruition of "stratified topographical contexts", which embraces inter alia points of access to the area from major road networks and soft mobility systems, points of visual perception and of points of access to individual examples of heritage within the area, museums and eco-museums.

The plan entrusts projects' implementation to public and private subjects by privileging forms of co-design and agreement, and specifically singles out actions, actors and policies to be involved and activated at the regional and local level.

4 WHAT COULD BE LEARNED?

Designing the future by means of the construction of visions and the devise of strategies is a political task, implying societal conversation and political debate (Mazza, 2010). Planning is profoundly intertwined with politics and "the political" since it involves decisions that unavoidably implicate some re¬distributive effect, and different costs and benefits for diverse social groups. In the Apulia experience the boundary between politics and planning expertise is fuzzy due to the background in planning of the deputy president responsible for the L-T P. It also illustrates that roles should be not considered fixed in planning annex political processes. But also the boundary between politics and "the political" is blurry, because an activist planner, with a long background of joint commitment with antagonistic groups, became a government member. Thus, she acted as a sort of interface between these groups and the politicians, and thus was an important part of the storytelling.

When seen from the vantage point of practice, the difference between the political and politics which equates to a conflict between a collective and a liberal (individualistic) view of society seems to be reductionist. The co-presence and interplay between the political and politics are almost unavoidable (Castoriadis, 1995; Deleuze and Guattari, 2006).

Seen from the "inside" of movements, dissent is not always aimed at initiating a conscious radical change of society (Zizek, 2013). Moreover, when the emancipatory corresponds to a radical change, the absence of politics and power to materialise it leaves the dissidents without any possibility to see their hopes realized. Therefore dissidents want/need politics. In Apulia some dissidents had the opportunity to find themselves in an authoritarian/leading position and others had the possibility to look at the government not as an antagonist but as an ally. Together they had the opportunity to change the situation they had criticised. Most of them grasped this unique chance for emancipation/change. However, even when working for emancipation/change, hegemonic control is always present, at least until new institutions are created according to the dissidents' vision.

Activist planners, in their (new) roles of governmental politician and planners, become interceptors of social practices seeking to build citizenship rights in the territory-landscape, stimulators of new social practices, and creators of conditions that favour joint action between activists and regional/local governments, so as to make the exercise of citizenship rights also an opportunity for greater responsibility for people and organizations towards the future of territory-landscape.

The strategic approach to territory-landscape planning did not seek to replace the antagonistic, more open and transparent role and purpose of planning in mediating between conflicting and often irreconcilable interests by highlighting the strategies, mechanisms, actors and networks that mitigate conflict and undermine critical discourse (Oosterlynck and Swyngedouw, 2010, 1580). Its formation was the product of a specific institutional setting which shaped what was imagined as strategic and yet which may come to have the capacity to challenge and transform that setting (Hajer, 2005).

The Apulia T-L planning process can suggest directions for (radical) transformative planning practices, since it was possible to trigger some in a regional context where spatial planning is traditionally weak,

regulations governing land-use and transforma¬tion are often infringed, and the market sirens are likely to exert a strong attraction due to the high unemployment and low average income levels.

Carrying out “experimental integrated projects” during the plan-making process anticipated the implementation, at least for some significant examples, at the elaboration phase to show "live" the ways in which the T-LP could have been implemented after approval. As mentioned, some projects were already in progress, and the region supported and made them known to a wider audience; others were co-designed by the region together with municipalities or local associations; others are being developed around Apulia after the plan approval, due to the voluntary initiative of municipalities or local groups, for example the ecomuseum of the sail swamp in Taranto promoted by a group of associations and funded by the Foundation with the South, the implementation of city-countryside pact in municipality of San Severo in the Province of Foggia, the integrated project for creating a linear inter-municipal park linking Martina Franca, Noci and Alberobello in Valle d’Itria.

Furthermore, the aim of sustaining on-going experiences and promoting new ones contributed to bring to the fore the milieu, or rather the foundation of a specific collective identity, with its endogenous development potentials related to protection and enhancement of local heritage. This was an important change of perspective after decades of top-down development policies, including the growth-pole policy, which had been dominated by purely functional concerns relating to economic efficiency and modernity. This revealed the potential of social innovation based on culture and identity building (Moulaert et al., 2005) to break self-reinforcing processes at the basis of path-dependence in many distressed areas of Apulia, thereby initiating a process of change that could amount to an unlock-in path (Greco and Di Fabbio, 2014).

The strategic approach was essential for not considering the plan’s intentions, visions and rules just limitations to the individual freedom. Intentions, visions and rules were consistent with a narrative that at least a part of the economic, social, cultural, political groups shared as a support for a new form of self-sustainable development that assigns great protagonism to local communities. Allocating resources to municipalities and local socio-economic actors for projects and actions in line with the plan helped these groups understand that the vision can result in concrete actions, and this further strengthened the legitimacy of the planning process and the reliability of the politicians that had promoted it.

The institutionalization of the new landscape planning narrative, stated in the most sensitive social groups, i.e. its penetration in the norms, attitudes and practices, thus providing a basis for structural change, requires great efforts and much time (Albrechts and Balducci, 2013). The long process of “social production” of the plan was essential to create a common base of storytelling, language, and awareness through interactions. It helped to resolve conflicts triggered mainly by regional opposition councillors and municipalities, landowners, and energy companies in the approval phase.

But, probably more importantly, it is crucial that politics is willing to take risks of proposing a radical change. This requires the ability to demonstrate, through robust arguments and concrete examples, the social, environmental and economic damages caused by the dominant development model in their everyday living places. At the same time it requires building a new imaginary and joining the unthinkable to the experience, that is giving concreteness to this imaginary by means of a series of present actions that show that what seemed to be impossible is possible. This repopulates the political with new visions, hopes, and modes of organisation, taking them out of the cage that makes them consider the present as closed to any kind of change. Of course planning and the political are only a part of this story. Building a coalition of interests around the territory-landscape imaginary is an important (and difficult) task. The political vision underlying government policies has to be -at least in part -consistent with the planning objectives. In the Apulia government experience, tourism, culture, agro-food, and youth policy programmes were considered drivers of a new local development model based on the improvement of cultural and environmental heritage of the territory. These policies and programs produced short-term actions and Community financial resources that contributed to bolster the strategic scenario designed by the Territory-Landscape Plan.

5 EPILOGUE

Strategic planning is usually thought of as producing new images. But these are often “images of” rather than a social imaginary, as conceived by Castoriadis. How can the vision in strategic planning be seen as instituting a radical imaginary? What kind of relationships should be envisioned in strategic planning between instituting and instituted imaginary in order to make planning the beginning of a new history? What happens when strategic planning is used in a context in which the old social imaginary has been challenged and there is already a movement to institute a social imaginary embedding specific emancipatory ideas of social justice? How can the collective and community play a role? How can this problem be faced in order to find new urgent support to the transformative potential of planning? This case study can suggest directions for (radical) transformative planning practices, since it was possible to trigger some deep change in a regional context where spatial planning is traditionally weak, regulations governing the use and transforma¬tion of land are often infringed, and the market sirens are likely to exert a strong attraction due to the high unemployment and low average income levels.

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ID 1613 | SUBVERTING THE PRESENT, PLANNING THE FUTURE: PROPOSING A COUNTER-PLANNING

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1 INTRODUCTION

Our discussion references are the realities of contemporary, capitalist societies under the (more orless) domain of a neoliberal market ideology and economy. In this context of political and institutionalchanges and mobilizations of different orders and scales in streets and squares, there is an increased academicproduction regarding processes of insurrection and subversion in the most different spheres of politics andsociety. (Pierce and Williams, 2016, Olson, 2016 and others).

Also in the discussion of different modes of planning, insurgent and subversive practices of plannerscan be identified under certain circumstances. Sager (2011, pp. 8ff), in a broad systematization of forms ofplanning, describes a range of situations and activities that characterize planning as "radical" and planners asinsurgents and subversives. As he states, in a reference to Friedman, "state engagement in radical planningseems close to contradiction in terms". For this reason, he understands that radical planning is "anoppositional but overt activity performed by planners with their professional base in civil society and with astrong commitment to a cause" (Sager, 2011, p. 9).

Stimulated by experiences of alternative forms of planning, we try to discuss, in this essay, theirpossibilities and potentialities to contribute to such a "radical" society's transformation as it is put in theirproposals. Without referring to a specific country and its society, the adopted approach seeks to show,generically, existing structural conditions for the necessity of “another” planning and its characteristics.

This seems nearly a paradox in the face of discussions about reformulations between State´s andsociety´s relations in the sense of transferring public (state) responsibilities and tasks to private agents or tothe anonymity of market forces´ performances - even in the form of public-private partnerships or newforms of governance with the participation of stakeholders.

Nevertheless, encouraged by the above-mentioned approaches of “radical planning”, it is the aim ofthis text to show why and how, especially in these (neoliberal) societies, planning could gain an even increasedpotentiality and necessity than in the past.

Our argument will be that it is necessary to abandon planning´s main features to anticipate orforecast situations and events in the future; and give up that it has to prepare decisions rationally or even toincrease problem solving capacities. Obviously, such conditions would be unconceivable for the traditionalplanning modes and methods, even of those like communicational and collaborative forms; a discussionabout the different modes and their characteristics see in Limonad (Limonad, 2015).

Instead of this, like presented in the title of this essay, planning´s main incumbency should be tosubvert the relation between present and future: shrink the future and increase the present. This will demand a shiftin the “temporal dimension” of planning which has its consequences for the understanding of planning as asocial process how will be shown afterwards.

But, there is a second dimension, a “spatial dimension”, linked to the understanding of planningpractice as an element of producing (social) space. Besides the “subversion” of time, there will be discussed a“subversion” of space (and its representation) as the second constituent element of our argumentation.

Both of them, together, will signify an “epistemological shift” in planning understanding. What weintend to show in this essay is: that planning´s future depends on an “epistemological shift” on behalf of timeand space in planning. That, dialectically, even a planning, which not wants to be a “planning” in the formersense, remains planning within a shift to a new episteme and a different comprehension of the “world”.

Therefore, it is necessary, as hypothesis of the present work about the “subversion” of planning, to“open” the potentials of the present and focus on the (real) potentialities of the future. In other words, it isnecessary to "subvert" the very logic of planning.

2 EXPANDING THE PRESENT, CONTRACTING THE FUTURE: VALORIZING DAILY LIFE EXPERIENCES

The contemporary consciousness of time was formed in the end of the eighteenth century with itsreferences to an actual epoch itself and not to the coming eternity that would arise until the final judgment´sday. Since then, according to Habermas (Habermas, 1987 ; see also in Randolph, 2016), "past" and "future"are established from a conception where the actuality is a passage to the new. This actuality - the present -"lives in the awareness of the transitoriness of historical events and in the expectation of other configurationsin the future. ... Actuality linearizes the rupture with the past as continuous renewal ".

Confidence disappears that present problems could be solved in relation to examples from the past;other times do no longer serve as guidance for overcoming problems and time becomes a scarce resource foraccomplishing this. Thus, as the author says, modernity finds itself "completely abandoned to itself, it has toextract from itself its normativity. From now on, authentic actuality is the place where the continuation oftradition and innovation are intertwined”. Planning certainly belongs to this place of intertwining tradition (past) and innovation (future).

With respect to the future – as an “utopia” –, as expectation of better and less endangered life forms,it was only in the Twenties Century that future – as utopia – was “rehabilitated as an unsuspected medium forthe design of alternative possibilities of life, which must be potentialized in the historical process itself. Theutopian perspective (of futures) was inscribed in the very consciousness of politically effective history”(Habermas, 1987).

Like Habermas, Boaventura Santos realizes a reading of time and highlights the change ofcomprehension that occurred in recent periods. He identifies, on one hand, a contracting of the present and,on the other hand, an expansion of the future. The contraction of the present, occasioned by a peculiarconception of wholeness, transforms the present into a fledged moment, entrenched between the past andthe future. In the same way, the linear conception of time and the planning of history allowed to expand thefuture indefinitely. It seems, that, the broader the future, the brighter are the expectations confronted withthe experiences of the present (Santos, 2003).

Nowadays, besides the ending of the utopian energies, alleged by Habermas, Santos affirms that thissituation of valorization of the future by neglecting the present is responsible for a huge waste of socialexperiences as it conceals and discredits alternatives to neoliberal globalization and capitalism produced bysocial movements and non-governmental organizations.

To change this situation, it is necessary to work with "a different model of rationality. Without acritique of the Western rationality model for at least the last 200 years, all proposals presented by a new socialanalysis, however they may judged as alternatives, will tend to reproduce the same effect of concealment anddiscredit"(Santos, 2003).

The central argument for our discussion is the author´s proposition that another rationality mustpursue, "in this phase of transition, ... the reverse trajectory: expanding the present and contracting the future.Only in this way will it be possible to create a space-time necessary to know and value the inexhaustible socialexperience that is going on in today's world”.

For "expanding the present", Santos (2003, p. 4) proposes a sociology of absences; for “contractingthe future," a sociology of emergencies. Without following in more depth or details Santos´ argumentation,his approach can give valuable indications to identify essential characteristics of actions which can promotethe valorization of the present as the very moment to recognize its future potentialities. In this way,“expansion” of the present – to the future – will be “contract” the future to the potentialities of the present(in Bloch´s words, to a “concrete utopia”).

The subversion of planning means that “planning” itself should be able, in practice, to contribute toextension of the “present”; in other words, to the expansion of social experiences already available, as well asto experiences as potentialities of the present. But, in Santos´ perspective, there are two problems with themultiplication and diversification of the available experiences: "… the problem of extreme fragmentation oratomization of the real and the problem, derived from the first, of the impossibility of giving meanin This author “solves” this problems by two forms of reason: a metonymic and a proleptic one whichseem to involve some “planning” afford. We shall argument, that these “problems” have to and can besolved by the same actors who create their experiences in their own “rationale”.

To show how this will be possible, it is necessary to take a look at an opposition between twodifferent reasons which are responsible, on the one hand, for the above-mentioned reduction of present andexpansion of future, which shall be called an “instrumental” reason; and, on the other hand, for a certain“survival” of social actions and forms of social reproduction responsible that there are even socialexperiences, not submitted to that instrumental reason. Without this “communicational” reason – notsubmitted, entirely, to the “dialectic” of reduction/expansion of time - there would be no possibility to thinkin social experiences which could have the potential to confront the reduction/expansion processes, promotedby traditional planning processes.

But, as we have shown in other place, it is not the simple communicative speech act which will beable to confront the instrumental reason (Randolph, 2015). We will discover first indications about thecharacteristics of this “new” (“subversive”) actions by adopting a “pragmatic turn” in linguistic as introducedby Habermas (Habermas, 1990).

In its preparation phase, these actions will have, to some extent, characteristics similar to those ofcommunicative actions. Thus, the same way as in the pragmatic perspective of communication contactsbetween life-world agents cannot be based on a pretension of "truth" as a (“true”) representation (speech) ofthe objective world. Appealing to this (objective) "truth" is indeed a very common strategy in attempts of"experts" who advocate being the "masters" of the truth - even by relying on scientific knowledge.

Regarding the turn, (pragmatic) "truth" of any action depends on the relations of sincerity andcorrection between those life-world agents engaged in an action against that reduction/expansion processes.

Preserving sincerity and correctness is essential in order not to jeopardize the very power of this type ofaction that has its origin, in the last instance, in the collective recognition - through communicative rationality- of the contradiction between the two reasons mentioned above.

For at the time of the decision on or adherence to these actions, we may call them “subversiveactions”, the lack of subjective sincerity and normative correction will infallibly lead to the infiltration in it of alatently strategic rationality compromised to reduction/expansion processes.

The preservation of subjacent communicative rationality at these moments is not at all trivialbecause, unlike communicative action, the actions opposed to the “reduction/expansion dialectics” does notexactly have as purpose a mutual understanding between life-world agents and those of systems – the realmof instrumental reason and reduction/expansion processes. At the moment of interaction, subversive actionsapparently resemble some “instrumental acting”: speech acts, not as mere communication, but with anobjective - which is subversion - and needs of certain means to reach it.

In other words, observing the two moments of gestation and the realization of subversive actions, its"hybrid" character appears because it needs, at first, to assure the communicative rationality to elaborate theg tosocial transformation" (Santos, 2003, p. 29).This author “solves” this problems by two forms of reason: a metonymic and a proleptic one whichseem to involve some “planning” afford. We shall argument, that these “problems” have to and can besolved by the same actors who create their experiences in their own “rationale”.

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In other words, observing the two moments of gestation and the realization of subversive actions, its"hybrid" character appears because it needs, at first, to assure the communicative rationality to elaborate the "pragmatic truth" of its action; and in the second moment of execution and interaction with the system asrealm of instrumental reason, the "effectiveness" of the action as subversive depends, to a large extent, on a"programmed incomprehension" of its meaning by agents of the system. This "incomprehension" is not dueto the subjective failings of certain agents, but is structurally programmed because only the "life-worldagents" - as the it was said form the former proletariat - really has the conditions to understand society in itstotality (especially in its contradictory totality). "System agents" interpret society from its instrumentalperspective, and although they may believe that they understand it in its totality (that is the origin of theirideology), this comprehension is only partial - and therefore becomes susceptible to certain "programmedmisunderstandings" that take advantage of the "black spots" in their understanding.

In Habermas' terms, this "hybrid" character (between communicative rationality and latent strategicrationality) of "subversive" acting as speech acts would allow us to take advantage of ambiguities of thelanguage itself to create, purposely and "communicatively" misunderstandings aimed at subverting actionscreated through an instrumental rationality.

We believe that social subjects´ daily life is full of these "deviations" of understanding and theproduction of intentional misunderstandings that protect the communicative rationality of the advances ofinstrumental rationality. This is not an open fight between these two rationalities; but of a real daily"subversion" of rules, orders and guidelines in the private and - why not – public sphere, which are imposedto people's lives by the systems.

Here, as well as in the case of subversive action in the public sphere, it is not a matter of enteringinto a "symbolic struggle" between different conceptions or proposals, or eventually to "win" such a dispute.

Subversive action not necessarily must arise prepared by great mobilizations and movements ofcommunication and mutual understanding, but condition of sincerity and correction has to be minimallyassured.

In this way, that two problems of extreme fragmentation or atomization of the real and the problem,derived from the first, of the impossibility of giving meaning to social transformation will be “solved” on thebasis of the daily experiences and within its own logic: the articulation of collective actions (as speech actsand intervention) against the realm of the logic/dialectics of time reduction/expansion. Without any need ofsome extern actor to create “reciprocal intelligibility between the experiences of the world” (Habermas,1990).

3 EVERSAY LIFE, SPATIAL PRACTICES, AND THE PRODUCTION OF (SOCIAL) SPACE

In the previous item we postulated, more implicitly than explicitly, that there is some “force” ineveryday life that does not permit its submission - at least totally - to the dictates of an abstract/instrumentalreason, to bureaucratic demands and to a "commodification" of life´s vital manifestations.Without intending to open a debate with authors who believe that in neo-liberal societies thispossibility no longer exists (Dardot and Laval, 2914) , we shall show here, briefly, the arguments of those authors who defend this daily life force and its opposition against instrumentalization and transformation into a commodity.

In fact, Certeau (Certeau, 1998, p. 42) sees the basis for social transformations in daily life´spotentiality through its manifold manifestations of cunning and anti-discipline. Opposing Foucault's"networks of surveillance" and "microphysics of power" approach, he recommends that it is more urgent todiscover how society is not reduced to networks or the microphysics of power:

> *that popular procedures (even "tiny" and daily) play with the mechanisms ofdiscipline and do not conform to them except to change them; that "ways ofdoing" form a counterpart, on the side of consumers (or "dominated"?), of themute processes that organize socio-political ordering.*

The author realized an entire research to find out what rules obey these tiny daily operations that are"fragmentary, relating to occasions and details, insinuated and hidden in the devices of which they are theways to use, and therefore devoid of ideologies and its own institutions."(Certeau, 1999, 42).

In his critique of Foucault, Certeau points out that this neglect of the cunning of groups and individuals and their everyday anti-discipline leads this author to replace

> *the analysis of the apparatuses that exercise power (that is, the institutions thatare locatable, expansionist, repressive and legal) by means of "devices" that"vampiraize" institutions and clandestinely reorganize the functioning of power:"tiny" technical procedures acting on and with details, redistributed the space totransform it into the operator of a generalized "vigilance". (Certeau 1998, p. 41)*

As showed above, even using other terms, Habermas identifies similar forms of resistance and antidisciplineas deviations from productions of purposive misunderstandings which protect a “communicativerationality” against the advances of an “instrumental rationality”. In general, there is no apparent strugglebetween these two reasons, but a real daily subversion - that is, anti-discipline and disobedience - of rules,orders and guidelines in the private sphere, which are imposed by systems on people's lives.

If for Certeau everyday life is the place (or non-place, utopia) of cunning and anti-discipline, forHabermas it is in life world where the forms of living together (tradition, socialization and formation ofpersonality) derive from a communicative logic of practices which suffer from tempted intrusions of (system)institutions. Both readings mutually reinforce each other.

Only to mention, briefly, another argument in favor of the potentiality of this "revolutionary force ofdaily life" is provided by Vaneigem (Vaneigem, 1967). For him this force seemed to have at certain momentsin

history even the potentiality of inaugurating a new society. Albeit the examples delivered from him notbeing successful, they show that, beyond their origins in daily experience, it is necessary to overcome theperception of everyday perceptions as particular, and that a more profound rationality has to be revealed orrecognized.

We agree with Vaneigem that this everyday life force can be revolutionary, in certain circumstances,and has the potential to transform entire societies. Even considered as “small, tiny or minuscule” on behalf ofsomeone’s daily experiences, it can become “gigantic” when it is turned to a collective practice. To justify this statement, we have to direct our attention to the spatial practices which are determined and determinants of (social) space.

Therefore, with the intention to fulfill this promise, we choose as our theoretical reference Lefebvre´s conception of space as a social product.

In his conception of social space, Lefebvre (2013) confronts the elaboration of discursive spacerepresentations by certain specialists - architects, urbanists, planners – with, what he called the “spaces ofrepresentations” formed by people and groups permanently in their daily life and experiences. These spaces ofrepresentation, as a sort of emanation of people´s living experiences are not always discursively accessible.

> *The representations of space express the dominant (ideologically hegemonic)perspective of that society regarding its social space always related to the socialrelations of production and the orders that have their origin in them. Thesespatial representations as the official comprehension of social space seek toimpose their perspective on social experiences of that people whose spaces ofrepresentation are often at odds with them. Because, the spaces ofrepresentation may be linked to a more clandestine and underground side ofsocial life which does not obey the rules of consistency and cohesion; its“maps” involve not so much reflection and reason, but passion and feelings. AsLefebvre says, these spaces (of representation) have an affective nucleus andembrace the places of passion, action and the lived situation and thereforeimplies time (Merryfield, 2002, p.90).*

Therefore, we discover here another intrinsic conflict/contradiction in capitalist societies. Maybe wecan call this the “spatial dimension” of societal contradiction where one spacial representation tries tosubordinate all those representational spaces which do not agree with the dominant version. A rather similarsituation that we found in relation to the dominant (capitalist) instrumental reason of economic accumulationand political oppression which tries to subordinate life world processes to its order.

This intrinsic conflict of social spaces in modern (capitalist) societies emerges throughout history -and is expressed differently in certain periods - with the separation between perception, experience andconception of space, introduced in the Renaissance (see Lefebvre 2013). It characterizes the production ofmodern (social) space ever since.

The “connection” between the lived space (representational space) and the concept of space(representation of space) is spatial practice. These three “moments”, as Lefebvre calls it, in their contradictionalconfiguration, constitute the triad which determines the dynamics and production of social space: spatialpractice, space representation and representational spaces.

> *Representations of space and representional spaces are ´secreted´ by spatialpractices which ensure that conceived and lived space coexist in dialecticalunity. They secrete stability as well as contradiction. Spatial practices invariablyrelate to perception, to people´s perceived take on the world, on their world –particularly their everyday world. Spatial practices make sense (and nonsense)of everyday reality, and include routes and networks, patterns and movementsthat link together spaces of work, play, and leisure. … They maintain societalcontinuity and ´spatial competence´, and somehow mediate between theconceived and the lived, keeping representations of space and representationalspaces together, yet apart … (Merryfield, 2002, p. 90, autor´s highlights)*

In a former comprehension of participatory, communicative or collaborative planning (Randolph,2007), spatial practices task was providing mediations between the abstract representations and conceptionsof

architects, urban planners and planners, and the lived spaces (spaces of representation) by those who areobject-subjects of the process of transformation.

In our line of argument, we do not search the “mediation” capacities of spatial practices. On thecontrary; in overcoming these above-mentioned forms of planning, we are looking for the subversivepotential of spatial practices. This will be the case by those spatial practices when expressing and oriented bythe representational space of a person or a group of people and will have the same potential of contestationas we found in the subversive (speech) actions.

This subversive potential of spatial practices can be directed against the domination of therepresentation of spaces – and the ones responsible for turning a certain representation of space dominant.And it has to be directed against space representations that try to expropriates the population of their spacesof representation - and, in some way, with this threaten also to expropriate their space practices.Without arguing here that these spaces constructed in the daily life must be untouched or absolutelypreserved, they deserve to be considered as a potential for subversive action capable of organizing concreteactions in concrete contexts as concrete expressions of subversive actions - prepared by subversive speechacts.

4 SUBVERSIVE ACTIONS AND THE SUBVERSION OF PLANNING – SOME NON-CONCLUSIONS

It needs to be made clear that subversive actions are not understood, in this essay, as "coup d'etat" ordirected against order, law, government or system itself. Subversion seeks to des-structure and to annihilate,yes, actions that are directed against the above-mentioned life world processes – shrinking the present,enlarging the future and submitting representational spaces to dominant representation of abstract spaces. Ina specific way, the understanding of subversion here proposed follows the comprehension elaborated in thecontext of anarchy and situationalism (Randolph, 2014, pp. 42ff). In its “natural way“, always present, the"subversive" capacity of the daily life – in time and space – acts against concrete manifestations ofexploration, oppression and submission where and when it can be identified.

For example, urban social movements - such as those that broke out in June / July 2013 - may havehad a "subversive" intent and oppose advances in the increasing dominance of exchange value in the city. AsMélucci says: "I define analytically a social movement as a form of collective action (a) based on solidarity, (b)involved in a conflict and (c) breaking the boundaries of the system in which action occurs." (Melucci 1985,p.795, emphasis added).

Subversion, within the conceptual framework outlined here, can or must be understood as apermanent, everyday social practice that is part of the daily life of social agents when they become aware the permanent attempts to harm their life through abstract and instrumental logics. Ultimately, subversiveactions and practices may be understood as counter-hegemonic when they seek to expand the present and therealm of representational spaces. It is worth to subversion what Vaneigem expresses at the end of his book aboutthe revolt:

> *The moment of revolt, which means now, is hallowing out for us in the hardrock of our daily lives, days that miraculously retain the delicious colours andthe dreamlike charm which - like an Aladdin's cave, magical and prismatic in anatmosphere all its own - is inalienably ours. The moment of revolt is childhoodrediscovered, time put to everyone's use, the dissolution of the market and thebeginning of generalised self-management. (VANEIGEM 1967; ourhighlights).*

In the previous items of this essay, by looking for a "new" planning as a subversion of previousforms, we tried to show that there are in the everyday life of people in contemporary societies potentialities ofsubversive actions, both in relation to a transformation of dominant temporal relations as well as of dominantspatial relations. It´s first aim is to "defend" the everyday life against the imposition of a temporal logic, as aspatial logic of those societies that pursue to submit life to its abstract, instrumental and commodificationdictates.

Finally, counter-planning - as a subversion of planning - appears in our argumentation as anemancipatory action of those whose everyday life is submitted and threatened by the shortening of thepresent and

whose space practices undergo transformations because of the dominance of the representationsof space over their own spaces of representation. This first, reactive form of counter-planning can only becarried out by the very people who suffer or are threatened from the impacts of other forms of planning andtheir "dialectics" of shortening/extending the time horizons of planning and imposing representations ofspace colliding with their own spaces of representation. A second form can be seen as an active attitude of“counter-planners” towards the deliberate extension of the present and the extension of validity of theirspaces of representation.

As a concrete form of opposition to the diffusion of instrumental and abstract logics in the world oflife, for this counter-planning there is no "recipe" for its realization. Its dynamic seems more like amobilization or movement, than an institutionally organized performance.

It is possible, for the moment and in the first approximation, to establish some characteristics. Theagents of this counter-planning are people, groups, segments or even social classes who pursue commongoals or strategies. They meet in a concrete situation or to counter threats of the present or weakening ofspaces of representation or to. The scope of the actions of this counter-planning is contingent and willdepend on the agenda itself drawn up jointly by those who have gathered around certain issues.

These "subversive" activities need not necessarily be clandestine in capitalist societies crisscrossed bycontradictions and subject to permanent crises where even "counter-hegemonic" initiatives, as history shows,are essential for survival or renewal of the system. The "activism" of this "new" subversive planner, aimed atstrengthening civil society itself in terms of increasing its autonomy and combating inequalities, may bepossible at an infra-systemic level that does not immediately pose any threat to the order.of Different from the understanding of “insurgent planning” which is, as reported by Miraftab (2009,p.46) concerned to marginalized and oppressed groups and offers a critical analysis and understanding of thestructural forces that marginalize and oppress population, counter-planning is not limited to these groupsbecause of certain problems – on temporal and spatial basis – are more generalized in capitalist societies,especially in the neoliberal societies.

This is, as we have tried to show in previous works, what the very social dynamics in capitalismseems to allow without a direct confront which will easily be smashed down by the dominant forces (Bey,1985).

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ID 1623 | ROLE AND GOALS OF ONTOLOGICAL ANALYSIS IN UNDERSTANDING SPACE AND PLACES

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1 INTRODUCTION

Places are landscapes as seen from far away, places are cities lived from inside or cities imaged from outside: are they ecological ecosystems too? We intend to focus our attention on lived places. Physical places are complex entities. Nonetheless, we should first distinguish a concept of space from a concept of place. Each of these concepts has different declinations and for each declination there is a possible definition. From a cognitive or a designer's perspective space is instead conceived as something different, at least not explicitly a 3-dimensional subspace (Freksa et al., 2014).

A place is an interpreted space, a reasoned space, a space with feelings, a result of an aesthetic fruition of a physical space. We can define physical space as a set of mental images, spaces of representation, and the architecture of cognitive processes in vision theory. The essence of place lies in the quality of being somewhere specific, knowing that you are "here" rather than "there" (Rapoport, 1977) for example enclosure becomes a very important aspect of place-making which also seems, in some way, to be related to the concept of territory.

We understand places through cognitive contexts. This is the reason we 'read places' we live in. We can interpret our being in a space as an objective proposition according to geometrical rules/indications. Nonetheless, our being in a place is defined only via a richer description. Every single person that stays in a place has a subjective point of view. Points of view and contexts are results coming out from a historical – cognitive -cultural selection. Our knowledge of places can derive from experiences, from stories that structure ideas and feelings about them. When we talk about 'subjective knowledge' of places, what are we really dealing with? 'Subjective knowledge' is a kind of representation of places, and a representation vary not only from different subjects, but even during one subject's life (Orr, 1992). "Knowledge of a place — where you are and where you come from — is intertwined with knowledge of who you are. Landscape, in other words, shapes mindscape."(Orr, 1992)

In literature there are many attempts to get a definition of representation of space. Ontological research is increasingly seen as providing methodologies and tools to move forward in this direction. Ontologies, these systems being typically specified in languages that allow to abstract away from data structures and implementation strategies. The languages of ontologies are closer to first-order logic than languages used to model databases. In computer and information science, an ontology is a technical term denoting a conceptual artifact that is designed for a purpose, which is to enable the modeling of knowledge about some domain, real or imagined (Gruber,1993).

2 ABOUT PLANNING

Today's awareness of the complexity of social and natural environments implies that in using state-of-the-art techniques to model these complex systems we must accept a dramatic, and perhaps discouraging, level of uncertainty. The traditional deterministic and quantitative approaches to urban planning and design in risky contexts seem to increasingly fall short of expectations in environmental domains; and this is now widely recognised (McConnell, 2010).

Planning tries to manage complexity, it is the result of an interaction between collective knowledge and project, through the intersection of knowledge: it is a value that should be treated with the principles of sharing, as the foundation of a necessary political dimension of the contemporary design (Formato and Russo, 2014).

The 'futurisation' of reality (pro-jectus) finds consistency and dynamism in the concept of process as a source of reflection that constantly provides new impetus to new proposals and a consistent updating of that locally-based langue, the expression of a culture's identity (Gregotti, 2007).

An urban project as a plan or a strategy have to evolve over time, it can't stay frozen [8]. The planner like the urban designer has always to look at changes of the territory and have to read the different relationship between built space and complex urban organization.

Architecture, social sciences or anthropology have an active role in the thinking and the development of urban projects. About anticipation city is a relational system and must be thought as a whole and not district by district (Ingallina, 2007).

We have to point out that knowledge in our domain is not completely coded. There are large part of non formal/uncoded knowledge; the more there is a knowledge not explicitly expressed.

Our domain refers to a low structuralized knowledge.

3 CARVING UP GEOGRAPHICAL PLACES

Humans live, move in and observe complex spatial environments using different paradigms. The interaction of humans with space is sophisticated. It continuously changes over time and relies on a variety of information types that can be classified in terms of topology, geometry perspective, dynamics, affordance, society, culture and so on. Perhaps due to the richness of this interaction, humans are not aware of how their understanding and interacting with space is realized. Ontological analysis, the study of what is at the core of our view on reality, can help to recognise, clarify and organise the essential elements

and features of space that is crucial to humans in terms of objects, properties and processes. Searching for a general framework where to discover and organise this kind of information, we can list a few levels that seem quite relevant. Without aiming at an exhaustive list, we propose to subdivide these levels as follows: spatial, artifactual, cognitive, social, cultural and processual. These levels, in turn, can be subdivided in finer levels as we show for some of them.

3.1 THE SPATIAL LEVEL

Mereological level (where one understands space in terms of spatial parts), e.g. recognising the subdivisions of an area like a neighbourhood Topological level (where one understands space in terms of contact and unity), e.g. recognising the contiguity between neighbourhoods and the unity of a neighbourhood Geometrical level (where one understands space in terms of shapes), e.g. seeing the geometrical shape of a neighbourhood Geographical/morphological level (where one understands space in terms of locations and their descriptions), e.g. distinguishing being in a valley or having a radial/grid/linear pattern.

3.2 THE ARTIFACTUAL LEVEL

Material level (where one understands space in terms of materiality), e.g. seeing the presence of wood, concrete, water Structural level (where one understands space in terms of qualified components), e.g. distinguishing natural vs manmade, residential vs production vs recreational area Artifactual level (where one understands space in terms of intentionality), e.g. looking at entities as planned/intentionally modified things like buildings Functional level (where one understands space in terms of functionality), e.g. understanding a building as a place for gathering or as a shelter.

Production level (where one understands space in terms of manipulation), e.g. seeing an object/material as needed to produce something else.

3.3 THE COGNITIVE LEVEL

Cognitive level (where one understands space in terms of experience), e.g. perceiving how to move across the objects

Representation level (where one understands space in abstract terms), e.g. perceiving the relationships among entities

Observation level (where one understands space in terms of how it does or may change), e.g. perceiving the change of the relationships among entities

Phenomenological level (where one understands space as a moving entity), e.g. perceiving space as an evolving situation

Perspectival level (where one understands space as something where one is located in), e.g. perceiving space from a specific point in it

Conceptual level (where one understands space as a collection of realised concepts), e.g. perceiving space as the manifestation of natural and artificial objects

Action level (where one understands space as an entity in which to act), e.g. perceiving the changes that one can bring to it

3.4 FURTHER LEVELS

The Social level is the level of norms and social roles and includes the organisational level, the service level, the economic level and the political level.

The Cultural level is the level of knowledge and meaning and includes the behavioural level, the living level, the knowledge level, the historical level and the community level

The Process level is the level of temporal change and transformation, it includes the dynamic level, the development level, the temporal level and the interaction level.

4 THE CASE STUDY

An example we can refer to is the making of the Taranto's strategic plan to 2065.

We started community-based, interactive processes of knowledge exchanging, aimed at building future scenarios for the new plan.

Community-based, interactive processes of knowledge exchanging were carried out in Taranto, southern Italy, aimed at building future scenarios for the new plan during the 2014's spring/summer.

They were carried out to support policies and decisions on urban socioeconomic as well as environmental domains, basing on a sequence of face-to-face brainstorming forums, aimed at cooperatively singling out strategic lines to build alternative development scenarios. From a methodological point of view, it was a 2-step scenario-building activity (Khakee et al., 2002). First, agents were invited to report problems they faced in their town districts. Then, each agent was invited to generate a reflection about the future of the district, particularly concerning expectations of future changes. Such sessions were organized in all town districts, indoor or outdoor, with participants divided in groups each of them sitting around a dedicated desk. A municipal representative coordinated each desk without taking part in the generative session, she/he had only the task of transcribing in linear charts concerns, problems, expectations and desires presented by the participants at the desk.

In order to manage the results in real time (synthesis and refinement), the interactive process was supported by the use of conceptual maps drawn using dedicated software tools (Decision explorer, Inspiration) (Heft, 2013) (figure 1). This resulted in a real/virtual hybridization of the process, following well-established research trends, as reported in a number of case studies (Borri, Scandale, 2005; Khakee et al., 2002).

Results achieved during the nine organized meetings were very different from one another. In particular, the first meeting was organized in the Città Vecchia (inner city district) with its great historical, environmental and cultural resources as well as significant environmental, physical and social degradation problems. In the Città Vecchia session the citizen participation was very high. About 80 stakeholders joined form different societal domains: residents, merchants, students, tourists, visitors. These agents, gathered around 6 desks and about 150 instances were collected.

The database collected during this session resulted interestingly rich and articulated. Because of this reason, it is a significant and valuable source for the present research effort.

Fig. 1 – Example of di conceptual map

This process has allowed the definition of two great categories of instances: a. contextual problems; b. future visions. These two categories of instances are about each quarter of the city and about the city in general.

What emerges is that the environment is the most recurring issue. It is present in community problems and/or expectations, but also in the perceptions of the physical reality of the city.

The industrial problem often seems absent from protocols, but it is difficult that final strategies could ignore industrial relations.

A first common character is the natural environment that persists in many city representations, so apparently resisting the consequences of an industrial culture.

A second one is related to a more structural relationship with the sea, intended as an element of union and communication.

A third common aspect is the potential of tourist attraction to the city, linked to different characters in relation to the different peculiarities of the area.

The industrial problem often seems idiosyncratically absent from protocols, but it is difficult that findings can be used for strategies disregarding industrial relations.

There was an almost total absence of participants in the forum session held in the industrial district, perhaps given the disillusionment with past policymaking. Other issues are related to the inadequacy of urban and metropolitan linkages to the city center, as well as related to the recovery of many illegal settlements.

Other instances are about the inadequacy of the urban services and about the inadequacy of metropolitan connections, other instances are about the recovery of unauthorized coastal settlements.

The session held in the inner city was crowded and complex. The session was held with a hybrid computer-based and traditional, rather conflictual interaction. Outcomes showed a clear prevalence of visions on mere problems: important issues were the unstopped relation with the sea (for tourist aims and/or city infrastructuring) and the enhancement of Taranto as archaeological and historical center (Magna Graecia colonization).

5 ANALYZING THE SOCIAL LEVEL

Once we outlined the general framework we proceed to analyze levels one at the time. This analysis is useful to identify if every level is well structured or if it is necessary to model additional information. Then we can proceed to characterize every specific sublevel.

We intended to start from the higher levels of abstraction, so we have started our analysis from the social level, then we will analyze the cultural level and subsequently the process level.

The data we have about Taranto haven't been meant for research objectives, they were collected during the participation activities belonging to the strategy planning process. Nevertheless we thought that it could be useful to start from these data for a first delineation of 'objects', 'attributes' and 'relations' populating the social level.

First of all it is necessary to point out what we mean by 'social': we mean social practices , the way people live a city, or a part of the city (the quality of the interactions between people and how dynamics have been built). In the social level it is difficult to elicit the distinction among formal and informal knowledge, because the social knowledge is principally informal, tacit and implicit.

According to ontological analysis methodology we are interested in modeling this kind of information about this levels. In fact it is important to survey what kind of relation exists between places and the social meaning of places, and what kind of relation exists between social practices in the places. Agents that live the city have certain references of certain places and at the same time they have a common knowledge of the social places. As we outlined, this common knowledge emerges from the database that has been produced during the participative process that took place for the preliminary works of Taranto's strategic plan TA2065.

The procedure is: a. to single out references of places and landmarks that are of interest also for the relevance they have in social practices; b. to single out the kind of the relevant entities and the relations that exist between them; c. how inhabitants use those places and the habits they have.

Analysing the social level it emerges that the objects of the city (or of part of the city) are cognitive objects and that they are a set of many meanings/signifiers, so in this analysis it is necessary to model some complex entities' definitions.

Anyway it is important to clarify that the participative meetings that gave us the data we have were of a claiming kind and not narrative or expositive. We have chosen data about the ancient centre (città vecchia) because it has more stories, denser projections of sense and a denser presence of social places.

We have to underline that some objects of the city's tissue that a technician would image essential key points for the sociality are not mentioned in the database (for instance: Cattedrale San Cataldo, Chiesa S. Domenico, Ringhiera, Colonne doriche, Castello Aragonese, Piazza fontana, Ponte di pietra, Ponte girevole, Municipio). We wondered: are those objects not considered as landmarks?

The very first analysis about the social level for Taranto–Città vecchia has been about the search of entities/places/services useful to elicit social relations, as follows:

Places/Landmarks:

-Beachfront
+Bathing establishments
-Porta Napoli's area
-Bulging of the port (for loading and unloading goods industry)
-Pier
-Archaeological sites
-Molo s. Cataldo (old fisherman's wharf, a project today to cruise ships dock)
-The three levels of the old town
-The island -The seafront
+Huts of fishermen
+Gardens of the Vasto descent
-Lanes (Garibaldi, Nove Lune, Zippro, Abbastante, Santi Medici)
-The forty hypogeum
-Plazas, squares, courtyards
-New Acropolis (in Cardo and Decumanus)

-Prestigious Palaces (noble Palaces)
-Dewatering ILVA (steelwork industry)
-Mar Piccolo (internal lagoon)
-Navy sites
-Crumbling buildings

Objects:

-Buildings
+Sheds (the fishermen)
-Cruise ships
-Pier
-Archaeological finds
-Fishing boats
-Crumbling Buildings
-Sea
-Port
-Lanes

Roles:

-Capital of Magna Graecia
-Intermodal plate (area behind the port for unloading ship-borne goods-truck-train)
-Convergence point (road junction and railways)
-For service center
-Old city as a place of urban junction between parts of Taranto
-City 'as old as eco-museum
-Engines for tourism
-Catalyst historical and cultural identity
-University

Services (existing and desired):

-Pubs, cafes, restaurants, shops, bookstores
+Bathing establishments
+Gardens of the Vasto descent
-Cinema -Refurbishment -Leases
-Recycling
-Sewer services, electrical ...
-Cultural workshops
-University laboratories
-Toilet (for tourists)
-Tours / excursions by fishing boat
-Connections via sea
-Pedestrian network (e.g., on the waterfront)
-Tourist routes, thematic tours for sightseeing
-Organization of events and cultural attractions
-Subdivisions peripheral block
-Business block 'loading / unloading material to the port
-Parking lots
+Mussel museum
-Police station

Desiderata:

-Tourism -Work
-Involvement of local residents in tourism
-Break down the non-recoverable
-Giving air and light to the city
-Close to traffic

Primary and secondary infrastructure:

-Regulatory use of public spaces
-Development history of the area
-Refurbishment of ancient buildings
-Enhancing archaeological sites

A first delineation of the elicited relations may be outlined as follows:

Space-city (division)

-Space-object
-Space-landmark / role
-Space-service
-Existing space-desired space
-Existing service -desired service
-Object-role
-Object-affordances

Service-social practice

-Space-social practice
-Landmark-social practice
-Social practice -social practice

6 CONCLUSIONS

There is a strong contextual aspect in the way we live in places. Here, by context we mean a description (often implicit) of a place that includes at least what are considered the relevant elements in it. Typically, in discussing a place where we are, the context is what surrounds us and can be perceived; ideally, the set of entities that we see and (actually or only potentially) relate with. Thus, a context provided by an place is

an information entity that contains: a (typically partial) description of the place, what there is in it and how the place is evolving (e.g. things moving, leaving or arriving, agents acting and transforming them etc.) and possibly the potential interactions between us and what is in the place. A ground context, as opposed to a generic context, is a context that refers to one or more actual/existing entities. A context has to furnish the link between the ontological classification of what we use for understanding places and the actual place that we are experiencing. For this reason, the context has to include physical elements (e.g. location) with material components (e.g. enclosed spaces, object distribution); agentive figures (e.g. habitants, organisations, social roles) with the relationships across them and objects (e.g. generic dependences and actual goal or habits). We intended to start from the higher levels of abstraction, so we started our analysis from the social level. Here we have reported the very first achievement of a long and complex path of an ontological analysis that could be useful to share the complex knowledge that forms the city.

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ID 1637 | TERRITORIAL OPPORTUNITIES FOR URBAN REQUALIFCATION PRACTICES

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1 THE TERRITORIAL PERSPECTIVE AS A PLANNING AND ANALYSIS MATRIX

The urbanization processes of the last thirty years show a profoundly changed urban framework related to the functional and formal orders of the previous periods.

The territorial organization of social and economic activities, in Italy, is affected by the contextual phenomenon of urban sprawling and “territorial coalescence” (Calafati, 2009).

As consolidated as stable forms of urban growth over the last two decades, these phenomena have occurred in path-dependent processes, starting from specific conditions and actions that are «unintended and deliberated, but that are tolerated as minor evils, in the absence of alternatives, or as a result of force relations that have prevailed over every deliberate and programmed regulatory instance» (Donolo, 2011:189, translated by the author). These urban changes are generically referable to a contest of “urban regionalization”, and show some relevant instances of “re-shaping” and “re-qualification”.

In facing the territorial dimension reached by the urban condition, some traditional criteria of analysis and interpretation – strictly focused on a basic and dichotomic “lecture” of urban “facts” – must be overcome.

Some systemic researches on the whole Italian territory and the monographic work of some authors, especially in recent times, contributed to the increase and improvement of the factors involved into the “urban matter”. The aim of those works was to create “dense” representations of territories, in a “laic” and transcalar approach, in order to reveal the potential of “discontinuity”, “fragmentation”, “heterogeneity”, by recognizing some forms of urbanity in marginal contexts, by researching new “models” of proximity relations in dispersed areas, by revealing “the interesting beauty” of unexpected landscapes. They suggest a new paradigm for planning, that comes out from the specific characteristics of each territory, from the “original conditions” (suggesting elements for a new urban governance paradigm that «is faithful to a methodological option, according to which political and decision-makers processes must correspond to the urban processes, by interrogating and interpreting the specifics of the territory» (Donolo, 2011: 177; translated by the author)).

So, in a context of “dense” interaction between the “knowledge” and the “decision” dimension, the “territorial perspective” seem to indicate “promising” paths to decline new tassonomies, to suggest new attitudes to plan the new “urban-territorial” city, in order to achieve re-composition and re-qualification objectives.

The urban relation between “city” and “territory” isn’t new and some forms of “civism” projected in large territories inspired, the anti-urban utopianism of the late XIX century, the Garden City theory and some European and North American experiences of New Urbanism and Regional planning.

In the construction of a territorial matrix for the planning projects, it is necessary to consider renewed factor. However, a reflection aimed at providing prospects for effectiveness in contemporary practices cannot limit to alluding to forms of autonomy of communities of 'low-density' settlements.

This contribution aims at reflecting, in particular, on three components implicable into “the territorial matrix” for the requalification of urban contexts: that of the landscape, the energy and the relation factor. The following proposal calls for a reflection on, in particular, three factors which, in the territorial dimension, can play a key role in regeneration and redefinition of settlements: landscape, energy and, ultimately, relational matrix. The following proposal calls for a reflection on, in particular, three factors which, in the territorial dimension, can play a key role in regeneration and redefinition of settlements: landscape, energy and, ultimately, relational matrix.

2 CONTRIBUTION OF LANDSCAPE COMPONENT

The idea of Landscape introduced by the European Landscape Convention[1] (extracted from the aesthetic matrix definitions[2]) leads us to reflect on the interdependence between places (whether urban, peri-urban, rural, natural, etc.), and people who live in and interact with them. Landscape expresses its full identity[3] and uniqueness thanks to the persistent and balanced interaction between man and nature: through

[1] «Landscape designates a certain portion of territory, as perceived by people, whose character derives from the action of natural and / or human factors and their interrelationships» (Article 1, (a); translated by the author).
[2] Relazione illustrativa della legge 11 june 1922, n. 778, Per la tutela delle bellezze naturali e degli immobili di particolare interesse storico; Law 29 june 1939, n. 1497, Protezione delle bellezze naturali.
[3] «2. The Code protects the landscape in relation to those aspects and characters that are material and visible representation of the national identity, since expression of cultural values» (Article 131, D.lgs. 42/2004; translated by the author).

spontaneous or forced relationships, created by direct connection with the territory or imposed by need for safety, welfare and renewal, which implies continued environmental stress. It determines the conformation and / or transformation of the physical features of places and of their aspect. (Legislative Decree 42/2004; L. 14/2006).

In this regard, taking into account the important interdependence between man and nature, means above all considering the relationship between new forms of urbanism (urban landscapes) and the exteriority of highly complex environments (natural landscapes) where better ecological-environmental conditions are essential, in order to optimize the quality of living spaces and create more "sustainable" typologies of anthropic intervention[1]. If territorial transformation processes – from urban to peri urban – are not appropriately controlled, planned and managed, are the main advocates of the depletion of resources, especially the natural ones, whose customization by man causes and requires attitudes and abilities, by the resources themselves, of resistance, resilience or reaction to changes and anthropic interferences. «The landscape [...] the extra-urban, as the urban one, must be safeguarded in its entirety. Safeguard, however, does not always mean intangibility[2], because landscape need to be managed by man and the protection of its values must be the result of man's interventions» (Campus Venuti in Oliva, 2010: 125-126; translated by the author).

Therefore, the "semi-natural landscape" seems to represent the weak link of a system of elements that follow and evolve from the city to the countryside, from the center to the periphery and vice versa. «As for the urban development, we perceive changes with greater difficulty, because the built environment evolves at a slow pace [...]. We are concerned about the aspect of the cities and both their social and environmental risks» (Ascher, 2006: 21; translated by the author). Moderating and / or reducing the exploitation of ecological-environmental components means improving landscape management and reconsidering urban renewal projects, so that environmental and anthropic factors are in harmony with each other. This consideration leads us to reflect on the complicated role of urbanism that «[...] has to equip itself with a new city and territory project, in which the borders cease to be invaluable and plans so rigidly drawn within administrative and not geographic and natural spaces [...] Responsibility towards a "borderless" nature must inspire the urban agenda and the plan» (Granata and Pileri, 2012: 90-91; translated by the author).

The most affected territories by deprivation and landscape alterations (loss of differences) are the marginal places (due to the continuous transformations), where the space generally recognized as urban becomes (sometimes gradually, sometimes suddenly) rural space. Within the latter, the real urban conformation is not entirely perceptible; «[...] from a physical and conceptual point of view, in a border zone between city and countryside, between artificial and natural areas [...]» (Ricci, 2005: 57; translated by the author). This is the controversial and problematic situation of the peripheral areas. They are characterized by an accentuated sense of abandonment and territorial dispersion, where natural and semi-natural environments blend with an indefinite system of built environments. In these areas, it is necessary to encourage the recovery, improvement and renovation of preexisting or contingent situations and conditions whose prospect of refunctionalization would prevent the abandonment of "refuge locations for diversity" (Clément, 2005). This territorial condition occurs when industrial and infrastructural projects, continuous expansions and urban dispersion, cause a rift between anthropic and natural environments: «large metropolitan areas produce visible lug and friction phenomena in the interface areas, that translate into disintegrating transformations of the city itself and the external environment, and in the loss of mutual territorial identity. The result is a set of areas that resemble landscapes [...] through the loss of differences [...] between urban and non-urban areas» (Ricci, 2005: 56-57; translated by the author).

The effort to focus on the "natural reaction" of some human transformation processes requires a sustainable conversion of "creation activities" (programs, plans and projects in support of natural landscapes). This is the approach that emerges from the analysis of a document on the conceptual and

[1] Landscapes evolve in form and content - they change and / or involve the organization of spaces and connections, functioning and localization of productive activities, scientific and technological service distribution, etc. - as the needs and lifestyles increase and diversify (Indovina, 2013).

[2] «The Republic promotes the development of culture and of scientific and technical research. It protects the landscape and the historical and artistic heritage of the Nation» (Article 9, Constitution of the Italian Republic; translated by the author).

design reconversion strategy of the “green” of Milan and its metropolitan area[1], which states that «the system of external parks allows a projection towards the urban region, linking the metropolitan city parks to the outdoor parks, and integrating them into a unitary design of the “territorial parks” around Milan. [...] This approach aims at promoting the ecological value of the metropolitan park, in addition to the urban and agricultural redevelopment, and at recognizing Milan as the center of an environmental network and not as an isolated area»[2]. Besides, this project allows us to focus not on the dispersive set of empty and open urban and periurban spaces, but on the system of networks and places they are able to compose, despite the complexity of the fragments and the discontinuity of the connections (ecological-environmental). In a perspective of developing a continuous territorial system from the city to the countryside, it is necessary to create a project of sustainable integration of paths, places and people starting from the analysis of the components of two “territorial parks” of the province of Milan[3], Parco Nord Milano and Parco Agricolo Sud Milano. This is important not only for the different territorial and administrative extension[4], but also for the characteristics that mark them and that determine “landscape uniqueness”. Parco Nord Milano comes in the form of large discontinuous green areas within a strongly urbanized territory, because of the presence of peripheral districts, dismantled industrial areas, landfills, places that escaped further territorial urbanization but that are completely abandoned and / or degraded. However, the park, through renaturalisation and ecological-environmental redevelopment, tries to absorb (with difficulty) cementing operations that characterize territory, meeting the needs of the city and its inhabitants. On the contrary, Parco Agricolo Sud Milano has a completely different vocation, due to its geomorphological and functional conformation. It houses farmland, natural and semi-natural areas, goods of historical, architectural and natural interest. It blends with several urban areas, assuming the appearance of an ecological-environmental passage, extending from East to West. Above all, this park allows us to discover a territory nestled between periurban spaces and rural areas of a “complex landscape system” (Parco Agricolo Sud Milano – Metropolitan city of Milan).

The two case studies have different perspectives and requirements, but a common goal: to decide to what extent a “challenging attitude” towards territorial contexts that are difficult to manipulate by man, can improve their conditions. The ability to select, shape, and interact with natural resources must be a prerogative of all human beings and their methods of intervention.[5]

3 CONTRIBUTION OF ENERGETIC COMPONENT

The concept of sustainable development is transversely recognised as a new paradigm for the spatial planning process and strategies (Camagni, 2000). The goal is to boost a co-evolution of different territorial systems: the economic system, the environmental/physical system and the social system, in terms of increasing the territorial quality in a long-term vision.

The lack of a common translation of this rhetorical concept in operative actions, is related to the difficult to understand the geographical scale of sustainability. In line with many authors (Magnaghi, 2005) and with the Local Territorial Systems approach (Governa and Salone, 2004) the territory is considered as the fulcrum of discussions on local sustainable development, following an approach which can be defined as “territorialist”, in which the territory is considered the base of tangible and intangible relationships (Bagliania et al., 2010). In the debate of sustainable territorial development, the energy factors (production, managing, delivering and consumption) are crucial. But, if is recognised the strong relationship between urban form and energy consumption and use (Owen, 1986), is underestimated the relationship between energy and territorial system. By recomposing and requalifying the huge territorial fragmentation – the core

[1] Annex A - to the proposal for Resolution No. 1219/2016 on “Approval of the Document named – Future Landscapes - Milan: open spaces in a metropolitan view”, useful for the definition of the Green Plan of the City of Milan (translated by the author).
[2] Id, p. 9 (translated by the author).
[3] Id, p. 9 (translated by the author).
[4] Parco Nord Milano has a territorial extension of about 600 hectares and is run by a Consortium of 6 municipalities (www.parconord.milano.it/storia-del-parco), unlike Parco Agricolo Sud Milano that has a territorial extension of about 47,000 hectares, and it is run by the Metropolitan City of Milan and includes about 61 municipalities (www.cittametropolitana.mi.it/parco_agricolo_sud_milano/index1.html).
[5] «As for the present settlement, it is obvious that a different production of urban spaces will have to emerge, starting from the periurban areas, the urbanized countryside, in a word from the widespread city. What is at stake, [...] is the ability of these territories to be reconnected to landscapes that activate a new urban quality. [...] The central instrument becomes the organization of the vegetation system as well as the landscape project» (Belfiore, 2007: 199; translated by the author).

of the paper – we might reconsider the role played by the energy model, in achieving sustainable objectives. We are in an energetic and technology revolution, which imposes a change in the relation between energy production/consume and territories (Verbong and Loorbach, 2012).

The energy system affects and influences physical and spatial components (such as size, density, distribution of destinations of use, integrated technological systems, transport and mobility, characteristics of public spaces and common equipment, urban naturalness, comfort and microclimate both in-door and out-door) on one side, and social inclusiveness and economic growth, with a general improvement of territorial quality as common values, on the other side. Since the beginning of the nineties, several events had determined a shift in the way we deal with energy, including: EU directives, the liberalization process of the energy markets, the increasing of environmental restrictions, the scarcity of fossil fuels, the use of intermitted renewable energies, and the increasing share of small distribution generations systems (Bagliani et al., 2010). But, might these changings be assumed as a territorial potential? According to Dematteis (2007), the territory can be considered as: (1) a mere support; (2) a container of fixed (tangible and intangible) potential resources; (3) a place of possible exercise of active territoriality with the aim to activate and valorising local vocations by transforming the resources from potential into exploitable under the actions of development; (4) a network of material and immaterial relationships characterised by their ability to generate local synergies that lead to local self-organisation and local attributions of meaning.

In this way, the "energy matrix" (which influences the three meaning of sustainability: environmental, social and economic) should be assumed as a territorial potential in terms of reducing environmental impacts of urban growth; increasing the energy efficiency use; valorising the territorial peculiarity (types of renewable energy resources available); increasing the economic income from the decentralisation of energy production and consumption process; influencing citizen behaviours, as well as the social inclusion process; understanding and controlling the territorial metabolic process.

Behind these considerations and the evidence of consequences of our un-sustainable urban development and sprawl, the territorial scale of energy seems to be the appropriate one, especially because production and consumption have temporal and spatial discontinuity (Verbong and Loorbach, 2012). But, in order to re-organize the territorial structure, in spatial cohesion and identity dimensions. It's necessary an integrated approach able to recognise and manage the links between local values and potentials and a shift on the territorial vision: from a patchwork of discontinuous elements, to a network of material and immaterial flows, sources and capabilities.

A territorial energy approach should combine demand and consume, resource and opportunity, environmental system and urban system, agriculture and landscape, economic growth and social inclusion. It doesn't concern only the energy production or supplying, but it is related also to a correct mix of functions, mobility, land use, resources (both social, then environmental). Energy should be considered as a cross-sector issue in plans and policies regarding building efficiency, water management, air quality, emissions into the atmosphere, land use regulation, agricultural policies, norms on transports and traffic, and so on (Bagliani et al., 2010). Although the connection between territories and the "eco-energetic matrix" is internationally recognised. European and national energy policies are still sectorial. Territories are now in an unstable balance between resource exploitation, economic value and environment and landscape preservation. Fiscal incentives, developing strategies or policies related to energy system (especially in the RES[1] production or in building/industrial/agricultural sectors) follow economic and speculative objectives[2], without take in account environmental and landscape protecting instruments, plans[3] and directives (both at national and European level). To translate the energy issue into a territorial developing key it is necessary to re-connect all the different layers, which make up the territory.

A shared vision is still ignored, leaving each sector managed by a specific policy, or by a limited administration task-force, with a negative impact on the dichotomies: energy/territory and energy/landscape.

[1] Renewable Energy System.
[2] A special focus is here dedicated to: energy crops production, wind farm installations, photovoltaic panels, which have a directly relapse into landscape and environment systems.
[3] It is referring to Italian planning instruments system. The Italian Landscape plans aim to preserve, manage and valorize the landscape regional patrimony.

They might be seen as opportunities and no more as conflicts. In Italy, the recent National Law 221/2015[1], about the promotion of the Green Economy, aims to spread a new vision of environment[2] as the core of territorial development. A part of this mind change, is the creation of Green Community, where crucial is the valorisation process of territorial peculiarities in different fields: urban environment (form, organization, transportation); energy; industry; water resources; agriculture; tourism. About energy, it has been highlighted the role of RES local energy production and supplying, with an approach defined: bottom-up decarbonizing process[3]. It represents a step up in the sustainable vision of the interaction between energy and territories. But, is still necessary build common objectives and intersectoral actions, reduce the fragmentation not only in physical aspect, but also in the administration procedure. To draw an active energy territory is necessary an attempt to integrate planning activities and policies throughout different sectors and ambits. Therefore, energy policies should be accompanied by norms and standards that regulate all the different impacts of energy sources on various territorial systems.

A good practise in resolving the conflict between energy and landscape, is the Puglia Landscape Plan (Piano Paesaggistico della Puglia). This regional plan assumed the energy issue as a significant component for the valorisation of the regional landscape, mapping all RES productions in the territory. This map gives a general framework of local RES generation, and it relation with urban energy needs, understanding the quality; the localisation and the amount of energy production. In conclusion, a reformation of planning action, oriented by an eco-energetic prospective might: reduce territorial energy supply, guide the physical develop of urban areas, increase social inclusion, share environmental responsibilities, valorise territorial particularities, reduce greenhouse emissions, preserve the environment and incentivize the network between different sectors involved in the sustainable development objectives.

4 THE "RELATIONAL DIMENSION" IN TERRITORIES

Starting from the acceptance of renewed relation with the "exteriority" of high complexity environments and the "alterity" of the various actors which interact in territorial scene[4] (Raffestin, 2012), from the beginning of 80's , some theories, in a straight contrast with the functionalist principle of urbanism, raised and suggested a "place oriented" approach, in order to recognize «into the territorial peculiarities a field of knowledge to be approached with planning and urban project instruments» (Palazzo, 2010: 5; translated by the author).

In this way, a relevant contribution come from the theories and practices of the italian "Scuola territorialista", created by a group of researchers at the end of eighties – and later converged into the "Società dei Territorialisti" – with the objective of «rediscovering in urban practice the use of "territory elements" and of long lasting memories and signs which in territory are represented (Poli, 2010: 15).

At the end of nineties the Scuola Territorialista, with Alberto Magnaghi's guidance, for the Florence part, and Giuseppe Dematteis's, for the Turin part, reached an operative dimension and elaborated numerous plans both local and regional, such as: Piano Territoriale di Coordinamento della Provincia di Prato (2003), Masterplan of the Parco Fluviale della Media Valle dell'Arno (2008), Piano Paesaggistico Territoriale della Regione Puglia (2010), Progetto della Bioregione Urbana della Toscana Centrale (2010), and finally, Piano Territoriale Regionale della Regione Piemonte (2011).

In the territorialist approach it is possible to appreciate some recurrent profiles: «a critical distance from sovra-determinated and global dynamics which impact on the territory» (Fanfani, 2010: 92; translated by the author); a "bottom-up" paths for the building of future scenery; an organized involvement of territorial

[1] Law 221/2015 "Disposizioni in materia ambientale per promuovere misure di green economy e per il contenimento dell'uso eccessivo di risorse naturali" (Environmental provisions to promote green economy measures and to contain excessive use of natural resource: translated by the author).
[2] Here environment represents a complexity of elements: resources, beauties, histories, identities, social interactions, anthropic influences and material or immaterial infrastructures.
[3] Law 221/2015.
[4] "Exteriority", referring to the physical and natural environment, and "alterity" related to the social and relational environment are the characteristics that the geographer Raffestin attributes to the condition of "territoriality", that is «the whole set of relationships that a society, and therefore people who belong to it, have with exteriority and alterity to satisfy their needs with the help of mediators in the perspective of obtaining the greatest possible autonomy, taking into account the resources of the system» (Raffestin, 1999; translated by the author), in one of the most appreciated definitions of the concept.

actors, often supported by empowerment practices; a deeply integrated vision, multi-scalar and multi-sectoral (Fanfani, 2010).

Some planning instruments were put in practice, such as the “Territorial Integration Areas” (AIT) of Piemonte Region. The AIT, are 33 sub-provincial areas, “cut out” in the Region, within the PTR, so that «in each of them it is possible to capture inherent connections that shouldn’t emerge through sectorial vision and which must therefore be the subject of integrated planning, as it is by its nature the territorial one» (Regione Piemonte, 2011: 66; translated by the author). AIT are constructed from the identification of «local inter-subjective spaces, defined on the basis of a relative self-containment of flows that are the cause and/or effect of such relationships» (PTR Piemonte, 2011: 67; translated by the author) and are the nodes of the superhighway networks.

The AIT derive from the application of a theoretical model of analysis and evalutation model, called SLoT (Sistema Locale Territoriale), developed by the territorialist school of Torino, which is based on the analysis of the interaction between local and regional systems.

From an analytical point of view, the model seeks the presence of a series of “clues” and “starting conditions” that favour, appropriately supported by government intervention, the building of a local development system (Dematteis, 2003; translated by the author): «relational, cognitive and organizational resources, “dynamics” that reflect the active role of the territorial subjects», territorial aggregations of public and private entitites that have produced projects and actions of transformation and territorial development in the various sectors (productive, environmental, tourist, etc.).

All the local actors involved in the project are analysed through special analysis grids that take into account the types of project activities, actors involved, and territorial resources. These dynamics are then compared with order elements of the territorial organization in order to rebuild a territorial framework as fully as possible of the current dynamics and to guide the developmental paths.

Directly derived from the SLoT model, AIT are a device to support the diagnostic, evaluative and strategic phases of the Plan, with regard to the implications of local choices. They also play an important role in the analysis and in the actions of the large scale (regional, national, and European) networks, because they are complex nodes of these networks[1].

5 CONCLUSION

The above examples show different “territorial implications. The territory become a source and an opportunity for those areas: “intermediate”, “post-metropolitan”, “peri-urban”, “fringe”, in which the “deterritorialization” process (Choay, 2010) has triggered evident environmental (resources degradation and depletion) and social (marginal) impacts.

The territory assumes an active role, reacting to the anthropic effects with resistance actions, advantages and opportunities. It is a “subject which earns a new semantic relevance”, in which «all effects own a meaning» (Corboz, 2014: 190; translated by the author). It assumes the role of an unexpected “framework”, which combines infrastructural and natural components that have different relationship with the territory. It represents a “silent” place and, at the same time, the place of “outburst”, suggesting multi-paths of intervention and most of them are still unexplored.

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[1] This model (Local Territorial Systems, SLoT) refers to the Programming Document “For a New Regional Territorial Plan” (Piedmont Region, Department of Territorial Policies, December, 2005: 47; translated by the author).

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ID 1650 | LOCAL IDENTITIES ON CHANGE- URBAN WATERFRONT REGENERATION WITHIN THE GLOBAL CITY ISTANBUL SERIN GEAMBAZU

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1 CASE STUDY I: INNER URBAN COMMUNITY UNDER A CASE OF WATER FRONT REGENERATION IN HALIC

1.1 TRANSFORMATIONS IN HALIC

Over the last decades, many cities worldwide have promoted urban waterfront regeneration for a variety of reasons building on the particular scenery of these sites. The success of the first well known urban waterfront regeneration project, Baltimore Inner Harbor regeneration (1960), has served as a prototype for cities around the world with the desire to position themselves in the race to become Global Cities (Harvey 1989) by providing strategically located high-quality investment opportunities to attract global capital, or by constructing attractive spaces to promote tourism and leisure. Nowadays, almost every city at water's edge is engaged in regeneration projects with strong political impetuses and interest from various parties: authorities, developers and neighboring communities (Hoyle 2001).

These developments have been critically examined by many scholars, many of which share the belief that urban waterfront regeneration is often not addressing the underlying, deep-rooted problems of the cities and furthermore, ignoring the socially and economically unstable landscapes in which they often occur, veritably contributing to the escalation of inequality, polarization and deprivation in the city (Harvey 1989; 2005; Brownill 1990; Gordon 1997b; Hoyle 2000; Saarinen and Kumpulainen 2005; Butler 2007; Healey 1997; Gordon 1997a, 1997b; Feldman 1999; Fainstein 2001; Granath 2005; Butler 2007).

Studying urban waterfront regeneration as a complex urban intervention, specifically its special governance, resistance and impacts on the neighboring tissue, could be considered a prism through which broader societal transformation processes and related planning challenges can be understood. For the scope of this study, the empirical research gathered both primary and secondary data through: literature review, review of laws, review of official documents and land-use plans, 31 interviews, 91 questionnaires, participatory- observation, an workshops, observation and photographs.

In order to understand the planning processes of the regeneration of Halic's waterfront, a reflection is done upon the peculiarities of Istanbul's urban regeneration policies and the institutional framework at city and national level that have facilitated it: Istanbul, Turkey has been experiencing a neo-liberal reconfiguration that is now in its final stage. In this context, urban regeneration is steered as a tool for development within a special legal framework and while the purpose of the projects seem to be in the name of upgrading the built environment and improving the living conditions of the poor, the top-down approach, reduce the projects to just transformation of physical space and neglecting the social, economic and environmental dimensions, which along with the unwillingness of government to allow grassroots participation in the planning process become the focus of discontent and protest.

Halic, a 7,5 km bay of the Bosphorus and the cradle of settlement since the birth of the city, was heavily industrialized and contaminated in the 1970s and since then has been experiencing a long process of transformation along its waterfront. In line with popular North- Western examples of urban waterfront regeneration at that time, this process was triggered by Mayor Dalan in 1983 who famously stated his mission: „The water of the Halic will be as blue as my eyes'". Behind the environmental concerns, there was also an economic motivation to bring Istanbul between the competitive global cities with a vision of a "Cultural Valley".

The following forced de-industrialization process of the 1980s was impressive and did indeed improve Halic from an environmental perspective, but the clearing process was pursued with a heavy-handed, top-down governmental approach to planning and the legacy of Dalan is contested: The project created an approximately 50m wide strip of vacant land– a great opportunity in terms of offering open green spaces for the city- but also mass unemployment and poverty in the backstage neighborhoods populated by former dock and shipyard workers.

The following initiatives to regenerate Halic's waterfront showed no intention of resolving the social and economic burning issues of the neighboring communities. Within the same top-down planning approach, as in the 80's clearance intervention, urban waterfront regeneration projects are ad-hoc initiative of different bodies of the government depending on ownership and planning rights over the land, creating developments for middle-high income citizens: "With empty convention centers in the middle of poor neighborhoods, a few art galleries right beside demolished historic buildings, and newly built museums next to squatter housing". (Bezmez 2008 pp. 817).

Still, this 7,5 km green belt of parks and recreational spaces in the heart of the city, represents an enormous opportunity for a congested global city as Istanbul and its citizens, but mostly for its low-income neighboring communities in need of public space.

1.2 HALIC SHIPYARD CONSERVATION PROJECT

Halic Shipyard Conservation Project is an urban waterfront regeneration project in on-going planning process, initiated and subsidized by Istanbul Metropolitan Municipality and creates hope in tailored outcomes, serving the citizens interest as a public project, but is missing its transparency.

The site of Halic shipyard was for long under pressure of transformation due to the opportune location and also being one of the last projects that could complement to the "Cultural Valley" vision. For understanding the area of the project and its relevance, it must be noted, that the shipyards aimed to be transformed are also important for their cultural and historical value at global, national and local level. Considering the legal framework, all three shipyards are under Law of Conservation and designated to regeneration and their current function will be changed with the suggested functions from existing plans: culture, recreation areas, commerce and education. Also Conservation Board No. II (representing Ministry of Tourism and Culture) will be added to the planning process.

The ownership belongs to different governmental bodies which makes a collaboration between these actors challenging. Major actors in the planning process of Halic Shipyard Conservation Project are: Istanbul Metropolitan Municipality, the initiator of the project, owner of the land and also the provider of the finance in realizing it.; the Department of Historic Environment Protection managing the project, having mainly the responsibility to assure the conservation and restoration of the historical monuments in the area; the Conservation Board No. II, representative of Ministry of Culture and Tourism, having also the main responsibility to assure the conservation and restoration of the monuments; Istanbul Metropolitan Planning in charge of the plans and design of the project and also IDO (private company), having the tender of the land.

In the interviews with representatives from the planning department of Istanbul Metropolitan Planning, the team planning Halic Shipyard Conservation Project, it has been revealed that the outcomes of the project will take into consideration the previous suggestions. Halic Shipyard Conservation Project will respect the 1/1000 Plans of Beyoglu in terms of conservation of the shipyards, along with the recommendations of implementing cultural and recreational activities. Moreover creation of green spaces is emphasized, the vision being to open the waterfront for the broad public, the citizens of Istanbul. However, the project contains no analysis of impact assessment such as: environmental, economic or social, this showing the physical focus of urban waterfront regeneration in planning, putting in doubt the success and purpose of this project. Strategies concerning the development have been proposed by Istanbul Metropolitan Planning: "conservation of the buildings, enhancing the transportation in the area, introduction of recreational and exposition areas, bringing the city to the waterfront, protection of green spaces and ensure the participation of the local people of the area." But although these strategic points presented, there was no information for the broader public about the project or the request for any collaboration from the citizen's side. This leads to questioning the outcomes of the project because of this type of non-transparent planning process that leaves no input from the citizen's perspective. As seen and criticized in other examples of projects along the Halic, the project could also potentially enhance existing socio-economic problems, a matter that will be presented in the following part of the article, by analyzing the neighboring community in rapport to the project.

2.1 BEDRETTIN INHABITANTS, A NEIGHBORING COMMUNITY ON STRUGGLE

This part presents the evaluation of the Halic Shipyard Conservation Project, considering the impact on the neighboring community. Bedrettin Neighborhood is chosen for analysis because it is the closest community next to Halic shipyard, also being the first group of actors impacted or that could benefit from this project will be exposed.

Bedrettin Neighborhood is a low income neighborhood (according to median monthly household income 2010) at the shores of Halic, in Beyoglu District. It was strongly connected to Halic Camialti and Taskizak shipyards, being occupied by blue collar workers at the shipyards. Therefore, the neighborhood was much affected by the clearance process done by Mayor Dalan in 1983, the first regeneration along Halic, its current problematic economic condition being outcome of the forced deindustrialization process of that time. Today, approximately 1500 people live in Bedrettin Neighborhood and are mostly divided as retired workers from the shipyards, people coming from Anatolian side of Turkey and a considerable group of roma minorities.

Based on the interviews with the "muhtar"(mayor of neighborhood) of Bedrettin Neighborhood, the questioners realized with the community and the personal observations of the researcher on site, is found that the neighborhood is in on-going transformation due to several reasons. First, Bedrettin Neighborhood was declared as Renewal Area in 2005 and, according to Law of Renewal, the neighborhood will go under a process of regeneration which will put in danger of displacement the poor citizens living in the area. Although 80% of the citizens living there own their land, the houses built are not in good condition, being classified as "gecekondu", squatter housing, and have to be renewed and improved for their safety, this being a hard task for the majority of the community which is poor. Second, the increasing prices of land in the area are the proof of the process of gentrification seen also along the whole waterfront of Halic.

These changes bring a strong opposition from the community, who is against this renewal project and afraid of displacement. Together with their muhtar, the community found a neighborhood association named Bedrettin Neighborhood Association. This has the purpose to fight in court, as the only way of

challenging decision-making, against the regeneration of their neighborhood and all other regeneration projects that could affect them. All citizens of Bedrettin Neighborhood signed a list opposing this intervention and the municipality's project was given to court. However, the results were not positive ones and this created mistrust between the community of Bedrettin Neighborhood and municipality along with loss of hope towards the actions of the government. In this context, although the purpose of the urban renewal project seems to be in the name of upgrading the built environment and improving the living conditions of this poor community, the top-down approach along with the unwillingness of government to allow any participation from the citizen's side can be questioned.

The reason for opposition, from the citizen's perspective was not only the fear of displacement, but also the difference between the new proposed plans and their actual needs. As reason for this are the un-transparent processes of planning with no collaboration or participation from the community's side. Public planning policy in Turkey gives rights of involvement in planning process just to the owners of the land and welcomes participation from the citizen's perspective at the end of the planning process. Still, studying the neighboring community of Halic Shipyard Conservation Project, it was found that the citizens have been informed about the development of the shipyards and active in influencing the planning process. The community doesn't believe that the project will be done for their interest and that will bring them job opportunities or other benefits of such. Also there is a lack of information regarding the project which proves the lack of transparency in planning.

The lack of information regarding the project makes the community come closer to Chamber of Architects, Neighborhood Associations and Halic Resistance urban social movement, the actors currently engaged in a fight against the waterfront regeneration of the shipyards. In the questioners conducted during the meetings of Halic Resistance, besides the fear of displacement answers also as: "to learn the truth", "because this project is being used strategically against us" were given.

2.2 TRUE NEEDS OF THE CITIZENS

Looking to Bedrettin Neighborhood, one could see a condensed living environment, trapped between wide boulevards and with a great view towards the shore of Halic. Analyzing the built environment, it can be seen through the narrow streets and lack of public spaces, that it evolved organically and unplanned. The lack of public space and also green areas is a main loss for this neighborhood, but also one of the main aspects that Halic Shipyard Conservation Project could improve.

Although, as previously mentioned, the citizens of Bedrettin Neighborhood are against the Halic Shipyard Conservation Project, outcomes of the questioners regarding what they would need in the future development were: green spaces, culture and education facilities, keeping the working shipyards, health facilities . In the discussions with the community, especially with the group of mothers, mostly staying home and taking care of their children, the need of closer public space and green areas was emphasized. It was found that families go to other parks along the Halic and make barbeques or just bring their children to play, this being the only recreational activity for these families. An intriguing vision of the children is the one of the "fisherman", a symbol of the waterfront of Istanbul which should not be blurred in the landscape of waterfront development for global economical gain given by projects in name of tourism and consumption.

The regeneration of Halic shipyard, is understood to be a big opportunity for the community in terms of creating public space for recreation, improving the quality of their life considerably.

Taking into account the vulnerable position of the neighborhood in terms of economical situation, the on-going gentrification process at Halic's waterfront and the renewal project in the agenda of the government, it can be argued that Halic Shipyard Conservation Project will contribute to this picture considerably, creating social and economical impacts on the community. From the questioners conducted in the neighborhood it is clear that the community is against Halic Shipyard Conservation project, the main reasons being in relation with the mistrust towards the regeneration projects initiated by the government, the lack of transparency in the planning processes, the lack of good quality information and the fear of displacement rather than the project itself or its outcomes. These aspects are also the reason why the neighboring community is engaging with other actors in opposition.

The community of Bedrettin Neighborhood is an important actor being the most affected by the project, but also by its potential to give inputs to the project. Due to the lack of consideration of this neighborhood in the planning process the true benefiting outcomes of the project will not be achieved. Opportunities for more inclusive and transparent processes in planning can be found after analyzing the neighboring community as the openness and interest of the community in participatory planning methods and in expressing their need. The community is not only in need of public green space which can be created with the Halic Shipyard Conservation Project, but also in need of programs and solutions for its vulnerable economical condition. Halic Shipyard Conservation Project, if planned carefully, might satisfy and resolve some of the problems faced by the community, but this is possible only if the community is involved in the planning process.

Urban waterfront regeneration in the context of Istanbul reveals the same features of the popular contested cases of North and Western examples . The leading factors are an entrepreneurial government and also a national policy on urban regeneration designated by the central government. The strong and constantly growing opposition is not only the resistance to this particular urban waterfront regeneration project, but it leads to a bigger picture of urban regeneration projects in Istanbul, realized through a top-down approach to planning, creating major social and economical impacts. One may argue that only through a change towards a more inclusive planning approach, along with clear targets for the improvement of the quality of life for the neighboring community, the urban waterfront regeneration project, Halic Shipyard Conservation Project, will be able to escape the current deadlocks and collisions between government, investors, resistance and local community and might have a chance to actually set an urgently needed precedent of a new planning culture in Istanbul.

3.1 PICTURES

Opposites. Right : Renewal Plan of Bedrettin Neighborhood; Left: the garden of a citizen
Source: Geambazu, S (2014), Date: 19.11.2013

Perspectives: Analysis on the urban tissue of Bedrettin Neighborhood through photograps;
Source: Geambazu, S (2014) ; Date of photographs: 23.09.2013; 19.11.2013; 11.11.2013

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ID 1659 | FLANDERS´ SPATIAL (POLICY) PLANNING IN THE MAKING: POTENTIAL AND LIMITS TO COLLABORATION AS COLLECTIVE LEARNING

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ABSTRACT: Planning has to adapt itself to changing challenges and circumstances. But also innovative ideas and new ambitions from within can lead to changes of an established planning system. In Flanders (one of three Belgian regions), the administration of spatial planning is currently developing a new concept, format and approach: spatial ‘structure planning’ will be followed-up by ‘policy planning’. To foster flexibility, a new legal frame and instruments redirect planning towards combining a long-term strategic vision with mid-term realization-focused policy-frames. The regional government hopes to approve the new planning system by the end of 2017. Worth mentioning here is the shift from hierarchical relationships

between planning levels to partnership-relationships based on equivalence. Collaboration at and between governance levels, policy domains, and relevant actors is central to this. The regional planning agency will provide rather guidance than norms. Since that kind of collaboration is not yet a structural part of the actual planning culture, this new direction is at odds with practices until now, and needs critical support. This paper has the ambition to assess the actual situation in Flanders and to contribute to theoretical positions on flexible planning within constellations of uncertainty, while developing concepts on collaboration and reframing concepts on participation. In terms of method, the recent 'White Paper' – approved November 2016 - about this 'policy planning', is scrutinized in the light of research findings from the Policy Research Centre (Steunpunt Ruimte: research by 3 universities for the administration Spatial Planning Flanders), i.e. conclusions from the research on methods for future explorations and collective learning for complex spatial issues (Kuhk, et al, 2016). This study analyses stimulating large-scale pilot practices, identifies crucial methodological issues and formulates valuable policy-recommendations. In our analysis, we acknowledge collaboration as means (methodological aspects), as a goal (collectivity aspect), and as a medium (collective learning as a mode of 'rehearsing the future'). Collective learning has a huge potential for collaboration in planning practice. The recommendations in the paper built on and attempt to widen results from separate case-studies, i.e. to allow for a more generalized implementation. It is hoped this critical analysis will stimulate the ongoing stakeholder consultations and partner debates and thus amend the document that will be prepared for preliminary approval and public consultation.

KEYWORDS: collaboration, collective learning, policy planning, uncertainty

1 INTRODUCTION

The socio-spatial issues which face spatial planners are complicated. Reasons can be found in the combined effects of interrelated (f)actors within the planning processes and of influences from a wider context. Consider, for example, how the city of Antwerp closed the slaughterhouses in the Lange Lobroek street after the European Food Agency changed the rules on slaughter in response to livestock epidemics in the 1990s. European food policies, in other words, had important implications for urban development, for employment, for existing infrastructure, …. In abstract terms, this means that elements from a broader 'contextual' environment interact with the 'transactional' environment of spatial policy (see Kuhk, et al., 2016: 12), i.e. elements outside the planner's influence with an impact on planning. Moreover, developing new land policy for the slaughterhouse site cannot be a purely public decision, but needs to be done in consultation with the private sector because of the distribution of ownership (see Kuhk, Dehaene, 2017). On top of that, any decision will generate effects that cannot be forecasted because of complex interferences between physical, social and mental agencies. The Dam neighbourhood, that is the historical location of the slaughterhouse, is going through a (still rather smooth) phase of gentrification, generated by replacing a strong physical barrier (a railway-yard) by a successful huge public park. Corollary, physical opening up is complemented by social transformations such as influx of wealthier inhabitants. New housing development and densification raise the price of real estate. At the same time uneasiness grows because of 'hanging' decisions concerning (the impact of) huge infrastructure works on and along the Antwerp Ring. The city government is confronted with growing socio-spatial activism and demands for participation in decision making. Mistrust grows because decisions are postponed and citizen participation is window dressing … Such situations are very recognizable in planning. They are thoroughly complex. Goals are diverse; means are unknown or dispersed, the situation is frustratingly uncertain. 'At the edge of order and chaos' (Waldrop, 1992), the compact expression for complex systems is applicable: these phenomena are decentralized, highly spontaneous, dynamic, interacting in a non-linear way, but adaptive as a living system.

2 EMERGING APPROACHES IN PLANNING & DESIGN

2.1 SOME THEORETICAL POSITIONS VIS-À-VIS UNCERTAINTY

Planning theory has evolved in order to cope with the complexity of such situations. Although we are aware of "the growing diversity of approaches within what is now broadly categorized as spatial planning" (Haughton, et al., 2010: 2) two 'opposing' kinds of approaches can be mentioned as indication of a more general tendency.

Criticizing modernist comprehensive regulatory land-use planning, structure planning focused on essentials. The comprehensive character (encompassing, controlling, zoning, …) is replaced by strategic choices, such as prioritizing crucial issues or transformations with a levering effect. The controlling blue-print character vanishes through planning for infrastructures and physical/natural structures, thus leaving room for further development, adaptable to territorial and social local characteristics. The abstract and passive character is replaced by dynamic integration of long term visioning, realized projects and continuous citizen participation. Albrechts' plea is to 'take strategic planning beyond its usual boundaries and traditions' and 'to reinvent itself' (Albrechts, 2017: 400). He stretches strategic structure planning to its rational limits. "Broadening the scope of the possible and imagining the impossible", strategic planning still 'needs an arena', "an open dialogue in which a plurality of interests and demands, opinions, images, conflicts, different values and power relationships are addressed" (Albrechts, 2017: 400).

Starting from a poststructuralist relational pragmatism, Jean Hillier re-conceptualizes 'planning as strategic navigation': structured experimentation, yet speculative and creative (Hillier, 2010: 470). "Strategic spatial planning as strategic navigation is a performance of risk-taking, of not being in total control, of transcending the technicalities of planning practice to create an 'open reading frame for the emergence of unprecedented events'" (Hillier, 2010: 473).

Strategic navigating involves the community by fabulation. 'Fabulation' is a 'conceptual groping towards potential-to-be', oscillating 'between reality and the virtual', intersecting in 'a state of transformation or a becoming'. (p. 470) Following Deleuze, Hillier states that becoming should be expressed as a collective will, 'a collaborative process of invention', belonging to a community, a collective but non-unifying articulation of differences, to produce 'common thought'. "Common thought is the outcome of a process in which differences are neither suppressed nor superseded, but in which they are integrated into a 'whole' " (Hillier, 2010: 470).

This implies starting with the living, changing and evolving actors or agents themselves in order to respond to such a non-linear world full of complexities (de Roo & Boelens, 2016: 20).

Both approaches, rather debating 'deliberative opportunities', or rather fabulating 'common thought', become aware of a condition of becoming, of open lines of flight, of uncertainty. This condition of uncertainty is partly due to the plurality of stakeholders. At the same time stakeholders are the basic 'ingredient' to cope with that uncertainty. And both deploy consciously rich concepts to imagine spatial planning by adaptive practices that involve stakeholders and communities intensively. But will 'arena' or 'navigation' work on the floor? In other words: would it not be helpful to construct an imagination for collaboration in conditions of uncertainty that is corresponding more to the need for sharing?

Uncertainty as a condition of planning has been addressed time and again. The most obvious uncertainty is produced by the fact that the future development of the complex socio-ecological system is not knowable because of the non-linear character of changes. On top of that at any moment, uncertainties in decision-making include 'uncertainties about the working environment', 'uncertainties about guiding values' and 'uncertainties about related decisions' (Healey, 2006: 255). When (many) stakeholders are involved, their different values, perspectives, desires and demands most probably will bring in disagreement and thus even more uncertainties about the outcome of a planning process. The most common situation entails so much uncertainty and disagreement about planning goals and means that it has be coined as 'irreducible uncertainty' (Bertolini, 2010: 413).

Collaboration is a second key-term. Bertolini is attracted by the notion of 'wicked' planning problems, as coined by Rittel and Webber, and even more by their suggestion of 'second generation approaches' to cope with the resulting irreducible uncertainty. "Approaches of the "second generation" should be based on a model of planning as an argumentative process in the course of which an image of the problem and of the solution emerges gradually among the participants, as a product of incessant judgment, subjected to critical argument." (Rittel & Webber, 1973: 162)

Basically this quote has everything to help conceptualize planning as collaboration in uncertainty: stakeholders involved in a process of deliberative critical communication, gradually building an image of how ends and means are related. The tendency of emerging new models and practices in planning also reached Flanders. By analysing practices we can learn what kinds of capacities are needed for such adaptable trajectories of collaborative planning.

2.2 TOWARDS A 'POLICY PLAN ON SPATIAL DEVELOPMENT' IN FLANDERS

Flanders is a region of Belgium that became gradually semi-autonomous, due to an enduring step-wise process of federalization starting from 1980. During the last 50 years three important shifts in the planning system can be discerned.

In 1962 a new Belgian law installed a comprehensive planning system. The Spatial Planning Act stipulated that municipalities were obliged to design general as well as partial land use plans. Statutory land-use plans also had to be developed at regional and national level (gewestplan, streekplan, national plan). When installed, this law was considered to be a major step forward towards a systematically controlled and geographically complete spatial development. Practice was not completely fulfilling these expectations however. The statutory character was weakened because many compulsory plans were never developed. Binding land use plans only exist at the sub-regional level (gewest) and at (parts of) municipalities at the local level.

Already since the mid '70s critiques were formulated concerning this comprehensive land use planning practice (Albrechts, 1974). The planning system was considered to focus too much on legal aspects and control by zoning, to decide at hoc and treat plans in a passive way, ….. Framed as structure planning, a new approach was elaborated which should be imaginative, strategic, action-oriented and participatory. Louis Albrechts, Charles Vermeersch and Jef Van de Broeck co-designed the new Spatial Structure Plan on the level of Flanders (RSV) (Ruimte Vlaanderen, 1998). They fell the "need for a planning discourse as a set of ideas, notions, concepts, a frame of reference, a system of meaning with which ideas and arguments are articulated and whose goal is to undertake initiatives that affect (spatial) development and everyday life." (Albrechts, 2007: 92).

Selecting a limited number of critical issues, constructing strategies, and carrying strategies forward towards implementation, while mobilizing the public in order to gain acceptance and support for the strategies and solutions to the problems, were the main principles of spatial structure planning in Flanders. The principle of 'subsidiarity' of relationships between levels of governance was brave, but almost 'forgotten' in practice. Albrechts sees the idea to "intervene more directly, coherently and selectively" (Albrechts, 2007: 92) as the crux of "the decision to replace traditional land use (zoning) systems by an approach wherein planning develops an overall spatial policy framework." (Albrechts, 2007: 94)

In 2011 already the Flemish administration of spatial planning started a broad participatory trajectory. An interactive information campaign and several debates were used as basis for reflection on the present state and on future spatial policy. This was the start to replace the (strategic) structure planning system by policy planning. The process towards the BRV started with a Green Paper (approved 04.05.2012) and has been elaborated into a second preliminary text, the White Paper (approved by the Flemish Government on 30.11.2016). This document is presented as a base for consultation with (possible) partners as a trajectory of operationalisation (Ruimte Vlaanderen, 2016: 3).

Accordingly, the RSV will be replaced by the BRV (Beleidsplan Ruimte Vlaanderen: literally translated meaning 'policy plan for space in Flanders'). Contrary to the RSV this preliminary document does not contain a graphic plan, but intentions, ambitions and principles. Therefor we will call BRV a 'spatial policy document', analogous to 'spatial structure plan'. BRV conveys a vision on future spatial development, which is however at the moment still largely to be translated into policy-frames, development programs and lists of actions, and to be supported by rules and instruments.

Reasons for this shift to policy planning are not expressed very explicitly, probably because they are diverse and partly eschewing discussion. We imagine the main reasons may be found within an inchoate implementation of structure planning, the (changing) context, political prerogatives and the planning system itself. Gaps between principles and practices have been identified and criticized repeatedly. These were a burden for the effectivity and the fame of structure planning. An official assessment of the RSV did not lead to devastating criticism (Ruimte Vlaanderen, 2010). According to the administration, which is developing the new approach primarily internally, the RSV is not so much a 'wrong' vision, but rather outdated (Ruimte Vlaanderen, 2016). New and changing societal challenges – mentioned are: globalisation, demography, mobility, climate, energy, technological innovation, food production, biodiversity and related spatial conditions – ask for an actualization. It sounds as a convincing argument. However, within the structure planning model, these challenges could have been easily added since according to its

principles the RSV needs to be actualized every 10-15 years anyhow. Therefore, frustration might be a more important reason for renewing the planning approach than outdatedness.

The White Paper expresses (finally!) a certain sense of urgency. Graphic representations of the cumulative effects of the daily 'consumption' (6 ha.) of space in Flanders, repeatedly shown, seem to work as a wake-up call. The nick-name of the policy document, 'betonstop' (meaning: stop pouring concrete in the Flemish landscape), reveals ambitions as well as slight panic. However, politicians feel hindered to intervene because of the rigid interpretation given by most administrations to the policy-vision of RSV, and also because of the rather cumbersome procedure to change a structure plan. Thus shifting from a structure plan to policy planning might as well be inspired by the occasions to introduce more flexibility. It is the explicit intention to not make a plan, but stick to general principles for development, complemented by strategic policy frames. These frames can be changed in a short time span, without too much interference from stakeholders or councils.

As to the planning system, several shortcomings have surfaced since 1996 and should be remediated. However, continuity is apparent. The White paper announces the intention to build further upon the main lines of RVS. The existing spatial structures remain the base for future spatial development (Ruimte Vlaanderen, 2016: 4). Development of cities and villages will be linked to public transport and facilities. Existing concentrations of companies are consolidated as a major economic structure. Concentration and bundling are still crucial spatial principles; together with performant collective transport those will be strategic measures to control mobility and safeguard open space. The centre of gravity for development will still be the Flemish Diamond (a main spatial concept of the RSV) but in a nuanced and amended form: centralities created by nodes of public transport and services will steer development. The main ambitions became stronger: gradually abolish the consumption of additional space for building and development while preserving qualities and (added) value for the whole society; use integrated area development as a motor for collaboration with stakeholders.

2.3 "WE WILL PRODUCE THE NEW SPACE TOGETHER"

The BRV explicitly enumerates 10 'policy-changes' compared to the RSV. These will support the new planning approach to shift from a comprehensive and regulatory attitude towards a spatial policy based on conditioned partnership. The new directions announced are: from comprehensive to strategic content, from hierarchic collaboration to equivalent partnership, form programmatic and territorial delineation to integrated territorial development, from geographic expansion to transformation of existing built-up space, from growth based on hierarchy to development based on potentialities of city-centres, from mono-functional to multifunctional roles for open space, towards innovative concepts for climate and energy, from supply-based policy to a project-based approach, form strict prognoses-based quota for housing to flexible programing, complementing land use control with monitoring realizations (Ruimte Vlaanderen, 2016).

While 9 out of 10 changes were repeated from the Green Paper to the White Paper, one intention was changed. It is not clear why the 1st intention – from technocratic to participatory plan-making – was dropped? To make room for monitoring, while sticking to the round number of 10 shifts? To avoid discussions about the meaning of a loaded word such as 'participation'? Or to evacuate the issue of participation and to stress instead collaboration, as a more neutral term?

Anyway, it is a fact that the policy-document (Ruimte Vlaanderen, 2016) on special development is leaning on and even depending on collaboration very much. It states that spatial development will be the result of collaboration. Each policy level will have its own responsibilities. Flanders will allow for partnerships by setting strategic conditions and allowing local implementation of these principles. Mutual agreements about preparing spatial development can be made via – much stressed – integrated area development. Deliberately, the new policy document will leave room for development to measure. The Flemish government will no longer test local plans based on a comprehensive assessment frame. Instead, the regional government will assist in looking for solutions, based on specific principles and frames, and argues that solutions will only exceptionally be regulated. Stipulating frames with conditions, being exemplary (project-)director and supporting territorial development will the principles guiding the conduct of Flanders' administration. Striving for integrated (area) development, collaboration will be intensive. In short, collaboration is strongly imbedded within policy planning-in-the-making. Policy-actions will be a

result of collaborative trajectories. They will make policy action-oriented by summing up engagements of partners, including means and instruments, within an agreed time frame.

It is not clear however what 'collaboration' will mean in practice, both in terms of aims and of effects.

For provinces and municipalities collaboration is not compulsory, so it seems. Flanders' administrations is inviting those government levels to collaborate, by focusing on expected advantages such as quality gains, advantages of scale, coordination of policy, programs and tasks, creating better mutual understanding, diminishing risk for dissensus and conflict, etcetera. The White Paper hints to a broad pallet of possible modes of collaboration: between government-levels, across boundaries of municipalities, provinces and even regions, between policy domains, with a diversity of partners such as civil society, inhabitants, entrepreneurs. Probably the intensity of collaboration will differ according to the situations at hand. The main framing is however 'partnership'. The document qualifies this as a relationship based on equivalence. On the same pages however is announced that Flanders' government will create and set conditions. How contradictory this will be is unclear because they are not published yet.

The optimistic tone about the acclaimed collaboration is striking. Working around the table 'in consensus' is expected to integrate interests and to limit or avoid conflicts afterwards. This optimism sounds exaggerated at first sight. Consensus in spatial planning is not obvious, and Flanders' administration is nog known as consensus builder either. Optimism might however also be the result of some successful experiences and experiments. Of the ones mentioned in the BRV, the more interesting seem to be three Territorial Development Projects (T.OP) for: the northern border of Brussels, the former coal-belt in the province of Limburg, the Coastal region. These are all initiated by Labo Ruimte (Lab Space), a formal collaboration between the administration Ruimte Vlaanderen (spatial planning) and the Team Vlaams Bouwmeester (Flemish government architect). These are ambitious and promising examples of integrated area development projects, where collaboration is at stake. And they are directed by the administration which is writing the White Paper.

Collaborating should go beyond working together on a contract-basis. Collective learning is a crucial aspect of collaboration because it delivers answers to important aspects such as arriving at consensus, suitable frames, and collective assets.

3 COLLECTIVE LEARNING RESPONDS TO UNCERTAINTY IN PLANNING

3.1 THE IMPORTANCE OF COLLECTIVE LEARNING WITH INCREASED UNCERTAINTIES

Why focus on collective learning processes in spatial issues? In the cases studied, similar changes become apparent. In the broader context, more and new challenges (climate change, migration, economy ...) raise uncertainties about future developments. New insights regarding the complex nature of the human-environment system are grafted to these challenges. Alternative planning approaches try to deal with different dimensions of uncertainty (unpredictable changes and complex adaptive systems, …) through more open processes. Collective learning starts from a field of players who can differ significantly in terms of capacity, importance and position. These actors try to develop a shared problematization and a shared sense of meaning. A process of collective learning in the context of spatial innovations shows a strong resemblance to learning processes pure sang (Capello, 1999). What distinguishes both is the emphasis on the collective dimension of the learning process, and the intended collective purpose of the learning process (De Laat & Simons, 2002). The result of a collective learning process does not belong to one actor, but it has been shared in one way or another. In dealing with conflicting positions and dissensus in major social emergencies, collective learning trajectories, among other things, offer the opportunity to develop new or adapted frameworks, including the collective dimension of complex issues. Based on the cases studied, we briefly summarize the capacity we assign to collective learning.

3.1.1 COLLECTIVE LEARNING AS RECOGNITION OF MULTIPLICITY AND DISSENSUS

In current societal challenges such as climate change, aging, migration, mobility or energy transitions, there seems to be a growing consensus on the importance and urgency of these transitions. Whilst it is agreed that something should happen, this apparent consensus vanishes as soon as concrete objectives

are formulated and solutions are sought. Behind the consensus on urgency, conflicting interests and fundamentally different normative frameworks hide. Uncertainty about the future developments of the major challenges does not help the consensus to be installed. Pluralism and conflict indeed are well known phenomena in spatial planning.

In the cases we studied in the MOS research, current planning approaches show weak signals of a 'reassessment' in response to major societal challenges. In this regard, collective learning trajectories and sociocratic planning approaches seem to come more easily into the picture. Characteristic is a simultaneous attention to actors' ability to act, and to the broader contextual environment. For example, MKL2100 focuses on policy questions in a broader perspective of climate change, or does the proposals for LaboXX also take into account a changing demographic situation. Actors are involved in processes of change, sharing the provisional knowledge and the "advancing insight" with as many parties as possible. Collective learning does not focus on levelling out differences, but makes differences visible, discussable, and manageable in iterative processes. Organizing (more) equal and shared access to knowledge and expertise is essential: this strengthens the ability of a group to cope with pluralism and contradiction. In any case pluralism and dissensus may be recognized earlier in the process, which is crucial in any sphere of collaboration. It is only one step further to become aware that dissensus does not necessarily imply antagonism (see also Mouffe, 2000, 'agonism') and does not exclude searching for a shared imagination of collaboration.

3.1.2 COLLECTIVE LEARNING PROCESSES AS STRATEGY FOR APPROPRIATE FRAMEWORKS

The condition of uncertainty that spatial planning seeks to address is not just a matter of a changing contexts, new urges and targets weighting on consensus. Planning is also a search for suitable (spatial) frameworks to address problems: a scale level, a territorial definition, a proper sectoral bond, an institutional link or legal framework. Major social and physical challenges put pressure on existing relations. Social challenges such as accelerating urbanization, demographic growth, or systemically complex sustainability issues might possibly not be addressable within existing (institutionalized) relationships. Urban issues, for example, do not necessarily coincide with territorial contours (see, for example, T.OP Noordrand or Plantage issues), or can run square against the logic of planning demarcations or administrative frameworks. Economic relations, political networks or socio-cultural interactions are heavily structured by previous choices and path dependencies, thus provoking lock-ins. But also new relationships are developing in contingent and unpredictable ways, thus impeding addressing as usual. Collective learning has the potential to deal with contingency and path dependency. Collective learning trajectories jointly define appropriate paths, resulting in shared insights, practices and values, created in a field of collective experience. Collective learning trajectories heavily bear on experiments exploring and assessing various possible action frameworks. (For example, at the Metropolitan Coastal Landscape 2100, at T.OP Noordrand and at Living Labs, ad hoc or more structural cooperation across land, regional or municipal boundaries was sought because socio-spatial issues develop on a different scale than the Administrative institutional scale). New connections and overlapping synergies originate by connecting projects, as in the rather experimental setting of the Kolenspoor project (see Coaltrack as part of T.OP Limburg: Schreurs, 2016). Also new partnerships can help to categorize issues differently (for example, through an activist position and broad mobilization, Ringland faced the problem of the Antwerp traffic jam not only as a mobility issue, but first and foremost as a liveability issue. An ambition to act was installed already at a moment when the outcome was still anything but clear.)

3.1.3 COLLECTIVE LEARNING AS INSTIGATING COLLECTIVITY

Within the context of spatial issues, collective learning means learning from one another, learning to learn from one another, but also – and even more important - learning to recognize the collectivity-dimension of the subject of concern. Concerning spatial planning issues such as urban food supply, housing, mobility or energy, this dimension of collectivity has two sides. The spatial transitions which the experimental planning strategies we investigated try to offer, are not just challenges that need collective efforts in order to be successfully realized. They also confront us with the gains and losses the collectives (have to) face. Import of food, lack of affordable housing, traffic jams, fossil energy ... in one way or another externalize costs towards society at large or towards local communities. Social cost of Flanders' systematic dispersed development became very apparent in the issues at Living Labs, on the one hand, the corridor formation

along the N16 and the de facto clustering around the regional transport knot in Denderleeuw on the other hand, are examples.

4 ANALYZING COLLECTIVE LEARNING TRAJECTORIES IN A CHANGING FLEMISH LANDSCAPE OF PLANNING

4.1 AN ANALYTICAL FRAMEWORK FOR COLLECTIVE LEARNING

The Flemish spatial planning world is in motion: recently, some new kinds of initiatives were created with an important role for collective learning. In this contribution we present an analytical framework with four generic parameters as well as a number of process characteristics. The CALT-R framework was progressively developed for (and while making) a sharper description of running trajectories, but it can also be used to launch new collective learning trajectories in spatial planning. The generic concepts of the analytical framework are a preparation for tailoring concrete cases, based on negotiation or targeted experiments.

From 2007 to 2016 a Policy Research Centre Spatial Planning was founded by the Flemish Ministry. The last 4 years its research focused on four themes: polycentrism, resilience, monitoring & evaluation, and future explorations. The research on ‘future explorations’ aimed to concentrate on potential added values of combining scenario-analysis and research-by-design as strategies to deal with uncertainty. The research was based on literature (planning, design, policy-science, systems, future explorations, learning, …) and on methodological workshops fed by thorough understanding of seven real life cases (amongst which the three T.OP already mentioned) and two pilots of living labs organized by the Policy Research Centre. A main focus was 'collective learning'. This was framed as a form of actor-oriented, flexible knowledge management focused on the recognition of uncertainty, a condition that is innate in future explorations.

In the so-called ‘MOS’ research (acronym for Methodologisch OnderzoeksSeminarie, meaning methodological research seminar), the work-package future explorations developed an analytical framework concerning collective learning trajectories in socio-spatial issues. This framework is a tool that leads to a more accurate self-description of complex trajectories, and that is designed to support a critical methodological evaluation. The analytical framework can also be a starting point to launch new collective learning trajectories. Based on the analysis of several different cases, we consider an explicit reflection on the methodology as being necessary for the further professionalization of spatial policies in dealing with complex socio-spatial issues. So far, methodological issues often remain underexposed, e.g. in the education for spatial planners, in multi-actor processes or in the evaluation of complex processes in the development of socio-spatial issues.

The analytical framework is not merely a theoretical-abstract conceptualization: it was gradually developed using the input from practitioners involved in regional and local cases (Kuhk et al., 2016). Participatory observation, document analysis and two series of interviews were combined. The results of the interviews were discussed and further deepened in two systematically documented methodological research seminars. The iterative process of interviews and methodological research seminars is in itself also a collective learning process, and can be conceived as a meta-trajectory to help building insights about existing projects. The analytical framework is referred to with the acronym CALT-R, which stands for "Conditions | Actors | Learning | Thresholds || Relations ". These notions refer to the recurring sections in the analysis of collective learning trajectories (CALT) as well as to the relationships (R) between these aspects. The analytical frame serves as a 'descriptive grid' for tangible cases. The framework uses concepts of public policy studies (e.g. about strategies for change), from sociology (including the concept of ‘boundary objects’), from pedagogy (e.g. learning styles) and from literature on future investigations (e.g. dealing with uncertainties and path dependencies).

4.2 RELEVANCE OF COLLECTIVE LEARNING TRAJECTORIES IN A LANDSCAPE IN MOTION

For a long time, the rationally comprehensible model of planning has been relieved by variants of collaborative or strategic planning. This development acknowledges that the isolated, autonomous knowledge of the ‘expert’ is not sufficient to ‘master’ the complexity of social-ecological systems. Spatial planning, understood as deliberate dealing with spatial characteristics with a view to a more sustainable and resilient future requires dealing with irreversible uncertainties. The uncertainties are partly due to pluriformity and dissensus within society as well as to shifts in the nature of planning issues themselves (so-called 'wicked problems'). What is proposed in positive terms as a landscape in motion can also be experienced as a landscape in crisis, where inability to deal with uncertainties results in great uncertainty about the approaches to be applied and their institutional anchoring. We witness both institutional emptiness and institutional hustle and bustle. How can planning be a compass for urgent social issues while interventions for future developments are faced with irreversible uncertainties? How can spatial policy introduce 'planned' changes into a world that changes itself? We identified several conditions where collective learning pathways can be a relevant answer:

1. In a shared recognition of a problem, for the time being, without a shared normative point of view: Collective learning allows for conflicting positions. This is just as important in spatial planning, given that choices often make or prevent developments in the long term, involve a large group of people and require a substantial budget.
2. Recognition of a shared problem: Nevertheless, collective learning is relevant to issues with a clear collectivity dimension, where the effects of choices involve a large group of actors, where social, ecological or financial benefit can be achieved by collaborating with different policy areas and/or policy levels.
3. For shared recognition of shared frameworks: Collective learning trajectories are iterative processes with different experts (interdisciplinary), bringing together implementation-based practice with more conceptual reflections or explorations (transdisciplinary). In this constellation, existing frameworks can be adapted, can be searched for other or combined scales (e.g. by linking the local to regional, by understanding singular cases as part of a family of cases), or may be innovative sectoral, institutional or territorial relations.

4.3 CALT-R: FROM GENERIC FRAMEWORK TO TAILORED APPROACH THROUGH NEGOTIATION AND EXPERIMENTATION.

Based on the cases studied a number of recurring subjects were identified as important. Planning would gain if more rigorous attention would be provided to these. The CALT-R framework brings them together. The analytical framework holds an invitation for systematic reflection on the process and methodological development of collective learning trajectories, without pursuing uniform processes or methods. The conclusion is not that the process of the trajectory should be standardized, but that attention for and reflection on the process can be much more systematic. The best known search strategy to deal with such complex and uncertain situations is trial and error: keep trying until it works. In real life situations of spatial planning this kind of experimentation is seldom possible. Trial and error would probably imply important investments and possibly have a tremendous impact on different users (residents, entrepreneurs, investors ...). More intelligent heuristics are needed. Simulation could replace blind trial. Collective learning processes have been raised here as a more performant and effective search strategy for relevant and accurate interventions. Searching for variants creates tailored work, as is shown strikingly in the cases. For example, a selection of actors can be made based on institutional-sectoral affiliations or be based on discipline-specific expertise. These can be combined with socio-psychological type-casting and plausible roles of actors. A collective tailor-made learning process benefits from using different 'lenses'. It helps to look beyond the list of 'usual suspects', and rather to scan with an open, but sharp look, at a landscape in motion. Two action strategies are very important: negotiation and experimentation (cf. Christensen, 1985). Both can be seen as crucial modes of knowledge sharing. The majority of practices in the cases testifies of some Experimentierfreude, i.e. desiring - or acknowledging the need - to set up experiments. Experiments are an intelligent and cautious response to the difficulty of dealing with uncertainties. Learning by doing is a more intelligent and effective heuristic than sticking to transmitted certitudes. This results in trajectories that seek to acknowledge the complexity of current planning tasks, while testing methods, partnerships, roles and practices. Remarkably, the cases show that scenarios and design research are often pivotal for the emergence of experiments in a co-evolutionary iterative process. Typically variations are produced and

selections are made based on multiple cycles of debates, generated by the implicit questions ‘what if?’ respectively 'why not?'. This tailoring of relevant questions and possible answers is able to cross-link the more exploratory, long-term perspectives with action-oriented rationalities of current problems and demands. This meshwork of concerns helps to keep the trajectory open and searching, away from a linear project logic, rational means-ends relationships and overt sequential process steps.

4.4 COLLECTIVELY LEARNING ABOUT CURRENT CHALLENGES IN FLANDERS?

A number of initiatives were set up in order to develop the BRV as a canvassing and substantiated story in the planned shift from structure planning into policy planning: partner dialogues, various working groups, directing in 10 bottom-up test areas, etc. The BRV challenges are inextricably linked to wider societal issues and urgencies. On the one hand they are visible in current circumstances, but on the other hand also have consequences in the longer term. The White Paper recognizes a number of (shared) challenges, and acknowledges that new frameworks and suitable tailoring may be necessary. It is easy to argue why collective learning trajectories are the better heuristics with these types of questions. Through the lens of the CALT-R analysis framework, the BRV-process qualifies as a collective learning trajectory for some aspects, but to a lesser degree for other aspects. In terms of intensions there seems to be scope for negotiation, tailoring and experimentation (Ruimte Vlaanderen, 2016: 11, 45). The need for appropriate frameworks is acknowledged, for example for cross-border collaborations (Ruimte Vlaanderen, 2016: 135) or in response to specific local conditions. However, the White Paper also emphasizes the consensus principle (Ruimte Vlaanderen, 2016: 134), the orientation towards implementation, and sometimes even rather linear logic (e.g. on p. 45, indicating that the spatial program for area-based projects should already be known from the beginning). This contradicts the results of research into collective learning trajectories, which evidenced that precisely the accommodation of dissensus is an important aspect in dealing with complex issues and uncertainties. The aims of collective learning processes are expanding and enriching, in favour of realisation, but also of exploration of complex socio-spatial issues, thus interrelating short term (possibly in agonism) and long term (hopefully in consensus). Collective learning trajectories may run against regimes of consensual governance, but do not run away of complex issues. Rather: dissensus or "well-reasoned disagreement" is essential in democratic decision-making (see Laermans et al., 2016: 49), based on the expectation that, in the case of normative uncertainties, adapted frameworks will arise in particular from a deliberative debate, imaginative negotiation and targeted experiments.

5 CONCLUSIONS

Flanders faces urban and regional societal and spatial challenges. A new regime of policy planning (BRV) will be installed to cope with these conditions. In the White Paper, the preliminary text for BR, collaboration is seen as a relief of the existing hierarchical plan-cascade (Ruimte Vlaanderen, 2016: 11). This is a brave but correct choice. ‘We will produce the new space together’ is motto that deserves and needs support. But collaboration is not obvious. Collaboration implies more than bringing actors together and to discuss what needs to happen, why and when. Collaboration will have to gather collectives, working towards (shared) recognition of (shared) problems and giving these (shared) meanings. Within the conditions of extreme uncertainty, which are always present in spatial planning, collective learning is a crucial aspect … That’s what we found out, based on an intensive investigation of real live cases and living labs. Hoping to contribute to the concept of collaboration as collective learning, we conclude with three suggestions.

1. Collective learning is a complicated process. It is wise to be concerned about the crucial aspects of that process. From the MOS-seminars we learned that many of those aspects can be identified and linked in a framework we called CALT-R. This framework can help methodological follow-up during and after a collaborative process. It can also be used to anticipate the crucial characteristics in future processes. A systematic and explicit engagement with the methodological aspects seems a must to us. This will contribute to the learning within every collaboration process. It will also build up a meta-learning process across different cases: learning about collective learning.

2. Collective learning allows and enables work made to measure. The potentials for responding to the latent crisis are unevenly distributed, because the influence reaches evident, but also unexpected places, well-equipped but also unprepared situations of governance. The ability to organize collective

resilience requires a necessary critical mass in terms of expertise, means, …. An open process, fed by diverse attitudes, knowledge and experiences, interactively co-designing, co-operating and co-producing, is well-fit for dealing with specific situations (conditions, actors, knowledge, thresholds) and contexts. But flexibility without frames becomes chaos. Frames must and will play a role. As mentioned, finding or making practically adequate frames to address challenges and answers is part of the reduction of structural uncertainty. Therefor the role of the policy frames announced within the White Paper, will be crucial. The thematic choices are important, but even more the form that will allow addressability (and responsibility).

3. Collective learning seems to be a potential candidate for a collective imagination that can cope with planning in uncertainty. The terms of 'collective learning' imply both a vision (on learning as changing, adaptive, becoming, …) and collaboration (exemplifying the collective as collectivity, equity, sharing, …). Imagining a subject for collective learning would make this candidature even stronger. We suggest to conceptualize collective learning for trajectories called 'rehearsing the future'. Through that lens, policy planning becomes: directing performances of multitudes of actors, taking time to dive into the unknown, elaborating simultaneously strategies and frames, collectively, iteratively, learning by doing and reflecting while doing, until uncertainty becomes 'incertainty', that is: the merging of an uncertain avenir (French, a second term for future, meaning 'to be coming', 'becoming', 'ever changing') and an expected, seemingly knowable future (Schreurs and Kuhk, 2015).

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ID 1660 | CHALLENGES AND TRICKY WORDS. A STRONGER ROLE FOR PLANNERS

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ABSTRACT: In the last 20 years, a deliberate strategy of impoverishment of local governments argued the imperative need of: a) involving at all (public) costs, the private sector through the “trojan horse” of governance (Miraftab 2004); b) designing big and shortsighted urban projects (frequently destroying public resources and ignoring public needs) through the mantra of the urban and territorial competition. As it has been already noted, “by elevating Governance above Government, and Economics above Politics, the globalpolicy undermined nation- and state-building capacities in many Countries” (Demmers, Jilberto, Hogenboom, 2004). Moreover, through the rhetoric on pluralism, the neo-liberal governance has contributed to shrink and destroy the relevanceof public interest. In fact, behind the 'screen' of governance and the representation of an amorphous citizenship and a notqualified of diffuse interests, the deployment of capitalism has prevailed. This legitimized the partial and strongest interests into shaping the public agenda within the polarized inequalities. In thisframework, the paper will give some suggestions and advices for rethinking current problems, and trying to deal with them,by starting by the critical evaluation of some words we use. Moreover, by focusing on the ethic of responsibility andaccountability of planners (and for most of us as planning scholars), the paper argues that a stronger role for planners andplanning scholars has to do with our own field of responsibility (such as professionals/practitioners/scholars), andmoreover with our commitment in building and using new theories and research approaches at least to: a) incorporate the ‘others’/minorities by considering furthermore the interaction between capitalism accumulation in space and the minorities (Yiftachel 2013); b) improve critical urban theories mixing with place-based planning and research practices (Campbell 2012; 2014), by applying different approaches; c) co-produce (Watson 2014) a public model of development, being aware of the oligopolistic elites and extractive institutions (Acemouglou, Robinson, 2012).

1 INTRODUCTION

The paper discusses critical perspectives on contemporary urban planning from a sort of Southern-Europeanpoint of view focused on:

a. Challenges/a model of social regulation under discussions.
b. Tricky words/suggestions and advices for re-thinking and re-setting problems by definition;
c. Role of planners & planning scholars/implications for planners and planning theories and practices.

The first point regards the evidence that all around Europe there is a model of social regulation underdiscussions. In fact, behind the question of public debt, there is the question of change of model of socialregulation there are the needs to underline in which condition we can think about critical perspectives in urbanplanning that are connected with this request of changing (urban) development model.

For this reason, the paper will underline some concepts (behind some tricky words we used for decades) tryingto give some suggestions and advices for rethinking and re-setting current problems and try to deal with them,starting by the words we use.

Then, some directions and perspectives for planning theories and practices will be discussed by focusing on theresponsibility and accountability for planners and for most of us as planning scholars to change our tools andway to do in a changing world.

2 MAIN CHALLENGES AND STARTING POINT

In the last 20 years, a deliberate strategy of impoverishment of local governments emphasized the imperative need for:

- involve at all (public) expenses, the private sector through the Trojan horse of governance;
- big and shortsighted urban projects (destroying public resources and ignoring public needs) through real estate speculations & big events "to make cash" (you are experts about it!), but cash for developers, not for people…

By elevating governance above government, and economics above politics, this global policy undermined nationand state-building capacities in many Countries… (J. Demmers)

Cities have become powerful machines of suspension of the rights of individuals and groups with important effects on security, socio-spatial segregation, and moreover the citizenship rights, by shaping, day-by-day the SO CALLED ‘‘dualistic city- scape’’ characterized by at least four factors:

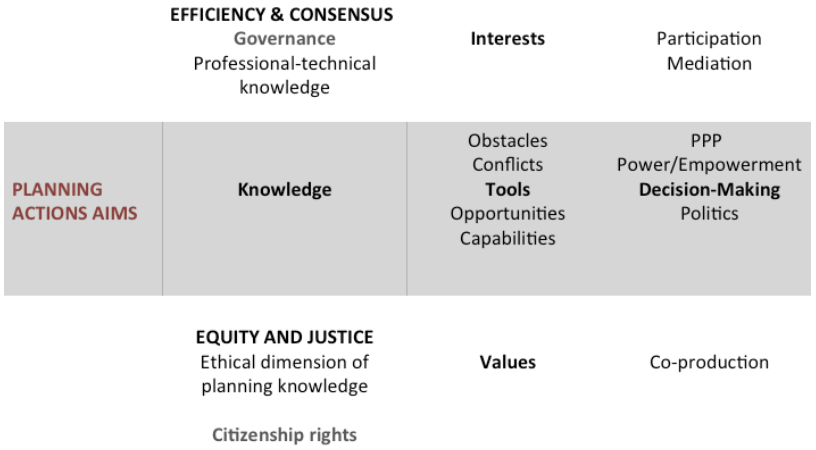
- brutal inequality,
- neoliberal roll-back of the State,
- formation of a ‘‘vicious circle of exclusion, insecurity and violence’’ (reviewed by Koonings and Kruijt, 2007, p. 4).

In few words, we can say that especially in the last few years, Market organizes more and more urban spaces than we are able to do…..But spaces are our domain as public planners and PLANNING SCHOLARS!!!

The paper would like to emphasize here the role of PLANNING SCHOLARS also because our role has been underestimated by literature and research, even if we play many roles as participant in practices, as community based researchers, activists but also as instructors or thesis/PhD Thesis supervisors…and all this implies a special RESPONSABILITY AND ACCOUNTABILITY especially within THE PUBLIC UNIVERSITIES…

So, according with this responsibility and accountability we have to redefine aims and tools of our every-day practices and research practices…

Moreover we have to redefine aims and tools of our every-day work and orientation.



In this scheme, from one side, there are efficacy & consensus, and on the other the equity & justice...the first areunder the mainstream umbrella of governance, and the sphere of interests, in which conflicts are consideredObSTACLes, as incident for the efficient action...

The second – in a frame of citizenship rights – regards values and within this aims – in which most of us are operating – conflicts are considered as (important) opportunities…

Equity and Justice and moreover "Citizenship rights" are the key issues in the effort of moving from a professional-technical knowledge to a socio-political and ethical dimension of planning knowledge.

But in a conflictive dimension of opposing interests the role of values is fundamental!!!

3 SOME "TRICKY WORDS"

Here the some tricky words for resetting problems emerged. First of all, the Governance. Governance has been used as an assignment of sovereignty not to the people/citizens/weak and poors, but to the private sector (strong and bearers of particular interests). Thus, in the framework of the substantial impoverishment and weakening of public institutions, in the negotiations/mediation it means public costs for private profits; This is the problem or as Miraftab called "simbolic inclusion for material exclusion".

Another tricky word is Mediation. The awareness about the limits of Mediation underline that obviously is not neutral about values. Thinking about mediation is clear that the argumentative turn fails if the discursiveapproach is not based on a truthful and open level of confrontation/especially when the asymmetries of powerare strong. Hillier (2003) analyses the Habermasian concept of rational consensus formation and its fallibility,describing the possibilities of the permanence of conflict, non-reciprocity, domination and the related power-games which areinherent in planning decision-making.

Thus, by reducing notions of empowerment and participation to individualized and economic change, neo-liberalgovernance depoliticizes the emancipatory concepts;Meanwhile, to seek legitimacy for its acts, it adopts a socially concerned posture of social upliftment thatpoliticizes decisions that government technocrats, policy makers and planners have traditionally claimed asmundane and technical.

These sorts of double move – depoliticization/politicization; inclusion/exclusion – are an important feature ofneo-liberalism, highlighting the paradox of its policy processes and framework.

Empowerment, Miraftab, again/but also the relevance of agonism (Hillier)…An exemplum to be clearer: marketfor everything, there is not alternative TINA of 80es and the citizens as technicians for green area that is aStandard…or it is supposed to be a standard…

Moreover, it is on the principle of efficiency that the major criticism to the "agonistic" approach in the ambit ofpublic decisions is built.

Costs/Beneficts: analytical techniques apparently 'neutral' can facilitate a potential unequal distribution ofbenefits and costs;Public-Private Partnerships: can be reconsidered only by a renewed idea of public interest.

Then the two aspects (interests and values) often overlap in the plan of action, almost always confused fordialectic and rhetoric reasons, However, they do not coincide on the level of theoretical analysis, and results oftheir reciprocal opposition may vary.

In planning practices, the “revelation” of the values at stake (in opposition and sometimes irreconcilable), must beplaced before the interests. Highlighting the values at stake appears to be ethically imperative and operationallynecessary…

Moreover, in the last few years, the retoric on pluralism (faraway from Davidoff, Advocacy and pluralism) bylegitimizing the (strong) interests, neo-liberal governance has contributed to shrink and destroy the relevance ofpublic interest.

In fact, under the umbrella of pluralism and behind the representation of citizenship amorphous and notqualified of diffuse interests, in the crisis of a definition of the general interest , behind the screen of governance,the deployment of capitalism has prevailed.

So, it legitimized the partial and strongest interests into shaping the public agenda within the polarized inequalities.

Territorial competition/according to neil brenner and david wachsmuth, beginning in the 1980s TC has graduallybecome one of the dominant idea in main stream approaches to the local dev. >> the neolib preoccupation withcompetitivness followed closely the transition from Keynesian “welfare state” to the post-keyneisian“competition states: instead of initiating local economic development it obfuscate the capitalist restructuringprocess. So it is necessary to escape from this “competitivness trap”. (((As you known better than me, all theGREAT EVENTS are based on this traps…)

4 A STRONGER ROLE OF PLANNER AND PLANNING SCHOLARS

Finally, to conclude, the perspective, not in general, as I said at the beginning, but starting from us and regardinga stronger role of planner and planning scholars. It has to do with the field of responsibility and the role of theplanner (professional/practitioner/scholar) and with our commitment in building and using new theories andresearch approaches:

- Incorporate ‘others’/minorities by considering furthermore the interaction between capitalism accumulation in space and the minorities;
- Improve theories CUT-Critical Urban Theory mixing with place-based planning and research practices
- Co-produce a public model of development.

The strong focus of the dominant development recipe on rapid free market reforms, efficient governance andthe decline of state formation as a political project produced a loss of legitimacy of political and technical classeswith important effects on planners and planning scholars roles.

- - build and use new theories ((((Dall'advocacy to radical planning what to save what you can not more 'use)))

a. Incorporate ‘others’/minorities by considering the interaction between capitalism accumulation in space and the minorities /

“The idea of identity should be governed in space” (Yiftachel) we cannot ignore minorities, we can’t ignore capitalism and accumulation we need to look at them in interaction.

And we need to also think about justice that is a very important element in planning theorizing in more complex ways.

Here the old but increasable relevant idea of how resources are distributed, distributional justice on this axes and between on most conceptual idea of the market logic should determine how city is developed and between the idea that there is intervention, the most socialist perspective, on a just society.

But interacting with it in a more complex way means the idea of identity and how it should be governed in space.

This is more complex because different groups, different minorities, different community have different demands. Usually low income people demands for redistribution and the upper class ask for a state withdraw and let the market decide. It's more complex and here comes the issue of recognition.

Quite often it appears in a negative way, in a situation that I call of "hostile recognition". We have to open up the box of recognition not assume that recognition is necessarily good, because when planners talk about particular groups sometimes it's in order to isolate them, deride them, stigmatize them and this is the way in which grey spaces comes in very much because many planning documents actually mobilize against them, they criminalize them and with this kind of argument you have to look critically at the work of identity and planning even when it is mentioned.

b. Improve theories: strecht them, the CUT-Critical Urban Theory, Critical Urban Theory ((Beyond the deliberative democracy)) coming from the clear limits of Communicative planning (remember Spivack: subaltern cannot speak…), for example, mixing with place-based planning and research practices…according with Yiftachel, Margo Huxley, Vanessa Watson, again…

- P/PT needs to re-engage with the city, 'division(s)' and justice, and its ceaseless identity-power-resources conflict;
- PT theory and research practices – must continue to research and explain the role/impact of planning on cities and their societies;
- PT theory must improve its theorization including those from north and south, west and east! (Watson, Yiftachel) – gray space, urban citizenship, urban apartheid, insurgent citizenship etc;
- PT must continue to be critical, as well as creative and positive;
- PT should politicize the professional planner.

Last but not least,

c. Co-produce a public model of development and State-society engagement:

- modifying the forms and possibilities of listening and relationship with the "public demand";
- structuring a not occasional reflection that also involves the development of new forms of relationship between universities, institutions and people, in order to help guide even the institutions in developing potential models to be tested;
- overcoming the boundaries of a widespread simplification wanted for a long time, innovation oriented to competition and competition coupled to growth
- accessing the state (Watson, again)

Be part of a co-productive but still public sector-led, that requires fundamental shift in balance of power in a context of civic or counter-governmentality (Roy) or a governamentality from below (appadurai) able to resist and comply with the top down rules…

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ID 1668 | LEARNING FROM EUROPE?

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The rich history of European planning thought has been radiating out to countries outside of Europe for a long time, either in the form of colonial planning and by providing active guidance and orientation or simply by serving as a model for the look from the outside. Within Europe, the exchange of ideas and practical expe-rience has been continuous from the beginnings of planning and urban design – whether we consider our professional field to have started in the Renaissance and Baroque era or whether we want to restrict our per-spective to the discipline of 'modern planning' in the 19th century, or, again in a different context, in the 1960s. There is a rich literature dealing with periods and areas of planning in which the international exchange of ideas has been particularly lively and influential, extending from, say, the garden city movement, via the exchange of ideas in classic modernism and the period of post-war reconstruction to the very recent history.

My working experience while straddling two continents, Australia and Europe, in research and teaching for a number of years is the background for the survey in this paper. The paper essentially puts spotlights on the European scene of urban design and planning since the late 20th century and asks for the significance and prospects of the learning experience mainly in Australia.

I want to briefly mention, however, that the stream of ideas has not been a one-way street. There are windows upon the Australian scene that can help Europeans to learn from Australia. Colonel Light's plan for Adelaide, which served as a model for Ebenezer Howard's garden city is one example. The amazing practice of the Green Bans in Sydney during the 1970s that stopped the demolition of the atmospherically rich working class district of Woolloomooloo is another; and the visit of German politician Petra Kelly who came to Australia to study the Green movement led to the naming of the German Green Party in Germany is another (Coleman 2016).

Back to the basic theme; drawing inspiration from international models of urban design may conceivably make particular sense for a 'young' country with a relatively small population size such as Australia. But even Britain with its long and rich tradition of planning has repeatedly discovered that it may be useful to look for orientation abroad – to 'Europe'. Saying this, I am obviously accepting a definition of 'Europe' which is common in the UK, but is met with a degree of amused bewilderment on 'the continent' or the European mainland. If Britain sees itself as a separate continent, then the Brexit decision has certainly underscored that sentiment.

Shortly after the turn of the millennium, the experience that countries can learn from each other was expand-ed in Britain by another, rather drastic assumption. According to Sir Peter Hall, what Britain needed was much more than simply orientation. '...British planners have lost the art of urbanism' (Hall 2013 p.306) he argued; the UK had 'gone backwards and the current generation of planners do not possess the breadth of knowledge and skill to develop innovative world-leading places' (McGuinness 2014).

From the late 1990s on, Sir Peter Hall and the head of URBED, Nicholas Falk as well as the RTPA had gath-ered groups of British architects in order to (re-)visit a number of European cities. During the first decade of the new millennium, they were working on a book which they thought they might call "Learning From Eu-rope". Against the background of political economy and planning the book rolls out a broad

canvas of issues in the UK and of model-type approaches on the European continent. As in Hall's previous work, the issue of dealing with regional imbalances plays a major role.

Particular attention in the work of Hall and Falk was devoted to the so-called "new urban districts" or "eco districts" ranging from large-scale projects such as Hamarby in Sweden and Almere New Town in the Nether-lands via Hamburg's Harbour City to small model developments in Freiburg and Kassel. The work in and on Kassel knitted into practical work. Kassel, a city of 200.000 situated midway between Hannover and Frankfurt was at the same time exporting an innovative scheme of hybrid trams to Blackpool – a result of a co-operation with a team again headed by Peter Hall on the British side. This work garnered sufficient interest for transport planners from Australia, mainly from Melbourne to come to Kassel in the same context. For me, the experi-ence of taking part in such processes has been raising questions such as: Which elements of such model de-velopments can actually be implemented in a different cultural context?

The effect of studying an iconic model can result in a successful translation into a local context, it can turn into travesty and unintended parody (take the example of new urbanism and what it looks like when built for nouveau-riche New Russians); it can create myths such as the Bilbao effect; but it can also contribute to a creative process resulting in genuine innovation.

The question which lessons can actually be applied in a different cultural context is a subject matter which research on urban design and policy has been examined under the heading of path dependence. The history of the local institutional structures, the character of the building industry, the constellation of local actors and event chains may constitute, reinforce or challenge patterns of behaviour and policy approaches leading to certain outcomes, eliminating others in seemingly deterministic ways. An awareness of this kind of context can contribute to a realistic assessment of the prospects of "learning from"; it can help in the process by avoiding naïve assumptions of instant one-to-one transferability as much as the cringe of defeatist abjection.

With this in mind, and against the background of my acquaintance with the Australian context, the paper is going to put spotlights on the European scene of current urban design and planning. It is briefly going to review the experience of some 'reference cities' of urban design/regeneration, the German international build-ing exhibitions, different phases of innovation in Barcelona, the urban renaissance in Britain, 'eco-cities' and 'Grand Projets', and then to focus on the question: Where do we stand today? i.e. how do today's models and principles deal with challenges such as globalisation, climate change and social change? And which approaches may be useful for Australia?

It is doing so with a historical perspective. Obviously, European cities have managed to transcend periods of urban blight and plight such as the dark age of the early industrial city and the stark age of the Corbusian 'City Functional' and to revive not only their historic centres with their specific texture of buildings and private and public spaces, streets, plazas and greenery, but also to foster urban villages in all parts of the urban fabric. Discussed under the heading of 'Urban Renaissance', processes of this kind have in fact been experienced by cities in all continents, albeit in very different contexts. Urban renaissance can be seen as a post-modern phe-nomenon - in the sense of a necessary post-Jane-Jacobs transcendence of the functional city ideal à la Corbu-sier and CIAM. Following the coining of the term in a campaign by the European Union and a publication by Yona Friedman in 1980, Britain gave it substance by implementing it in the form of a government program – emphatically design-led under the auspices of R. Rodgers around the beginning of the new millennium, but substantially policy-supported by planning guidance channeling the retail potential from peripheral shopping malls into the urban centres and developing integrated transport concepts.

In Germany, Urban Renaissance has been discussed in a more complex context and in controversial terms looking at winners and losers of gentrification processes, and it has been connected with the European City concept, which combines aspects of urban structure and design with the notion of socially integrative com-munities and governance patterns with strong municipalities. This has its roots in traditions that reach back to the cities of the middle ages and their elected councils, which were a safe harbor for migrants and run-away bondsmen ('Town air is liberating') – an important element in establishing path dependencies in the German context.

There is then of course not one European City, but a patchwork of traditions. Municipal autonomy guaran-teed by the national constitution is a feature of the German political system – not, however, the English one; which is why M. Thatcher was able to disband the GLC and to reduce the task of the local councils to

roads, rates and rubbish, a division of labour not unknown in Australia, but a utterly surprising for my students in Germany. Still it is precisely this diversity of cultures within that small continent which makes the European experience particularly interesting. The sober, rationalist Dutch architecture (which has been emerging in con-stant contrast with the existence of quaint traditional neighbourhoods), the specific mixture of trams, tradition and modernity in Germany, and certainly the grand gesture of French urban design, they all have their origins in different paths of modernization and local traditions.

Britain's post-war welfare state with its sweeping visionary utopianism and often rather rigid radical roots was rather different from the social state concept pursued in Germany, which had its oldest roots in late 19th cen-tury. Rhenish capitalism, which, as has been argued appears to have changed from Rhenish or Rheinish to a different form of capitalism under the auspices of Thatcherite neo-liberalism and the recent banking crisis. While this seems to confirm the theory of the convergence of economic and political systems, the path de-pendence engrained in local traditions and institutions, down to the ways of thinking and arguing, is always going to produce a striking diversity of political and urban realities, even in times of attempted European Un-ion harmonization.

Let us very briefly look at the sequence of 'reference cities' of European urban renaissance; a sequence which can be seen as a kind of step-by-step learning process. One by one, these cities have learnt from each other, quoting this learning process, too, in the sense of "Learning from Europe" within Europe and outside the continent, too. It began with Bologna, which took a pioneering role by placing the entire historical core under protection – including the residents' rental contracts – and by doing the opposite of what the urban renais-sance approach has been doing since the 1980s: In order to protect the historic centre, Bologna banned new shopping centres and businesses outside the medieval city walls. One of the major actors in this process was Leonardo Benevolo, who is well known for his "History of the City".

In step # 2, cities such as Berlin and Vienna extended the attention of urban preservation and careful renewal to the city extension areas of the 19th century. Berlin fought many a battle against the myth that the typical 19th century tenement building was supposedly inherently bad beyond salvation. And it fought many a battle against the interest blocks of political party sleaze, banks, developers, and architects driving the machinery for urban redevelopment and suburban high-rise estate construction. Their descent from the late 1970s on marked the end of large-scale clearance and the practical re-orientation of urban policy towards the rehabilita-tion of the inner urban areas.

The associated breakdown of public confidence in Berlin's municipal politics required a radical re-orientation of planning policy, which was met through the establishment of a new special authority working in parallel to the existing authorities in 1978 and culminating in the opening of Berlin's International Building Exhibition in 1987 (Fischer 2013). It served as a model for the rehabilitation of the 19th century housing stock through careful urban renewal, and for the resurrection of the perimeter block instead of the modernist rejection of the "corridor street". Crown Street in Sydney was probably the earliest development along similar lines in Australia.

The IBA also developed a method termed "critical reconstruction", which aimed for an orientation towards the historic pattern of streets and public spaces, building parcels, density, social mix as well as a mix of actors and architects. A key to the success of these developments lay in the precedence of process and structure over individual architecture.

Step # 3 in the sequence was the fundamental transformation of the industrial city and the city functional, and Barcelona was the pacemaker and model. While the transformation really came about in three phases between the late 1970s and 2004, it was mainly associated with the Olympics of 1992. Re-conquering public space from the dictates of automobile traffic, turning town squares from parking lots into centres of urban life re-connecting the city with the waterfront, re-vitalizing decaying districts through big cultural projects, the development of mix-use areas, middle-class and up-market apartments in central locations, a new appreciation of traditional buildings and structures (albeit rather selective), coupled with neo-modernist gestures signifying ostentatious futurability – these were the key themes of this approach to urban transformation, which have been influencing debate and practice in Europe, in North and South America ever since.

The darker sides of Barcelona's transformation are discussed less frequently: the architectural heritage of the Catalan city is falling victim to the overhasty realisation of projects, and social aspects are being neglected almost completely. More conspiucuously, Barcelona has created a brand in its own right, a new

icon for “Learning From” introduced as a point of reference in planning reports including Roger’s big yellow book on the urban renaissance in the UK. The Barcelona Model is referred to in professional circles when distinguishing small-scale design programmes in public space as a central component of neighbourhood development. It has become a model for a kind of “living city” people have found desirable anywhere between Sydney and Lyon. And each city has found its own approaches for turning it into reality; Lyon with its public spaces strategy banning the cars into luxurious underground garages, and with turning waterfront parking into waterfront parks. The Barcelona model also serves as a point of reference when implementing large-scale infrastructure projects using an integrated design approach. The reasons underlying the special status of urban planning in Barcelona no doubt lie in a specific connection between tradition and the avant- garde, as well as in a mix of cosmopolitan openness and individualistic originality. These are specific aspects of a fertile path dependence.

The other cult cities of urban transformation of the 1980s pursued this new programme as well: Paris with its Grand Projets in a carefully cultivated traditional city and London with its projects of transforming the railway station districts such as that around Liverpool Street.

A major field in which Europeans are trying to learn from each other is at the level of the local nuclei, at the level of the planning principles for what in Europe and also in the US is called eco-districts, and which German planning policy called more modestly “new urban districts” in the tradition of the urban village idea.

They come in different sizes, and the crew around Peter Hall and Nicholas Falk even included big ones like Almere New Town, Hamarby in Stockholm and Hamburg’s Hafen City under that heading. In fact, a German government report listed more than a hundred of them in Germany alone, including the Hafen City and the “Water Cities” in Berlin.

They are compact urban places, designed for walking and cycling and public transport; with densities to support that objective; there is a high proportion of apartments around mixed uses, especially in and around centres. They follow traditional urban designs with sidewalks and street blocks.

Looking back we can see that the opportunity for large-scale urban regeneration had arisen in many cities following the closure of urban docks and railway freight yards, and, particularly in Germany, of army barracks in the 1980s and 1990s. This has led to the creation of new urban quarters, often inner city districts close to city centres, where the ideas of the urban village, have come into play. The location of the new developments was significant. They happened to be in parts of the city that either had an existing infrastructure of public transport, or could fairly easily have it injected. This, plus the fact that the land was accessible and potentially valuable, meant that higher densities were a logical and accepted consequence. Add to this the fact of a new niche market for apartments arising from socio-demographic change (students, dual-career households), the reaction against suburban lifestyles on the part of so many who had experienced growing up in suburbia unexciting as adolescents – then it was perhaps logical that these quarters should become the location of the new urban lifestyles. This kind of urban renaissance was easier to forge in Europe and Australia as inner city 19th century suburbs including Paddington or Carlton demonstrate than in the US, where urban decay following industrial decline had proceeded much further.

Let’s look at a range of European examples, which Peter Hall and colleagues have been examining, and ask the same question Nicholas Falk was asking in an article: “Why not here?” (Falk 2009b) In the context of their first wave of research on what they chose to call eco-districts, and which is going to result in the book I mentioned, “Learning from Europe”, they looked at a number of districts that were very different indeed in size and composition.

Each of these examples has a variety of lessons to learn from. But on the occasions such as those of the conferences of RUDI (Resource for Urban Design Initiatives) in London, where I reported on them, I found no example which had attracted more attention than those of the Vauban district in Freiburg and the French Quarter in Tuebingen. Both have been developed on former military grounds.

When the army barracks in Freiburg closed down in 1992, the city bought 80 acres for a politically negotiated price; the rest was divided between the university students’ union and a self-organized, independent housing initiative that converted several of the earlier barracks into student housing and inexpensive living space for single occupants and apartment sharers.

The city developed Vauban into a neighbourhood with a distinctive ecological profile and planned living and working in small subdivisions. The individual lot is at the core of a development which has been carried out by groups of developers in balance of coordinated urban development and individual design.

Tuebingen has developed its French Quarter, formerly occupied by the military, into an internationally renowned new neighbourhood. The short distances concept has been taken seriously here: a mix of uses in small subdivisions and the integration of work give the area a high practical value in everyday life. The re-urbanizing of space, projects carried out by small investors and joint building groups, who purchase theiraesthetic diversity but also its social mix all go to make up this neighbourhood's special qualities.

In Kassel, it was initiatives coming from the university which have initiated a process of re-developing a large area "on the other side of the river", which had not been reconstructed after the war but had been left as a parking space. This was in municipal ownership. In 1992, a joint initiative of university, city council and housing associations started a process which they called the "re-founding of the Unter-Neu-Stadt" (the lower new town). Just as in medieval times, when individuals had played a significant role in founding the city, it was now to be individual house builders, co-housing groups, co-operatives plus a carefully balanced set of activities by banks and by housing associations who would all act as "Stadt-Gruender", as city founding fathers and mothers.

The development method was to follow a principle invented at the IBA Berlin in 1987, the method of the "critical reconstruction". While employing new architecture, the urban design of the district follows the structural principles of what had been in place before war time destruction in 1943: The street network, the pattern of building parcels and house blocks, the building height and density and aspects of the functional and social mix as it had once existed.

In each of these cases, it is the principles of participation, process planning and sustained local leadership, the mixture of municipal encouragement and community initiative which have accounted for the success.

In most of the new neighbourhoods it is a number of niche markets which have made up a development patchwork not well suited for the classic volume house builders whose interest is focused on a rapid turnover, and who, it has to be said, play a bigger role in the UK as well as in Australia than in Germany. In order to collect information on these markets, niche and otherwise, German market research has developed interesting as well as curious methods of modeling the demand of house builders, renters and other actors on the scene. Moving away from the classic models of social classes and stratifications, the German Sinus Institute has made extensive surveys of life style characteristics, and they have produced graphics of social milieus which are supposed to provide a closer approximation of social reality and for predicting people's needs and requirements.

The milieu approach examines not only socio-demographic variables, such as age, gender,

income and education, but also a range of aspects of modern, individual lifestyle such as cultural

activities and preferences of residential location. These two directions are shown in this milieu-diagram:

The vertical axis is related to social structure and the horizontal axis displays varying degrees of modern lifestyle. We recognize for instance, the milieu of the conservatives on the upper left hand side, the milieu of the classical middle class in the centre and the milieu of the hedonists on the lower right hand side.

Each of these various milieus has specific preferences for residential location. These preferences are important indicators of how each household of the corresponding milieu would behave in terms of effort made for the relocation. And we can link other categories with this including household size, preference for housing typologies ranging from individual houses to dense apartments. Linking census data with thousands of telephone interviews, the market researchers have produced these diagrams for various segments of the European market. Here's the English diagram, in which I particularly like the category "quiet peaceful Britain". I wonder what the Australian map would look like if they were do produce one, or the map of Sydneysiders. It would probably include a long drawn-out bubble of hedonists and modern performers lapping into the post-materialist milieu, similar to the composition of people who are supposed to have contributed to the Freiburg Vauban success. A couple of questions arise of this: One is: does the German researcher take his own theory serious? I'll be coming back to this in a moment with Johan Galtung's help. The other question is: Can this be sensibly translated into urban design categories? Here,

Kassel Unter-Neu-Stadt is an interesting case. In the development process, a typology of developers and house builders was linked to a typology of building blocks and parcels ranging from garden lots for terrace houses via court parcels to compact blocks with high to very high densities (for the commercial buildings near the big arterial road in the north). Each house is then designed by a different architect, modern, but with typological reference to the historic precedent. Competitions are held for the major buildings including the “urban villa”, a housing type that had been “invented” at the Berlin IBA.

All of these examples have led to enthusiastic reactions by quite a number of British teams. The desire of learning from their experience has imposed an atmosphere of a museum or a zoo on some of them teeming with visitors. “Why not here?” was Nick Falk asking (Falk 2009b), and the model lingo of eco-sustainability has been propagated wildly in the UK.

But so far, the UK sustainable housing programme, which came as part of the Urban Renaissance Programme, has neither been sustainable nor community based. The term is a misnomer for the major housebuilding initiative in the South East. The focus on the economic competitiveness of the volume house builders has ignored the question of design quality, and the poor quality apartment housing has produced shocking results leading to broad-based public disenchantment.

Unfortunately, the next wave of eco-towns that have appeared on the UK horizon, do not seem to have learnt sufficiently from the mistakes. While the design quality promises to be better, the flashy label of carbon-neutrality and the ecological house design are to distract from the essential greenwash nature of the exercise. Worse, a number of the so-called eco-villages are employed as a vehicle to finally gobble up the greenbelts around Oxford, Plymouth and elsewhere.

To overcome deep-ingrained structures of path dependence, a lot has to happen. A special, new relationship has to be developed between the private sector, which still has to build the new communities, and the public sector, which will have to help fund the necessary infrastructure, i.e. from capturing the resultant rise in value for the community. There are challenges here for planners at every scale of planning, from the strategic to the local, and in every kind of specialization, from architectural and urban design to transport engineering to fi-nancial. Trying to learn from Europe may help, if the complexity of the processes is taken into account in this sense, and if long-term leadership alliances can be forged and maintained. Another important role is played in the UK by the institutions ranging from CABE and English Heritage to the National Agencies.

Australia is well behind in this respect, and possibly the initiative for a national urban policy has great poten-tial. Within each planning culture the specific path dependencies have to be explored and checked for their potential as well as their bog-down effects.

What are the path dependencies in Australia? To an extent, they are similar to the British situation, as might be expected; slightly more complicated as a consequence of the State/Local Council contradictions and without the benefit of substantial national government funding and guidance; similar constellation of volume house builders without any serious architectural guidance; a tradition of too many broken promises, of watered-down competition results alienated by secret back-room deals. No wonder then that my Australian colleagues throw up their hands in disbelief when I tell them that I have written an essay entitled “Learning from Aus-tralia” (Fischer 1999). Only an alien from outer European space could do such a thing. But the point is that among everything that has gone wrong, excellent bits of urban design have remained, and at least fragments of interesting development processes, and yes, that they have sometimes even survived; examples we in Europe can learn from too, even if in the long run, a great deal of the achievements may go down the drain as a rule.

This is understandably more painful for those involved in the local scene than for this here distant observer, who can hold up for instance the Green Games as a fascinating process with long-term benefits – in spite of bitter details, and who can find positive elements even in what is often considered as an icon of a design disas-ter, Pyrmont/Ultimo.

There are a number of explanations for the episodic manifestation of achievements of planning politics and their subsequent frequent disintegration. I’d like to propose one in the form of the image of Australia as a desert country; a metaphor with correlations at the physical as well as the cultural level. Down under, specifi-cally Australian aspects of the path dependence can be seen in the prevailing, let us call it: ‘liberal’ nature of the economic climate of the ‘desert continent’ and the occasional rainy season brought about by

politics rising beyond the horizon of short term gains, which has repeatedly led to a flowering of blossoms in the desert (ranging from national planning programs to broader cultural achievements including the film industry) - fol-lowed, unfortunately, of course, by their withering in the next long drought season. One reason for this lies in the existence of a high-quality discourse and design practice, which have their roots in traditions of social and cultural reform dating back to the 19th century.

Australia was then characterized by a social climate in which a strong will for democracy and egalitarianism lead to the creation of legislation for women's rights bills, manhood suffrage, minimum wage regulations and the beginnings of a trade union System. It was a period in which Australian legislation was ahead of that of many older nations, and became known as “The Social Continent”.

In an important instance, this political situation permitted Australia to learn from its bitter experience with a land-speculating 'squattocracy' of graziers and consequently to create a system of public ownership of land for its capital, but also to develop the most extensive tram networks in the Commonwealth. The strong pluralist tradition, which was at the back of these developments, was marginalized following World War I in the after-math of the trauma of the Australian and New Zealand Army Corps (ANZAC) in the First World War. But it has been surviving within a minority culture, which mainly shows up in the centres of Australia’s capital cities, sometimes in exurbia, too.

Just as rain in the desert suddenly makes the flowers bloom (because the ground is fertile and the seeds are there) a favourable constellation in Australian planning politics will once in a while divert resources from their usual purpose of just oiling the big-money machine in the direction of planning in the public interest.

And then, like the flowers in the desert, ideas for Australian cities can come to fruition and exceptional results spring up. There are plenty of examples between the foundation of Canberra and achievements in the other capitals. Why? Because the ground is fertile and the seeds are there. The seeds lie in a sophisticated, far-sighted, globally aware Australian planning discourse of high quality providing solutions ready for implemen-tation.

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ID 1691 | PLANNING AS A RHIZOMIC PROCESS OF EXPERIMENTATION. NOTES FROM BRAZILIAN PLANNING EXPERIENCE

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ABSTRACT: This paper presents a cartographic view of planning by taking the contemporary Brazilian planning experience as reference. It understands planning not as formal activity of public administrations, but as a multiple, relational and mixed social process for dealing with the contingencies of a dynamic and complex world. In this view, planning is not limited to the institutionalized activity of formal planners, but it also includes the action of informal networks of agents seeking to promote their own social life. Based on the philosophy of Deleuze and Guattari it understands planning as a 'rhizomatic network' of horizontal connections that evolves in several directions through the action of multiple and different actors working along (lines of flight) in order to deconstruct (deterritorialize) old social premises and re-territorialize them as a more democratic, inclusive and just society. This (rhizomic) kind of planning proceeds through a haphazard process with no hierarchical structure, central command or control. The paper suggests that in the Brazilian case, emerging experiments with planning as a creative, interactive and fluid process may prove essential for keeping both the process of social transformation and the ways planning is actualized and turned into a democratic, participatory and collaborative assemblage. The paper takes as empirical case several informal/formal planning experiences carried out by many and different agents, acting either inside or outside institutional boundaries.

KEYWORDS: Rhizome Planning, Becoming, Deleuze-Guattari

1 INTRODUCTION

In an often complex and conflicting world, social institutions are under constant pressure to adapt its decisions and working procedures to new social imperatives. The objective of this paper is to identify the main elements in this process of adaptation and institutional transformation.

In order to discuss the contemporary processes of social and political transformation this paper takes the propositions advanced by Deleuze and Guattari (1977, 1986, 1980), which advocates for a permanently changing and moving world. Their ontology suggests a number of interrelated concepts in order to demonstrate the pervasiveness of the difference/heterogeneity in relation to the idea of unity and homogeneity. For them the world is but a succession of moving scenarios composed by ever increasing diverse entities. This paper explores that approach in the first part of the text by analyzing the main concepts that comprise their ontology. The second part evaluates the implication of this view for planning practice. It analyzes several experiments of planning as a free, collaborative and rhizomatic process extracted from Brazilian experience. The aim is to set the basis for understanding planning not as an idealized and closed activity of plan making, but as a democratic and relational process for dealing with a complex and fast changing world.

This paper follows Deleuze and Guattari ontology of difference, which is concerned with the processes by which the world changes and transforms the social environment, and focuses on the ways such transformations are created. It takes planning as a social process, and argues that it should not be guided by models, ideal visions or prescriptions, but by processes of experimentation, which requires investigating problems[1], exploring relations between elements "and being open to what might happen if ….; what differences might emerge" (Hillier 2007, 2013).

[1] The concept of problem in Deleuze's ontology emerges from his thinking about objectivity. For him the idea of problem is linked to three assumptions: (1) the difference in nature between the problem and its solution, (2) the immanence of the solution and, (3) the transcendence with respect to any possible solution.

2 ON DELEUZE AND GUATTARI ONTOLOGY

One of the main concepts of Deleuze-Guattari ontology relates to connectivity. Connectivity involves a mode of reasoning that understands the world (urban space) as system of meaning, affinity, multiplicity and performativity. Such way of thinking presupposes an inherent process of change and transformation in which difference and diversity is the rule. In this understanding, the world is in continual process of change and adjustment while fixed and stable structures are only exceptions. They propose a "theory of change" that focuses on movement, flux, and transformation rather than in stability, order or permanence. In this theory, change and movement are the objects of investigation. Movement is the general rule and it relates to emergences, flux and contingencies. Structures, patterns, fixities or orders are incidental events in the flux of change and movement (Deleuze and Guattari, 1980).

Another fundamental concept of Deleuze - Guattari (1987) work relates to the idea of immanence. By immanence, they mean an ever-moving material and immanent space and society. This paper takes this concept and argues that in order to understand the world's ongoing change, planners should pursue the immanent dimension of reality, a dimension concerned with the unrealized, possible realities that unfolds behind the transcendent/organized world (of structures and orders). Deleuze and Guattari (1977) argues that this immanent dimension is like a latent surface of possible realities that are in process of "becoming", although not yet fully realized or turned real. This text argues that planning frequently confronts with latent/immanent virtual realities, and in order to go through that it should learn to deal with the unfolding of improbable likelihoods. The aim of planning in this formulation is not to play a schizophrenic role of seeking governability in an unforeseeable and ungovernable context of immanent becoming, but to understand and work with the dynamic and complex contingencies of a transforming realities and act to facilitate the unfolding of changes through multiple and participative processes .

According to Deleuze-Guattari (1980, 1991) ontology, concepts should do something very specific and the objective of theorizing is not explain what something is, but to elucidate what it does. More fundamentally, it should inform what and how it might affect what others things do. With regard to planning, we should ask what a concept does for or affect planning practice. This approach has been understood as non-essentialist (De Landa 2002) or as a post-structuralist ontology of difference (Hillier 2008). This ontology is concerned with the new, with change and transformation. It points to continual creation a recreation of reality. Nevertheless, it recognizes the importance of structures, systems and orders, in defining the agency power, the power relations between agents, and agents' networks. (De Landa, 2006)

Deleuze/Guattari work presents a new empiricist constructivist conception to the relation between theory and practice. Their contribution emphasizes the importance of praxis in the transformations of the structures and the role of "bodies" in that process. According to them, reality has three different dimensions: The Actual, the Process of Actualization and the Virtual. The actual is the world around us and it is comprised of many participants (humans and non-human): people, houses, trees, animals, forests. That dimension of reality displays the actual/observed entities in a continuous and frenetic process of interaction to each other in a complex and diverse ways. However, reality is not limited to what can is seen or observed in the outside world. According to Deleuze-Guattari (1977), an observation is only part of reality: that which displays "images" that our senses can grasp. That (actual) "reality" does not offer an understanding of how "things" come into being, how they affect, how they might be affected by other entities and how these affects affect what other entities can do.

In order to understand how the world unfolds or emerge, Deleuze/Guattari (1980) proposes another dimension of reality - the virtual. The real-virtual is defined as the reality that precedes the real-actual, and therefore is not is not visible. The real-virtual can be understood as a field of many possible/parallel realities that can be actualized (turned visible). The real- actual is one among many virtual realities which is actualized along with the process actualization. In fact, many concurrent worlds (virtual realities) may result in different realities, and often we cannot anticipate the unexpected along the process. For Deleuze (1980) we can only perceive a small part of the real-virtual (which comprises those entities in the process of becoming actual), which in general, surrounds the real-actual entities, and which we identify as important. The virtual is therefore, that part of part of the actual that cannot be seen. It is beyond the visible actual. This dimension is formed of becomings, which are entities that have not yet started their movement toward the actual. They are formless, latent realities to become, with no apparent sign of what they might become and how they might become. Clusters of becomings (virtual diagrams) and lines of potentials (planes of immanence) form this real-virtual world.

According to Jean Hillier (2006), planning should approach the world from the ontology of becoming, rather than from that of being. While in the latter[1] the world as made up of objects with transcendental and fixed essences, the former[2] approaches the world from the ontology of becoming. That ontology contends that real objects are in a perpetual the process of becoming something else and that the real world is a continual unfolding of events that do not necessarily move toward a specific end or final destiny. Planning working with 'the world of becoming' does not search for stability, certainty or fixed patterns, but seeks to cope with and manage unpredictable futures and moves by improvisation and creativeness, seeking to identify trends or scenarios from "disparate flows, energies, events, entities and spaces in more or less temporary alignments" (Hillier 2007). Planning according to Hillier (2007) "have had a pervasive commitment to an ontology of being which privileges end-states and outcomes, rather than an ontology of becoming which emphasizes movement, process and emergence." Planning that privileges processes and movements deals with a continually emerging world in a fluid course of becoming.

In this perspective planning deals with the world as it actually is, instead of working with idealist prescriptions on what it should be. This approach is neither prescriptive nor normative, but intends to devise most effective practices that enable planning to help bringing about the future and facilitate the process of

change[3]. Planning as practice direct to setting off the future does not prescribe a particular (or desirable) future because it is just that which is the object and target of planning as a practice of seeking new futures. In fact that practice emerges from the conflict of ideas and political views, through the movements along the lines of flight, through the process of deterritorialization and the courses of fleeing to new lands (Banville and Torres 2016). It is working with and through these movements, that planning as process of bringing about the future can help to produce the (desired) new world. This "desired" new world will probably be product of some rhizomatic process of many competing desires, and perhaps, it might never epitomize the truly desired outcome of any particular vision.

According to Deleuze and Guattari (1980), this approach implies a political agenda. There is a clear compromise with the process, with change and transformation of whatever political, social or economic structure. This planning does not advocate for preservation of any institutional order, practice or rule, it has no compromise with old conventions or traditional habits, but instead it seeks the new, the different, and the diverse in order to create multiple ways of producing a free and more just mode of doing and living together in the world.

2.1 LINES OF FLIGHT, BECOMING AND BORDERS

Lines of flight" are one of the most important concepts of Deleuze and Guattari's ontology (Deleuze & Guattari, 1986; 1987). The notion of flight brings about the idea of escape from the apparatus of capture. Instead of using the notion of "point", Deleuze-Guattari employs de concept of "line" in order to indicate motion through the points. While points are fixed in the space lines are associated to the notion of movement and the idea of becoming[4].

Apparatuses of capture work to imprison the bodies to a fixed point. Escaping from the apparatus means start moving along a line: a line of flight. This movement away from the fixed rules gives rise to a process of becoming different, becoming something else and new. Similarly, the concept of deterritorialization is also used to imply a process of escaping from the apparatuses of capture. To deterritorialize means to start a movement of liberation, detached from the rules of the territory (Deleuze & Guattari, 1986). Although deterritorialization and flight are hopeful movements, they may turn however extremely risky. In

[1] This approach is taken from Plato and Kant ontology.
[2] Rooted in Aristotle, developed by Nietzsche, and embraced by Deleuze and Guattari,
[3] This position is, associated to Michel Foucault. Foucault argues that the role of the intellectual is not to propose any fully formed political agenda, but to analyze the political terrain and to participate of political struggle, as member of any popular or social movement. (Foucault, 2012).
[4] Instead of adopting the concept of contradiction as a methodological axis, the authors work with the idea of Lines of flight. Lines of flight seek to explain the constituent movements of each society beyond the legal and institutional regimes aimed at normalize and control of social life.

fact, the common outcome of deterritorialized bodies pursuing a line of flight is to be recaptured and reterritorialized according to the rules of an apparatus[1] (Deleuze & Guattari, 1977).

The process of fleeing and recapture is a cyclical one. However, this is not an endless mechanical process since each movement of escape lead to some "piece of the system to get lost in the shuffle." Along the historical process, the repeated flights and recaptures will affect and marginally change the apparatus. This continuous process, they hope, scars the system and deteriorates the apparatuses of capture (Deleuze & Guattari, 1986).

Deleuze & Guattari find a way out of this limiting cycle of flight and recapture, by turning to concept of "revolutionary connections" (Deleuze & Guattari, 1987, p. 473). When a deterritorialized body that succeeds to escape from an apparatus of capture and begins to move through its line of flight, it does not have to do so alone. It can link up with other deterritorialized bodies combine with other lines of flight, and form flows, aggregates, collective multiplicities moving together in a shared project to elude recapture. According to Deleuze and Guattari (1987), these associative behaviors are in the nature of desiring production: to produce connections. One of the most important characteristics of desiring bodies is to connect with other bodies and together produce larger assemblages (Guattari, 2002). Desiring-production relentlessly unsettles the apparatuses of capture, it sets elements in motion along lines of flight, and at the same time, it induces those lines of flight to seek connection with other lines (Deleuze & Guattari, 1987). They argue that bodies in movement of flight connecting with other fleeing bodies will be able to construct a larger and stead and continuously growing network of escape. The process of "connection indicates the way in which decoded and deterritorialized flows boost one another, accelerate their shared escape, and augment or stoke their quanta" (Deleuze & Guattari, 1987). According to our earlier example, the Land less Movement in Brazil encompasses many cells of land less movement linked to a bigger movement. The larger the network grows, the more it is empowered psychologically and materially, and the easier it is to ward off recapture by the apparatuses of the state or the capitalist economy.

2.2 RHIZOME

The network of fleeing bodies/entities is not an organized and striated process, but instead it grows and evolves in a rhizomatic manner[2]. The Rhizome is a disjoined, a centered, non-hierarchical network of entities communicating horizontally with any other entities. (Deleuze & Guattari, 1987) Deleuze and Guattari contrast the rhizome to an arboreal structure in which all flows must pass through a single connection, in which all relations are hierarchical. In an arboreal structure, all communication must pass first through a single coordinating "trunk" before it flows out to the limbs and branches. Rhizomes, by contrast, are a centered; they have no trunk, no general command, and no central committee that coordinates the whole. Rather, organization and coordination emerge naturally, on its own, without any intentional or purposeful action. The network organizes itself. It is only through rhizome, Deleuze and Guattari argue, desire can operate, that it can follow its inclinations, that it can move and produce in the way that is proper to it (1987, p. 14)

Deleuze and Guattari insist that rhizomes must operate this way. In order to form properly revolutionary connections, the lines of flight must associate with each other in rhizomes without leaders, where coordination emerges spontaneously. Deleuze and Guattari suggest that rhizomes will never come to rest, but will relentlessly grow and spread by sending out new stems, any one of which can connect with any other in the rhizome, or with deterritorialized elements that are not yet part of the rhizome (1987). That is

[1] This can parallel the events of land occupation promoted by social movements in Brazil. A particular plot of the urban land is occupied by low-income (land less) population, producing a temporary outcome, but eventually the police arrive to and enforce the private property rights of the owner.

[2] Rhizome is an epistemological model in the philosophical theory of Gilles Deleuze and Felix Guattari. The concept of rhizome was borrowed from botany and indicates the structure of some plants whose shoots can branch out at any point, as well as thicken and turn into a bulb or tuber. It can function as root, stem or branch, regardless of their location in the figure of the plant. For Deleuze and Guattari the rhizome exemplifies an epistemological system where there are no roots - i.e. propositions that are more fundamental than others are - which ramify under strict dichotomies. Deleuze and Guattari contend that according to the Anglo-Saxon tradition of philosophy of science, the structure of knowledge does not evolve by logical means through fundamental principles, but it is drawn up simultaneously from all points under the influence of different observations and conceptualizations. This does not imply that a rhizome is necessarily a flexible or unstable structure, but requires that any order model can be modified. There are in the rhizome, solid lines and organization determined by groups or sets of related concepts. These sets define a relatively stable 'territories' within the rhizome.

why Deleuze and Guattari ask us to “make rhizome everywhere”, to free up escapes that “dismantle the strata in their wake, break through the walls of significance, pour out of the holes of subjectivity, fell trees in favor of veritable rhizomes, and steer the flows down lines of positive deterritorialization or creative flight” (1987). The more successfully we can do this, the more likely we are to create a runaway effect in which deterritorialized flows of desire “become parts and cogs of one another in the flow that feeds one and the same desiring-machine, so many local fires patiently kindled for a generalized explosion” (Deleuze and Guattari, 1987).

2.3 NEW LAND

Deleuze and Guattari use the image of lines of flight connected to each other in a rhizomatic way, to explain that the purpose of these lines is to help de-territorialized bodies to remain in flight, and keep flowing, away from the apparatuses of capture by continuing to move. If these lines can manage to flow together, progressively forming a large enough mass, they begin to trace out a plane, a fluid and yet substantially consistent two-dimensional space. They form what Deleuze and Guattari eventually call “a new land”, a generalized condition for humanity in which becoming, flow, and desire pervade the community and choke or occlude being, fixity, and capture – a coherent but always growing and spreading rhizomatic multiplicity (Deleuze & Guattari, 1977).

This process of flight-and-connection may become revolutionary, since it is pushed “to a point where the process cannot extricate itself, continue on, and reach fulfillment, except insofar as it is capable of creating – a new land” (Deleuze and Guattari, 1977). The line of flight as a schizophrenic escape has the potential to become revolutionary and this involves a process by which a body withdraws from the apparatuses of capture and start to live on the fringe.

The new land brought about by this transformation implies the collapse of the system and of apparatuses of capture. In the resulting disorder, some regularity can emerge and some form of coordination among the elements will come to exist. However, that coordination, as in a rhizome, must always be immanent or emergent. Regularity and coordination must arise spontaneously out of the collective will and of the activity of the rhizomic network. This network is not a planned framework or managed by a leadership, nor does it emerge from a central or more important node in the rhizome. However, liberated desires will not simply live free and undisturbed in the new land. According to Deleuze and Guattari (1977) it is likely, that in the new land new institutions will emerge and new centralized apparatuses of management take control. Hence, as Deleuze and Guattari warn, desire must continuously flee. It must remain in motion, always on the line flight, permanently escaping and resisting the new apparatuses (Purcell, 2013).

That is why the new land is something like a contradiction, since it is in fact, made up of flights. The movement of escaping desire traces its topography. The fleeing elements can never come to rest because the apparatuses are never eradicated once and for all. Capture will continually reaffirm itself in forms like state agencies, private property, party organizations, corporations, planning departments. Fleeing agents of desire will always continue the process of fighting off these apparatuses, preventing the formation of institutions that will try to regulate desiring-production, organize it into organs, and assemble it into machines directed to perform restricted functions. Like desires, planning in this new land will be in an endless in movement, acting along the flux desires to promote change and transform the world into a new, and possibly a better land (Porter, 2011).

2.4 SELF-GOVERNMENT. NO CENTRALITY

The debate about whether humans are capable of self-organization has a long history in political thought, one that I certainly cannot resolve definitively here (Purcell, 2013). Advocates of self-organization often point to natural examples: the anthill, the beehive, the bird flock. Michael Hardt (2004) and Antonio Negri (1999) like the metaphor of swarm intelligence, where decisions emerge from the whole instead of being issued by a central power. Deleuze and Guattari, talk of rhizomes, trees, and wolf packs. Perhaps the prime example is that of a flock of starlings. They rise together into the air, a black mass of perhaps 50,000 birds, to hunt insects. The flocks are cohesive, but they are constantly changing shape, undulating purposefully as the birds move about in pursuit of prey. Everybody knows the flock is an assemblage of individual birds, but it seems we are watching a single coherent thing, a pulsing life form with an obvious

intelligence, efficiently carrying out the task of finding, catching, and ingesting food. Scientists explain that there is no leader, that the flock makes decisions without any centralized system of command (Hayes, 2011). The flocks do not take flight, turn, or change shape gradually. Despite the great quantity of birds, they can change direction suddenly. The flocks operate as a collective mind and are able to change that mind promptly. Throughout their movements, the collective of 50,000 birds, can suddenly disappear, before you can process what you see. They seem to rematerialize as fast as they fade.

2.5 (DE) TERRITORIALITY AND THE BORDERING

Deleuze and Guattari understand the concept of flight (flee) and the process of fleeing to the border as an event of becoming. As dispersed events of flight, the process of fleeing virtually generates and opposes all institutionalized structures and established rules of organization. The process of flight encompasses a large number of affective and transformative accomplishments through which social and spatial orders are continuously reconstructed.

For Deleuze-Guattari fleeing to the border means, an escape from institutionalization (1980). This is accomplished by producing affects that operate outside of the influence of existing organized assemblages. Such lines of escape produce new frames, which in turn produce new affects. The process of fleeing to the border involves evading the limits of established structures and /or disabling archaic moorings. By this is a rhizomatic course, entities fleeing through a process of heterogenesis[1], assert their uniqueness and heterogeneity in opposition to a transcendent, universalizing homogenization. Heterogeneity manifests desire; it expresses a process of becoming that is always in the course of changing, adapting, transforming and modifying.

To deterritorialize a body means to transform it into a body without organs. That is a process of recovering its various affective capacities rather than breaking it up into functions and categories. The body becomes a multiplicity supporting new connections, affects, assemblages, etc., with other bodies, a process of infinite possibilities. It is worth note that for Deleuze-Guattari the deterritorialized body does not mean reducing its actual territorial complexity, but rather the deterritorialization and heterogenesis it experiences, creates socio-spatial complexity which, in fact was kept concealed by the functional and definite compartments of the establishment. (Guattari, 1994)

Lines of flight and deterritorialization are developments that help in the escape from the instituted body (Marks, 1998, p. 31). Nevertheless, Deleuze and Guattari warn that there are always forces of stratification seeking to capture deterritorialized bodies in order to re-organize and reabsorb (reterritorialize) them into transcendental orders of homogenized bodies. Deterritorialized bodies are always at risk of being caught by the magnetism of the organization and fall back into the territory of institutions. These are like mechanisms of repression and capture that works to attract the external into a system of interiority. That system is made of identities, which are abstracted from actually existing bodies and transposed onto another dimension: the world of transcendental structures.

The concepts of territory and flight (to the border) advanced in this paper does not convey the idea of a stable, permanent, definite or inexorable spaces and events, but rather. ‘At the limit, all that counts is the constantly shifting borderline’ (Deleuze and Guattari, 1987, p. 367). The movement toward the borderline that marks the process becoming diverse and heterogeneous is perhaps a movement toward the borderlands of established states, which are territories marked by profound nonconformity and creativity. The smooth spaces generated by resistance assemblages like “shelter or land movements” (in São Paulo) that resist both the striating forces of the state and the reterritorialization of capital are themselves constituted through the bordering activity of becoming.

Assemblages such as Land and home movements take their lines of flight from what they are struggling against striations, organizations, institutions that want to close the escape points and fold these fleeing aberrations back into the order of things. The group’s strategy seems to speak to the solution proposed by Deleuze and Guattari: ‘it is by leaving the plan(e) of capital, and never ceasing to leave it, that a mass becomes increasingly revolutionary and destroys the dominant equilibrium of the denumerable sets’ (1987, p. 472). If capital has indeed erased international borders, leaving the plan (e) of capital requires

[1] An active, immanent process of singularization of subjectivity.

something that Massumi (1992) has encouraged from the outset: that you carry your bordering with you. The erasure of national borders (which is itself always an imperfect concept and an incomplete project: would not mean the end of borders.

Following Deleuze-Guattari (1994), we can problematize the concept of border as a fixed place, and understand it as distributed across diverse spaces, and not simply constituted by capital or state striations, but emerging from the assemblages of bodies becoming-other upon it. The urban movements for home, land, health, education are movements of fleeing to the border a process that embraces the perpetual end point proposed by Massumi (1992): 'To achieve the goal that has no end means ceasing to seem to be what you are ['legal'] in order to become what you cannot be: supermolecular forever.'

The goal is a limit approached, never reached'. The practice of reappropriation of space by the multitude, the minor (Katz, 1996), manifests becomings-other by assembling in and with space, by bordering against the surrounding smooth spaces of capital. But even the term 'reappropriation' may be problematic: becomings can never really re-appropriate, they cannot return ownership, capture, or repossess a space. Rather, these moments of becoming merely revival of what was always there: the ever-existing capacity for mutual transformativity and inter-affectivity. It is through the assemblage concept that Deleuze starts to build his conception of difference and change.

2.6 ASSEMBLAGE

Deleuze develops its theory of assemblage (agencement) from Hume. Accordingly, Hume solved the problem of subjectivity by developing the concepts of association, belief and exteriority of relations. Association is a natural principle that works by producing relations between things. Belief is a human reflexive sense based on habit, which allows the individual to transcend a given reality. It allows the subject to be creative and to go beyond the given by means of connecting habits. The relations of exteriority mean that each component is more or less autonomous, that is it does depend of the whole to exist. In this type of relation (external), the relation may change without changing the component.

An Assemblage is any number of heterogeneous components (parts, or things) gathered into a single context. In the assemblage, components keep certain autonomy from the whole from which it is part. A component in an assemblage has the ability to establish relations with other components and to form as many assemblages at the same time. This ability to connect in various directions, allows the component to affect and to be affected by other components, and this double affect (interaction) determines which interactions are possible.[1]

Each assemblage is made of components of immediate lower scale. What is Macro (Molar) in one scale is that which plays the role of the whole (the assemblage), in turn, what is Micro (Molecular) is that which plays the role of component (part). The Molar is a statistical result of a Molecular population at any given scale and not a causal product. There is no causal relation between molecular and molar, because there is no linear relation between then. Since the relation between them are not coherently (but contingently) produced, there is no unity in assemblage theory.[2]

An assemblage can be regarded as an unintended and not totally determined product. Therefore, an assemblage at a higher level is not self-determined but a result of lower level connections. However, a larger scale assemblage acts as a source of resources and limitations for lower level components. An assemblage molar lines enable as well constrain the parts in specific ways. In this context, both parts and the whole are historically produced. This means that the parts of an assemblage retain a kind of autonomy from the whole.

[1] Assemblage in Deleuze and Guattari sense is a mode of thinking the social reality: a relational process of composition and a methodology directed to practice. Assemblage intends to mean the processes of bringing heterogeneous elements together.

[2] Assemblages are made of two vectors: the actual and the virtual. The first is oriented toward the plane of transcendence or molar or strata. This vector produces a relative de/re-territorialization. The second vector is oriented toward the plane of immanence and produces absolute movements of de/re-territorialization. Movements on a plane of immanence are seen as virtual. The absolute and thus virtual movement of de-territorialization is called as a Line of Fight.

An important aspect of an assemblage is that it does not lose its identity when it is connected to a larger assemblage. The assemblage ontology is open to any connections and these connections have relations of exteriority with those that are already included. According to Deleuze-Guattari (1987), there are three ways of approaching the concept of assemblage. The first takes assemblage as a mode of thinking. Assemblage thinking is mode of thought whereby reasoning goes through a 'rhizomatic or nomadic process' forging 'linkages or connections between different systems of knowledge'. This growing connection with different modes of thinking, rearticulate the way we see, understand and thus live the world. This paper is an exhibition of that by setting out the problem and moving towards an expression of it.

The second way of approaching the concept of assemblage is by focusing on how entities are connected and organized (humans, for example). They are then understood through the variety of capabilities they develop to make connections and the capacities they have 'to form assemblages with other individuals, organic or inorganic' (DeLanda 2002, 63). For Deleuze and Guattari (1987), the main characteristic of the assemblage is its tetravalency[1]. This means that an assemblage has four (tetra) means of combining elements: machinic content, collective expression, territoriality and deterritorialization.

The concept of truth applies to problems (in general). It does not apply to actualizations because it is only a temporary solution to the problem (in the process of difference and repetition). Problems maintain certain autonomy from their particular solution. The capacity to affect is the potential to form connections with diverse elements in an assemblage.

The third way of thinking on assemblage operates at the level of matter itself in its molecular and temporal dimensions and is directly related to the concept of plastic habits. The defining distinction of the Deleuze-Guattari assemblage is that its aim is not a totalization, a definitive tracing of limits, or a final theory of everything. Rather, assemblage is an expansion of possibilities, an invention of new methods and new perspectives, an active 'entertainment' of things, feelings, ideas, and propositions that were previously unavailable to us.

2.7 VIRTUAL – ACTUAL

An assemblage refers both to a virtual space (of pure potential on the plane of immanence) and to actual space, (an actualized form on the actual/transcendental plane). Thus, a Real assemblage has both a virtual an actual dimension. Abstract machines belong to the virtual (immanent) space, and they are actualized as assemblages. The virtual is accessed through a diagram which maps (1) the unactualized tendencies (singularities) and (2) the unactualized capacities to affect and to be affected[2].

Everything that exists in the actual is a response to a problem. Each actual thing is a solution to a problem that is posed. Each solution however, is not the only solution to that problem. A liberal state or an autocratic state is different responses (solutions) to the problem of how to organize society. The 'real' consists of two planes, one correspond to the ACTUAL (form) and the other to VIRTUAL (formless). They are both two different parts of the REAL.

2.8 CHANGE

Since the assemblage is made of heterogeneous parts it does not dissolve into the next larger scale, but evolves through a creative process and thus remains open and active for new and different connections and therefore for (immanent) change. The identity of an assemblage is always unstable, uncertain because other processes act to destabilize or decode it. The identity of an assemblage is that of a unique singular individual. Its properties are not given; they are merely potential if not exercised.

De-territorialization may be understood as a movement that produces change. It expresses the creative potential of an assemblage to become to connect differently and to grow in a disorganized way. To de-territorialize means to loosen, release, disconnect from fixed connections of an assemblage, while

[1] Taken from chemistry and biology, valency here means the combining power of an element or molecule.
[2] Singularities are seen as attractors that allow many actualizations to a problem. Actualization is a temporary solution to a problem and is derived from processes of individuation. Real problems are defined by singularities.

reconnecting into new organizations is understood as re-territorialization. De-territorialization is not the opposite of re-territorialization. De-territorialization is the territory intrinsic/natural process of transformation; it is linked to the process of change, which is immanent to a territory. Thus in order to know how an event emerges and advances, it is not enough to trace its developments from actual events, but instead, to map it, which implies (1) to embrace the space of potential, and (2) to counter-actualize the becoming of the setting.

The focus of this work is in the becoming of entities rather than in their beings. Instead of examining points or fixed properties of an assemblage, this work focuses on the different kind of lines that frame it which are related to the two vectors that make up the process of transformation. This work regards an assemblage as composed by actual molar and molecular lines in the plane of transcendence /molar/strata, and by virtual lines of flight on the plane of immanence. Molar lines portray a hierarchical system that displays centers of significance and subjectification (command and decision). The molecular lines are fluid in its principles of organization. (Guattari, 1977, 1995)

3 EXPERIMENTS: A RHIZOMIC PROCESS OF PLANNING THE UNFORESEEN

This sub-section discusses some experiments with planning in which participatory practices are carried out by a diversified range of informal participants, advocate groups and local movements. These experiments evaluate the rhizomic working of these groups in dealing with specific and concrete situations. The focus of research is to evaluate the range of small and intertwined real problems the community faces every day and how it solves them by adopting a sequence of creative and unexpected solutions. The distinctive aspect of these experiments is the collaborative and networked effort accomplished by the participants. The recurrent feature of these networks is the absence of any kind of formal (institutionalized) apparatus, be it public or private (Nyseth, 2011),

The history of local planning in Brazil has been mostly conservative. For the most part planning institutions only served the private interest of some groups (elites). In fact, these groups always dominated the local institutions, and as such, most of the administrative procedures only produced outcomes to promote those interests, mainly in detriment of the majority of the population. Only recently, changes introduced in administrative practices—mainly under the impact of democratic governments—endorsed popular involvement in public planning activities. The first innovations starting in Lages and Boa Esperança during the seventies, pointed out to the emergence of local and popular groups such as neighbor associations, rural organizations, housing and land-tenure defense movements, etc. These early associative experiences and their participative practices open the way for new experiments and that requires new institutional arrangements for the management of urban realm. That entails the construction of a new political culture, which may involve the assemblage of new relations between formal institutions and the public.

Nevertheless, what are the direction these experiences points out? Are they innovative? What kind of political project or utopia they carry on? Innovations by themselves do not tell us anything about the direction of change. It is important to be aware that democratic processes of deliberation may conceal their meanings. Anyway, these societal movements, according to Deleuze and Guattari, can be seen as lines of flight seeking to construct new spaces and new modes doing and dealing with the real world problems and distresses. However, as Deleuze-Guattari warns us these flights may be recaptured by the institutional apparatus and indeed dominant interests may seize them, and use them to deceive, co-opt, and control the political power. In fact, lines of flight recouped may be used as an instrument of manipulation of people's dreams and expectations and work to disarticulate any possibility for genuine popular action.

The experiences described in the following lines are part of experiments under way in Brazil, and they are connected to many aspects of the urban or rural life. These experiments take place in many spheres of informal governance system and counts with the involvement of different kind of individuals, informal groups and associations, participating and articulating the construction of Deleuze-Guattari "new lands". These experiments are mostly present outside the formal institutions and in many cases may even be carried out independently of any formal government participation.

The next section describes some experiences we call rhizomatic collaborative planning. These experiences differs in scope, objectives and results, and are taken from an array of informal, low profile,

practical experiences of local communities, seeking to solve their real problems. The main features of these experiences are the informal, non-hierarchical, a centered and collaborative work the participants perform along and within the process. Actors interact freely and collaboratively with no central control and actions are taken with no need for bureaucratic intermediation or formal regulation. Decisions are not a formal top-down process, instead they are based on open dialogue among participants and solutions are not definitive—an ultimate and fixed point—but emerge as flow of possibilities, that is built along the way from the diverse of views, opinions and interests.

3.1 HULHA NEGRA TOWNSHIP EXPERIMENT

Hulha Negra is a small community of the Rio Grande do Sul State, where a remarkable experience of collaborative and rhizomic work has taken place. The interaction of two local councils dealing with different issues (economic development and scholar meals) introduced a new perspective for local rural producers and improved the quality of local student's meals, by changing the logic food supply of local schools.

Several small producers (local farmers) participated in the council of school meals since their children belonged the local education system, but they were also members of the economic development council seeking alternatives to improve the local economy (and local producers revenues). Initially, they thought that they needed to increase demand for their local commodities in order get increases in income, lately they discovered that the local administration used local resources to buy food for the school meals outside the town – from foreign dealers and/or producers. They also discovered that the quality of the meal was poor and inappropriate. The collaborative work of the councils, the farmers and of the local administration resulted in changes in the school meals policy: the local farmers organized a cooperative and began to provide the meals to the local public schools. This allowed public resources to remain within the local economy and the children meals improved considerably.

The disjoined multi-connected (rhizomic) relations between agents opened up many ways for participants to solve their concrete, real problems through an evolving assemblage of horizontal (non-hierarchical) network of community collaboration.

3.2 MONSENHOR TABOSA EXPERIMENT

Monsenhor Tabosa is a small town in Ceara State, in the northeast of Brazil, a poor and depressed region in the country. In Monsenhor Tabosa initiate the Programa Arco Iris (Rainbow Program) a very interesting collaborative work among the local government, a local NGO (Conselho de Segurança do Bairro de Fátima) and Abrinq Foundation (a Nationwide NGO sponsored by the Toys Industry Federation). The main target of the program was the students of primary education. After many discussions among the parts representatives and the local community, it was decided that the program should start by improving the capacity of the local teacher in order to enhance the quality of the teaching, and by that to improve the child school performance. Pedagogical workshops on a variety of subjects (ethics, art, history, citizenship, bio-dance, etc) were implemented with the objective of persuading the professor on the need to revise and change their old educational practices. Abrinq Foundation covered the main costs of the program, and the local government paid for travel expenses and meals of professors. Some years later, the municipality of Monselhor Tabosa shows a dramatic change in their education patterns with a noticeable improvement of the entire school system performance as indicated by the figures showing a drop on student's academic failure or school abandonment. In fact, this collaborative work shows important and interesting aspects. First, it started in a small town far from any significant urban or information center. Second, it also started outside formal government, through the informal action of a local NGO and the community. Third, these local groups were able to seize important connections not only with local public institutions but also with institutions at the national level. No decree or hierarchical decision-making mediated the collaborative process, but on the contrary, people were able to sew of an informal assemblage of horizontal cooperative work.

3.3 WOMEN IN ACTION PROGRAM

This program starts in Leme, a medium size town of Sao Paulo State. It is directed to the low-income families and unemployed people. The main objective of the program is to increase the professional capacity of the women by means of educative courses, events, workshops, and meetings and active social work. The local chapter of Lyons Club and the Solidarity Social Fund (private NGOs) handled the program in cooperation some branches of local government.

With the partial contribution of each of these partners, Leme city was able to create a very powerful social program directed to, on the one hand, help woman emancipation and, on the other, to face problems of poverty and unemployment. What really matters in this case is the informal alliances and non-hierarchical work between the participants – government, private groups, population. The program achievements soon became clear. It has contributed to, on the one hand, reduce poverty and unemployment, and, on the other, to generate income and self-confidence for poor families. Some of the women who participated in the courses of dressmaker and cloth painting are now working by themselves, at home and trading their products. Other women created a cooperative and are now producing bed-sheets and uniforms for the Public Health and Education departments of the local administration.

3.4 COMMUNITY GARDEN PROGRAM

In 1995 slum dwellers in Sao Bernardo do Campo– a median size town of 400.000 inhabitants situated at Sao Paulo metropolitan area – starts a program called Community Garden, directed to increase the quality of the food consumed by the low-income population. The program had several partners/sponsors: slum residents, local government, the Methodist University Alumni Association, local firms, and other interested citizens. In addition to assure the food supply for poor people, the program also sought to increase family income. Each participant worked in collaboration with the other. There was no central coordination, or rules for participating. The local administration[1] and the private firms provided the land for cultivation, the low-income people worked on the land with the technical supervision of university professors (agronomy engineers), and the Alumni Association offered technical and legal support and undertake the project management.

In this experiment, all the members participate and deliberate together on how to distribute the land, how to prepare the land for plantation and who does the infrastructure work. Once the land is cultivated, new meetings are held to decide on how to share the production and to whom the new plots for cultivation will be assigned. After the harvest and distribution of the yields, the surplus is commercialized. During the whole process, the alumni association in connection with the local university carries out an education program.

The vegetable garden experiment achieved an enormous success all over the country, and soon other municipalities started a similar program. The program success is mainly due to its ability to assemble the target population, solve the food problem of low-income families, and create an alternative for increasing the earnings of people with no formal employment.

This is a relatively cheap collaborative program. The local administration gain by alleviating poverty, the private firms gain by improving their image in the city, the university and the alumni association gain by providing an opportunity for students and alumni to apply their knowledge, and the low-income families gain twice as they have their food quality and family income improved. At this moment, many municipalities over country have adopted programs like this mainly as a real alternative policy against unemployment.

4 CONCLUSION

The history of social struggles in Brazil is a history of struggle for citizenship and social justice, which can be summarized as the pursuit for democratization of the public sphere. In the case of planning, such democratization involves access to arenas of collective deliberation. For this reason, movements and associations of civil society carries previously incorporated into their practices, a strong ability of working

[1] São Bernardo do Campo local government was at that time fleeing political project from the mainstream political system.

together, of sharing and collaboration: a history of network organization, solidarity and mutual strengthening. (Freire, 1994) These movements are carriers of a new social ethics: the ethics of respect, brotherhood, justice and freedom—an ethics that seeks equality of opportunities in a world of diversity and differences.

These participatory social action experiences do not appear anywhere. They are the product of specific circumstances, of real political actors and of tangible action social groups. Often, experiences emerge of informal, isolated actions; other times, they are part of larger movements of transformation of civil society institutions. In most cases the current decline of political forces and the decay of conservative governance institutions nowadays, result from their inability to build a political pact that paves the way for new discourses to manifest and new political actors to emerge. In contexts of change and transformation, new social agents materialize as political actors constituting movements and practices that will seed new forms of political and social regulation.

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ID 1694 | CITY-MARKETING POLICY AS GENERATOR OF URBAN DISCONTENT

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1 INTRODUCTION

"Neoliberalism is a hypermarketized style of governance (i.e. government through and by the market)" (Weber, 2002, p. 520). Under the hegemony of neoliberal-globalism, the entrepreneurial state has largely deployed market-oriented policies including city-marketing to attract flows of people and investment from the global market (Brenner, 2004; MacLeod, 2011; Madureira, 2014; Peck, Theodore, & Brenner, 2009). According to Deleuze and Guattari (2009), these flows of capital and people are vital for the capitalist city existence and its functions, particularly its constant economic growth. These neoliberal policies, including city-marketing, generally promise, or fantasise, further enjoyment to their residents, local/international investors and new arrivals, including tourists, expats and labours (Dovey, Woodcock, & Wood, 2009; Gunder, 2010).

Based on post-structuralism, particularly Lacan's works, planning theorists such as Gunder and Hillier (2009) have investigated how the neoliberalised states have extensively deployed plans and policies to generate a fantasmatic images of their cities. These theorists have mainly provided an in-depth understanding of the role of planners in the production of these market-oriented policies in late capitalism.

In this context, the role of neoliberalised planning including city marketing in the production and accumulation of urban discontent is largely neglected in planning theory. This paper investigates this neglected side-effects of the implementation of city marketing policies in the production and accumulation of urban discontent in Auckland, the largest city of New Zealand. The production and accumulation of urban discontent in the neoliberalised cities has significantly increased socio-cultural conflict and its symptoms such as xenophobia, antagonistic behaviours.

2 NEOLIBERALISM, GLOBAL CITIES COMPETITION AND CITY MARKETING

Globalisation and its consequences have increasingly become a focal point in politics and also academic research. Globalisation is not a new phenomenon in the context of history (Banerjee, 2008, p. 1). "Globalisation is a process that can be described in terms of flows, networks, capacities, distribution, diffusions, and movement" (Pizarro, Wei, & Banerjee, 2003, p. 113). Population, capital, information and ideology movements are agents of globalisation (Pizarro et al., 2003, p. 112). Globalisation, as a process, inevitably affects cities – the nexus of global flows-and their inhabitants, whatever their position in the international global network hierarchy (Amen, Archer, & Bosman, 2006, p. 2). These global flows have significantly restructured local social-political institutions, reshaping the contemporary city's spatial spaces (Marcuse & Kempen, 2000, p. 2).

This research considers neoliberal- globalisation as a universal trend that implants, as its dominant ideology, the adoption of market values, through its encouragement, or promises, of maximum levels of enjoyment by the maximisation of consumerism (Stavrakakis, 2008a, p. 101). Since the 1980s, neoliberal¬globalism has constantly transformed local governments and their functions into as urban entrepreneurial organisations to respond to the market demands. Neoliberal globalism redefines planning and its functions as a component of the state apparatus. Sager (2012, p. 130) notes that "[p]olitical-

economic ideas of neo¬liberalism have become deeply entrenched in the public sector administration of countries in most parts of the world, affecting planners in a number of ways".

The neoliberalised cities compete to attract a greater portion of the international investors and skilled immigrants through the production of new desires for greater enjoyment by affluent consumers. Under the hegemony of global neoliberalism, decision makers, including planners, are primarily concerned with generating further economic opportunities (Olds, 1995, p. 1714) by directing the flows of capital to their cities. To reveal the way in which contemporary planning practice operates to maximise international investment flows and lure the creative class, a variety of concepts have been proposed, including 'urban¬entrepreneurialism' (Brenner (Brenner & Theodore, 2005; Jessop, 2002), 'city marketing' (Doel & Hubbard, 2002) and 'place branding' (Govers & Go, 2003). These concepts emphasise the competition between globalised cities for luring a greater share of global capital flows. Outside judgment and international perceptions are important for raising the profile of cities (Ong, 2007, p. 89). Thus, planners as the workers in an entrepreneurial apparatus, deploy and legitimise market-oriented policies including city promotion. Gotham (2002, p. 1735) states that "[m]arketing is the use of sophisticated advertising techniques aimed at promoting fantasy, manipulating consumer needs, producing desirable tourist experiences and simulating images of place to attract capital and consumers". Planning policies such as city branding are largely implemented to assist market operation and also to lure flows of capital, skilled workers, cheap labour, if required, to a neoliberalised city. Sager (2011, p. 153) mentions that "these policies, for example, gentrification and city marketing, are nevertheless included, as they fit hand in glove with neo-liberal ideology and have taken on new importance as policy instruments under neoliberal urban regimes". These market-driven policies tend to create conditions conducive to capital accumulation in neoliberal cities (Peck et al., 2009).

Concurrently, multiculturalism, as another consequence of flow of people (human capital), has recently been the subject of extensive research across a range of disciplines such as sociology, political studies and economics (Benhabib, 2002). Neoliberal globalism promotes multiculturalism, many cities have become more culturally diverse. Friedmann (2002, p. 157) indicates that cultural diversity is a defining characteristic of globalised cities. Florida's (2002) investigation of American cities reveals that cultural diversity effectively generates new economic opportunities in globalised cities by attracting more foreign investment (capital) and talented migrants (human capital). Further, Sassen's (2009) global city research further supports the role of cultural diversity as a key factor in economic growth. Sassen (2002) points out that the ranking of global cities in the universal trade network, as global trading hubs, corresponds with their socio-cultural heterogeneity. Vijver et al. (2008) stress that multiculturalism, as a market driven policy, has been globally deployed for stimulating the process of economic growth. The implementation of city marketing as a strategic policy lures the creative class in response to market demands in global cities (Storper & Scott, 2009). The next section will investigate a post-structural understanding how the implementation of city marketing policies attracts both human and non-human capitals to the neoliberalised cities.

3 NEOLIBERALISED CITY AS THE PLACE OF ENJOYMENT

A number of scholars such as Lacan (2006), Deleuze and Guattari (2009), and Žižek (2011a) have indicated that desire is the key driver in contemporary capitalism. According to Deleuze and Guattari (2009), the flows of desire are the sine qua non of a city-machine's operations: first and foremost, cities are desiring-machines. Dovey (2005, p. 20) stated that "the city is an immanent flow of desires". The existence of the city-machine is reliant on the generation of new desires, imperative for attracting capital and labour flows. Dovey (2005, p. 20) added "[f]lows of desire are the life force of the fluid city" such as Auckland.

Stavrakakis (2008a, p. 84) argues that "the emerging hegemony of consumerism, [as a dominant global value], cannot be explained without taking seriously the dimensions of desire and enjoyment". Similarly, Žižek (1989, p. 5) identifies 'surplus-enjoyment' as a main driver of global neoliberalism, which promises happiness through material consumption. Dovey (2005, p. 20) postulated that "[t]he world is not a collection of subjects who have desires, rather desires construct the subject". The flows of desire fabricate the identity of the city as the assemblage of an urban built environment and everyday life. The type of desires that are produced for profit, investment, privilege, consumption and power generally promise increased enjoyment, and significantly affect contemporary urban image and transformation. In the words

of Wood (2009, p. 204), "[f]rom this account of desire, flows of capital must, of necessity, be parasitic upon flows of desire; the basic argument which follows is 'before' the market can play a determining role in urban development, flows of desire must be made tantamount to, and seemingly derivative from, flows of capital."

Globalised cities are places in which regulated desires erupt into the production of flows of both material and sign values- symbolic images (Dovey, 2005; Ong, 2007). Cities across the western and non-western world have followed in an effort to materialise 'utopic images' based on market constructed desire (Kaika & Thielen, 2006). These utopic images reproduce and also reinforce to the flows of capital (human and money). In the neoliberal global context, first, the qualitative values such as quality of built/natural environment or quality of life are converting into purely quantitative values of money, investment, and profit. Secondly, the promised profit is actualised through consumption by generating a set of new regulated desires based on new qualitative values – advanced enjoyment (Wood, 2009).

City marketing policies include several policies such as encouraging cultural diversity (Florida, 2002; Ong, 2008), establishing iconic architectural buildings such a Skytower (Dovey, 2008), socio-cultural events such as festivals and mega events like the Rugby World Cup (Pløger, 2010), and creating an utopic images such as "making the most world's liveable city" (Mohammadzadeh, Meares, & Owen, 2015). These city marketing policies can be interpreted within the process of generation of new qualitative values. The new qualitative values generate new desires for more consumption and promise greater enjoyment. "All cities believe that, if they have the best socio-cultural amenities and creative milieus, architectural heritage, and cultural events, they have a reliable strategy to get the maximum in return, in consumption and image turnover" (Pløger, 2010, p. 848).

In Anti-Oedipus, "Deleuze and Guattari argue that capitalism functions by simultaneously producing two different kinds of surplus values: a quantitative, capitalistic surplus value, and a qualitative, subjectifying surplus value" (Wood, 2009, p. 204). Massumi (2002, pp. 200-201) defines subjectifying surplus value based on Deleuze and Guattari's notion of flows: "This implies the existence, in fact the predominance, of a kind of surplus value that is created in the process of circulation itself. The value of commodity-images (defined broadly this time, to encompass objects, bodies, representations and information: decoded sites of force conversion) is attached more to their exchange and inclusive disjunction (the production of recording accompanying the singular acts of consumption made possible by the inclusive conjunctions of the capitalist axiomatic) than to their material production. Deleuze and Guattari call this form of surplus value the 'surplus value of flow'. It has two aspects, corresponding to the consumer/capitalist dense points of the capitalist relation: it continues to feed into capital accumulation in the hands of the capitalist, but wherever capital surplus value is extracted in an act of purchase, an evanescent double of, what accrues for the capitalist is deposited in the hand of the consumer. This ghost surplus value has a non-capital form; it is even reminiscent of the surplus value of pre-capitalism. It is more on the 'other' of prestige, an 'aura' – style, 'cool,' the glow of self-worth, personality. The process of shaping surplus subjective value operates simultaneously with the process of production and consumption, rather than before or after this process.

Desires for a green city, a sustainable city or being the world's most liveable city are representative examples that actuate the neoliberalised planning. Both capitalistic surplus value and subjectifying surplus value are produced through the process of the implementation of urban policies and plans, including city marketing policies. First, planning fantasises the desirable images for cities, such as being the most liveable, multicultural, and greenest city in the world. At length, these fantasies are used to attract a greater share of the global flows of finance and immigration, in competition with other cities. Second, these urban policies and plans synchronously generate subjective forms of surplus value such as political praise for local government, civic prestige for residents and acclaim for visitors (Dovey, 2005).

Outside judgment and international perceptions are important for raising the profile of cities in the market (Ong, 2007, p. 89). Thus, decision-makers as the leaders of the apparatus, constantly deploy the new visions, e.g. Len Brown's vision to make Auckland the world's most liveable city. Gotham (2002, p. 1735) states that "[m]arketing is the use of sophisticated advertising techniques aimed at promoting fantasy, manipulating consumer needs, producing desirable tourist experiences and simulating images of the place to attract capital and consumers". "The reputation of a city, its image, is perhaps the most visible sign of promotional efforts" (Short et al., 2000). Thus, one of the primary objectives of local decision-makers and

planners is to construct favourable images of their city via place branding or city marketing in terms of investment, living and visiting. The production and promotion of desirable images are imperative for the operation of the neoliberalised city, and these images are produced through the process of urban planning and design. “The best of cities have always been a curious mix of economic engine and seductive surface; places of work and play; producing wealth and desire in abundance” (Dovey, 2005, p. 1). The entrepreneurial images of cities are not generated based only on urban projects such as waterfront development projects, iconic architectural buildings and emporia; rather, cities also create allure through their rhetorical policies, such as liveability. Through the process of planning, interests are produced (Wood, 2009). Desiring-production generates a fantasy that persuades non-residents to invest, live in or visit a city. The connection of the city to the global networks within the capitalist mechanism is central in shaping this fantasy. In this context, the Auckland Council’s vision has been used as a tool for reinforcing the economic power and competitiveness of New Zealand’s primate city. Auckland Council promises advance enjoyment (non-capital surplus value) to its residents, foreign expats and visitors by living and investing in the world’s most liveable city.

4 AUCKLAND AS THE WORLD MOST LIVEABLE CITY

Historically, Auckland has been the primate city, the city of migrants, and the dominant business and finance hub in New Zealand. Auckland is New Zealand’s largest city-region, home to more than 1.5 million people, a third of New Zealand’s total population, and contributes more than 37 per cent of New Zealand’s GDP (Auckland Council, 2012).

Horton (1995) observed that since the 1990s neoliberal globalism toward an urban entrepreneurialism had impacted New Zealand’s urban policy. Neoliberal globalism percieves cities as economic entities in themselves which can leverage their competitive advantage (Porter, 1995). The competitive cities strategy utilises land-use policy to foster spatial agglomeration and greater economic performance. Since 2000, the central government showed greater interest in Auckland’s contribution to the national economy, as the region showed strong economic growth (Lewis & Murphy, 2015). The central government’s initiative for “competitive cities” formed a key component of the economic agenda to support prosperity and future growth (Ministry for Local Government, 2009). Auckland was characterised as the “engine room” for New Zealand’s economic growth (Ministry for Local Government, 2009). This shows the strategic role of Auckland for the central government, not primarily as a population centre, but a vehicle to support the national economic strategy. Governance reforms were justified by imperatives for international competitiveness, Auckland’s significance to the national economy, and the desire to better serve interdependent needs for social, environmental, cultural and economic well-being (P. Salmon, Bazley, & Shand, 2009).

In 2002 the Auckland Regional Economic Development Strategy as an initiative was shaped to increase New Zealand’s GDP earnings, to expand export markets and attract foreign investment (Rowe, 2004). Supporting the international competitiveness of New Zealand cities is now a primary component of the central government’s economic agenda (Ministry for the Environment, 2010). In 2007, the central government assigned a Royal Commission of Inquiry into Auckland Governance to address ongoing problems in the region, to identify the issues facing Auckland in future, and to resolve them. The Royal Commission identified the lack of an integrated decision-making mechanism, including planning, as one of the main reasons for on-going problems in the Auckland region (McKinlay, 2011). The report suggested a fundamental governance reform to shape a unitary authority for the region with a mandate to develop an integrated planning mechanism. The first bill, the Local Government (Tamaki Makaurau Reorganisation) Act 2009, which provided for the merger of the eight pre-existing councils into a single unitary council and the establishment of the Auckland Transition Agency, was passed through all stages under urgency in 2009. The legislative reform termed the new Auckland region as the ‘super-city’. The term of 'super city' reflected the scale of the integrated authority (1.5 million people) compared with the scale of New Zealand's other large local authorities such as Christchurch City with a population of approximately 350,000.

In 2010, the Auckland Council was shaped an inclusive and united organisation to take over the functions of the Auckland Regional Council and the region's seven city and district councils, including Auckland City Council, Manukau City Council, Waitakere City Council, North Shore City Council, Papakura District Council, Rodney District Council and most of Franklin District Council (Rowan, 2011). According to the

legislation, Auckland Council has aimed to provide integrated actions, plans, strategies and policies for the future of the Auckland region. Shaping Auckland Council can be perceived as a result of New Zealand's national agenda for international competitiveness (McArthur, 2017). Ministry of the Environment (2010) led an initiative for "competitive cities" as a key component of the national economic agenda to support prosperity and future growth.

Auckland Council a new amalgamated organisation has subsequently enabled a new local agenda oriented toward liveability. Lewis and Murphy (2015) identified the shift from sustainability to liveability as a guiding spatial imaginary and a governmentality as a consequence of shaping Auckland Council. They observed that the shift in urban policy has attributed greater economic significance to the city as the pre¬eminent spatial form to support both quality of life and economic growth. However the city competitiveness agenda has been introduced and then led by the central government, the first elected Mayor of Auckland , Len Brown, outlined his vision to transform Auckland into the worlds' most liveable city. His vision set the newly amalgamated Auckland Council's goal to make Auckland as the world's most liveable city that deployed as a vision for the Auckland Plan, released in 2012.

The vision guides and shapes the agency of Auckland Council as a new organisation (Gunder, 2014). Thus, the Mayer's vision has significantly informed Auckland Council's strategies, plans and policies such as the Auckland Plan and the Auckland Unitary Plan. However, Auckland has been one of the most liveable cities in the world. The new integrated Council aims to improve the liveability of Auckland and, subsequently, to increase its ranks among other competitor cities such as Melbourne and Vancouver.

Auckland Council (2012) defines its vision, making Auckland as the world's most liveable city, in the Auckland Plan as an aim to "create a strong, inclusive and equitable society that ensures opportunity for all Aucklanders". Nonetheless, the Auckland Council vision that significantly has informed its plans and policy that can be perceived as a city marketing and branding exercise. Ranking highly in the Economist Intelligence Unit's Global Liveability Ranking, Mercer's Quality of Living Survey, and Monocle magazine's Quality of Life Survey is used as an imaginary tool to attract foreign investment, skilled workers and cheap labour (Mohammadzadeh et al., 2015).

The Auckland Council's vision to make it as the most liveable city ranking is an illustrative example of how a vision as a city marketing policy generates an utopic image of the city that produces new desires for both domestic and international actors that inherently functions as an economic driver for a city in the global market. The vision is promoted globally as a lucrative model for city development in media. Thus, several cities across the world have followed in an effort to materialise this globally accepted vision. The contemporary city should continually produce new desires; one of the new functions of local government is the facilitation and legitimation of the production of new desires, by promoting the image of the city within global market as the world's most liveable. To reveal the way in which the local government operates to maximise international investment flows and lure the creative class. Decision makers, including planners, endeavour to project a desirable image of the city by implementing appropriate city-marketing policies. In brief, "[p]romoting the right image [largely focused on advances enjoyment] is central to city-marketing" (Boland, 2007, p. 1027). Auckland Council's vision and its city marketing policy promise Auckland residents, immigrants, investors both objective and subjective capital values through living in the city and their contributions to its economic growth.

5 THE PRODUCTION OF URBAN DISCONTENT

The neoliberalised cities are inherently unable to materialise their promises at least for a large number of their residents and new arrivals. Based on Lacan's works, this paper claims that the Auckland Council's vision to make "Auckland the world's most liveable city",(Auckland Council, 2012) has intensified of urban discontent.

For Lacan, although the symbolic order restricts enjoyment, it simultaneously allows for the fantasy of the attainment of complete future enjoyment, so as to make the restrictions endurable. This mechanism is complicated in the neoliberalised society, which promises "advanced enjoyment" (Stavrakakis, 2008a) or "surplus-enjoyment" (Žižek, 1989) as the core of the market operation. Accordingly, McGowan (2012) conceptualises neoliberalised society as the "society of commanded enjoyment".

Under the hgemony of neoliberal globalism, city marketing promotes advanced enjoyment to the people through investing, living, working, and even visiting the city. Nonetheless, at least two main reasons can be identified for the failure of the neoliberalised state to materialize its promises in city marketing policies: first, as Freud (2002, p. 81) stated that “the programme of becoming happy cannot be fulfilled”. Second, neoliberalism largely operates based on increasing social, economic and geographic inequality (Harvey, 2007). In this context, the promises cannot be delivered to a large number of the neoliberalised city’s residents and new arrivals.

Lacan deployed the notion of lack to formulate the mechanism of capitalism and its promised enjoyment (Evans, 2010). Based on Freud’s works, Lacan argued that enjoyment is incomplete because desire can never be fully satisfied; instead, desire is continually being replaced by new desire. “Desire can only be sustained by dialectic of lack and excess; in order to remain attractive, the promise of excess relies on the continuous renewal of lack” (Stavrakakis, 2008b, p. 94). “Desire and lack always go together, overdetermining the dialectic aporia of human life” (Stavrakakis, 2008b, p. 90). This dichotomy between lack and desire perpetuates the contemporary city in late capitalism (Baudrillard, 2016).

Gunder (2009, p. 287) observes that “[b]eyond the traditional employment and investment opportunities, the quality of life available, including amenity, life and range of leisure opportunities are necessary elements for the city-region to attract businesses and talented people”. City-marketing policies are also constituted around lack, the liveablity or the quality of life; the attainment of full enjoyment is fantasised through living in the city (Haines, 2011). Despite the fact, the promises made, satisfaction cannot be achieved due to an inherent lack.

We desire because we don’t find the sacrifice of our enjoyment entirely satisfying, but desire, unfortunately, does nothing to overcome that dissatisfaction. In fact, desire is sustained dissatisfaction (McGowan, 2012). The neoliberal utopia as fantasised by the city marketing policies is predominantly a virtual utopia; its promised enjoyment, by advertising fantasy, that cannot be actualised (Stavrakakis, 2008b). Desire is constructed through fantasy – and it is through the fantasy we learn how to desire. As far as the final satisfaction of our desire is concerned this is postponed from discourse to discourse, from fantasy to fantasy, from product to product, from the most sustainable city to the world’s most liveable city. It is this continuous displacement that constitutes the essence of consumer culture (Stavrakakis, 2000, p. 89). If the disruption of replacing desires intesifies urban discontent.

Žižek (1989, 1993), Stavrakakis (2006) and Laclau (2005), among others, conceptualise socio¬political antagonisms, such as xenophobia or racist movements, as fantasises embedded in this same impossibility of full enjoyment tha results in intesfication of urban discontent. In this context, since fantasies can seldom be realised and full enjoyment is unattainable, some people misidentify the source of their dissatisfaction in external agents such as immigrants or ethnic groups. New fantasies, often of a racist nature, are replaced with market-based fantasies. These fantasies demonise others as the cause of one’s lack of attainment of full enjoyment. The recent Global financial Crisis (GFC) shows the failures of neoliberal globalism. It has brought an increase in socio-political conflict in late capitalism. Critical thinkers, such as Žižek (2009, 2011a), Laclau (2005), Stavrakakis (2002, 2007) and Mouffe (2007), among others, have extensively deployed Lacanian concepts to investigate these socio-political conflicts.

5.1 AUCKLAND AS THE PLACE OF URBAN DISCONTENT

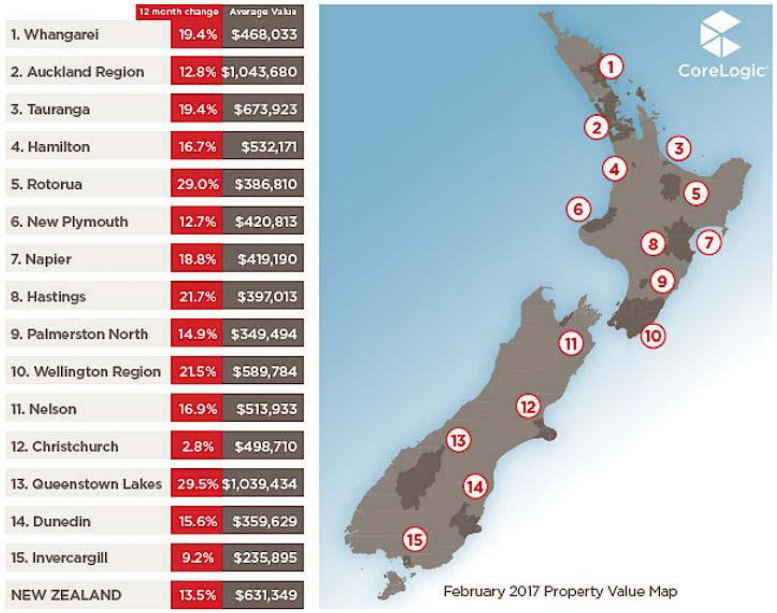
Sine the 1980s, the New Zealand economy was opened up to competition from imports and foreign investors through economic liberalisation and reform. The liberalisation, or neoliberalisation, of the economy has significantly influenced on Auckland as the main commercial and industrial hub of New Zealand. The neoliberalisation has facilitated flows of foreign investment in commercial, property retail and private real estate. The flows of foreign investment have boosted property development in Auckland, particularly in its CBD (Moricz & Murphy, 1997). “The city’s role as a major hub for the inward and outward flow of goods, services and people continued to expand as did its designation as the dominant centre for the retail and service industry sectors as well as the portal for overseas companies in New Zealand” (Neill & Shirley, 2013). Following the facilitation of flow of capital through neoliberalisation of the economy, the government has changed immigration policies in the late of 1980s to attract individuals who could contribute business expertise, or make a capital investment in New Zealand (flows of human capital) (Simon-Kumar, 2015).

"Between 1981 and 2006, the number of overseas-born people usually resident in New Zealand rose from approximately 450,000 to 920,000, an increase of more than 100 per cent" (Law, Genç, & Bryant, 2013). Auckland has attracted the large number of the new arrivals (Bedford & Spoonley, 2014; Spoonley, 2015). Flow of people increased the demand for housing that subsequently fuelled pre-existing housing inflation. Housing inflation among other factors made the cost of living in Auckland higher than other places in New Zealand (Neill & Shirley, 2013). The amalgamation of Auckland Council and, then, implementation of the new vision for making Auckland as the world's most liveable city have reinforced the flows of capital and people required for the city's economic growth. Concurrently, the central government changed the immigration policies to attract individuals to the country in 2009. However, several occupations were removed from the long-term skills shortage list and rules around sponsorship were tightened. New investor and entrepreneur categories, including "Investor/Entrepreneur" and "Investor/Entrepreneur Plus", were introduced to attract business migrants. According to Minister of Health, and Minister for Sport and Recreation, Jonathan Coleman, these schemes has facilitated entry criteria and fast-track applications for large investors (Coleman 2011). In 2013, the new immigration policy let students working full time in New Zealand; this policy increased the number of foreign students in Auckland as the primary education hub of the country.

Murphy (2011, 2016) observed that the Global Financial Crisis (GFC) has significantly decreased construction activities in New Zealand, particularly in the Auckland region. According to New Zealand Stats, building consents for new dwellings declined by 30 per cent from 2007 to 2008 and consents for all residential developments in 2009 were down 54 per cent from the peak of 2004. The shortage of supply in the market alongside the increasing the flows of internationa capital investment and people have rocketed up the price of housing in Auckland region. The 13th annual Demographia International Housing Affordability Survey (2017) classified Auckland as the fourth worst housing affordability, with a Median Multiple of 10.0 among the major investigatedcities in the world. The current housing inflation is one of the causes for the Auckland's unaffordability. The latest monthly house price index published by QV shows that Auckland values are quickly increasing. In the three months to January 2015, housing price increased

5.1 per cent which equates to over 20 per cent annually (QV, 2015). The growth is considerably higher than the 1 per cent to 2.5 per cent rate of increase per three months during 2014. It is the highest since 2003 at the start of the previous boom. The following map illustrates the housing price changes in Auckland compared with other major cities of New Zealand in 2017.

5.2 FIGURE 1 –HOUSING PRICE INFLATION



According to the CoreLogic NZ (2017), there are unique things about Auckland that set it apart from the rest of the country namely: Strong net migration, consumer confidence and low-interest rates.

These factors are increasing demand in Auckland's housing market, while a shortage of housing stock and a relatively low percentage of properties for sale are holding back supply to meet the incresaing demands.

The housing market is the mian driver of the New Zealand economy growth, and the value of housing represents almost three quarters of total household assets in New Zealand (The Reserve Bank of New Zealand, 2017). The amalgamation of Auckland Council and then the implementation of its vision as a neoliberal city marketing is one the drivers of housing price inflation in Auckland (Lewis & Murphy, 2015; Wetzstein & Le Heron, 2010). Investment in Auckland real-estate market seems promising for both domestic and international investors (objectifying surplus-value) (Kelsey, 2015). Based on Lacan's works, Žižek (1989, 2011) stated that theres is corelation between the production of 'surplus-value' and 'surplus¬enjoyment'. He (1989, p. 53) argued that "surplus value is the cuase which sets in motion the capitaltsic process of production and surplus enjoyment is the object-cuase of desire".

In addition, the Auckland Council's vision as one of the world's most liveable cities offers, or at least promises, the high quality life-style to its residents (subjectifying surplus value), if they can afford it. Thus, affluent people who can afford to pay the cost of living in Auckland, partcularly accomodation, may attain the quality of life that is suggested. The flows of investors and affluent migrants have remarkably exacerbated urban problems such as unaffordability, gentrification and social inequality in Auckland (McArthur, 2017; Mohammadzadeh & Bahmanteymouri, 2015).

Auckland Council as the local government has been successful in attracting flows of capital and people, required for the city's economic growth. The amalgamation of Auckland Council and implementation of appropriate vision has assisted the council to compete effectively with other cities in the global market. Nonetheless, the fluxes also generated some side effects such as housing inflation and unaffordability (Mohammadzadeh & Bahmanteymouri, 2015).

In recent years, there has been a great deal of concern expressed by various parties about the decline of affordability of residential housing in New Zealand; bringing into question as it does the possible end for many, of the kiwi dream of near universal home ownership (Bourassa & Shi, 2017). The decline in affordability has been particularly apparent in Auckland, where the surge in housing prices in recent years has been particularly strong. A range of causes has been put forward for the decline in affordability, including such things as the impact of overseas buyers, high immigration, low interest rates that over stimulate demand and a sluggish supply side response. Coleman and Landon-Lane (2007) investigated the relationship between migration, residential construction and house prices in New Zealand between 1962 and 2006. They found that a net migrant flow of one percent results in house price change of 8 to 12 percent. Using regression modelling, they concluded that migration flows do impact housing prices, explaining that this is possibly caused by shifting local demand coinciding with migration flows or that migration flows effect housing value expectations. Ge (2009) investigated New Zealand houses prices between 1980 and 2007. He argued that the main cause of New Zealand house price variations identified was migration, followed by mortgage rates, the number of building permits and the level of unemployment, which are also found to be important factors.

Ley's investigation on Vancouver Houisng market (2017)shows that "House prices have risen rapidly and the detached housing market is now unaffordable to most Vancouver residents. Despite public discontent about the likely role of investors in boosting prices, provincial and local governments, who value the revenues of high property prices and BIP fees, have shown little desire to intervene." In New Zealand, foreign investors and flows of immigrants are often recognised as the main causes of the housing price inflation in Auckland. In other words, the new arrivals are used as the scapegoats and are demonised as the people who steal enjoyment of the host society. Moreover, the production of urban discontent as a malfunction of neoliberal-globalism is largely misinterpreted or overlooked.

6 CONCLUSION

The regulated desires embedded in the subjectifying surplus-values shift public interest from crucial socio¬cultural challenges, such as the increase in social inequalityor lack of affordable housing, towards

superficial demands, such as making the world's most liveable city. As Dovey (2005, p. 210) argued, "[t]he interests and identities of social classes can be seen as the end-products of processes of new modes of production, the production of desire". In this context, the global neolibaralism as the hgemonic ideology shapes public interest and determines the planning process for considering the regulation of desires for prestigious architectural buildings, place or city marketing. Planners, urban designers and decision-makers are thus misguided in their recognition of existing urban challenges that produce urban discontent. In this context, one should ask who gains and who loses through the implematation of city marketing?

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ID 1696 - PROTOTYPES AS OPEN-ENDED ARTEFACTS IN URBAN DESIGN

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1 INTRODUCTION

When dealing with the quality of an urban space the criticism sets, almost without exemption, the end product of the urban design process as the main object of judgment. However, the product of urban design, in contrast to other consumer products, is more than a cohesive product of aesthetics and function. On the contrary, the design of space is a complex system of multiple individual products (open spaces, buildings etc.), each one with its own functions and needs. Moreover, due to the fact that each one of these individual products follows a unique path of development through time, it appears that the orchestration of this multitude of individual activities is difficult to accomplish.

Following the reasoning mentioned above, it becomes clear that the shaping of physical space is rarely under the full control of the designer and that most of the times the formulation of a physical space becomes the design of an overall framework of development. The latter highlights the importance to consider urban design not only as an object of design, but more importantly as a process of design. If we assume that participatory design, self-organizing, user-centered design and open source design are considered to be bottom-up processes, the hypothesis here is that open-ended design is a process that can either be initiated as a top-down or a bottom-up approach, but nevertheless, requires the participation of more than one person, in order to be successful. This implies that a set of rules must be negotiated and tested among all the actors participating in the process for any open-ended project to be implemented.

This research paper aims to present a discourse regarding the notion of open-ended in urban design and builds on the hypothesis that the notion of open-ended cannot be detached from the 'process'. This does not necessarily concern prescribed rules of actions but the act of defining the relations between possible actors as well as that a specific outcome of the design is not the main concern of the design process. According to this argument, design should be considered as an 'infrastructural' rather than a 'projecting' process.

The paper demonstrates that in order for the actors involved in a design process to develop or maintain relations towards an open-ended process, they need mediating devices, which are used both as representations for the evolving object of design and as means for aligning the different resources of a project. The paper focuses on 'prototypes' as important mediating devices and the process of 'prototyping' as an inseparable process for open-ended design approaches. It furthermore demonstrates that the prototypes' open-endedness extends beyond the lab's environment and scientific research, from the everyday inventiveness of people through Lévi-Strauss's bricolage process, to Alexander's 'patterns', to Habraken's concept of 'supports' or even to real life urban projects.

2 FROM PARTICIPATORY DESIGN TO OPEN-ENDED

Participatory design at first emerged as an important social movement around the 1960s and immediately gathered momentum. Participatory design was not merely a reaction to the ill-defined problems of societal nature, but it was essentially linked to the political and moral based issues of society with a primary focus on the empowerment of the people and the democratization of views. Participatory design usually refers to a process by which the communities involved, reach an identified outcome which resulted from the pluralism of the different 'voices' involved. It might as well be that one of the fundamental characteristics of open-ended, which is being discussed in this paper, and compared to participatory design approaches, is that of 'emergent', which is linked to the notions of sustainability and adaptability. The aforementioned notion is crucial for design, especially for urban design and planning practices, where the different phases may be implemented within considerably long periods of time, and where the existing conditions are quite subject to change.

2.1 SUPPORTS

One of the concepts that take into serious consideration time and change is that developed by J. Habraken. Laying emphasis on habitation, the work of the architect and academic Habraken, developed influential theoretical contributions specifically addressing the matters of mass housing and the integration of users and residents in the design process (Teerds & Havik, 2011). Habraken describes the relation between inhabiting and built form as a 'natural relationship', in which the close and continuous interaction of the users with the forms they inhabit defines their built environment. In particular, Habraken mentions that "dwelling is the result of a process…" and that "… dwelling is first and foremost a relationship between people and environment, and because the relationship arises from the most common actions of daily life it is rooted in the foundations of our existence" (1999, p. 18). For Habraken, architecture should concentrate on three significant questions (Habraken, 2006, reprint of the 2003 publication): i) how values are shared in the design of our environment, ii) how change and permanence make the environment alive and iii) how the distribution of design responsibilities can produce a more adaptable environment. Habraken refers to successful urban environments of the recent past and attributes their qualities to the sharing of common assets of the same locality. He also considers the factor of time an important aspect for the shaping of our environment. More specifically, Habraken notes that change and permanence go very much hand in hand, and therefore he lays great emphasis on the different timescales, by which the different elements that constitute our built environment function. The latter, becomes increasingly important concerning the scale of a project. As a reflection to the questions posed, Habraken developed the theory of 'supports', described in his 1961 book 'Supports: an Alternative to Mass Housing' (1999). What he did was to suggest a structure and an infill system by which the structure that is provided by the architect is more permanent and predictable than the short-lived and unexpected infill which is defined by the users. Furthermore, his theory on change and permanence of the elements that constitute the urban environment, regarding the levels of control and the distribution of design responsibilities, is described in detail in his article 'The uses of Levels' (Habraken, 1988). In his theory, the minimum material element of the built environment, for

example the house unit, is related and controlled accordingly by the smallest social unit in a society. Indeed, this possibility for individual control regarding the different levels of design provides Habraken's system with the capacity to act as a living cell and adapt dynamically to any changes over time.

2.2 PATTERNS

Alexander, on the other hand suggested a different approach for an open-ended design system; the mathematician, architect and academic, based his theoretical and practical work on his observation that old city centers[1] present a complexity and liveliness, which cannot be found in any of the contemporary new city centers[2] (1965). As with Habraken, he found that these assets cannot be credited to individuals and are basically the result of a collective effort. Alexander tried to understand the principles of vernacular architecture by documenting specific 'rules' that people have been using for thousands of years in design and have resulted from gradual adjustments on peoples' lifestyles over time. Alexander categorized these rules in 253 interrelated patterns that are hierarchically organized by scale, in order to structure 'A pattern Language' (Alexander et al., 1977); a model that would potentially offer a generative grammar for 'The Timeless way of Building' (1979). This pattern language intended to offer everyone the possibility to be practically involved in design. Moreover, what is extremely interesting is that the proposed language was structured with the provision to be modified by its users in order to be adapted to the different cultural aspects of a place and to the changing needs of people over time. Alexander's patterns were based on his assumption that the structure of the built environment is the process of a non-masterplan approach, by which the individual units are subject to local rules according to a timeless way of building. What is indeed suggested by Alexander is that the built environment should relate to a living world, which defines the city as the collective outcome of several interconnected forces. The author finds that Alexander's contribution of a pattern language builds on existing knowledge and uses an open-ended and self-organizing mechanism to collectively extend this knowledge.

2.3 DESIGN AFTER DESIGN

In other disciplines, such as in Information Technology or in Social Sciences, the management of complexity appears likely to be resolved by the users themselves, by embracing several models of collective processes, such as open source, p2p, crowdsourcing, etc., which promote a kind of sharing that is much more direct to the end user. Although the models mentioned above cannot be directly applied in the discipline of architecture and urban design, there are nevertheless some theoretical approaches that take into consideration several principles of the aforementioned models. Towards this direction is Björgvinsson's et al. (2012) research, which indeed gives great emphasis to the end user and their capacity for acting as future designers. Specifically, Björgvinsson, et al., take a step further towards an 'infrastructuring' process and argue about 'design after design' as a contemporary form of collective processes in contrast to 'use before actual use'. They argue that a new challenge is presented in designing "beyond the specific project and toward future stakeholders as designers".

All the aforementioned design approaches, make obvious the fact that despite the perseverance of a design process which is much focused on the end-product of the design, the process of moving from the initial framing of the problem to the final end-product, whether it is the final proposal or even its implementation, is equally important and undoubtedly more challenging to comprehend, criticize, map or reuse as a methodology of a process.

2.4 THE NEED FOR INTERESSEMENTS

Participatory design has basically emerged from the need for the democratization of design, manifested in some cases as a process in which all affected actors should have the right to be involved in the design. Apparently, in such cases controversy is an anticipated outcome of the design process that affects the

[1] Alexander named them natural cities
[2] Alexander named them artificial cities

consensual result. Star Leigh & Griesemer (1989) state about what is mentioned above that consensus is not always required in order to successfully complete a cooperative work; thus, they argue that the creation of both new scientific knowledge and of new solutions to the problems faced each time, depends on the communication of the different actors involved and on the understanding of the different problems that emerge from several social situations. Since these potential new findings, whether they are objects or methods have a different meaning for each of the actors involved in the design process, these actors would have to get involved in continuous negotiations, debates, etc. in order for the process to move on. In a similar way and in an attempt to conceptualize participatory design, Ehn (1988) refers to Wittgenstein, an Austrian-British philosopher and to his language-game philosophy. Wittgenstein (1958) suggests that language is inseparable from the everyday actions of life and argues that there are several forms of language (language games), which may be simpler than the entirety of a language itself but are nevertheless interwoven in the everyday activities of life. Ehn argues that while design can be understood as a significant participation "in intertwined language-games of design and use" (Bjögvinsson et al., 2012), for example between professional designers and users, design artefacts such as models, mock-ups, etc., can act as 'boundary objects' that can bind these different language-games together. Boundary objects are "both adaptable to different viewpoints and robust enough to maintain identity across them" (Star Leigh & Griesemer, 1989). The importance of these boundary objects is also considered in Buchanan's (1985) 'Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice', where the product of design plays a very important role regarding communication as rhetoric and argument regarding the communication between the designer of a product and its user. According to this argument, Buchanan mentions that "the designer, instead of simply making an object or a thing, is actually creating a persuasive argument that comes to life whenever a user considers or uses a product as a means to some end." (pp. 8-9).

In the same manner and adding to this argument, Callon (1986) argues that in order to establish scientific authority, scientists recruit 'allies' both human and non-human, after which they try to understand their allies' needs, and finally they connect these needs with their own goals establishing through the allies a mediating structure, of 'obligatory points of passage', concerning the different interests of the involved actors. The actions and devices incorporated for the success of the goals mentioned above, namely the translation of the non-scientific concerns into scientific, was named 'interessement' (1986). By this, as the etymology of the word 'inter-esse' implies, to be in-between, to be interposed, is achieved by the use of mediating devices. These mediating devices in fact relate to what Bjögvinsson (2012) also calls 'material presenters', that is the representations for the evolving object of design and the means for co-ordinating the different resources associated to the project; Bjögvinsson characteristically mentions: "We might also view these "presenters" as boundary objects in participatory design Things" (p. 106), which exemplifies their role as prototypical mechanisms for both the evolution of the design process and the design product.

By considering a design project not only as a series of consecutive stages of design, but mainly as collectives of human and non-human actors (Latour, 2007), we may also consider and focus on several inquiries concerning their possible relations. In that sense, a design project can be considered as a socio-material Thing (Bjögvinsson et al., 2012), where several boundary objects are necessary in order to align the different resources that relate to it, such as project briefs, sketches, drawings, buildings, project reports, users, engineers, architects, designers, developers, politicians, administration, researchers, and other stakeholders. But when can a project be considered a prototype, capable enough of being applied in different urban situations?

2.5 PROTOTYPES AS INTERESSEMENTS

Prototyping has always been an integral part of human history; nevertheless the recent differentiation of the functional system of science and art in addition to the differentiation of experts and lay people has led to the obscuring of current forms of prototyping (Guggenheim, 2010). The French anthropologist and ethnologist Lévi-Strauss, used the term 'bricolage' and 'bricoleur' to refer respectively to the processes of 'prior' science and to the person who still "works with his hands and uses devious means compared to those of a craftsman" (1966, p. 11). Nevertheless, by referring to the savage mind Lévi-Strauss actually describes not the thought of primitive people but the primitive foundation of thought, the process that explains the transition from nature to civilization (Scalbert, 2011). What is important to note is that the process of bricolage, regardless of it having a 'pre-constrained' set of tools and materials, remains open-

ended due to the fact that what were the ends in previous projects become the means to another end in the next.

As mentioned beforehand, Alexander believes that dwellers and dwelling should be heavily interdependent, which means that methods of making cannot be disconnected from the act of making. This, which is a significant aspect of a bricoleur, is also evident in the case of Habraken who emphasizes through his theoretical work his position that construction should not be seen as an end by itself but as a means to an end, thus giving prominence specifically to the direct and inseparable relation of the end product to the process. Indeed, what both Habraken and Alexander discuss is the loss of an inherent common understanding among the architects, which previously used to enable them to improve and transform the built environment and sustain environmental consistency. Both Alexander and Habraken refer to the role of the prototype from a 'Straussian' and 'Latourian' (2011) perspective, where prototyping can be perceived as an experimental design means that may lead to the production of knowledge -that is not at our disposal yet, not in the sense of a lab's experimental output but as a process of collective participation. The latter is also evident in the way other disciplines appreciate the role of the prototype; indeed the great importance and prominence that prototypes have gained in our time is mainly attributed to the development of free and open source software, whose release of the work-in-progress versions (beta) is a tactic used by software developers who seek for feedback and possible contributions of others for the improvement of their 'beta'. Consequently, emphasizing the cultural importance and social coherence of prototyping, Jiménez (2013) argues that "whereas the open-endedness and haziness of the experimental is oriented towards the production of epistemic things, the work of prototyping employs such openendedness to deliberate political effect" (p. 7), enabling the prototype to work both as an epistemic object and as a critical tool. Additionally, Jiménez (2013) argues that the prototype reflects possibility and expectation, both expressed at the same time as material and social form.

3 A CASE OF OPEN-ENDED APPROACH

In order to test the relation of the prototype to the open-endedness in urban design approaches, a specific urban site has been selected as a case study. The selected case study is the winning project of Europan 9 competition from a Spanish team for the city of Selb, Germany. The 'Catalogue for Dwelling on the Time' project was selected by the author because it clearly demonstrated a design approach that not only called for collaborative practices but most importantly set those as a prerequisite for the design process and furthermore promoted design concepts that according to the author seek for an open-ended design approach.

3.1 THE URBAN SITUATION

Selb, a small German town[1] in East Germany, took part in Europan 9 session seeking a radical approach to the problems that it was facing, including demographic decline, aging population, and decrease in industrial activities among others. These problems were primarily due to the crisis in industry that the local economy was based on (Fuente Martínez, Gutiérrez Sánchez, Fidalgo, & Ozaeta, 2008).

3.2 THE PROPOSAL'S RESPONSE: THE CONCEPT OF STRIPS AS INTERESSEMENT

Taking into consideration the aforementioned problems of the city, the managing director of the Building Department of the city of Selb which was also the site's representative in the competition, states[2] that in a town that is diminishing, it is the most important thing to pay attention to quality and for him entering in an architectural competition was a means to get the best ideas for implementation. He nevertheless, mentions

[1] Selb is a town in Upper Franconia, in north-east Bavaria, standing on the border with the former East Germany and with the Czech Republic. Selb grew through its single industry structure, of porcelain industry, that made it world-famous and led to the rapid growth of its population. This condition started to decline after the crisis in the porcelain industry in the mid-1990s and as a result many people moved away to find jobs in other cities. Today Selb's remaining residents consist mainly of older people.

[2] In an interview conducted by the author

that Selb's expectations from Europan were limited to a gain of a collection of ideas on their problems but certainly did not expect anything more than that.

Surprisingly for the site's representatives, the incorporation of Selb's participating site under a specific thematic of Europan[1], under which another 10 European cities were also incorporated, and the simultaneous comparative analysis of their problems, aimed at exposing Selb's local problems to a European major matter of concern, that of the cities' need for intensification. Surprise also for the site's representatives was the winning project's concept; according to the designers of the project 'Catalogue for Dwelling on the Time', the user's way of life, dwelling, as well as any everyday mundane situation, can obtain flexibility through small add-ons (programmatic strips) that can reprogram space and add value to what already exists there. Thus, through a typo-programmatical plug in module, they proposed a flexible and feasible means (in terms of scale, budget, etc.) for testing the impact of the addition to the existing situation in the near future. More specifically, the proposal opposed the creation of a definite masterplan to be imposed on the area by suggesting a system of interconnected strips, which can be arranged in different ways and still be part of the larger system (e.g., city). Further to its application regarding flexibility in space and time, this generative system was also meant to become a powerful tool to initiate debates across the different stakeholders since it could easily represent in a tangible way -kind of a 'game'- the different possibilities that can be generated. The latter, in conjunction with the ease of rearranging the set of strips that will be needed for each intervention, preserves the morphological identity of the whole city and at the same time provides users and stakeholders with a design tool that can be flexible in time, supporting 'design after design' as well as other means which can be shaped by collective decisions.

3.2.1 PROVIDING AN INFRASTRUCTURAL LOGIC

According to the architects of the project, the robustness of their plan allowed for maximum flexibility during the implementation stage. Specifically, whilst the competition proposal was dealing with the negative demographic trends of a shrinking city focusing on elderly people (healing acupuncture therapy), the implemented strategy focused on the lower part of the demographic pyramid namely children and young people (preventing acupuncture therapy). The architects of the project claim that this change was easily adapted in their proposal which exhibits the flexibility of the architects' design approach to switch from a reactive to a proactive strategy by integrating the emergent. Furthermore, the architects add that even though their tool of strips was originally destined for a residential addition, it was easily adapted to the emergent needs of a new program focused on youth (youth hostel and kindergarten). A member of the competition's jury (Metz) argues that the project acted as an intelligent mechanism that proposed a process instead of an object that could be easily applied and adapted, with slight adjustments, to other similar situations.

3.2.2 ESTABLISHING A COMMON LANGUAGE AMONG DIFFERENT ACTORS

Additionally, their system of strips not only could adapt to different architectural programs, but it could also be flexible enough to integrate several actors in the design process. The architects of 'Catalogue for Dwelling on the Time' argue, what is also confirmed by other actors involved in the implementation stage, that their idea of the strip system, turned into a really powerful tool in terms of communication among different cultures or languages because it served as a technical, structural and even topological language among people. The concept was flexible enough to also involve users in the design process; the city Architect of Selb clarifies that user participation would not be possible in earlier stages of the project (e.g., brief), giving emphasis to the role of the submitted project as argument in a negotiating process. Indeed, the concept of strips, which acted as an ally for the development of the project, has been the most important asset of the 'Catalogue for Dwelling on the Time' project; the fact that this system was clear and simple to follow and construct had a major effect on the project's appropriation and implementation.

[1] 'Local Mutations – Intensifying'

3.2.3 PROPOSING LEVELS OF RESPONSIBILITY & APPLICABILITY

The flexibility of the project 'Catalogue for Dwelling on the Time' that was organized on the idea of the strips, was also based very much on the ability of the project's parametricism; the strips were codified in accordance to parameters such as space, section, use, colors, materials etc. Specifically, the architects stress that the significance of their project was that they developed a parametric system that could work on a very small scale as an acupunctural tactic (e.g. additional private space, shared spaces & facilities etc.), as well as on a larger scale of a master planning (e.g., connections between public & privates spaces, continuous facades on the public street etc.) without making any compromise on its initial concept. The latter reveals that even though the concept of the strips focuses primarily on the local problems of the city and particularly on the small scale of the city's block, the project did not only suggest a specific solution applicable to the given problems of Selb. In fact, the project can adapt to several levels of intervention and assign different responsibilities to the actors involved in urban design.

3.3 THE HUMAN INTERESSEMENTS

The 'Catalogue for Dwelling on the Time' uses the concept of strips as an interessement to connect the different actors involved in the project. Nevertheless, it is also a project that owes its realization to the actions of specific human actors as well.

i. the local administration body & the political decision makers - More specifically, a jury member (Metz) states[1] that for the city of Selb one of the main factors of success was the involvement of the city Architect in the project and the fact that 'SelbWERK' the local housing company carried out the work of a planning office. The architects also highlight the catalytic role of the city Architect for the implementation of their project. Indeed, the city Architect of Selb (Resch) was so much convinced about the potentials of the project's concept that became himself an interessement between the winning project and the political decision makers. He (Resch) points out an important matter that is the political interests often create an unstable environment for the projects' development and therefore it is sometimes necessary to convince more than one government for the merits of a project. Specifically, he refers to the way of communicating the project's financial matters to the stakeholders who are active in the political arena or have a strong connection with political decisions. Indeed, the city Architect's (Resch) tactic to use the article in the Spanish journal AV Architectura as a non-human 'ally' helped him to initiate the implementation process; not only did the journal act as an ally for the implementation of the project but also all later publications acted in the same manner. In fact, more than 34 national and international publications in books, journals and architectural magazines and more than 18 articles in local press, mentioning the 'Catalogue for Dwelling on the Time' project, were retrieved for the scope of this study.

ii. the Govermental bodies - Another significant actor was the governmental agents that played an important role by offering essential support to the project. Usually, these kinds of agents are responsible for providing subsidies that may prove crucial for the implementation of the project. However, in Selb's case it appears that the governmental bodies did not only offer financial support but were also actively involved from the beginning in the project's process. Indeed, the governmental representatives participated in Europan forums, juries and other Europan session processes. The architects not only confirm the presence of the governmental bodies during the competition's processes but also highlight that they worked together with them as a team.

iii. iii. the architects - Finally, an important catalyst responsible for the implementation of the project was the architects themselves. One of the winning project's architects (Fidalgo) states[2] their team's role as mediators of the negotiation process for their open-ended project in Selb. Another one of the architects (De la Fuente) also argues that the team was able to create a hybrid situation between the eagerness to implement their 'not yet tested' ideas and the experience of their local partners. Moreover, both architects comment on their success in blending the more improvised approach of a southern culture (Spain) and the more standardized approach of a northern culture (Germany). Specifically, the workshop which is organized by the cities after the announcement of the competition's results acted as an interessement for the architects, since it

[1] In an interview conducted by the author
[2] In an interview conducted by the author

support them in a negotiated process among themselves, the city and even the users of the place.

4 CONCLUSIONS

Returning to the processual property of open-ended approaches, a first important finding that comes out of this paper is that in order for the actors involved in a design process to develop or maintain relations towards an open-ended process, they need mediating devices, which are used both as representations for the evolving object of design and as means for aligning the different resources of a project; these mediating devices are defined as 'interessements' (Callon, 1986), 'boundary objects' (Star Leigh & Griesemer, 1989), or 'material presenters' (Bjögvinsson et al., 2012). Indeed, the project 'Catalogue for Dwelling on the Time' provided a tool that both in a processual manner and in terms of its representational techniques leaves space for personal interpretations in a way that could easily be adopted and appropriated by different stakeholders that do not necessarily come from the architectural and construction domain. An interrelated second finding is that a mediating device that supports open-ended processes can be considered as 'prototype' and can consequently support the process of 'prototyping'. Actually, the project 'Catalogue for Dwelling on the Time' can be considered as prototype because it succeeded in producing knowledge that was not yet at our disposal and managed to work both as an epistemic object, on which knowledge collectively and methodically builds and as a critical tool, by which innovation occurs in the design process. In fact, the project managed to constitute a prototype for a number of different reasons; firstly it succeeded in gaining the trust of the city of Selb and in convincing the involved stakeholders that it was worth their support, regardless of the many difficulties[1]. Secondly, for its applicability on a wide range of urban situations, different programmatic needs or scales and this can be seen on several instances in the city (e.g., kindergarten, youth hostel). Thirdly, for its cognitive outcomes by opening up the established way of planning the city and furthermore for educating the inhabitants on the built environment, as the specific project proposes a design process as well as a way of life that are quite different from what the large developments and the market currently offer. Finally, it became an important case model for the Europan competition whose successful implementation and 'good practice' has been presented through several international publications and awards. On these grounds, it is revealed that the concept of the strips' system entails a prototype for an open-ended design approach, flexible enough to adopt or integrate the idea of the emergent as a creative element of the design approach.

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[1] A small city without great financial capacity, foreigners, non-German speaking architects, having little professional experience.

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ID 1721 | GLOBAL SOUTH PLANNING: FROM WAR TO WARS

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1 INTRODUCTION

Not because of the various number of armed conflicts that are happening in Brazil related to landdistribution, indigenous rights, social justice or many others issues, nor because European refugees, financialand democratic crisis nor because USA intervention on Middle East and north american racial struggles thatcreated the Black Lives Matters Movement nor because another similar issues in countries around the world,nor even because protests in city streets in Cairo, Athens, Madrid, etc since 2008 financial crisis; war is thepolitics that became the paradigm of internal and external relations by nation states around the globe becausewar is a modus operandi that always has been used as a politic since the beginning of the foundations of thesevery own nations and states. Disguised and/or underestimated by media and even theorical and politicalthought as just “conflicts”, what is visible is that a war keeps continuing as the exercise of politics. And whenthis concept of war and politics is thought in an urban planning context, it serves to maintain the politicaldimension of everyday life impenetrable to disruptive and constitutional forces.

But if war is thought not as a colonization force as it is considered in history produced insideEurope and from Europe to the rest the world, the perspective changes and the ideia of war and how it canbe a disruptive force to the creation of life arises. In a Global South context characterized by the emergenceof others forms of experience the world, narrate the world and produce even new worlds like

Brazilianan thropologist Eduardo Viveiros de Castro discusses when asked about the relationship between nature andculture, a decolonizing energy surges and open imaginaries regarding war as a positive and immanent force oflife. Understanding the conflicts, collectives and multitudes forces through the prism of war and disputedspace in 2008-2016 conflicts, occupations and manifestations in Middle East, Spain and specially in Brazil,and relating it to historical urban uprisings, modes of organization in a economical and political sphere andaesthetical affects, a war engaged and capable of create new forms of urban planning, one between topbottomand bottom-up perspectives, surges. In this paper, after a discussion on how western thought thinkswar as a political paradigm, it will be presented how the french anthropologist Pierre Clastres interpretations of conflict and wars in Amerindian societies will be used to open that perspective about war as a vital force to renew and create new people, producing new spatialities and a specific manner to think and act, serving as basis to an urban planning interest in produce difference and multiply worlds.

2 WAR AND POLITICS: CONTEXTS

In political studies, the theme of war gained central place on discussion since at the seventies theFrench philosopher Michel Foucault brought back the axiom of General Carl Von Clausewitz made in XIXthcentury and put it in the political arena: the war is the continuation of politics by others means(CLAUSEWITZ, 2014).

If Clausewitz discuss the relationship between war and politics in a rapid manner in his work OnWar, it is not coincidence. For him war is another state of things, opposed to Politics. It has consequences onpolitics but it is not related to it in an intense and imbrincated manner. War in the Nineteenth century wasnot a political force, but an option that wipe out politics. In a century where new lands are not just discoveredbut colonized as well, and Nation States were created by unification disregarding race or ethnics questions,war is an instrument of conquer and pacification to install politics, inside and outside, transformingeverything in inside.

Foucault brought the theme of War back due its relation to another key concept in his discoursethat is Power. To the French philosopher, it is the inverse: Politics is the continuation of war by othersmeans. And when he said that, it is not metaphor or a connection that has no ties. Continuation because thenationalists wars – 1st and 2nd world war among other colonizing ones – unfold themselves into bureaucracyand institutionalization. So, politics is the continuation of war because war is reshaped and reintroduced intoState as politics. Power is exercised by the state as politics and war in a complex and intrincated manner.

Two courses given in College de France transformed into books – Society must be defended (1997)and Security, Territory and Population (2007) – affirms the intense relation between Power, Force andRationality. War is appropriated by the State and transformed into politics by rationality (biopower), bymanagement of risks, by the introduction of population as a key concept to understand the masses andterritory.

From the politics of silence – biopower and disciplinary power – to the politics of noise – usingpolice as an instrument of coercion – what Foucault realized was the state transform the sensibility employedin war in a disorganized, violent, caotic and, specially, visible manner, producing traumas and psychologicaltraces of anxiety into a rationalized machine of indifference and boredom.

It is not new such assertions by Foucault if we look back to Kracauer, Benjamin or many otherwritings regarding the relationship between the city and the sensitivity produced in its dwellers. But what isnew it is Foucault desire to expose from the state point of view how the war is produced and how the statecreated its own form of politics from war. Moreover, what the French philosopher presents to political and social studies is an intelligibility scheme of how state politics is exercised in an everyday life but according to a war agenda.

If war is a key concept to understand the colonization of bodies and the formation of stateapparatus, such concept is used in countries and cities all over the world. It is not a political frame that wasused only in colonization periods or in a certain time, but that is continued used creating centers and anhegemonical thread in all urbanized territory.

Anderson (2006) in his 1983 book Imagined Communities, when analyzing how European countriesduring colonization of countries in South Asia implanted the idea of nationality, despite read or not Foucault,impressively used a very similar foucaultian approach to understand how war became politics. In order toconquer territories (to absorb them and create one nation), destroy singularities (or the adversary,transforming it into national diversity) and erase a prior history – all main objectives of any war – the englishauthor analyse how three mechanisms created a basis for political institutions on Modernity and colonizationof theses territories as well. A basis that builds up new images of itself, a colonized itself. Using the MAPS,the MUSEUM and CENSUS as state mechanisms of produced a nation, what Anderson showed is how it isformed images of a nation and its border, its history, its people. And that images and imaginaries constructedin that period were destroyed in a very minimum scale and reorganized in a very and disproportional largescale beginning in 2008.

Despite Anderson use such apparatus to discuss colonization methods in colonizing times, it is surethat this same frame is used inside central countries. It is not a question of which country was colonized byanother one, but a political geography that creates centers and peripheries inside and outside itself.

3 2008-2016

The relation between politics and war gains visibility and is brought back to the central discussion after the end of Cold War in the new century after a peace period.

After 1989, all urban and not urban conflicts (a softer word to describe a War) disappeared of theNews. Such peace is celebrated as the end of conflicts but it is the end of politics as well, since Socialism lostas an alternative to Capitalism. All questions and wars caused by ethnic differences, or due ideologicalcolonization or pure colonization are indifferent to the occidental peace of mind, and specially to the LiberalAgenda that takes over. Rather than peace, it was and it has been a repression state, like Foucault arguesabout the Disciplinary Power in Modernity,But since 2000 with the emergence of a new cycle of global struggles against globalization initiatingin Seattle, such war gained another dimension. And the disruptive power liberated since 2008 with thefinancial crisis and its diverse and at the same time, similar, consequences to nations, people and the idea ofstate. It is not like before such struggle cycles never existed. They did in almost every country. What isdifferent is that it has never been so worldly connected, exposing similarities.

Since 2008, in Spain, Egypt, Brazil and other countries and cities around the world, the paradigmof Capitalism as the only logical possibility of live since socialism fail is redimensioned. Protests in city streetsput in discussion not only economical and financial management of 2008 crisis, but the western democraticmodern political system and a mode of social life. Protests against dictatorship in Egypt, against austeritymanagement in Spain and Greece, against democratic representation in all cities gained visibility in socialnetworks and then, in streets, live. The unifying MAPS of a united world based in the idea of humanity wheredestroyed by dissensus and the remembrance of what French-argelian philosopher Jacques Derrida stated asthe not-human. The MUSEUM that points out history always as a movement ahead like an arrow, promisingdevelopment and growth to all, curved that same arrow to affirms the history as repetition. The pretensiousindifference among individuals certified in CENSUS were erased by the diversity of people that went to thestreets, putting in check identities and old forms of understand population, masses and specially the people.

In Brazil, such protests were impulsionated by the realization of Confederation Cup in 2013 in atime when a new progressist economical cycle that started in 2003 and continued until 2013 by Lula andDilma presidency collapsed. Violent collisions between multitudinary forces and police due 20 centsregarding bus transportation ticket transformed into a questioning about democracy, corruption and othersthemes regarding a new image of what is Brazil, putting in question the Brazil and its unity into discussion.During the month of June of 2013, initially the streets of Brazil biggest city, São Paulo wereinvaded by people mobilized by Social Movements like MPL (Movimento Passe Livre) in order to reclaim thecancellation of the 20 cents raise of tickets transportation. With the negative response by the mayor andgovernment of the city and state, the pressure on streets just raised and became a movement not just relatedto ticket transportation. People from others places of the city gather around, first, due the tickets issues, andthen others agendas like corruption, environment, economical discontent and many others.

From this first multitudinal invasion of public space in june, another big and medium cities likeCampinas, Belo Horizonte and Rio de Janeiro, for example, had their streets occupied too. Using cardboardswith phrases regarding a serious question related to political issues, people invaded representatives spaces likeBelo Horizonte Town Hall, occupied streets near houses of mayor, like in Rio de Janeiro. And beyond June,four months later, garbage collectors of Rio de Janeiro went on a strike, against the mayor and syndicateadvices and threats (MARICATO et al, 2013).

But more than the occupation itself, what was been inaugurated by theses social movements not just on Brazil but around the globe is the opening and remembrance of new ways of doing politics.

4 POLITICS AND POLITICAL = MOVEMENT AND POSITION: MOUFFE AND GRAMSCI TO LEFEBVRE

The belgian political scientist Chantal Mouffe makes a distinction between politics and political thatis very necessary for the present argument. To her, politics "(…)would be characterized by a set of practicesand discourses that seek, on an institutional level, to establish a certain order and organize human coexistence (MOUFFE 2005)" This means that politics tends to maintain a certain consensus produced in a contincencycontext by the state. Politics is a constituent exercise. Politics is an exercise performed by representatives inspaces of representation like congresses, presidents, law makers and others. The political is not related withrepresentations, but with direct action. The political emerges to put in discussion such representations andtheir limits through appropriation and use directly in space. The democratic paradox is that politics andpolitical are not contradictory terms, in which one (politics) excludes another (political), but paradoxicalbecause they are exercised together and the relationship between protests on streets and the necessity ofoccupy by agreements and arrengements prove that.

The potential constituent power of the political is the desire to be a new kind of politics: the powercapable to produce a context in which arrangements and agreements are made in order to stablish a(re)newed hegemony based in less representation and more direct action. The power to not only dismantle ordeconstruct models and forms of state organization, but to create new social, political, cultural andeconomical forms of produce collectivities and to discuss dissent. Dissent here is the key word: democracy asan exercise of many others.

The French philosopher Jacques Ranciére already discussed the question of dissent in terms verysimilar to Mouffe (1996), but in his book dedicated to democracy entitled Hatred of Democracy (2006) hediscuss the model of democracy created in Greek society. The etymology of the word democracy is"government – cracy" of the "demon – people". So, democracy was born by the desire of give freedom tothe people and not to the elected by the people. The election is a lottery process which anyone can be chosento be elected. That kind of voting mechanism had the objective to keep politics an activity performed by nonprofessionals,which it guaranteed that the elected would do what people command and not what they thinkis the best. The power is not in the representation but in the people that elect such representation. Despitenowadays in which congress man have their own agenda, these representation in greek terms accordingRanciere means that their agenda should be formed in assemblies and encounters with the people who vote.

Despite this lottery methodology, what is at stake in demo-cracy is the possibility of the people rulethe society through public assemblies and encounters. It is a democracy that is based in a very shortinstitutional distance between the people and their representantive and the fact that the very own democraticexercise is made not just by representation, but by direct action either.

Antonio Gramsci, Italian political scientist makes an interesting approach between war and politics/ political using the concepts of war of movement and war of position. Using the context of politicalstruggles in Russia pre-1917 and post-1917 revolution, Gramsci tries to explain such revolution using thesetwo concepts. The revolution, the struggle with firearms, the civil war he called war of movement(LIGUORI, VOZA, 2017) . So, this is the exercise of the political: the dispute to act, to have power to act. Itis a struggle against old forms of regime and it is characterized by the fact that it is a passage from one modeof production to another. The war of position is another political struggle. If the first is to take state power,the second is once the state power was taken, it is the struggle to create and exercise democratic

forms ofbuild a new democratic state (LIGUORI, VOZA, 2017). Such passage from movement to position is the very own relation between poltical to politics. They are two phases of the same movement: from the status quo to the protest and then, to the invention of a new manner to produce social relations in the production of space.

The French philosopher Henri Lefebvre in 1973 wrote an underestimated book that is central tounderstand a passage from politics to political and to politics again: The Survival of Capitalism. That book, thatpreceded The Production of Space, is central because it brings to the discussion the relation between theproduction of space and the political / politics question. According to the author, everyday life is the spherewhere politics and the status quo are reinforced and reproduced endlessly. It is that cycle that makes possibleto capitalism understood as a political, social, cultural and economical system to reproduce itself. But it is thepolitical – and having in mind that this book was written after may of 1968, where French students went tostreet to reclaim a more meaningful life and strikes happened all over France, organized by French factoryworkers – that makes possible to envision new forms of space, new forms of produce social relations ofspace production (LEFEBVRE, 1976). If the space and its social content are inseperable (LEFEBVRE,1991), the political puts a war movement inside the very own core of capitalism.

5 STASIS, THE POLITICAL AND A OTHER WAR

Giorgio Agamben – reader of Michel Foucault – in Stasis. Civil War as a Political Paradigm discussesthe relationship between civil war and citizenship in ancient greek society. Citzenship is not a sentiment or alegal document that attests nationality. Citzenship is action, it is the individual that discusses and act thinkingabout the common good of the society, of what is public, instead of keeping at its individual residence.

Citzenship relates to a responsibility regarding the public and the exercise of the Mouffe`s political. It is a warof movements. “Not taking part in the civil war amounts to being expelled from the polis and confined to theoikos, to lose citizenship by being reduced to the unpolitical condition of a private person” (AGAMBEN,2015, 13).

So, to the Italian philosopher, between the family (more of the same, oikós) and the city (the others,polis), what is formed is a movement between politics and political. And that movement of differentiation isthe war: “(…)politics as a field of forces (…) civil war marks the threshold through which the unpolitical inpoliticized and the political is ‘economised” (AGAMBEN, 2015, 17).

When a multitude of people invades the streets declaring war against state and its modus operandi,what is in dispute is the manners of how the state controls, manage, regulates and dominates population. InBrazil in 2013, when people went to the streets demanding the annulment of the 20 cents raise of tickettransportation, they were defying bus companies, transportation secretary BHTRANS, Townhall, democraticelected representatives. They were discussing an entire political, economical and social system. But it is notjust a war of movement. There is inside such war a constituent component. However, such war seems tochange from one hegemonic context to another.

In an urban planning sphere, such citizenship movements are autonomous cells that produce anddiscuss their own strategies and taticals regarding urban planning. As SOUZA (2006) states, urban planning is not a exclusive activity of any power, specially the State. Organized groups and social movements that occupystreets or empty buildings, for example, make their own urban planning. Urban planning is not a exclusiveactivity of the State, although the State has the power to make it in a more complex and broader scope. Thismeans that this others social-spatial actors acts as urban planners, but they are not interested in constitute acentral power. They battle for spaces, for representation, for inches in streets but they are not interested inreplace the state. So, they are another kind of war.

6 THE AMERINDIAN WAR AND THE MULTITUDE: FRACTALIZATION OF URBAN PLANNING

The French anthropologist Pierre Clastres gives images of what war can produce in terms of life.While he was studying ameridian societies in Latin America, they noticed that the traces of violencerepeatedly considered by others anthropologists as a traces of primitivism and savagery were not that at all.Putting into scrutiny anthropological analysis of the violence of theses societies, he realized thatthey were always considered as traces of peoples who are not capable of live together. Even more, theviolence were considered as a distinctive trace of a immanent incapacity to be civilized (naturalist discourse),or result of the fight among tribes for the resources in nature (economist discourse), or as a intrinsic part ofcommercial activities that can not be resolved in a pacific manner (commercial discourse) (CLASTRES,2011).

Instead of viewing such violence as a trace of anti-social behavior because different from the whiteman manners, he saw as a trace of a very specific social relationship. He understood that such behavior wasnot anti-social, but the amerindian societies manner to maintain a sociability. Violence is a sociabilitymediation between themselves (CLASTRES, 2011).

The war among tribes was a sociological mechanism, according Clastres, to maintain an identitythrough a differentiation from the others. Indigenous from different places fight in order to differentiatethemselves from the other tribes. Violence is a mechanism that prevent one to became the other. Tribesmake agreements and alliances that lasts just until it is necessary. They are not made to last because if onetribes gets to close to another, a tendency to fusion has to be denied and it is done by war. Delleuze andGuattari understanding of war machines as a productivity movement of differentiation (2004) came fromClastres perception of Amerindian societies.

If the western war is a war to dominate and eliminate the adversary in order to conquer the otherand anulate him as such, the Amerindian war is a sociological mechanism that guarantees difference. It is notinteresting to eliminate the other because it is its existence that affirms itself.

When we transfer such diverse rationality to the description of social movements, urban planning,participation and so on, it seems disconnected from western reality. However the protests from 2008 untilnow are all manifestations against homogenization, against the prevalence of the idea of one nation, onepeople, one identity. Such protest and the movements created due it are formation and affirmation of new identities – economical, cultural, gender and/or social ones. The Amerindian war is a war against the one infavor of the many, so the protest.

One can say that good practices of urban planning are agreements made among many socio-spatialagents – alliance – regarding an issue and not the disagreement or a war. But what was the positive anddisrupt force that came from the protest if not a desire to agree that everybody disagree. On many streetsaround the globe, there was not a phrase or a word that could resume all the reinvindications made by thepeople. The words were many, so the people were many.

And after the disruptive force liberated on streets, what followed were alliances among newpolitical forces and social movements together with the hope of many voters: in Spain, municipalistcandidatures to cities town hall incredulously won the election; in Greece, Syryza reached the presidency; isIsland, the people voted against austerity and in favor of a new constitution that limits the market forces(CAVA, BELTRAN, 2015). But others multiplicities arised too: in Brazil, the movements presented in 2013'sstreets of the big and medium cities transformed into new movements (Free Pass Movement in São Paulo arenow in others cities, for example), occupations broke out all over brazilian schools, citizens movementsdisputing city elections. A hole new panorama never seen in Brazil emerged – to the left and to the right –and are repeating old forms of make politics instead of the political.

7 A PROPOSAL: GLOBAL SOUTH PLANNING

It has been presented here two kinds of war: one that is related to the dispute of the culturalhegemony and other, related to the production of new forms of life endlessly. A Global South Planning thatis discussed here is not just a strategy or a tactical manner to absorb minorities and transform them into anew majority. And it is not just the understanding of war processes inside the society as a dispute over theproduction of

a new or renewed hegemony. It is not a question of dispute the State and its hegemonicalpower, but to dispute the power to act despite the state, with the State or against the State.

Such Global South urban planning should consider that are other ways of doing politics andexercise power, considering the political as an instance of negotiation and alliances that does not reducemultitude to the will of occupy the State. It does not mean the occupy the State is not an objective: it is. Butoccupy it should not mean just to replace one group for another. The question is how to occupy the Stateand organize it in such a manner in which others forms of democracy can appear not as adversaries, but asother kinds of Urban Planning. It means reduce the power of the State in order to give it to the people. It isto occupy the State not to make it into a liberal one, but reinforce it by making it more anarchic It isnecessary to give force to the State in order to be repassed to people.

So, the theme of war, when discussed not as an extent of politics as Foucault read it, but of political, opens possibilities of emergence of new strategies of planning and manage social spaces.

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ID 1738 | PLANNING THEORY, A 'DECONSTRUCTIONIST-TURN': ARE WE THERE YET?

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1 INTRODUCTION

Deconstruction' is the attractive Derridean project, which he describes as 'the opening of the future itself…'. Deconstruction destabilizes inherited concepts and traditions, towards '…what remains to be thought …[that]… cannot be thought within the present'. Interestingly, it has established an 'awkward' interaction with the city design and planning through architecture theory and practice. It has simultaneously flirted with planning theory in reflection to the institution: 'dark side' of practice and the design-process: the planning model (see Allmendigerand Gunder 2005). However, it remained on the periphery of the developed debate.

But, like the question raised in architecture, 'what is there to deconstruct in Planning?'

Deconstruction is not a method, a critique, an analysis or a reading; there are no steps, rules or criteria to be applied to a content: theory, practice, institution etc. It essentially works from inside the content; totally dependent on the nature of this content (planning theory), author/ reader (involved actors, planner, citizen, government etc.), and contextual reality embedded in time. Deconstruction thus literally, turn things –a theory, interpretation, an object–, upside-down or the other way around by searching for a conflict in representation. They identify the structure, the inconsistencies, and the weak and missing points within the content. The content is exposed and deconstructed from inside; i.e. deconstruction hold the potential to allow planning theory deconstruct itself, to destabilize the inherited frameworks and opens the way to new interpretations and traditions.

Are we there yet?

The planning debate is literally going through a turnabout with an unidentified exist. The debate involves the disciplinary knowledge: the role of space/place, geographies and social construction; the design-process/ product: the liberal/ agonistic becoming of the city and involved citizens/ consumers; and the institution of public/ private space and the relational power within. It simultaneously, questions the city author/ reader, the role of the planner, the citizen, the institution. Furthermore, the debate is co-dependent on contextual temporality.

This paper thus explores the development of the planning model drawing on deconstruction strategies. It particularly questions the role of the city author/ reader: planner, citizen and government. This reading aims to destabilize the previous established debate, as a primary step towards a new exist.

2 DECONSTRUCTION

> *'Deconstruction … In French, it has both a grammatical and mechanical meaning. It means both to disarrange the construction of words in a sentence and to disassemble a machine and transport it elsewhere. It also, forms a reflexive verb [se deconstuire] meaning to lose one's own construction' (McQuillan, 2001:1)*

The reading strategies of deconstruction in this paper are based on the 'five strategies' introduced by McQuillan's (2001) in 'deconstruction: a reader'. Firstly, deconstruction is not a method, or a set of rules, applied to interpretation (Lucy, 2004). These reading strategies essentially work from inside the text content. Secondly, deconstruction is totally dependent on the nature of this content. It is also, dependent on the author/ reader as they acknowledge the multiplicities of meaning and truth. Thirdly, this dependence on the content represents a trace of contextual reality and history of both content and context. The fourth strategy, deconstruction of binary oppositions, is referred to by many authors as the stages of deconstruction in general, see (Alvesson & Skoldberg, 2000; Collins et al., 2005). Binary opposition

divides ‘conceptual material’ into a pair of binary terms, e.g. west/ east, masculine/ feminine. These binary pairs are dependent on each other for meaning through ‘difference’: a fixed ‘either/ or’ relation (Collins et al., 2005; McQuillan, 2001). However, these binary pairs are not opposites in reality; they are not equal; the first term is usually ‘privileged’, which is traditionally associated with masculinity (McQuillan, 2001). The deconstruction of this binary thus involves two steps; reversing the binary and displacing the binary oppositions so as not to ‘involve binary logic at all’ through ‘this thing called différance’ (McQuillan, 2001:13, 19). Différance displaces the stable either/ or relation with the dynamic oscillation between neither/ nor and both/ and relations. Accordingly, it deconstructs this hierarchy through the simultaneous presence of two conflicting ideas, thus destabilising the notion of ‘fixed’ meaning and creating potential for alternative interpretations (Alvesson & Skoldberg, 2000). The fifth strategy embraces the margin, which denies the proposed representation and brings the marginal to be the centre. Deconstruction is thus interested in the marginalised set of binary oppositions, which is called the cornerstone. The cornerstone is considered the first stone, which is not at the centre and upon which the whole structure of a representation is built. However, it is defective and that makes it unstable. The reader’s task is thus to find the cornerstone which will readily deconstruct the structure of the proposed representation (McQuillan, 2001). At the same time, the subversion of the hierarchy between centre and margin blurs the peripheries of the content. The centre escapes the boundaries and is thus located both inside and outside the content, which further destabilises the established representations (Derrida, 2001 [1978]; McQuillan, 2001:20).

In summary, deconstruction reading strategies literally, turn things –a theory, interpretation, an object–, upside-down or the other way around by searching for a conflict in representation. They identify the structure, the inconsistencies, and the weak and missing points within the content. The content is exposed and deconstructed from inside. A visual metaphor of deconstruction using a flipping coin is presented in Figure 1. A coin has two faces a head and a tail. The head usually carries an image, a national representation e.g. the queen’s head and the tail carries the coin value e.g. £1. In this figure, a coin with head up is turned over, so the tail is face-up. Simultaneously, head and tail are displaced in a search for a conflict and potential new representation of a coin (Abdelwahab, 2013)

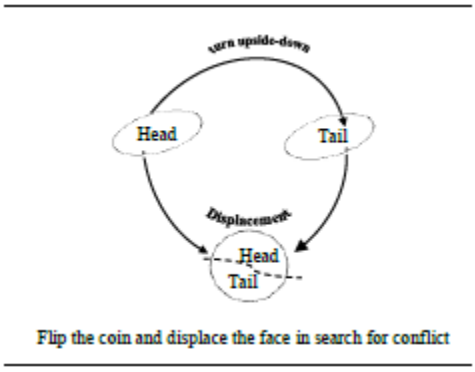

Figure 1 The coin as a metaphor for deconstruction

Subsequently, by reflecting on the deconstruction strategies as a reading event, a number of themes can be identified, which are working in the background of these strategies and which help to relate them together. These themes are represented in three sets.

The first set constitutes:

- A rejection of a transcendental truth which exists outside the discourse
- Reading the discourse as a reality, a representation of reality, and beyond this reality
- A rejection of the obvious or the expected reading (the traditional) which denies the potential differential reading, the unexpected
- Deconstruction is already inscribed inside the discourse
- Deconstruction is ascribed to ‘the experience of the impossible’; the impossible is that which opposes the expected potential, rather than the possible. Deconstruction is impossible in a sense; it is yet to happen unexpectedly, differing from the tradition.

The second set considers the (construction) of the discourse:

- The discourse is inscribed in the context, and vice versa through the concept of ‘trace’, every term holds a trace of the reality, its representation and what is beyond
- The discourse is constructed through sets of binary oppositions,
- Centre/ margin of the discourse which highlights the centre and excludes the margin
- Binary representations are included in the discourse

- The discourse revolves around centre/ margin; while metaphysics considers the centre and its de-centring; deconstruction is more interested in the margin
- Binary opposition representations follow the discourse, reality, representation and beyond reality; metaphysics is concerned with the representation of the reality, 'facts of life'; deconstruction is concerned with binary opposition which metaphysics missed, beyond the reality representation and which is disguised through binary opposition

The third set considers the de.construction of the discourse, embracing the margin, the cornerstone, différance and the trace:

- The centre/ margin hierarchy is deconstructed
- The centre is displaced through the supplement; it escapes the discourse and simultaneously is inscribed inside the discourse to demonstrate the impossibility of its construction
- The margin is displaced through the cornerstone; the defective stone on the margin of the discourse which is responsible for the construction and deconstruction of the discourse
- Deconstructing the discourse binary oppositions through différance and trace
- Différance promotes ambiguity over the well-defined; it implies a continuous change of the binary terms through time and space; once you define a term it changes;
- The trace blurs the boundaries between the binary opposition sets; each a term holds a trace of the other, as well as all the other terms it is not (Abdelwahab, 2010, forthcoming).

> *…My deconstruction can only happen once because it is unique to the singular moment of affirmation, which is the event of my reading…So, my reading (or deconstruction) is nothing more than a matter of placing myself within the operation of the text and being part of that operation (the text's own self-deconstruction) for the singular duration of my reading (McQuillan, 2001:26-7).*

3 MODE(S) OF PLANNING

> *'Derrida (1981, 1997) reminds us that one trouble with Western thought is its propensity to privilege one side of a binary opposition, when in effect most things are not absolutely black or white, but somewhere in between an 'undeciderable' grey' (Allmendiger and Gunder 2005, p.88)*

The reading of the different modes of planning in this paper draws on Walter Schonwandt's book (2008), 'Planning in Crisis? Theoretical Orientations for Architecture and Planning'. I am particularly interested in the concept of 'constructs' introduced in his book that addresses the gap between theory and practice in planning. 'Constructs' thus represents a third term in between the binary 'theory/ practice'. The latter thus dominated the debate on planning as a widely-accepted representation of an inherited conflict. However, the concept of 'constructs' involves another binary beyond the representation of 'theory/ practice'. Schonwandt (2008, p.x) introduces two constructs, 'constructs Of planning' and 'constructs In planning'. The first informs us 'of' 'concepts, propositions, contexts, conceptual core ….descriptions' of planning; whereas the latter informs and directs the process in planning. Constructs are thus 'bearers of our knowledge', 'the conceptual core' of planning that simultaneously 'guide our actions in planning'. Accordingly, the binary 'theory/ practice' in planning is displaced through the concept of 'constructs' of/ in planning. It is worth noting that he rejected the idea of 'ready-made constructs' to be applied to planning, these constructs are rather dependent on the planning context. He thus continues to identify the various aspects of planning through the concept of 'constructs' as: the role of the planner; the public interest – citizen; politicians – governance; power and resources distribution; knowledge and content; and lastly the planning process or procedure for action.

In this instance, the 'obvious representation' of planning through the binary theory/ practice is rejected in favour of the 'other' representation, constructs of/ in planning. Deconstruction is thus questions the new binary, is this binary a cornerstone on the margin that opens-up the planning debate for deconstruction, or is it simply another binary representation at the centre.

'The rational model of planning is the source and inspiration for most of the other models, which are either a modification of the rational model or a reaction to (or against)' (Schonwandt, 2008, p.3)

Furthermore, Schonwandt (2008) introduced seven modes of planning: the rational, the advocacy, neo-marxist, equity, social learning and communicative action, the radical, and the liberalistic model of planning. He thus emphasises the dependency between these models and the rationalist model. This helps to raise the question, is the rationalist model the logo-centre of the planning debate? '…logo-centrism constructs or centres, sense and meaning, around the identity of these terms [binary oppositions] while disguising un-resolvable tension between them' (McQuillan, 2001, p.12). Accordingly, these models represent a series of binary oppositions; where in each the rational model is the privileged term: rational/ advocate; rational/ radical and so on. Significantly, the planning debate has reflected this interest in the rationalist model as a privileged term, for example see (Kunzmann 2014, Mantysalo 2014, Albrechts and Balducci 2014, and Abdelwahab and Serag, 2017).

At the same time, deconstruction is totally dependent on the nature of this content, author/ reader, and context. This dependency thus acknowledges the multiplicities of meaning and truth in this content. Consequently, our argument – deconstruction reading – works from within planning, the rational model logo-centrism, content, author/ reader and context (Abdelwahab and Serag 2017). Significantly, this interest in the 'rational model' reflects an inherited 'tension' between the various involved actors in planning: planner, citizen, and government, involving power relations and resources limitations. We shall thus explore the development of the role of these actors as authors/ readers in planning.

Whose vision is created remains a basic question to be asked?'
(Albrechts and Balducci, 2014: 18, 21).

To start with, in the 'rational planner' is the '… the expert who relies on the objectivity of 'professional expertise' to do what is in the Public's best interest' (Schonwandt, 2008, p.5). They worked directly with the government, and were expected to 'hold' the power to implement their 'rational' designs. Although, they worked on behalf of the citizen; the citizen was 'marginalised' from the planning process. Accordingly, we can recognise the first binary that considered the planners' affiliation towards government/ citizen, and the government is the privileged term. The 'advocate planner' thus turned this affiliation binary upside-down. The planners work for the citizen, offering their expertise, to support the citizen's needs, particularly the 'disadvantaged' groups who lack 'power'. Furthermore, the advocate creates a conflict in the presence of the planning affiliation to the government. The advocate planner works within the government; however, they escape this boundary, and operate from outside to reach out to the citizen. At the same, the planning debate recognised the heterogeneity of groups of interests, 'social, ethical', and so on.

Significantly, the neo-Marxist planner lost their power to become 'a handmaiden' of the government. The planners held a rather 'ambiguous' role as 'mediators' between the different groups of interests. The government/ citizen binary is thus displaced through the government/ planner binary. The 'equity planner' thus re-instated themselves inside the government, to work with 'like-minded' personnel, to approach the 'disadvantaged' groups. The government/ planner's binary was further reinforced through the radical model. Not only the planner stepped outside the government presence, they joined the 'other' side, the citizen groups. The planner thus lost their 'power' of expertise, and re-instated the government/ citizen binary, '… a particular us, who are not them' (Verran, 2001, p.38). The planner's loss of power was further emphasised in the liberal model; 'the use of resources in the service of planning is thus seen as a necessary evil, to be avoided whenever is possible' (Schonwandt, 2008, p.17). Simultaneously, it became evident that the different citizen groups, particularly the 'disadvantaged' lacked 'power' rather than expertise. The planner's role no longer involved the protection of these 'disadvantaged' social or physical settings, but rather the protection of the citizin's 'freedom of action' as well as 'undesirable consequences produced'. In summary, the liberalistic model thus supported two binaries: citizen/ government, and citizen/ planner. Later, Schonwandt (2008) highlighted three main theories in planning today: the communicative/ collaborative, the post-modern and the post-structuralist. The difference between these three theories and the seven models of planning is a significant transformation in the content and knowledge from the technical and positivist rational model to the post-structuralist, post-positivist theories today. It is worth noting the recurrence of the communicative-turn in both classification, which is simultaneously 'a model of communicative rationality' in place of the 'rational model' in planning. This raises another question about the displacement of the logo-centre of the planning debate as the communicative-turn.

This brings about the post-positivist planning the shift towards '...co-productive form of governance' (Albrechts and Balducci, 2014:22). Co-productive governance recognises 'power struggles and missed opportunities' in the previous models (Van den Broeck et al. 2013: 326); and thus, both involves and empowers the citizen in the process; it basically constitutes the citizen, government, and the power-relations between them. However, co-productive governance doesn't transfer the government power to the citizen. Power is recognised as a relational value that shapes the institutional practices and processes, and is simultaneously shaped by the perception of the citizen's role in the institution. Furthermore, the citizen is not identified an independent point in the city, they are being constructed in space and time; '...certain bodies, certain gestures, certain discourses and certain desires [in the city] come to be constituted as ... [citizens]' (Foucault, 1980: 98). And the government is not a 'political institution' but the processes and practices – the relations – to the citizen; how the institution perceives and instantaneously shapes the governed, citizen and city (Townley, 1993).

The preliminary binary citizen/ government is thus, displaced by citizen-government relations (involved actors); and two binaries are introduced actor/ content, and actor/ context. The boundaries of these binaries are instantly blurred through the concept of the trace that recognises the inscription of each term in all others, as discussed in the previous section. Simultaneously, it recognises '... the fragmentation and multiplicities of the actors'. (Albrechts and Balducci, 2014:17).

4 DECONSTRUCTION IS ALREADY THERE? ARE WE?

> *'The very condition of a deconstruction may be at work, within the system to be deconstructed; it may be already located there, already at work, not at the centre but in an excentre, in a corner whose eccentricity assures the solid concentration of the system, participating in the construction of what at the same time threatens to deconstruct' (Derrida and De Man, 1989:73)*

Deconstruction, is not a defined framework of analysis or interpretation to be applied to a text, theory, any content. Simultaneously, is already at work in the text, not in its centre but on the margin; i.e. deconstruction is already there in 'planning' theory and/ or practice, working on the margin, deconstructing the content, its inherited 'ideas and practices and its traditions of debate' (Healey, 1997, p.7). Our task, as deconstructionist reader, is thus to 'trace' the work of deconstruction in the content of planning. In this paper, we have reflected on a few instances of deconstruction at work, through the binaries of government/ citizen, government/ planner, planner/ citizen, and so on. Simultaneously, we traced a few 'displacements' in the discourse of the planning. However, this is yet an early stage-exploration that opens-up the way to further explore deconstruction and planning. It would be of a highly-added value to explore the development of the various planning aspects, approach their deconstruction reading. This should thus be complemented by a deconstruction reading of planning theory that recognised the displacement of the rational model through the communicative-turn.

I would wholeheartedly embrace Wigely's (1989) conviction that not only architecture is intrinsically influenced by deconstruction, but also deconstruction, and resonate in planning.

> *'Consequently, deconstruction does not simple survive architecture [planning]' (Wigely, 1989)*

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T02 | PLANNING EDUCATION: BUILDING UP SPACES OF DIALOGUE FOR PLACES OF DIGNITY

CO-CHAIRS: KRISTINA NILLSON; ANDREA FRANK; ARTUR ROSA PIRES

The recent years of economic decline and uncertainty, and growing migrant and refugee streams are leaving their mark in today's society. Municipalities and public service provision are afflicted by government imposed austerity measures. Moreover, the often unexpected influx of considerable numbers of new inhabitants (migrants/refugees) in many European cities creates growing conflicts in land use planning, discontent of existing residents and often increased social segregation. Effects are touching both rural villages and sprawling metropolitan agglomerations alike and are becoming visible in many respects. The task of planning in such circumstances is extremely challenging. With scarce resources, political pressures and often limited time for decision-making and solution development, how can and should planners for example steer the creation of or protect truly public, safe open spaces with high quality amenities for all, and accessible and affordable housing? New strategies, practices and approaches will need to be explored and developed, and planning educators will have to prepare students for working in a dynamic, contested, and uncertain environment where actions need to be negotiated amongst affected stakeholder groups and their interests. How are educators integrating issues of space, dialogue and self-respect, pride, and respect into their teaching? Planning need to be able to develop innovative and locally responsive (economic) development strategies without however, losing sight of issues and opportunities provided by global societal challenges (healthy food, climate and environmental challenges, etc).

This track invites papers and presentations reporting on:

- innovations in planning education, e.g., working collaboratively with communities, NGOs, vulnerable groups and practitioners;
- cutting-edge, experimental pedagogies involving technology-assisted, interdisciplinary and/or international teaching aimed at preparing students for today's and tomorrow's planning challenges;
- innovative planning modules, short courses, programs, particularly focusing on space/place, dialogue and dignity in a variety of contexts;
- planning modules that prepare students to wider European and global planning challenges while keeping local interests and conditions in mind, i.e. modules that "marry" local context-specific planning with global awareness and foster international and multicultural competencies;
- planning modules that focus on innovative economic development strategies in the context of economic austerity / decline.

All authors and presenters are expected to take a critical, reflective stance relating their work to pedagogical and/or social & planning theories.

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ID 1350 | DEALING WITH OPPOSITION IN PARTNERSHIP DEVELOPMENT PROCESSES

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ABSTRACT: This article reflects findings from an action research approached PhD case study, that highlights the need for legitimate planning and leadership functions to succeed in partnership development processes. The study focuses on a particular case of partnership development among actors from the public, private, and volunteer sectors. This case initially concerned a 9-year-longitudinal process of developing a community arts center in a rural region of Western Norway. One of the main findings of this research identifies the political oppositional challenges such a process faces through its different stages, actual challenges that threaten the vital legitimacy of planning and leadership functions all the way. The paper contributes important knowledge, insights and awareness to those dealing with related partnership development processes.

1 PLANNING AND LEGITIMATE LEADERSHIP FUNCTIONS; INTERWOVWEN ISSUES OF A PARTNERSHIP DEVELOPMENT PROCESS

Of all the presumptions of this action research case, the most important was the one of a better outcome due to its partnership focus; the actual actors anticipated the outcome to be larger than the participants would have been able to achieve individually. As years went by, the case grew enormously to become a project with a much broader focus. Planning and Leadership functions of innovative projects must be flexible and are challenging due to changing contexts along the way. How to legitimatize such innovative projects became essential to keep the innovational forces on their desired track.

The theoretical point of departure is within the field of planning, partnership-based local and regional community development, and some approaches within the field of leadership. This actual case mirrors action research and planning practice as being similar to development processes. Theoretically, this research is linked to planning theorists, partnership theorists, and a few leadership functions theorists that are relevant in the contexts of this particular case.

2 A VARIETY OF INTERPLAYING GOVERNANCE NETWORKS

The case is an innovative project. The definition of innovation has an implication also toward the definition of the term partnership as it is used here. The embryonic steps of innovative-based partnership processes and the visions and goal creation that justify the existence of both the partners and the processes are constantly dependent on context conditions, or on the social structures of the civil society that fosters these processes. During initial development of ideas and goals and their inherent needs for implementation, networks change and develop also, and…loose coupling within networks affords favorable conditions for interactive learning and innovation. Networks open access to various sources of information and thus offer a considerably broader learning interface than is the case with hierarchical firms… (Grabher, 1993: 10.)

This underlines the approach to the term partnership to be similar to the term network as a more or less constantly changing element of the partnership process.

The non-linear interactive process of developing a future innovative partnership can be characterized as a first step in a mobilization process that matches John Friedmann's four last steps (of five in all) of such a mobilization process (Table A); 1. Local Action Group, 2. Networking, 3. Coalitions, and 4. Formal Organization (1987: 274-276):

Friedmann's terms (4 of 5) of social mobilization	Adequate charcteristica of Friedmann's terms
Local Action Group	-informal first organization -firsthand local knowledge -reliance on personal interaction -reliance on commitment -face-to-face dialogue -comrades and friends -flexibility
Networking	-increasing movement -easy conditions of entry and exit -few demands -locally based -efforts of enlarging the network
Coalitions	-joint undertakings -other groups or formal organizations are recruited -more complicated leadership -struggles of power and control might occur
Formal Organizations	-formal -professionals at play -political weight -legitimate standing

Table A: The Partnership Development Stages Based on Friedmann

Networks, then, are continually more loosely-coupled elements than the partnership itself. In the early development phases, it is more relevant not to talk of a partnership at all as such. It is more a case of open loosely-coupled innovation networks that come and go in order to keep the process dynamic and to avoid it stopping. It is a type of start-up of a potentially formalized organizational work, but without locking the process up at too early a stage.

Elvira Uyarra talks of initial mobilizations such as these as being elements of a democratization process, where unelected local and regional bodies are organized in order to develop themselves as bottom-up 'growth coalitions' (Uyarra, 2007: 243). Such developments may be based on a reinforcement of specific local competitive advantages wherein relevant actors have to develop partnerships in order to be able to materialize their goals. Local identities along with local learning processes might be one of the central factors and drivers for success (2007: 244-245). This learning process is relationally-based; it is a non-physical resource. Uyarra talks of a relational capital released by know-how formation …relationships based on cooperation and competition between players, and the knowledge and ability of the 'players' to identify opportunities for interaction and relationships with the external environment… (Uyarra, E. 2007: 245).

Local identities that initialize the innovative partnership development are also carriers of tacit knowledge that might be essential as a basis for the initiative itself. According to Uyarra (2007: 246), such knowledge is geographically immobile because of its nature of being carried within persons, a fact that makes local identities a precondition for developing local and regional innovation. It could not have taken place in any other place. In order to allow such tacit knowledge and corresponding actual localized resources to bloom, networking and partnership development should be nourished. Uyarra refers to Lawson (1999) when she talks of this "recipe" of creating a necessary "institutional thickness" that can bring forward a "regional competence" …ensembles of competences that emerge from social interaction…(Lawson, 1999: 158). She also underlines that many other authors focus on these bases, …of developing location-specific competitive advantage, i.e. one that is embedded in regional and local cultures, and thus impossible to copy or replicate… (1999: 246). Thereby, Uyarra contributes important perspectives on the four research factors of this particular case: actors, relationships, structures and levels of formality.

According to Amdam (2008 B), regional development policy in Norway has changed from being based on a top-down distribution system to partly becoming a bottom-up initialized development regime. Often, these bottom-up initiatives are based on voluntary partnerships (2007: 4). Frequently, an innovative partnership building process as such is a voluntary based initiative. Bukve and Amdam characterize this phenomenon as being a change from government to governance (2004). Definitions of governance are manifold. One is Rhodes'. The partnership process referred to in this article includes the public, private, and voluntary sectors. In this specific context, governance means self-organizing and interdependent

networks that exchange resources, partly based on own rules of the game involving a certain autonomy from the state (Rhodes, R.A.W., 1997: 15).

The constantly changing networks of such processes are all more or less necessary in handling the innovative stages that occur in some cases unexpectedly on the way to goal achievement. It is very much the planning and leadership functions' responsibility to try to foresee them and suggest, or take, action steps to make them constructive and positive contributions to the overall purpose. The networks, then, are inevitable construction elements of the partnership process. Initially they are loosely coupled and without formal obligations for the actors involved. All of the three sectors, public, private, and/or voluntary, might be represented in these networks, but also just one or two of them might be engaged in an interaction with other purpose-based "visitors" for shorter or longer periods. The intercommunication is continuous among these networks as efforts are made to allocate resources with a view to procuring an outcome that is hoped will be larger than that which the participants would have been able to achieve individually. Often non-linear interactive processes are interplays among inhabitants, organizations, and private companies engaging players from all the three sectors; public, private, and voluntary. Basic here are the networks and partnership processes that take care of the knowledge production the project needs to achieve success. These networks are unelected bodies (Uyarra, 2007) making governance. Uyarra underlines that this is …knowledge sharing being aided by face-to-face, collaborative relationships at the local level, based on high levels of trust and common values… (2007: 248). However, she also focuses on the fact that social networks are often too narrow or locked to be able to collect all the knowledge that is essential to the purposes in question :

> *…However, 'social networks are never as wide as to include all members of a community, and in many cases, (they are) not even a significant minority of them' and knowledge is often 'far from accessible to most of those located nearby' (Breschi&Lissoni, 2001:262)……More attention needs also to be given to the relationship between knowledge and different cultural environments (Bryson et al., 2000)…*
>
> (Uyarra, 2007: 249).

According to Stoker, …Governance is about governmental and non-governmental organizations working together… (1997: 10), and, literally, autonomous networks of actors (1998). Uyarra quotes Hudson (1999) when she states that it is …the 'milieu' that learns and innovates, rather than the firms or individuals (2007: 249). Governance initiatives might be such milieus. Like Uyarra (2007), E. Swyngedouw (2005) talks of such networks acting as a reinforcement of democracy, a type of oppositional, anti-bureaucratic way to action organized by those who, for different reasons, want to get things done. This he holds to be a reaction to the 20th century's …sclerotic, hierarchical and bureaucratic state forms that conducted the art of governing… (2005: 1992). Governance networks such as these are often those of initial interest groups in partnership development processes. According to Swyngedouw, they can take the shape of formal or informal stakeholder-based associations, ad hoc committees or different development coalitions. They are organized horizontally, often based at local/urban level, including …private market actors, civil society groups and parts of the 'traditional' state apparatus… (2005: 1992).

Often, these networks grow out of innovative social movements and might be the first steps in a partnership process. However, one of the big democratic challenges, Swyngedouw states, is that these innovative governance forms are …both actively encouraged and supported by agencies pursuing a neo-liberal agenda… (2005: 1993), and it is ...this interplay between the empowering gestalt of such new governance arrangements on the one hand and their position within a broadly neo-liberal political-economic order on the other hand… that is his concern when it comes to the democratic issue and participation. Because of this neo-liberal agenda, some actors are empowered and others are disempowered within such networks. Procedures of governing might be formally codified. They might also be transparent and legible. On the other hand, the workings of governance networks might be dominated by an internal power choreography often led by economic, socio-cultural and/or political elites (Swyngedouw et al., 2002 in Swyngedouw, 2005: 1999).

In the process of legitimizing such innovative governance networks, the state has then to play a central role. Then, the governance networks' most important democratic legitimizing arena becomes the formal system state government. In fact, the state takes center stage in the formation of the new institutional and

regulatory configurations associated with governance……the result is a complex hybrid form of government/governance…(Bellamy and Warleigh, 2001 in Swyngedouw, 2005: 2002). It is this phenomenon Swyngedouw calls the Janus Face of Governance-beyond-the-State: The Contradictions of Social Innovation in Governance (2005). According to Uyarra (2007), this might be regarded as types of 'institutional configurations' in order to secure 'regional competitiveness..' Such a development …'advocates a type of regional economic governance, which is associational, and network-based, allowing for 'bottom-up,' region-specific, longer-term, and plural-actor based policy actions' (Amin, 1999)…(2007: 254). She identifies three preconditions for successful government/governance projects, or innovation development, such as these:

> *…first, that policy actions should aim to mobilize networks of association and clusters. Second, emphasis is placed on creating partnerships between the public and the private sector and on the legitimization of intermediate associations or forms of governance, such as regional development agencies (Halkier et al., 1998; Morgan, 1997), seen as better suited to act in the interest of and forge stable relationships with actors at the local level. Thirdly, the public sector adopts a different role under this perspective, acting as one of the institutions of the collective order working in collaboration with other organizations. Therefore, policy action takes the form of facilitation rather than direct intervention. Finally, a key axiom is that solutions have to be 'context-specific and sensitive to local path-dependencies' (Amin, 1999: 368)…*
>
> (Uyarra, 2007: 254).

Often, initial groups that start processes of partnership development are created from scratch, a fact that Uyarra states might lead to "institutions of inefficacy". Reasons for this are the lack of being embedded in existing routines and …about the expectation that they will induce institutional change and enhance cooperation …(2007: 255). In order to become successful, the long-term spans of such developments are frequently not taken into consideration; and neither is the fact …that they have to deal with 'complex, instituted processes and barriers' surrounding their design and implementation (Howells, 2005). The risk of governing complexity and the likelihood of governance failure (Jessop, 1997) are often overlooked… (Uyarra, 2007: 255).

3 WHO WERE THE GOVERNANCE NETWORKS HOLDERS?

Another challenge in getting innovative network and partnership processes to develop in the desired direction is avoiding that policy made suggestions/results do not only focus on …the views of those who have vested interests in verifying the claims being made, and thus limiting critical value and policy relevance (Lovering, 1999 / Markussen, 1999 / Uyarra, 2007: 255). This could legitimize and support the efforts of 'elite groups' when they eventually have a goal of constructing and promoting …regional agendas which mask the unequal power relationships between particular interests (MacKinnon et al., 2002: 304; see also Phelps et al., 1997)… (Uyarra, 2007: 255).

Thereby, the non-linear interactive network processes within the development of partnerships, with their inherent increasing focuses on commitments for their partners, in order to try to establish their functional formal structures, are processes dependent on and originated by communicative governance networks. Rhodes states that …governance refers to self-organizing, inter-organizational networks…(1997:53). These networks are interdependent and include non-state actors. This might mean that partnerships between public, private and voluntary sectors become erratic and opaque. Exchanging resources and constantly negotiating shared purposes cultivates continual interactions between network members. Agreements are regulated by rules of the game based on an atmosphere of trust. These networks are not accountable to the state on a daily basis. A certain degree of autonomy is present because they are self-organizing networks. Despite this, the state indirectly and imperfectly can steer these networks (Rhodes, R.A.W., 1997: 53).

Networks of this type are in fact not organizations themselves as such, but they have many organizational-like elements, e.g.:

1. Contexts that more or less influence the network and which the network itself can influence and even control.
2. Goals formulated as purposes, visions, and concrete working aims that express tasks the network wants to realize.
3. Actors, or members, who pull together in the desire to fulfil mutually developed goals.
4. Relationships among people. These relationships can be dominated by common values and opinions, by disagreements and conflicts, and by trust and distrust.
5. A structure that makes possible a specialization and a division of labor add a hierarchy that distributes power among the specialized parts.
6. A production of products and/or services that have effects and consequences for both the network and the contexts.

(Mostly based on Amdam, 2008 B, my translation.)

The interactive process towards a formalized partnership is being continuously formed by the relevant actors, the relationships that were made all along, the different structures that occurred out of necessity along the way, and the levels of formality by which the entire operation was dominated. Elements 1 and 2 above, those of shifting contexts and goals, permeate the entire process and constantly affect the four chosen research factors: actors, relationships, structure, and levels of formality.

Regarding the term 'actors' above, this group of individuals or institutions might be regarded as being 'stakeholders,' defining their interests in their various engagements. According to Newman (2001), the term "stakeholder" has in recent years been linked to governance processes as an explanation of members of networks and what "stakes" these members hold in the respective networks during their different development stages. Schmitter (2000) states that the shift from traditional forms of government by 'political citizenship' to governance dominated 'stakeholder'-based polity …does not go far enough…regarding this 'holder' issue. Therefore, he proposes many new approaches to this term by introducing different types of relationships according to the reasons these might have, or the rights these might carry or represent, in order to become participants in actual governance proceedings of such partnership development processes (Table B).

He calls them holders. He shows his definitions of the holders in the two columns on the left in this matrix. The column on the right suggests who these holders might be in a relevant partnership development process:

Right-holders	Participate because they are members of a national political community	Members of the public government system, municipality, county and/or state authorities
Space-holders	Participate because they live somewhere affected by the policy	Ordinary people living in the area, the inhabitants affected
Knowledge-holders	Participate because they have particular knowledge about the matter concerned	Skilled hands, experts, specialists and professionals
Share-holders	Participate because they own part of the assets that are going to be affected	Money investment people, members of investment companies
Stake-holders	Participate because, regardless of their location or nationality, they might be affected by change	External resource persons, external legitimating persons
Interest-holders	Participate on behalf of other people because they understand the issues	The carriers of the visions
Status-holders	Participate on behalf of other people because they are given a specific representative role by the authorities	The carriers of formal given status, status given by the authorities

Table B: Holders, Based on Schmitter (2000).

4 MUTUAL INTERESTS, TRUST, INTERDEPENDENCE AND LEGITIMACY

The development line of the interaction stages that all the networks go through in such processes is continually influenced by the actors, some stable, some unstable, and their behaviors and degrees of commitment and eagerness. A partnership might be the result of …a network coordination in which formally independent actors cooperate long-term based on a mutual dependence… (Halkier, 2000 / Gjertsen og Halkier, 2004, my translation). Just as important are all the continuing relationships among the participants in question. Governance partnership revolves around a combination of public-, private-, and civil-society interests, which, voluntarily based, involve mutual benefits (Amdam, 2008 B). The number of networks is due to the numerous structuring efforts. Most often it is a necessity to try to formalize the network into a more committed partnership in order to be able to reach the goals. The different loosely coupled networks are a challenge throughout the various processes. The partners have to understand that the progress of the development towards a formalized alliance is conditional upon an understanding that the partners are mutually dependent on each other in order to materialize the goals that cannot be reached individually. Trust is essential here, and the structure must have enough inherent authority to be able to handle conflicts, e.g. those concerning localization of projects, or those involving various potential oppositional involvements.

In this continuous interplay of partnership development, the different levels of formality are essential all the time. According to Veggeland (2003), partnership is defined as a bounded cooperation among independent partners in a negotiated community of interests. Cooperation in governance partnerships is dependent on formal mutually developed authorizations and funding in order to be able to materialize goals and actions (Amdam, 2008 B).

More or less loosely coupled networks come into play as elements in the efforts to legitimize the entire project and establish the degree of formalization that is needed to get a functional partnership going. Thereby, the governance partnership's existence is dependent on a well-functioning and complete legitimizing process. On their ways to becoming formal alliances, strategic, tactical, and operational networks have to come more or less into play. All of these networks, or different types of governance partnerships, are development stages, some repetitive, on the road towards a long-term working, and, thereby, institutionalized, partnership. The strategic partnership is a necessary phase to secure a defined mutual understanding of reality and organize actions to make the purpose or the thoughts of a goal visible on the actual political agenda. Visionary leadership functions are essential here. These partnerships are known and defined by their lack of formalization and the absence of hierarchy. The activity is uneven and the number of members is uncertain and fluctuating (Amdam, 2008 B). Often, such partnerships function because nucleus members mobilize others due to the actual needs. Initial efforts and the networks connected to those innovative in their start-up-periods might be defined as being strategic partnerships.

Tactical partnerships arise in order to find solutions between visions and dreams and the realistic and the practical. According to Amdam (2008 A+B), these partnerships are characterized by their levels of formalization, limited numbers of members, a strong need for trust, and a marked need for acceptance and legitimacy regarding the jointly developed program for action. All the project groups involved in the innovative processes offer relevant contributions at such stages of tactical partnerships.

Operational partnerships define the periods of instrumentality wherein decisions on actions are taken. Amdam underlines the necessity of a successful legitimizing process as a basis for the operational stage where the realization of goals is essential. Typical of operational partnerships are their high levels of formalization, externally given legitimacy, a limited number of members, a clearly defined division of labor, a marked hierarchy, and a focus on production. The road towards a partnership development might end up with a shareholding company with its board, members, a precisely defined agenda and goals, and mutually accepted time limits; long-term cooperation and contracts are formalized among committed and defined partners. Every stage of such a process is accompanied by accordingly changing 'institutional partnerships'.

These institutional partnerships are the framing terms-giving-institutions that occur/are established throughout such processes. They might take the form of different 'bodies' dependent on the actual situations/needs or what development stages the processes are going through. New institutional partnerships might be the result of such governance development, such as the one cycle initiating similar cycles or purely contradictive politically dominated cycles; in plain words opposition.

5 A POLITICAL OPPOSITIONAL PLAYGROUND

When the public sector takes part and is an essential actor in longitudinal development partnership processes like the one studied in this case, particular challenges may occur when the process lasts for more than four years (a Norwegian democratic election period). There is a risk of the project losing its already established legitimacy, due to the result of the local public democratic election. A supportive local political party group before the election might turn into a destructive oppositional party group after the election, a fact that can destroy such processes through the loss of legitimate leadership funtions.

6 OPPOSITIONAL CHALLENGES

In this case studied there are four main findings related to how the character of the partnership development contributed to the challenges faced by the project in taking the final steps towards its completion:

1. The Initial Period / The Strategic Partnership Development Period was blinded by dreams and visions.
2. The Period of Turning Points / The Tactical Partnership Period lacked an awareness of, and a plan to tackle, repetitive negative patterns of opposition.
3. The Company Period / The Operational Partnership Period was a very confusing development period due to the enforced adjustments to the constantly changing oppositional demands.
4. Recruiting The Actors of the Partnership led to unforeseen consequences due to over-motivational blindness and inherent unconscious and unsustainable excitement.

7 THE INITIAL PERIOD; A STRATEGIC PARTNERSHIP DEVELOPMENT PERIOD

The Initial Period represented a very self-propelled development period. Retrospectively, though, the lack of process expertise in this strategic period was not acknowledged as being essential to the later stages. The initial Interest Group had only one focus in this particular process: to engage the interest of the municipal council in order to obtain the fundamental permission to initiate the process. Actually, at the start, nobody saw any potential need for the future partnership development. Rather, it was a modest request to the municipal council to allow The Interest Group to initiate and organize a relatively limited process. Initially, the potential future complexity of this rather modest initiative was not foreseen. The positive reception that this request was given blinded the initiators, the action research approach included. Within a couple of years new and pertinent actors just rushed to join the project which, then, very rapidly grew out of proportion and outside the scope of the initiators' inherent competence.

The recruitment of new actors, bringing with it the inherent need for sustainable relationship building, the continual adjustment of structures, and finding convenient levels of formality, constantly challenged the unforeseen partnership development. This did not happen based on carefully thought-out plans, but seen in retrospect as the result of cogenerated situational data between the new actors and the initiators. Viewed at the time, the action research approach functioned very well. Retrospectively, it was actually a well-functioning partnership mobilizing process. Many problems or challenges were avoided, and those that did occur were easily solved by way of dialogues and collaborative actions in which the most deeply involved actors were included. A bottom-up growth coalition was born to systemize specific local competitive advantages in order to enable the on-coming partnership to accomplish its goals (Uyarra).

The enthusiasm and positive attitudes of the actors involved created a spiral effect that lead to the recruitment of new potential actors. The whole initiative itself depended entirely on the municipal council's answer to The Interest Group's initial application. Also in hindsight, it is clear that the initial standing ovation of the municipal council blinded the initiators, who, rather naively at the time, thought of and handled the project as if it in fact had already been accepted and implemented by the project's most important actor, the municipal council. Thereby, a rather naive approach led those involved into thinking and believing that it was already legitimized.

Seen in retrospect, what stand out as being the real reasons for contemporary blinders grew out of a perception that everything went off too smoothly. Actually, the process of this particular initial phase was free from any seriously felt obstacles. This was the stage for securing a clearly defined mutual understanding of reality. A fact that was necessary to make the purpose or the thoughts related to a mutually developed goal visible on actual and relevant political agendas (Rhodes / Amdam).

The strategic first steps of what later, by Norwegian standards, developed into a huge partnership, originated in a local action group that started processes of networking (The Strategic Partnership Period). Later this networking consisted of more or less loose coalitions (The Tactical Partnership Period), and finally led to a formalized organization (The Operational Partnership Period) (Friedmann / Amdam).

Viewed in an historical perspective, this was a location-specific bottom-up initiative embedded in regional and local cultures (Uyarra / Amdam). It was the voluntarily based start of a gradually more clearly defined innovative governance project: self-organizing, interdependent networks for exchanging resources for mutual benefit (Rhodes). At this strategic stage, the early organizing steps were loosely coupled without specific formal obligations for the actors involved. In a contemporary state of excitement, too little attention was given to the development of the particular governance networks and their respective internal power choreographies. This also included the intervened performed action research approach through the researcher's role as the formally elected leader (Swyngedouw).

Mostly, at these early stages, the actual networks were unelected bodies in which knowledge-sharing took place face-to-face (Friedmann). Initially, the governance networks were collaborative relationships at a local level (Healey). What bound them together were high levels of trust and commonly felt values. According to Uyarra, networks like these might turn out to be too narrow, thus not enabling them to collect all the knowledge necessary to handle the contemporary challenges. Swyngedouw states that within innovative networks, some actors in such initial processes might be empowered while others might be disempowered, including perhaps precisely those actors that in fact should not be. The exaggerated, almost euphoric enthusiasm of the partnership's start-up period blinded the central actors. More attention given to the relationship between the different cultures of the actors and the knowledge produced would probably have made it possible to avoid such blinders. Preferably, the cultural cognitive pillar (Scott) and its inherent meaning construction elements represented by the social reality should have been more firmly established early in the process. The long timespan of such an innovative governance partnership development was not taken into consideration due to the actors' assumptions and contemporary experiences. It was impossible to relate to the meaning construction elements because of these blinders.

8 THE PERIOD OF TURNING POINTS; THE TACTICAL PARTNERSHIP PERIOD

The start of this research period of turning points, The Tactical Partnership Period, was felt to be equally as uncontroversial as the former strategic period regarding the lack of awareness of future potential oppositional challenges. Actually, such an attitude, displayed by both the participating actors and the contemporary action research approach, prolonged some of the blinders. Dreams, and vested interests, partly unintended as such, dominated the processes. Retrospectively, they could have worked as counterforces that reinforced the gap between the initiators and the opposition. In the view of the initiators and most of the other actors, the partnership development process ran really smoothly and stayed on track, only slightly disturbed by some bends and bumps in the road now and then. Gradually, though, the opposition more and more revealed their true tactics. Their suspensory double-communication demeanor and its appearance of the rationalized exercise of power eventually dictated the course of the partnership when formal final decisions were to be taken (Friedmann). Actually, two parallel partnership development processes took place: one by the initiators and most of the other actors, one by the opposition.

Especially, towards the end of this partnership development period of turning points / tactical period, the pressure on the actors to adhere to formal commitments increased greatly. Formal deals, distribution of formal responsibilities, plans and binding timetables, and economic commitments had to be established. Not least the most important actor, the municipality represented by its council, was heavily challenged during this stage. This growing complexity, towards the end of this period, also challenged the action research approach: what advice to give, and what cogenerated elements were worthwhile following up, due to the fact that the hidden opposition caused surprises all along. The play of the opposition came more easy, e.g. casting doubt and uncertainty about details of the partnership project to the extent that they step

by step obstructed the formal decisions necessary to realize it. In practical terms, this involved rather small adjustments and/or small changes of direction in ways that kept the project alive as such, but which also prevented it from accomplishing its preferred objective.

Actually, at the end of the tactical period, the most central actor of the partnership, the municipality represented by its municipal council, developed to become a kind of two-headed actor. The partnership project, and, thereby, also the action research approach, focused on their relationship with the formal democratic heads of the municipality, the mayor and the chief municipal executive. All along, these formal representatives supported and took an active part in the positively focused development of the project, always presenting positive propositions as a basis for the formal decisions to be taken, both by the municipal executive board and in the municipal council. Thereby, these two institutions were the key players in the public meaning-construction processes between the partnership development and the actual political agendas, at least from a formal point of view. Regarding these facts, the action research approach all the way obtained legitimacy vis-à-vis the formal face of this particular decisive actor. This manifested itself in the communicative and collaborative atmosphere developed between the leadership functions, the mayor and the chief municipal executive. The most important data cogeneration processes also took place in this particular interplay. Formally, these were the representatives in what were regarded as being the preparatory phases of the process. Communication and collaboration within the partnership functioned very well and the action research approach saw to it that practical problem-solving took place in local and holistic ways in which challenges were jointly reflected upon by problem owners, including the researcher.

On the other side stood the opposition, the other representatives of this municipal council's double-headed actor. In regard to them, the action research approach fell short. A milieu for joint debates, informational attitudes, and negotiations was never established. From the perspective of emotional and political engagement in the case studied, the reflective cogenerated processes that took place all along without doubt safeguard the prerequisite for successful action research. So did the analytical process. It created a distance for the researcher to the actual actions, the present political strategizing, and the emotional involvement (Levin). But this action research based analytical process did not contribute the problem-solving answers, e.g. by bringing the opposition to the negotiation table, nor in any way did it create any kind of communicative atmosphere at any level regarding this rationalization of power by the opposition within the municipal council. The action research approach never succeeded in establishing a continuous communicative atmosphere with the opposition. The repetitive negative spiraling patterns of the oppositional behavior represented and contained unbreakable codes, due to what was felt to be the arrogant and distance-creating oppositional platform of power rationalizing. For the partnership development project, the codes were unbreakable due to the double-faced oppositional behavior: The opposition supported the project, but were against it. They supported it, but presented "better" solutions all along. They supported it, but changed the formal propositions adopted by the municipal executive board before the decisive final votes in the municipal council. They supported some basic features, but sowed doubt about others. They pretended to be conducting democratic processes, but they were working in secret and stolidly. During the tactical period of this particular partnership development, the extent of the vital parts of the opposition's strategy was not understood by the action researcher. The same applied to the other centrally placed developers. Due to this ambivalence, everything was in a way unreal and it did not seem possible that the opposition could stay powerful over time.

At the end of The Turning Point Period, a new municipal election was held. Actually, the result finally simplified the work of the opposition, since its leaders were given a free rein regarding leadership of their respective local party groups in the municipal council. They succeeded in establishing a stable majority coalition, though the slimmest one possible, with 14 (15) representatives out of a total of 27. This newly obtained and unthreatened opposition majority placed them in a position whereby they were completely free to implement their own game plan during the final development period of the partnership project.

9 THE COMPANY PERIOD; THE OPERATIONAL PARTNERSHIP PERIOD

Operationally, this was a period of developmental ups and downs, but mostly a journey from one failure to the next one, best described as a botched and confusing wandering around in a quagmire. The formation of the partnership shareholding company represented the main element of this particular period, in which all the actors of the partnership had to take on formal commitments, not least financial ones (Friedmann / Amdam). In this particular process, a private investment company entered the scene and complemented a

full worthy three-sector private, public, and voluntary partnership. The shareholding actors appointed a board due to their holdings in the new company. A project office was established, and a hired part-time project leader and a hired project secretary started taking care of the daily activities of the company. The action researcher roles of formal leadership and formal board relations ended, a fact that also limited the action research approach as such.

During the Operational Partnership Period, the governance process became more closed, less democratic, less transparent. This development aspect was challenging, and affected the motivation of both the initiators and of those actors who were not directly involved at the control levels of the board. The action research approach tried to put a focus on these challenges by striving for reflective distance and rigorous analysis (Levin). But this failed, due to the fact that the empathic and political involvement were distanced from the communicative and collaborative heart of the partnership by the opposition's successful rationalization of power. The action research approach could not counteract these tactics. The challenges simply increased as a result of the arrogant exercise of its power by the opposition, which finally ended the partnership by putting forward a series of concrete formal demands, most of which were, of course, impossible to accommodate.

10 OVER-MOTIVATIONAL BLINDNESS AND UNSUSTAINABLE EXITEMENT

Actually, what was strongly felt to be successful initial development periods of the partnership blinded the chosen action. It did not manage to recognize the likelihood of the need to establish or consider alternative ways forward. A culturally-based and defined idea among equals, all of them local citizens who shared a joint vision of a certain field, was the partnership's point of departure. At the starting point, none of the participants, all of whom were rather randomly included, was able to foresee or predict the future dimensions of the project nor how demanding it would become with regard to time and resources. According to Bob Jessop, the actors of such governance processes are involved in complex relationships of reciprocal interdependence. Furthermore, Jessop defines governance as also being a self-organizing process based …on continuing dialogue and resource-sharing to develop mutually beneficial joint projects and to manage the contradictions and the dilemmas inevitably involved in such situations… (Jessop, 2003: 1, Chpt. 6.5). Often, despite the interdependency between the actors involved, some of the specific dilemmas and developmental challenges are based on the fact that the actors in question operationally were autonomous actors. According to Friedmann, such a networking process is strongly colored by easy conditions of entry and exit, involving just a few bindings.

There was an inherent excitement stemming from the way the very central and decisive local authorities received the project initially. This fact, coupled with the early and rather enthusiastic recruitment of actors, fostered a blindness that prevented a cool and oriented evaluation of eventual later consequences, or of upcoming challenges (Friedmann). Additionally, no one involved was able to predict the fact that this was the start of a 9-year-longitudinal development process that would involve huge challenges. The randomly democratic-based challenges related to the local election results of the various municipal four-year election periods was one of these. Actually, the initiators did not expect the project to last for more than one, at the most two, election periods. "For sure, it will be realized faster than that," was the conviction of everyone involved all along.

11 CONCLUSIONS

The public sector actor of the partnership case studied, the municipal council, was the most important actor of the project. This was the case even though the municipality's share of the total room space program was only about 21%. In addition, this project developed to become an unforeseen longitudinal one spanning as many as four consecutive municipal council periods. The governance arrangement's red thread was very challenging to hold, and, thereby, also the leadership functions accepted by every central actor at vital moments in time.

Over time, such legitimate leadership functions were almost impossible to maintain. An eventual unidentified meta-perspective of the governance function was almost impossible to prolong. It had to be continually renewed and revitalized. Due to these challenges, these secondary criterions of failure, the

governance arrangement's historic facts became rather vague. In fact, now and then they almost disappeared from view, which prepared the ground for an easy oppositional play all along. This was the play of new, unforeseen, undemocratically made "new truths", which even today, seen in the light of history, stated as being the real truth by the representatives of the opposition.

As a governance enterprise, the partnership development project lacked a stable and firm approach. It lacked its meta-governance perspective, which constantly should have guaranteed both the legitimate leadership functions, every actor's ownership of the project, and the overall aspects framing it. Throughout all these years, the absence of such a perspective allowed room for the opposition's particular political strategy. Neither the normative nor the cultural-cognitive pillars ever became strong enough to really sustain the complete partnership project and to combat the opposition's political designs. The essential communicative process between all the actors in position and those of the opposition was never established, and, thereby, neither were the legitimate leadership functions that were vital in order to accomplish the final goal.

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ID 1372 | THE DEVELOPMENT OF CHINESE PLANNING THEORY SINCE THE 1978: A THEMATIC PERSPECTIVE

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1 INTRODUCTION

The year 1978, when China initiated its policy of reform and opening-up, marks a distinct turning point in the history of urban planning in modern China. A new Chinese urban planning system, with its values, ethics, approaches, laws, regulations and so on, has gradually formed since that time. A set of Chinese planning theory also emerges within this system development. This set of theory 'is interpreted as the values, principles and working procedures which conduct planning practices' (Zhang, 2008) by Chinese planners. This paper will mainly discuss Chinese planning theory.

Different academics have different views when categorizing planning theories. As known to all, Faludi (1970) categorizes planning theories in substantive theory (theory in planning) and procedural theory (theory of planning). Based on his classification concept, other scholars develop varied ways of classification of planning theories. In Hendler (1995)'s opinion for example, besides 'theory in planning' and 'theory of planning', she further identifies a third category, namely 'theory for planning', or definitional theory. Subject-oriented theory provides the knowledge base to inform the planning process. To her, definitional theory is the body of theory that describes what planning actually is and how it fits into the social context, and procedural theory deals with the process of planning, with issues related to determining the 'best' approaches for transferring knowledge into action. Wolfe (1989) categories planning theories the same way as Hendler's, but calls definitional theory as 'explanation' theory. Focusing on definitional theory and procedural theory, this article aims to shed light on the development of Chinese planning theory since 1978.

2 DEFINITIONAL PLANNING THEORY

Definitional theory deals with the nature of planning. The Chinese definitional planning theory study began in the early 1980s when Chinese were eager to shake off the legacy of the USSR and to form a 'new' urban planning system partially based on the European and North American planning system. It is inspired from three origins or Perspectives, namely, practices of the socialist market economy, inspirations from traditional Chinese philosophy, and lessons from Western positivist philosophy. Prior to 1978, when China was in the time of planned economy, planning was perceived as a technique to embody the economic plans of central government. One of the main activities of planning was painting blueprints that are were directly used to guide city development. However, in the process of economic reform since the 1980s, it was recognized that the perception of planning as a technical activity hinders China from developing the market economy and participating in the global economic system. Simultaneously, the Western planning thoughts started to exert influence on Chinese planning theory. All kinds of 'Western' planning thoughts and theories poured into China and acted as important enlightenments for developing 'Chinese' planning theory. Against such background, Chinese planning scholars began to rethink the nature of planning. The theory debate articles at this time mainly focused on the 'scientific nature', 'soft scientific nature', 'rationality', and 'sociality' of planning, with some high-frequency terms like 'philosophy', 'basis', 'nature', 'characteristics', etc. These were Chinese kind of 'definitional planning theory.'

2.1 THE NATURE OF CITY PLANNING

Sun (1993), for example, conceived of city planning as an applied science. In his opinion, planning was about making arrangements of land use and formulating development guidelines based on city development goals and overall studies of the city. The construction activities guided by planning were to change city space so that an orderly city development could be achieved. Thus, turning planning thoughts

into practice was what planning should be about. Meanwhile, different from natural science, according to Sun's point of view, the application of city planning requires the acceptance of social communities.

Wang (1989) holds the opinion that during the period of planned economy, planning activities in China were narrowly perceived as technical activities. But from the year 1978 on, as commodity economy replaces product economy, planning became an activity that required a wide social support. Hence, city planning was both physical and social, and by nature it was more social than physical.

In Tong's (1997) view, the ideological basis of planning theory should return to rationality. Planning activities on one hand depend on scientific studies, on the other hand cannot be divorced from social environment. The leading academic journal about urban studies and planning issues in China - City Planning Review - once organized a special discussion on issues like 'scientific mode of planning', 'soft science' and posed the question 'is city planning a soft science?' (Vol. 11, Issue 3 and 4, 1987). This discussion provided a formal platform for Chinese scholars to explore the nature of planning. Chen (2007) argues 'if we link the core definition of city planning to the strict definition of science, we cannot draw the conclusion that "city planning is a science".

Thus it can be seen that concerning the nature of planning, Chinese scholars have been very aware of the dual attributes of planning. Just as Zhao (2005) describes, planning is neither entirely a 'technology' of 'scientific rationality ', nor completely a passive 'coordination and cooperation', but 'a combination of the two'.

2.2 THE SOCIAL ASPECTS OF PLANNING

With the development of market economy in China, the social aspects of planning are increasingly emphasized by Chinese theorists. For example, Wang (2003) pointed out that current theoretical study of Chinese planning stayed in the 'instrumental rationality' stage, and economic and social considerations were quite lacking. He held the opinion that planning was an activity that falls in between natural science and social science, and it should be realized that planning should be more considered as a public policy. Zhang and Legates (2009) held the viewpoint that in the post neo-liberalism era (post-crisis era), social learning and social reform should become the direction of Chinese planning theory. To them, city planning should help establish a balanced interest distribution.

Although the social features of planning have been recognized since 1978 at the theoretical level, however in practice, planning is still perceived as a scientific technical activity. According to the viewpoints of Zhang (2008), urban development became the primary goal of China in its socialism construction process since the 1980s' economic reform. As an important means of implementing the central policy and allocating resources, planning was mainly employed to promote urban economy growth, enlarge city scale and improve production efficiency. Influenced by the central government's message 'development is the absolute truth,' the pursuit of economic efficiency rather than social equity became the first priority of local governments. Hence, planning turned into a productive force, a rational tool used to accelerate economic growth.

2.3 THE LOCALIZATION OF PLANNING THEORY

It is worth mentioning that during a certain period (approximately from the late 1980s or the early 1990s onwards), Chinese scholars start to explore localized planning theory and try to investigate the nature of planning based on traditional Chinese philosophy. Qian Xuesen, a renowned Chinese scientist, advocated for the study and construction of the "shan-shui" city from the traditional Chinese nature view in the 1990s. Shan and shui refer to mountains and water or rivers, and actually mean the nature. The essence of his advocacy is to pursue the co-existence of the human and nature or the non-human. Base on the theory of "shan-shui" city, Liu and Li (2006) proposed the idea of "planning of poetry conception". They considered the process of planning a process of pursuing and creating a poetic city. Planner should "Grasp the truth of the ecological environment, create a good man-made living condition, and achieve a beautiful poetic world so that people can 'live poetically'". Nevertheless, such explorations are purely conceptual analysis and not aimed at directing planning behaviors in practice.

3 PROCEDURAL PLANNING THEORY

Apart from the exploration of planning nature, the definitional planning theory, theoretical debate on planning process in China is also very essential in Chinese planning theory development. In the time of planned economy, the understanding towards planning process was relatively narrow. The view that planning process referred exclusively to the process of plan formulation, namely a linear process, including steps like 'data collection – data analysis – scheme formulation' was dominant. After the economic reform, new ideas influenced by the western planning thoughts concerning planning process started to emerge. Among all the thoughts, rational planning theory was most influential. In the framework of rational planning theory, planning was a means to find the best solutions, and planners should act like engineers who rationally sought for the optimal answers based on external conditions and requirements (Faludi, 1973). Through learning rational theory from the West, Chinese scholars started to emphasize the necessity of planning cities in a 'scientific' and 'objective' way, and divide planning process into the following 5 steps: (1) definition of problem and/or goals; (2) identification of alternative plans/policies; (3) evaluation of alternative plans/policies; (4) implementation of plans/policies; (5) monitoring of effects of plans/policies.

3.1 PLANNING PROCESS UNDER A SOCIAL PERSPECTIVE

From the 1970s on, influenced by the idea of humanism, new ideas like advocacy planning, transactive planning, and communicative planning arose in the western world. While in China, with the sociality of planning being recognized, Chinese scholars also started to think the process of planning from a social perspective. They advocated that the general public is supposed to play a role in the planning process, and the planning process should be cyclic rather than linear. In other words, the public should participate in each step of the process and between each step a feedback mechanism ought to be established. As with what happened to planning nature, despite the changing cognition of planning process, the gap between theory and practice was evident. According to Zhang (2008), the planning process in most Chinese cities was not transparent enough. Public participation was superficially organized in the form of plan information education and plan consultation such as organizing the public to visit urban planning exhibition hall, soliciting public opinions of plans or projects through questionnaires. Substantive public participation, such as establishing public planning committees with veto right, was absent. For such superficial public participation, citizens might show their passions at the very beginning out of curiosity. Once they find they cannot genuinely participate in the decision-making process but were only accepting the results passively, they started to feel bored and unsatisfied. In addition to examining planning process at the operational level, He (2005) also defines planning process from the perspective of the relationship between participating actors. In his viewpoint, planning process is "an active process where the administrative bodies and other actors (such as legislative bodies, interest groups, social media, citizens, etc.) exercise their power and rights, and a process where different actors interact with each other to set up and achieve city development goal."

3.2 THE ROLE OF PLANNERS

The role of planners is a permanent topic in the discussion of planning process. While in the period of the planned economy, planners are exclusively perceived as technicians who organize urban space strictly according to government's economic plans and then draw the blueprints, a diverse understanding towards planners' role can be identified in the time of socialist market economy. As a Chinese-American, inspired by Western planning thoughts, Zhang (1993) takes the leading role in the discussion of planners' role in socialist market economy. From his viewpoint, against the backdrop where the emphasis of planning is slowly changed from 'efficiency' to 'equity,' planners should give more attention to people instead of plan itself in order to ensure the long-term interests of the whole public, and spend more time on studying human activities. Planners should focus on the public interest, and show no discrimination and favor to any actor in the process. He also argues for the transformation of planners' career training. In his opinion, planning process influenced by market economy is supposed to include more components like legislative procedure, laws and regulations analysis, economic analysis, policy analysis, etc. Hence, planners should be trained to learn the hearing procedure, methods of negotiation, and ways of making a compromise. After Zhang's paper is published, the topic - planner' s role along with planners' values – starts to receive

more attention from local Chinese scholars. Tong (1997) argues planners should not be scientists or people who only focus on painting blueprints. Instead, planners should be formal or informal technocrats. The mission of planners is to apply the scientific technology to the social public behaviors. Simultaneously, Chinese academics even organized several formal discussions on this topic. For example, the leading planning journal Planners (Vol. 14, Issue 1, 1998) published the draft of '21st Century City Planner Declaration and emphasized that planners should "plan, design and construct cities in the spirit of humanism, highlight the social harmony between different cultures and different social groups; avoid social segregation and conflicts, serve citizens without bias, not sacrifice and harm public interest, keep updating professional knowledge and skills […]".

Planners (Vol 16, Issue 4, 2000) also organized the discussion on the issue of 'speak truth to the power', which again brought Chinese scholars' attention on planners' role. Chen (2001) suggests three directions for planners' career development: state planners, registered planners and community planners. In particular, state planners are technical officers who serve the government planning management institution. Their duties include: (1) to speak truth to the power; (2) to endeavor to participate in the decision-making process; (3) to make overall and long-term guidelines for social, economic and environmental development in cities; and (4) to defend public interest and stand up for the weak groups. In contrast, registered planners are planners employed by engineering survey or design institutes. They are technical planning professionals who provide plan, design and consulting services according to the market demand. The career goal of them is to maximize the benefits of project owners without violating laws, regulations and technical specifications. Community planners are devoted to affairs like community management, renewal and renaissance. They are state planners at the community level. Their objective is to seek for long-term and maximal benefits for communities they work for while not infringing the interest of other communities and the whole city.

Zhang (2002) holds the opinion that planning must ensure a balance between the state, market and civil society. In principle, planners are civil servants who represent the interests of all citizens. With the support from communities and social groups, they make suggestions for land and spatial arrangements based on market orientations, and ultimately help achieve the goal of promoting social progress. It should be recognized that the interrelationships between planners and the state, planners and market, planners and civil society are complicated. Although planning is a government activity, planners are supposed to act as professionals who work hard to correct the mistakes of government decisions. Planners must rely on the market when implementing plans on one hand but they are also required to direct the market, and supervise the market on the other hand. Planners should encourage public participation to balance the power in the decision-making process, but they also have the responsibility of educating public and helping improve communities' competence.

He (2003) argues civil society in China is embodied in the flourishing development of non-government organizations (NGOs) and communities. Against such background, planners are supposed to collaborate with citizens and NGOs, and form an organic trinity to promote community development.

4 CONCLUSION

It can be concluded that the development of Chinese planning theory is still in its infancy, and theorists in China give their primary attention to the nature of planning, in particular how to define Chinese planning in the unique context of socialist market economy. Simultaneously, they are concerned about the role of planners as well as the professional ethics that planners should comply with. The focus on definitional theory and procedural planning theory demonstrates that Chinese scholars and practitioners are still confused about the ontology of planning and have not been able to go further in theory debate. They have attempted to get involved into the international discussion on planning theory, yet the differences in contexts and cultures makes a common discussion at the same theoretical level between China and the West difficult. This might be the directions of Chinese planning theory development in the future.

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ID 1407 | LEARNING THROUGH SOCIAL ACADEMIC GROUPS: UNDERSTANDING, SHARING AND CONTRIBUTING. THE FAU SOCIAL CASE

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1 INTRODUCTION

In 1st January 2016, more than 150 world leaders signed a historical pact towards the Sustainable Development of all the countries in the world. The "United Nations' 2030 Agenda for Sustainable Development" is a document composed by 17 Goals and 169 Targets, which aims to put the entire world in a sustainable development in three different dimensions: economic, social and environmental.

The seventeen goals are related to people and eradication of poverty; planet and the sustainable usage of natural resources; prosperity and citizens access to economic, social and technology progress; peace and the end of violence in all forms; and global partnership, strengthening solidarity intra and inter nations.

Since this paper concerns about the play architects and urban designers have in the society, it will focus on the topics which reach us the most and can be practiced within our career:

- Goal 1 - End poverty in all its forms everywhere: the document ensures that, by 2030, all genders and especially vulnerable groups will have access to basic services, equal rights to economic resources and control over land and property. As urban designers, our actions generate impacts both in land access and social development, making us indirect but important actors in the achievement of this goal.
- Goal 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all: the document guarantees the access to affordable and qualified education. As urban planners, we have a play in ensuring all children have a learning place next to their residences and that they are able to commute there safely.
- Goal 6 - Ensure availability and sustainable management of water and sanitation for all: the Agenda ensures the access to safe and affordable drinkable water, the improvement on wastewater treatment and recycling. Besides, it wishes to promote more efficiency in water use and protection to ecosystems related to the water cycle. Strictly related to land ownership issues and city spread over environment protected areas, architects and urban designers are directly responsible for the success of this goal.
- Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable: the document ensures the access to safe and affordable housing and services, as well as the upgrade of slums to formal residences. It also brings attention to the importance of integrated planning and management, and participatory decision making.
- Goal 17 - Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development: this is the most important goal, since it is not an actual aim but the main method to achieve all the sixteen commitments made before. Through the Global Partnership in all levels (finance, technology, building, trade, accountability) and with all actors (governments, private sector, civil society, academia, philanthropic organizations, volunteer groups, the United Nation), the accomplishment of this Agenda is directly related to this globalized commitment and help.

The document is very embracing and gives more emphasis on international mobilization and finance support in order to help poorer countries to reach the goals. Even though, it leaves space for interventions in all levels, evoking groups from different scales and backgrounds to be responsible and make their part: "Our journey will involve Governments as well as parliaments, the United Nations system and other international institutions, local authorities, indigenous peoples, civil society, business and the private sector, the scientific and academic community – and all people." (United Nation, 2015, p. 12)

Seven days after this agreement, a much smaller group, formed by less than 30 students of the School of Architecture and Urbanism from the University of São Paulo, was also making a commitment with a document with more similarities with the UN's Agenda then they could imagine. January, 7th 2016 is the date of the foundation of FAU Social, a new model of academic extension, created by undergrad students, with no links to professors or university staff, aiming to contribute with society, raising accessibility to architecture and technical support to needy communities, though partnerships and mutual collaboration.

2 THE EMERGENCE OF FAU SOCIAL

In the past decade, Brazil saw the rise of several groups called "coletivos urbanos". They are usually a group of people with common interests, united by social medias and with no internal hierarchy, who want to interfere in the city somehow, bringing more awareness of public spaces to general people, thought small interventions such as painting streets, planting trees and improvising urban gardens, promoting free "walking tours".

Following this tendency, similar groups started to grow inside universities, intending to combine this desire of improving the city with the knowledge learned in classroom. In the University of São Paulo, where FAU Social was conceived, several other coletivos arose, such as FEA Social and Poli Social, created respectively in the School of Economics and Administration and School of Engineering.

The idea of FAU Social emerged in the beginning of 2015 and one year was necessary to fortify it, define goals and principles, research and organize its structure, call for new members and accomplish the pilot project. According to Lucas Piaia, one of the cofounders, in an interview to Jornal da USP (USP Newspaper), the concretization of the idea was inspired in this already existing coletivos. "We got in contact with other social entities from USP, who already existed, and started the work of adapting this knowledge and applying it to FAU's reality" (Gomes, 2016).

FAU Social main objectives are to put into practice the knowledge obtained in the classroom, reinforcing the social role of the university, informing and promoting the right to the city, fomenting local appropriation, and promoting exchange of knowledge. Besides, its central way of acting is through partnerships, much in agreement with UN's 2030 Agenda.

This goals and values are compiled in its statute, were eleven objectives are enumerated: (i) Put in practice the university's social role through the student's organization; (ii) Develop the project through a joint construction by members of the entity and its target group; (iii) promote the requalification of spaces; (iv) inform citizens of their rights; (v) promote well-being activities in communities; (vi) promote the right to the city; (vii) promote actions in agreement with real demands, among our assignments; (viii) promote autonomy and empowerment inside the groups we act; (ix) promote the intermediation with other urban agents; (x) promote the exchange of knowledge, experience and technique; (xi) act directly or via partnerships with NGOs, civil associations, through an analysis, selection and definition of an strategic plan. (FAU Social, 2016)

I joined the group in March 2016, in the first call for new members, participated for two semesters, being part of the Project Group working in the Jardim Jaqueline Project, as will be explained further on. In 2017, I had to end my active participation and today I am part of the counselor board.

3 THE FAU SOCIAL ACTION WAYS AND STRUCTURE

The organization, or entity, as we call it, acts in two different types of projects, the One Time Actions and the Project Groups:

- One time Actions are activities were everyone is invited to participate, members of the entity or not, and their objective is to revitalize, in one day, a place that impacts in a vulnerable group life. One example was the AplicAÇÃO, a two days' intervention (in this case, two days were needed, but people participated in just one day or in both) held in September 2016, that revitalized the open areas of the public school Aplicação, located inside USP campus, in São Paulo, Brazil.

Much more that qualifying a space, this type of intervention has the objective of connecting users of the space, empowering them and creating a sense of belonging.

- Project Groups have the purpose of making deep intervention in spaces where more technical knowledge is required. They are held by groups of around 10 people and last one semester (four months), with the possibility of extension for another one, through the approval of all members. In 2016, first years of activity, three projects were conducted at a time; in 2017, with the entrance of new members, this number could be increased to four. The entity is organized in a horizontal structure, with no president or hierarchical relationship.

Instead, there are five administration areas (macro areas) responsible for specific subjects, with two to three sits each, that are rotated among all members. The macro areas are:

- Public Relations (PR) – responsible for seeking new projects, representing the entity in formal events, communication with other organizations, and settling practical subjects with university's staff.
- Creation and Branding (C&B) – responsible for creating visual communication material, publishing in the Facebook page, compiling and keeping the photography bank and editing flyers and presentations.
- Human Resources (HR) – they organize the General Reunions (as will be explained further ahead), give feedbacks, organize calls for new members, and concern about motivation and commitment of all members.
- Resources Management (Resources) – responsible for developing tools to raise funds, such as selling lunch is special events in the university, and keeping transparency in accountability.
- Events – They organize the One Time Actions and promote internal confraternization parties, such as picnics and meetings.

Due to its absence of hierarchy, all decisions are taken in the General Reunions, held every fifteen days regularly and in extraordinary sessions when needed. Before the meetings, the topics to be discussed are published in one of the used medias (usually Facebook), so members can come prepared.

Today the group has 53 active members, some working only in the macro areas, others just in project groups and a few in both functions. Since the workload in the architecture bachelor is large, having FAU Social as an extra activity requires a lot from students. Even though, most of them show real commitment to the proposed projects and sacrifices leisure hours and weekends.

In its third semester of activity, FAU Social already delivered, besides the One Time Activities, five projects and have four more ongoing. The projects concluded until now are: (FAU Social, 2017)

- Casa do Estudante (Students' house) – The house receives students with low income who study at USP Law School. The building is in very poor condition and students are requesting its renovation. FAU Social participation was to make a diagnostic of the renovations needed and make a conceptual project, empowering students to claim for the renovation.
- Cairbar Schutel Assistencial Center – The main effort of the project group was to make the Asbuilt of the center, allowing the staff to regularize the edification. The non-profit organization, that receives vulnerable children, was now preparing itself to also welcome elderly. For this reason, the team also made the design for a new kitchen.
- Vila Capriotti Missionary Project – This NGO, situated inside the slum Murão (Carapicuíba, SP, Brazil) works with 80 children, from 3 to 12 years old, organizing cultural, learning and sports activity. The Project consisted in the redesign of their leisure area, concerning the water drainage in the patio, the necessity of a storage room and the optimization of the patio.
- Education Week – Project organized in partnership with the School of Education from USP, the goal was to develop the Visual Communication to the academic event Education Week, organized by students from that institution.
- Jardim Jaqueline – The Project Group entered to add forces in a team fighting to transform a vacant lot in a park, inside the slum Jardim Jaqueline (São Paulo, SP – Brazil). This project will be our object to deepen this analysis in the following sections.

4 THE JARDIM JAQUELINE PROJECT

Jardim Jaqueline is a slum of approximately 111.000m2 (Zamoner, 2013, p. 39) that housed, according to the Public Defense, 2.867 families in 2012. (Zamoner, 2013, p. 20) Its occupation started in the decade of 1960 and had the most significant expansion in the 70's and 80's, period when São Paulo passed thought a large industrialization and migration process. Today it is politically organized through the association Associação União dos Moradores do Jardim Jaqueline (Jardim Jaqueline's Union of Residents Association), with the leadership of the community members Nivea and Bete, both very respected among residents and well-articulated with local politicians.

In 2010, the public defender and former student of FAU USP Tatiana Zamoner started leading a pioneer project: the land regularization of the entire neighborhood. The work started with a vast research and the registration of all constructions in the area. The data and experience collected is synthetized and problematized in her Master's thesis, developed in 2013 .

Through Tatiana's relationship with the Jardim Jaqueline leaders, the university approached the community, in order to develop ideas to the urbanization of the slum. The first approach was in the course Urban Design, in which students proposed a requalification for the area, intervening in the most vulnerable lands. This project was held in 2013 and the design of the student Daniel Collaço evolved to an extension project, with supervision of the professor Dr. Karina Leitão and the other bachelor student Willian Valério.

By this point, four years have passed from the start of the regularization process and no apparent progress had occurred. The community has lost belief in the power of governances and university in helping them and, in this context, the extension team, with the advice of Tatiana, decided to change their project focus and work in a much smaller area, designing a park in a public terrain with approximately 2,400.00 m2 in the entrance of the neighborhood. This project could work as a starting point, giving the community something easier to visualize and accomplish, keeping the mood to fight for the bigger steps.

The project, realized in one year inside the Laboratory for Housing and Human Settlements LABHAB and discussed with the community leaders, delivered a conception plan of the park to the association, who used the design to make pressure among local politicians to finance its construction. (Figure 1 and 2)

FAU Social joined this partnership in 2016, when Nivea (the community leader) got in contact with the old extension group signalizing she got interested people inside the local government, who could sponsor part of the construction. Because the extension program was over, and Daniel and Willian would continue this work as volunteers, they and LABHAB made a partnership with FAU Social in order to add forces and help making the park feasible.

5 FAU SOCIAL GOAS AND ROLE IN THE PROJECT

Initially FAU Social Project Group had a workforce of 11 people and one semester to help in the construction of the park. Our internal goals (FAU Social members only) were to be able to conclude the implementation, through the support of stakeholders; and to apply concepts of participatory project learned in classroom, connecting and exchanging experience with the community. Quickly we realized that our goals were very ambitions and both process would need much more than four months.

In practice, we extended the project for one extra semester, working for almost one year with LABHAB, the teacher Karina, Daniel and Willian, as "the university group", with no clear distinction for the other parts involved. Our participation can be divided in three work fronts:

5.1 THE PROPOSAL REVIEW

Two circumstances forced us to review Daniel and Willian's project: the method of construction, through sponsors; and the aim to broad the community's contribution to the design.

The first job made by the team was to budget the costs of implementation (first knowledge obtained, since academic projects usually don't take price into consideration). We reached a number of approximately R$500,000.00 (€137,000.00). So far, the community had obtained a budged of R$50,000.00 (€13,700.00),

mobilized by a councilman to install fitness equipment, that would be implemented by the construction department of the local government. Luckily, one of the architects responsible for the department, Ana Paula Pereira, was also a former student from FAU and related to the project. At this point, we were already four parts involved: the community association, the academy (FAU Social + LABHAB + Daniel and Willian), the construction department and the councilman.

With no money to complete the project, Ana Paula and Nivea's idea was to raise funds from private stakeholders. Jardim Jaqueline is well situated, having a bid from a shopping mall and a unit of a home improvement retail store as neighbors, who showed interest in financing parts of the park.

Our play was then to revisit the project and divide it in different parts, that could be budgeted and constructed separately. We had to redraw the park several times, making it smaller and using cheaper materials, trying to fit it in the available budget. When this article was written, only one private stakeholder had actually contributed to the project: the Bimbo Group, a company from the food industry, had financed the construction of the sports court and a leisure benches area.

The second reason to rethink the project was to contemplate the community's wishes, collected during the approximation activities, as we called the meeting realized with residents. As we will see, both the activities and the possibility to make a joined designed were not as we expected. Due to the lack of money, the only desire we could add to the plan was the sports court; other important equipment, such as toilets, were not included.

The final design was divided in five parts: (i) the entrance square, were the topography is very complicated; (ii) the playground and fitness equipment, the first part constructed and sponsored by the government; (iii) the leisure area and sports court, constructed in 2016 and sponsored by the private company; (iv) the arena theater, which terrain was disfigured during the construction of other parts; (v) and the vegetable garden, situated in the steepest terrain.

5.2. DIALOGUE WITH COMMUNITY AND THE IMPLEMENTATION OF THE PARTICIPATORY PROJECT:

The main goal of FAU Social team was to approximate the community, who would actually use the park, put them in the design process and create an affective connection with the area, creating the sense of responsibility towards the project and its maintenance. Our initial idea was to create a series of activities regarding not only the project but important issues such as garbage control, the use of the public spaces and healthy food (part of the park project is a common vegetable garden).

In a conversation with the Prof. Dr. Catharina Pinheiro, who has a lot of experience in participatory project, she suggested us to realize playful activities using humanized designs and drawings of what the square could become, make a party to choose the name of the park and baptize it. She also suggested us to contact with local schools and other entities, an easier way to approach the residents.

At this point we understood the difficulties of making a participatory project. It was really hard to combine everyone's agenda: the team, the community leaders, the politician involved. Besides, the bidding process takes time and the construction would not start in the first semester of 2016, as we wanted.

Another complication was the diversity of interests of each part. We, as academia, were trying to implement a research and wanted to hold the approximation activities preferably before the beginning of the construction. The leaders, on the other hand, ground their recognition in the community through accomplishing the ideas they are involved with. Therefore, they did not want to start advertising the park with no guarantee that it would be finalized. They were not wrong, though, considering the number of unfulfilled promises they receive. Still, this disconnection forced us to summarize our activity in a one-day breakfast, before the construction started.

Despite the lack of time to advertise it, just one week, our group and the leaders leafleted and announced the event. The consequence was a number of participants not as large as we wished, around 30 came to the breakfast. Even so, we classified it as positive, since important things happened: it was the first step to show some parents the possibility of having a new leisure area for their kinds; people sang local songs; we

could make an activity with the kids where they give ideas; and, the most important part, we met two coletivos which worked inside the community, who helped us a lot (and are still helping) to foment the use of the area. The groups Progueto and Batukaí teach music to children inside the community and held with us the second proposed integration activity. (Figure 3 and 4)

With the beginning of the second semester, the construction started. As part of our appropriation plan, we wanted to organize a second event, to show the residents what was being done in the terrain. Once again, the difficulties in combining agendas, the uncertainty of the exact construction date and, a last aggravating, the arrival of a rainy period, forced us to change our plans and simplify the activities. At the same time, we started contacting the surrounding schools, following the suggestion given from the teacher Catharina.

Combining all these elements, the solution was to realize the activity in the municipal school EMEF Viana Moog, in November 2016. The concretization of the event was a real lesson of commitment, organization and improvising for all students. We organized three activities: the Affective Mapping was made with a giant Google Earth picture of the neighborhood where the kids had to identify their school, the land of the future park, the main landmarks of the neighborhood and their houses. This game was a real success, with children surrounding the map, wanting to find the proposed spots. (Figure 5)

The second activity was a music workshop given by the Batukaí group. They brought several different instruments and taught notions of rhythm and sheet music.

We had problems with the third activity and, in the day before the event, we knew it would not happen. At this point, the group learned a great improvising lesson and organized a Muay Thai workshop, held by one of FAU Social members. He explained the philosophy of the sport and taught a few techniques.

In conclusion, this second event had a much broader purpose, to show children how architects and urban designs work, who were we and what was our university, what are maps and blue prints and how to look at them, besides presenting the project of the park.

The last event was much more organized by the community leaders than by us. Following teacher Catharina's advice, they made an election to choose the name of the new park. The winner name was Praça Só Alegria (Only Joy Park). The event was then the inauguration of the park – the two parts constructed so far - and its baptism, with a cake and beverages also sponsored by Bimbo.

5.3 DIALOGUE WITH THE LOCAL MUNICIPALITY AND MONITORING THE CONSTRUCTION:

The construction of the park was made by two different private companies, one hired by the construction department and in responsibility of Ana Paula and other contracted by Bimbo, which responded to both Ana Paula and the private company. To our group remained the responsibility of monitoring the work made by the companies, because Ana Paula could not stay in the site all the required moments. Since we could not make an executive project, we were responsible for ensuring that the project was being done as we imagine and giving instant solutions for elements not explained in the blue prints. (Figure 6 and 7)

Several hindrances made this task more difficult than we imagine. First, the tractor entered the area and excavated the plateaus in different locations, not following the project. We got very frustrated, but later on we understood the reason: our topographic survey was not accurate and our propose would not work. Ana Paula, with much more experienced eyes then ours, saw that and asked the men to change equipment locations.

The second hindrance: we were supposed to give advice for workers from a private company, that had no idea who we were and had no connection with the entire process. In consequence, everything that we saw in disagreement with the project had to be discussed with Ana Paula, who would communicate it to the coordinator of the project inside the contracted company, who would talk to the workers; all very busy people. It meant that our requests would become an action in weeks or, what most frequently happened, were never contemplated.

Still a third problem made this process harder: most of the students did not have enough experience or knowledge to decide things instantly or even to see problems in the construction site. Ideally, less experienced colleagues should always monitor the site following more experienced peers. However, the lack of time and our rotation scheme to visit the park made some unexperienced students go by themselves to monitor the construction.

Even though the dialogue with sponsors and local municipality was not as wide and harmonious as we dreamed, the experience put everybody's feet in the ground and showed us the real possibilities of working in partnerships. Besides, everyone learned more about the day-by-day in construction sites and the real concerns needed when designing. One good example was the space needed to the tractor to move around. Not planned, he had to open a new plateau, which was later used to the leisure benches area.

6 THE LESSONS LEARNED

All projects held by FAU Social had the purpose of complementing the knowledge obtained in the university and approximating the higher education to people who cannot access it. In the particular case of the Praça Só Alegria, lessons were learned through the success and failure of ideas.

The first taught to be highlighted is the shift in the relationship with the architectural project, especially in urban design. Vitor Miceli, one of the members in this project, told us his impression, in an interview given to this research:

"The project works as a tool to reunite people with different visions and different ways of acting towards a final ideal, that not necessarily is the same to everyone, but that walks in the same direction (through the project). It becomes a type of marketing material, not in a bad sense, but a method to 'sell' and idea, a purpose. (…) The project won't be constructed to the letter and we have to detach ourselves from the drawing we made."

Everyone broadened their understanding of a Master Plan: much more than the final project to be constructed, it is an instrument of discussion, advertisement and learning. We revisited the plan so many times that, when going to the construction site, we had it in mind and could make the necessary changes. For example, when the plateaus changed and we had to decide how to relocate the equipment, we could do it, because we had previously studied each part of the terrain and the necessities for each equipment.

Another important lesson was the challenge in implementing a participatory project. In the university, we study the concept and the tools to develop it, but in practice, everything happens different than expected. Specially talking about students' intervention, as it is one of the proposals of FAU Social, the first hindrances were our lack of money and time to maintain the planned activities. In order to really implement the concept, we wished to go to different schools in the neighborhood, distribute flyers about the project, advertise the events several weeks in advance, have tools, games and gifts to call people's attention. Instead, each member had around two to four hours in the week to attend the meetings, do field survey, redesign the project, create the activities and make the advertisement material.

In relation to financial support, the partnership with LABHAB was crucial, since they sponsored most of the materials needed and some food for the activity. If the university had some program to finance this new group's formation, maybe we could put in practice many more of our ideas. Having the second activity day in a public school was also a great way to enable it, because they gave all needed support: the roof, teacher's supervision to the children and the meal.

To Vitor Miceli, the interaction with the general people from the community was weaker than he expected and he attributes this to the lack of time and difficulties in combining agendas. "If maybe we had split the group in two and one on them had worked only immersed in the community, seeking demands and legitimizing our acts, there is no doubt that the project would be much better, both in its acceptance and its maintenance, what is missing now."

Most of the students were, for the first time, acting in a construction site, doing data survey, studying different material and caring about construction methods. The project was then a first approach to all these

aspects, combined with the experience of dealing with construction workers. Since FAU Social's idea is to always act in real situations and generate a product, working with more experienced people, such as Daniel and Ana Paula, was an important step, considering that in future projects these students might be expected to be the ones with the technical knowledge.

7 FINAL CONSIDERATIONS

The usage of the park was intense since its inaugurations. People from all ages started to exercising when the first sunbeams appeared and, even at night, people would use lanterns to illuminate the equipment (the park still does not have public lighting) and enjoy the park. Some residents even reunited themselves to paint the wooden toys from the playgroup. (Figure 8 and 9)

Six months passed from the inauguration, however, we do not see the park we were expecting. It is still widely used, but the maintenance is very poor. Benches are graffitied, some equipment in the playground are broken and the court's fence is partially in the ground. This situation makes us question what did we do wrong, what could have been done better. (Figure 10)

Firstly, we attribute the situation to the bad quality of materials and construction methods used. From the beginning, we questioned the chosen techniques, such as the use of non-framed concrete and not welding the iron structure of the fence. Since sponsors did not have much money, they selected cheaper materials, to purchase more equipment.

The second possible reason, more related to our participation, was the inefficiency of the participatory project. It did work as an advertisement, but did not take the next step: create the sense of responsibility towards the space. It was also not effective in clarifying our role in that process. For the residents, we were related to the government and responsible for the maintenance of area. We attribute this fault to the lack of time and knowledge in both sides. The appropriation of an area takes time and the participatory project should be something continuous, where both the community and us – the technical support team – learn to stablish goals, methods and limits.

I would like to highlight that none of these setbacks are reasons to avoid this type of partnership. They are all elements to be studied in order to improve these actions. The union of all actors was a pioneering project, which enabled the construction of a park desired by the community and allowed the exchange of experiences in many levels.

Even though the final form was not what we dreamed, it was something inside everybody's expectations, teaching us what an urban project really is, with several interests and hands working together. In the end, all parts benefitted from the results: The community earned a leisure area, gained new mood to fight for their bigger cause – the land regularization gave a big step in 2016 – and learned more about the role of urban planners. The university could work for the public good, as it is expected to. The local government made possile the construction of a new park and experimented a new working model; and us, the students, got in contact with a real project, with real demands, and real problems, being challenged in so many ways and learned from so many sources. (Figure 11)

8 PICTURES

Figure 1 – Original Park's Plan
Design: Daniel Collaço and Willian Valério

Figure 2 – Original Terrain from Jardim Jaqueline's Park "Praça Só Aleguia" Photo: Daniel Collaço

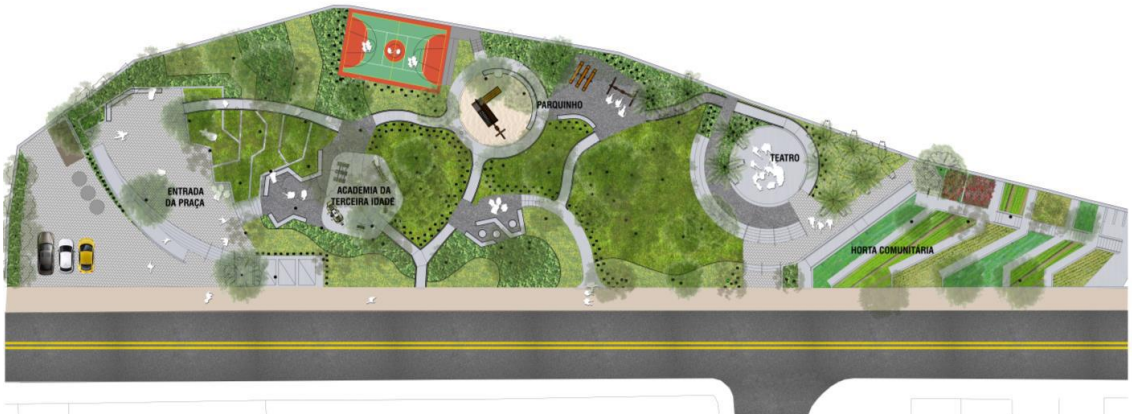


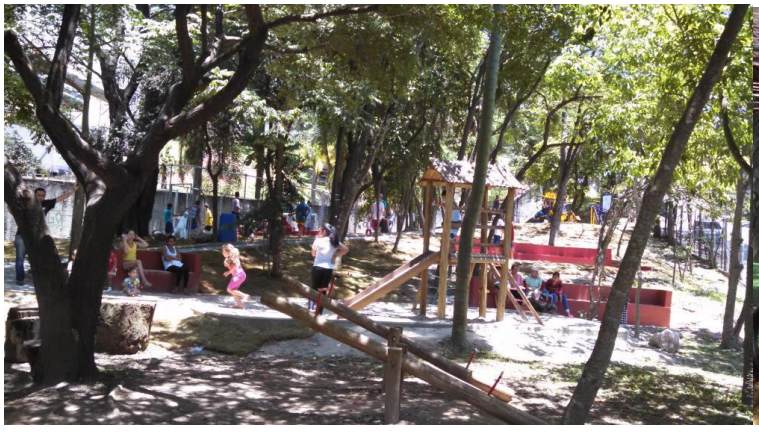
Figure 3 – Humanized Plan of "Praça Só Aleguia" – Used in the activities with the community
Source: FAU Social collection

Figure 4 – Breakfast in Jardim Jaqueline
Source: FAU Social collection

Figure 5 – Activity in the school
Source: FAU Social collection

Figure 6 - Construction of the Park in Jardim Jaqueline
Source: FAU Social collection

Figure 7 - Field work at Jardim Jaqueline
Source: FAU Social collection



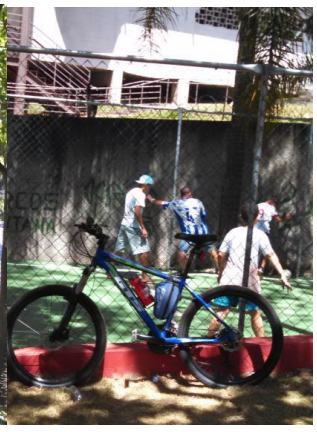


Figure 8 and 9 - Inauguration of Praça Só Alegria. Pictures: Nívea Santos

Figure 8 and 9 - Inauguration of Praça Só Alegria. Pictures: Nívea Santos

Figure 10 - Inauguration of Praça Só Alegria. Pictures: Nívea Santos

Figure 11 – Current situation of the park in May 2017. Pictures: Vitor Miceri

Figure 12 – FAU Social Project Team at Só Alegria Park Source – FAU Social

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ID 1436 | PLANNING EDUCATION IN THE CASE STUDY OF THE COURSE OF METROPOLITAN PLANNING IN ISTANBUL

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1 INTRODUCTION: TO FORGET BEING A CITY PLANNER

After completing my urban planning degree in early 1990's, I started to work in local government. It did not take me long at all to notice the great gap between education and practice, just like Tasan-Kok et al. (2016) pointed out recently. Every day, drawing cities anew that were never approved of as they are anyway and putting my signature under urban failures were all I was doing in the municipality. But the person who kept writing minutes and petitions in the Chamber of Turkish Urban Planners in opposition to practice meetings; that was also me. Besides, the same person was editing theoretical articles of academicians for a local governments journal. Despite their value, the signatures put under documents of the municipality kept losing effect once they entered the city, making them resemble drops in the ocean. They were being imprisoned within the limits of the role planning was able to play in urbanization (Campbell and Fainstein, 2005). And what is more, that same pen used blood as ink most of the time. The production of inequality never slowed down in the process of capitalized urbanization (Harvey, 2016). The meetings of the Chamber amounted to beating the air, with the rare exception of a concrete outcome: a petition. Because filing charges against a planning project, without even knowing if you will win the case or not, could be described as participation in urban planning back in those days in Turkey. The journal's range and hinterland, on the other hand, was limited like that of an "island", just as its name suggested. I was educated to be a planner, I wished to plan cities, I believed that I was able to change cities, that I was able to change the world. However, I was weak. So I returned to the academy, as a field of power, because the educational environment could give me a chance to forget that I was a planner myself. At that point of my life, I was far away from and oblivious of using reflexivity tools like Bourdieu did in Homo Academicus (1988).

It has been 25 years since I graduated as a city planner. By writing this article in 2017, the 25th anniversary of my graduation, I aim to contribute to the improvement of planning education. I have picked my own educational activities as a research topic and in this paper I present the background, the theoretical framework, the methodology for my research, the data I obtained and the conclusion I came to in the end.

2 RESEARCH BACKGROUND, JUSTIFICATION, RELEVANCE AND OBJECTIVES: DIFFICULTIES AND POSSIBILITIES IN PLANNING EDUCATION

In general, planning education has three main components: spatial planning education, expertise-oriented planning education, professional competence (Gülersoy, 2007). Planners are at the centre of this categorization, which causes a major question in planning theory to be missed: "Who plans/makes cities?" Over the course of hundred years, planners have been a minority among those who plan/make the cities and have had limited influence on the result as well. This situation shows how important it is for planning education to involve a broader part of the society.

The shifting role of planners within the urbanization process and with related professions can be described as follows: From the proclamation of the Republic (1923) until the rapid urbanization phase which took place after the Second World War (1945), the exposed face of Turkey's modernization process, namely the cities were planned for the most part by foreign masters of architecture and planning. Then, planning entered a phase of institutionalization especially starting from the 1960's until the 1980's. While planners were busy with performing scientific activities in collaboration with demographers and sociologists in the newly-established educational and governmental institutions, cities got built by squatters. Following the year 1980, planners either had to resort to the skills of cartographers or, more often than not, became bankers while they tried to draft the improvement plans for these already constructed cities (in accordance

with the new construction repentance laws). In the 2000's, the number of graduates with the title of "planner" have increased in parallel with the also increasing number of city planning departments in universities. Additionally, jobs (types of labour) became varied in Turkey for planners: They can be employed as technicians, project directors, realty experts, academicians, city councillors, or maybe even as planners in private or public sector. In the end, they take their place among those who plan/make the cities. Well then who are those who plan (make) the cities? Uncertain. If you are an educator in a university, regardless of the program you teach, the student you are facing is definitely one of those "makers". Either with a little, or a big influence.

But who are you? Who is the educator? If you are licensed to teach planning, you are supposed to provide the students with the characteristics of a good planning program. The Royal Town Planning Institute specifies more than ten (10) characteristic features for a planning program to be considered good. Improvement of forecast and creativity in spatial planning, development of guiding strategies for implementation, as well as instructions on how to acquire skills for decision-making, mediation and efficient sourcing are among the criteria highlighted by the institute. The students get equipped with abilities to make spaces based on public interest. The educators, on the other hand, try to transfer these skills, values and knowledge to their students.

After completing their education, planners begin their duty where they are going to do their best. But as Kristina Nillson, Andrea Frank and Artur Rosa Pires point out, the conditions in today's European cities contradict with this duty, since the economic uncertainties combined with the problems caused by growing migrant and refugee influx are taking their toll on both the urban residents and administration, where public services keep failing and land use plans result in conflicts. In addition to this, social segregation tends to increase as a consequence. Further to that, owing to its social and economical texture and also the political processes it has been through, compared to European cities, Istanbul presents much more severe conditions that could be described as penal servitude for planners.

This text discusses the possibilities and the hidden hardships of teaching planning, using the Istanbul Metropolitan Planning course as a case study.

3 THEORETICAL/CONCEPTUAL FRAMEWORK/HYPOTHESES: GUIDANCE OF URBAN PLANNING THEORY IN PLANNING EDUCATION

Since the beginning of 2000's, I have been teaching in the Local Governments and Decentralization Master's and PhD Program, Institute of Social Sciences, at Marmara University. I also have been giving lectures on urban planning as part of the Global Cities and Istanbul Studies Master's Program since its launch. In the first years, abiding the course's place in the curriculum, I used to prepare a standard annual plan under the title of "urban planning theory and practice". The students taking part in the program formed a both demographically and professionally heterogeneous group consisting of graduates of various disciplines from engineering to political sciences. Professionals, experts, bureaucrats working in central and local government, politicians, the unemployed, who were elected or pursue academic careers, and even planners here and there, were among them. In the class, I was expected to introduce urban planning education to these makers of cities. The unit list of the class started with descriptions of fundamental urban and planning concepts and concluded with current debates on the agenda of planning in Istanbul. I was talking about the city as the subject and about decision-making mechanisms as the method of planning. The development of planning theory in a nutshell and what had to be done in order to solve urban problems mainly based on comprehensive planning were also included in my schedule. After all, if urban plans could be realized, we would have livable, sustainable and equitable cities. My aim was clearly "good urbanism" and I had my "tools of urban planning". All I had to do was to use these tools according to the rules I was teaching (and had been taught). As a result, my students agreed on asking "why are these plans not being/can these plans not be implemented, what a relief it would be if they were!", within academic limits and under my authority. This point of view involved theory taking on the role of rule-making for the practice: If practice would conform to theory, the problems would be gone.

However, it was generally accepted that theory and practice were disconnected. There were heated debates going on about planning theory, the development of planning as a discipline, its relations with other disciplines, the legitimacy of the action of planning, the field's boundaries/limitations and its ideal and

actional foundations (its values). While theory was taking on the role of rule-making and leading for practice most of the time, it also could be its echo occasionally. The disconnection between theory and practice was usually defined as a difficulty to overcome, but was also examined in terms of its functionality for educational purposes (Campbell and Fainstein, 2005).

In Sandercock's words, "In the late 1990's the world of planning education and practice uneasily straddles an old planning paradigm, and one that is struggling to be born, in a way that is evocative of Matthew Arnold's great mid-nineteenth-century image of wandering between worlds, one lost, the other yet to be found." (Sandercock, 1998). Those were the years how planning, that had removed the differences of the postwar era, was abandoned and the transition of cities from being metropolises to cosmopolises were talked about. Arguments were starting about how the space of flows could be included as a part of planning. Jane Manning Thomas had made the call for educating planners for unified diversity for social action back in 1996. In the world of postmodern era, theories of planning were diversifying and developing based especially on the communicative action approach by Habermas (Allmendinger, 2009).

The differentiation of discourses in planning education were triggered by the changes in the field of planning theory. As a planning teacher, I was following how planning theory was evolving. Adopting the communicative rationality paradigm was an appealing idea as well, but I had my doubts about types of participatory planning (communicative planning, argumentative planning, collaborative planning, …), because the reason I came back to the academia was how all the participatory planning experiences I had "outside" left me disappointed, after all. The notion of being a "planner worth her salt" triggered wandering away from participatory practice and the "public interest" basis, while being capable of, "having command" of theory triggered desperation in practice. As I was swaying from one side to the other, planning education conferred the inefficacy and disgrace of being a planner on me rather than the opportunity and strength of a "thinking practitioner" or "practical scientist" (Campbell and Fainstein, 2005).

For my educational activities, I had two basic presuppositions, that were derived from theories of planning and education. "If a capable (group of) planner(s) have adequate background information about what a city is, they are able (supposed) to plan a good city" was the first one, while the second went like "If the educator has adequate knowledge (has a good grasp of the subject), they can (should be able to) answer the students' questions in class." While the first aims to improve the notion of the "good and wished-for city as we know it", the second aims to do the same for the "good and wished-for subject". The responsibility and the authority belongs to the planner and educator. If you have the adequate knowledge and skills, you will (might) be able to attain the aims (imposed on you). In other words, if you have the adequate knowledge and skills, the problem might be solved "in the way that it is demanded from you".

Adhering to these presuppositions, I experienced that the fuller my luggage was packed with knowledge, the more prepared I was to give quick answers. Both the questions and their prepared answers increased in number over the years. I knew and gave the answers to students' questions; I was teaching them, and they were learning. However, the answers would not solve the problems. I have not been able to reach the high level of "adequately knowing the subject of urban planning" then, and I still am not able today. Istanbul is being regenerated day by day. Every day, urban studies are being developed. But I do not, cannot have adequate knowledge. I will repeat this in the ontological, epistemological and methodological contexts: I cannot know. This research is the result of a planning educator confronting the state of not being able to know. It is the product of the acceptance of uncertainty.

Along with this acceptance, I reviewed my theoretical orientation and restructured my educational activities accordingly over the years, which was not something that happened overnight and is actually still going on. I tried to read Habermas in company with its criticism. Among theories of planning, I adopted the idea of turning my classes into laboratory in order to functionalize Haley's inclusive approach which improves multicultural communication and learning capacity, based on collaboration that strengthens mutual understanding and trust. I looked through Collaborative Learning, a topic included in the pedagogical formation course I took in 2004. I brought Thomas Gordon's effective communication approach into class with me, whom I was introduced to during my formation, but actually internalized thanks to the Effective Parenting courses I took (Gordon, 2001, 2002, Birsen, 2015).

I entered the classroom not to convey what I know, but to discover, to understand, to find meaning and to explain what I did not. I was there to research. I chose to be a researcher planner.

4 METHODOLOGY: THE CASE STUDY OF THE COURSE "METROPOLITAN PLANNING IN ISTANBUL"

While keeping track of my educational activities by the way of participant objectivation suggested by Bourdieu (not to be confused with participant observation) during the last years, "I have always seen myself as an object, but in the meaning of representing a category, not of narcissism," in his own words (2003, 205). I cared about his promise of the possibility of finding places of real freedom (which are already very scarce) and generating a modest, practical morality if we carry reflexive sociology into action. I turned my classes into a research topic and and submitted a research project suggestion to the Scientific Research Projects Committee of Marmara University. This first attempt of mine was completed with a paper entitled "How Has the Problem of Research Evolved in Urban Studies?" (Marmara University, Scientific Research Projects Committee, project no SOS-D-130416-0151). Even if interrupted every now and then, I continued with the necessary systematic work for my research, while planning my two master's classes and teaching the others.

As part of this research, I collected data under the categories of students, instructors, pre-class preparations, contents of the course, teaching method, class discipline, teaching activities, students' reactions and questions and student & instructor assessment & evaluation, using the participant objectivation method. My techniques for compiling data were varied, such as standard forms, surveys and interviews. Then, using these data, I reached some conclusions.

Data on students were collected over time: The documents they submitted for the master's program application and their performances before the jury were the initial source of data. The second source was the forms I prepared according to Vygotsky's (1998) conceptualization of cognitive readiness, which they had filled out at the beginning of the term. There were five sections in these forms: 1. The student's demographical information and address. 2. Their relation to the program and the course. 3. Their experience of spaces and places. 4. Association game about their knowledge of fundamental urban and planning concepts 5. Foreknowledge of scientists and sources in the field of urban planning. And my third source of data was the documents from various classes, where the students took notes or drew about the current agenda, their spatial experiences and conceptualization in spontaneous exams. Additionally, written and oral term papers and examination documents were basic sources of data on students.

Information about the instructor and the class was collected from the instructor evaluation forms students had filled out, the class evaluation surveys of the department, the comments delivered to fellow instructors or to the administration and from the instructor's diary. In addition to the above-mentioned material, lecture notes used by the instructor, forms given to the students, the course plan submitted to the institute and the class project report by a student who compiled their and their friends' notes were used to acquire data on the contents of the course, the educational activities and class discipline.

While techniques for data varied, a case study has been done methodologically based on participant objectivation. By comparative evaluation, data were turned into findings. Due to the qualitative approach of the study, the findings are presented in the end, in the form of potential hypotheses. A critical and reflective stance was adopted throughout the whole study.

5 ANALYSIS AND DISCUSSION OF RESULTS/FINDINGS: WHAT A RESEARCHING CITY PLANNER HAS LEARNED

The Metropolitan Planning in Istanbul lectures subject to this case study are part of the curriculum of the Global Cities and Istanbul Studies Master's Program of the Institute of Social Sciences. The program offers both options of completion with or without thesis. Among the students who receive acceptance to the program without thesis, the ones who are permanent or temporary employees of municipalities or subsidiaries and participations receive automatically 75% scholarship according to the protocol signed by the Turkish Association of Municipalities and Marmara University. This collaboration of the university and the association of local governments was able to activate the program to guide the city makers of Istanbul, who are in charge in local governments.

The History of Istanbul, The Administration Structure and Governance Process in Istanbul, The Economic Structure and Development of Istanbul, Metropolitan Planning in Istanbul, Comparative Metropolitan Governments, Scientific Research Methods are the classes of the first term. The class schedule of the second term constitute of Istanbul's Culture and Aesthetics, Istanbul and Environmental Management, The Demographic Structure of Istanbul, Strategical Management and Strategical Planning in Istanbul and Metropolitan Financial Management. The teaching staff includes sociologists, political scientists, environmental scientists, financiers and experts of public administration and international relations. The instructor of the course in question is one of the three urban planner educators in the staff. 39 students took part in the two Metropolitan Planning in Istanbul classes (one each in the programs with and without thesis) during the 2016-2017 school year. All of them approximately were practitioners; 28 students had been working on different levels of management in several municipalities of Istanbul, two of them were deputy mayors and one student was an alderman. 9 students had been working in NGOs in Istanbul. Only two of the students were unemployed.

While occupational origins varied from engineer to firefighter, gathered data on students show that senior manager municipal employees were the majority of the group. Students who never went abroad and who form the elite layer of the space of flows (Castells, 2005) coexist within the classes, where the ages ranged from 22 to 51. On one hand, there are ones who preserved strong attachment to their hometowns and fellow townsmen; on the other, there are "villagers without a village" (Erder, 1998) who came to Istanbul as a result of forced migration and lost all connection with their hometown. Squatters and villa residents seem to have met in the same classroom as students. Being members of different urban groups, they are also scattered to various districts of Istanbul due to the city's labor and housing markets. Among the students working in Istanbul's municipalities that belong to the political party in power and the opposition parties, the number of them working for the party in power is dominating. Additionally, it can be deduced that the class profiles represents the segregation that has been debated to have increased in Istanbul's social texture in the last years.

Each course contains 10 units of presentation and discussion. Each unit is to be taught during one lecture a day of the week. Each lesson is between one and three hours long, depending on the topic. A new topic is presented with a catchy question. Students' criticism and comments are received by the educator in manageable quantities, with free-flowing conversation following right after. The lessons were formulated according to two models that have been interwoven: the simulation of the planning process and the black box model. The classical planning process diagram was utilized as well, while the lessons were configured based on planning theory. As is known, basic steps of the planning process are a common key for planners: It is possible to list them with reference to Friedman (1987), show them in a diagram like APA (2006) does or copy them from the Habitat report (2015). As for the lessons, the starting point was to see the class as an arena of debate as Healey (1996) suggests as part of the spatial strategy formulation and then follow the steps of flow as follows: the scope and style of discussion, sorting through the arguments, creating new discourse, agreement and critique.

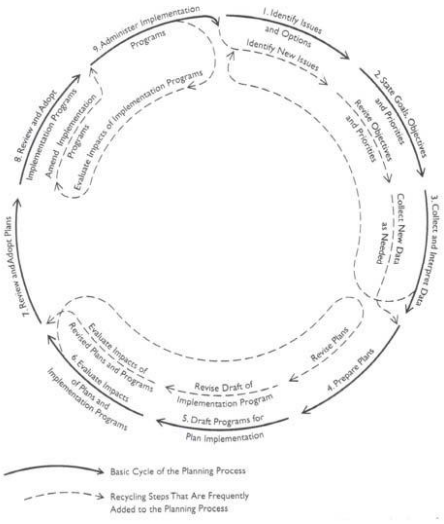

Figure 1 - The Planning Process

During each class (in other words, black box), we constructed the topic using the participants' questions and answers which were "derived" from each other and then knowledge was processed and became shared. (After first week's class) each day we repeated/copied the residue of the previous class and also multiplied it. While the classes kept going on (in a cycle), the residues of knowledge kept accumulating in layers and formed an iceberg.3 Regardless of the fact that I had flexibly mapped out the topics forming the iceberg in the beginning of the term, the class contents evolved with the students' questions and my following of their interests and knowledge during the term. Each week, I brought forth a caption, a suggestion for a question. These captions expanded and transformed by the debates in the class. The classes were stylistically conforming to the standardization requested by the university, but they flowed with the students' knowledge and were constructed accordingly. Some question (caption) examples and what kind of research questions (topic of study) these correspond to for the instructor are as follows:

1. Introduction to the field of urban planning: description and development of knowledge, science and urban studies.
   1.1 Activity of "locating" Istanbul in 2016 and in the universe as a built environment
   1.2 As a member of the homo sapiens, the instructor's attempt of "participant objectivation" in the academy
2. What are the essential elements of cities? What are the similarities and differences between the first cities and the contemporary cities? Describing the evolution of cities as historical and geographical contingencies.
   2.1. Discussing the elements and sequence of urban DNA and designing questions for the patterns of the dynamics of transformation.
3. How do we experience, perceive and represent (a city) Istanbul? (The students describe the way they take to school with drawings. These drawings are discussed with Lefevbre's (2014) triad, also using input from Harvey (1999) and Castell (1997, 2005).
   3.1 Re-deciphering the capitalist and global character of (a city) Istanbul from various aspects.
4. What are the main questions of planning theory? How can the relation between urban politics and planning be described?
   4.1 Relating the object of planning, namely the city to the method of planning, namely decision-making mechanisms: Moving away from the distinction of object and method in planning theory. Examination of decision-making mechanisms in Istanbul's construction/ development process.
5. How was Istanbul urbanized? What kind of role did planning play in this process?
   4.2 Realizing the interdependence between the socioeconomic and political-governmental structures and that planning is located within this interdependence. Analysis of the structural background of problems caused by conjuncture. Examining the planning of Istanbul from various aspects historically and pluralistically.
6. Keeping track of Istanbul's planning agenda: What are the mega projects, relevant organizations, plans in force, new demands?
   6.1 To perceive the existence and the role of alternative realities in understanding, explaining and designing Istanbul, becoming aware of the choices and the variety of them.
   6.2 Examining the "preference falsification" (Kuran, 1997).
7. Discussing the urban transformation practices and their results, the fact of gentrification and evolving publicity in Istanbul.
   7.1 Expanding the boundaries of generating alternatives.
   7.2 Utilizing the planning classes as an alternative space for dialogue and a public place.
8. What are the main foundations of urban planning? What are the planning principles specified in the constitution and international documents? Bringing the principles of urban planning up for discussion.
   8.1 Paning the references.
   8.2 Seeking and discovering shared values (the "communals")
   8.3 Casting and playing out roles in Istanbul's planning; right now right here.
   8.4 Discovering the plurivocality of the conceptualization of public interest (all over again).

The list above is the knowledge formed by the subjects in the classroom and dissected by the instructor who used the method of participative objectification. Below follows the evaluation of the course and instructor by the students.

Some of the questions that were included in the survey that includes closed ended, ordered alternative questions (I don't agree at all, I don't agree, No comment, I agree, I completely agree) anonymously filled out by the students with the purpose of evaluating the course and the instructor, were about: the suitability of the course's reading material, the intensity of the necessary amoung of study for the class compared to other classes, the encouragement the class provides for thinking and creativity, the benefits of the course compared to other courses. On the other hand, questions about the instructor included: the level of the instructor's knowledge about the subject, the level of the instructor's encouragement for asking questions, discussion and class participation, if s/he evaluates the students' work fairly, if s/he is reachable out of class, if the students would like to take another class from the same instructor and the instructor's overall situation (from poor to excellent). The majority of answers in both of the surveys were either "I agree" or "I completely agree". The questions where the "I don't agree" and "I don't agree at all" were marked, were those about comparing the class to others. Two among the total of thirty nine students marked "I don't agree" for the statement "the class is more beneficial compared to other classes". Six students marked "No comment" for the same question. Also the students stated that they studied less for other classes.

In the class improvement survey including three open ended questions, students specified the positive aspects of the class, the points where they think it should improve and three adjectives they would use to describe the instructor. Considering its content and style, the most significant feature of the class appeared as "full participation". While this particular style usually is approved of, it apparently had disadvantages for some of them such as "The class is so interactive that I sometimes forgot what we were talking about", in a student's words.

The need for clearer and more concrete share of knowledge was a concern generally expressed. In addition, the surveys revealed a warning for the instructor to care about the students' profile, as can be seen in some student comments below:

"I think that the course should be simplified and include more visual material for people with different undergraduate degrees to understand better."

"Students who were not sufficiently equipped for the class would benefit from short reading texts on the topics or similar material which would be helpful for them to reach the same level as others. The subjects can be discussed in a more clear and concrete way."

"The definitions of scientists such as Harvey and Castells were not internalized by the class. The current issues of people, institutions, history and lawsuits in metropolitan practice that we had in the last days attracted our interest a lot more. Concrete concepts could be included more."

"Every essential aspect has been dwelled on here. In addition, there could be more examples. There could be more bad examples which are more concrete, to compare with what should have been instead."

The positive evaluations of the course indicate some really important outputs. A student who worked as administrator said that the class "raised awareness. It put it in my mind that I have the duty of planning cities for future generations."

Another student who was an alderman stated "I know that I am not alone in my worries for Istanbul, where my children are going to live in the future. I will have a louder voice from now on."

The students' comments highlighted that the instructor had an "unbiased" attitude towards all, despite most of them were working in municipalities which belong to the political party in power and their arguments tended to favor the power:

"No project was aggrandized just because it was made by the power. There was not even a doubt about that in the class."

"The students' point of view and way of thinking have shown resistance to accept a new one. There could be different strategies to overcome this. But in the end, the instructor's strategy worked as well."

Ultimately, these courses were "thought-provoking and informative, provided motivation to do research" in a student's words and have also been guiding and expanding horizons for the instructor.

6 CONCLUSIONS: THE JOURNEY OF BEING A CITY PLANNER

I am one of the instructors who has been trying to bring the possibilities of participative planning into class with my urban planning courses that I have been giving since years. I am utilizing effective communication in generating collaboration with my students. I am carrying out my experience keeping in mind that "Experience can be reversely educative", as Dewey advised. Still contemplating about if my classes should be a topic for research, I am trying to find out what benefits could come from analyzing the classes as case studies. What could planning education gain from the comparative analyses of instructor's experiences with city makers as students from various disciplines, all over the world? Planning theory and practice, or cities, students, educators… I am not sure…

Examining the findings of case studies from the Istanbul Metropolitan Planning classes, the outcomes, the challenges confronted… Can these really act as guides?

In classes, when the topics were presented in form of open ended questions which we sought answers for together, the doors to possibilities for collective reflexivity opened up slightly. Now and then, our synergy and our flow generated some kind of public interest. One day, when I was thinking that particular class was an example of relationality for public interest, I was not expecting it at all when suddenly a student told me "to give them the 'right' information (notes) and dismiss the class instead of wearing myself out for nothing". I wanted to quit and leave the class, but I didn't. I realized that planners are in quest for power to generate public interest, as planners. Planners are the ones authorizing public interest in their city. But at the same time, I was able to observe that the motto of "Public interest means solving the citizens' problems, to protect their property and to maximize their profit" were reflected on my students' actions who were aldermen, deputy mayors and advisors. Together, we looked for ways to regard public interest and also building it as a "win-win" situation as matters of creating common interest ("A single zero leads the whole multiplication to zero." Stefano Zamagni quoted by Archer, 2015, 249), rather than creating total benefit. I realized that two variables stood out in the way my students participated in this pursuit. One of these is the student's aim in enrolling in the program (obtain diploma, acquire status, curiosity) and the second is if the student was able to generate a sense of belonging to the class or not. The symptoms for their levels of belonging could be observed in their positive or negative reactions to each other during class, the seats they chose to sit, their conversations and arguments during breaks and (partially) in their friendships after class. The stronger their relations became, the more they wanted to defend the common grounds they had and the more they resisted to opposite ways of thought. Additionally, I noticed that factors such as the students' personal development level, their knowledge in the field and political preferences were affecting their performance of class participation in an indirect way.

While playing out my role as an instructor in taking part in discussions, listing arguments and forming a new and common discourse, the part both most difficult and helpful for me was to attain intellectual and emotional acceptance; in other words, to understand the other(s) (the antithesis). Regardless of how unfavorable the idea sounds, I realized that I was able to understand the other and as a result to become independent and flexible, as long as I kept accepting them intellectually and emotionally. Accepting a disagreeable idea or action was not the same with approving it; in fact it was a prerequisite to change it or play a part in the change. For freedom, the connection with the opposite had to be severed. Thus flexibility could arise. Apparently, in the instructor evaluation forms students described these efforts with adjectives such as questioning, question-provoking, fair and unbiased. During the whole term, I was able to reach neither the sufficient flexibility nor the sufficient concreteness to solve the problems. My efforts in dealing with issues in dual languages of both theory and practice did not satisfy my students. While they kept demanding more concrete and ready solutions, I, as a planner educator, was busy looking for ways to decipher/solve the formula for the pattern in practice together with them. Very often, I reminded myself Crick's warning against blind faith in democracy and about how much should be expected from science in discovering the objective truth, who also describes politics as reconciliation (Heywood, 2013). I kept repeating that our demand for "democracy" and "truth" (which is perhaps out of place) in Istanbul's aggravated circumstances also came with the obligation and opportunity of finding creative ways for Istanbul. As a consequence, the findings of these case studies in class revealed my dependence on methodical generation of knowledge (research) in planning, while they pulled me into the boundaries of critical pedagogy as an academician.

In the end, as participants of the course of Metropolitan Planning in Istanbul during the 2016-2017 term in Marmara University, we tried to create a humble and temporary space of dialogue and an alternative public area. Even if we did not succeed yet, not having consented to the existing, having enough courage

to try to change; are these not “planning” itself? As stated by Aesop 2017 under the title of Urban Futures: Challenges and Vision, “Inspired by Harvey (2012, X) and Lefevbre, the track invites you to envision “an alternative urban life that is less alienated, more meaningful and playful but … conflictual and dialectical, open to becoming, to encounters (both fearful and pleasurable), and to the perpetual pursuit of the unknowable novelty”. I am aware that we have possibility of making comparative analyses with educators who respond to this invitation and wish to open their classes to participant objectivation. With this paper (this beginning), I am gathering my pride as a planner instead of my embarrassment as one, as I celebrate the 30th year of my start to planning education and my journey of becoming a planner.

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ID 1449 | PROCESS-ORIENTATED LEARNING AS KEY ASPECT IN HANDLING UNCERTAINTY. EXPERIMENTAL TEACHING METHODS IN CONTINUING EDUCATION IN SPATIAL PLANNING

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1 INTRODUCTION

Understanding spatial planning as an action-oriented discipline allows planning to concern itself with the exploration, clarification, and resolution of difficult, unsolved tasks. The starting points for this are both spatially relevant conflicts and desirable spatial developments, as the latter too can likewise lead to future difficult and unsolved tasks. Due to the fact that solutions to spatial planning problems always lie in the long- term future, clarification processes must be able to adroitly handle circumstantial changes linked to uncertainties, such as changing political priorities or shrinking financial resources. Employing model calculations and perfecting forecasting methods alone is insufficient for appropriately dealing with the degree of uncertainty in a planning process. On the contrary, what is needed are methods that take into account the uncertainties, as well as desired and undesired effects of decisions in solution-finding processes. A universally valid approach for exploring, clarifying, and solving future spatially relevant problems cannot be prescribed; this depends on the given tasks, and must be tailored to the respective problem situation (SCHOLL 2011: 279). Moreover, what underlies most difficult, unsolved tasks is a decision-making problem (BEHN/VAUPEL 1982: 40 f.), which in turn triggers subsequent action. As such, approaches for laying the groundwork for decision-making and actions take centre-stage in research and teaching on spatial planning.

In Switzerland in particular, being a small country in the heart of Europe, with its topographically determined, limited availability of settlement areas, and its landscape as principal bearer of identity, problems of coordination in spatial planning tend to appear sooner in Switzerland than in other countries. Moreover, due to the small territorial extent of the country, most challenging planning problems are transnational tasks. As such, Swiss spatial planning is - to a greater extent than in other countries - dependent on applying methods for clarification processes which don’t rely on formal procedures but rather place informal problem exploration at the start of a planning task. These special conditions make Switzerland’s main settlement area a fruitful laboratory space for examinations in research and teaching.

1.1 PROBLEM ORIENTATION AS PREREQUISITE FOR HANDLING UNCERTAINTY IN SPATIAL PLANNING

In the field of spatial planning, there are few helpful theories which specific research questions can build on, and which can be transferred to any given spaces (SCHÖNWANDT, JUNG 2005: 790). Moreover, they are only partially good for exploring, clarifying, and solving new types of problems, which are, for example, emerging due to the primacy of inward development in Switzerland (GRAMS 2017: 43). The planning theoretician Horst Rittel had already in 1972 criticised that a rational planning model is ill-suited for future spatial planning tasks and developed the “planning model of the 2nd generation” (RITTEL 1972: 392). According to this model, planning doesn’t involve “tame problems” but almost always “wicked problems”. “Wicked” planning problems are characterised by their uniqueness and lack of a conclusive definition. Moreover, there are no demonstrable, conclusively quantifiable sets of solutions and measures for such planning problems. Therefore, solutions to “wicked problems” are not classifiable as either “right” or “wrong”, but only as “plausible” or “less plausible” according to the current level of knowledge.

What has proven to be of much greater help for solving problems than the discussion on spatial planning theories, has been the disclosure of approaches adopted by participants in a clarification process. Every planner consciously or unconsciously adheres to a system of values with regard to how he/she perceives and attempts to solve planning problems. Spatial solutions that lie in the future are highly dependent on assumptions made in the present. It is therefore essential that planners disclose their approaches at the start of a problem-solving process, including the assumptions they make, and how they intend to handle uncertainties. Without explicit formulation of approaches, solution variants cannot be compared and the process cannot be improved. Such an approach comprises problem orientation in the “planning model of the 3rd generation” (SCHÖNWANDT 2011: 295). Precise exploration of the initial problem of a planning task is the essential point in handling uncertainties. For if the problem is not formulated in a precise manner, the chain of reasoning cannot be developed, simply because the problem to be solved is unknown (SCHÖNWANDT 2011: 300).

The realisation of what exactly constitutes the basic problem in a specific planning task grows out of a structured clarification process. This must permit the conception as well as rejection of solution variants alike. When transferred to teaching, this means that students are, above all, given methodological guidance in the problem-solving process. To this end, a teaching concept has developed in the continuing education programme in spatial planning at the ETH Zurich in Switzerland2, which focuses on problem orientation and process expertise.

1.2 PROBLEM-ORIENTATED TEACHING

Action-orientated spatial planning develops recommendations for decision-makers acting in space on how invariably limited resources should be usefully applied to solve a current or future problem. To implement them, formal instruments and procedures are necessary whose regulation by law is different depending on the territory. Therefore, in teaching spatial planning, it hardly makes sense to exclusively focus on imparting expertise on which formal instruments and procedures are to be applied in different administrative units. Rather, teaching is directed towards methodological expertise on how problems can be solved in a limited time. To this end, first and foremost, study projects must be mentioned here (see 2.1) which are to be prepared and guided by experts with practical experience. Moreover, lectures and seminars also assist in defining problems from the perspective of different disciplines. Table 1 gives an overview of the learning units in the continuing education programme in spatial planning.

Learning unit	Problem-orientated learning objectives
Spatial Planning: Function and Methods	Familiarisation with and comprehension of the tasks of spatial planning. Methodologically important elements of spatial planning processes (assessment of the situation, focus decree, conception, decision-taking, reasoning).
Urban Planning and Urban Development	Methods and tools for urban design and working out urban development strategies.
Landscape Architecture	Impartation of a landscape-based approach to a given urban development project; critical consideration and review of landscape and tools; impartation of basic principles for a well-considered design understanding.
Landscape Planning and Environmental Planning	Understanding landscape development using system-dynamic analysis; methods for weighing of interests.
Transport Systems	Understanding the effects of infrastructure on space as accessibility-producing, vital network industries.
Communication and Conduct of Negotiations	Simulations of typical presentation and negotiation scenarios; introspection on one's own presentation style; reasoning.
Spatial Economics	Understanding spatially relevant economic relationships and driving forces of spatial development. Understanding and assessing existing spatial concepts, policies, and measures. Development of new concepts for spatial development policy.
Spatial Sociology	Understanding socially relevant relationships in spatial planning; methods of participation.
Planning and Policy	Familiarisation with, comprehension of, and structured discussion on the political science-based view of planning.
Spatial Planning: Theory and Methodology	Impartation of approaches and active application of basic principles of planning theory and methodology; plausibility and rigour in planning-related chains of reasoning; problem determination; analysis of the causes of problems.
Academic Work in Spatial Planning	Procedures for clarification processes; basic principles of academic working and writing.
Law	Understanding the relationships between law and space. Understanding juridical thought and methods.

Table 1 – Overview of learning units in the MAS programme in spatial planning at the ETH Zurich

1.3 PROCESS-ORIENTATED LEARNING

Study projects form the core of teaching in the continuing education programme in spatial planning at the ETH Zurich (SCHOLL 2012). With this focus on the impartation of methodological knowledge, the continuing education programme corresponds to the needs of Swiss planning practice which, in the course of the paradigm shift from inward to outward development, especially requires experts who understand planning primarily as a problem-solving and formative process. By orienting continuing education in spatial planning in this way, Switzerland occupies a unique position compared to the rest of Europe (FRANK ET AL. 2014).

Implementing several study projects within the framework of continuing education of professionals in spatial planning basically simulates the method of test planning (SCHOLL 2011: 330). Competing, interdisciplinary teams work on a task within a limited time period while being regularly subjected to criticism by a circle of experts from the project field. Working on problem-solving in three cycles with different foci (see Fig. 1) leads to robust reasoning, which finally culminates in a recommendation to the stakeholders acting in space. In a first cycle, an overview of the main influencing factors and an assessment of the situation is made. At the end of this "opening and narrowing down" phase, a focus decree determines which problem is to be solved from the viewpoint of the students. In a subsequent procedure, the focus decree is examined and expanded into a concept. In conjunction with temporal structuring which divides the individual elements of the problem-solving process into short-term, medium-term, and long-term measures, the concept turns into a strategy. This forms the core of the clarification process. The last cycle serves to deepen and adjust the results, culminating in a draft proposal to the relevant actors in space.

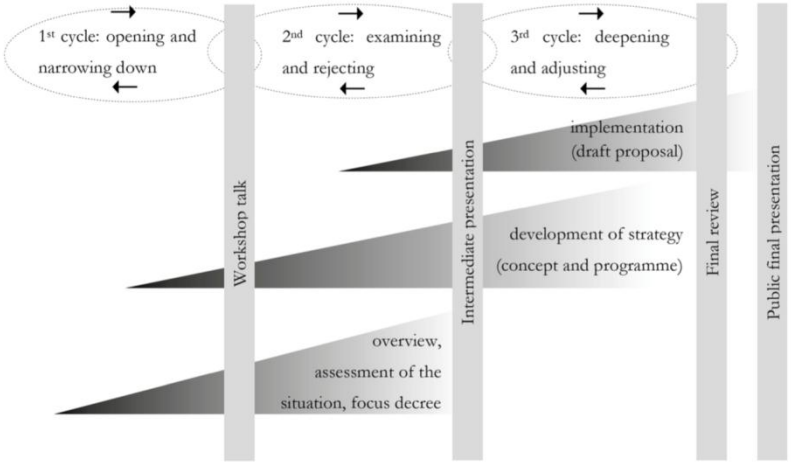

Figure 1 – Phases of the clarification process in process-orientated learning

Process orientation, in contrast to product orientation, is unfamiliar to most students at the start of continuing education. Only by an intensive engagement with the phases of the problem-solving process do they achieve sure-footed reasoning, partly leading to surprising results, especially when starting positions are uncertain.

2 EXPERIMENTAL SIMULATIONS OF PLANNING PROCESSES IN CONTINUING EDUCATION IN SPATIAL PLANNING

Handling uncertainty in a planning process can be trained in education. In the continuing education programme in spatial planning at the ETH Zurich, various interdisciplinary teaching methods have been continuously developed and extended since 1965. Essentially, they consist of simulation experiments of actions and decisions.

In this context, a most precise distinction between the terms ‘simulation’ and ‘model’ must be made. A simulation allows a scientist to simulate a process by means of another process (HEGSELMANN ET AL. 1996: 77). In doing so, the process is divided into various useful sequences, and is always tailored to a specific problem to be solved. Simulation results are open-ended. A model, by contrast, targets a mathematically backed up final condition of a process, which may lead to questionable results in the social sciences. The Process-orientated learning as key aspect in handling uncertainty philosopher of science, Mario Bunge, insofar warns of the irrelevance of mathematical models in the social sciences: “Some of these models are just intellectual games.” (BUNGE 1996: 64). In this context, he warns against viewing the computer as a substitute for theories: “Computing without theory is mere data processing devoid of explanatory power” (BUNGE 1996: 65). For problem-oriented spatial planning, simulations in the learning process are useful. The application of models can well be seen as a component in the clarification process, though they are far from replacing it.

2.1 REGIONAL AND SUPRA-REGIONAL STUDY PROJECTS

In academic continuing education, teaching and learning based on unsolved tasks is accomplished by working on study projects. Here, in contrast to basic training, participants can fall back on experiential knowledge from daily planning practice. Elementary knowledge in fields such as project management, as well as knowledge of formal procedures and instruments or skills such as the application of programmes for processing large amounts of geo-data are expected at the start of studies.

In the MAS programme in spatial planning at the ETH Zurich, a regionally oriented and a supra-regional study project primarily serve didactic purposes, though the task is based on actual planning problems. Solutions to complex tasks in spatial development must be drafted in a clarification process on the basis of

the given and respectively different spatial, factual, and operative conditions. As such, the MAS students are to be given opportunities to apply and bring together, as well as to supplement and deepen the knowledge and skills acquired during the MAS programme and in their own professional training on the basis of real spatial planning problems. Moreover, this also serves to address questions in the study projects which are interesting from a professional and practical viewpoint. Conversely, current information and new knowledge from scholarship and practice should, finally, also flow into the study projects as directly as possible.

The organisation of project studies presupposes only a few albeit important rules, such as division of students into groups, limited time for implementation, and a clear structure of the learning process (Table 2).

	Regional Project	**Supra-regional Project**	**Project abroad**
Scope of consideration	City and its agglomeration	Functional space	City and its agglomeration
Work parameters	As given in the assignment	Freely selectable, based on thematic focus decree	As given in the assignment
Focus decree	Spatial	Theme-specific	Spatial
Process time	10 months	8 months	1 week
Number of students	20 - 24	20 - 24	30 - 40
Number of teams	4	4	6-7
Number of students per team	5 - 6	5 - 6	7 - 10
Number of teaching staff	6	8	10-12
Language of instruction	German	German	English

Table 2 – Features of study projects in university-based continuing education in spatial planning

Though the groups simultaneously work on the same assignment, each of them focuses on a specific component deemed primary by the group on the basis of its selected strategy, in order to examine the feasibility of the selected approach, also with respect to costs, time constraints, and other important parameters. Projects are also especially suitable to establish and maintain links to practice. To this end, experts are consulted to supervise project work and to explain especially important aspects of a given task.

2.2 STUDY PROJECTS ABROAD

Methodological knowledge is acquired and trained in study projects. After successfully completing two projects, the students are ready to work on a third study project under more difficult terms. This serves to examine whether they have internalised problem orientation as an approach.

The project task is prepared during the course of one year in cooperation with teaching staff from abroad, and focuses on a city and its agglomeration (Table 2). Thematically, the main focus lies on coordination problems such as between urban development and railway development. Students face a demanding challenge insofar as, firstly, the project abroad is processed in only a week; secondly, the groups are interdisciplinary and intercultural; and thirdly, the procedural work takes place in English. Moreover, the students have to organise themselves into larger groups.

As the experiences over the last few years have shown, this type of process-orientated learning is a major challenge for students. Skills are trained to maintain an overview even under difficult conditions, while reasoning skills in different cultural contexts are also exercised. This project concludes the two-year continuing education programme in spatial planning, and especially supports students who intend to handle difficult, unsolved tasks in an international context in their subsequent career and to take on leadership roles.

2.3 EXERCISE: EXPERIMENTAL SIMULATION OF A TEST PLANNING PROCEDURE

The continuing education programme in spatial planning at the ETH Zurich in Switzerland incorporates a learning unit on “experimental simulation”. Experimental simulations are thought experiments in which students assume the roles of different actors and stakeholders of a planning procedure in role plays, representing their respective aims and reasoning. The learning objective is to explore possible decisions and actions in general. Over the course of several role-playing cycles, the students take on various roles in different settings. By combining their own daily work experiences with the presumed aims of the respective actors, they learn reasoning skills, and how to respond in messy situations where a given problem isn’t at all clear yet. For this reason, experimental simulations are only successful as a teaching method in continuing education where students already have a certain professional background.

The experimental simulation exercise is used to simulate the clarification and decision-making process of a test planning procedure (SCHOLL 2011: 330). The exercise follows the organisational and operational structure common for this procedure in a shortened time frame. As such, groups of students take on different roles and responsibilities (Table 3).

Role	Task	Group size
Assessment body, incl. chairperson	o Responsibility for correct implementation of the test planning procedure o Assessment of team contributions on the basis of the task formulation and assessment criteria o Conduct of dialogue with the teams o Proposal with recommendations addressed to the executive committee for the next procedural step	5-7
Executive committee	o Overall supervision of the procedure o Responsible for strategic decisions o Appraisal of drafts of teams	3-5
4-5 Teams	o Preparation of drafts o Presentation of findings o Revision of drafts on the basis of the recommendations of the assessment body	16 -20
Observers	o Continuous process observation o Regular report to the assessment body	3-4
General public	o Critique of final recommendations from the viewpoint of the general public	4-5
	TOTAL	**30 – 40 Students**

Table 3 – Roles and tasks of actors in a process simulation

The assessment body provides quality assurance in the test planning procedure. It strives for decisions by consensus, and is led by a unanimously elected chairperson. The following representatives constitute the assessment body: representation of property owners; experts from the fields of urban development, transportation, economics, open space and green space planning, and social issues.

The organisers are represented by an executive committee. This constitutes the commissioning authority, having oversight of the test planning procedure. It is informed of the work status by the chairperson of the assessment body subsequent to the presentations, and has the opportunity to ask questions to this end. The teams are composed in an interdisciplinary manner, consisting of experts in urban development, open space planning, transportation, and economics. The teams are led by the urban development representative (an architect or spatial planner). A group of observers takes part in all activities. They analyse the learning process, giving their feedback at the concluding discussion at the end of the exercise. This ensures that the didactic objective is met. The general public too must be represented within the framework of the simulation, including representatives of associations, organisations, owners of adjacent properties, and potential investors. Likewise, representatives of the media are to be included in this group.

The operational structure of the experimental simulation exercise follows the actual course of the procedure and must encompass several cycles. Three cycles on three consecutive days have proven themselves. On the fourth day, the simulation is concluded with a media conference. At this occasion, subject matters which have not yet been discussed can be addressed, also by teaching staff. The following illustration shows the operational sequence of the exercise (Fig. 2):

This thought experiment has to be prepared, performed, and assessed very carefully. It is based on an actual planning process, and active participation by the key actors is expected. By confronting the students with actual planning problems in combination with their own passive knowledge and intuition, they are able to simulate problem-solving. This leads to a hitherto underestimated intensification of teaching practice.

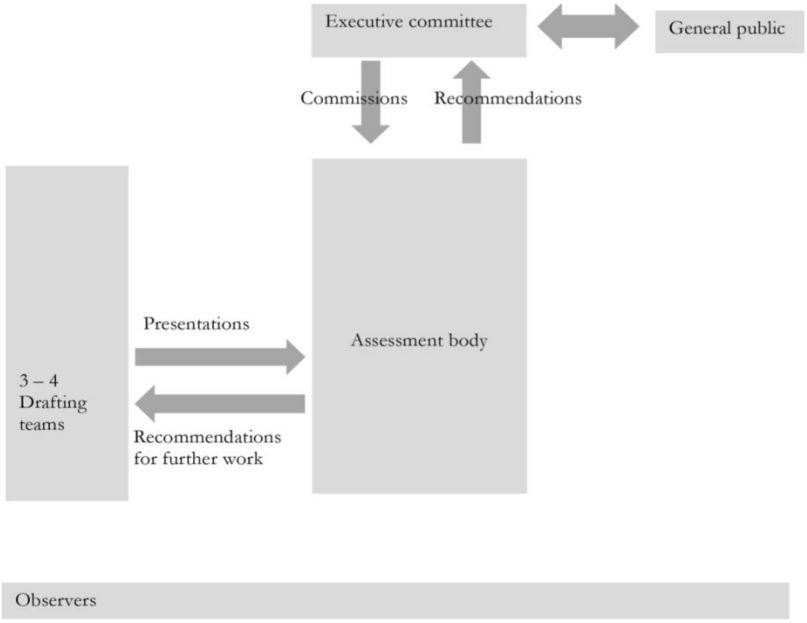

Figure 2 – Role differentiation of actors in the clarification process

3 SPATIAL SIMULATIONS AS A TEACHING METHOD IN CONTINUING EDUCATION IN SPATIAL PLANNING

With action orientation as the underlying basic conception of problem-based teaching, simulations and study projects become central to continuing education in spatial planning. As such, interdisciplinary work on difficult, unsolved tasks can be understood as a method to sensitise students with respect to uncertainties in the planning process. By internalising a three-phased problem-solving process graduates are conditioned to take on leadership roles for difficult clarification processes. The experience gathered in the continuing education programme in spatial planning at the ETH Zurich is leading to the emergence of several factors determining the success and failure of simulations as a teaching method.

3.1 FACTORS FOR SUCCESS

The impartation of methodological knowledge by means of difficult, unsolved tasks in the continuing education programme also requires teachers to come up with more than the usual forms of instruction in elementary studies. Firstly, lecturers must have accompanied an actual procedural process which is being used as an example for the simulation. This means that the professorship responsible for the course is participating in cooperation projects in practice, and has preferably even developed and led them. Practice orientation in spatial planning at university level cannot be taken for granted in Switzerland, though future problems in planning demonstrate that it is precisely problem orientation that is needed to attain new knowledge in research and teaching. Secondly, the application of simulations in teaching requires more preparation time than is usually available for conventional teaching methods in a daily teaching routine. It is useful to start drafting the task formulation already during an actual procedure in order to identify critical milestones in the procedural process at an early stage and to productively imbibe them in teaching. Moreover, a study trip to the site of a completed or ongoing test planning procedure following the simulation has proven itself. As such, students can get an idea of the circumstances on site, and look back on the procedure while being engaged in discussion with important process-specific actors. Questions which may have come up during the simulation, can be originally answered by the actual actors. This

dramatically enhances the learning achievement in continuing education in spatial planning. Another success factor has proven to be a clear rhythm during the implementation of simulations. Individual steps by students in the clarification process must follow the actual procedural sequence. Study projects carried out over two semesters and in sequences of about 3 months have proven their worth. An experimental simulation of a clarification process can be carried out during a week, whereby as much time should be devoted to self-study as to group work. This leaves sufficient time for a thorough familiarisation with a given role in the simulation, and for practicing adherence to temporal sequences. This also demonstrates the great responsibility of the role of the chairperson of the assessment body. This role should be taken on by practically experienced students.

3.2 STUMBLING BLOCKS

The basic precondition for learning on the basis of specific projects is a certain individual experience in handling problem-solving processes in practice. Therefore, continuing education in spatial planning is predestined for applying experimental simulations as a learning method. Students come from various spatially relevant disciplines, such as geography, architecture, construction engineering, etc., and must have at least 2 years of professional experience following their graduation. If such a first experience of real planning processes is lacking, an experimental simulation risks sliding off into a simple role play, which fails to lead to a satisfactory learning effect. Therefore, this method is hardly suitable for application during elementary studies in spatial planning. Another difficulty has proven to be allocation of too less time for role differentiation in the exercise schedule. Students must be able to come to grips with their role in the planning process as they ideally change their roles thrice during the exercise. This also necessitates that the individual cycles of an exercise take place on 4 consecutive days, with a new distribution of roles at the start of each day. It also requires the possibility for block instruction during a week, which is rather difficult to organise in elementary study instruction and its semester programmes. In conclusion, it must be stated that the preparation, implementation, and follow-up (study trip) of such a problem-orientated learning method requires more teaching staff than is the case for conventional exercises and lectures. It has proven to be beneficial to have 2-3 research assistants for formulating the task, of which at least one must have participated in an actual procedure. This requires specialists in teaching who ideally are at the doctorate or post-doctorate level.

4 RECOMMENDATIONS FOR FURTHER DEVELOPMENT OF TEACHING METHODS IN CONTINUING EDUCATION IN SPATIAL PLANNING

Spatial planning in Switzerland, with its more than 2,000 autonomous municipalities, requires extensive coordination and is a major challenge for planning practice. In continuing education in spatial planning, it is therefore useful to focus on imparting methodological knowledge on how difficult tasks can be brought into a clarification process. A spatial planner is not only responsible for supplying ideas at a very early stage of a planning process, but also for balancing interests and initiating interactions. This constitutes a major challenge, all the more so, considering that planning is also political consulting. In this field, planners must carefully assess ideas, interests, and interactions. As such, planners are also exposed to social and economic constraints, making planning - especially the teaching of spatial planning – extremely demanding. Handling uncertainty and understanding the various mechanisms in a planning process when it comes to negotiations can be trained in education. The most important element for coping with complex problems in teaching is illustrative clarity, bringing vitality and pragmatism to the process. Visualising a planning process by means of experimental simulations can most aptly be described by the term “enactment”. This also makes clear that careful adherence to role differentiation in the exercise is the essential factor for successful learning.

This results in the recommendation to focus more on the simulation of processes in continuing education in spatial planning. Designing and testing arguments in a negotiation process that feels “real” can greatly enhance personal motivation and sense of discovery in students. They are able to strengthen their judgement ability by learning to cope with opposition and criticism. At the same time, this method fosters an enthusiasm and a fascination for planning problems, which is important since the results of planning efforts often only become apparent decades or even generations later. A fascination for testing, experimenting, and of course solving problems should be a basic requirement for future planners. Training

these skills is highly stimulated by illustrative clarity. Teaching by means of discussions of case studies, experimental simulations, and on-site explorations is extremely demanding, confirming that teaching professionals require a certain practical background. This ensures that the concept of illustrative clarity and its teaching methods become a central aspect of learning and teaching spatial planning.

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ID 1468 | TEACHING-IN-THE-FIELD IN A “HUB” ACCOMODATING MIGRANTS IN TRANSIT IN MILAN. CHALLENGES AND OPPORTUNITIES FOR A “SOCIAL AND URBAN ANALYSIS” COURSE

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1 INTRODUCTION

The paper reflects on a teaching-in-the-field experience carried out in the context of the course of “Social and Urban Analysis” for students at the third year of bachelor in Planning at Politecnico di Milano. The course integrates the competences of two professors who are experts in urban sociology with a particular

attention to inequalities and welfare provision, and in urban planning with a particular attention to immigration issues and multi-ethnic contexts.

For this specific course, a collaboration was established with Fondazione Arca, a big third sector agency that assists homeless, drug addicted, vulnerable and deprived groups in Milan and in other cities.

Arca currently runs the main centre -called "hub"- destined to accommodate refugees and migrants in transit arriving at Milan´s Central Station, where they receive basic services like food, short term accommodation, medical advice, orientation towards other existing services. Arca started to work on this issue in October 2013, in a first instance intervening in more "emergential" ways inside the station, and then finding new spaces to offer more structured services. The hub was opened in May 2016 thanks also to the significant support of the Municipality of Milan. Other public, third sector and voluntary bodies contribute to deliver different services inside the hub. This centre has been able to integrate the work of different public and third sector actors, becoming a best practice of "welcoming" migrants in transit in Europe.

It is important to underline that, after more than twenty years of centre-right governments in the Municipality of Milan, including Mayors coming from the xenophobic North League party, in 2011 the election of Giuliano Pisapia supported by a centre-left coalition marked an important shift towards a less aggressive public debate on immigration and refugees (Marzorati and Quassoli, 2015). A particular role was played by the Sector in the Municipality dealing with "Social Policies, Welfare and Rights" and, in particular, by the Councillour in Charge for this Sector Pier Francesco Majorino who devoted a lot of attention both to issues arising in different neighbourhoods due to the presence of more established immigrant populations as well as to welcoming refugees and immigrants in transit (Majorino and Sarfatti, 2015). This position was basically confirmed after the recent election of the new Mayor Giuseppe Sala in 2016. Majorino was confirmed in his role, and the change in the construction of the public debate on "strangers" could be measured by the success of multi-ethnic and multicultural parade "Together without walls" held in Milan the 20th of May 2017, registering 100.000 participants.

The paper will unpack a series of issues that emerged during and after the teaching-in-the-field experience from the pedagogical, the social analysis and the planning theory's sides. Globalization and the challenges of dealing with diversity had to be framed in a way that allowed critical thinking on the impacts on urban management of the arrival of a huge amount of people mainly "transiting" in a city without settling there. The specificities of knowledge and skills that students in planning can gain working in the field will be developed, focusing on how this teaching environment can contribute to train more responsible and aware future practitioners. Given the high vulnerability of groups involved in this project – people coming from different countries, most of them escaping from violence and war – a core reflection was related not only to opportunities and challenges for such a type of teaching experience, but also to ethical issues.

The paper is structured as follows: § 2 describes the more general framework of Polisocial, the public engagement program of Politecnico di Milano whose experts supported also the specific experience discussed here; § 3 introduces to the context of immigration in Milan with a particular focus on migrants in transit and refugees, and gives some information about the field were the teaching experience was developed; § 4 describes the didactic activity and its results, then some reflections on this experience are proposed in § 5.

2 TEACHING IN THE FIELD URBAN AND SOCIAL ANALYSIS

The course "Social and Urban Analysis" was framed in the context of Polisocial, the public engagement program of Politecnico di Milano supporting action-research and action-learning experiences, with the purpose of experimenting a new active role of the university within the civil society. Polisocial's vision is grounded on the idea that universities should be leading institutions directly involved in addressing social changes, producing collective learning, and taking on new social responsibilities to refocus the "missing" link between the university and the city (Balducci, 2013). The perspective is to fill the gap and strengthen the connection between the university and territories, operating towards the reinforcement of an academic institution more and more able to serve communities, produce "usable knowledge" (Lindblom and Cohen, 1979) and face emerging social challenges. To reach this goal, Polisocial actively promotes and develops socially oriented teaching and research activities.

Concerning the educational practice, one of the initiative promoted by the programme is called “Teaching in-the-field”. This is an experimental programme aimed at fostering engagement with communities through a number of teaching activities where students and teachers work together with local partners, addressing challenges or problems the city/community is facing. The idea is to establish an interplay between teaching activity developed within the University and experience in the field, opening the perimeter of the classrooms and bringing students and teachers on the ground, involving them with the complexities of real-life situations and concrete issues, cooperating with social actors, questioning the social utility of teaching and research practice.

In this framework, “Teaching-in-the-field” proposals are innovative experiences of action/active-learning. Learning environments in which students, teachers and community partners work together, sharing ideas, producing knowledge and strategic thinking to contribute to the development of more just cities and equal societies. The process of design and implementation of teaching activities is characterized by an approach of co-design and co-sharing, in which all the parts are actively involved in a dialogue inside and outside the university, and they all contribute to the development of the collaborative process.

The design and development process of a teaching in-the-field project consist in different activities and operations, which can be described through the following stages: the first one entails a dialogue with civil society partners to align their requirements to the didactic work, aiming at matching the need of community to the educational goals of teaching practice. Teachers and partners try to understand how the didactic work can be useful for facing communities’ challenges, expectations and desires. In this stage, the brief of work is developed together in order to establish and share the purpose of the project work.

The second stage concerns the development of the teaching activity. External partners are actively involved as they have a leading role to make students understand specific topics, issues and local dynamics. Moments of interaction and discussion with community partners are planned, and they take place both inside the university and outside, in the field, by experimenting an innovative and open teaching approach intended as a “public” practice of mutual learning. Students, coordinated by teachers, should cultivate relationships in close contact with partners, using meetings and group work as tools of interplay, even beyond the time and the possibilities of classwork. Surveys, interviews, field visits, observation, involvement and participation in partners’ activities are important tools to interact with them. Working moments with community partners are constituent activities in the development process of a “live” teaching activity. This kind of interaction shapes firsthand collaborative abilities and new types of knowledge and perspectives. At the same time, it stimulates the development of green relational skills and new ways of approaching complex issues; in this perspective, conventional teaching methods and tools are called into question.

A third stage has to do with reporting the work and sharing the results with partners involved in the process. Students, guided by teachers, deliver the outcomes to the partners and involve them in a public moment of debate and presentation of the work. The public presentation is also intended as a reflective moment upon the entire process, to assess outcomes and activities in order to reflect upon the “lessons learned”. Teachers and students hand outputs over to the partners, giving special attention to the formats and the contents of the design work, making sure they can be accessible and reasonably usable by partners. Final outputs, indeed, have to be usable tools for community: for stimulating new visions for the future, supporting the daily action of partners, enhancing both their empowerment and awareness, and contributing to the progress of their projects and practices. They are tangible and intangible results, through which also the university learns how to generate and share usable knowledge, questioning its role in/for the city.

The setting-up of a teaching in-the-field proposal is always addressed by a set of principles, which guides both the contents of the teaching activity and the collaborative work with partners, underlining the social-engaged attitude of this teaching practice. These principles start from the idea we have to assume a “twofold responsibility” (Castelnuovo & Cognetti, 2013). For “responsibility” we intend the recognition of the role that one plays both as a practitioner and an individual in coping with others’ requests. In these terms, assuming a responsible behavior entails the development of a sense of social commitment and ethical intent which arise from the direct engagement with concrete real-life situations. The responsibility is twofold whereas is primarily tailored towards students and the academic community, and implies the thorough revision of forms and methods of education and research. Secondly, it is addressed towards civil society, presuming an important dimension of reciprocity and questioning the usability of academic

knowledge as well as the way in which it can be made more reachable and useful to face social challenges.

In this sense, the purpose of a live teaching context is to set up a learning environment in which teachers, students and community partners are committed in the enhancement of an innovative learning process, testing approaches and tools in a “live” teaching and learning perspective. This also means encouraging students and teachers to rethink the way we learn: sharing competences, exchanging knowledge and different kinds of know how (local and expert) to reach a common outcome (Castelnuovo & Cognetti, 2014). Through interaction and commitment, individual and collective abilities can be developed and tested on the ground, into reality; individuals can gain a new critical perception and awareness of the world where we all live and operate. These capabilities, developed within a situated learning practice, are complementary to the competences acquired in the traditional teaching practice, and become increasingly necessary to face complex and multiple social needs (Gronsky & Pigg, 2000).

Active learning environments instill the ethical value of public commitment and contribute to build a social environment, in which we are collectively involved in contributing to the co-production of public goods. Experimenting such a learning environment, new generations can be educated to develop a new ethic of responsibility and social commitment, being more aware and responsible citizens and practitioners in the future. In this perspective, city and communities are not just a field in which applying and experimenting competences, but primarily a complex environment within which university is an actor among others actors, increasingly engaged and attentive to urban, social and economic development.

3 THE CONTEXT

Italy is at the forefront of the migration flows of recent years. It is clear that we are facing an epochal phenomenon. The resident foreign population reached 5.026.153 thanks to new regular entries, births and asylum seekers (Idos, 2016). The closure of many internal borders and the agreements with Turkey turned the Central Mediterranean the main route to access Europe, though dangerous and costly in terms of human lives for those who run away from wars and fierce dictatorships. In addition, for the same reasons Italy has been transformed from a “transit land”, a “land of permanence”, a place where to seek shelter, help and international protection. The data in Table 1 show to what extend this transformation is evident: The number of hosted migrants grew much more than arrivals (with also increased in absolute numbers).

	2014	2015	2016	variation 2015-2014	variation 2016-2015
Landed migrants	170.100	153.842	181.436	-9,6%	+17,94%
Hosted migrants	66.066	103.792	176.554	+57,10%	+70,10%
Asylum seekers	63.456	83.970	123.600	+32,33%	+47,20%

Table 1 - Number of migrants landed by sea in Italy, number of hosted migrants and numbers of asylum seekers by year. Source: authors’ elaboration of “ Dipartimento per le Libertà Civili e l'Immigrazione” data

Among those arrived by sea in 2014 and 2015 less than 50% asked asylum in Italy, in 2016 almost 70% did so. This change has put a strain on the country's reception system. As a matter of fact, “talking about immigration today means mostly how to host those who reach Europe looking for some form of protection if they not die in the sea” (Codini & D'Odorico, 2016, p. 193). The issue of providing accomodation to asylum seekers is one of the most debated in the media and is the subject of very different positions by the various political parties. The massive arrival of people has also opened up a new sector of welfare policies since migrants need to be supported in their everyday life, at least at the beginning of their new life. The numbers and facts show that Italy is gearing up to give dignified living conditions to those who apply for asylum even though much remains to be done, assuming the perspective that thousands of people will continue to arrive. Hosting is then something very different from having a roof over your head and at least a hot meal per day. In these last years, it was possible to understand what are the requirements for “doing things well” (paraphrasing the subtitle of the Catone book, by 2016): it is about welcoming and integrating, creating the conditions for people to return to a condition of normality and autonomy.

Although refugees' reception is a State competence, it is at local level that these policies are implemented. Milan hosts the highest number of refugees of Lombardy, the Region that concentrates the largest number of migrants in Italy (13%) (Anci et al. 2017) as evidenced in table 2, followed by Sicily.

	Italy	Lombardy	Province Milan	Milan Municipality
SPRAR	22983	1275	614	422
CAS	94188	15381	3395	3100*

Table 2 - Distribution of places in different kinds of facilities (absolute numbers) . Source: Anci et al. (2017), per Milan the number of people in CAS* are estimated and are represent the situation of February 2017, while the others represent the situation at mid 2017

The city of Milan and its metropolitan area saw the passage of thousands of persons over the last four years, the estimation is that 107.000 refugees have transited since 2013 till December 2016. Until the first months of 2016, the reception facilities of the city were destined to "transitants" (see Figure 1), people who stayed in the city a few days to continue their journey to northern Europe, where to seek asylum. The closure of borders (Austria, Switzerland and France in some moments) along with the enforcement of the Dublin Treaty obliged people to remain in Italy and applying for international or humanitarian protection here.

The "wave through" policy took root in conjunction with the Syrian crisis (Majorino & Sarfatti 2014), which dictated the need to give hospitality for a short time to individuals and entire families. The Municipality of Milan, together with many and diverse third sector organizations, organized a reception system that developed over time for this type of migrants, first in the mezzanine of the Central Station (from 2013 until 2015), then on Tonale Street (2015), close to the station and, finally, in Via Sammartini, in a more peripheral space owned by "Grandi Stazioni" a private enterprise linked to the public company that runs the national railway system in Italy. This space has been named "hub", not to be confused with the regional hubs, which are much bigger centres devoted to host and distribute asylum seekers in hosting facilities within the Region. The hub occupies the more peripheral part of the "Magazzini Raccordati", a big decommissioned system of warehouses built under the tracks of the Central Station of Milan (fig. 2).

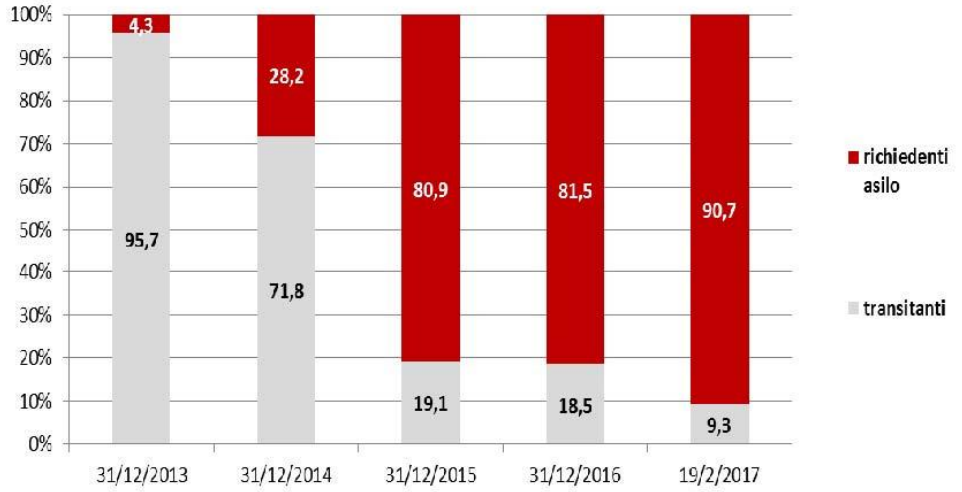

Figure 1 - Percentage of refugees hosted in Milan facilities that were in transit or where looking for asylum. Source: Milan Municipality, internal document. * These percentages are related only to people hosted in facilities organized and regulated by the Municipality there are many others by the Prefecture)

Figure 2 – Current position of the hub. Credits: Basile, Dridi, Gabriele (2017)

This hub allowed many people to "land" in a safe place, where they could find an immediate response to fundamental needs, after a long journey: Refreshment, change of clothes, hospitality for the night, meals as well as legal support and night hosting. From there transitants were sent to one of the various reception facilities made available by the Municipality of Milan where they stayed for a short time, on average 5-8 days. These is the lapse time in which they decide whether to stay and apply for international protection or leave the country.

Total registered people	*Individuals*		*Families*		*Total*	*Hosted*	
2015	*24.695*	*8%*	*6.942*	*2%*	*31.637*	*27.401*	*7%*
2016	*28.848*	*5%*	*5.047*	*5%*	*33.895*	*32.784*	*7%*
2017	*2.590*	*5%*	*450*	*5%*	*3.040*	*2.938*	*7%*
Total	*53.543*	*2%*	*11.989*	*8%*	*65.532*	*60.185*	*2%*

Table 3 - Registered and hosted by Via Sammartini Hubs per year and typology (individuals or families). Source: Fondazione Progetto Arca.

Since May 2017 the hub changed its nature, loosing its importance for people in transit and assuming a more "long term stay" characteristic. It has been transformed into a CAS (Centro di assistenza straordinaria), a centre for extraordinary hospitality where people will stay till the end of the asylum seeking procedure. Before it was accredited with the Municipality and the Prefecture for 150 beds. In many moments since last year there were more than 500 people sleeping there. The hub is managed by Fondazione Arca Onlus, an organization that has a multi-year experience in combating severe marginalization. It has welcomed more than 50,000 people over the two years period 2015-2016, as shown in Table 3.

It can be said that a de facto humanitarian corridor was created, facilitating the passage of many people heading North. In the space of Via Tonale and in that of Via Sammartini, lots of organizations are engaged: Fondazione Progetto Arca is the general manager; Fondazione Albero della Vita and Save the Children who develop different activities related to children's care and needs; the local healthcare agency; and different individual and organized volunteers (doctors, pediatricians, social workers, computers specialists). Here, forces of all sorts have coagulated, with private citizens who have supported the initiative by donating goods and performing their work. Here, the value of Milanese volunteering, part of the "conscience of Europe" (Cesareo, 2016) is visible and tangible: people are supported irrespective of their legal status.

The hub has accommodated up to 700 people but has a capacity for 150 people. It worked as a buffer for very massive arrivals of migrants so as not to leave them on the street to sleep. It is divided into four large spaces, one dedicated to clothing stores and other types of goods, a daytime area where computers,

internet attacks and cell phone charging sockets, as well as an area for children; a canteen and an area with lockers and beds.

The Hub of Via Sammartini used to be a unique service for asylum seekers and refugees in Milan and in Italy. Its particularity is attached to the fact that it hosted people arriving independently to the city and not sent by the agencies of the Ministry of Interior Affairs. It is an anomaly in the Italian landscape and, it represents an innovative response to cope with the needs expressed by a huge flux of migrants (Costa 2017). Even if Milan has a strong social infrastructure, it needed a first-hand spot for people arriving in the city. It's around this hub that we asked our students to work.

The hub was and probably will continue to be a thermometer of migratory routes. The consequences of the changes in the political response to the refugee crisis here become apparent almost immediately - a matter of days (Petrillo 2016). Our field work started in a moment where the hub's function was changing: from being a place of transit, to be a place of permanence (Costa, 2017), due to the fact that newcomers searching for a better life don't transit anymore, as explained before. This change was not easy to cope with by the students' analyses.

4 THE COURSE'S DEVELOPMENT AND OUTCOMES

"Social and Urban Analysis" is a course for students at the third year of Bachelor in "Urban Planning and Policy Design" at Politecnico di Milano. Since the beginning, both the teachers agreed that students should understand methodologies, aims and scopes of urban and social analysis working "in the field", and developing a case-study on a real situation. Hence, also the decision to cooperate with Polisocial.

The "first stage" described in § 2 was thus developed taking into account the research interests of the two teachers – this experience implies the analysis of a social policy developed by the Municipality of Milan, and the social issues related both to the newcomers' situation as well as to the impact of their arrival on the urban space and on local established populations. At the same time, the hub accommodating migrants in transit was chosen for several reasons including the fact that welcoming the newcomers is a core issue in many European countries. Anyway, a core point was the clear interest expressed by Fondazione Arca in having an "external view" of the hub and of its activities, as well as on its "location" in the territory and its' functioning in the city. Some specific planning questions were posed by Fondazione Arca as the current hub occupies the more peripheral part of the "Magazzini Raccordati". Grandi Stazioni undertook a major renovation project of the Central Station before the opening of Expo 2015 in Milan, while the Magazzini Raccordati's future remains uncertain, as is the hub future.

The second stage "developing the teaching activity" was basically constituted by three strictly interrelated parts: (1) some more traditional academic lectures covering both methodological issues and the specificity of the case-study (e.g. lectures that provided a framework of the "refugee crisis" phenomenon in Italy and its related social issues; sessions on how the system to accommodate migrants in transit and refugees works in Italy, on management and spatial impacts of shelters in other Italian cities etc); (2) a series of meetings with experts from Fondazione Arca, with the Councillor in charge of Social Policies and Welfare in Milan Pier Francesco Majorino who runs the policy sector more committed in facing the migrants' arrival in the city, and with some representatives of the main associations that emerged in this area to cope with local problems and explore possible potentialities; (3) field visits organised in cooperation with Fondazione Arca to introduce the students to the reality of the hub, showing them how it works.

Students were asked to do field research using a mixed methodology, working inside or close to the hub to understand how this place works, but also the social and urban impacts of such a type of place at the neighborhood level. Spaces had to be analyzed in terms of their use, functions, story, policy development. Students were encouraged to work collaboratively with Arca as well as with local community groups, small businesses and citizens. The course's project work includes press review, photos, drawings, maps as well as policy and ethnographical analysis.

After field visits with us, students were left free to explore the place without our guide for around one month, as well as to identify possible topics for urban and social analysis. Some of them showed an immediate commitment in trying to "enter" in the hub also without our support and to conduct a sort of ethnographical analysis of the place. Other clearly started to explore a series of issues at the

neighbourhood and city level, keeping in some way the reality of the hub a bit more “distant” from their analysis. The field visits and this “reflexive month” were very useful also for us to decide which students could really be introduced into the “vulnerable” reality of the hub, and which students could work on its impact in the immediate nearby or in the broader city context. This was done not having in mind any kind of “preferential” attitude toward some “more committed” students, but on the contrary, trying to respect their preferences and sensitivity. At the same time, this also resolved in a quite “natural way” a problem that the teachers, the Polisocial experts as well as Fondazione Arca foresee since the beginning of the course: the risks and ethical issues related to introducing a group of around thirty students into a space where very weak people – including children – arrive, eat, sleep and try to recover from very hard journeys. At the end, only two groups composed respectively by four and three students worked inside the hub with the mediation of the experts of Fondazione Arca. To “minimise” the impact of the students’ presence one group started to observe the dynamics related to the clothing and goods warehouse, and the other one focused on the daytime space. The warehouse is a strategic place for the logistic organisation of Fondazione Arca as here garments and other supplies donated by enterprises and individuals arrive (fig. 3). This is also the only part of the hub opened to the public, so it constitutes a direct connection with the Milanese population. The other space is where a variety of functions are carried out – registration of the newcomers, medical care, children care (fig. 4). This space is also a particular place of socialisation thanks to internet points to connect with the families at home (fig. 5) or with the world, as well as to a very long plug that allows the mobile phones charging, being one of the more crowded corners of this space.

The group working on the warehouse adopted a twofold “entry strategy” to this place. On the one hand, they concentrated on ethnographical observation of people working here and of spaces constituting the warehouse; on the other hand, they tried to “map” the local-to-international networks and flows of goods arriving here, allowing the hub and Fondazione Arca to develop its activities. This last work was an interesting but challenging one, and students had to face the lack of time and availability of information to deal with this. This led them to get lost in the ethnographical observation, and the result was a work mainly focused on the volunteers’ role, with a particular attention to the pivotal role played by the very charismatic responsible of the warehouse. Their very simplistic conclusion was that, as the warehouse is one of the places where the volunteers and people working in the hub have their breaks, this is a relaxed place opened to everyone – and this conclusion clearly does not reflect the complex environment that the students choose to analyse.

Figure 3 – The warehouse. Credits: Basile, Dridi, Gabriele, (2017)

Figure 4 – The “line”. Credits: Basile, Dridi, Gabriele, (2017)

Figure 5 – The “internet point”. Credits: Basile, Dridi, Gabriele, (2017)

The group working on the daytime space developed a more sophisticated analysis of the spatial organisation of this multi-functional “room”, as well as of people arriving and working here. They produced a very interesting photographic and drawing essay, and a written essay that looked too much biased by a “positive prejudice” of the situation they were observing. In other words, despite long observation in the field, their preliminary view of this space seemed not to have been challenged before and after the work. Anyway, they developed an interesting view on how the migrants in transit life is characterised by a main and alienating activity that allows the access to all the primary functions that they need: queueing – for registration, for food, for dresses, for medical care – hence the title of their work: Keep the Line (Basile, Dridi, Gabriele, 2017).

Other works were developed in the immediate nearby of the hub. In particular, a group analysed dynamics and policy processes related to a green space close to the hub that has been and is at the centre of a significant mobilisation at the neighbourhood level. Formerly a brownfield, local citizens fought to have this space recovered by the Municipality, but when this recovery happened, the hub was opened and the green space started to be used mainly by the newcomers. This caused increasing discontent in the area. Their work focused on the policy process that led to the opening of this “contested” small park, and implied a direct relationship with the associations that were involved at the local level. The urban dynamics analysis suggested to frame this process not only at the local level, but also in a more metropolitan strategic vision, looking at this small green space not as a park, but as one of the spaces connecting different green areas along the Martesana Channel in Milan. This change of scale allowed both the observation of a change of meaning of this space, as well as to new ways to answer to their main research question: “whose park is this?”.

Two other works analysed in different ways the local commercial system trying to understand if it was or not affected by the migrants’ presence. In one case, this was more an analysis of if and how local commercial activities had changed due to the hub presence, as well as if and how they perceived it as an opportunity given the huge amount of people arriving in a peripheral area, or as a problem, given the specificity of the population arriving. Despite a huge amount of work with the local commercial activities, this group faced many problems in finding some kind of significant conclusion. As the Magazzini Raccordati constitute a very long and quite strong barrier in the urban tissue, and the hub is located only on one side of them, a last group concentrated on the differences in the commercial environment on the two sides of the structure, trying to understand if the richer commercial environment located “on the other side” was in some way affected by the presence of the hub. In general terms, all the three works focused more on an urban analysis, as well as on how the hub’s presence affected the local neighbourhood as well as the wider urban dynamics. Anyway, they tended to remain focused only on the local dynamics, capturing mainly the local complaints for the hub’s presence, and not contextualising the observed dynamics also in terms of actors and resources.

In any case, all the groups developed a press review and were asked to read book chapters and (academic) articles on migration flows in Italy, and on how the system for welcoming people works, and it is possible to say that at the end of the course almost all the students had understood these issues, as well as the specificities of this system and policies carried out in Milan.

Regarding the “third stage” of Polisocial activities (reporting the work and sharing the results with partners involved in the process), this took place only inviting representatives of Fondazione Arca and of the other associations operating at the neighbourhood level at a presentation of the students’ works that was held at the end of the course at the Politecnico di Milano. This choice represented a sort of “downgraded” third

stage, as the best way to share the results of Polisocial projects is presenting them directly in the neighbourhoods where they have been developed. This “more public” presentation was not done because both the teachers and the responsible of Polisocial agreed on the fact that the students’ work were interesting, but still not enough developed for a presentation “in the field”. This choice implies the recognition – from the teachers’ point of view – of a partial failure of the experience that will be discussed in the conclusions of this paper.

5 CONCLUSIONS

In these conclusions it’s important to unpack the bulk of issues that emerged from the pedagogical, the social analysis and the planning theory’s sides. The questions that lead our balance of the teaching in the field experience are what is the gain for the university? And for the students? And for the involved partners?

The Gain for the university and for us as teachers is connected to the possibility to cope with new research topics and issues. From the “urban side” both the direct contact with this place and the students’ difficulties in this place allowed the teachers to understand the challenges of coping with the presence of a huge amount of people transiting in a place without settling there. In any case, this is a place to face emergential situations, and from the planning side there are still not many answers on how dealing with these type of places minimizing their impact at the neighborhood and city level (Briata, 2014). If “the gain” for the city proposed also by the Municipality was clear (places like the hub allow the city not to have all these people wandering around, especially in the station area), the gain for the neighbourhoods where these places are located are less clear.

The gain for students is quite evident. They were for few months in a face to face with a situation that they were used to see only in the media. Most of them had never been at the hub, and only a minority of the class was aware of the issue we were dealing with. Before our course, they used to think at this issue as “people who land in the South of Italy”, but without thinking that this might be also an “urban issue”.

At the end of the course we interview the representatives of Fondazione Progetto Arca which is a big organization. They recognised the limits of the students’ work, but they were quite satisfied and they noted at least two positive aspects of the cooperation with us. On the one hand, they state that the teaching experience permitted them to go beyond their day to day activities. As a matter of fact this is part of their expectation because they wanted to be analysed by outsiders and to reflect about their presence in this part of the city and on themselves as an important actors in the Milanese asylum seeker hosting system. Working in an emergency regime prevents from doing what students did, to observe. Students final composition were at least a form of “restitution” of their daily work. The second positive aspect underlined by Arca is that we were perceived as a “loyal” partner. We did what we promised, non more than that. We were all aware of the limitations inscribed in the experience.

Teaching in the field implies a complex triangulation between the teachers, the students and the external bodies involved in the process. In this case, it might be said that Fondazione Progetto Arca’s expectations were in some way satisfied both in the relation with us, as well as in the relationship with the students. At the same time, the students proved to be satisfied of the relationship with Arca.

The only problematic aspect is related to the mismatch between our expectations as teachers and the final works of our students. We know that the issues proposed were very difficult to grasp as they entail the knowledge of the macro phenomena of new migrations as well as micro aspects of it. We spent a lot of time revising their writings, tables and map as well as supporting them in the ground research activities. At the end we realised that four months were insufficient to produce complete works. The outcomes were not as good as we expected. The critical aspects relates to the complexity of the issue, the lack of time of students for working on the ground and the difficulty for them to apply research tools (both methodological and conceptual ones). Everything was too new but they declared that our proposal constituted a big challenge for them. As a final word, all of us have learned a lot and we will replicate the Polisocial live teaching experience in the year to come, analysing old and new migrants lives in the social apace.

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ID 1473 | USING BOUNDARY OBJECTS TO MAKE STUDENTS BROKERS ACROSS DISCIPLINES - A DIALOGUE BETWEEN STUDENTS AND THEIR LECTURERS ON BERTOLINI'S NODE-PLACE-MODEL AND INTERDISCIPLINARITY

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ABSTRACT: Competencies required for steering urban development sustainably are scattered among various disciplines. Most prominently, this has been acknowledged by the growing community of planners in the field of transportation and urban development promoting an integrative approach known as transit-oriented development (TOD). Disciplinary traditions including different ways of thinking and doing as well as a strong vertical organisation of public administration form major obstacles for TOD and other interdisciplinary approaches to urban development. The implementation of TOD principles in plans and planning policy is usually dependent on strong actors brokering across disciplinary and departmental boundaries (Thomas and Bertolini, 2017: 145). "Boundary objects" (Wenger 2000) can help sustaining the effort of individuals promoting integrative planning approaches against institutional and disciplinary rigidness. These objects allow practitioners of different disciplines to discuss common challenges without constant guidance of experts in multiple disciplinary fields. The development of boundary objects is therefore crucial in order to support current "brokers" (ibid.) and provide continuity when brokers are unavailable. We believe that the node-place-model (NPM) by Bertolini (1999) can be such a boundary object. We test our hypothesis as part of two design studio courses confronting urban design students with the task of developing their own design brief based on a node-place-analysis – a systematic quantification of both accessibility and activity at transit stations. We conducted the course twice while testing our approach on two scales: a city-wide node-place-analysis of the City of Munich with the goal of designing a small city quarter and a node-place-analysis of the entire metropolitan region of Munich with the goal of developing a spatial strategy for the City of Ingolstadt, a key economic node within the metropolitan region. The paper is of dialogic, discursive nature. The lecturers and the students discuss whether or not the node-place-model enables us to understand better the relationship between transit and urban development and to develop spatial strategies based upon an integrative approach. Our discussion reveals that the node-place-model, despite of or perhaps due to its compelling simplicity, cannot necessarily bridge disciplinary boundaries successfully. The model does not comprise mechanisms about how both domains are qualitatively linked. It simplifies node and place into quantitative variables without providing sufficient guidance on operationalisation. Operationalising the model is often subject to misinterpretation. The schematic quantitative nature of the model incites users to blindly apply calculated results. We therefore reject our hypothesis and conclude that the node-place-model may not be suitable as a boundary object in planning practice. Due to above mentioned shortcoming, it cannot serve as a common tool across disciplinary boundaries. However, both lecturers and students see value in the model as a didactic instrument. It initiates food for thought during a discursive process that may lead students to become brokers across domains. The model forces students to connect and integrate knowledge of multiple domains. It raises awareness for the pitfalls of interdisciplinary issues, but at the same time also enforces a critical stance on simplified quantitative implementations.of multiple domains. It raises awareness for the pitfalls of interdisciplinary issues, but at the same time also enforces a critical stance on simplified quantitative implementations.

1 INTRODUCTION

Competencies required for steering urban development sustainably are scattered among various disciplines. Cities, with their multitude and complexity of actors, structures, and processes cannot be

conceived as being the domain of one particular discipline in traditional categories. Rather, they are shaped and (re-)produced by the overlapping, converging, or sometimes conflicting outcomes of a range of disciplines – in fact, there are few scientific fields without at least indirect impacts on urban environments. There are however a number of them which are explicitly connected to understanding, and in some cases ultimately influencing them. Among these are architecture, civil and transport engineering, (human) geography, urban economics, or urban sociology, to name just a few. Public administration follows the same disciplinary logic subdividing its institutions in sectoral departments and agencies. Urban planning, that already lays claim to interdisciplinarity with respect to urban space, has to conform to the same idea of vertical separation between disciplinary domains. This vertical separation comes with the distribution of responsibility and power among various stakeholders. While politicians and citizens expect planners to effectively steer urban development, planning departments have to broker between various public and private actors.

Despite the interdisciplinary nature of urban planning, teaching approaches across disciplinary boundaries are still relatively rare (Rooij and Frank, 2016: 483). Establishing planning degrees with homogeneous groups of students has led to the formation of its own unique ways of thinking and doing. However, scholars and practitioners alike are confronted with the challenge of understanding and incorporating different disciplinary backgrounds in group work. Programme administrators and lecturers are hence looking for new ways to bridge potential incomprehensibilities between students, for example in graduate programmes of urbanism which admit students with a range of different undergraduate degrees (Bertolini et al., 2012).

Interdisciplinarity has been discussed as both encouraging and underdeveloped avenue for future research and teaching for a range of subjects during the last decades. One case where this becomes clear is integrated transport and land-use planning. Sectoral technical planning and comprehensive land use planning both exert a strong influence on our built environment, which is not always aligned. Planning practice and academia has now long acknowledged the deficits that can arise for our urban environment if a single of the disciplines involved in its formation becomes prevalent over others (Jacobs, 1961; Mitscherlich, 1965; UN Habitat, 2009). The dominance of the private car in western cities can partly be attributed to the supremacy of traffic engineering in post-war urban development of the 1950s and 1960s, which is strongly connected to the modernist ideal of the functionally segregated city, in many cases to the detriment of the quality of public space. It was only in the 1970s and 1980s that other disciplines, such as heritage protection or urban design, reasserted their claim to be equally considered in urban development. This example shows that it is necessary to find methods and tasks that enable disciplinary experts to introduce their knowledge into the urban development process and put it into perspective.

Integrated transport and land-use planning today still is an area that yields potentials for interdisciplinary student group work. Often, students with a civil or transport engineering background view urban development challenges more in terms of quasi-mathematical optimisation problems while students with a background in the social sciences emphasize specific place-based qualities in need of protection or strengthening. The planning vision of transport-oriented development (TOD), which suggests a joint analysis and alignment of settlement densities and (public) transport quality, creates space for a common discourse between these disciplinary approaches (Kinigadner et al., 2016). The emergence of interdisciplinary discourses in urban planning and developments is summerised under the title of Urbanism (Wolfrum and Schöbel-Rutschmann, 2011; Olsson and Haas, 2014; Gilliard and Thierstein, 2016).

2 METHODOLOGY

The paper presents two studio courses of the last two years that employed the node-place-model (NPM) developed in the 1990s by Luca Bertolini (Bertolini and Spit, 1998) to acquaint students with the challenge of integrating land use and public transport planning. The students had to familiarise themselves with the NPM and were asked to use it as an evidence base for identifying areas for development. The students had to understand the model, to apply it as a calculation model and to interpret the results. Consequently, they developed design proposals on the scale of individual stations and their surroundings as well as for general strategies of an entire city. The learning goal was to familiarise students with an object that can span the boundaries of two disciplines: urban planning and civil (transport) engineering.

However, the studio fulfilled a second goal for us as teachers. Munich's MSc Urbanism programme is designed for graduates of various disciplines. Developing interdisciplinary methodologies that help students with different previous knowledge to communicate about urban space is crucial for the success of such a degree. Our hypothesis for the studio course as well as the paper is that the NPM is a boundary object that allows experts from two fields of transportation and urban planning to jointly develop plans for the future. Wenger (2000: 236) conceptualises boundary objects as processes, discourses or artefacts shared by multiple disciplines. They are designed "to enable multiple practices to negotiate their relationship and connect their perspectives" (ibid.).

Students of both the MSc Urbanism and the MA Architecture programme joined our studio course. Their backgrounds include bachelor's degrees in architecture, civil engineering and geography. We tested our hypothesis on two scales: once for the city of Munich and then for the metropolitan region of Munich. The hypothesis is assessed by a discursive methodology. First, both student groups talk about their application of the NPM to an integrative land-use and transportation design project. Both groups will individually reflect on their experiences before developing a structured conclusion together. The last part summarises what we as educators have learned from both projects and what we think are important implications for planning education.

3 NODE-PLACE-MODELLING AS A DIDACTIC INSTRUMENT

3.1 BERTOLINI'S NODE-PLACE-MODEL

While the general long-run impact of accessibility improvements on settlement patterns in the past is well documented (Wenner, 2017), the effect of land-uses on transport infrastructure depends more on policy decisions (Rietveld and Bruinsma, 2015: 239). The 'node-place' model (Fig. 1) is an analytical tool that enables formulating such planning guidelines. One of Bertolini's major advanaces for urban planning is the combination of two basic concepts of space. On the one hand, space is formed by its geographical strcture and refers to the dimension of place. On the other hand, space also inheres a topological component that is adressed by the term node. Regarding didactics, the NPM enables to understand locations in a wider regional context and consider these from the position in transport networks and there physical qualities. In effect, it suggests to match densities of activities, which generally also translate into building density, with public transport service level in order to achieve a more sustainable urban development. It essentially describes a normative relationship: areas of high density of activities ('place') should be served by more frequent and more diverse public transport, and accessible locations ('node') should be surrounded by dense and diverse urban development, while for sparsely used areas a lower accessibility level is acceptable, and vice versa (Bertolini, 1999: 201). Locations where node- and place-quality are balanced are called 'accessible'. This serves two functions: On the one hand, high accessibility levels of public transport in low-density areas mean an inefficient use of public resources that should be avoided (this would be an 'unsustainable node'), while high densities with low public transport accessibility gives rise to car-dependency, which is associated with negative social and environmental consequences ('unsustainable place').

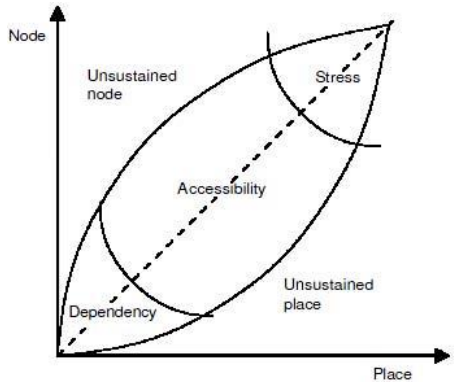

Figure 1 The node-place model.
Source: Bertolini (1999: 202)

There are, however, cases where node- and place-quality match which nevertheless can cause difficulties for urban development. First, there are situations of 'stress': "Great concentrations of flows and activities mean that there is an equally great chance of conflicts between multiple, extensive claims on a limited space. The property development ideal of maximal intensity of land use and the transport development ideal of maximal flexibility for infrastructure adaptation and expansion have to find here a difficult synthesis" (Bertolini, 1999: 201-202). Second, there are dependent locations: Here, other factors than accessibility are decisive to maintain supply of both public transport and urban activities.

3.2 EXPERIENCE OF THE FIRST STUDIO

The studio included an analysis of the city of Munich, using Bertolini's NPM as a guideline, an identification of places that stood out from the results as having potential for development and implementations of urban design projects in those places. For the analysis, a node was defined as a rail-operated public transport station (suburban rail, underground or tram) and a place was defined by the characteristics of an area within a 700 meter radius around a node. Then, calculable "sub-values" that comprised the final node and place values were defined.

The node value (Fig. 2) was calculated from two sub-values: centrality and frequency. The centrality value represents the amount of people that would travel through a certain station when going from point A to point B using the shortest path (betweenness centrality, as defined in Sevtsuk et al., 2016: 12). The values were calculated using the "Urban Network Analyst" tool developed at the MIT as plugin for ArcGIS. The frequency value represents the sum of the frequencies of all public transport lines that pass through a specific station. The frequency was calculated as the average of weekday and weekend frequencies at different times of day (7AM, 12PM, 9PM) and was given in trains per hour. The place value (Fig. 3) was also calculated from two sub-values: density and diversity. The density value comprised of population density (municipal data from the city of Munich was available by neighbourhoods and was recalculated for the 700 meter radius of each place), built density, the percentage of built area within the radius at ground floor levels (not considering the height of the buildings), density of activities, the number of businesses within the radius categorized by NACE as retail (G), gastronomy (I) or culture (R) and density of workers, taken from GIS firm data and modified to take into account small businesses as well as corporations. The diversity value was defined as the level of balance between the population density values, number of workers and number of firms. The basic assumption was that the ideal diversity exists when all three values are equal, the bigger the difference between the three values is the lower the diversity value is.

The final step of the analysis was to enter the node-place value for each station area into Bertolini's node-place-diagram, to receive a classification for each station (unsustained node, unsustained place, stressed, dependent or accessible) (Fig. 4). To calculate the node and place values, we used GIS data provided by the city of Munich, while frequency data was compiled using the online timetable of the municipal transit agency.

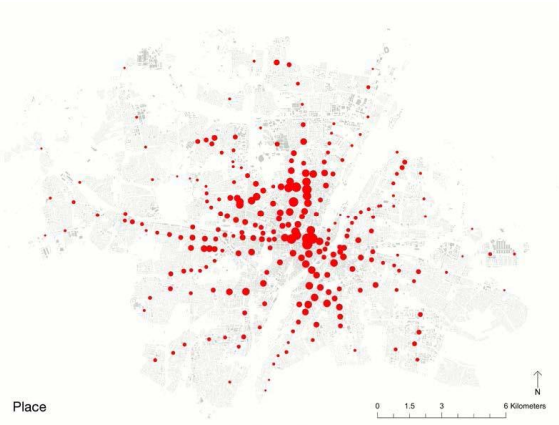

Figure 2: Node values overlaid on a map of Munich. Larger circles indicate higher values. Source: own account

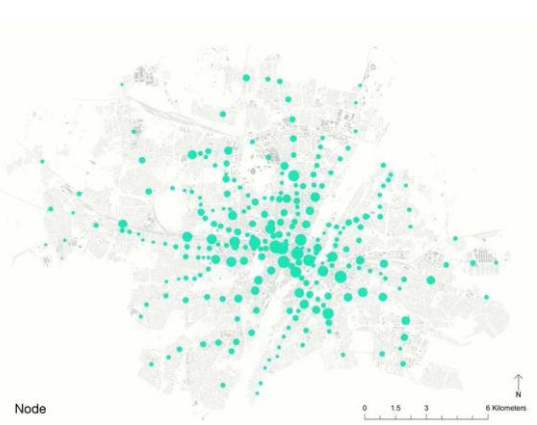

Figure 3: Place values overlaid on a map of Munich. Larger circles indicate higher values. Source: own account

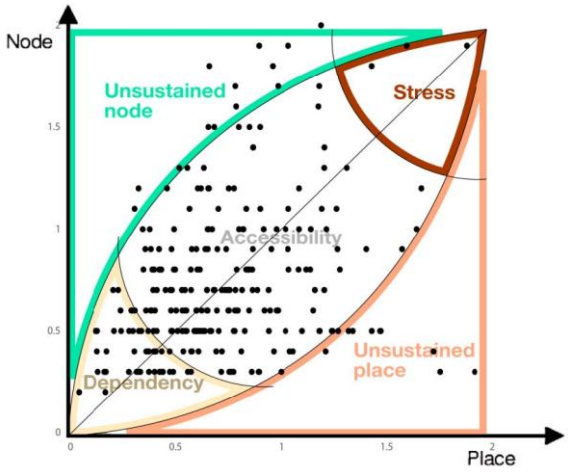

Figure 4: Node-Place diagram showing all analysed stations in Munich. The abundance of accessible areas is clearly visible. Source: own account using Bertolini (1999: 202)

The results of the analysis showed that Munich is mostly a balanced city with a majority of accessible station areas (Fig. 5). The stressed stations were, as expected, in the city centre, in proximity to the main station and historic centre. Most of the unsustained places were found to be located in neighbourhoods close to the city centre where the population, business and activity densities are the highest. The majority of unsustained nodes were found to be located along the main suburban rail line passing through the city from east to west. The stations categorized as dependent were mostly located in the periphery of the city. Within the analysis results that were mostly unsurprising, a few of the station classifications stood out and required further attention. In Schwabing, a popular neighbourhood north to the city centre, three adjacent station areas with less than 500 meters between each station received different classifications. Clemensstraße station was classified as an unsustained place, Karl-Theodor-Straße as accessible and Scheidplatz as an unsustained node. Scheidplatz station also stood out as one of only three unsustained nodes not located on the main suburban line. A similar situation was found in Giesing, another central neighbourhood, with the adjacent Tegernseer Landstraße station and Giesing station. Finally, it was very surprising to discover a cluster of mostly dependent stations right next to the city centre in Altstadt-Lehel neighbourhood (Tivolistraße, Bundesfinanzhof and Paradiesstraße).

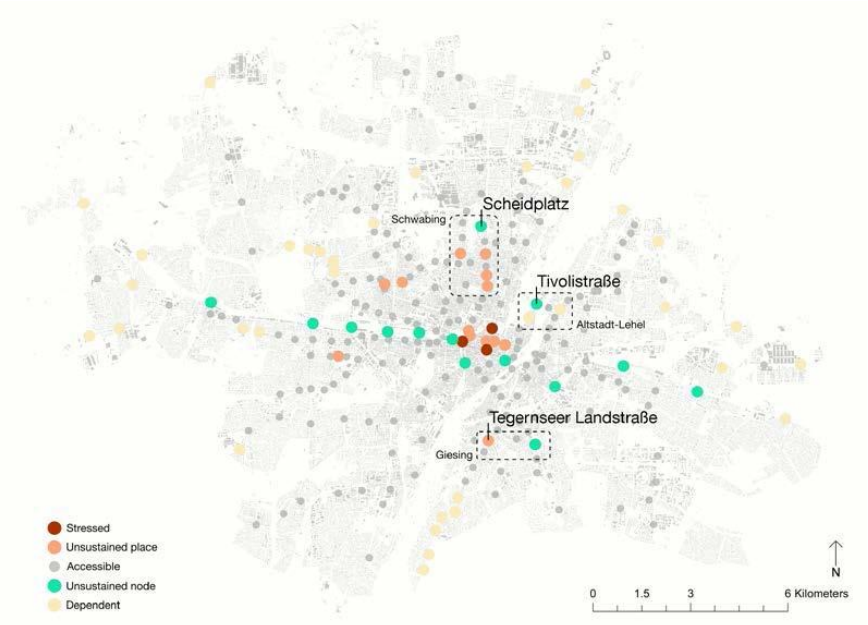

Figure 5: The five categories of the node-place model: accessible stations (grey), stressed areas (red), unsustained nodes (green), unsustained places (orange) and dependent areas (light brown).
Source: own account

Limiting our analysis to rail-operated public transport stations meant that areas not covered by these networks were excluded. However, extensive coverage of the Munich suburban rail, underground and tram networks made this a negligible problem as virtually all relevant areas of the city were found to be within reach of such stations.

As a way of checking our results, we calculated the model with a modified radius of 400 meters instead of the previously used 700 m. This was meant to take into account that 400 m is a more realistic distance that people would actually be willing to walk. Across the majority of stations the relative place-value decreased, which produced a higher number of unsustained nodes. Although we could not with absolute certainty attribute a cause to this effect, we assume that it might be related to the often significant proportion of empty space in the vicinity of a station (street junctions, railway lands, etc.). A decrease in radius would render these areas proportionately more important. Another factor was that a decrease in radius would very often lead to a decrease in the diversity value, on account of functions not being evenly spread out across the analysed area. This was an important find, in that it clearly illustrated the inaccuracies involved. As the NPM is relative, the results can easily change, depending on the dataset that is used. Thus, a station that is categorised as an unsustained node or place could in another dataset possibly be in accessible range.

We also encountered several other shortcomings in the results of our node-place analysis. The analysis did not take the positive aspects of public open space (namely parks or the banks of the river Isar) into account. By virtue of being non-built-up areas, these areas therefore had a negative impact on the place values of nearby stations. They do however, especially during the summer months, generate significant footfall and contribute to a high quality of place.

We also found that the model could not realistically display situations where stations of different lines or modes were spaced closely together. This is especially true of many of the tram stops within the city centre which would consistently get low node values. However, many tram stops are in fact within easy walking distance of a railway or underground station and interchange is therefore possible, but is not accounted for in the model.

There have been many instances where the model could have been calculated in a much more detailed manner (e.g. by using actual walking distance instead of a predefined radius to define our areas of analysis.) Since the strengths of the model were seen in its simplistic approach, we felt that the model would not necessarily be more powerful with such an increased level of complexity.

As the design phase of the studio did not seek to develop a coherent spatial strategy for the city of Munich, it was decided to pinpoint several localized improvements across the city which were taken forward by individual students. When choosing these locations, we selected a two-phased approach. First, a shortlist was compiled from the stations that featured in the outer extremes of the node place diagram. Second, the stations from the shortlist were visited to enable an empirical analysis of the sites. During this stage it was decided to progress only with the unsustained stations as we thought they would be more interesting to develop than stressed or dependent areas and because some of them were, as has already been mentioned above, among the more surprising results of our analysis. The stations that were selected were Scheidplatz and Tivolistraße as unsustained nodes and Tegernseer Landstraße as an unsustained place.

Scheidplatz stood out as the sole unsustained node in the northern neighbourhoods of Maxvorstadt and Schwabing. Although the station is among the most important interchange nodes in the north of Munich, it is located between a quiet urban park on one side and a primarily residential area on the other. During the design process, an approach was taken to developing business and leisure in the area and to opening up the park, thereby increasing its attractiveness and usage. By relocating large allotments within the park to make room for new buildings, diversity and density values could be raised to make the area more balanced (Fig. 6&7). The tram stop Tivolistraße was found to have a similar urban setting. Being located in a thin strip of urban fabric bordered on both sides by the green spaces of Englischer Garten and the river Isar, the site is severely constrained in its development potential. A currently proposed tangential tram line across the north of Munich would pass through the station, further unbalancing its node-place values. This increase in connectivity would heighten the development potential of the area. An already existing business park immediately to the north of the station was chosen as the most suitable location for an architectural intervention. Redeveloping this area through a mixed use approach with high-rise elements enabled a significant increase in density of both residential and office space.

As the only unsustained place to be developed in our design studio, Tegernseer Landstraße required an entirely different approach. Further analysis of the site showed the results of our node-place model to be somewhat misleading in this case. While the tram stop is situated next to a dense urban neighbourhood, the immediate vicinity is characterized by one of the most congested road junctions along the urban ring road called "Mittlerer Ring". As this isolates the tram stop from its surrounding neighbourhood and two underground stations with much better connections to the city centre are located only a few hundred meters away both to the north and west of the site, we felt that to propose an increase in service to the station could not be the right way forward. The chosen proposal for the site was a pedestrian-oriented redevelopment of the public open space. This included strengthening walking connections across the entire site and between the residential/commercial areas and nearby nodes as well as improving pedestrian crossing times at the road junctions.

In the course of our design studio, we have come to understand that the first steps in the development of a certain area can be taken from the node-place-analysis. Following our basic assumption that a balanced and diverse place is best, we have tried across all three locations to take actions that increase the lowest values to receive the best results. However, in most cases the NPM could only serve as a starting point and further analysis was necessary to determine the best way forward. Nonetheless, we feel that the model did help us in our design process by offering an additional level of analysis and by bringing our attention to locations that we would not normally have looked at. While it is our belief that it cannot serve to define the qualities or shortcomings of a given site, it presented a different way of looking at a city and the way it's functioning. Whereas the place values are more of a micro look at an area, the node values are a macro look, connecting a small area to the perspective of an entire city. The NPM helped as a tool to understand the immediate needs of an area in the city and made us appreciate that there's an importance in thinking about each small area and how it functions as well as how the city works as a whole.

Figure 6: An overview of the urban development proposal in Scheidplatz station, project by Gal Biran

Figure 7: Night street view of new Business and leisure area in Scheidplatz, project by Gal Biran

3.3 EXPERIENCES OF THE SECOND STUDIO

The second studio started with the same task but for the entire metropolitan region of Munich. The project's first step was to set up a NPM for the railway network of the metropolitan region of Munich (MMR). This network consists out of the regional and long distance trains in the more rural areas on the one hand, and, on the other hand, in the main cities additionally of the underground and suburban rail infrastructure. Only trams were not respected in our analysis for reasons of data complexity. For the calculation of node values, we used betweenness and gravity measures for every railway and underground station in the MMR. The gravity measure assumes "that accessibility at [one specific station] is proportional to the attractiveness (weight) of [surrounding destinations] and inversely proportional to the distances between them" (Sevtsuk et al., 2016: 12). In contrast "the betweenness of a [station] is defined as the fraction of shortest paths between pairs of other [stations] in the network that pass by" (Sevtsuk et al., 2016: 12). With these two complex components, the calculation of the node-values could be quite standardized. To widen the node value's meaning we tried to add some extra information about the stations' inherent quality. Therefore, we analysed infrastructures and facilities of the stations like Park & Ride areas and the possibility to charge E-cars. However, adding more criteria to our analysis didn't make our analysis more accurate, so we decided to rely on the sum of gravity and betweenness.

Due to this extensive data analysis, it was easy to deduct the place values. In order to define it we examined the number of inhabitants living in the stations' catchment area, radius of 600 meters (Schwarze, 2005: 19), as well as the socio-economic services in this area, which was classified by a ranking system including all enterprises, larger concerns and educational facilities. Also, the cultural and leisure opportunities were considered. The first step was concluded by the set-up of the node-place-diagram and its interpretation.

Examining the data output of the first calculation, the results gave a consistent and argumentative overview of the railroad stations of the entire Metropolitan Region of Munich. Locations with a high frequency, line quantity and population density as well as services yield a high node and place value (each on a scale of 0 to 100), like the Munich central station (MHBF in the chart below, with Node =100, Place=88) or Marienplatz München (MMAR in the chart below, with Node=50, Place=94). Besides their high importance for commuters and travellers, these places also offer a high range of facilities such as high retail, office or housing density. Furthermore, stations with high node values and low place values in comparison like Ingolstadt central station (IHB in the chart below, with Node=68, Place=50) were identified (Fig. 8).

After a detailed reconsideration, we had a closer look at the type of the investigated cities and locations. This was reflecting the results in a new way, as you can see in the following illustrations (Fig. 9).

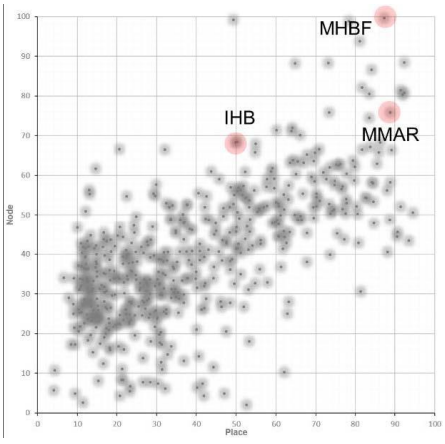

Figure 8: Node-Place-Diagram of the Metropolitan Region of Munich.
Source: own account

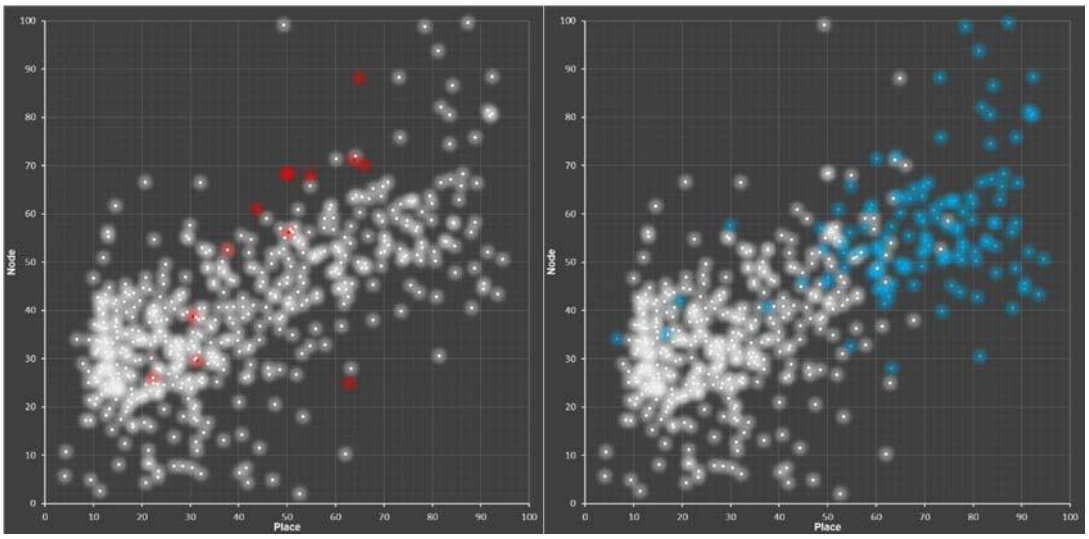

Figure 9: Munich's stations highlighted blue, other smaller cities highlighted red. Source: own account

Some problems in the understanding occurred with the interpretation of the chart. Some stations are located in unexpected positions. By closer examination, we got to the point that Betrolini'scalculation model is disputable. With the metropolitan region being a very diverse area consisting out of dense city structures as well as extremely rural areas, it is questionable to compare the same data for stations, which are located in very different locations. Furthermore, in some areas the importance of the railway network is not as high as it is in other areas. For example, cities like Ingolstadt and Augsburg that are a lot smaller than the city of Munich are not covered by an urban railway system. This phenomenon is supported by our calculation of the inhabitants per railway station value. As you can see in Figure 10 a city like Ingolstadt would need 14 additional stations in its railway network to reach a coverage like Munich. Ingolstadt has fundamental problems with motorized individual traffic, but the essential information about the connection of public transport coverage and urban development could not be deducted from the previous model.

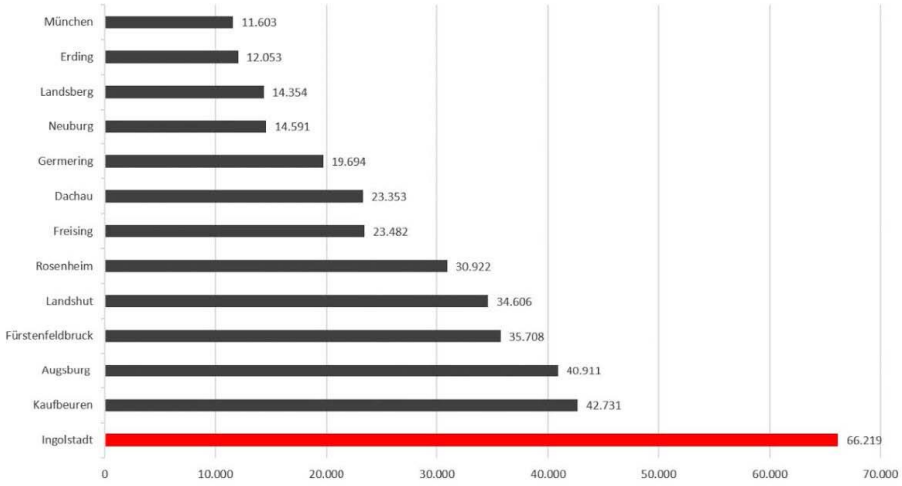

Figure 10: Inhabitants per Railway-network station in metropolitan region's cities. Source: own calculation

A new calculation is needed with adaptation in the examined public transport system and scale. The hypothesis was that a systematic adaption of the node-place model is needed for the suggestion of interventions to reduce the centrality and accessibility deficits in cities like Augsburg, Ingolstadt or Rosenheim in the MMR. These cities' public transport is highly based on their bus network. We got to the conclusion, that an adaptation was necessary since the role of the bus system in these cities was not incorporated in the prior calculation.

Figure 11: Munich Metropolitan Region, INVG area highlighted. Source: own account

The main reason to choose Ingolstadt the examined city is shown by the calculation of inhabitants per railway station (Fig. 10), which is the highest in the metropolitan region. The conclusion that there is no working public transport would be misleading. Rather it is that the public transport is organized by the bus system, a system that was completely neglected in the first step's analysis. So, in the second step this system in the city of Ingolstadt was in focus. To get the values of place and node, all stations in the bus network of the INVG (the city's public transport corporation) were analysed (Fig. 11). The place value for each bus station consisted out of the same factors as it did in the first step's calculation, but the catchment area was defined smaller with a range of 200 meters (Schwarze, 2005, p. 19). The radius of 200 meters was chosen, because it is a reasonable walking distance for users of the bus-network. The data of gravity and betweenness, in accordance to the definition described above, were calculated by a GIS Analysis for every bus station in INVG's network done by the Urban Network Analysis Tool designed by the city form lab of Harvard University. We then set up a new node-place-diagram for INVG bus system (Fig. 12).

In the third and last step of the project the applicability of this new model had to be tested. Therefore a catalogue of very different planning tools (like settlement densification, founding of new settlements, changing frequency of bus lines and much more) in the field of public transport in spatial and urban development in common were introduced. Each single intervention of this catalogue was classified by its impact on the position of a station in the node-place model, whether if it is changing the node or the place value. To validate these, in other contexts evident actions, are working in Ingolstadt as well, some example station had to be highlighted. To select, a cluster analysis of all bus stations was done. Thereby, the clusters were defined by the station's position in the node-place-diagram in relation to the 45° line. Thus 7 different kinds of stations were identified: isolated places, over-sustained places, over- and highly over-sustained periphery, over-sustained centres, unsustained centres and places. For each of these clusters one extreme example was selected. Every suitable intervention (regarding to the aspired direction of development in the model-chart) of the catalogue was taken into practice. In some cases, this approach delivered logic and working solutions. But in other cases, the outcome was indefinite and, in some parts, even illogical, because the actions demanded by the station's position in the model did not fit to the actual real place and its surroundingIt does not make sense to desnifiy the urban structure around a station which is classified as an over-exploited place just because the chart is requesting this. Sometimes an overstated infrastructure provision has reasons far above planning mistakes. It just makes sense that, for instance a station near an attractive park, needs to have a high accessibility to open it up for the public. To claim densification here is not just illogical but even counterproductive.

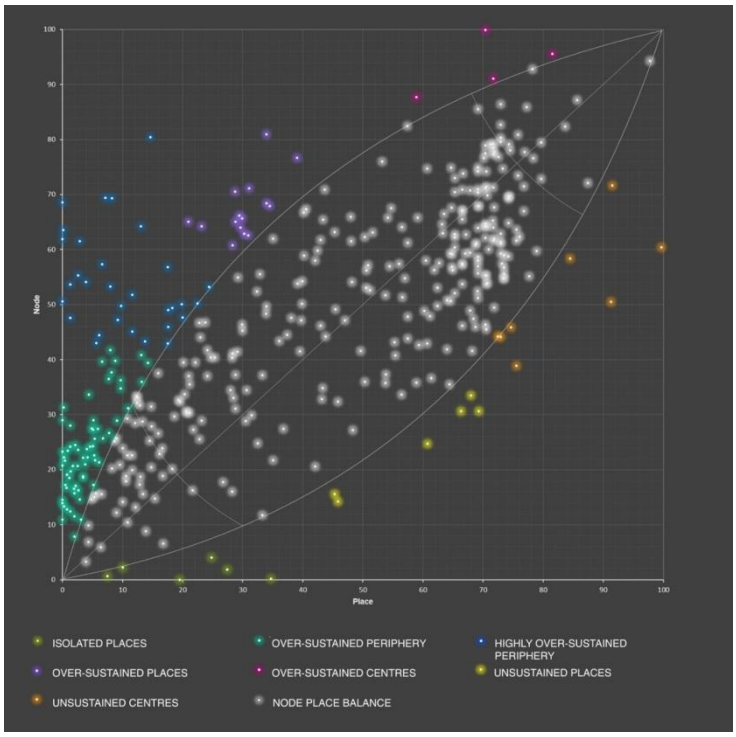

Figure 12: Node-Place-Diagram of INVG area

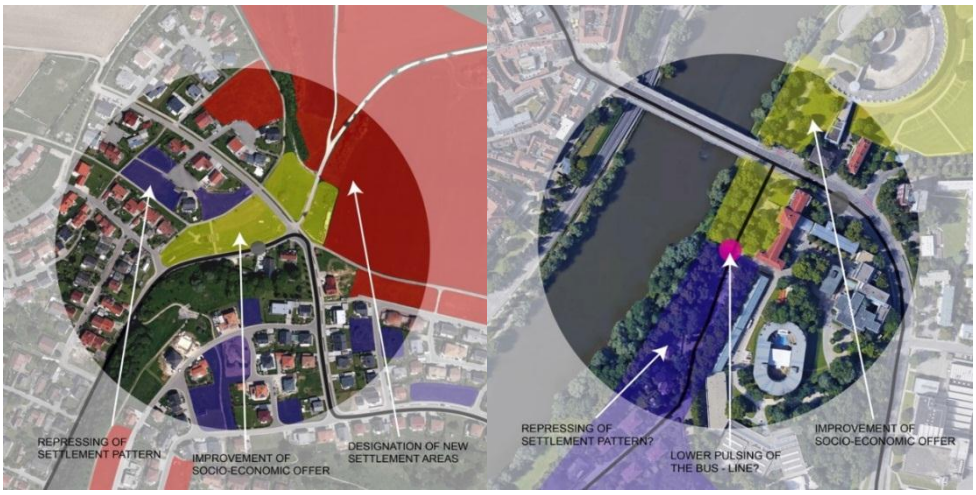

Figure 13 + 14: Useful Instructions deducted out of the model for the station Andreas-Schmöller-Straße (over-sustained periphery, left) and questionable instructions for the station Brückenkopf (over-sustainder centres, right)

To sum up, working with the NPM is on first sight a helpful tool for the analysis of the relationship between public transport and urban development. The model and especially the visualization in terms of a diagram is comprehensible and give a better understanding of the interdependency of transport and development. It offers a good base for discussion of the various participants in urban development. Urban researchers, municipalities, investors and all other actors in the development of cities have an easily discussable and understandable model.

However, there should be awareness of some problematic aspects. The diagram leads to quick and often false assumptions based on the oversimplification of a rather difficult and complex field. The simplicity of the xy-chart leads to reductionist conclusions. Another problem was identified, by expressing future strategies for the evaluated stations based on the model: The well-served station “Brückenkopf” in Ingolstadt (node=87, place=40) is a touristic place, where a museum and the nearby Klenzepark are located. The area is characterized by wide green and open spaces (Fig. 14). According to the model and the high node value a recompression was suggested to position the station in the accessibility area of the diagram. This case leads to the conclusion that the model gives first-hand a simple overview about the

stations and their future strategies, but otherwise the spatial situation of all stations needs to be considered as well.

Furthermore, the systematical thinking of the calculation of node and place values only provides the current situation. Future investment and development are not considered. The model and diagram can only be seen as an initial research and an indicator for possible interventions. Additionally, the calculation results are only relative to each other. There are no absolute values. The selection of parameters for the calculations and the quantification can be questioned as more subjective than objective. To simplify the process only one city public transportation network (Ingolstadt) was examined. The interaction between different cities was not considered. Therefore, the gravity and betweenness values were not accurate, especially on the borders of the public transportation network of the municipality.

Further critique refers to the regarded type of traffic as mentioned earlier. In the case of Ingolstadt, the main public transport is provided by the regional bus system of the Ingolstädter Verkehrsgesellschaft GmbH, INVG. Though, in the earlier analysis just the rail-bound traffic was considered. Thus, the traffic system of Ingolstadt couldn't be evaluated on a smaller spatial level. This fact does not prove the model false, but makes it harder and more time-consuming to analyse and to calculate the values and comparable to the rest of the stations in the MMR. In which exact way a different assessment should be used, isn't suggested. This makes the model in a way vulnerable and the evaluation more subjective. The evaluation of node and place values for every city consequently has to be done always for a macro and a micro based spatial standard, however which makes the model less comparable in a wider spatial scale.

Furthermore, the calculated values are specific to the public transportation system. You cannot compare node and place values across systems. Another critical point consists of the fact, that the public bus network is a flexible and small-scaled system. The system of the node-place-model is based on the transport-oriented development. On the contrary, the bus system is not particularly based on this approach. Finally, all outcome - clustering as well as indicated interventions, - need further examination and discussion.

4 CONCLUSIONS

The reflections of both the architecture as well as the urbanism students point out various issues while operationalising Bertolini's NPM. These can be categorised into three groups: issues of underlying assumptions, issues of calculation and issues of interpretation.

Bertolini (1999: 201) defines node as the "potential for physical human interaction" and place as "realisation of potential for physical human interaction". Implicitly, he argues that public transportation infrastructure is a 'given' resource, which planners can exploit by redeveloping the areas around stations. Our analysis shows that this argument is plausible as long as the majority of public transport is realised on rail infrastructure. Both the railways and its stations are long-lasting investments relatively resilient to changes in funding and planning policy. It is therefore not only in the developer's interest, but also in the interest of public authorities to utilise the potential created by infrastructure investments. The studio work on Munich demonstrates that the NPM leads us to areas that are worthwhile undergoing redevelopment.

This has unfortunately not been the case for the city of Ingolstadt. The student's first attempt to identify potentials across the entire region becomes quickly limited by the extent of rail-based transport infrastructure. An initial NPM that only included rail services rendered most areas of major cities across the Metropolitan Region of Munich as undesirable for redevelopment, although these cities itself are important economic centres. Instead redeveloping should have happened around stations in peripheral areas. This would lead to a clustered, but disperse settlements structure, while potentials of general inner-city and brownfield developments in cities without rail-based public transport are neglected.

The inclusion of bus services puts the underlying assumption of public transport as a resource into question. Bus services require very limited specific infrastructure. Transportation authorities change bus services frequently to satisfy demands. Taking the bus-service-based public transport network as a given infrastructure is therefore unjustified and led us to conclude that the premise of the studio should be adjusted to development-orientated transportation (DOT). This is obviously a fallacy, because 'DOT' is the simple adjustment of public transport according to demands and – as argued before – this is only possible

for bus services. The application of the NPM in the Ingolstadt case distracted us from the pressing main issue that the city is in desperate need of rail-based public transportation instead of ineffective optimisations of bus services.

We have to conclude that Bertolini's NPM should only be applied in regions, where rail services carry out the majority of public transit across the entire region. Even in case of the much more successful application for the city of Munich, we have to realise that despite the density of metro and tram services the calculation of the node value does not easily account for non-motorised transportation modes such as cycling and walking. An underlying problem of the NPM is that it is a mono-modal.

The second group of issues arise from applying the abstract NPM by calculating concrete node- and place-indices. Bertolini's (1999) paper implies the model's intent to be applied by citing the application as part of two master's theses at Utrecht University. He does however not provide a proven and tested way of calculation. It is suggested to use multi-criteria analysis. Contrariwise, our experience shows that it is not the case that the more criteria you use the better the calculation becomes. Choosing, collecting and weighing data requires a deep understanding of the interrelation of various criteria affecting public transit service and the traveller's behaviour. While we do not want doubt that advanced modelling could actually yield excellent results, we cannot verify our expectation for the NPM that it can be easily used by both transportation and development experts. Planners with limited expertise in modelling will quickly reach their limits and will just improve their calculations for the worse by introducing numerous criteria. Moreover, the more criteria you introduce the harder the interpretation of your values becomes. Perhaps, the success of the NPM is explicable by the intriguing nature of the most popular games that they are easy to understand but hard to master. This may be an excellent feature of a game but it makes the NPM less usable as an easy-to-use tool for planning across disciplinary fields.

Interpreting the results is the last but perhaps most important challenge while using the NPM. Both groups of students pointed out that the premise of Bertolini's model is easy to grasp. It quickly led both groups to discuss measures that could be taken to bring both node- and place-value of an area into equilibrium. A tendency to generalisation and oversimplification resonates however constantly. Almost all top-down approaches reveal that under closer inspection other criteria may play a bigger role than the ones calculated as part of the model. Obviously, it is not surprising that an area with a great potential for redevelopment according to the NPM cannot be redeveloped due to environmental, economic, social or aesthetic concerns. It would be unfair to accuse the NPM of being misleading in this case, because it does not promise to combine these domains with urban development. The NPM is however introduced as facilitating a transport-orientated development – so the interplay of transportation and development planning. As such, it delivers in many cases interesting results, but also fails in other cases. One of the Munich design projects demonstrate that the appropriate measure can be neither related to node- nor place-value but a qualitative improvement of public space.

After testing the NPM for two semesters, we have to conclude that the NPM cannot necessarily serve as the sole boundary object in order to connect the fields of transportation and development planning. We identified three reason:

1. Using the NPM as a calculation model requires a deeper understanding of modelling to be sufficient for robust interpretation.
2. The NPM comes with inherent shortcoming, which makes it only applicable under spatial conditions of dominant rail-based transportation.
3. The NPM is prone to oversimplification. Working across the boundaries of development and transportation planning requires a multi-method boundary practice.

5 FURTHER RESEARCH AND IMPLICATIONS FOR PLANNING

Spatial planning bases upon various disciplines holding valuable conceptual and methodological knowledge. Planners are therefore constantly challenged by the need to get deeper insight into a specific discipline while keeping an overview and an interrelated understanding across various of them. It is important that educators raise awareness for this duality of knowledge in planning among students. Otherwise, planning graduates may fall into the trap of applying planning principles and concepts blindly.

Planning principles can be described as the application of various disciplinary knowledge for a typical planning case. It is well established among planning scholars that besides universal challenges local specificity plays an important role for planning practice. Basically, there is no typical planning case. Planning problems are essentially unique (Rittel and Webber 1973). Internationalisation of research and practice has led to an increase of transnational flows of ideas (Healey 2012). As such, scholars in Germany as well as other countries have picked up Bertolini's NPM. Although the contexts of the Netherlands and Germany seem to be very similar, local differences are enough to let us question some of the underlying assumption of the NPM.

The key learning outcome is perhaps not the application of the appropriate boundary object to link transport and development planning but the awareness that multi-methodological planning approaches across disciplinary boundaries need to be developed. The NPM can be a valuable didactic instrument. Its simplicity prompts us to think about the connection of transport infrastructure and land-use development, but it also reveals quickly the insufficiency as a singular tool to bridge the gap between disciplines.

Preparing students for the interdisciplinary field of planning practice requires the development of fully-fledged cross-boundary experts. Bringing together disciplinary experts such as architects and engineers in a course is a valuable exercise to raise awareness for each other's disciplines but it does not replace the planner as the mediator between the spatially relevant disciplines. Spatial development requires a boundary discipline (Gilliard and Thierstein 2016) that is able to broker between various disciplines.

Thus, we recommend that planning educators look further into two issues:

1. The core of the planning curriculum could be competencies for brokering between spatially relevant disciplines – such as boundary objects and boundary practices. We feel that these competencies are more likely of methodological nature. We should therefore shift our focus from better planning outcomes to better planning processes. It may be the built city that we should study as planner but the way this city has formed over time.
2. Planning degrees must connect to other disciplines. Learning to broker between disciplines requires disciplines to broker between. This trivial statement is easily being neglected, when planning as a discipline establishes its own unique ways of thinking and doing. Perhaps, a planning department must sit horizontally to the otherwise vertically organised universities.

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ID 1506 | CHALLENGES AND INNOVATION IN THE ARCHITECTURE AND URBANISM RESIDENCY: WORKING TO OVERCOME THE GAP BETWEEN PLANNING AND IMPLEMENTATION

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1 INTRODUCTION

The Residency Program in Architecture and Urbanism: Urban Planning and Management, is a proposition of a community outreach initiative outlined in the University of São Paulo's Statute. Aimed at deepening the knowledge and social action of the architect-urbanist through a set of academically supervised practical and theoretical activities, inspired by the Healthcare Residency model.

Consists on work-education program, during one year, after completion of the graduation in Architecture and Urbanism. It allows for the young professional to act on public policy development activities that

intervenes in the social and spatial reality of Brazilian cities, with a core axis on planning and public management capacitation.

The purpose is to improve qualification amongst architect-urbanists through a closer connection to the practical word, in its design, economic and management dimensions, especially on a generous and independent space, the academia. From the public interest point-of-view, the program contributes on the formation of better qualified professionals and the development of final thesis that may be objective contributions to the formulation and management of urban policy. According to the nature of these thesis as formulated by the program's coordination, designs and proposals should be developed with an approximation to the "real city" in the search for correlating plans and designs with the perceptions, demands and real needs of social groups, in actual locations.

With the access provided through the Residency Program: Urban Planning and Management it became possible to perceive several shortcomings in the development of public urban policies in São Paulo, through the personal experiences of the residents, and develop important discussions on innovative ways we can advance as planners.

By associating an academic period to professional working hours, the program allows for a broader and independent research, as well as a perception of the interests and contingencies of the public management inside legal, administrative and financial conditions. In that sense, it differs from the professional internship, in which the practice is independent and disconnected from the academic support, and from the Professional Masters that, for the most part is restricted to the academic instance, though it provides professional and practice content.

This paper presents and discusses this experience from the view of a teacher (that coordinated and developed the program) and one resident, that experienced the program, and how this comprehensive new approach to planners' education may help overcome the gap between planning and implementation.

2 INSPIRATION AND LEGAL FRAMEWORK

The architecture and Urbanism Residency derived from the existing format of the Medical Residency, a professional qualification activity - technical, practical and theoretical. However, while the medical residency focuses on specialization of disease treatment, the formulation of the Architecture and Urbanism Residency is closer to the Public Health approach rather than Medicine properly. Relies upon the action not directed to the individual, but to society. In our residency, the laboratory is the city.

The current design of Architecture and Urbanism graduate programs is much embedded on the qualification of an able workforce mainly for the private market, with little consideration for the development of skills for handling the city. There's also a scenario of low-engagement with communities from the academic environments, as even the ones included on research projects and themes gain no return on final results of these projects. (eg. Souza, 2017)

In this setting the FAUUSP Residency was outlined, focusing on the concept of Social Interest Urban Projects, as a counterpoint to the ever-expanding idea of the city as an investment and the growth of the socio-espacial inequalities. This is how this program articulates with local governments, in the pursue of creating a professional staff with knowledge and resourcefulness to circulate in the legal and management domain and foresee alternatives for a more inclusive city.

The Architecture and Urbanism Residency - specialization in Planning and Management is referenced to the Healthcare Area Professional Residency, created by the Federal Law nº11.129/2005, that defines Residency as "category of lato sensu postgraduate program, aimed at the in service education and destined to the professional classes that integrates the healthcare area". It also disposes that "the Residency will be developed in an exclusive dedication system and performed under teaching-assistant supervision, with joint responsibility of the educational and healthcare sectors…" Defining that the Residency constitutes an intersectoral cooperation program to encourage the qualified insertion of young healthcare professional in the job market, particularly on priority areas of the Brazilian universal healthcare system (SUS), a concept that can be paralleled to the needs of the Architecture and Urbanism field.

In that sense, the proposal for the Architecture and Urbanism Residency expands the concept to the Urban Planning and Management field, creating a collaboration between the Architecture and Urbanism College of the University of São Paulo (FAUUSP) and the Municipal Urban Development Secretary (SMDU-PMSP).

Another legal document that contains guidelines regarding the residency program, is the Federal Law nº 11.888/2008, that while creating the framework for a Public and Free Technical Assistance system that not only reiterates and assures the right to housing, ordains to: optimize and qualify the use and rational handling of the constructed space and its surroundings; formalize buildings and informal settlements; avoid the occupation of high risk areas and those of environmental interest;

It also establishes that "The technical assistance services will be object of cooperation or partnership between Federal, State and Municipality instances and must be provided by professionals from the areas of architecture, urbanism and engineering that act as public technicians; non-profit NGO members; professionals included in residency programs; professors on community outreach activities;" (Federal Law nº11.888, 2008, highlight by authors)

3 PROCESS

The Residency Program at FAU-USP was approved in 2010, but the first program implemented was only in 2015. This first class, of 32 residents, was selected amongst 300 candidates from several states, within 5-years of graduation completion. They were enrolled full-time in a scholarship scheme, during the whole year, in the development of academic and practical activities, the latter being performed in agreement with the São Paulo Urban Development Secretary (SMDU-PMSP), participating in the development of São Paulo Submunicipalities' Regional Plans

The program, that comprises theoretical and practical activities as stated before, was organized in three modules. of four months each: the first two contain classroom lectures (two full days a week) and practical fieldwork (three full days a week). The third module consisted on the finalization and presentation of the individual dissertation, based on the work developed throughout the entire time.

The disciplines offered on the 2015/16 program aimed at providing theoretical, technical and managerial sustenance for the development of the designs and plans locally, in each of the city's submunicipalities. To do so, the residents were each assigned one submunicipality.

Each module, with two disciplines, articulated the theoretical content to a specific time and type of practice in the workfield. This correlation can be seen in Table 1. The offered disciplines were: Procedures and methods of urban planning and management, Urban process, Plans and designs in São Paulo (module 1), Local Management an Urban qualification, Public Contracts and Management (module 2), The State and the public sphere, Final thesis orientation (module 3).

	1st module	2nd module	3rd module
FAU-USP	The disciplinary field: planning and urbanism	Public Management and Administration	The State and the public sphere.
Theoretical lectures	Procedures and methods of urban planning and management Urban process, Plans and designs in São Paulo	Local Management an Urban qualification Public Contracts and Management.	The State and the public sphere Final thesis orientation
Products	Dissertations on each Submunicipality	Exercises - reflection and deepening of the lecture's themes	Individual dissertations: Reflection and proposition

Table 1 - Synthesis of the Work-Education Organization.

By associating an “academic period” and a “professional period”, the Residency Program allows both a broader and looser research, and the perception of the pressures and contingencies of the public administration in its legal, administrative and financial conditions.

In the manner established in this current proposal, with the practical work in supporting the development of the Regional Plans for the submunicipalities, according to the City’s Masterplan, it encourages a multi-scale dialogue, between Plans, Public Policy, physical intervention and the local management of equipments and services;

The Regional Plans consisted on a creation of an intersectoral coordination between the city’s departments and their local counterparts, the submunicipality, creating perimeters for priority intervention in public space.

The scope was to intervene on areas that clustered public equipments, or were receiving investments in the near future, and develop the surrounding public spaces to improve accessibility and space quality. This could be done in 8 different types of intervention:

Environmental Patrimony	Preserve existing areas with dense vegetation and allowing their public use as an integral part of the neighbourhood
Housing	Improvement of housing in risk areas, specially surrounding water bodies.
Environment	Preserve water bodies in areas of environmental preservation, considering housing in risk areas.
Mobility	Assuring better crossing point for all types of transportation - buses, pedestrians, cyclists - above all water bodies and avenues
Equipments	Promoting connection between different public equipments, creating a system.
Economic Development	Consolidate the areas surrounding commercial axis.
Vacant Lots	Priority use for the implementation of public equipments.

Table 2 - Regional Plans’ Scope, source: SMDU-PMSP

This process was divided into two timelines: the technical workgroups - from August 2015 to November 2016 - and the participatory process that took place from April to August 2016, to avoid clashing with other subjects as the zoning laws and the municipal elections.

The technical workgroups comprised a set of technicians from different sectors of the central municipal government - Health, Education, Environment, Social Services, etc - and the local government appointees, usually from the Planning Sector of each Submunicipality. With the help from the residents as off-meeting mediators, this groups developed diagnosis of the area, along with marking the planned investment from each sector and finally setting initial perimeters for places of interest to intervene.

The role of the residents during this time was to properly understand the territories they were assigned and serve as a connection between the local and central governments on this decision-making process.

During the participatory process, this role as mediators was extended to the workshops with the communities, helping with the maps used and translating the needs and demands voiced by the people present into actual places and ideas.

Figure 1 - Residents and Technicians preparing for the participatory process. Source: SMDU - PMSP

Afterwards, they were also the ones to compile all the information gathered and, after validating the points made by the communities with the corresponding departments, provide all of them with responses, creating a full-circle of participation and response from the municipality. The ideas and propositions considered within the range of activities of the Regional Plans were added to the perimeters, changing their objectives and shape, and even creating new ones.

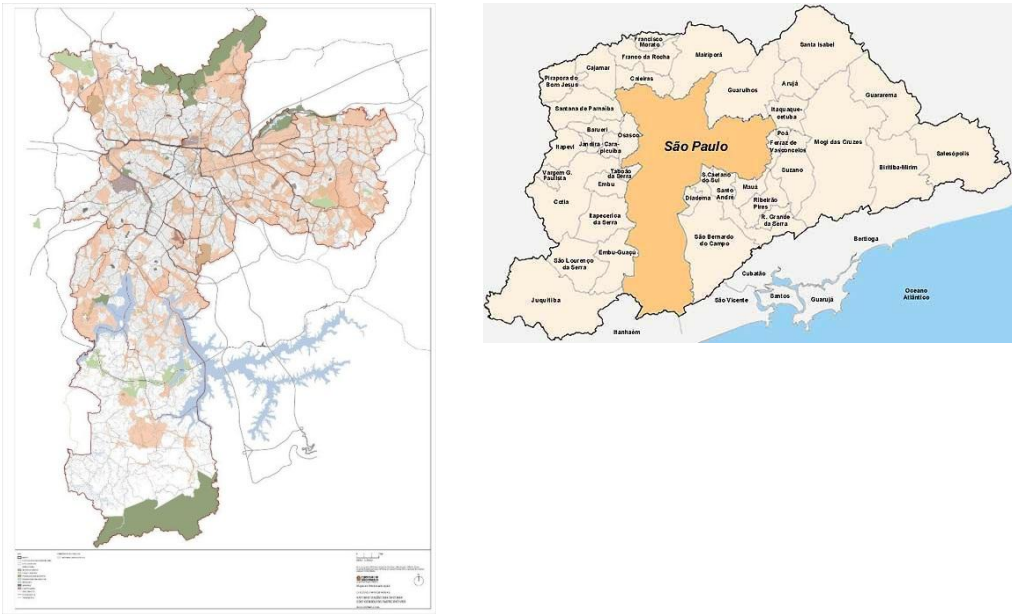

Figure 2 - Map of São Paulo with perimeters for intervention and location within the metropolitan area. Source: SMDU - PMSP

Having such a key role in the development of an actual plan for a complex city such as São Paulo led to the rise of several questions on the role of urban planners, according to each residents' experience with their submunicipality and inner questions about the profession. That combined to the different disciplines and discussion that occurred in the university, created a prolific environment for the proposition of their 32 final dissertations.

The final dissertations ranged from different topics that could be categorized in eight main axis of propositions: Social and Economic Development, Planning and Urban Instruments, Participatory Process and Institutions, Public Management, Public Budget, Urban and Housing Precariousness and Public Spaces;

While the topics are diverse in their spectrum of approach of urban planning, the dimension in which they are intertwined is that of investigating new aspects of the profession that are often overlooked or considered an afterthought in the Brazilian context, such as budget, participation, and even, management. One of the most sought after topics were the ones related to the monitoring and comprehension of the intricate public budgets, as the discipline “Public Contracts and Management” developed a new dimension that the residents had not yet been exposed. Some of the dissertations on the topic were “Urban and budgetary planning. Public participation as qualification”, “Federal financing of local urban policy: the case of São Paulo”, “Budget execution and urban planning: Case study of the submunicipalities of M’Boi Mirim and Campo Limpo”, “Decentralization of resources in São Paulo: the case of the submunicipality of Freguesia/Brasilândia” and “The monitoring process of public investments: an experiment in the submunicipality of Cidade Ademar”

Demonstrating the overall sensation that urban planning as a single knowledge, without combination of other subjects, has little power to overcome the severe inequalities and difficulties in the Brazilian current scenario.

4 FINDINGS AND CONCLUSIONS

“The public university has to constantly justify its existence” (eg. Salles apud Souza, 2017) and also, reconsider its stand as a vessel for creating a better dialogue with social movements and society in general, stretching the role beyond the theoretical construction of ideas and proposition, and that is the relevance of the residency model. By inserting young graduates in the job market while maintaining their connection with the academia, we can not only intervene on the process that is currently being developed, but also creating a substantial academic production that is grounded on such process.

In that manner, the Residency Program in Architecture and Urbanism: Urban Planning and Management, created a framework for innovation not only in the public sector, but also in the manner in which the university shapes their graduate and postgraduate pupils towards a social conscience and with practical insertion. It allows for the viewing of the real city, considering the local demands and creating a dialogue with the Local Councils.

Seeing firsthand the demands from the communities and exactly how and if they can be incorporated into the actual plans created a myriad of inquiries amongst the residents, and that instigated the development of several dissertations that are a contribution to the academic, public and civil scenarios if appropriated.

Moving forward, with the addition of a widespread discussion on the architect-urbanist’s profession in the corresponding class councils, the allocation of resources in these councils for Technical Assistance programs, and the propagation of these new models of community outreach programs developed within the academic universe, signal the relevance of this sphere of study and practice and launch important expectations towards the architects and urbanist presence broadening at the social practice, contributing with their knowledge in the development of better and inclusive cities.

Figure 3 - Graduation ceremony with the residents, technical body and professors.

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ID 1576 | CHALLENGES FOR URBAN PLANNING TEACHING: POSSIBLE PATHS THROUGH COMMUNITY OUTREACH UNIVERSITY PROJECTS

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> *"Today, probably more than yesterday, it seems to the author that it is urgent that interdisciplinary technical assistance has to be discussed, taking the man whom it serves as the centre of the discussion. Not, however, an abstract man, but the concrete man, who does not exist but in real life, concrete life, who conditions it.*
>
> *" [Hoje, provavelmente mais do que ontem, parece ao autor inadiável que se discuta, interdisciplinarmente, a assistência técnica, tomando o homem a quem serve como o centro da discussão. Não, contudo, um homem abstrato, mas o homem concreto, que não existe senão na realidade também concreta, que o condiciona.]*
>
> Paulo Freire (1983[1969]:9)

In Brazil, experts involved with urban planning -planners, architects, urbanists, economists, lawyers, etc. - have a constant challenge to confront two divergent realities: a legal city, consolidated by the implementation of official (legalized) urban settlements, generally located in central areas, designed for middle and upper classes housing; and an illegal city, with lower classes dwellings as favelas and illegal (or irregular) settlements located usually in the peripheral portions of the municipalities. In large cities and metropolises access to housing by the lower income population usually occurs through housing in favelas or through self-built residence in illegal peripheral settlements. According to the 2010 Census 84% of the Brazilian population lived in cities (161 million inhabitants), at least one third of this population lives in precariousness or irregularity conditions. In a country with continental dimension, Brazilian urban planners have the constant challenge to deal with a reality with specific and peculiar characteristics that differ widely between its various regions and metropolitan areas. In this sense this paper wants to bring to the debate the following question: how teach urban planners and urbanists to be able to face the challenges presented by an urban reality of extreme irregularity and inequality? Based on the analysis of recent community outreach experiences carried out in Porto Alegre -Faculty of Architecture of Federal University of Rio Grande do Sul (FAUFRGS), and in São Paulo -Faculty of Architecture and Urbanism of University of São Paulo (FAUUSP) this paper intends to explore the teaching potential of the urban projects operated outside the classroom. We understand that on the search for the construction of a sustainable habitat the teaching of urban planning has to pass through a knowledge based on real experiences and direct observation of the complexity of the urban phenomenon. The community outreach experiences carried out by both Universities – The Future of Self-Constructed Neighbourhoods along Waterways and Orquídea Libertária Project for Habitat Social Production Projects carried out by FAUFRGS and Lapenna

Neighbourhood Housing Upgrading and Community outreach: students autonomous experience on housing improvement in a rural settlement, projects developed by FAUUSP team – are experiences that tries to improve and change the traditional practices of design, based on the architect-client relationship. Besides these cases there is the recent innovative we have the recent experience of the Urban Practice Workshops/ Oficinas de Práticas Urbanas held at the XVII Meeting of the National Association of Postgraduate and Research in Urban and Regional Planning (XVII ENANPUR). By the practice of new pedagogical and research approaches these community outreach experiences reveal alternative paths for project design and urban planning and propose innovative tools for teaching and train young Architects and Urban Planners as professionals capable to act based on the knowledge of the social reality, challenging and questioning traditional and established routines. The discussion and dissemination of these experiences are significant in a way to show possible paths of how the urban planning under graduation courses can happen also beyond the classroom, with community outreach and social engagement from our professors and students.

1 RESEARCH PROBLEM: THE UNIVERSITY COMMUNITY OUTREACH IN BRAZIL

Public university education in Brazil, as well as the structure of our universities, is based on the teaching-research-community outreach tripod. Even considering the differences that mark the Brazilian university world, made up of public, private, confessional and community higher education institutions, the community outreach today is a relatively consolidated activity in many of them.

Brazilian experiences related to extension go back to the beginning of the 20th century, with courses and conferences held in 1911 in the faculties that would give rise to University of São Paulo (FORPROEX, 2012). After decades of isolated experiences, 1980s were an important moment for its institutional consolidation as a fundamental university axis. In 1987, in the 1st National Meeting of Pro-Rectors of Community Outreach of the Brazilian Public Universities, it was defined that:

"The University Community Outreach is the educational, cultural and scientific process that articulates Teaching and Research in an inseparable way and enables the transformative relationship between University and Society. The Community Outreach is a two-way street, with assured transit to the academic community, which will find, in society, the opportunity to elaborate the praxis of an academic knowledge. Upon returning to the University, teachers and students will bring an apprenticeship that, subject to theoretical reflection, will be added to that knowledge. This flow, which establishes the exchange of systematized, academic and popular knowledge, will have as consequence the production of knowledge resulting from the confrontation with the Brazilian and regional reality, the democratization of academic knowledge and the effective participation of the community in the work of the University. In addition to instrumentalizing this dialectical process of theory / practice, Community Outreach is an interdisciplinary work that favors the integrated view of the social. "(FORPROEX, 2012: 21-22)

In 1988, the new Federal Constitution established that teaching, research and community outreach activities are indissociable (Article 207). This definition was responsible for the creation, in 1993, of the Program for the Promotion of University Community Outreach (PROEXTE) and also, within the scope of the Law on Guidelines and Bases of National Education (LDB), approved in 1996, to characterize the University Community Outreach as one of the Purpose of the University. It was then possible to provide financial support for community outreach, including scholarships (Law No. 9,394 -articles 44, 52, 53 and 77). Another important initiative, in the sense of institutionalizing university community outreach, was the creation of the National Community Outreach Plan, elaborated and approved in 1998 by the Forum of Pro-Rectors of Community Outreach of the Brazilian Public Universities. (FORUM 2001).

More recently, the National Education Plan of 2001 (PNE 2001-2010, Federal Law 10,172 / 2001) and the 2014-2024 Plan (Federal Law 13,005 / 2014) established the responsibility of universities in their teaching, Research and Outreach. Both defined that a minimum of 10% of the total credits required for undergraduate higher education must be fulfilled "in programs and projects of University Community Outreach, directing their action, primarily, to areas of great social relevance" (Federal Law 13.005 / 2014, Strategy 12.7). Since then, organizations such as the National Forum of Pro-Rectors of Community Outreach of Brazilian Public Universities -FORPROEX (which held its XXXVII National Meeting in 2015), the National Community Outreach Network (RENEX) and the Association of Universities of the Montevideo Group -AUGM, have been working to consolidate outreach policies that are not limited to cultural and local

actions. In 2012, based on the discussions and deliberations of FORPROEX, the National Policy of University Community Outreach was established. (FORPROEX, 2012)

In Brazil, therefore, university community outreach is understood today as an important instrument for bringing the University closer to society, necessarily in a two-way interaction. According to Paulo Freire, a reference for the area in the country, the outreach should assume a delivery character:

"(...) of something that is taken by a subject who is 'behind the wall' to those who are 'beyond the wall', 'outside the wall' (...). [And where,] on the contrary, to educate and educate oneself in the practice of freedom is the task of those who know that they know little -for this they know that they know something and can thus get to know more -in dialogue with those who almost always think that they know nothing, so that these, transforming their thinking they know nothing in knowing that little they know, may also know more. "(1983 [1969]: 12 and 15)

At the institutional level, FORPROEX understands that outreach activities can represent an important gain in the training of our undergraduate students:

"For all this, the University Community Outreach has the potential not only to raise awareness among students, teachers and technical-administrative staff for social problems. As an activity that also produces knowledge, it also improves the technical and theoretical capacity of these actors, thus making them more capable of offering subsidies to governments in the elaboration of public policies. Better equipped to draw, if they hold any public office, these policies, as well as to implement and evaluate them. "(FORPROEX, 2012: 35-36).

The text of the National Policy of University Community Outreach is very broad, defining guidelines, basic principles, objectives, thematic areas and areas of priority action. All these definitions should guide the performance of public universities as well as federal government funding lines. According to the document, the five essential guidelines of University Community Outreach are: (i) dialogic interaction; (Ii) interdisciplinarity and interprofessionality; (Iii) inseparability between Teaching, Research and Extension; (Iv) impact on student training and (v) social transformation. (FORPROEX, 2012: 46). Among its basic principles are:

"The citizen action of the Universities cannot dispense with the effective diffusion and democratization of the knowledge produced in them, in such a way that the populations, whose problems become the object of academic research, are also considered subject of this knowledge, having, therefore, full right of access The information resulting from these surveys. " (FORPROEX, 2012: 59).

According to the same document, the axes integrating community outreach activities are: (i) thematic areas; (Ii) territory and (iii) population groups. From these axes, and considering eight main thematic areas, activities that promote territorial and population integration should be carried out, articulating different population groups throughout the national territory, especially those in situations of social vulnerability. Among the 53 passive lines of action, we understand that our work as teachers of Architecture and Urbanism courses should prioritize activities related to regional development, urban development, individual and collective rights; To public management; Vulnerable social groups; To cultural, historical, natural and immaterial heritage; And environmental issues.

Among the objectives of extension, we understand that one of the most relevant is to contribute to interfere in the solution of the great social problems of the country, creating conditions for the participation of the University in the elaboration of public policies aimed at the majority of the population, prioritizing practices attending social demands, with emphasis on housing.

We understand that one of the ways to achieve these goals is to narrow the relationship between teaching and extension. community outreach. The problem lies in the marginal, unsystematic and fragmentary nature normally assumed by this relationship, especially in public universities where research is an absolute priority agenda. This work reveals this problem, based on experiences developed in São Paulo and Porto Alegre, by Architecture and Urbanism professors from USP and UFRGS.

2 METHODOLOGY

This paper reports experiences directly experienced by the authors. Therefore at the methodological level qualitative participant-observation and action research techniques were used (Carlos Rodrigues Brandão, 1981, 1985, and William Foote Whyte, 2005).

These well know methods and techniques will not be discussed in a more detailed manner. It is only necessary to point out that they suppose, among other conducts: deep interaction between the researcher and the respondents, relatively long periods of direct observation, use of all the senses (listening, seeing, dialog) and ability to deal with uncertainties and errors always present in the processes.

It should be noted that the authors participated in the formulation of the methodologies used in each of the case studies described below, developed specifically for each of the experiences observed. In all the experiences analysed in this paper the valorisation of the field work, interdisciplinary approach and the search for partnerships were always a goal.

3 HYPOTHESIS

In the book Childhood and History, Giorgio Agamben says that:

"A tale of Tieck, entitled 'The Superfluous of Life', shows us a couple of lovers in penury who gradually give up any good to all external activity, and ends up coming back to their room. Finally, when they could no longer find firewood, they warmed themselves by burning even the wooden staircase that connected their room to the rest of the house, thus being isolated from the outside world, with no other possession and no occupation but their love. This ladder, Tieck clarifies to us, is experience, which they sacrifice in the name of 'pure knowledge' "(Agamben, 2008 [1978]: 23-24)

Despite the institutional discourse, in main Brazilian universities community outreach occupies a position still relatively marginal, that value mainly the "pure knowledge". Their teachers are almost all "academics". And when they engage in "practical" activities, they usually respond to market demands. The "social", from this angle, is on the sidelines. In the case of Architecture and Urbanism courses, this picture seems obvious to us.

Our hypothesis is that extension activities directed to the "social", such as the ladder evoked by Agabem, can offer students the experience of another knowledge -a counterpoint to the "pure knowledge" aimed by the research world. The question is: how to incorporate this "ladder" into the university routine? The following cases seek answers to this question.

4 CASE STUDIES

The experiences and analyses briefly presented below refer exclusively to community outreach activities carried out at UFRGS, Campus Porto Alegre, and at USP, Campus São Paulo, both public universities highlighted mainly by the value of their research.

Based on the understanding of university community outreach as "an educational, cultural and scientific process that articulates Teaching and Research in an inseparable way and enables the transforming relationship between University and Society" (FORPROEX, 2012: 21) and, especially, investing in Potentialities of the teaching-learning experience "beyond the wall" of classrooms and the University (Freire, 1983), we believe that, in the context of Architecture and Urbanism courses, the community outreach will really happen only if closely linked to the habitat social production.

We understand Habitat as: "(...) to all those processes that generate habitable spaces, urban components and dwellings, which are carried out under the control of self-producers and other social agents operating on a non-profit basis. They can originate in individual families acting individually, in informal organized groups, in social enterprises such as cooperatives and residents' associations, or in nongovernmental organizations, professional unions and even philanthropic institutions that serve emergencies and vulnerable social groups. Self-management modalities range from spontaneous individual to collective

self-production, which implies a high organizational level of participants and, in many cases, complex processes of production and management of habitat components. " (Ortiz Flores, 2006: 3-4)

4.1 ORQUÍDEA LIBERTÁRIA -LIBERTARIAN ORCHID (FAUFRGS)

With the technical assistance of the City-in-Project [Cidade em Projeto], Research and Community Outreach Laboratory of FAUFRGS, the Orquídea Libertária residential complex project has been developed by the Cooperativa de Trabalho Mista Solidária Utopia e Luta (COOPSUL) in partnership with the Association of Carcassers and Pickers of Gravataí Recyclable Material (ATRACAR). The works are programed to be done with funds from the My Home My Life -Entities Program, managed by the federal government. Located in Gravataí, a municipality next to Porto Alegre, the land with 1.2ha belongs to the federal government all will receive 50 housing units. Between 2014 and 2015, the area urban-architectural project was supported by four undergraduate scholarship students, linked to the City-in-Project laboratory. Within FAUFRGS this experience was marked by moments of deep interaction between teachers, technicians, students, residents and popular leaders. But also by conflicts, which led to the interruption of the outreach action. The experience propitiated for the teachers and students a learning process about the specificities of the architectural project destined to the population in situation of great social vulnerability but also the difficulties to work with very diverse families and professionals. The project was supported by the Pro-Rectory of Community Outreach of the Federal University of Rio Grande do Sul.

Figure 1 -Project Libertad Orchid. Settlement and workshop facilities. Gravataí-RS 9
(ONG Cidade -Centro de Assessoria e Estudos Urbanos, 2014)

4.2 HABITAT SOCIAL PRODUCTION (FAUFRGS)

Also promoted by the City-in-Project, Research and Extension Laboratory of FAUFRGS, the Outreach Course for Social Production of Habitat -Theory and Practice was held in October 2015. Based on the fact that the teaching program of the Architecture and Urbanism undergraduation course of FAUFRGS does not offer to its students any atelier dedicated specifically to the theme of social interest housing, and taking into account the potentialities and difficulties found in the development of the project Orquídea Libertária, the course explored, in general lines, two conceptions of housing design teaching: how to teach "object design" and how to teach "habitat and city" design. From this perspective, the architect's participation in the project of social interest housing was more specifically approached. The whole course was developed based on the observation and discussion of practiced project experiences, involving visits to two housing estates financed by the Minha Casa Minha Vida Program (My Life My House Federal Program), dialogue with architects, engineers and other technicians, with public agents, community leaders and residents. Supported by the Pró-Rectory of Community Outreach of the Federal University of Rio Grande do Sul, the course attracted a good number of students, offering them an opportunity to interact with realities rarely addressed during their studies. The visits generated heated debates. The action, in addition to achieving its most direct objectives, was also a preparatory activity for a workshop The Future of Self-Constructed Neighborhoods.

Figure 2 -Produção Social do Habitat – Teoria e Prática. Visitas Técnicas COOTRAHAB, São Leopoldo. (Cidade em Projeto, 2015)

4.3 FUTURE OF THE SELFCONSTRUCTED NEIGHBORHOODS BESIDES WATER STREAMS (FAUFRGS)

The idea of organizing this workshop came from the contact with professors of the National School of Architecture of Paris La Villete (ENSAPLV), with which FAUFRGS has a cooperation agreement. Since 2006, ENSAPLV teachers have organized exchange activities on urban planning practices between France and South America, with the purpose to discuss the process of urbanization in South America, to confront different design practices through the organization of intensive workshops, to situate fieldwork as the central element of the project process, to promote the questioning of the role of the architect and other knowledge in the urbanization process.

The main objective of the Porto Alegre workshop, held between 2016 April 15 and 30, was to develop an experience of participatory elaboration of an urban project based on the urban areas located in the Mãe D'Água Basin (municipality of Viamão), together to the UFRGS Valley Campus. More specifically, its objectives were: (i) to promote the meeting between students and professors of Architecture and Engineering in Brazil and in different countries (Brazilian, French and Argentinean teachers participated) in order to develop a participatory project culture; (ii) to promote the contact between the University and urban reality of the metropolitan peripheries and their community leaders, (iii) to develop reflection on the experience and to disseminate its results, in order to deepen the debate about the outreach potentialities.

The action proved to be valuable in the pedagogical and social plans. The studio developed instigating experiments from the point of view of teaching-learning project practice. The community, through the solidarity of many residents, found an opportunity for dialogue with the technicians and also to demand solutions for the problems that reach the area, especially those related to sewage and solid waste collection and drainage problems. The workshop proposed the experimentation of innovative pedagogical practices, based on direct observation of the study area and on permanent contact with the resident population.

The results of the work were encouraging for all partners involved in the action. The atelier contributed to reduce of the distance and still existing prejudices between Architecture and Engineering as fields of knowledge. The exchanges between the different national cultural groups participating in the action were intense and very important. The workshop also contributed to the recognition of the importance of the participation of the metropolitan peripheries dwellers in the formulation of solutions to the problems that afflict them -in this case, particularly related to water (floods, sewers that are non-existent or precarious , solid waste, etc.). The project was supported by the Pro-Rectory of Community Outreach of the Federal University of Rio Grande do Sul.

Figure 3 -Workshop O Futuro dos Bairros Autoconstruídos junto a Cursos d'Água. Porto Alegre/Viamão-RS.
(Bárbara Giacom, 2016)

4.4 JARDIM LAPENNA: HOUSING IMPROVEMENTS AND MAPOGRAFIAS (FAUUSP)

The FAUUSP team, in partnership with the Tide Setubal Foundation, has worked in Jardim Lapenna on two fronts: Housing Improvement and Mapographies projects. The first aimed to subsidize a project to improve the quality of housing, construction and sanitation of the neighbourhood houses. The Mapografia Project, coordinated by Professor Jorge Bassani, was carried out with high-school students, where they were urged to understand and appropriate the neighbourhood urban environment and the public space after the discussion and preparation of daily maps of the city. The project had two more specific and equally important objectives: (i) to enable USP students to have an experience of social engagement and to coexist effectively in areas of the Eastern Zone of the city; (ii) and make feasible interventions with real improvement to the living conditions of the Lapenna population. The project had the support of the Pro-Rectory of Community Outreach of the University of São Paulo.

Over the course of the 12 months of work, the greatest difficulty faced by the Housing Improvement project was the difference between university times, with specific deadlines and demands in relation to students' scholarships, and the "real world" deadlines, where Funding for the feasibility of the 2016 stage of the project only came out when the scholarships were almost over. The contribution, in fact, to the improvement projects fell far short of what was originally planned. In the Mapographies project, after a timid start, the involvement of the state school students was very good, with a great final result. With regard to the training of our undergraduate students, the contribution has been impressive, with involvement far beyond what was originally planned (D'Ottaviano 2016 and Bassani 2016).

Figure 4 -Jardim Lapenna. São Paulo-SP and Mapografia. São Paulo-SP.
(Camila D'Ottaviano and Jorge Bassani)

4.5 HOUSING IMPROVEMENT IN A RURAL SETTLEMENT (FAUUSP)

Agroecological Construction Group is a very special project once it is a fully autonomous initiative from FAUUSP students, bringing together postgraduate and undergraduate students. The project is currently

coordinated by Professor Caio Santo Amore, based on previous experience of the same Group in a Rural Settlement with 28 families, organized in the municipality of Cajamar (Metropolitan Region of São Paulo) by the Landless Rural Workers Movement (MST) .

From the students mobilization work the housing needs were recognized and they started to design interventions projects and to search for public financing for the needed. Together with a teacher -an architect who already had a history of working with social movements and who had recently joined the faculty of FAUUSP -an extension project was drawn up, submitted to the official program of the University. The granting of three scholarships boosted the Group's action and its organization as a self-managed collective. The students articulated themselves to use a collective part of the obtained resources, aiming to cover expenses of displacement, food and with materials of consumption demanded for the execution of the surveys and elaboration of the projects. Decisions and technical work are shared, involving students and settled families and have a very clear purpose, which recognizes and seeks to meet individual and collective housing needs. This is experience is relevant both because of its object and the relationship established with an important social movement, but also, and perhaps most importantly, because of the students' self-organization, recovering some of principles defined by the student organizations of Architecture and Urbanism in the 1990s that interferes straight in the university education process. (Santo Amore 2016).

Figure 5 – MST Settlement Project -SP.
(Bárbara Muhle, 2016)

5 URBAN PRACTICE WORKSHOPS AT XVII ENANPUR

Last May, during the XVII Meeting of the National Association of Postgraduate and Research in Urban and Regional Planning (XVII ENANPUR), we organized for the first time a special workshop – Oficinas de Práticas Urbanas (Urban Practice Workshops) – that has as its central goal to make the researches not only study the city and territory but live the city, its problems and challenges and potentialities.

Organized in an autonomous way by professors, researchers and students, the ten workshops congregated also social movements, technical professional and work entities operating in the São Paulo Metropolitan Region. In general, they aim to develop practical activities of environmental and urban reading, planning and design in contexts that involve participatory processes of recognition of problems, decision making and elaboration of proposals associated with the landscape and the production of the city:

- Workshop 1 -Urban project in the Luz region: the city surrounding the occupation of Rua Mauá.
- Workshop 2 -Occupy, resist and build: self-managed housing in the rehabilitation of empty buildings in the central area.
- Workshop 3 -Urban ways: from the historic hill to the metropolis
- Workshop 4 -Urbanism in the defense of rights: the Observatory of Removals in the favelas of the Urban Operation Águas Espraiadas.
- Workshop 5 -Self-construction and housing improvements in consolidated precarious settlements: Diadema.
- Workshop 6 -Urbanization of favelas: Jd. Jaqueline.
- Workshop 7 -Agrarian Reform in the metropolis: political formation, infrastructure and production.
- Workshop 8 -From the modernist project to condominialization -the case of COHAB José Bonifácio in Itaquera.
- Workshop 9 -On the shores of the city: urban expansion and the dams of the South Zone.
- Workshop 10 -Cartography affective and insurgent in Paranapiacaba.

All the workshops were held on the real city, at expansion axes, consolidated urban areas, peripheries, precarious settlements, borders, "peri-urban" areas. Various situations present in the Metropolitan Region of São Paulo. The workshops were a moment of group reflection and collective production, elaborated after the direct contact and in interaction with community leaders and residents of the visited territories.

Figure 6 – XVII ENANPUR Workshops
(Camila D'Ottaviano and João Rovati 2017)

6 CONCLUSION: A OPPORTUNITY TO TH EXPERIENCE

In the search for a sustainable habitat, urban planning education must necessarily be confronted by the harsh reality of our Brazilian and South American cities, which are all marked by profound social inequalities and serious environmental problems, such as floods, absence and precariousness of sewage networks, occupation of risk and formally protected areas -themes, moreover, little valued by our curricula.

The succinctly reported community outreach actions, modest and punctual, provided the experience of the student's involvement in Architecture and Urban Planning with concrete social demands of great complexity. These experiences show the importance to explore alternative paths, new pedagogies and new project practices. The opportunity to join this experiences were important for our students, as one of the participants in these actions suggests:

"About the project, it was a very good experience, since a project was done for real people, with real problems and needs, very common throughout Brazil. And since during our Faculty we only realize pharaonic projects for millionaires." (Baumbach 2015, apud Rovati 2015: 1087)

Mello (2015) argues that the community outreach projects and experiences are a powerful moment of knowledge exchange. These are moments were the technical academy experts learn from the popular and vernacular knowledge. And in the other hand, it is the moment when the academic knowledge must be adjusted to the population real needs.

For Agamben (2008 [1978]), the destruction of experience is a striking feature of the daily life of modern man:

"Every speech about experience must start from the realization that today it is no longer something that we can do. For, as was already deprived of his biography, contemporary man has also been deprived of his experience: in fact, the inability to make and transmit experiences may be one of the few certain data he has about himself."(Agamben, 2008 [1978]: 21)

For some, the trivialization of catastrophes would be responsible for the corrosion of the experience:

"But today we know that for the destruction of experience a catastrophe is by no means necessary, and that the peaceful daily existence in a great city is, to this end, perfectly sufficient. For the day-to-day of contemporary man contains almost nothing that is still translatable in an experience: not the reading of the newspaper, so rich in news that it concerns an insurmountable distance; Not the minutes that passes, stuck behind the wheel, in a traffic jam; Not the trip to the suburbs in subway trains, nor the manifestation that suddenly blocks the street; Not the haze of tear-drops that slowly dissipates between the buildings of the center, and not even the sudden blast of pistol detonated, it is not known where; Not the queue in front of the offices of a breakdown or the visit to the country of Cocanha of the supermarket, nor the eternal moments of dumb promiscuity with strangers in the elevator or the bus. Modern man returns home in the evening exhausted by a jumble of events-fun or boring, banal or unusual, atrocious or pleasant-yet none of them has become experience. "(Agamben 2008 [1978]: 8)

It is surely an exaggeration to invite Agamben to the dialogue about our routine and unpretentious project teaching practices. However, are modest and timely community outreach actions like those reported in this article, would not be finally a rare and exciting opportunity to turn trivial moments of project teaching into and knowledge exchange experience?

Figure 7 – MST Camping, São Paulo. (Camila D'Ottaviano 2017)

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ID 1605 | THE CHALLENGES OF PLANNING IN THE UNEQUAL CITIES. "URBAN POVERTY WORKSHOP" FOR INNOVATING URBAN PLANNERS EDUCATION PATH

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ABSTRACT: The recent shift from the Millennium Development Goals to the Sustainable Development Goals scored a point of no return in the international debate on development, stating that the separation between the rich part and the poor part of the population is no longer with the North and the South of the world, but between nearby areas in always more highly polarized contexts. In this framework, a deeper knowledge of the spatial dimension of poverty and of its spatial implications is required; especially in the Italian Faculty of Architecture where urban design and plan-making are frequently still considered "the real core" of the discipline with the general under-evaluation of the wicked problems. On the contrary, in the United States, thanks to the passionate work of Ananya Roy, this knowledge found its place, first in the university program at the Institute of Urban and Regional Development of UC Berkeley, and then in Los Angeles, being highly appreciated both by students, scholars and NGOs. According to this awareness, the first workshop "Urban Poverty. The praxis of planning in unequal cities" organized in September 2016 at the Sapienza's Faculty of Architecture in Rome, gave the opportunity for discussing and testing theory and practices of urban research and city planning with issues of poverty, in particular regards of western cities

and the city of Rome. This first experiment offered the opportunity to think about the interdisciplinary and/or international teaching aimed at preparing students for today's and tomorrow's planning challenges in the unequal cities.

1 INTRODUCTION

The impoverishment of society, the growing awareness in the importance and urgency of a "new urban question" have stimulated a more explicit attention to the social and spatial inequalities within the cities, and then, to the limits of urban design and planning theories and practices. In this framework, a strong rethinking of the social role of the planner seems inevitable in a condition of increasingly uncertain and fragmented representation and expertise. In fact, as it has been repeatedly noted, planners have too often failed to treat with the so called "wicked problems" (Rittel, Webber 1973), especially at the time in which cities were developing the growing polarization of society, and the problematic fragmentation in the urban spaces (Madanipour 1998; 2014). As it has been recently noted "spatial ordering for the construction and management of cities and territories have had (and have) significant consequences with regard to the relationship, integration or exclusion, between rich and poor" (Secchi 2013). In this context, urban planning seems to have strong and specific responsibilities with respect to the worsening of inequalities and, therefore, interventions aimed at defining new structures and new policies that may not be important starting points for their elimination and contrast. Today, the meaning of the "new poverty" can be understood in relation and in opposition to the sense of poverty more common in the past. These "old poverty" were defined, above all as the lack of economic means: they showed (and they show still today since they are not completely disappeared), duality in society and can be described as a contrast between "high" and "low".

Poor, in this sense, is one who has a "low" income statement and that, therefore, is a social condition overall "low". These "new poverty", however, are described as another form of duality like "inside" and "outside", that does not end only in the now inadequate spatial polarization between centre-peripheries. In fact, they are more properly defined in reference to the possibility of access and participation in social life: poverty means first of all "marginalization", then "exclusion" and, increasingly, "segregation".

Distinction and exclusion are inseparable aspects of the modern city (Secchi 2013, 42) that remain in the post- modern one as peculiar forms produced by the concentration of a specific unit and type of subjects, within the matching between recurrent social and spatial morphologies. In this perspective, the new urban poverty is represented, not only as a "condition," or a "status", but from "processes leading to the margins" and, then, to the exclusion from social life, while the urban life becomes inadequate. So, it's quite clear that they ask directly to the planning about their responsibility, since they are based on a duality concerning the inside and the outside, the included and the excluded, the accessible and the restricted/limited, by drawing and redrawing, more or less intentionally, the contemporary urban spaces through boundaries.

Nevertheless, according to some authors (Chiappero, Moroni, Nuvolati 2011) "studying the relationship between the territory and nowadays poverty is not only a substantive contribution to knowledge of the discipline, a contribution to the investigation about the relationship between urban design and planning's effects, and social outcomes" (considered as one of the main technical tasks of urban planning); it is also a task that can provide a useful contribution to better design the "spatial matrix" of public policies about poverty (Patriarchi 2014). Policies on which Western governments have often invested considerable resources but, certainly, with results largely unsatisfactory. In fact, at first under the influence of the major acquisitions of the Modern Movement, poverty and hardship have been considered mainly with reference to the economic aspect, responding (spatially and socially) in a rather standardized way.

Subsequently, these matters have been handled through policies or individual area (place or people-based), but rarely have been linked with positive forward-looking idea of processing and/or development (local and otherwise). Therefore, in order to think new guidelines for innovative theories but, also, for policies and urban design tools to fight urban poverty, social and spatial segregation, marginalization and exclusion, it seems necessary to restate what is widely perceived – for progressive simplifications – as a theme anchored to the "individual" size (limited to single buildings or to specific populations), in an "urban theme", absolutely crucial for this phase.

Since the late ' 70s the Italian and European cities fall the most critical consequences of economic restructuring and related labour changes, the ongoing downsizing of national welfare systems. With the Crisis, the spread of social vulnerability and poverty have been accelerating also by intertwining: - precariousness/insecurity/uncertainty of labor and income, - increase in migration, - demographic changes, - aging population - weakening of family structures and resulting tensions on "the care" (de Leonardis 2016) On cities and their governments flock: - dynamics of social embrittlement - trend of impoverishment of the middle classes, - growing inequalities and social polarization. Within this context, the workshop was focused on the challenges of doing research, planning and design urban policies considering urban poverty and the unequal cities as crucial. In cities, inequalities are, at the same time, "within" and "among" individuals, families & social environments. Inequalities are not only about difference of income but there is a spatial dimension of poverty we have to consider as urban planner.

2 THE WORKSHOP

In 2016 took place the first workshop "Urban Poverty. The praxis of planning in unequal cities" organized within the Faculty of Architecture in the Sapienza University in Rome. The deprived urban area is one of the feature that people observe (also urban planners and architects) but they are exactly the environmental and physical aspects of poverty. Theoretical and practical implications of labelling urgent problems of our cities in terms of "urban poverty" for better intervene on them, interplay between the international debate and domestic problems seems a promising direction.

Thus, starting from the work of Ananya Roy, the workshop tried to underline theoretical and practical implications of reading/defining/labelling urgent problems of our cities in terms of "urban poverty" to understand and define new directions of development and multi-scalar actions for the city and to fight inequality in our cities. It will take advantage from the collaboration of experts in different but complementary disciplines, for:

1. Identifying a new framework for "urbanpoverty" studies;
2. Dealing with urban poverty using an interdisciplinary point of view;
3. Promoting interdisciplinary actions;
4. Putting together theory and practices for intervention;
5. Developing critical thinking in future and contemporary experts.

Courses were organised in three parts:

1. Theories – new keys/framework for interpretation of the urban poverty phenomenon Ananya Roy opened discussion about urban poverty to new meanings, points of view, research fields, encouraging new theoretical debates;
2. (Miscellaneous – tools from case-studies and experiences Case studies from Italy were illustrated by D. De Leo, S.Monni , G. Giunta , D. Esposito that focused interest on analysis and intervention tools;
3. (Field Work – proposals V Municipality of Rome was the selected area for the field work. Participants had the opportunity to explore the context and speak with associations' members, inhabitants and delegates from the Municipality, to identify specific problems and issues related to "poverty" in this area. At the end of the workshop participants presented to delegates their proposals. According to Roy, the actual reference model tends to impose "subjective concepts of development, modernization, civilization, aid and certain aesthetics of poverty". For many people the way of thinking has been influenced according to the ruling economic model and to the Western approach. Indeed, the world economy and the capitalism are ruling the global relationships.Therefore, it is necessary to take into account macro phenomena to understand local problems. Urban poverty became a global issue particularly affecting cities where more than 50% of the world population lives: poverty exists just because wealth does. "Poverty is not just about economy, is about power and about political appearance". "Capitalism and neoliberalism lead to concentration of wealth and growing inequality: just a democratic world can counterbalance and contrast the system" (Roy). While wellness and wealth increased on the whole, the benefits of this growth have not been shared homogeneously, producing or reinforcing

unequal distribution. This phenomenon is evident in the countries of the South, but is becoming alarming in the North too. This is probably another reason of the growing attention of this topic in the West. However, inequality is often considered as a problem to be solved or eradicated, without taking into account the bigger scale relationships that have caused it. Since the intensification of those inequalities could be attributed to the socio-economic model, the small-scale interventions could not be enough; and the weakest and the most marginal population are the one suffering more. For sure, as it has been underlined, "new indicators should be introduced, such as capabilities and quality of life" (Monni).

2.1. THE MAIN TOPICS

During the workshop some topics emerged from lessons and discussion. First of all, professors Roy and Monni and moreover Giunta underlined how the economic principle encourages competition between constitutional values, such as equality, liberty, dignity and so on. According to him, "to promote urban development, personalization is fundamental, along with understanding the perceived needs, expectations and capabilities". So people are the core of the question.

The goal seemed to "break the dichotomy between economic and socio-cultural dimension, between State and financial market", imagining a model with new balances and mutual advantages. In this process of metamorphosis ethic and aesthetic are strictly linked, and the concept of beauty as a privilege for wealthy has to be fought.

Moreover, another topic discussed during the workshop has been common attitudes (of power representatives) towards urban problems or considered as such: elimination, removal and exclusion are usual approaches. In doing so, just the symptoms of issues are treated, forgetting or ignoring the complex system of causes and effects. Therefore, if poverty is just a consequence of a multifaceted structure that includes space, society and economy, the focus should not be on symptoms of inequality and poverty, but on causes and effects that create those. The author Marie Huchzermeyer (Huchzermeyer 2011, 36-39) describes well the difference between a rights-based approach and the operational approach focused only on symptoms promoted by the Millennium Development Goals (MDGs). The two different methods are described and compared to explain alternative modes of treating informality in South Africa. The core of the question is the "focus on causes and complexity of poverty/informality", through the promotion of "accountability of governments to organized citizens" and treating the "poor as agents", identifying "duties for the state" and therefore creating "political implications ". Moreover, issues about "colonialism of power" were discussed: all the approaches linked to it are founded on the "will and need to improve" the others. Instead the purpose should be the "will to promote justice – that is about distribution of resources" (Roy). The concept of justice is related to the right to the city promoted by Henri Lefebvre (Lefebvre 1968) and many others after him. "The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights" (Harvey 2008, 23).

Finally, poverty was assumed as a multidimensional problem of People+Place+Policies/institutions, by trying to underline the responsibility of academic and professionals since space matters in producing of social problems but also in the protection of rights and in the creation of citizenship opportunities. We assumed that, especially in the last few years, we saw poverty become more and more visible and serious in our cities in different ways. By avoiding the frequently common trap in the public debate about Absolute or Relative Poverty, recently, Lea Ypi (2016) assumed clearly:

> Absolute poverty as Poverty

> Relative poverty as inequalities

[[Rel. Pov.>> inequalities >> Abs. Poverty]]

Inequalities is not only a difference of income but a difference in the place prosperity accessibility as difference between public material fix capital and real accessibility to the material and immaterial capital of

each urban spaces. For economics statistic, inequality is a difference of income, a statistic territorially aware could emphasize the place prosperity inequalities as difference between capital public fix material and accessibility to the material and immaterial capital of urban spaces. Poverty is not only an internal problem, a problem of persons/individual income but a problem of urban conditions, availability and accessibility, and then a problem of place and space. Space matters in: producing of social problems but also protection of rights & creation of citizenship opportunities. In nineteenth-century reformers assumed the importance of place, so interpretations which treat poverty ONLY as a spatial problem run the risk of overemphasizing the causal power of concentrated poverty or residential segregation and missing the political-economic forces that produce uneven geographies. So, there is not concentration here but see it to try to deal with theoretical challenges by posing the problem of power!!!

3 LEARNING AND CONCLUSIONS

At the end of the first edition and while we are organizing the Summer School on the same subject, few learning and first conclusion can be underlined:

1. We couldn't evade the difficult questions of political economy by focusing on the promise of educational expansion and/or housing reforms, because a single solution is not available or easy to be found it BUT we could work together around the possibility to do better: to understand more and improve skills and tools in theoretical and practical work.
2. Relevance of practices: significant changes will not come about as a result of elite goodwill. Real change requires countervailing centers of power. The trade union movement/ASSOCIATIONS decimated by decades of attack, still remains vital, although weakened. Community organizing networks provide the second center. Building from the grassroots to players on the national policy scene, they have mounted some of the most effective.
3. A not exclusive but place-based (such as "people IN places") orientation.
4. Co-production of interdisciplinary knowledge: more attention in each field of studies by underline the responsibilities of each specific knowledge and a path for the co-production of a new interdisciplinary knowledge as a combination of different.
5. Finally, Definitions of poverty as a lack of resources often stop short of focusing on the sources of unequal income distribution, here we try to underline a different idea of resources, especially the relationally resources by looking at the local ASSOCIATIONs AS RESOURCES: As a matter of fact, the urban poverty complexity could be better interpreted taking into account associations like neighbourhood committee in Tor Pignattara and the Foundation od Community in Messina. The challenge now is to understand how involve those resources in the urban design process."

In conclusion we can assume that poverty is a problem of correct interpretation of the phenomenon from power representative and from planners, that should be responsible of intervention. Correct interpretation of theory but also interpretation of manifestations of inequality allow to identify meaningful phenomena and data to consider to support actions.

In few words, the workshop produced critical knowledge, helpful to analyze and discuss a real wicked problem such as the case of "Villaggio Falcone" a very deprived neighbourhood where we practically tested the utility of theories and practices coming from different context. The fragmentation and differentiation of urban space with reference to the social characteristics of the populations established, as well as the segmentation of the housing and the labour market. However, it seems possible to say that, even in European cities, urban poverty:

1. remains a significant problem, common and persistent in urban areas of different types;
2. it is a multidimensional phenomenon and not one-dimensional;
3. as many social phenomena, it is not coming out from the simple interaction between individuals, but manifests itself as a complex phenomenon to the scale of the urban areas, city regions and cities. Finally, the workshop, from one side highlighted that it is more important to guarantee proximity between administrations and citizens (control can't be considered only punishment) than to do make-up actions on problematic situations. From the other, it showed one time more that for very complex issues, the co-production of interdisciplinary knowledge is required. And it means at least the combination of researchers' attitude of:

4. statistic's researcher knowledge, that ask to themselves: how many people are involved in this or that problem?
5. sociologists, that ask to themselves: who are this people?
6. but also architects and planners that are able to understand and ask to themselves: where this people live and how are their living conditions? Since it's not a disciplinary issue we need to educate students about these issues and in the ability to coproduce knowledge and proposal with Statistics, Sociologists and Urban and social Planners with responsibility and accountability in order to change the world by promoting justice.

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ID 1639 | COMMUNITY GARDENS AS TEMPORARY USES FOR VACANT LAND REVITALIZATION: THE CASE OF RIGA

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1 INTRODUCTION

As some European cities are undergoing economic and population decline, at the same time showing urban sprawl, the number of vacant land inside the city centers is rapidly growing. Under complicated cunstruction regulations, development of vacant land inside the city center is often related to high construction costs and time investment, forcing land owners to postpone site development. Vacant land in the city center, providing space for garbage collection and even affecting increase in crime, results neighbourhood degradation.

Concerning common uncertainty regarding future development of vacant land, temporary uses appear to be good solution to outdoor space revitalization, helping to improve quality of life of local residents. As show various case studies from different European countries, community gardens appear to be common solution for the temporary use of vacant land. According to previous research data, community gardens contribute to social cohesion, promoting integration and strengthening sense of neighbourhood belonging.

Moreover, gardening positively affects people's physical health and wellbeing, reducing one of the major risk factors of noncommunicable deseases.

Nowadays, Riga, being a shrinking city is facing population decline and as a result reduction in land development investment and construction. Integration of temporary projects in particular creation of community garden, can help to promote sustainable development by creating livable outdoor, where people want to spend their free time. However, as community garden do not appear in any construction and land use legislation, as well as concerning the special status of Riga's city center included in the UNESCO World Heritage Protection list, the research focuses on possibilities of introduction of temporary uses, in particular community gardens under the legal framework.

In-depth interviews conducted with city's Construction Department representatives and representatives of city's institutions involved in development of Riga city development plan, development of land use mapping, cultural heritage and green area protection, as well as interviews with local school authorities were chosen as a tool to analyze the current situation of legal framework and possible development of new guidelines to promote introduction of community gardening in the city center.

The results of this research show which particular construction regulations and land development plans should be completed to ensure legal framework under which community garden in the city center can be developed, promoting easier and quicker temporary land use approval.

1.1 THE PROBLEM OF VACANT/UNUSED LAND

Currently facing shrinkage and economic decline, number of vacant plots in many European cities remains to grow. The vacant/underused land problems have raised already in the first part of the 20th century in the economically depressed years, however, widespread attention this fact gained in the late 70's early 80's (ed. Pacione, 1999; Martinez-Fernandez et al., 2012). So, for example, in UK concerns about the negative impact of vacant land in the inner city raised already in 1976-1977 (Home, 1983). This fact, however, proves that there is a need for new approaches and strategies to deal with this problem.

Existence of vacant undeveloped territories in the center of the city is often promoting degradation of the neighbourhood plots and even promotes crime. As according to De Biasi (De Biasi, 2017), the bed condition of undeveloped/unused lots often has negative influence on individual's social, mental and physical health. Yet, considering all the negative features, in recent years vacant land started to be perceived as a possibility, not a problem.

In order to deal with the vacant / underused land in the inner cities, various approaches are developed. Being first seen as a problem, vacant land can also offer a range of opportunities (Nemeth and Langhorst, 2013). The vacant land can work as a room for various kinds of different temporary uses, enabling community activities, positively affecting air quality, even helping to reduce crime and providing space for recreation.

1.1.1 METHODS

Combining the temporary uses and urban gardening approaches for dealing with the vacant land, the research focuses on possibilities to implement various community gardening forms under the legal framework of Riga. Being in the list of UNESCO heritage protection zones, the historical center of Riga and its protection zone/area needs specific approaches for vacant land temporary uses.

In order to find out which types and functions of community gardens would be appropriate to introduce on the vacant land in the historical center of Riga, in-depth interviews with City's Construction Department's, City's Development Department's representatives and representatives of cultural heritage and green area protection agencies were conducted (9 interviews in total). Interviews with local school authorities and authors of previous projects related to urban gardening helped to find out which inhabitant groups are interested in gardening in the center of the city (5 interviews in total).

Field studies showed the number of vacant land and land used for temporary car parking in the protection zone of the historical center of Riga.

2 THE CASE OF RIGA

Riga is a shrinking city, and this process is especially affecting the center of the city. According to the census data in 2010 number of inhabitants in Riga was 673433, shrinking to 639630 in 2016 (Census data, 2017).

As defined in various planning documents, Riga's historical center and its protection zone is a multifunctional territory, providing livable, flexible and sustainable environment. Analysis of the Riga Territory Plan shows that the chosen territory consists of various land development groups. Water bodies (17,9%), streets (16,9%) and squares (24%) are taking the largest territories in the historical center of Riga. Mixed housing and business land development groups are the most common functions in the current development plan. Distribution of these functions is unbalanced, leading to the coexistence of housing and night club buildings and so negatively affecting the quality of life.

Underused/vacant land makes 4,3% of the territory in the historical center of Riga and its protection area and includes vacant land, underused built-up territories as well as declined territories. Furthermore, these numbers do not include extensively used areas with the development which allows further construction. Some af these territories are functioning as car parking, which is defined as a temporary use. As showed field studies there are 32 vacant and 17 temporary car parking plots in the protection zone of the historical center of Riga (Fig. 1 a,b).

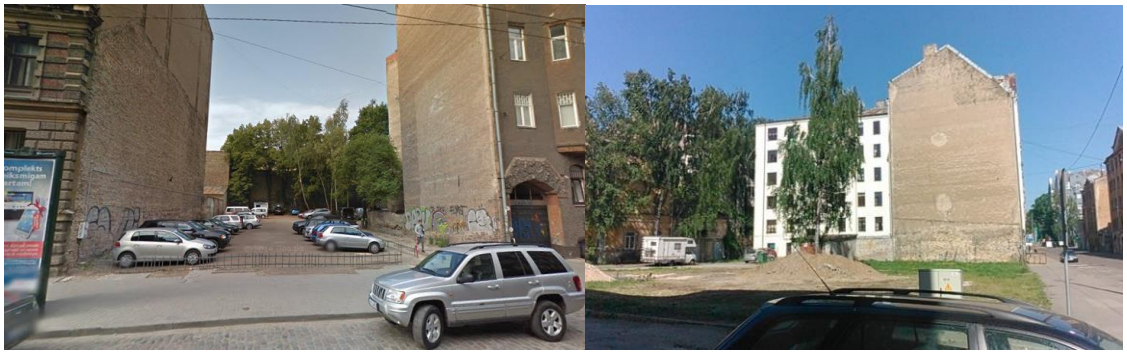

Figure 1 a, b – Vacant land with a temporary car parking, vacant/unused land
(protection zone of the historical center of Riga)

According to the aims defined in the development strategy for the historical center of Riga and its protection zone, revitalization of degraded or underused territories is to be reached with new construction development (Riga's sustainable development strategy till 2030). This fact, however, does not support flexible and fast revitalization, on the contrary it results more complicated and slow process of revitalization. In the context of a shrinking city new construction development might cause even more fragmentation, negatively affecting residents' quality of life.

As shows the evidence from other cities in Europe, inhabitants prefer to see community gardens or other community supporting temporary uses, rather than vacant land or temporary parking. Community gardens often start as guerilla initiatives, as for example in the case of Todmorden, UK. However, in the case of the historical center of Riga unplanned actions might lead to penalties and dismantling of the garden. That is why to ensure the development of community gardens as a temporary use for vacant land, the legal garden approval process needs to be simplified.

Research on the previous urban gardening related initiatives showed that authors usually avoid development of a garden project, prefering creation of an „event" or „campaign", which is easier to approve in planning institutions. However, it allows to set up garden only for a very short period of time, requiring also detailed „event" programme. In depth interviews with authors of urban garden related events showed that the idea of growing in the center of the city is supported by different inhabitant groups. So, the commercial urban garden, which functioned as a cafe and the advertisement point for the household

equipment, attracted attention of young families and middle-aged people (Fig. 2 a). The vertical garden located on the market place encouraged attention of children and seniors (Fig. 2 b). This evidence confirms Riga's inhabitants' interest in urban gardening and proves the necessity in development of easier, people-friendly regulations concerning installation of temporary community gardens in the center of the city (Interview data).

Figure 2 a, b – Urban gardening related events in the center of Riga

At the moment, creation of a community garden on the vacant land requires not only land owner's permit, but also a detailed project. Taking into account absence of guidelines or regulations related to development of community gardens, common regulations as for landscape design or urban amenities project are implemented. In order to introduce new guidelines or regulations, and to ensure the quality of the proposed guidelines in terms of community garden in the historical center of Riga, various institutions should be involved. In depth interviews with representatives of The City Development Department, The Construction Department (Architects), The Construction Department (Landscape Architects), Country's Cultural Heritage Protection Agency and „Riga Forests" Agency showed which particular aspects should be taken into account when creating new guidelines. Examples from different European countries show that community gardens can be introduced not only on the vacant land, but also in green areas (parks, garden squares), school or nursery school courtyards and residential housing courtyards. Location of the community garden affects also the main function, preferably introducing educational garden at schools, and promoting physical activity and social integration, as well as providing free time spending possibilities in parks and residential housing courtyards. Taking into account these differencies, interviewees were asked to consider best matching function for community garden on the vacant land. As a result, representatives of different institutions reached common ground on community garden as a free time activity for seniors and as a revitalization tool for vacant/underused land. Some experts considered also promotion of physical activity and social integration (Table 1, Interview data).

As differs the function of community gardens, differs also the design or the visual appearance. Considering type of community garden on the vacant land in the historical center of Riga and it's protection zone, preferable are container and vertical garden. Creation of raised-bed garden might be supported only in protection area of the historical center. In adition, all interviewees arrived at a common view on the importance of design, considering necessity to insure visual appearance of high quality.

	The City Development Department (2 people)	The Construction Department (Architects) (2 people)	The Construction Department (Landscape Architects) (1 person)	Country's Cultural Heritage Protection Agency (2 people)	„Riga Forests" (2 people)
Vacant land for community garden	yes	yes	Yes/No	yes	yes

Container gardening	v	v	-	v	v
Vertical gardens	v	v	-	v	v
Raised-bed gardens	-	v	-	-	
Supported function of the temporary urban garden	Free time activity for seniors Social integration As an areas revitalization tool	Free time activity for seniors Promotion of physical activity As an areas revitalization tool	-	Free time activity for seniors As an areas revitalization tool	No specific preferences
Current requirements for container gardens	-	-	Project with the detailed description, photo evidence, topography, plan and detailed description of the planned beds/containers/ structures, description of the planned plants	-	-
Desired Requirements	Insured safety and maintenance. Common maintenance requirements for all gardens.	Visualisation, to ensure visual quality of the garden. Assurance of maintenance		Design and plan of the garden. When working on design local traditions should be respected, however, contemporary design solutions are welcome to be introduced. Special attention on the choice of planted species.	Visualisation, to ensure visual quality of the garden. Special attention paid on design.
Integration of community gardens in the city's development strategy	v	v	-	v	v
Separate regulations on community gardens	v	v	Integrated in the general construction regulations		v

Table 1 – Interview data

3 CONCLUSION

According to in-depth interviews' data, use of community gardens as a tool to revitalize vacant/underused land is supported. Positive impact of urban gardening on people's health and well-being, and the free time spending possibilities garden gives to senior residents, has also been considered as an advantage. Considering the type of community garden, container and vertical garden were chosen as more appropriate. However, considering legal framework and creation of new guidelines all interviewees came to a common conclusion that in case of the historical center of Riga and its protection zone, special attention should be paid to garden design. It is recommended to have separate or integrated regulations which would ensure high visual quality of the community garden. In order to prevent vandalism or any other problems, the maintenance should be insured. Introduction of community gardens in the city's development strategy is advisable by all interviewees.

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Interviews of research participants (14 in total)

ID 1642 | THE LEARNING EXPERIENCE OF TRANSPORT PLANNERS: AN INTERNATIONAL SURVEY

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1 INTRODUCTION

The call to advance the quality of higher education should be a constant priority for academic institutions in response to the changing needs of the professions. This is particular true for transport planning, a discipline that is experiencing rapid and on-going changes due to the emerging environmental, economic, security-related and social issues that mobility is becoming increasingly more associated with. Indeed, academic institutions are faced with the challenge of ensuring that transport planning courses address the growing complexity of urban challenges (Zuylen 2000; Ramsden 2003).

Transport planning courses are typically offered in urban and regional planning or engineering departments although, in some instances, they are also offered in other institutions such as tourism, business, public policy, social science and urban studies departments. A number of studies have provided national overviews of transport planning education, such as in Australia (Mateo-Babiano et al., 2013), Switzerland (Kaspar, 1982), Canada (Ruppenthal, 1998) and USA (Krizek and Levinson, 2005). These studies have adopted different research methodologies and slightly different research questions. In any case, in these studies, it has been identified a general preference for multidisciplinary and holistic transport planning courses (see as well van Zuylen, 2000 and Ferreira et al, 2013, who confirm the same trend). In the ‘60s and ‘70s the rational technical planning model influenced the field of transport planning which led to the delivery of a technical-oriented transport-planning curriculum. With the introduction of communicative planning in the ’80s and ‘90s, planning pedagogy was revised to capture its thrust towards policy-orientation and towards the facilitation of communicative planning processes (Handy et al 2002). This had important implications in a number of transport planning courses, which have reflected this new trend.

However, not all the transport planning courses that one can find today accommodate a broad curriculum. Moreover, only limited hours can be allocated to cover the broad and multidisciplinary field of transport planning and this means that difficult choices have to be made even when a comprehensive curriculum is

desired (AESOP, 1995). Within each course curriculum designers must then choose from amongst a diverse set of important topics what should be taught. The inevitable exclusion of many concepts and topics results in curriculum gaps that might negatively affect the professional future of the students. As an alternative to this, curriculum designers can choose to make curricula as broad and comprehensive as possible, however this can lead to shallowness and superficiality and will make it difficult for students to achieve deep learning in any given subject area (Krizek and Levinson 2005, Ferreira et al, 2013). In line with this, two key questions emerge. First, how should curriculum designers solve the tension between the comprehensive and the specialist orientation in transport planning courses? Second, which subject areas should be given priority in these courses, if any?

The aim of this article is to assist curriculum designers finding their own answers to the abovementioned questions. In order to achieve that aim, an international web-based survey was conducted where transport planning professionals across the globe were asked to give their opinions on what are the subject areas and topics that they rank as the most relevant for their work and how much coverage of these subject areas should be given in an ideal transport planning master. It was also asked the coverage given to these elements in the master course they have attended when they were still students. Through this, the paper seeks to explore the challenges associated with teaching urban transport planning today and identify the state of the art in transport education. The study also answers some questions about the future trends of the transport planning profession.

The paper is organised in the following sections. Section 2 briefly discusses the research design choices and setup of the data gathering. The relevant characteristics of the sample (survey respondents) are also presented. Section 3 discusses the research results. A discussion of significant differences found among different countries, professional roles, and age groups is included. Section 4 provides conclusions and briefly discusses the future of transport education.

2 METHODOLOGY

2.1 DATA GATHERING

The research is based on a database gathered through an international web survey. The respondents are professionals involved in transport planning that attended a master degree. The master could have been in any field. The data was gathered with a Qualtrics survey and it was available in English only. We distributed the survey and several reminders via mailing lists from national transport planning professional organizations, research groups, and via a number of LinkedIn and Facebook groups on transport, geography and urban planning. The survey's structure could be completed within fifteen to twenty minutes. The survey is divided in four main parts.

The first part of the survey consisted of five general questions concerned with the education of the respondents. It asked the field of their undergraduate bachelor degree, the field of their master degree, the country where they attended the master, the year of completion of the master, and the duration of the course.

In the second part the respondents were asked to reply to 15 questions about how much different subject areas were covered in the master degree they have attended. These questions were answered with a 5-point Likert scale. It also included questions about the extent to which they consider that given topics are important for their work. There were a total of 46 topics and these were also ranked using a 5-point Likert scale. In terms of definitions, we considered a subject area one that includes several topics. For example, the subject area Data collection and analysis included the following topics: Qualitative data collection and analysis, Quantitative data collection and analysis, and Statistics. This section included as well an open question about the themes and topics that are emerging and which ones are losing relevance in the transport planning sector.

The fourth part consisted of four questions about their personal views, including their personal planning goals and on their level of happiness in their career.

The last part consisted of nine questions about the respondents, namely the organisations they have worked for, the nationality, the country of residence, age, gender, their employment status and their key

psychological trait according to the Holland Codes (also known as the Holland Occupational Themes RIASEC (Holland 1973).

2.2 THE RESPONDENTS

A total of 254 respondents completed the survey. Their characteristics are presented in table 1. 26% of the respondents attended a master degree in Southern Europe, 18% in Central Europe, 33% in Northern Europe. Smaller percentages of respondents also cover other geographical areas, such as South America (1%), Northen America (12%), Asia (9%) and Australia (2%). The predominant field of the masters attended in the sample of all countries is transport and mobility. The respondents work mainly for academia, consultancy firms and public authorities. There is a prevalence of male respondents, which sadly reflects the male predominance in the sector. The predominant age group is of people from 23-34, which just finished their master degree.

Geographic area where the respondents attended their master	South Europe	Centre Europe	North Europe	South America	North America	Asia	Australia	Total
Total	**66**	**45**	**83**	**3**	**31**	**22**	**4**	**254**
PG Master field								
Architecture	16	6	2	1	1	2	1	**29**
Economics	2	2	5					**9**
Engineering	14	8	3		5	4		**34**
Geography		7	3		1			**11**
Other	1	5	7		3	2		**18**
Transport	19	5	56		7	7	1	**95**
Urban Planning	14	12	7	2	14	7	2	**58**
Type of work organisation								
Academia et al	15	14	10		12	3	1	**55**
Only Academia	32	18	9	2	9	6	1	**77**
Other	1	1	3			5		**10**
Private Consultancy	3	5	21			2		**31**
Public authorities	7	3	24	1	7	3	2	**47**
(blank)	8	4	16		3	3		**34**
Type of employment								
Employed full time	49	37	55	2	25	10	2	**180**
Employed part time	2	2	6	1		2	1	**14**
Retired		1	2		2			**5**
Unemployed looking for work	2					2	1	**5**
Other	5	1	4		1	5		**16**
(blank)	8	4	16		3	3		**34**
Gender								
Female	25	11	24	2	6	4		**72**
Male	33	29	43	1	22	16	4	**148**
Prefer not to say	1	1	1		1			**4**
(blank)	7	4	15		2	2		**30**
Age								
18 - 24	2	3	4			5		**14**
25 - 34	13	14	26	1	11	8		**73**
35 - 44	15	8	15	2	6	3	1	**50**
45 - 54	15	8	9		3	2	1	**38**
55 - 64	13	5	8		5	2	2	**35**
65 - 74	1	2	5		3			**11**
75 - 84		1			1			**2**
Prefer not to say			1					**1**
(blank)	7	4	15		2	2		**30**

Table 1 Characteristics of the respondents

3 COVERAGE AND IMPORTANCE OF SUBJECT AREAS

The second part of the survey questioned the respondents about their post graduate learning experience. In practice, this means that the survey questioned the respondents about how much different subject areas were covered in the master degrees they have attended and how important the respondents perceive these subject areas for their transport planning work.

In aggregate terms the first three most important subject areas are data collection and analysis, travel planning and transport and land use interaction (see Table 2). Even though they rank as the top three in the list of subject areas, it is relevant to notice that the values of perceived importance decrease in a quite

gradual way. So there is not a clear agreement that a small number of subject areas are very important and others are considerable less important. It is also relevant to notice that, while data collection is considered well covered in the master program, this is not true for the other two most important topics. The table indicates that what is considered important for professional work is not necessarily what was most covered in the master degrees the respondents have attended. According to the survey respondents, these topics should have had more space in the master curriculum. Another quite noticeable gap is on the subject area 'soft skills for planning'. Even though this is ranked only as the tenth most important topic, the gap between the importance value and the coverage value is the highest among all subject areas. Also the subject area GIS science and spatial analysis has a quite low coverage, while it is considered important by our respondents (ranks as the fifth most important subject area).

Rank for importance	Subject areas	Perceived importance of subject area (mean normalised value from 0 to 1)	Coverage of subject area (mean normalised value from 0 to 1)
1	Data collection and analysis	0.762	0.566
2	Travel planning	0.740	0.385
3	Transport and Land Use interaction	0.734	0.454
4	Transport Project Appraisal	0.722	0.414
5	GIScience and Spatial analysis	0.680	0.364
6	Modelling	0.676	0.392
7	Participation of community members and stakeholders	0.665	0.344
8	Development of transport plans	0.648	0.354
9	The policy and regulation context	0.636	0.452
10	Soft skills for planning	0.614	0.183
11	Planning theory and planning history	0.613	0.461
12	Innovations and transition management	0.596	0.258
13	Transport Infrastructure construction	0.553	0.388
14	Design skills and creative thinking	0.515	0.309
15	Financial and operational management of transport systems	0.490	0.244

Table 2 Perceived importance and coverage of subject areas

Two key conclusions can be drawn from the analysis of Table 2. First, it seems reasonably clear that respondents support, in aggregate terms, comprehensive curricula as there is not a clear preference for a limited number of subject areas over all the remaining ones. Second, there is for sure room for improvement in terms of matching the importance the respondents attribute to given subject areas and the level of coverage these areas have in master degrees.

3.1 SPECIFIC EXPERIENCES ACCORDING TO THE FIELD OF MASTER DEGREE ATTENDED

The coverage of subject areas varies according to the field of the master degree. Planning theory and planning history has the highest coverage in planning masters with a score of 0.59, those masters also cover quite well transport and land use interaction, the policy and regulation context, GIS science and data collection and analysis. Data collection and analysis is less covered in Architecture Master (average score 0.35), compared to the average score of 0.56. GIS is more covered in geographical Master (0.61), but only marginally in Transport course (0.32) and Economics (0.25). Modelling is slightly covered in Architecture Master (0.19%); the subject are design skills and creative thinking is covered in Architecture Master with a good score (0.65) and Urban Planning Master (0.40), but only marginally in Transport Master (0.17), Geography (0.25) and Economics (0.17). Geography masters are the ones covering the most the subject area innovations and transition management compared to other masters' field, but only marginally (0.38). Soft skills for planning are generally very marginally covered in all the Master fields, with a total average of 0.18. The maximum coverage is in Geography Masters (0.27).

There are some differences of course also in terms of how people who attended different master rate subject areas. Respondents who followed a Master in Architecture rate as very important planning theory

and history, design skills and innovation and transition management, in opposition to the other groups who do not. Professionals who attended a transport master consider on the contrary design skills and creative thinking not important (average 0.43). Soft skills for planning and participation are considered important by transport planners who attained a master in Architecture, Transport and Urban planning, but not by the professionals who attained a Master in Economics, Engineering or Geography.

There are some significant differences among the different master fields also regarding the gap between the importance rate and the coverage. Innovations and transition management are rated very important and are at the same time not covered in all Master fields. This difference is higher for professional who attained a master in Architecture. The same is for soft skills for planning, especially in Architecture, Economics and Transport Masters. Modelling is another subject area that is perceived important but not enough covered in Architecture master, such as the subject areas of Transport Planning Appraisal, participation and community members and stakeholders

3.2 JOB ORGANISATION DIFFERENCES

Some differences exist also in how professionals consider important the different subject areas to be covered in a master and the organization they work for. Transport planners who work in private consultancy are the ones who rate the subject area of Modelling as the most important (average 0.80). Comparing to other groups, transport planners working in public authorities rate higher the subject area of Transport Infrastructure and construction.

There are no significant differences on how professionals working in different organization types rate some subject areas. For example Land use transport interaction, Data collection and analysis, Travel planning are the three subject areas that are rated very high and this happens among different groups of people working in different organizations. Financial operational management of transport systems are rated low by all the groups.

3.3 COUNTRY SPECIFIC PERCEPTIONS

Within the macro geographical areas of the sample, as detailed in Table 1, we noted some peculiar country differences. For example, transport planners who attended a master in Italy rated Planning Theory (0.67), Design skills and creative thinking (0.64) and Transport infrastructure and construction (0.64) as more important than professionals who achieved their masters in other countries, which achieved a mean respectively of 0.57, 0.48 and 0.52. On the other hand, for professionals who attended a course in United Kingdom, modelling is more significant than in other countries, as they rated it 0.71 over a mean value of 0.65. In Italy and USA, GIS and spatial science are rated as more important subject areas than in other countries.

There are no country specific differences for subject areas such as Land use transport interaction, Transport appraisal, Data collection and Travel planning, which are considered very important by all respondents disregarding their country of residence.

3.4 AGE, GENDER AND PERSONALITY DIFFERENCES

There are some differences on how respondents perceived the importance of different subject areas also according to gender, age, and personality.

Women rate more important than men soft skills for planning, with an average of 0.82 for women over an average of 0.74 for men. Also participation and data collection is considered more important by women, who rated this subject area with an average value of 0.73 over 0.63 for men.

Regarding age differences, transport project appraisal is considered one of the most important subject area by older generations with a score of 0.93, compared to an average value of 0.72. Also financial and operational management is rated differently by young and old transport planners. Younger generations of

transport planners consider more important other subject areas such as modelling. The increasing perceived importance of modelling grows with the younger age in an almost linear relation.

We recorded some differences also in how people perceive the importance of subject areas and their personality. People who define themselves as Artistic rate (with no surprise) design skills and creative thinking (0.75) and Participation of community members (0.74) as the most important subject areas. People who recognize themselves as Realistic rate the Modelling subject area as the most important (0.74). Classical people rate lower (0.36) than the other groups the innovations and transition management (average of 0.59).

3.5 WHERE IS THE TRANSPORT PLANNING DISCIPLINE GOING?

Looking at the coverage of the subject areas along the years, it is clear that the education offer for transport planners is changing. Professional who attended their masters in the '60s stated that some subject areas were more or less covered that what professional finishing their master in 2010 did. For example there is a linear increase of the coverage or transport land use planning (from 0.31 in the 60's to 0.57 in 2010's). Also GIS science and Spatial Analysis coverage is growing (from 0.21 in the 60's to 0.40 in 2010's). Soft skills for planning's coverage is also increasing in the last years (from 0.07 in the 60's to 0.20 in the last decade). Some subject areas coverage remains stable such as planning theory and planning history or design skills and creative thinking.

From the question asking themes that are emerging in the transport-planning sector, some topics have been cited by many respondents. Those are: 'big data' (cited 28 times), 'autonomous or automated vehicles' (cited 20 times), 'land use and transport interaction' (cited 18 times), 'technology and smart mobility' (cited 14 times), 'mobility as a service (cited 9 times). We also asked which subjects are losing relevance. Our respondents used some common keywords, such as 'infrastructure design' (cited 10 times), road and highways construction (cited 9 times); traditional modelling (cited 5 times).

4 DISCUSSION AND CONLUSIONS

The results presented here are preliminary and part of an on-going research. As such, we would like to invite our readers to see them as temporary and subject to revision. The survey remains open online as we write with the aim of gathering a considerable higher number of respondents so that we can better cover more countries, age groups, and educational backgrounds. However, some temporary conclusions can be sketched. First, it seems relatively clear that transport planning professionals rate a large number of topics and subject areas as important. There is a clear resistance to dismiss knowledge as irrelevant for transport planning practice. In other words, holistic and comprehensive curricula seem to be the clear preference. In our view, this is a good sign as it shows the openness and curiosity of professionals involved in transport planning. It can show as well their awareness that transport planning is an activity with deep societal and environmental implications and relationships. It is then perceived as most needed to master a wide variety of concepts and theories, tools and techniques. However, it can also be seen as a sign of a professional crisis. As argued by Bertolini and associates already in 2008, "for urban transportation planners these are the challenging times" (2008, p. 69). Among these challenges one can count great uncertainty about the future of mobility, major environmental issues such as climate change and pollution, health problems due to physical inactivity, among some others.

Second, and in terms of what kind of knowledge transport planners tend to perceive as the most important for their work, data collection and analysis, travel planning, transport and land use interaction, and transport project appraisal were the subject areas ranked the highest. This is meaningful. All these subject areas are focused on expert content and not on procedural issues (as soft skills for planning or participation of community members and stakeholders are). Even though some argue that the communicative turn has left important marks in the planning discipline, transport planners do not seem to prioritise procedural or communicative forms of knowledge. Instead, their priorities go to the hard-core content of transport planning as a spatial and social science.

Third, it is also relatively clear that there is a mismatch between what transport professionals rank as important subjects for their work and subjects that have been covered in greater detail in the master

courses they have attended. This is partially explained by the fact that only 37% of the respondents did a master on transport planning or transport studies. This can also be partially explained by the possibility that when a professional ranks something as important for work it is necessarily difficult to offer to this person enough. Indeed, the person is likely to want to receive all possible information about the subject as their professional success depends on it. Nevertheless, curriculum designers seem to have some serious work ahead, if their objective is to match better levels of coverage of subject areas and what professionals (and professional organisation) rank as important for their practice.

Fourth, and at a more conceptual level, perhaps it is time to reflect more critically about how transport planning master courses are designed. Most countries and universities still adopt a prescriptive logic to their curricula, that is, they base higher education on attendance of courses with clearly specified disciplinary orientations (e.g. transport planning, urban design, human geography). Why is that accepted so uncritically is the key question here. If transport planners recognise that holistic and comprehensive curricula is what suits them the best, why are they forced to follow pre-given modules? Maybe their best interest would be to have the freedom to choose the modules they want to attend, as is currently done in the MIT Media Lab (Ito, 2012) or some interdisciplinary graduate transportation programs also offered at MIT. However, this poses an intriguing question: how would professional associations react to this? Moreover, what would be gained and what would be lost in the world of planning if the educational background of their professionals was even more diverse? Taking into consideration that transport is a sector that has proved to be hard to change, and that private car dependence, pollution, carbon emissions, congestion, physical inactivity, among other problems, continue to be experienced at increasingly more alarming levels across the world, maybe it is time to explore new avenues of thought. Further research on these intriguing subjects is indeed most necessary.

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ID 1672 | GAMES AS DIALOGUE TOOLS FOR SPATIAL LEARNING: AN EXPERIENCE IN EDUCATION

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1 INTRODUCTION

The course 'The game and the city' was offered during three consecutive semesters as an elective course to the undergraduate students of Architecture and Urbanism at the Federal University of Minas Gerais. The course was proposed as part of a research on the use of games as a participatory tool in the context of spatial production. Currently, there are a growing number of initiatives that use gamification as a resource to motivate people and increase civic engagement in matters of public interest. However, the use of this resource lacks a critical reflection in the same depth with which the participation is currently debated.

Taking into account the extensive debate about participation produced so far, we start from the challenge posed by Jeremy Till regarding the need to move the architectural participation from a placatory participation towards a transformative participation (Till, 2005). In this context, this article reflects on the educational and formative aspects involved in participation, having as a horizon the intellectual emancipation with regard to spatial issues. The games produced in the context of the course will be considered as a space for dialogue that aims to foster the spatial learning and qualify the participants for a transformative spatial practice. The experience of the course 'The game and the city' will be taken to discuss the spatial learning in two instances: one concerning the formation of the architect and planner as a producer of games; And the other, related to the spatial learning involved in the act of playing and therefore, outside the school boundaries.

Regarding the education of the architect and planner, the article questions what displacements might be possible to the practice of architecture and planning when shifting the focus of education – conventionally concerned in finding solutions to spatial problems through the practice of project – to another perspective, based on the questioning of spatial issues as means to structuring an open process for the collective construction of spatial knowledge. From a Lefebvrian understanding of the production of space (Lefebvre, 1973, 1991), the aim of the course is to approximate the practice of producing games to the concept of "spatial agency" developed by Nishat Awan, Tatjana Schneider and Jeremy Till (2011).

The second level of discussion, takes all the games produced by the students throughout the semester to discuss the spatial learning provided by the act of playing. Therefore, it brings the thought of educators such as Paulo Freire and Ivan Illich and also the philosopher Jacques Rancière to approach the educational process provided by the games from the perspective of intellectual emancipation. Then the games produced by the students are grouped in a classification that allows discussing the formative process that is established in the act of playing. The principle of equality of intelligence brought by the political thought of Jacques Rancière (2002), confers a political dimension to the game, that comes to be understood as the activator of a process of intellectual emancipation that qualifies the citizens to participate actively in the everyday production of their space and the city.

2 THE GAME AND THE CITY: DISPLACEMENTS TO THE SPATIAL PRACTICE

The theoretical assumptions that support the course will be presented in order to enable a clearer formulation of its objectives and the contextualization of the games that were produced by the students.

The course is based on the Lefebvrian perspective for the production of space. In the statement that "The (social) space is a (social) product" (1991, p.26), Henri Lefebvre expands the architectural and planning field of interest to the scope of social relations and the modes of production involved in the process of producing space. When the understanding of a space embedded in social relations is brought to the field of spatial practices, Lefebvrian theory offers a critical counterpoint to the mode of action of architects and planners whose conventionally consider the space as a matter to be transformed into a product by means of echnical intervention. In this model, the technically produced space becomes a product, an object to be negotiated in the form of a commodity. Beyond this notion of space as an object, the Lefebvrian concept of spatial production is amplified by the different ways in which Lefebvre understands the meaning of producing.

The double meaning of the term stems from the fact that 'men' in society produce sometimes things (products), sometimes oeuvres (everything else). Things are enumerated, counted, appreciated in money, exchanged. And the oeuvres? Hardly. To produce, in a broad sense, is to produce science, art, relations between human beings, time and space, events, history, institutions, society itself, the city, the state, in a word: everything. The production of products is impersonal; the production of oeuvres can not be understood if it does not depend on subjects. (LEFEBVRE, 1973, pp. 79-80)

This understanding of space as an object, adopted by the conventional practice of architecture and planning, claims for the professional field the monopoly of spatial knowledge. Issues relating to the everyday life of cities, such as mobility, public spaces, housing policies, or possible ways of occupying and inhabiting the city, are removed from the public debate. The alienation of everyday spatial practice in the hands of a few, supposedly qualified to decide how people should live in the city, collaborates with the reproduction of social relations of domination and the processes of exclusion and social inequality. As a product, the space is conditioned by the market. The space-object therefore tends to be a response to demands that do not always coincide with the interests of people for better living conditions in the city.

Another approach of spatial practice claims for the social role of the space through a professional practice understood as praxis towards the transformation of social reality. Some of these practices were brought together by Awan, Schneider and Till in an attempt to qualify as “spatial agency” (2011) a spatial practice that is closer to the understanding of architecture and planning as an oeuvre rather than a product. This paradigm shift is brought by the authors in Bruno Latour's terms to characterize a change in the understanding of architecture as a 'matter of fact' to architecture as a 'matter of interest' (Awan et al, 2011).

As matters of fact, buildings can be subjected to rules and methods, and they can be treated as objects on their own terms. As matters of concern, they enter into socially embedded networks, in which the consequences of architecture are of much more significance than the objects of architecture. (Spatial Agency, 2016)

The spatial agency seeks to overcome the model of action that is justified in the technical-scientific authority to build networks of collaboration in which architects and non-architects seek to collectively construct another way of producing space. The means of spatial agency action range from forms of political activism to the production of pedagogical tools to empower people to work collaboratively for the transformation of their space.

The course 'The game and the city' aims to establish games as a mode of spatial agency, contrasting to the educational model based on Project practice. As Till points out, conventional education understands design as an answer to spatial questions. "In education, the architectural study is held up as an exemplar of problem-based learning, the space where students are set to 'problem' and through the creative, and reflective, act of design as a 'solution' (Till, 2005). This may even work at scholar education, however, when confronted with reality, this logic ultimately constrains the role of architects and planners since the problems to be solved are formulated in terms of real state. In these terms, inevitably, the answer will always be that of the space-object.

In opposition to this logic of the project, the course proposes the production of games as a problematizing action. In order to construct a game, students are challenged to identify tension nodes, present in the socio-spatial reality, not as problems to be solved by the game, but rather as elements that structure a dynamic that enable an environment of negotiation and knowledge sharing. Thus, the role of these games are not to solve concrete impasses, but rather to thematize dissensus, to problematize alternatives and to construct an understanding about what would be the collective interest of the stakeholders. This also aims to broaden the perspectives of students to other possibilities of professional role beyond the heteronomous limits of conventional practice.

2.1 THE GAMES PRODUCED IN THE COURSE

The games produced by the students, as the studio practice in the three semesters in which the course was offered, will be will be presented in summary form. It is worth clarifying that this study does not aim at the individual analysis of each game, but of the whole of works. Therefore, we are not dedicated to explain the elements and dynamics used in each game, but rather its context and objectives. Neither is it intended to conduct an individual evaluation of the work. Thus, the fragilities and contradictions that surely exist in these games are left out, even understanding the relevance that this recognition of controversies could have for the methodological debate of a course based on the practice of producing games. It is not an omission, but rather a clear option to establish the object of the analysis in the whole of the produced games and not in the particularity of each. In this sense, it was decided to keep the totality of the works presented, although there is considerable variation regarding quality, no work was left out. It is not a matter of choosing the best examples; the twelve games presented here constitute the totality of the production over the three course terms. These are the games:

Occupy: This is a board game produced to assist dwellers of an urban occupation in the early stages of the process of producing their space. The aim of the game is to promote a reflection on other possibilities for spatial organization, as an alternative to the reproduction of spatial models of the formal city.

The cards of the game simulate everyday situations experienced in an urban occupation and the tiles allow players to experiment many different spatial configurations over the board.

What would you like to do in the school of your dreams? The game was produced in the context of the construction of a new building for the School of Architecture and Design (EAD) of the Federal University of Minas Gerais (UFMG). The change of EAD building, currently located in a central district to the university campus in the outskirts of the city, had previously been decided through a public consultation to the academic community. The proposal consists of an interface that aims to raise the demands and desires of students and staff in order to inform the design of the new building.

Treasure Hunt: The game seeks to reconfigure, even temporarily, the relationship of the residents of the Calafate neighborhood, located in the city of Belo Horizonte, with their daily space. Treasure Hunt is a session published in a local newspaper produced by the students under the name of ‘Speak Calafate’. The idea is that in each issue a spatial puzzle would be published to be unraveled by the locals. The first to unravel the riddle is awarded with a voucher for purchases or services in the neighborhood commerce.

Mobiligame: It is a board game that aims to promote the awareness of the players about the implications that the modes of displacement have on the quality of life of people living in a city. The game seeks to highlight the responsibility of each citizen as part of the collective that shapes urban mobility scenario in the city. The game simulates some everyday situations for which players should move around the city-board taking into account the effects of their individual choices as well as those of other players, over the city.

Manzo Ngunzu Kaiango: also known as Manzo Game, it was designed as a translation tool between the quilombola community and the team of architects involved in the project to recover its candomblé yard. The game seeks to relate the spatial and symbolic configuration of the candomblé yard to the sacred meaning of each of their deities (Orixás).

Occupy the Allotment: The game proposes a reflection on the logic of private property through an evaluation of the effects of individual actions in the city space. The game problematizes issues such as

population density, road overload and real estate speculation as a counterpoint to actions that favor the collective use of the city as the construction of public facilities, the provision of private services of daily use and actions of urban gentleness.

#Movimenta: It is a card game that intends to introduce players to the guidelines of the main social movements in the city of Belo Horizonte. The game seeks to identify issues of the city's daily life, which are raised by the players, with the possibilities of action by each of the social movements.

Geopolitics: The Game problematizes spatial segregation in spaces of public use, whether privately owned or not. The debate promoted by the situations posed by the cards questions the spatial features that restrict or discourage the use of certain spaces by certain groups, whether these are physical elements or not. The objective is to denaturalize the barriers that are configured in the socio-spatial plane.

River: The game seeks to make players aware of how the production of the city's space affects the quality of water resources. Through a dynamic of individual actions with collective consequences, the game seeks to illustrate the responsibilities and implications of the initiatives of various agents (citizen, real estate entrepreneur and public power) over urban rivers as a resource not only for supply, but also for the conformation of urban landscape.

Glaura's Game: The game aims to trigger a reflection amongst residents of the village of Glaura about the implications of the transformation that have been taking place in the city due to the implementation of a weekend houses condominium on the outskirts of the village. The aim is to denaturalize the service bond relationships between the village residents and the new landowners that also have implications in a process of gentrification of the city center and, thus, to problematize the (in) sustainability of the growth model guided by real estate interests.

Opportunity: This game proposes a re-signification for the notion of 'opportunity' expressed in the real estate ads found throughout the city. Therefore, it takes the territory of the city as the game board. The city as a gaming opportunity contrasts with the idea of the city as a real estate market.

Tower of Memory: The game aims to rescue the memories and experiences of the residents of the village of Glaura and, from these, encourage the idealization of possibilities for the future regarding the relationship between the community and the places of the village. The structure of the game allows the memories and imaginaries to articulate spontaneously in the construction of narratives about the place. The game aims to act as a storytelling activator, as well as reinforcing the affective bonds between the community and their space.

3 GAMES AND INTELLECTUAL EMANCIPATION: EDUCATION BEYOND THE SCHOOL

In addition to the previous reflection, which points to the displacement in the proposal of an studio practice based in the production of games instead of producing projects, we intend to add another reflection, which goes beyond the limits of the school and the practice of students as game producers. The games designed by students act as tools for dialogue with society and, as such, Work towards structuring a debate that results in the collective construction of spatial knowledge. This expanded scale of education goes beyond the limits of the school in that it transfers to the city and the collective the object of learning.

The proposal of a spatial education available to society through games is aligned with the thought of Illich, whose criticism of school education intends to show that learning process does not depend of any kind of teaching or institutions that constrain and delimit the knowledge. Illich is in favor of processes of self-learning, supported in intentional social relations, but in a fluid and informal intentionality. In his project of "deschooling society" the author introduces the concept of learning networks that consist of "educational networks that increase the opportunity of each one to transform each moment of his life into another one of learning, sharing and of interest" (Illich, 1985, p.14).

It is in this sense that we intend to discuss spatial education beyond the exclusive interest in the professional training of the architect and planner. The games produced in the course were made to be played out of the school environment. Its goal is to articulate the participation of society in a collective

debate about the space produced in the community context or in the daily life of the city. The games intend to act as the educational networks proposed by Illich, having as a horizon the intellectual emancipation of the players with regard to the production of their collective space.

It is important to clarify that it is not about taking the game as a tool for the transmission of technical knowledge. It is necessary to differentiate the process of formation and subjectivation that occurs through the collective experience in the act of playing, from what Freire called "banking education" (1988). In Rancière's terms, it is necessary to differentiate " the emancipation of the men" from "instruction of the people" (Rancière, 2002). Rancière proposes a reflection on intellectual emancipation based on the experience of Joseph Jacotot, the educator, who in the nineteenth century developed a method for universal education in which he assumes the equality of the intelligences between master and disciple as a starting point for an emancipatory education (Rancière, 2002). Such a method is opposed to the conventional model of education, which aims to reduce the inequality between the knowledge of the one who teaches and that of those who learn. In this regard Rancière's thought coincides with that of Freire insofar as both understand that in the emancipatory process the man must be the subject of his own education. While Freire states that "to educate is not to transfer knowledge" (1996), Rancière contrasts Jacotot's emancipatory method with the "explanatory method" (2002) adopted in the conventional education system. Thus, a process similar to what Freire refers to as "banking education" (1988) is understood as "roughness" by Rancière (2002).

In an emancipatory game the end is not to transfer knowledge, but rather to establish a common vocabulary, which take account of the dissensus and the plurality of experiences brought by each player. Thus, the principle of equality is present in two ways: The first recognizes that any person, irrespective of his or her professional background or level of education, has a spatial experience to be considered, and the second is that which equals all participants as players. In this regard the learning process provided by the game contemplates people with the most diverse backgrounds, taking as a starting point what all of then has in common: everyone knows live and experience spaces and the city in their everyday needs. It is not intended, however, to claim that the spatial knowledge of architects and planners is equivalent to that of lay citizens, it is not a question of comparing these two spheres, but of constructing a common vocabulary, so that each one can develop and learn through the contact of the other's experience.

From the education point of view, we can understand that the goal of the games produced by the students is aligned to Illich's proposal on the intentional creation of social networks. The games are expected to act as a platform for self-education, in terms of spatial knowledge, y means of the contact with the collectivity. In this respect, the game is only the activator of a transformative process. One should not seek immediate transformation through play. The game is emancipatory not because it has the potential to transform the real, but precisely because, as a game, it can displace hierarchies, hegemonies and modes of oppression, opening cracks in the commonplace, in the naturalized certainties, and thereby giving rise to uncertainty, and to dissensus. In this sense playing is also a political action.

3.1 QUALIFYING THE COLLECTIVE LEARNING

It is therefore in the light of the notions of an emancipatory education, that we intend to resume the analysis of the games produced by the students in the course 'The Game and the city'. In order to do so, the previously presented games were organized in four groups, in order to facilitate the analysis that will be followed regarding the spatial learning activated by the action of playing. As a criterion for grouping, it was sought to identify in the general objective of each game a field of interests whereby some of then converge towards a common end. These groups of interest were thus named as follow: Tools for dialogue; Essays for autonomy in everyday practice; Games of estrangement and denaturalization, and; Building ties between players and the city.

These categories allow to approach in a same group games referring to different contexts and scales: some circumscribed to a specific location and others that takes the city as a whole; Some focusing on certain themes and others that relate the diversity of the aspects that characterize the daily space. The naming of the groups allows to bring to light issues implicit in the games that can only be perceived behind the surface of their themes or scales. The attempt to group the games by converging interests, does not intend to constrain them into rigid categories. The characteristics that give names to the groups are often present in games of another group. The names chosen for thematizing the groups are referred to spatial

agency features that are dominant in each game, but do not exclude other possibilities of reading or classification.

Tools for dialogue	Manzo Ngunzu Kaiango
	What would you like to do in the school of your dreams?
Essays for autonomy in everyday practice	Mobiligame
	River
	Occupy the Allotment
	Occupy
Games of estrangement and denaturalization	Geopolitics
	Glaura's Game
	# Movimenta
Building ties between players and the city	Opportunity
	Treasure Hunt
	Tower of Memory

Table { SEQ Table * ARABIC } - The games grouped by converging interests

The games of the first group, classified as 'tools for dialogue', have as common goal to provide communication channels to guide the exchange of information for the collective construction of knowledge. For Freire, the opposite of transferring knowledge would be a process that instigates the interlocutor so that "as cognoscent subject, he becomes capable of understanding and communicating the intelligible" (Freire, 1996, p.45). In this sense, the role of the games of this group is to activate the dialogue that can be qualified to the extent that it enables the contact to the diversity of experience of the players. In the Manzo game, dialogue is an effort whereby a translation of the symbolic imaginary of candomblé enables it to be discussed in spatial terms; whilst the interface to collect the wishes for the new building to the School of Architecture plays toward instigating a public debate. In this case, the inputs brought by the user community are developing as they are collectively discussed. In both cases the dialogical effort has more to do with the construction of a common vocabulary than with consensus building.

In this group, both games recognize listening as a knowledge-forming process. For Freire to listen means "the permanent disposition from the subject who listens to be open to the speech of the other, to the gesture of the other, to the differences of the other. This does not mean, of course, that listening demands from those who actually listen to be reduced to the speech of the other. This would not be listening, but rather self-annulment" (Freire, 1996, p.45). The idea of listening as a "permanent disposition" in Freire coincides with the idea of play from an anthropological and socio-cultural perspective in which "the act of playing can be understood as a disposition rather than an activity or behavior" (Glenn et al, 2013). Besides meaning an inclination or willingness, the term disposition adds the negative prefix 'dis' to the word 'position', also indicating the absence of a prior position. Listening as a disposition becomes a precondition to a taking stand process and therefore to the constitution of subjectivities. For Rancière, political subjectivities are constituted by means of dissensus, understood as a rupture with the status quo. For Freire, it is through listening that it becomes possible to disagree. "True listening does not diminish in me, in anything, the ability to exercise the right to disagree, to oppose, to position myself. On the contrary, it is listening well that I prepare myself to better take a stand or to better situate myself from the ideas' point of view"(Freire, 1996, p.45). In the games featured as 'tools for dialogue', listening does not represent the reduction of the listener to the other's point of view, but rather a structure whereby players can formulate their own thinking.

Another concept dear to Freire is the idea of autonomy present in the second group, named as 'Essays for autonomy in everyday practice'. The four games of this group have in common the role of providing a structure in which the player is asked to make decisions at the same time they are confronted by the consequences of his choices. For Freire autonomy is not something given a priori. "No one is autonomous first to decide later. The autonomy will be constituted in the experience of several, many decisions that are being taken "(1996, p. 41). The games of this group are based on the simulation of a certain urban context where the players are invited to act individually without losing the perspective of the whole. There the players have the opportunity to evaluate their everyday practice in the extended field of collective space. Three games have the city as a field of action whereby the balance between individual actions, and the collective interest for the quality of space, can be understood as a kind of urban ecology. The Mobiligame places the player as co-responsible for the quality of urban mobility; the River game intends to make

explicit the relation between the way of occupying the city and the available water resources; and the Occupy the Allotment highlights the dispute between individual and collective interests in view of the private property's logic. The Occupy game, on the other hand, allows the residents of an urban occupation in an initial stage of construction to evaluate the different possibilities of spatial configuration. The formative proposal that crosses the four games of this group works in the direction to find a balance between the individual autonomy and the collective space.

The games of the third group, 'Games of estrangement and denaturalization' are joined by the common goal of destabilizing the consensus around the hegemonic ways of producing and using the collective space of the city. Based on a dynamic of argumentation and sharing of experiences, these games seek to provoke the estrangement of situations of inequality and spatial segregation that are naturalized in the city space. Geopolitics questions the social barriers that manifest through space, the Glaura's Game proposes a prospective exercise by demanding players to imagine the kind of social relation that can be established in face of the real estate development that are being implanted in the neighborhood. And #Movimenta tries to relate conflictive situations in the city with the agenda of the social movements. These games seek to decolonize the spatial imaginary by means of denaturalizing social and spatial embedded practices that are consensually accepted as the only possibilities. The games of this group are based on dissensus as a process of de-identification with the status quo and also as a possibility for the formulation of other spatial imaginaries, able to considerate the range of stakeholders and plural identities that inhabit the cities.

The fourth and last group, named under the goal of 'Building ties between players and the city', brings together games that seek to activate other relations with the space. They seek to trigger the affective dimension of space as a form of resistance to the logic of the city as a product. Opportunity and Treasure Hunt - in a situationist way - take the real city as the board where an action, that involves the displacement of the body and the senses, take place. Both explore the playful nature of space in its materiality. The Tower of Memory aims to rescue the affective bonds with the space by means of the construction of a collective memory of the city. In these games, participating means an intense experience of life in the city, enabled by the joyness of meeting the other.

4 CONCLUSIONS

Although grounded through an experience in the education of architects and planners, the above discussion is also an attempt to rescue the transformative dimension of participation. However, it is necessary to relativize the ability of games to change reality. It is not possible to state a direct relation between the participation by the game and the transformation of the socio-spatial reality. There is some possibilities for empowerment by the games, but one can not demand more than the games can offer: the transformation of socio-spatial reality is constantly crossed by multiple asymmetries, inequalities and even the difficulty of cultivating participatory and collaborative skills.

What the games are expected for is the role of a trigger to a formative process that seeks to collectively qualify the spatial knowledge of citizens. When referring to the education by means of games as an emancipatory practice, what is at stake is not any specific content. It is not intend to be an alternative method for qualitative research or a strategy of approximation to the vernacular knowledge. It does not mean that these can not happen by the game. But the great contribution, which we intend to emphasize in this study, is related to the process of learning how to learn together.

With regard to the education of the architect and planner, the substitution of the practice of producing projects by the practice of producing games proposed by the course 'The game and the city', enabled the displacement of the normative and technical education to the field of a spatial practice. This displacement of education beyond the boundaries of the school is advocated by Illich, who blames formal education for the main misconception of our time: that one that transforms basic needs into demands for scientifically produced goods.

The student is thus 'schooled' to confuse teaching with learning, obtaining degrees with education, diploma with competence, fluency in speaking with the ability to say something new. Their imagination is 'schooled' in accepting service rather than value. It wrongly identifies health care with medical treatment, improvement of community life with social assistance, security with police protection, national security with military apparatus, productive work with unfair competition. (Illich 1985, p.18)

As far as the practice of architecture and urbanism is concerned, this misconception is represented by the commodification of space. Producing games as processes instead of producing space-object, reestablish the Lefebvrian sense of production to the oeuvres rather than products. In this sense, the practice of producing games points to an opening towards the reinvention of spatial practice and the overcoming of the heteronomous order imposed by the surplus value of space.

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ID 1679 | POST-GRADUATE STUDIES IN PLANNING IN LATIN AMERICA: RATIONALITY VS. DELIBERATION

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ABSTRACT: This paper describes the current academic scenario of post-graduate studies in planning in Latin American Universities by focusing on the curricula of masters and doctoral programs as well as theses produced in the last 3 years in Argentina, Brazil, Colombia, Chile, Mexico and Venezuela. The study attempts to determine the character of the programs and their orientation towards rational or deliberative models. It also develops a historical analysis of planning education in the region, and its different stages in time, and whether or not spaces of dialogue are being built. In order to determine the emphasis of the programs a survey was conducted to coordinators in planning schools in the region. Survey includes objectives and academic structures of the existing degrees as well as theses titles regarding their rational or deliberative emphasis. It also inquires about historical facts such as the first time a post-graduate program was offered in every country studied. In addition, it also explores the certification

process and standards defined by national governments for post-graduate studies in planning. Urban and regional planning was introduced to Latin America as an area of specialization for architects and engineers. Urbanismo, Planeación Urbana y Regional or Estudios Urbanos are the Spanish terms to refer to any course or degree related to the city, including urban and regional planning, and urban studies. Therefore, the survey targeted only the programs with this titles, regardless their adscription to geography, architecture, engineering or economics schools. Since the first half of the 20th century some courses on Urbanismo were inserted in undergraduate programs' curricula in Latin America; yet they were merely introductory and limited to an architectural approach. Some decades later in the 1960s, post-graduate programs in planning, as part of a rising discipline, were offered in architecture and engineering schools with a rational/ substantive model embedded, but there are reasons to believe this approach is slowly leaning towards deliberation. This study concludes with general remarks on academic structures and orientation that could help matching regional programs with planning schools around the world, including the Europeans, since faculty and students mobility between Europe and Latin America is becoming common ground.

1 A BACKGROUND OF PLANNING STUDIES IN LATIN AMERICA

Planning was introduced to Latin America as an area of specialization for architects. This was evident since the first half of the 20th Century when courses on Urbanismo were offered in several universities in architecture programs. Urbanismo courses or seminars were merely introductory and limited to an urban design approach. As a rising field not only in the region but also world wide the first graduate programs in planning were offered in Architecture Schools as early as the 1960s. Later, in the 1980s regional planning annd local development became an important area of knowledge taught also at Economics Schools including an emphasis on political and economic issues. In 1949 the first graduate program was offered at the Universidad de Buenos Aires. This masters degree in Urbanism (Curso de Urbanismo) was hosted by the Facultad de Arquitectura y Urbanismo. The program focused predominantly on physical planning and urban design. Several years later some other masters degrees appeared in Latin American countries such as: Chile (1965), Colombia (1967), Mexico (1967), Venezuela (1969), and Brazil (1971). All of the post-graduate programs have similar origins, as they were proposed by Research Institutes, created during a wave of racionalist thinking in the region.

	Country	City	Institution	Post-Graduate Program	First Year Offered
1	Argentina	Buenos Aires	*Universidad de Buenos Aires*	*Curso de Urbanismo*	1949
2	Brazil	Rio de Janeiro / Sao Paulo	*Universidade do Estado do Rio de Janeiro/ Universidade de São Paulo*	*Maestria en Planificación Urbana y Regional / Maestría en Arquitectura y Urbanismo*	1971
3	Colombia	Medellin	*Universidad Nacional de Colombia*	*Maestria en Planeacion Fisica*	1967
4	Chile	Santiago	*Pontificia Universidad Catolica de Chile*	*Maestria en Desarrollo Urbano*	1965
5	Mexico	Mexico City	*Universidad Nacional Autónoma de México*	*Maestria en Arquitectura y Urbanismo*	1967
6	Venezuela	Caracas	*Universidad Central de Venezuela*	*Maestria en Urbanismo*	1969

Table 1 – Post-graduate programs by country in Latin America.

After some experiences in graduate studies, another landmark in planning education in the area was the appearance of undergraduate programs such as the Bachelor of Urbanism in the Universidad Simon Bolivar in Venezuela (1974). This program was offered by the Departamento de Diseño y Estudios Urbanos (Department of Design and Urban Studies). Almost simultaneously (1975), a new program called Bachelor of Design of Human Settlements was offered in the Universidad Autónoma Metropolitana – Xochimilco. The program was offered by the Division de Ciencias y Artes para el Diseño (Division of science and arts for design). Both programs originated at design schools/ colleges; consequently the main focus was physical, particularly on urban design.

Finally, doctoral programs appeared in the 1980s. These programs aim at developing planning theory for Latin America by focusing on local contextualization and specific features found only in the area. However,

these programs started with a faculty usually trained in foreign institutions, mostly European and American, therefore are recipients of their influences.

Currently, there is an important critical mass of planning programs in Latinamerica. In particular, six countries are well known for having a tradition in planning studies: Argentina, Brazil, Chile, Colombia, Mexico and Venezuela, therefore, this study reviews the programs located in these countries.

The research design includes an internet search attaining only the programs with some sort of accreditation or recognition by a national association or institution. The accrediting institutions consulted were: the National Council for Evaluation and Accreditation of Universities (Argentina), the National Commission of Accretitation Chile, the National Commission of Accreditation Colombia, the National Council of Science and Technology (Mexico), the National Advisory Council of Post-graduate studies (Venezuela), and the National Association of Post-graduate Programs and Research, which is not an accreditiation board, but it affiliates the planning programs in Brazil. Once detected in the accrediting institutions' web page, the programs were filtered using the following key words: planning, urban development, local development, regional development, city, territory, territorial, urban studies, habitat, socio-territorial and human settlements (Urbanismo, Planeación, Planificación, Desarrollo Urbano, Desarrollo local, Desarrollo regional, Ciudad, Territorio, Territorial, Estudios urbanos, Hábitat, Socioterritorial, y Asentamientos humanos). As a result, a total of 246 post-graduate programs were found (see Table 2).

	Country	Doctoral Programs	Master Programs	Academic Specialisation	Accreditation board/ National Association
1	Argentina	9	25	17	CONEAU– National Council for Evaluation and Accreditation of Universities
2	Brazil	70	44	4	ANPUR- National Association of Post-graduate Programs and Research
3	Chile	3	6	0	CNA- National Commission of Accreditation Chile
4	Colombia	0	4	0	CNA- National Council of Accreditation Colombia
5	Mexico	13	33	1	CONACYT- National Council of Science and Technology.
6	Venezuela	2	12	3	CCNPG – National Advisory Council of Post-graduate studies.
	TOTALS	**97**	**124**	**25**	

Table 2 – Post-graduate programs by country in Latin America.

Post-graduate studies include: Academic Specialization, a 1-1.5 yr.program with a final work to show proficiency in specific professional skills; Master, a 2 yr.program with a thesis including a theoretical framework, methodology, and development of a case study. The admission of students in such programs is subject to the presentation of a 4-5 year bachelor degree. Finally, the highest level of post-graduate programs is the Doctorate, a minimum of 3 yr. program with a dissertation defense, an original work which contributes to enhance the discipline in a significant way.

Later, a survey targeting the schools affiliated to the Association of Latinamerican Schools of Planning (Asociación Lationamericana de Escuelas de Urbanismo y Planificación – ALEUP) was conducted. This association is part of the Global Planning Education Associations Network – GPEAN, and planning schools from Mexico, Venezuela, Argentina and Chile comprise the membership. ALEUP organized the second World Planning Schools Congress, hosted by the National University of Mexico in Mexico City in 2006.

Survey helped to cross compare the web pages and the perception of programs' officials in order to avoid any possible bias in the study, particularly in the definition of programs' profiles.

The title names of the programs highlight their character, therefore, as an preliminary excercise they were fed into a word cloud creator software to define patterns in the degrees offered. Although there is a great diversity, the predominant word in them is Development, followed by Planning (Urbanismo). It is also worth to notice that Architecture is still an important component in the programs, surely due to the fact that around a 60% of the programs is hosted in a College of Architecture.

Figure 1 – Word Cloud with text from name titles of Post-graduate planning programs in Latin America.

2 CURRICULAR ANALYSIS

In the analysis only the oldest and well-known programs from each country were considered. The plans of study of the seven oldest programs in Latin America (see Table 1) were assessed in order to identify trends in the curricular design. Assessment consisted of a review of goals and courses of each program in an attempt to find commonalities and differences among them. The results indicated that goals of the programs were predominantly oriented to train planning professionals with an interdisciplinary approach. Despite the fact mainstream planning is still focused on technical abilities, the analysis found that there is a concern on planning processes, including actors and the arenas that lead decision making in local and regional contexts.

Sustainability is also a major concern. Inter and intra generational issues are considered as a central focus of the programs. On the one hand there are programs which include sustainability in courses syllabi as a cross-cutting theme. On the other, most of them offer specific courses on sustainable urban and regional development.

Since planning in Latin America has been traditionally made by architects, it is still oriented to tackle physical issues, not only at planners' level, but also at urban designers detailed level. However multidisciplinary approaches have been also incorporated. Economics, Management, Political and Social Sciences are common courses taught in the programs with a planners' view.

Another transversal issue addressed by the post-graduate programs is housing development, a subject that is usually analysed from different angles: financial, production, environmental sustainability, among others.

This type of problematiques imply a broad participation from faculty with expertise in multiple areas, and usually from different colleges within the University of beyond it.

Yet all of the programs require proficiency in a second language (English, French, German, Italian, Chinese, Japanese), most of them do not offer a single course entirely in a language other than Spanish or Portuguese.

2.1 THESES PRODUCED

The amount of thesis produced in each program is very variable, it ranges from five to fifteen per year. For instance, at the Master program in Architecture and Urbanism in the Universidade de São Paulo (Brazil), more than five-hundred thesis have been produced in forty-two years, or the Master in Urban Development in the Pontificia Universidad Catolica de Chile where forty-five thesis have been defended from 2013 to 2016. Master theses usually address a case study using a specific theoretical framework to develop an analysis and conclusion. Doctoral programs are usually smaller, with a production ranging from three to ten dissertations defended per year. For instance, the Doctorate in City, Territory and the Environment in the Universidad de Guadalajara (Mexico) a total of 86 dissertations were presented and successfully

defended from 2005 to 2016; and 15 candidates graduated in the Doctorate in Architecture and Urban Studies in the Pontificia Universidad Catolica de Chile from 2014 to 2016.

Conservatively, the 124 Master programs could produce around 620 theses a year, and the 25 doctoral programs, around 125 dissertations. Although most of them are forwarded by an abstract in English, theses are written in Spanish or

Portuguese, because of this, they do not reach an important number of investigators worldwide. In round figures, this is the contribution of the Latin American Region to the Planning field. It is important to notice that most of the Doctorates initiated after the year 2000, so this large volume of scientific production is relatively a new phenomenon in the region.

2.2 ACCREDITATION PROCESSES

Ministries of education have provided for accreditation commissions such as: 1) Argentina's National Commission for Evaluation and Accreditation (Comision Nacional de Evaluacion y Acreditacion Universitaria- CONEAU); 2) Brazil's Coordination for Higher Level Personal Improvement (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior-CAPES); 3) Colombia's National Council of Accreditation (Consejo Nacional de Acreditacion- CNA Colombia); 4) Chile's National Commission of Accreditation (Comisión Nacional de Acreditacion- CNA Chile); 5) Mexico's National Council for Science and Technology (Consejo Nacional de Ciencia y Tecnologia- CONACYT); 6) Venezuela's National Advisory Council for Post-graduate studies (Consejo Consultivo Nacional de Postgrado- CCNPG). In the six cases, the national ministry for education, science and technology is involved, therefore national funding is required.

There are two kinds of programs for Accreditation Commissions: New and ongoing Programs. Most National Accreditation Bodies include in their assessment criteria: 1) Institutional Commitment/ Support; 2) Faculty Capacities; 3) Student Body Capacities; 4) Quality of Infrastructure and Facilities; 5) Amount of Institutional Finance and Community Relationships; and 6) Provision of a Structured Improvement Plan. In order to successfully apply for accreditation, program's coordinators are required to elaborate an initial self- assessment study including the criteria enlisted above.

Accreditation Institutions use qualitative measurements: Argentina (CONEAU, 2013) considers a scale from Excellent (A), Very good (B) or Good (C) for the programs assessed. In Mexico, CONACYT defines 4 different levels for the Padron Nacional de Posgrados de Calidad (National Register of Quality Post-graduate studies): Recently Released, Developing Program, Consolidated, and International Competencies (CONACYT, 2017).

Accreditation Bodies form subcommittees for different disciplinary areas, planning is certainly an interchangeable area as it can be included in the Humanities and Behavioural Sciences, Social Sciences, but also in Engineering; usually is allocated in the first one. These groups are comprised by academic pairs which assess the program using a set of criteria and through a process of deliberation inform publicly the results of the evaluation and agree on a final rating, which defines a benchmark in the process. The observations raised by the accreditation team are supposed to be remediated by the program's officials. By doing so, program can keep its grade or jump to the next level.

Master degrees can be professional and academic/ research oriented. Professional programs attempt to update and specialize working planners, and Academic programs train future professors and build new knowledge on applied science. Doctorates are research oriented.

3 RATIONALITY VS. DELIBERATION

In the 1960s when all of the Research Centres of Urbanismo in the Latin American countries reviewed in this study were already in place, mainstream planning was rational, and the city was approached as a "machine" which could only be addressed or fix by expert scientists. Most of the capital cities in Latin America had an operational Master Plan at the time, and planners were required to design cities of the future, therefore planning post-graduate studies considered the city as a human construct which required

efficiency and beautification, regardless the means to attain those goals. Consequently, a pragmatic, rational/ ivory tower approach was common practice, and planning schools trained professionals to do the job. Although initiated in a rationality tradition, planning in Latin America has been steadily changing towards a procedural/ deliberative approach.

As stated before, planning programs have flourished in Architecture Colleges, and have strong Design contents. This is probably the reason why some Latin American Planners approach planning as a technical comprehensive discipline with specific goals disregarding processes. However, this conception has been changing as Democratic governments are emerging in the area, allowing the appearance of a new planning arena with new actors, therefore new processes to generate new outcomes. These political processes in Latin American countries such as democratization and decentralization have promoted new approaches to planning based on public policy.

In addition to preceding arguments, after reviewing the course title lists and programs' goals of the seven oldest Latin American Master degrees through time, it is possible to conclude that planners are in a transition from rational to deliberative training (see figure 2). All of the programs refer to the participation of multiple actors, acknowledging social diversity, in the decision making processes.

In terms of curricular contents guidelines; on the one hand urban and territorial complexity –planning schools officials argue, force an interdisciplinary approach, including the disciplinary fields of Economics, Sociology, and Political Sciences, complemented with faculty trained in Architecture and Planning, Sociology, Economy, Engineering, Geography, History, Law, and Public Administration. On the other hand planning schools address sustainability in order to integrate complexity issues in a cross cutting approach.

Deliberative decision making related courses are becoming common in planning post-graduate programs in Latin America: Space and Society, Planning and Participatory Management, Sociology for Planners, Urban Management, Planning and Governance, Communitarian Sustainability, Segregation in Latin American Cities, Cities and Social Integration, Urban Justice, Violence and Cities in Latin America, Instruments for Management and Evaluation, Planning tools for Social Rights and Conflicts, Urban Management and Public Policy, and Citizen Participation are the courses which mark the time of a turn from rationality to deliberation in Planning.

The list of courses includes production of the city as a process which implies management from a systems theory perspective. Other systematic processes considered are ecology, public space, and housing, which according to the plans of study are supposed to be managed or organized by the planners jointly with their communities.

Systemic/ procedural approaches are more likely to favour spaces for dialogues in planning, therefore this turn in the history of post-graduate programs is convenient for the actors involved in the production of cities, and additionally urban spaces production, but is also promising of better and

Figure 2– Word Clouds with text from goals and lists of courses of Post-graduate planning programs in Latin America.

4 CONCLUDING REMARKS

Traditionally, master planning has predominantly been taught in Latin American Universities. As stated before, planning programs have flourished in Architecture Colleges and still have strong Design contents. Consequently, professional practice in Latin America is still based on mainstream planning from 20th Century. Asian, and African experiences are rarely shared by faculty in the schools, a situation that precludes the three regions from benefiting of each other's contributions.

Post-graduate programs were started by individuals who studied abroad, mostly in Europe and the United States. As a result, programs were designed as one world, having context specific in mind, but not covering it thoroughly. Only recently, as doctoral programs appeared, theories on context specifics have started to be published and accepted as foundations for developing new research in the area. This recent theorization has also promoted an offer of Latin American Planning courses in post-graduate programs in Brazil, Chile and Mexico.

In terms of regional or worldwide approaches, there are issues to be considered: 1) Regional specific contexts should be an important part of planners' training; 2) International best practices develop significant knowledge in students; and 3) A combination of regional sensibility and understanding with a global approach could replicate best practices in an ethically responsible way.

A generalist approach provides planners with interdisciplinary skills, allowing practitioner students and researcher stounderstand complex problematiques, which are common grounds for planners. However, the generalist approach which undergraduate programs introduced in the Latin American region as a deductive process from general to particular issues is changing the traditional particular-general approach which planners with an architecture background had. In consequence, emergency of undergrad programs should force the post-graduate programs to reconsider contents, since lower levels of education are already addressing the issues which traditionally were the core of them, leaving room for more in depth studies and specific contents at the masters and doctorate levels.

Views and experiences in different regions of the world could help developing and replicating successful stories all over the world, this is why Planning Schools should cross compare curricular structures in a systematic basis, and the Academic Congresses are an excellent scenario for realising the task.

Finally, the turn from rationality to deliberation is a sign of our present reality, and if well conducted and nurtured by Faculty in Latin American Universities as a cross-cutting approach is very likely to promote spaces of dialogue in the region.

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ID 1710 | ON THE PATH TOWARDS SMART PARTICIPATION: A CASE STUDY OF TAIWAN

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ABSTRACT: Information and communication technologies (ICTs) have become wildly infused in policy making process in recent years, and it has shown its potential of bringing public participation into another level. There are numerous sorts of participatory platform that uses ICTs as a tool to enhance the quality as well as quantity of citizen participation. However, studies on the transaction mechanism from traditional participation towards e-participation is in scant. This article conducted path dependent analysis by using archived data and literature, retrospecting the evolution of e-participation in the decades in Taiwan. Result of this study shows that the development of ICTs has led citizens participation to another level in Taiwan, and the focus of public participation though ICTs has shift from quantity to quality. The path of the ICTs development are more driven by contingent events such as social movements and political incidents in Taiwan.

1 INTRODUCTION

In recent years, information and communication technologies (ICTs) have become wildly infused in the public policy-making process, especially in urban planning domains, where public participation is considered vital and the interest parties are miscellaneous. ICTs has not only created a new bridge between public and private, but also between different groups of people. Moreover, citizens who use Information Technology Equipment (ITE) to express their views on current affairs and urban policies have increased significantly, further changing their roles in political participation. In terms of an international level, the world's major countries also consider ICTs in e-participation as key indicators for the innovation application service of the government (EU, 2014). However, the speculation on whether ICTs are making the policy-making process more inclusive and democratic is still in doubt, and the systematic comparison

between different countries and societies is in scant. Therefore, it is significant to investigate the path towards smart city and the citizen participation by using ICTs in general.

The previous studies on e-participation in Taiwan mainly focus on the evaluation of certain platforms. Chen (2006), takes a specific insight into the Taipei city Mayor's E-mail box, analyzing its outcomes, limitations and how it influences the public management. Chen (2016) makes a comparison between vTaiwan and Join platform, providing governmental agencies with several suggestions. Yu (2009) researches on the bureaucrats' attitudes, organizational barriers, and other possible factors for successful implementation E-rulemaking in Taiwan. However, there is no research how it transformed from the past to present. In particular, this research tried to take a holistic view on the trajectories of change in e-participation and take a specific look at the conjunctions.

The main questions of the article are: "How are ICTs involved in citizen participation?", and "What are the crucial factors contributing to the changes in trajectories?" The structure of this paper is as follows. A theoretical background is provided to set a scene at the second chapter. Afterwards, path dependent analysis is conducted in the case of Taiwan, as it appears to capture the process of e-participation evolution in the past two decades. The analysis fully utilizes the archived data and literature, and online information. The findings are discussed in the final.

2 CONCEPTUAL FRAMWORK

2.1 DEMOCRATIC TRANSITION IN TAIWAN

Taiwanese society is considered one of the most liberal society in Asia (Wu, 2006). However, the country's historical and geopolitical factors make the democracy in the island faced tremendous challenges. In 1949, Chinese Nationalist party flee to Taiwan, the post-Japanese-colonial, due to the Chinese civil war with Chinese Communist party. After the mainland china was completely claimed by the Communist, the Nationalist took Taiwan as their frontier against Mao and communism. During 1949 to 1986, Martial law had been implemented in the whole island, which means human rights and freedom of speech were heavily suppressed by the government. Although by the time it was not allow to had freedom of speech and freedom of gathering, there were still a lot of activists fight for the democracy of the island(Wu, 2006). In 1987, the President Jian Jin Guo lifted the martial law and began to implement democratic constitutionalism, since then, Taiwan has gradually transformed into a democratic nation. Taiwanese democracy showcases specific features due to its Confucian value and history, and is considered representative among the democratic transformation in Asian countries (Zhu, 2001).

Taiwan's democratic transformation experience in the world's third wave of democratization is very prominent in the theory and practice (Zhu, 2001). According to Zhu (2001), Taiwan's polity transformation has four distinct characteristics: first, top-down. The transition of the polity is dominated by the ruling elite, not the opposition movement. Second, election-driven. The electoral process is main path towards political revolution, not social movement. Thirdly, gentle progressiveness. The political system experienced a gradual, multi-stage adjustment, rather than a comprehensive transformation in a short time. Fourth, low social cost . There is no serious political upheaval in the process of constitutional transformation, and the impact on the existing social order and economic development is relatively small (Zhu, 2001). These characteristics make the democratic transformation in Taiwan is sometimes described as the Glorious Revolution in East Asia since there was no severe military conflict between the ruling class and people. However, some scholars question that the gentle transformation also make the transitional justice harder to process, causing social division and class sodification (Wu, 2006), Some also say that Taiwanese democracy is still immature, and the civic society is fragile because people are political alienating and doesn't trust the government (Zhu, 2001).

2.2 PUBLIC PARTICIPATION

Citizen involvement in policy-making process have been an international trend in recent decades. "Participation mechanism allows citizens total part in the design, implementation, monitoring and evaluation of public policy"(Granier & Kudo, 2016). Since the landmark study by Arnstein(1969), many

scholars have been studying participatory mechanisms as well as implementation in different scales and societies. Most studies shows citizen involvement may generate numerous positive outcomes, such as deepening democracy, improving the quality of public service, social justice and social inclusion(Bovaird, 2007).

Urban planning theories have been developed in the past decades, especially that its concept has been changed from a highly technocratic practice to a respond to needs of citizens (Healey, 1996). Meanwhile, it is critical to identify every problem from particular local viewpoints, through which sufficient details and facts about the problem fields are able to be gathered (Watson, 2003). These facts indicate that public involvement and citizen participation are increasingly important in the urban planning field.

Citizen participation is the coherent concept of participatory democracy (Barber, 1984). Almond (1987) defined citizen participation as an action of participation in the formulation, adoption or implementation of urban policy. This definition broadens the categories of "citizen", whose main participant can be politicians, government officials or ordinary citizens. All citizens own equal opportunities participating in the entire processes in the democratic political system and policy contents are the response to the consensus (Lin & Wang, 1999). Citizens intend to further influence policy-making through participation (Huntington, Nelson, 1989). Meanwhile, citizen participation attempts to put democracy into practice and pursuit public interest.

In order to realize more efficient citizen participation, it is necessary to change the traditional government-led method and reconsider the relationship between government agency and citizens (King Feltey & Susel, 1998; Chen, 2016). Its success highly depends on the institutional framework that fully disclosure of information and equal participatory platform are required. Substitute methods by making use of ICTs, which can be simultaneously interactive, transparent, and democratic, are being the key focus and gateway into participation in the urban policy in recent years. The following sections explain the role of ICT in the urban policy.

2.3 ICT POTENTIAL FOR PARTICIPATION

With the increasing discussion on the development of information technology in the field of democracy, relevant topics including virtual democracy, tele-democracy, digital democracy, electronic democracy and cyber-democracy are becoming popular. Website, e-community, e-voting and e-government are utilized to assist the practice of the democratic intentions. Indeed, citizen participation is the core concept among these discussions. It is proposed to develop a participatory network through ICT to promote citizens' democratic participation in urban policy decisions (Sassen, 2015). According to the UN E-Government survey 2013, the definition of E-participation focuses on “citizen to government” (C2G) and “government to citizen” (G2C). The indicator includes three parts, E-information, E-consultation and E-decision-making, 2 in order to measure the E-participation level in each country (UN,2014). This classification is also compatible with the "information", "consultation" and "active participation" that the OECD has put forward to strengthen the contacts between state and citizen. For example, using ICTs to enhance the quality and quantity of citizens' participation in government decision-making will be very helpful to the legitimacy, responsiveness and effectiveness of democratic governance (Chen, 2009).

ICTs play a multi-faceted role in citizen participation. On one hand, it can enhance the convenience and popularity of citizen participation. It overcomes psychological and social barriers, greatly reducing the costs of participation. On the other hand, ICTs can only be beneficial to the powerful group rather than the general public, resulting in enclave deliberation and inequality (Huang & Chen, 2004). Therefore, it is necessary to deliver multiple participatory platforms.

In the process of promoting democracy through ICTs, the role of citizens is considered as “policy shaper and participant” (Chen, 2015) instead of the group being governed. Its character has further transformed into resources and partners of urban governance (OECD, 2015). These trajectories of transformations can be better understood through path dependent analysis.

2.4 PATH DEPENDENCE

Path dependence in this paper is used to explain institutional change which being accompanies with the ICTs' development. The concept was first defined in economic field as non-ergodicity of dynamic economic processes (Arthur,1989). Different historical events and their order of development cannot achieve the same kind of market outcomes with 100% probability in a dynamic economic system. In this case, the economic system is viewed as path-dependent (Arthur,1989). North (1990) introduced the path dependence theory into institutional economics in order to explain the process of institutional changes. He suggests that path dependence is equivalent to the idea of inertia in a physical field, when individuals or systems entering into a path, it may depend on this path (North,1990). Institutions are possible to follow a path onto a positive track, as well as into an opposite state, further being locked into an inefficient state and stay stalled (North, 1990). Path dependence includes two main features: one is that path dependence emphasizes the critical impact of small historical events which sets deterministic institutional patterns. Contingent events outside the system are considered closely related to the result of trajectory changes (Mahoney, 2000). Second, path dependence emphasizes the path continuity of system development. It points out that once the system complies with a certain path, it will evolve and strengthen itself in this, which will exclude the other alternatives outside of the system (North, 2003).

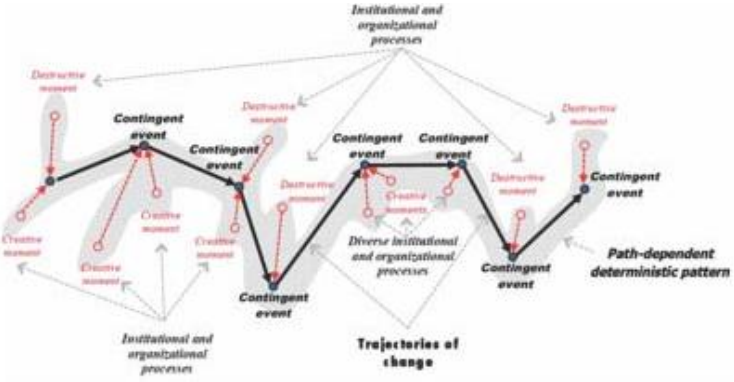

Figure 1 -Formation of path dependent trajectory.
Source: Tasan-Kok, 2015, p. 2189

3 CASE STUDY: TAIWAN'S E-PARTICIPATION IN URBAN POLICY

The case study of Taiwan's E-participation in urban policy provides not only a holistic story of its transformation, but also a distinctive view of events. The analysis teases out the institutional conditions, contingent historical events, turning points that make up the citizen participation of Taiwan. The study aims to analyze trajectories changes in the development of citizen participation and exams the contingent events that are trying to create a new path. As illustrated in Table 1, various events were closely connected to the institutional process and ICTs progress can then be identified. As a consequence, these trendsetting contingent events determine the development path of the citizen participation of Taiwan. These turning points and events describe four trajectories: (1) Complaint mechanism; (2) Diverse types of advice collection mechanism; (3) Participatory mechanism combined with social media; (4) Two-dimensional participatory mechanisms: official and private

3.1 COMPLAINT MECHANISM

The Martial Law lifted in 1987 opened a new chapter of Taiwan's democratization. After then, increasingly importance has been attached to public opinion and citizen participation. Governments at all levels have also designed mechanisms to provide citizens with direct access to the political process. As the capital city of Taiwan, Taipei City always acts as the pioneer in various government reform measures (Chen, 2006). In 1994, Taipei has experienced an unprecedented rotation. Being the first popularly elected mayor after the Kuomintang's 27years long dominance, mayor Chen took significant steps to strengthen the democratic images through Taipei City Government's effectiveness and responsiveness in handling citizens' complaints. He launched a program called ‘Meeting with Citizens' right after his electoral victory. After then, he launched ‘A-Bian Mailbox' in form of a bulletin board system (BBS) by taking advantage of ICTs. It

was the very first E-participation initiative in Taiwan's government agencies (Chen, 2006). In 1998, 'A-Bian Mailbox' was upgraded to the web version by Taipei City Government. After Ma Ying-jeou was elected as the new mayor in the same year, its name was changed into 'Mayor e-mail-box' while keeping the same functions. Taipei City Government also developed a set of mechanisms dealing with the e-mail. The complaint e-mail sent by citizens through a designated website would be registered as an official document, and further be distributed to the appropriate unit.

According to the research, the number of petitioners in the 'Mayor e-mail-box' increased by ten times in just 5 years, with 1,080 email per quarter in 1996 and 12,508 email per quarter in 2001 respectively (Chen, 2001). This platform provides a convenient and low-cost tool for citizens where citizens are more willing to present their daily complaints and ask for an immediate resolution from city government. On the contrary, the government needs to devote more efforts and resources to process mounting complaint e-mails. This pressure pushed the government to reform its managerial and organizational capacities concerning the 'Mayor e-mail-box' (Chen, 2006). It also shows limitations on citizens' level. Internet active population mainly consists of high-educational groups, which raise inequality in participation.

In sum, the election of the new mayor who has a democratic agenda with local government support to put forward citizen involvement in urban policy issues, is the key factor for creating this new path. Besides its limitation, it is not only the start-point to reshape the relationship between state and citizens, but also a turn in opening up the previously blocked political procedures.

3.2 ADVICE COLLECTION MECHANISM

'Research, Development and Evaluation Commission, Executive Yuan' planned to establish 'National Policy Internet Think Tank Online' in 2005 in order to use ICTs to promote citizen participation through different platforms. Especially after Mayor Ma was elected as new president of Taiwan in 2008, Taiwan's democratic agenda was put into a new phrase. The functions of 'National Policy Internet Think Tank Online' was integrated into E-government website 'Think tank'. In addition to continuing the original service, a 'Policy Planning' section was created to provide information on government-related planning projects. It enables citizens to provide opinions through leaving comments. Moreover, the conference on 'Improvement citizen's living condition' hold by Executive Yuan put forward the online grievance investigations and voting project. The project collected the main concerned urban issues such as high housing price, insufficient barrier-free facilities, and unsatisfied living environment. These problems would be put into the primary consideration of the policy agenda. Executive Yuan also promoted '2020 Vision Platform' in 2009 to organize the ideas for future development. 11 scholars were invited for the operation of particular channels, while citizens could join this platform through article publishing, online programs, voting and discussion. The information would be collected as a part of the official report, shaping the future planning vision of Taiwan 2020. In sum, the election of the new president in 2008 was a turning point transforming the previous one-way e-participation towards diverse types of e-participation. In line with the aim of enhancing democracy, approaches to citizen participation have evolved. Not only citizen's complaints on urban issues, but also their advices were included in the future urban policy agenda. However, citizen participation in this phase is still lock-in the government-led framework.

3.3 PARTICIPATORY MECHANISM WITH THE SOCIAL MEDIA

The popularity of networking equipment and the growth of internet population emphasized the sharing between people, which gradually formed the World Wide Web 2.0. As an important strategy, Executive Yuan also mastered the development trend that introduced web 2.0 into the e-government project "Integration of social network". Moreover, 'Guidelines for the operation of government website WEB2.0' was established in 2011. It provides an official guideline for state government to fully utilize social media, such as Facebook fan-page and Plurk, in order to shorten the distance with the citizens and promote citizen participation (Chen, 2016). After then, the 'Think tank' Facebook fan page was established.

In additional to the actions taken by the government, bottom-up initiatives also appeared due to an advertisement of Economic Power-Up Plan released by the government in 2012. Unsatisfied with government's asymmetrical and non-transparent attitude, a group of computer programmers founded the online community 'g0v.tw' in December 2012, to push information transparency. Based on the open

resources, this online community aimed at providing easy-to-use information service for citizen participation (g0v, 2016).

The review procedure of 'Cross-Strait Service Trade Agreement' was undertaken by The Legislative Yuan from March 17, 2014. However, the policy-making process was questioned by citizens since the information was not fully opened to the public and even the public's ideas were not included in the decision-making. It resulted in 318 Movement, through which the student-led group expressed their dissatisfaction to the Legislative Yuan. It is rather remarkable that this student movement widely utilized ICTs to express their pursuits. Process of the movement was instantly published to Facebook, PTT and other online community platforms, provoking a heated discussion, in which way called for more people to participate in the movement. The internet users also took advantages of diverse social media platforms connecting the power of people through APP, sharing files, and webcasts. Thus, it set off a new wave of E-participation in urban policy. Apparently, government agencies also noticed that the speed at which citizens connect with one another in online society go beyond the traditional policy-making pace. It is hard to convince citizens without receiving public opinions and communicate with them through the internet (Hu, 2014; Tang, 2016).

318 Movement altered the former conservative thinking of the government. Consequently, the government started to rethink the role of E-participation. In response to the 318 movement, 'National Affairs Conference on Trade' opened an online participatory platform, including the BBS, webcasts with the combination of existing social media platform. At the same time, 'Taiwan Free Economic Pilot Zones Online' also utilized social media platform to increase public participation and interaction mechanisms in the policy development and implementation stage. Moreover, 'National Development Council Online' webcasts were used to support the policy of Free Economic Pilot Zones. The webcasts not only explained the necessities and importance of free economic pilot zones, but also widely accepted public suggestions as a reference to policy adjustment. It was the first time that government agencies conducted a real-time interaction directly with citizens through the internet (FEPZs, 2014). This breakthrough is considered as a significant step of online consulting on urban policy. From October 2014, Executive Yuan began to share the press conference on Youtube once a week. Live broadcast accompanied with live discussion boards helps 6 Executive Yuan react immediately to the suggestions. 318 movement also provided an opportunity for the development of private initiatives -g0v. In order to guarantee the transparency of information, the community launched a live webcast with the hackfoldr system to integrate on-site conditions, live images and material needs. G0v made it possible for everyone to obtain the first-hand information during the one-month movement. This event also allowed a substantial increase in its participants (g0v, 2016).

To sum it up, the prevalence of social media further stimulated the diversity of e-participation platforms. Bottom-up initiatives also appeared due to their unsatisfied with government's attitude, while these initiatives were not very influential at first. Instead, 318 movement is considered as a turning point of citizen participation towards a combination of social media platform. It brought new opportunities to private initiatives. Meanwhile, the government gradually realized that an active participatory environment that uses social media platform has a great potential to involve the citizens. Using these tools can ensure the integrated forms of communication, encouraging the expressive dynamics of mobilization. Therefore, social media platforms began to be included into the urban policy-making process.

3.4 TWO-DIMENSIONAL PARTICIPATORY MECHANISM: OFFICIAL AND PRIVATE

As the internet word is grows to be an indispensable part of everyone's lives, Taiwan also took efforts to catch this global trend. In December 2014, "Virtual World Law Adjustment Program" was proposed by the Executive Yuan to remove regulatory barriers in the way of virtual world developments. In order to promote the law adjustment program with the power of netizens, g0v project's participants and the Virtual World Development Regulation and Implementation Unit collaborated with each other, building and managing a new platform called 'vTaiwan'. The main concept of 'vTaiwan' is to adjust our own policies by ourselves. The authorities provided background information or draft amendments to the relevant topics. Afterwards, the information is published on the platform for one month to collect advice, fostering a consensus through discussions and exchanges. The consensus can then be implemented through coordination of ministry jurisdictions and amendments or proposals in regulatory practice (vTaiwan, 2015). Until 2015, vTaiwan platform has discussed more than 301 topics with 1363 articles published, and conducted 9 online counseling sessions (Chen, 2015). It promotes e-participation through the construction of a transparent

network community, which differs from the previous platform. The Executive Yuan positions vTaiwan platform as an experimental project for enhancing transparency of citizen participation and policy-making process. For example, law amendments on closed-company were open to discuss from January 7, 2015 through vTaiwan platform. The community participants were invited to join the discussion and online consultation meeting. After half a year, the amendments won the consensus, approved by Legislative Yuan (Commercial Times, 2015). Thus, this platform becomes gradually accepted by citizens.

The National Development Council also launched an urban policy participatory platform, called 'Join', aiming to achieve the disclosure of policy information and strengthening citizens' supervision. Meanwhile, it aims to standardize the construction of the network community, making citizen participation as a common activity. Citizens can participate at all stages of urban policies formation, implementation, and evaluation through this e-participation channel. The multi-function platform ensures advice proposal, policy discussion, process supervision, and problem reflection (Join, 2015). According to the research, the total number of advice proposals has been 85, with 60 of which entering into the second round and 2 already being realized; Policy discussion part includes 52 topics, with 47 topics from the central government and 5 topics from the local government; The current discussion and plan of Free Economic Pilot Zones can be traced from the process supervision section (Chen, 2015). At the same time, fast development of 'g0v.tw' stimulated the bottom-up citizen participation. Within 3 years, g0v became one of the world's top three civic tech community. Its activity can be even keep pace with OKFN(Europe) and Code of America(USA). The main idea of g0v is decentralization that emphasize more on the interaction and collaboration (Chiang, 2016). In this platform, everyone can be an information provider and criticizer. For example, according to the law, election candidates should report their campaign contribution to the Control Yuan, and the contents of the declaration should also be open to the public. However, citizens can only obtain unclear digital files unless citizens themselves print the details at the Control Yuan, which makes further analysis and monitoring difficult for the public. In this case, g0v launched a project for a more transparent monitoring on the campaign contribution. The project advocated public to collect photocopying from the Control Yuan. Netizens were divided to read and record the data from pieces of images, contributing to the reconstruction of an electronic file. Thanks to nearly three hundred thousand participants, the images were identified only in a week, which make this project as the best example of mass collaboration (Chen, 2016).

To sum it up, due to the political support from "Virtual World Law Adjustment Program", the major government agencies Executive Yuan and the National Development Council both launched their online participatory platforms. Despite the combination of social media, it is an important step towards an integrated platform available for citizens to participate the whole process of urban policy-making. Furthermore, the power from bottom-up initiatives cannot be overlooked. Their efforts on raising public's attention on urban issues and collaboration make up for the insufficiency of government-led platforms. At this moment, both private and official participatory mechanisms have found their position in the way of development.

3 CASE STUDY: TAIWAN'S E-PARTICIPATION IN URBAN POLICY

The article first formulated a theoretical background on citizen participation and ICTs in urban policy. Then, the development trajectories of citizen participation in Taiwan was analyzed under the path-8 dependence framework. The case study testified the trajectories of change that were mainly set in creative moments and then to interpret some contingent events on the complex development trajectory of citizen participation. The main findings are as follow.

First, ICTs as a stimulator for the development of citizen participation. Due to its direct, rapid and border-less nature, ICTs has provided a convenient medium of participation by breaking through the boundaries physically and socially. It indeed creates direct contacts with the executive branch across the representative, political parties, and interest groups. More and more people use ICTs to satisfy their political pursuit.

Second, for a developing state, such as Taiwan, democracy was at the top of the political party's reform agenda in the early phrases. In order to put the idea into practice, promotion of citizen participation became their first choice. It is obvious that their efforts on democratic reform are aimed at winning the election. This is the turning point bring previous non-transparent governance to the trajectories of promoting citizen participation. The mayor who was elected had to be responsive to the public. With

increasing pressure on achieving his promise, the 'Complaint mechanism' became the very first type of e-participation.

As a similar pursuit for political party, the election of president pushed forward the transformation trajectory since the boundary of citizen participation expanded from city to state level. The evolution in ICTs made more types of platform being possible, while the main focus of this phase was collecting advice for future urban planning. Citizens acted more as a provider than participator at this stage. However, the 318 movement is another contingent event that obviously changed the role of the government and citizen in e-participation. The power of citizens became much stronger through the connection of the internet. In this time, the increasing use of the Internet, technology devices, and social media helped materialize the direct interaction between the government and citizens. Private initiatives also grasped the opportunity to become more influential.

Law supports of virtual world enabled a positive transformation. Main government agencies both took actions to create transparent platforms for the participation at all stages of urban policy-making. Private agencies became more powerful to push forward the transparency of information. The development of both official and private initiatives shows a different pattern at the current phase. On one hand, some political figures began to contact the private initiative. On the other hand, private initiatives had gradually infiltrated the government through speech and cooperation. As can be seen from the trajectories of change, even though the ICTs provide possibilities for diverse participatory platforms, the social events are the crucial reasons for the transformation of citizen participation: either the election in the early times, or the movement and law support at the latest stage.

Phase	Contingent Events	Trajectories of Change
1. From black box governance towards a compliant mechanism	• The martial law was lifted (1987) • Domestic election of the Taipei's new mayor who aimed to promote democratic agenda (1994) • A-Bien(the mayor) mail box (1995)	• The beginning of e-governance • Citizen involvement through Internet • Reshape the relation between public and government • Focused on compliant mechanism
2. From one way e-participation towards diverse types of advice collection mechanism	• *National Policy Internet Think Tank* Online (2005) • The presidential election (2008) • Online grievance investigation and voting promoted by Executive Yuan (2009) • "2020 vision platform" (2009)	• Diverse platform were offered for e-participation • Government-let e-participation was strengthened through official participatory platform • Focused on advise collection
3. Advice oriented platforms towards a participatory mechanism combined with social media	• The prevalence of social media • *National Policy Internet Think Tank* Facebook fan page • "g0v" online (2012) • Sunflower movement (or 318 movement) (2013) • National development Council online (2014) • Executive Yuan live broadcast channel on youtube (2014)	• The appearance of bottom-up initiatives • Public participation and interaction mechanism was enhanced through social media • ICT platforms stared to be considered into urban policy promotion • The connection between citizens became more stronger through the Internet so that online platform had to be included into policy-making process
4. From top-down e-governance towards two-dimensional participatory mechanism: Official and private	• Virtual Space Law adjustment (2014) • Booming growth of "g0v" • Online policy discussion platform "vTaiwan" (2014) • Online policy discussion platform "join" (2015)	• Breakthrough in both government-led and citizen-led e-participation • Focused on the construction of the network community • Interpreted platforms available for citizen to participate the whole process of policy making • Private and public agencies began to collaborate • Policy-making became more transparent

Table 1 - Development trajectory of e-participation in Taiwan

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ID 1735 | PEDAGOGY BUILT ON WORKING WITH COMMUNITIES

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1 INTRODUCTION

Preparing students for practice is the key challenge in planning education. Since the late 1990s, the issue of how to balance theory, methods, skills, and practice oriented courses in the core curriculum has been widely debated. Partly as a result of the greater emphasis in the 2006 Planning Accreditation Board guidelines on plan making skills, and partly in response to the increasing demand from students for hands on learning, most planning schools in the United States have by now incorporated practice oriented courses into their core curriculum(Edwards and Bates 2011, Vidhardi, et.al. 2012). Depending on how each program defines what planning is or ought to be, the strategies to incorporate practice oriented learning into the curriculum ranges from special seminars, internship requirements to studios (Lang 1983, Long 2012). Over two thirds (69%) of the 80 schools listed in the 2015 Planetizen Guide to Graduate Urban Planning Programs by now have a studio course requirement. Still, studio pedagogy is neither "dominant, not does it play a significant role in the earliest stages of planning education" (Long 2012, 438). Several questions remain on how to define, incorporate, and assess learning outcomes of studios in planning education (Long 2012, Vidharthi, et.al. 2012).

Since most studio projects involve working with a client, there is also the issue of how community engagement takes place within an academic setting, and how the process impacts partner communities (Frank2008, Ferman and Hill 2004, Angotti, et.al., 2011). This concern was reflected in the 2016 ACSP Conference Callfor Papers: "How are planning programs working effectively with communities in authentic, non-exploitive way sthat produce real benefit?" Especially within the current political context, it is critical for

planning programs to assess how they can work collaboratively with community based organizations and their coalitions and to link to the broader social justice movements (Shiffman 2007).

This paper a explores the challenges and benefits of offering a studio early on, during the first semester, that involves working with a community based client organization, using the case study of a introductory core course at Pratt Institute's Planning Program. After a brief review of some debates on studio pedagogy and service learning, we provide a short description of Pratt's practice and community oriented pedagogy. We then consider the effectiveness of the first-semester Fundamentals of Planning studio/seminar over the past seven years (14 semesters), from both the students' and community clients' perspectives. An online esurvey, with the participation of 163 students (out of the 208 contacted), was used to get students' assessment of the learning outcomes, and structured interviews with the community clients focused on some key issues raised in service learning literature. In conclusion, we consider the benefits, challenges and conditions necessary to effectively integrate a studio course early on into the planning curriculum.

2 PRACTICE ORIENTED LEARNING

There is considerable discussion in the academic literature about the benefits, issues and how to incorporate practice oriented learning into the curriculum. Different authors emphasize different aspects of planning practice and its implications on what practice learning should emphasize. Still, whether explicitly community service-oriented or not, studio pedagogy and internships seem to be the most popular strategy for practice oriented learning in planning programs.

The attitude towards studio pedagogy has changed over time. As the focus of planning programs shifted way from the physical planning oriented planning education of the earlier years towards social science and research oriented education, studio pedagogy was abandoned in most schools, to be revived once again in recenty ears. While for some, the term 'studio' still implies design-oriented activities, Senbel (2012) analyzes the difference between planning and design studios, and considers how the elements of each could be combined in ahybrid studio setting to teach urban design to beginning planning students. Clearly, studio pedagogy is equally applicable to social policy and policy formulation and analysis as well as physical planning, as it involves "designing and evaluating courses of action in response to problems" (Lang 1983, 123, Long 2012). "Synthesis," "learning-by-doing," and "reflection-in-action," and aiming to expose students to the complexity of "real-world problems" and to initiate "professional socialization" are some the most common terms used in learning outcomes descriptions in studio syllabi from different programs (Nemeth and Long 2012, 479). For Higgins et.al.(2009) studio pedagogy is about experiential, problem-based, student-centered and reflective learning. Rooji and Frank (2016) and Oonk, et.al.(2016) argue that contemporary planning practice requires development of skills forco-creation and a 'transdisciplinary' approach based on collaboration among scientists, professionals, private and public sector.

For others, studio courses should do more than just teach practice, and investigate "new modes of practice with a focus on advocacy and community outreach, as well as meaningful collaboration among disciplines" (Long 2012, 432). Forester (2012), from a critical pragmatic perspective, argues that studio settings can provide students the opportunity to learn to "think critically about outcomes as well as processes, about institutional and process designs, about power and performance…. [and to] reconstruct possibilities where others might initially perceive or presume impossibilities". Working with a community-based client early in their educational process can help students learn to relate theory to practice, and "can be a transformative experience, forcing them to confront their own values…" (Le Gates and Robinson 1998, 314).

While there is broad consensus on the benefits of studios as a key component of practice oriented learning, there are several challenges. Some authors point out the potential tensions, as well as the benefits, that might arise from teamwork and bringing together students with different, and especially design and non-design backgrounds in studio classes (Cameron, et.al. 2001, Arefi and Edelman 2013, 72). Moreover, "real projects can be messy and unpredictable, drawing students into complex political realms. They generally require work before and after the semester, setting up relationships and completing products" (Cameron, et. al. 1998, 111). And, since studios involve "both cognitive and non-cognitive outcomes and impart a complex set of skills, knowledge, and values to students," Nemeth and Long (2012) draw attention to the need for a systematic model for assessing the learning outcomes and evaluation procedures in studio courses.

While the literature on studio pedagogy focuses on how to bring practice into the classroom, service learning literature discusses issues involved in learning in and with communities. University community service is not new, but Angotti et.al.(2011) point out that planning approaches, like Advocacy Planning, that link service and learning emerged during the Civil Rights era. Federal initiatives and funding in the 1990s also led to areas sessment of the challenges and benefits of earlier university community partnerships (Dewar and Isaac 1998;Baum 2000, Le Gates & Robinson 1998, Ross, et.al. 2002, Sletto 2010). As Vidal et.al.(2002) point out, it is hard to consider service learning without understanding how the community engagement takes place within an academic context. “While quite useful and insightful, this literature is written almost entirely from the higher education perspective, leaving unanswered major questions about how community partners view and evaluatesuch partnerships” (Ferman and Hill 2004, 242). Similarly, others point out that service-learning courses tend to focus on the learning aspect, and the service aspect and impacts on the community are neglected, and they offer frameworks for analyzing their effectiveness (Bose and Wilson, 2014, Erickson 2014, Martin, et.al. 2014). Angottiet.al. argue that community service learning is not only about “shifting the site of learning from the classroom to the community;” it also requires equal partnership between the academic and community partners, one that is based on mutual respect , mutual learning and commitment (2011, 2-3).

3 CONTEXT MATTERS

‘‘Each school’s core is… inevitably a reflection of the uniqueness of the department and the students and faculty who define it” (Edwards and Bates 2011, 173). Pratt Institute’s planning program is rather unique as the only planning program in the US that is located in an Art and Design School, where innovative and creative practice is valued at least as much as academic research and publication. The faculty is mainly comprised of part timers and adjuncts – artists, practitioners, activists, innovators – who often bring to the classroom new ways of thinking, experience and strong networks from the field. Moreover, the program’s approach to planning has been influenced by the legacy of the Pratt Center for Community Development (PCCD). Pratt Center is the oldest surviving university-based community planning organization in the U.S, established in 1963 to address poverty and top down government policies by supporting affected communities to participate in the planning processes .Over the past five decades, Pratt Center’s “high quality” technical assistance and policy advocacy around social and environmental justice issues, working in collaboration with community based organizations in low income neighborhoods around the city, has led to long term relations and trust – a key component of successful university partnerships (A. Vidal & et al. 2002). This was how “an activist planning model” emerged in Pratt’s City and Regional planning program (L. Wolf Powers 2008, 3), attracting adjunct faculty with similar values and experience, and students interested in participatory planning, social and environmental justice and sustainability issues. As part of the Graduate Center for Planning and the Environment (GCPE) in School of Architecture with three other graduate programs, Sustainable Environmental Systems (SES), Historic Preservation (HP) and Urban Place making Management (UPM), the Planning Program (CRP) has two goals: 1) to utilize studio and team learning to educate students about the importance of collaboration in a multidisciplinary field, and 2) to provide opportunity for focused, specialized or interdisciplinary study and degrees (2014 Planning Accreditation Report,p.33). It should be noted here that compared to the 80 planning programs listed in the Planetizen 2015 Guide to Planning Schools, Pratt is the only accredited program that requires 3 studios. Over two thirds (68%) of all of the80 schools listed in the guide have a studio requirement, but only 11 (14%) require two studios. The practice-oriented components of Pratt’s curriculum include 3 studio requirements, a final thesis/demonstration of professional competence project (DPC), as well a range of internship/fellowship and action research opportunities which enable students to work embedded in communities to develop their action oriented research skills (Figure 1). Pratt’s three studios (Fundamentals of Planning seminar/studio and two advanced studios) and a final Demonstration of Professional Competence project or thesis make up half of theeight required courses, and a third of the program’s total 60-credit requirement. Moreover, to provide a multidisciplinary experience for students, two or more programs have started to offer their studio courses concurrently to either study the same geographic area, serve the same client, address the same urban issues, or all of the above. While the studios emphasize team work, students work individually on their final DPC project.

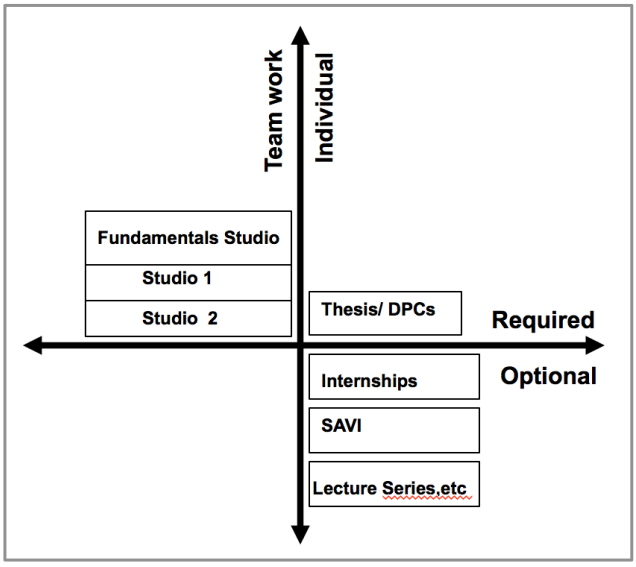

Figure 1. Components of practice-oriented learning at Pratt's Planning Program

An analysis of the 42 advanced studios offered between the spring of 2010 and 2016 reveals that most were client-based (83%), had a community development/advocacy focus (81%), and involved partnerships with community based or city wide non profit organizations (71%). Most studios stressed a multidisciplinary approach by combining faculty from the different programs and/or inviting experts from different fields (93%), and brought together students from different programs, fostering an interdisciplinary environment (71%). Some studios from different programs were linked for research then split for recommendations, some conducted research independently and then linked for recommendations, others came together in "salons" and presentations to each other for cross-learning; shared guest lectures, engaged the same client but employed different study areas or topics, or any combination of the above (GCPE Studio Guidelines Draft, August 2015). The outcome of linked studios, however, has yet to be evaluated.

4 A FIRST-SEMESTER CORE COURSE: FUNDAMENTALS OF PLANNING

It was within this context that a first semester seminar evolved into a five-credit course with a 'mini studio' component that involved working for a community based organization. The course is taught by one full time and two part-time faculty members. As expressed in the course syllabus, the goal of this introductory core course is twofold: "to familiarize students with relevant literature, both historical and contemporary, on the principles and practices of planning at different levels, and to relate those readings to practice by working for a real client on a current planning issue in a New York City neighborhood." The student learning objectives include learning: 1) to critically evaluate and reflect on the readings, 2) to work collaboratively in teams, 3) to work with a community client, 4) to gather data and analyze data on existing conditions and develop planning recommendations to address the client's concerns, and 5) to prepare and make professional presentations. The lecture/seminar component of the course requires students to prepare short weekly commentaries on the assigned readings that are reorganized each semester to provide relevant background for the studio topic. The purpose of commentaries is to make sure student stay current with the readings for meaning fulclass discussion, and reflect on how they relate to their own experiences and the studio area and project. Due to limited in-class time (two 3 hour-sessions per week), students are required to set additional time for teamwork, as well as site visits, community meetings, stakeholder interviews, etc. The studio topic and site is selected from among a few potential ideas proposed to the instructors by community groups they had worked with before or know through their networks, based on both the potential class size and the immediacy of the community partner's need. Discussions with the community partner about the focus and scope of the studio project begin often months before the semester, and the deliverables and meeting schedules are confirmed before the semester starts.

Students meet the client at the beginning of the term, to hear directly about the community and the background of the issues they are asked to work on. To get acquainted with the neighborhood, they start

their existing conditions research with a neighborhood survey. The coordination of assignments with the one-credit skills courses (GIS, Graphics Communication, Professional Writing, and Freehand Drawing) is critical in helping students with demographic and spatial analysis and graphic skills necessary to produce professional-quality reports and presentations. Students prepare and present their existing conditions analysis report to the client around the middle of the term. During the second half of the semester, they work on developing recommendations, based on the client's feedback and priorities and their research findings, and conduct additional research as needed. They make a final presentation to the client at the end of the semester and deliver their final report. Often, they are asked to present their findings to the community members or elected officials. They also present their work at the semester end Super Studio Day, and get additional feedback from GCPE faculty and peers.

Inevitably, tensions arise among students with different backgrounds who are used to working individually in more traditional class and studio settings. To resolve such issues, instructors meet with students individually or in teams, as needed, and hold a class meeting after their mid-semester presentation to reflect on the process and brainstorm about how to resolve issues. At the beginning of the semester, they share with the students the lessons learned from previous semesters about how to divide up the work among themselves within and across teams, as well as how to relate to the client. During the latter part of the semester, as students start to work on their recommendations, collaboration gets easier. The final class session is dedicated to reflections on what they have learned and how the process can be improved.

Teamwork and good class citizenship carries significant weight in grading. Commentaries and participation in class activities account for 25% of the grade, each, and the studio project accounts for half of the grade – half on their individual contribution, and the other half, on teamwork and their team's overall performance. Given the close coaching involved during the semester, grading is based on a discussion of a number of different factors about each student's performance and progress, as well as feedback from the client and other faculty members during midterm and final presentations, as suggested in Nemeth and Long (2012).

4.1 STUDENT'S ASSESSMENT OF LEARNING OUTCOMES

An online survey was conducted with students who took the course between Spring of 2010 and 2016. The questionnaire had three open ended questions that explored how the students remembered and would describe the course; whether the concepts and skills learned were useful in later semesters or in their professional work; and how the class could have prepared them better for future academic or professional projects. It also asked if they felt the experience of working for a community-based client was useful as part of their learning process towards becoming a professional planner. (Table 1.) The question on what were the most important concepts/skills they learned in this course was adapted with some changes from the learning outcomes categories developed by Nemeth and Long (2012). The response rate was quite high (78 percent), considering over a third (35%) the 163 respondants had already graduated and six percent either on leave of absence or had transferred to another program within the GCPE or another school. It was above 95 percent for those who took the course over the past three years.

Harris and Irazabal (2011) found that the characteristics of what students described as High Service – High Learning experience involves: a) a well defined significant project with a clear schedule, b) high level of support and supervision, c) close connection between the deliverable to the agency/organization and course assignment, and d) transformed subjectivities. When the Fundamentals studio is considered in terms of these aspects, first, the deliverable to the client organization accounted for half of their grade for the course. In terms of support and supervision, as several students acknowledged in the survey, the faculty spent a lot of time working closely with the students, at times, joining them on weekend team meetings to provide support and guidance. Working on a real planning project for a real community client was very important for the students. The studio process became more structured over time with specific weekly tasks, and guidelines were provided at each phase of the project with tips on how to organize the collaborative process, as well as the deliverables. Still, some students found any unforeseen changes in the schedule and lack of a single correct answer to the issues at hand rather difficult. The steep learning curve and the workload were also challenges for some students. A student whohad to work on completing the final report after the semester was over due to his absences during the semester, felt the instructors were being more responsible towards the client organization rather than the students. But as Irazabal and Harris point out, "while assignment design is important to student learning outcomes, so is the attitude of

the individual student" (2011, 118). Finally, transformed subjectivities refer to "gaining an understanding of the challenges and opportunities faced by professionals" and developing confidence to view themselves as professionals, and "becoming more informed and sensitized about social responsibility and ethics in the profession" (Irazabal and Harris, 2012, 115). Most students felt the class was a good orientation to the profession and it helped them confront their own values: "The course is not only an introduction to planning but an opportunity to shape your values as an urban planner through practice and learning." Another said facilitating a visioning workshop with "low income residents who have values far different than my own in terms of public space usage was more challenging than I would have imagined. I really had to listen and was keenly aware of my own discomfort and the difficult task of working in a community that is not my own."

Overall, the survey responses seem to confirm the course has been rather successful in meeting its primary goal of linking the background readings to practice through the hands on experience of working with a community partner. Almost all the students in each semester felt working with a community based client was useful. It was also one of the things a majority of students said stood out in their mind about the course. They learned, not only how to interact with a client, but also to respect local knowledge and realized the challenges CBOs face. One student said "it was about working for people who are more invested than my 40-hours per week; working for people who have to live with my decisions or lack of it, and working for people who may know more than I," and a few others said the CBO provided them the legitimacy to access and work in the community.

Having a real client put an urgency and seriousness to our work that would not have existed with a hypothetical client. Knowing who would see our work led us to want to produce the best product possible so we could see it put to use and see a real response to our work. It was also much more validating at the end of the course to have a community group receive your work and be appreciative of it.

Even though numerous students described the course as "challenging," "intense," "hitting the ground running," and often, as "baptism by fire," they all said they were glad that they went through the steep learning curve during their first semester. They felt the skills they learned and the experiences of Fundamentals class prepared them for more advanced studios and even later practice: "I find myself referring back to things I learned from the Fundamentals Studio in classes I have had post-studio;" "It is almost overwhelming but it prepares you for what you will be doing in future, and helps you find the areas of planning you want to learn more about;" "I believe this studio helped me get the job I have today."

While there was a rather equal distribution of responses to main learning outcome categories (Table 1), over sixty percent of the students marked teamwork, learning by doing, and working with a community based client (recognizing accountability or responsibility to the client, assessing planning outcomes on set of values) as the learning outcomes of the class. A significant number of students said they would have liked to have more time with the community partner and more direct interaction with people in the neighborhood. Others wanted more specific communication and analysis skills, or focus on other specific topics, and more in-class time.

TABLE 1. What were the most important skills you learned in this class? Source: Adapted from Nemeth and Long (2012)	**# Yes**	**% of N=163 respondents**
COMMUNICATION		
Graphical/visual skills	103	63%
Written skills	85	52%
Oral presentation	**99**	**61%**
Understanding the dynamics among plan's multiple stakeholders	**112**	**69%**
PROFESSIONAL EXPERIENCE		
Working in a "real world" work environment	88	54%
Gain project management skills (workflow, time management, etc)	**98**	**60%**
Understanding quality standards expected in practice	91	56%
Understand various roles of planner	**105**	**64%**
LEARNING BY DOING		
Application of general planning concepts to specific context	**120**	**74%**
Learning how to synthesize skills, knowledge, values	**97**	**60%**

Understanding the relationship between theory and practice	89	55%
Acknowledge uncertainty/complexity in planning practice	**114**	**70%**
Recognition of planning as iterative, long-term process	**109**	**67%**
PROBLEM SOLVING		
Ability to formulate logical, defensible planning decisions	81	50%
Learn how to evaluate several possible scenarios	93	57%
Negotiate oppositional viewpoints	82	50%
Recognize importance of flexibility in decision-making process	93	57%
Seek appropriate assistance and expertise	76	47%
Being creative in designing solutions and processes	**106**	**65%**
Develop critical thinking ability	81	50%
TEAMWORK		
Role recognition in collaborative work	**123**	**75%**
Understanding basic group dynamics	**125**	**77%**
Development of leadership qualities	94	58%
Gain vital listening abilities	66	40%
Development of interpersonal cooperation skills	**114**	**70%**
SERVICE/WORKING W/A COMMUNITY BASED CLIENT		
Assess planning outcomes on set of values (justice, sustainability, etc.)	**112**	**69%**
Sublimation of personal opinion	76	47%
Creation of ethical foundation for future practice	85	52%
Recognize accountability/responsibility to client group	**113**	**69%**
Acknowledge and challenge systemic power imbalances	45	28%

4.2 ASSESSMENT OF BENEFITS TO THE COMMUNITY PARTNER

The eleven community based organizations (CBO) that the studio worked with from Spring 2010-2016 were interviewed about their views on the benefits and issues in working with students in general, and specifically, their experience with Pratt students (Table 2). The questions were similar to evaluation criteria suggested in community service learning literature (Bose and Wilson 2014, Frank 2008, Erickson 2014). They explored the client's views on the quality and usefulness of the deliverables; how they were used; the time frame; and ideas on improving university-community collaboration.

TABLE 2. Summary of Client Interview Results

TOTAL(14 Projects/11 organizations)	11 clients	100%
1. Worked w/ Pratt before (Pratt Center)	7	64%
2.A. Benefits of working w/students	14 projects	100%
Resource	9	64%
Enthusiasm and ideas	9	64%
Can go deeper & do more	8	57%
2.B. Issues in working w/ students	14 projects	100%
Time consuming	8	57%
Can be too theoretical or unrealistic	5	36%
Lack of enough interaction	3	21%
Lack of understanding of local issues	10	57%
3. Positive experience w/ Pratt students	13	93%
4. Products useful	14	100%
5. Which materials most useful?	14 projects	100%
Research	14	100%
Visioning workshop (only 2)	2	100%
Recommendations	13	93%
6. Semester schedule was convenient	11 clients	100%
7. Ideas for improving collaboration	11 clients	100%
Structured collaboration	3	27%
Partnership/Extended commitments	10	91%
Structured follow-up internships	3	27%

Most CBO partners had worked with Pratt Institute before through the Pratt Center. They agreed that Students were a great resource, bringing energy, enthusiasm, and new ideas and ways of looking at things:

a) The energy and enthusiasm of the students, b) being made aware of emerging areas of expertise, c) it brought attention to neighborhood issues, d) It gave us an opportunity to see things thru the different eyes of the students and faculty, e) it gave me the opportunity to influence planning students about the real world (Director of Amsterdam Avenue BID).

MARP's director felt students "are a great resource but they are students after all, and so, more idealistic than realistic in approaching issues."

CUFFH also felt that some recommendations could be controversial or too complex to implement in the short run. GOLES director, who had the most experience working with students from different schools, said, "I've always had a positive experience.

Even if sometimes you don't get everything you want, many times you get things you didn't even ask for. So, it's a tradeoff. The same was true about the three Fundamentals studios." Director of NYCEJA, like the Director of Hester Street Collaborative (HSC), pointed out that "It is very useful to have many more eyes looking at issues, as compared to just one staff person analyzing them. In addition, this provides the opportunity to take an issue and analyze it in its broader context – which is often difficult for staff to do on a daily basis," and students "are eager to learn and get involved in co-creating a greater vision."

About half of the clients referred to time and capacity, as Ferman and Hill (2004) discuss in detail, as an issue. Since CBOs are under resourced and understaffed, it was hard for them to make additional time for the studio group, and sometimes, scheduled presentation or meeting dates had to be changed. MARP Director felt it was important to frame the relationship with students early on so that there will be less demand on client's time.

Another said "the amount of time that it takes to bring students up to speed to carry out the analysis" generally takes time away from their own work since "Every now and then, the students' lack of political context is an issue" (GOLES). The compressed schedule of the semester "doesn't allow them time to build relationships and trust with community members and stakeholders. So the client has to broker these relationships, meaning additional work for us" (HSC). While starting the work earlier on was a recommendation, most were aware of the difficulty of synchronizing the academic calendar with how things happen on the ground. As the Director of Hester Street Collaborative put it, "You must plan the curriculum in advance and on the ground things can happen more slowly or faster. An idea may not wait or process can take too long. Just 4 months doesn't allow students to see the end result." Moreover, Director of MARP pointed out that "not all CBOs as lucky as us to have access to Pratt faculty and Pratt Center. There should be a central place for groups to apply to for technical assistance on small projects."

All the clients' experiences with Pratt students were positive. Concrete Safaris director appreciated that the students were also well prepared and respected the time constraints of community based organizations: It was clear that your staff and students cared about the outcomes of the project and respected the time and contributions of non-profits… Visiting the place is essential. Your process of turning the visit into one or multiple events really built a team spirit outside of the classroom. The visits stressed the importance of the fact that work for a community-based organization cannot be done on a computer but in the community.

The Directors of NYC-EJA and HSC, perhaps because of their longer term involvement with the planning program through the ongoing Fellowship arrangements, felt Pratt students brought a more comprehensive perspective, and could grasp the issues at hand more quickly: By large, what is great about working with Pratt students is that … the program tends to attract students that are sympathetic to environmental justice and its values. It's a richer interaction because there are similar political views. You do not have to explain too much in order for them to understand the broad principles of the work. Also, there was some diversity, so some students directly understood the issues discussed… The fact that they work with a client and enjoy that work makes the project a very pleasant experience for everyone (Director of NYC-EJA).

Pratt students were well prepared for the task and the organization. They were diverse in their backgrounds. They were serious and idealistic but had a practical approach to problems. Tbey worked

with a true sense of enthusiastic learning about the grass roots community they were studying and seemed to grasp the community as unique from others. (Director of Two Bridges CDC).

CLIENT/Semester/Project	OUTCOMES How were the materials used?	CONTINUITY (interns, follow up studios or faculty involvement)
Amsterdam Avenue BID Manhattan CD7 - FA 2009 **Commercial revitalization & community development**	Posters used at BID meetings & to educate community. Student reports placed in local public library available to the public.	Follow up studio in Spring focused in on recommendations for youth & seniors.
Assemblyman's Office & BID Manhattan CD 7 - SP 2010 **A community Vision for the Future**	Presentations & Visioning Workshops brought together people who don't work together. Assemblyman disseminated findings in the Community Newsletter.	Fall semester students also helped w/ Visioning workshop
Myrtle Ave. Restoration Project (MARP) Brooklyn CD 2 - FA 2010 **Under and Around the Brooklyn Queens Expressway**	Visioning presentations & report helped w/later workshops. Traffic recommendations were refined in MARP's final report to DOT & some were adopted & implemented.	Some students & faculty helped w/ later Visionings, Alumni worked on MARP-AFH report to DOT
NYC Environmental Justice Alliance Brooklyn CD1, CD6, CD7 - SP 2011 **Planning for Resiliency -Safety & Jobs - in the three SMIAs**	Research findings used in negotiations w.City around the Waterfront Plan. Innovative "Peacock" concept for addressing zoning resolution issues; research on best practices and performance standards helped with advocacy.	NYC-EJA has ongoing PSPD Fellows (interns) + faculty involvement continued
Good Old Lower East Side (GOLES) FA 2011 **Gentrification, infrastructure, public health & the environment**	Studio materials provided valuable research and helpful recommendations, but the long report format made it hard to look up the information needed to make a case. Needed (and got) follow up interns.	A student intern continued work on public health issues
GOLES Manhattan CD3 - SP 2011 **Gentrification & Economic Justice in Lower East Side**		A student continued research on financial mechanisms to assist GOLES in implementation
Churches United for Fair Housing (CUFFH) Brooklyn CD 1 - FA 2012 **Development potential of CUFFH properties for resilient community development**	Studio research and recommendations provided useful facts/ideas. The Professional Reference Guide used in conversations with elected officials and clergy.	Internship position announced but not filled
GOLES & LES Ready! Coalition Manhattan CD3 - FA 2013 **Community Preparedness and Resilience Plan for LES**	Research & recommendations contributed to LES Ready! Community Preparedness and Resilience Plan. GOLES dedicated resources for disaster preparedness. A studio idea on waterfront berm was incorporated into final Rebuild by Design plan &being implemented.	2 student interns for Spring & Summer under faculty supervision - RAMP funding
Hester Street Collaborative & Asian Americans for Equality (AAFE) Manhattan CD3 - SP2013 **Open Space Analysis & Recommendations**	Studio findings & recommendations used in applying for capital funding from Borough President's Office in partnership w/the Sara D Roosevelt Park Coalition in Spring 2014.	HSC has ongoing GCPE Fellows (interns)
Carroll Gardens Association (CGA) Brooklyn CD 6 & Columbia Waterfront - SP2014 **Affordable Housing in Columbia Waterfront & Red Hook**	Studio report presented to Council Member to acquire a proposed site for potential mixed-use light manufacturing/affordable senior housing development.	Internship position announced but not filled
Two Bridges CDC Manhattan CD3 - FA 2014 **Bridging the Waterfront: Recommendations for Two Bridges**	Studio recommendations incorporated into the mission statement and bylaws of the recently created CDC.	Student thesis on Resiliency Improvement Districts.
Brownsville Partnership BrooklynCD16 - SP 2015 **Brownsville: Opportunity and Strength in the Heart of Brooklyn**	Storm surge info and open space ratio finding helped BP make the case for more open space w/ funders, other partners. Food retail recommendation were most useful.	
Youth Ministries for Peace and Justice (YMPJ) Bronx CD9 – FA2015 **Strategies for affordable housing and economic and environmental justice**	YMPJ used inventory & analysis of vacancies. Some recommendations implemented (e.g. repurposing of the lot adjacent to ABC carpet to regain access to the waterfront).	A student intern at YMPJ during & after the studio and. Ongoing PSPD fellows
Concrete Safaris Manhattan CD11 - SP 2016 **Open Space Systems, Youth and in East Harlem**	Recommendations and research helped in developing CS's strategic plan, write grant proposals & support both with current facts.	

Table 3. List of Studio Projects, Outcomes and Continuity

All CBO partners found both the existing conditions analysis and the final recommendations useful. The ability to get the existing conditions report at that particular time gave us a current snapshot of the community. In particular, we have used a lot the inventory and analysis of vacancies – block and lot number and ownership information. The recommendations were also great. For example, the repurposing of the lots adjacent to ABC carpet to regain access to the waterfront is something that we have actively been bringing up in various discussions with the City and now may be able to achieve. (Director of YMPJ)

An issue that almost all community partners agreed on was that there was not enough time for more interaction and to follow through with the outcomes of student research and recommendations. Director of Two Bridges suggested, “You should come back with some of the students about a year later to evaluate the results of the studio project. Students should know how the product of their work was used.”

Interestingly, no one felt the semester schedule was a problem, but all wanted more continuity, a key challenge in service learning (Martin, et.al. 2014) They had different ideas about how continued collaboration with Pratt could be accomplished, ranging from structured follow-up internship positions to multi-year collaboration agreements. The Director of YMPJ had further ideas about community university collaboration: There are so many other things the university could do to help out... Universities need to be aware of how to increase local organizations capacity too. The reports are cool but are there other potential benefits that should be considered – like to train members of the community, too. What about trainings on how to do research and mapping with Google tools? Or training on what is affordable housing? What about computers or software? Can we even access to universities' academic resources for local youth who want to go there? Can young people be able to sit in on a class? These collaborations could be useful to create a pipeline to design or planning.

5 CONCLUSION

This paper considered the benefits and challenges of engaging students during their first semester in a studio project with a real client. The findings from the student and client survey indicate that the first semester course has been relatively successful in meeting its learning objectives. Not only learning the technical skills for plan preparation, but also working collaboratively in teams, dealing with uncertainties, and acquiring a strong sense of accountability to the community client, provided a foundation for their advanced interdisciplinary studios in the program, and as several students pointed out, later professional work. Almost all the students (96%) reflected that they benefitted in different ways from working with a community based organization. Working with Fundamentals students was a positive experience for the community partners, too. They were, at times, impressed with the materials produced. They could use the data provided in the existing conditions report in different ways. At times, it highlighted issues they had not considered before (especially in relation to potential disasters and impacts of climate change). The recommendations generated new ideas that went beyond the scope they expected. Presentations to the community (Community Boards, other CBOs, CBO's constituencies) and visioning workshops were useful in a number of ways. They provided useful information for the CBO, but were also important in bringing together stakeholder groups that often did not work together. The presence of an independent outside party provided a sense of neutrality, and eventually, some of the recommendations were refined and implemented in the neighborhood.

Continued engagement and support was the community partners' main concern, reflecting a key challenge in the community service-learning. Cameron, et.al. suggest that campus based community design or development centers, like the Pratt Center for Community Development, "help create a more permanent framework for community relations and service" (1998, 110). Still, there is need for coordination (as has been started through the GCPE Studio Group meetings) to conduct follow up studios, and administrative support (Martin et.al. 2014). Coordination between the internship course, fellowships, and some of the studios has led to the creation of internship positions linked to studios, enabling students to continue to work longer with the partner CBOs or in the communities.

Despite the unique advantages of the Pratt's planning program due to the legacy of the Pratt Center, engaging students early on, during their first semester, with a real client around a plan-making project is possible and important for introducing them to the challenges of professional practice and collaborative work, and helping them confront their values and consider future directions. However, it requires a seminar component to ground students in theory, a structured process to overcome potential anxieties and ensure satisfactory completion of the deliverables on time, and close collaboration with skills courses to enable a steep learning curve. A lot of faculty time and attention is needed to plan the studio process: to meet and discuss early on with the community-based client the goals, expectations, deliverables and meeting schedules, and to work closely with students, incorporating feedback and reflection sessions into the class schedule. Without community outreach and establishment of strong long-term relations and trust with community organizations, however, it is not possible to have effective dialogue and mutual learning experience in communities.

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T03 | SPACES OF DIALOGUE FOR ACTIVE, NETWORKED AND RESPONSIBLE CITIZENSHIP

CO-CHAIRS: CAMILLA PERRONE; ROBERTO ROCCO; LIA VASCONCELOS

Doreen Massey (2011) claimed space as the dimension of multiplicity: “If time is the dimension of sequence, then space is the space of contemporaneous existence. In that sense, it is the dimension of the social and therefore it is the dimension that poses the political question of how we are going to live together”.

Massey calls this ‘radical simultaneity’, in which stories, ongoing trajectories and multiple voices happen simultaneously. Space is, therefore, composed by relations, practices and interactions imbued with power.

Descriptions of types of space in terms of levels of interactions are frequent in literature, ranging from self-organisation to deliberative/participatory experiments, as well as contested practices and multiple uses, offering generous inputs to planning theory and practice. What emerges is that spaces, places and people need to be reciprocally interconnected through networking and responsible citizenship.

Massey’s concept of space challenges the simultaneity of multiple trajectories displayed in a variety of intertwined existences. It feeds increasing uncertainty about what we mean by 'places' and how we relate to them. At the same time, it triggers a deeper and broader reflection on how to foster spaces of dialogue that can enable contemporaneous co-existences, diversity and social citizenship.

Accordingly, issues like the right to the city, power imbalances, empowerment practices, do-it-yourself urbanism, urban insurgency, social and environmental sustainability and the idea of common goods focus on a certain range of socio-spatial and political issues contributing to enter the debate, feeding democracy.

In radical simultaneity, where some voices are much more powerful and arresting than others, the pursuit of socio-spatial justice becomes urgent.

ID 1371 | BRIDGING THE GAP BETWEEN CRITICAL THEORY AND EMPIRICAL STUDIES: A RELATIONAL APPROACH TO THE STUDY OF THE URBAN COMMONS

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1 INTRODUCTION

Since the unfolding of industrial capitalism, the institution of the Market, based on the logic of capitalaccumulation and commodification, has prevailed in the social space through the support of the institution of the State. Inreality, the State, on behalf of the Society, should have represented the institution which, through the logic of the Public, based on universalization and social protection, could have balanced and challenged the Market. However, it is evident thatthe State has not only been an inadequate institution for the protection of the Society, but has also often withdrawn fromthis role due to a bizarre, complex and intertwined relationship with the Market. The last decades of our history constitutethe evidence that the protective role of the State has waned, giving rise to the hegemonic, albeit variegated, neoliberal regime (Peck and al, 2012), whereby the logic of the Market has permeated into the institution of the State. In the face of this reality, that even the latest economic crisis does not seem to have changed, despite the many urban protests which emerged invarious parts of the globe and in the wake of the failure of the communist utopia and if the post-politicization of the Leftthat has finally assumed the same Market logic, the Society seems to be out of alternatives. However, in this apparentlycatastrophic economic, social and political landscape a new logic has emerged in the contemporary counter-hegemonicdiscourse: the logic of the Common (Negri; Hardt, 2009; Laval; Dardot, 2014). This logic, based on two main principles, cooperation and self-government, aims to challenge not only the institution of the Market but also the intertwined relationbetween the latter and the State in order to put in motion a process of emancipation of the Society from both. The theoryof the Common derives from and connects to the theory of the Commons as the principles on which both are based arethe same. However, despite their close relationship, it is necessary to separate the two theories, especially in the light ofempirical work.

The Common is interpreted has as a political strategy of the radical Left, able to articulate the fragmented yetexisting antagonist struggles in order to institute the Common. This strategy is based on the claim, the production and thereproduction of the Commons that becomes the means through which the logic of the Common can be expanded. Nevertheless, as some scholars have shown, the critical theory of the Commons lacks an empirical approach (Hurton, 2015), preventing the effective understanding of the emancipatory capacity of these practices, that is to institute theCommon. This paper aims to contribute to filling this gap, by setting the analysis in the urban context.

The paper starts by explaining the critical theory of the Common and the Commons, their relation and theirdifferences, underlining the lack of an empirical approach. Secondly, by assuming that within the city, Urban Commonscannot exist in their pure autonomous forms, the paper proposes a comparative methodology based on a relationalapproach whereby Urban Commons have to be studied in relation to the institution from which they aim to outlineemancipatory processes: the Market and the State. By drawing from a case study of Urban Commons analyzed in the city ofBarcelona, an industrial factory occupied by a group of artists, the paper sustains that only by unveiling this interfacebetween the Urban Commons and the Market and the Urban Commons and the State it is possible to grasp theircomplexity and envisage their true emancipatory power, understanding how they are formed and how they are maintained. The paper concludes by reflecting on the emancipatory capacity of the Commons and the tension between the logic of the Common and the logic of the Public.

2 FROM THE COMMON TO THE COMMONS AND VICE VERSA

The critical theories of the Common and the Commons are closely linked since, in both cases, they are based onthe organizational principles of cooperation and self-government, and since in both cases they aim to design a path ofemancipation of the Society from the institutions of the Market and the State. However, despite seeming like Siamese twins, these two theories are actually two separate bodies which we are required to disjoin, especially in the face of empiricalimplications. The logic of the Common was presented for the first time in “Commonwealth” by Negri and Hardt (2009)and successively in “Commun. Essai sur la revolution au XXIe siècle” by Laval and Dardot (2014). Despite thedissimilarities of their approaches, based on the meta-level on the more or less spontaneous operationalization of theconcept, and on the micro-level, on a myriad of semantic differentiations, their thesis converges on the objective and thefunction of the concept of the Common in the political discourse through which all the fragmented, dispersed, yet existingantagonist historic struggles can be articulated. In this sense, their convergence-despite-the-differences, represents the firstevidence of the articulation capacity of the concept of the Common. According to their theory, the Common is a politicalprinciple (Laval and Dardot, 2014) and a project (Negri and Hardt, 2009) that enables the resistance forces of the Societynot to stay in the resistance but to go beyond, through an emancipation (Laval and Dardot, 2014) and liberation (Negri andHardt, 2009) process capable of producing a rupture with the spatial established order and create an alternativeconfiguration of the space. This alternative configuration can be achieved by questioning, challenging and redefining thespace occupied by the institution of the Market and by the State, by instituting (Laval; Dardot, 2014) and constituting (Negri;Hardt, 2009) the Common (Laval; Dardot, 2014). In this perspective the Common is not only a synonym of cooperationand self-government but also it becomes the same objective of the cooperation and self-government (Negri; Hardt, 2009).

The way through which the institution and the constitution of the Common is achieved is the main difference in the twoworks due to two different epistemological approaches, the one of Negri and Hardt following the Marxist historicalmaterialism tradition and the other of Laval and Dardot following the Proudhonian associationism tradition. However,independently from its operationalization, what the two approaches shared is that the institution and the constitution of theCommon takes place in the terrain of the practice. It is on this terrain that the theory of the Common connects with thetheory of Commons.

The theory of the Commons developed before the theory of the Common and it could be sustained that thelatter is an evolution of the former. The theory of the Commons was developed within the new institutionalist studies withthe ground-breaking works of Elinor Ostrom whose merit was to demonstrate that the collective management of differentresource systems, both material (1990) and immaterial (2012), not only were possible, but also represented a valuablealternative to the State and the Market. Her contribution had the aim to break that public/private dichotomy that had beenso dear to the Western economic-political culture of the twentieth century. Although her work was far from being criticalbecause she never questioned the capitalist mode of production nor the social, economic and spatial injustice produced byit, her contribution was crucial to opening up a new space of economic-political theory in a time when that intertwinedrelation between the State and the Market became stronger than ever. The space for new critical theorization was occupiedby a variety of scholars, starting from the De Angeli (2013) and Caffentzis and Federici (2013) to Harvey (2012) and Mattei (2011, 2013). According to their interpretation, the Commons are constitutive (and institutive) practices of struggle based onthe cooperation and self-government that demonstrate that autonomous non-capitalist forms to produce and reproduce lifeare possible beyond the logic of the State and the Market. In this case, there is no emphasis, as in the case of Ostrom, onthe mere collective ability of a community of individuals to self-govern a resource system, but on how the process ofcollectively self-governing a resource, material or immaterial, is an emancipatory practice that resists and challenges thattension of appropriation and commodification of the Market, but also the tension of absorption and transformation into abureaucratic and homogenous State form. In this way, the practices of struggle represented by the Commons become ameans through which the Common can be instituted and constituted.Concretely speaking, the Commons are built when a social relation (Caffentzis and Federici, 2013; Harvey, 2012; Mattei, 2011; Stavrides, 2015), although unstable and malleable, is built between a self-defined social group and an aspect ofits social and physical environment deemed crucial to its life and livelihood (Harvey, 2012). By focusing on the cruciality ofthe social relation, which is objectified in the struggle, the Commons aim to cast our eyes on the necessity of recovering theownership of the condition needed for life and its reproduction (De Angeli, 2013) and of re-establishing fundamental rights(Marella, 2012), collectively claiming them back. However, it is very difficult for this relationship to be stable and completelyseparate from the context, as the Commons coexist with a

myriad of other private and public forms of ownership andgovernance (Chatterton, 2016). As Stavrides (2015) argues, "we need to abandon the view that fantasies on uncontaminatedenclaves of emancipation," also because the emancipation of a single group can no longer be considered emancipation but abounded production and reproduction of social, spatial and economic equalities with the consequent production andreproduction of inequalities outside the boundaries of the group. For this, what characterizes Commons is not only thesocial relationship between the group and the resource, but also the social relation with other institutions that make itpossible for the Commons to be constituted. In other words, the Commons are not only a social relation but a relational socialrelation since the Commons cannot exist in their pure form.

However, the existence of Commons does not necessarily imply the production of the Common. If theCommon is an immanently positive concept in the critical sense of the term, as it was born as a cooperative force opposedto commodification force of the Market, the Commons are not, and for them to be so, they must meet certain conditions.First of all, the relation between the members of the self-defined social group must be as horizontal as possible, as well as itsdecision-making process (Harvey, 2012). Secondly, the relation between the social group and the resource must imply anon-commodification - off limits of the same resource (Harvey, 2012). And last but not least, the relation with the rest ofthe Society must be a porous relation, so that the Commons do not become elitist enclaves outside of which social, spatialand economic inequalities are produced and reproduced, but so that they become the means through which a universalemancipation process can happen, by overstepping the boundaries of the self-defined social group (Stavrides, 2015). Inother words, despite the great emancipatory potential of the Commons, it is not easy to materialize this emancipation.However, despite the abundance of literature on the critical theory of the Common and the Commons, there is a shortageof literature that empirically investigates the true possibility for the Commons to give form to emancipatory processes, thatis, to institute the Common. In other words, the critical theory of the Commons lacks an empirical approach (Hurton,2015), preventing the effective understanding of its emancipatory capacity. This paper aims to contribute to filling this gap,by setting the analysis in the urban context and by studying within this context the relation of a self-defined social groupwith a particularly contested resource of the city, which is land.

3 THE URBAN COMMONS

The Commons have become the subject of theoretical speculation by many critical urban scholars who see inthe urban space a privileged space for the anti-capitalist struggle (Lefebvre, 1970; Harvey, 2012; Stavrides, 2015; Chatterton,2016). The continued unbridled urbanization of our globe with the increase in the urban in relation to the rural population,as well as to the strong politicization of urban space, mainly due to the great manifestations and occupations that urbansocial movements developed in this context, has led to a growing academic interest in the urban. Startingfrom Lefebvre (1970), who was the first to reflect on the urbanization of the world and to argue that the revolution wouldhave been urban or would not have been, to Harvey (2012), who sustains that reclaiming and organizing the city for anticapitalistruggle is a great place to start, many authors have been struck by the fascination of the urban and its revolutionarypotential. However, beyond the fascination, the emergence of the urban is also due to the change of capitalist production inthe Western world. As sustained by Negri and Hardt (2009), if during industrial capitalism, the factory was the privilegedspace for class struggle, being the place of production, of the encounter of workers and of their rebellion, now this privilegecan no longer be attributed to this space. The current change in the capitalist mode of production has transcended thefactory to invade all the urban territory and so has the struggle. For this reason, they argue that the metropolis is for themultitude what the factory was for the working class. In other words, the urban space is considered to be a privileged spacefor anti-capitalist struggle where the Commons can become an instrument of this struggle. However, if cities offer aprivileged ground for the claiming, production and reproduction of the Commons, they also represent a hostile ground.

Cities, and the production of space, have always played a key role in the capital accumulation process (Lefebre,1970; Harvey, 2012). Cities embody the essence of capitalist production on which a major part of the same production isbased, through urban expansion and speculative land-use. In many of his works, Harvey has given evidence for the crucialrole cities have played in the uneven development of capitalism, underling the relation between capitalism, wealth and urbanexpansion as in the case of the United State's golden age as well as the one China is now undergoing. Moreover, heprovided evidence of how the city has been crucial for the rescue of capitalism itself during its many surplus-based crises,with the absorption

of surplus production into the urban development. The crucial role of cities in capitalist history is alsomaintained and legally legitimized by a series of regulatory devices, primarily the modern urban planning (Tafuri, 2007), supported by the institution of the State. In other words, cities are a socially constructed environment shaped to favour theaction of the Market with a broad support of the State. From this it follows that cities, being privileged spaces of capitalaccumulation, enshrine that constant tension to the commodification of resources that the market needs. This is particularlytrue in relation to one of the most valuable resource that cities have, which is land. In this saturated space of both capitalinvestments and people (Hurton, 2015) every single space of the city enters the competitive logic of capitalism, where thereis an over-competition and an over-pressure to the use of the space. This is the reason why, the claim, the production andthe reproduction of the Commons in the urban environment, especially if one of the resources in question is land, could bea much more hostile process. However, the hostility mustn't become a deterrent to the study of the Commons in the urbancontext. Studying their claiming, production and reproduction in this capital-shaped and hostile space is essential tounderstand the conditions and the limits of the Urban Commons to be truly emancipatory practices.

4 A METHODOLOGY FOR THE URBAN COMMONS

As we have seen, the critical theory of the Commons and the Urban Commons is supportedby abundant literature. All of the literature places great emphasis on the emancipatory capacity of the Commons, but it isdifficult to find empirical studies that materially respond to this emancipation, firstly because there are still few empiricalcontributions being made, and secondly because they start from specific research objectives: some research has beendedicated to the qualification of the Urban Commons (Hurton, 2015), some research focuses on defining limits andchallenges (Bresnhian and Byrne, 2015) and some research studies the organization of resistance (Bunce, 2016). The result isthat the shortage and fragmentation of the empirical contribution is still not able to substantially back-feed the theoreticalcontribution. The aim of this paper is to try to bridge the gap between critical theory and empirical study by proposing anempirical approach to the study of the Urban Commons that can help in the construction of an empirically-based theory oftheir emancipatory capacity, that is to say on their capacity to institute the Common.This empirical approach stems from the same ontology of the Commons, that is their relational nature. Thisnature is even more evident in the urban context where economic and demographic saturation and over-pressure and overcompetitionon a strongly State-regulated space make it impossible for Commons to exist in their pure form. For thisreason, the empirical approach that this research proposes is a relational approach to the study of the Urban Commons,whereby the object of the study becomes the nature of the relation between a self-defined group and a social or physicalresource and the nature of the relation between the former relation and the main institutions that dominate the social space,which are the State and the Market, that are also the same institutions from which they aim to emancipate from.

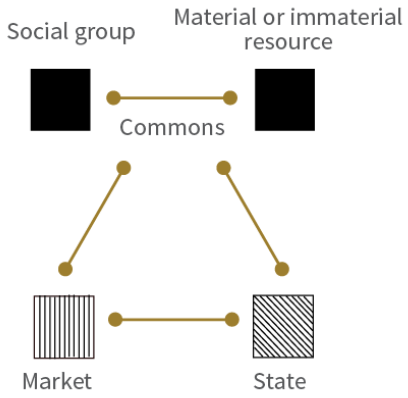

Figure 1:The relational approach to the study of the Urban Commons

Normally, the relational nature of the Commons is a fact that emerges as a result of empirical works, when the type ofalliances a Commons builds to sustain its survival or its partial institutionalization through the integration into publicprogrammes are finally shown (Hurton, 2015; Bresnhian and Byrne, 2015; Bunce, 2016). However, what is argued here, asalso confirmed by the work of Chatterton (2016), is that in order to understand the process of emancipation of theCommons, their relational nature, and therefore their non-pure-self-governing-form, can not simply be the result of aninductive work but must be deductively considered as a postulate of the research itself and as a guide for the entire empiricalwork. In order to show this methodology, this paper uses the case of an artists' self-governed space that developed in postindustrialBarcelona in the late 1990s. The relational approach is firstly used to define through which

web of social relationsthe Urban Commons takes shape and to what extent this web is capable of producing the Common; and secondly toanalyze what the threats and the limitations of these relations are and weather they could be maintained over time.

5 THE CASE OF THE ESCOCESA ARTS FACTORY

THE URBAN COMMONS

The Escocesa Urban Commons is the expression of a social relation established between a group of artists and aprivately owned industrial warehouse of 7500 square meter, called the Escocesa, located in the Pere IV street of thePoblenou, the former industrial district of Barcelona. The industry in place since 1885, officially terminated its operations in1998. After one year, the factory began to be rented by creative professionals. At the beginning, they were around 12-13artists. Generally, the relation built between the owner and artists was based mainly on mutual advantage. Artists couldbenefit from affordable renting prices of wide industrial spaces in a rather central area of the city and the owner couldbenefit from a low but constant profit in a time when these spaces were otherwise unprofitable. As time passed the numberof artists grew steadily. By the end of 2006 there were around 75 artists among which were painters, sculptors,photographers, circus performers, etc. During this period, the Escocesa was self-governed and self-sufficient. Selfgovernmentwas rather elementary, as artists had to share little, mainly the bills, and only few decisions had to be takentogether, principally concerning the realization of shared arts events within the Escocesa and shared events with other artsspaces of the neighbourhood. Self-sufficiency must be understood in the sense that the artists' social group of the Escocesawas not receiving any type of public funding as a group and each artist was paying the rent separately. This means that, theeconomic sufficiency differed from case to case, with some artists who were more and some who were less economicallyself-sufficient.

However, the Escocesa was not an isolated case. In those years, the Poblenou, suffering the decline of industrialactivities, was an undervalued area due to the financial disinvestment by banks and real estate developers and the laissez-faireapproach of institutional power. This is why, from the 1970s onwards many artists' groups settled in the area, using theformer industrial factories as work spaces. During that period, in which no other social group and no other economic andinstitutional actors were interested in these properties, artists represented the only ones. As a result, the artists' concentrationin the Poblenou grew to the point where it was identified in the literature as an unplanned creative milieu (Martì-Costa andPradel, 2011) as many others taking place in former industrial districts in western cities (Zukin and Braslow, 2011). Therearen't any institutional statistics available, but according to artists' associations (CVAA, 2007) by the end of 2006 in the Poblenou there were 232 artists and 12770 sqm of studios spaces. The Escocesa and the Poblenou creative milieu grewwithout any institutional planning, but only through the relation between the artists' need for affordable spaces, on the onehand, and landlords' profitability on the other.

The relation that all of the artists had with the Escocesa warehouse was based mainly on economic interest.Artists needed a space to work which had some specific characteristics, such as wide-open areas, an abundance of naturallight, affordable renting prices and proximity to the city center, and the industrial site of the Escocesa met all them.Obviously, for young, unsalable and low-income artists the relation of economic interest was a relation of necessity sincewithout access to affordable spaces, they could no longer afford to carry out their arts activities. Nevertheless, in addition tothe economic reason, some artists also began to develop an identity relation with the Escocesa and the Poblenou creativemilieu, since it made them feel as they were an integrated part of that neighborhood. This is why the Escocesa UrbanCommons can not be considered separate from the unplanned creative milieu of Poblenou as it was precisely because ofthis dense network of self-governed arts spaces that the Common was produced.

THE COMMON

The Common referenced in this case is the democratic, diverse and decommodified arts production,autonomous from market and political pressures. In the case of the Escocesa and of the Poblenou creative milieu, thedemocratic, diverse and decommodified arts production was due to the affordable access to space. If generally only thosewho can afford the uncertain economic stability of this

discipline can attempt this professional path, in this case young,unsalable and low-income artists could also find a workplace in the Escocesa, or in other arts spaces, and produce art. Inthis way, artists were keeping their creativity free, without feeling the pressure to highly commodify their arts or to fully meetthe need of the art market or to be constantly in search of public funding, maintaining a sort of collective independencefrom public patronage. Nevertheless, despite the fact that affordable access to space was helping to democratize, diversifyand decommodify art production, and to maintain artists' creative freedom, the democratization, diversification anddecommodification could only be partial, since it couldn't guarantee access to space to all of those more than young, lowBridging income and unsalable artists. This is why, it would have been ideal to compensate the production of the Common with aproduction of the Public, whereby the universal logic, by providing access to affordable space to those more than young,low-income and unsalable artists, could have reduce the imperfection of the logic of the Common.

THE THREAT

The Barcelona City Council, governed in those times by the left-wing Catalonia Socialist Party, played a leadingrole in the land revalorization process of the Poblenou through the implementation of a pro-growth land-use reform basedon the notion of the knowledge city - the 22@ Plan approved in 2000. The 22@ aimed to transform almost two-hundredhectares of the old industrial area of Poblenou, into a knowledge area, mainly ICT-driven, with the mixed uses of housing,economic activities and social facilities. In order to achieve these goals, the 22@ Plan used the Barcelona model, but with amore market-oriented approach. Thus, if, on the one hand, for each 100 sqm of private redevelopment, the publicadministration retained 31 sqm of the land, of which 18 sqm was to be dedicated to green zones and 10% in public facilities,on the other hand, it increased the construction rate from 2 sqm/sqm to 3 sqm/sqm without limiting the height ofbuildings. Furthermore, if on the one hand, the plan provides 100% of some sort of social housing of which 25% was to berented, on the other hand, it also allowed for the reconversion of factories into lofts to be sold on the market at marketprices. However, although knowledge (and thus culture) was the driving principle behind the transformation, the presenceof the unplanned creative milieu was not taken into account when the plan was drafted. The Urban Planning Departmentconsidered the Poblenou merely as an area characterized by a "functional obsolescence" (Barcelona City Council, 2010). Inthe Plan, the many vacant factories, together with those ones occupied by artists, were only considered to be disusedarchitectural artefacts, symbols of the economic downturn where all artists' social groups were not considered productiveagents, but rather only a further demonstration of the economic obsolesce.

With the approval of the 22@ Plan many redevelopment projects began and land value increased (Martì-Costaand Pradel, 2011). Many artists' workshop started to come under threat and disappeared, progressively moving somewhereelse, mainly towards another undervalued former industrial area: the Hospitalet de Llobregat. A few years after the Plan'sapproval, the Escocesa also became threatened. At the end of 2005 the factory was bought by RentaCorporación S.A, a Spanish real estate company. The plan they have for the Escocesa was to redevelop the factory, reforming the existinghousing along the Pere IV street, converting the rest into lofts and handing over the remaining 30% (two warehouses) tothe City Council for public facilities, as established by the 22@ Plan. The Escocesa redevelopment was approved and made public in March 2007. As soon as Renta Corporación S.A. bought the factory, it started to offer economic compensation toartists to facilitate their departure. Since each contract was subject to a specific negotiation, many of them accepted the indemnification and moved somewhere else. Only a reduced number of artists decided to remain until the end of their contracts refusing the compensation and campaigning against the redevelopment project.

THE STRUGGLE

Artists who decided to stay and to struggle in the Escosesa were few, around 15 people. This group was formedmainly by those young, unsalable and low-income artists who couldn't afford to pay higher rent for a studio space and bythose more or less affluent ones who had developed a strong identity relation with the space. Thus, in order to facilitate institutional negotiation, they gather into the Emma Ideas Association (EMA). When the Escocesa redevelopment project was made public, the EMA association presented a project to the ICUB, the Cultural Institute of Barcelona, in order to takeadvantage of the possible transfer of facilities space to the City Council. They proposed that the Escocesa become a not-forprofitcultural center

managed by the EMA Association to experiment, produce and spread fine plastic arts, where selfsufficiency would be provided by the members' fees and by the renting out of some studio spaces (EMA, 2007). Eventually, the EMA association managed to remain in the factory, saved thanks to the intervention of the City Council which acquiredthe two warehouses and included them in the Arts Factories Programme. However, most of the self-governed arts centersunder threat didn't benefit from the same institutional help and disappeared from the Poblenou.

THE PUBLIC LOGIC TO SAVE THE COMMON

The objective of the Arts Factory Programme (AFP) was to support existing and new creative activities byretaining affordable spaces in Barcelona for artists and creative professionals through the provision of a network of publicarts factories with different artistic specializations, assigning to arts companies or association or groups the management ofthese spaces. The Programme was part of the new Strategic Cultural Plan of 2006 that represented a shift in the culturalpolicy approach of the Barcelona City Council and the ICUB from an entrepreneurial towards a more democraticunderstanding of culture. In the words of a public officer who contributed to its drafting, the new Plan looked at culture"not as a commodity to foster economic development, but as a right, stating that everyone can benefit independently fromits possible commodification and from its status". Through the AFP programme, it seemed that public institutions hadunderstood how the provision of affordable spaces was relevant to guaranteeing a fully democratic, diverse anddecommodified artistic production. Spaces included in the network had to follow four main principles. Firstly, they had tobe in the public interest. This means that the artists' accessibility had to be guaranteed by an open and transparent selectionprocess allowing the rotation of artists. Secondly, they had to pursue cultural and artistic interests, giving spaces over toexperimentation and innovation, while also sustaining artistic excellence. Thirdly, they had to develop a territorial dimension,forming a relationship with the neighbourhood and offering cultural services to promote social cohesion. Lastly, they had tobecome spaces for technological innovation in the creative sector. Moreover, all factories, by being included in the networkwould have to be publicly funded, so that the economic sustainability of each factory would not be a crucial dimension, buthad to be assessed on a case by case basis according to the management system of each space (Barcelona City Council,2007).

The first stage of the plan was characterized by the researching of public industrial buildings across the entireBarcelona area that could be incorporated into the network. The Escocesa factory resulted in the first selection, butsurprisingly it wasn't considered for its existing creative activity, but only as an industrial artifact that met architecturalrequirements (Barcelona City Council, 2007). During this first phase, another six factories were included intothe programme: Fabrai Coats, La Central del Circ, Hangar, La Seca, El Granerand Ateneu Popular de NouBarris, ofwhich only Hangar was a former Poblenou arts center. Some factories were long-standing self-managed arts spaces, so theywere allowed to remain being managed by the same associations, while other factories were entrusted to differentorganizations, each one representative of a specific artistic sector. The second phase of the AFP involved the architectonicrenovation of all factories. Once the renovation was about to be terminated, each factory could finally become part of thenetwork and start to receive public funding in order to become a fully functioning Arts Factory.

THE ESCOCESA URBAN COMMONS WITHIN THE PUBLIC LOGIC

According to the 22@ Plan regulation, the 1st of January of 2008, two warehouses of the Escocesa estate weretransferred by RentaCorporacion S.A. to the ICUB to be used as public arts facilities. However, as the ICUB did not yethave a clear idea of the type of artistic specialization which the two buildings could accommodate, and since it wasn't awareof any other arts associations to entrust them to, it decided to take advantage of the presence of the EMA association bywelcoming their claim to manage the building. The same month, one of the two warehouses was temporarily entrusted tothe EMA association. The other warehouse, the function of which had yet to be identified, remained in the hands of theICUB. The rest of the estate was still in the hands of RentaCorporacion S.A which had however temporarily stopped theredevelopment project due to the crisis. According to public officers, the temporary entrustment was due to the fact thatEscocesa was not recognized as a long-standing self-managed creative space, as in

the case of Ateneu de Nou Barris andHangar because the EMA association wasn't an association with a long-standing tradition of social and/or cultural activismand it couldn't rely on a well-structured arts project.

The contract signed between the ICUB and the EMA association established that one of the two warehousescould be managed by the association until the renovation project of the building had taken place. From that moment on,the arts project of the Escocesa factory had to be re-discussed and a public call had to be done to assign the management ofthe arts project. This didn't prevent the EMA association from presenting itself and winning the call. However, in the eventthat the EMA had won, the association members would have to leave after two years in order to provide a completerotation of its artists, for the sake of the public, the cultural and the artistic interest, guaranteeing its open accessibility anduse. Thus the ICUB temporarily saved the social relation of Escocesa' artists with the factory, not because it recognized therelation of interest and identity of artists with the space, but only because of a temporarily lack of planning that should havesoon been overcome. However, the temporary status of the Escocesa factory never ended and became structural.

In 2010 refurbishment works began in all the factories. The Escocesa was the only one in which therefurbishment works didn't begin. The reasons given by public officers were that in those years of economic crisis, in whichthe municipal budget shrank in all areas, the AFP didn't have enough resources to carry out all of the works. Thus, it had toprioritize some projects and on this list of priorities, the Escocesa was the last one. However, a small amount of funding wasallocated in a timely manner to secure the building, as it was already operating as a sort of public arts center, albeitimperfectly. In those times the Escocesa, became a not-for-profit arts center self-managed by the EMA association,organizing a variety of public arts and training activities and offering access to some of their studio space for temporaryartists through public calls in order to economically sustain the project.

As soon as the refurbishment works were completed, all of the other factories were incorporated intothe programme as fully functioning Art Factories and they began to receive a constant public subsidy. Thus the Escocesawas the only factory that, since it didn't undergo the refurbishment works shouldn't have been entitled to funds, since itcouldn't be considered a fully fledged Art Factory. However, the Escocesa was part of the programme and it wasfunctioning as a sort of imperfect public arts centre. Thus, in order not to leave the Escocesa in a particularly disadvantagedposition the ICUB decided to transform the timely allocation into an annually-renewed contribution. In the beginning, theamount of the contribution was small, around 4000-5000 Euros, but it progressively increased over the following years.However, the funds were much lower in comparison to others factories. This precarious condition created by thepostponement of refurbishment works and the reduced amount of public funds has characterized the Escocesa up torecent times.

THE EFFECTS OF THE PUBLIC LOGIC ON THE ESCOCESA URBAN COMMONS

Being part of the AFP and being a publicly-funded, albeit imperfect, arts centre implied progressive structuralchanges in the Escocesa. Firstly, the relationship between the Escocesa and ICUB changed. The latter, in order to justify itsinclusion in the programme and the direct investment of public money began to be more demanding towards Escocesaespecially in relation to its compliance towards public and cultural interests. Two of the demands were the most pressing:the realization of as many public activities as possible and the rotation of as many artists as possible, reducing the number ofpermanent artists in order to guarantee an open access of the centre to creative professionals. Secondly, the internalmanagement changed. Artists involved in the management of the Escocesa, especially the president of the EMAassociation, were no longer able to carry out his/her art project. The management entailed such an amount of work that itcould not be carried out during an artist's free time, but rather required a person to be contracted full-time. Thus, at the endof 2011, the association decided to hire a manager through a public call, dedicating a part of its budget to this newadministrative role. Despite the fact that the manager was appointed by the same EMA association he was seen as a sort ofrepresentative of the public institution, since he strongly pushed for the Escocesa to satisfy the public and cultural interests.From 2011 onwards, the AFP was marked by a major cultural policy change. In this year municipal elections were won for the first time in Barcelona, by a conservative party, Convergence and Union. The new government set a newcultural agenda, also effecting the AFP design. The new guideline for the programme represented a shift towards a marketorientedcultural approach, whereby the Arts Factories had to be frontline arts centers in order to contribute to the city'scultural internationalization and professionalization (ICUB Report,

2011). In relation to the Escocesa, the ICUB becameless tolerant of its precarious conditions because they did not allow the factory to achieve the new objectives. However, asthe ICUB could not sand away the EMA until the renovation works had been done, while not having any intention ofactually carrying them out, it began to put the artists under pressure, pushing for an internal collapse of the Escocesa byunderfunding the project while over-demanding results.

During these years, public funds increased, reaching around 40.000 euros from 2013 onwards. Nevertheless, thiscontribution was still the lowest in comparison with other factories. This situation made all of Escocesa's artists feeldiscriminated against by the public administration and always in competition for funds with other factories. Theunderfunding also caused many social tensions among the same Escocesa artists. Since a part of the resources could financeart projects of both permanent and temporary residents, the result was that especially young, unsalable and low-incomeartists, for whom a little contribution meant a lot, were struggling for an extremely limited budget. Moreover, theunderfunding also increased the tension among artists and workers. In order to be positively evaluated by the AFP and toreceive more funds, the Escocesa had to maintain a high level of performance, but with inadequate resources, relying on theoverworking and the exploitation of both artists and the manager.In reality the reasons for all of these tensions are rooted in the protraction of the precarious condition created bythe postponement of refurbishment works and the integration of the Escocesa into the AFP as an imperfect arts factory.

Due to the lack of realization of the works, the artists were paying the for the effects of an non-compliance of the ICUB,which was implicitly recognized by the ICUB since the underfunding can be interpreted as an admission of noncompliance.This was also the reason why the relation of the permanent artists with the space changed. Since there was noprospect for the works to be carried out, the temporary privilege of permanent artists that were retaining a studio space farbelow the market standards was becoming more and more a consolidated privilege. This is why, no movement wasdeveloped among artists to press the ICUB to start the renovation works. Retaining the affordable studio space in such acentral location of the city and benefitting from the public funds for their art projects was an extremely advantageoussituation that none of the artists sought to change. The attempt to protect the privilege on spatial resource of permanentartists along with the tension in the struggle for the monetary resources among all artists caused the collapse of the Escoceseas it had been expected by the ICUB.

In September 2016, the artists of Escocesa decided to fire the manager. This decision was officially taken after amajority vote of the Assembly but it was heavily pushed for by a group of permanent artists, who saw him as a threat totheir privilege on the space. The dismissal of the manager can be seen as the last desperate attempt by some artists tomaintain their affordable studio space, by stopping the transformation of the Escocesa into a fully Arts Factory. However,this operation, far from achieving its objective, contributed to worsening the tension among artists and to legitimizing theICUB's view of the factory, which played a leading role in its future transformation. At the moment, the Escocesa is in atransition period where the assembly presidency has changed, handed over to one of the artists who had good relations withthe ICUB and in which the latter, despite its non-compliance, is leading a progressive transformation of the Escocesa tobecoming a fully frontline Arts Factory: with many public arts activities and with the rotation of all of its artists. Being publicproperty, and given the fact that the AFP was a consolidated programme of the ICUB, the artists no longer had anylegitimacy to maintain their relations with space, especially in the re-valued, saturated space of the Poblenou.

DISCUSSION

Before the Escocesa became part of the AFP, it could be considered an Urban Commons as it was rather selfsufficientand self-governed. Moreover, the Escocesa, together with other creative factories of the Poblenou creative milieu,was contributing to producing the Common, that is, a more diverse, democratic and decommodified arts production, freefrom market and political imperatives although the diversity, democratization and decommodification were only partialbecause it could exclude all those more than unsalable, young and low-income artists. In this sense the logic of the Publiccould have compensated the logic of the Common, reducing its imperfection. However, the existence of the EscocesaUrban Commons and the Poblenou creative milieu depended on the City Council and private sector's lack of interests andinvestments in the area that undervalued land prices. Once the City Council and private sector's interest and investmentsincreased, highly planned by the 22@, the days of both the Escocesa and the

Poblenou creative milieu were numbered. Theresult was that the autonomous creative factories disappeared from the Poblenou and moved to other under-valued postindustrialareas, such as the Hospitalet de Llobregat, where the same type of Urban Commons can currently be found andthe same type of Common is produced. The Escocesa Urban Commons was saved only thanks to the intervention of theICUB. The public ownership was the only guarantee to save the Escocesa at the cost of its inclusion in the Arts FactoryProgramme.

This AFP programme was born with the intention of producing, protecting and compensating the imperfectionof the Common produced by the Escocesa and the Poblenou creative milieu, through the logic of the Public, by universallyproviding affordable creative spaces to arts professionals. However, in its operationalization it was neither able to produceand protect nor to compensate the imperfection of the Common. The ICUB didn't protect the Poblenou creative milieuand it saved the Escocesa only because of a lack of planning. The emergence of autonomous creative factories and theproduction of the same type of Common moved to more marginal areas and Escocesa could not be considered an UrbanCommons anymore, since its management and sufficiency was no longer autonomous from state power and it was nolonger producing the Common. Under the Public logic, the diverse, democratic and decommodified arts production of theEscocesa and the Poblenou creative milieu had been distorted, confined within a spectrum of arts excellence and marketimperatives. In other words, the AFP became the expression of the intertwined relation between the State and the Market,where the intervention of the State, despite with the logic of the Public should have protected, produced and compensatedthe imperfection of the Common was not able to do so. The current state of the Escocesa is the materialization of thedegeneration of the conflictual relation between the Common and the Public. Certainly, the Public logic in the name ofuniversality must guarantee open and democratic access to all. In this respect, the defense of the interest of permanent artistson the space represented the defense of the interest of a particular collective on a universal space. However, it is also the lastdesperate attempt of a group to defend that crucial social relation with the space and the memory of the production of theCommon once possible, against the total disruption by State intervention and Market forces despite, in this case, the defenseof the Common meant the closure of the group inside on its own privilege, inside the Urban Commons.

6 CONCLUSION

Surely the Commons can be a means to institute and constitute the Common. However, the theory of theCommons lacks an empirical approach that allows evaluating their emancipatory capacity. This paper aimed to bridge thisgap by proposing a relational approach to the study of the Commons that reflects their relational nature. This methodologyis applied to the analysis of a case study of Commons in the urban space of Barcelona. Through this approach is possible 1)to build the network of relations that made possible the Urban Commons; 2) to understand if the Urban Commons wasproducing the Common; 3) to analyse how a change in these relations impacts the Urban Commons and its emancipatorycapacity. From the analysis of the case-study it emerged that the Urban Commons and the Common need the interventionof the State and the logic of the Public. The former because, under the pressure of the saturated space of the city, publicproperty becomes the only salvation; and the latter because, the Urban Commons was producing an imperfect Commonthat needed to be compensated by the logic of the Public in order to guarantee universality and democratization. However,the intervention of the State, with the logic of the Public permeated by the logic of the Market, has led to a deterioration ofboth the Urban Commons and the Common, which can no longer be regarded as such. The paper concludes sustainingthat the emancipatory capacity of the Urban Commons cannot rely only on the logic of the Common but needs also thelogic of the Public. However, the latter, highly permeated by the logic of the Market, instead of protecting, producing andcompensating the logic of the Common produced by the Urban Commons, often limits its emancipatory capacity.

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ID 1379 | CHALLENGING PERIPHERALITY THROUGH ACCESS TO THE INTERNET? SOCIO-SPATIAL PRACTICES OF THE CONNECTED RURBAN

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1 ACCESS TO THE INTERNET IN MARGINALISED COMMUNITIES: THE RURBAN STANCE

Specially in the last two decades, the widespread of the internet has had profound impacts on howspace is organised and experienced, reinforcing the importance of Information and CommunicationTechnologies (ICTs) in its production. While enough attention is being paid to our cities, limited studies onthe impact of internet on the countryside reflect a neglect of specific demands and needs of the ruralpopulation, with the risk that the rural continues to play catch-up with the urban (Craig and Greenhill, 2005).

The prevalence of an urban approach is further explained by the blurring of urban-rural boundaries broughtby an extended urbanisation (Brenner and Schmid, 2012; Monte-Mór, 2005).

The foundations of extended urbanisation discussion were laid by Henri Lefebvre in the 1970s,when he anticipated a complete urbanisation of the society that would lead to the "homogenization of spaceand the disappearance of diversity" (Lefebvre, 1989, p. 23), and culminated with the assertion that, ifsuccessful, the planetarisation of the urban would render the deconstruction of capitalism unviable (Lefebvre,1989). As such, it would render the categories that conform bounded territories and their oppositions, such ascity-countryside, inadequate to describe the pervasive encroachment of capitalism.

For Neil Brenner and Christian Schmid (2012, p.12), "while the process of agglomeration remainsessential to the production of this new worldwide topography, political-economic spaces can no longer betreated as if they were composed of discrete, distinct, and universal 'types' of settlement". They challenge the"existence of a relatively stable, putatively 'non-urban' realm as a 'constitutive outside' for its epistemologicaland empirical operations" (Brenner & Schmid 2012, p. 13). Discussing the existence of a rurban—transitionalterritories where urban and rural elements mingle and challenge one another—would be simply ineffective.

Questioning the authors' position, Kate Shaw (2015, p. 591) underlines that "while the urban can indeed beframed theoretically, in some places it is also subject to a powerful demarcation between land inside andoutside boundaries—arbitrarily drawn, socially constructed, but not at all theoretical—which producesprofoundly different land valuations". No matter how contentious the urban as a category might be, itspractical effects are felt by those people whose inclusion is defined by a matter of location.

Thus, this paper embraces a yet unfinished process of extended urbanisation punctuated by placeswhere a set of hick elements typical from the countryside have not been corroded or dissolved by theplanetarisation of the urban. Being so, disregarding further qualifications of space means ignoring the specificsocio-spatial arrangements that result from an uneven capitalist-framed urbanisation.

The specificities of the rurban motivate a growing body of research to focus on the rural-urbaninterface (such as Buciega et al., 2009; Cimadevilla, 2010; Grazuleviciute-Vileniske and Vitkuviene, 2012) witha critical view on how current social, spatial, cultural and economic changes are reshaping territories formerlylabelled as rural (Pereiro and Prado, 2013). This paper addresses a gap in literature on the impact of theinternet on rurban communities' socio-spatial practices by investigating the interaction between socio-spatialpractices and the late introduction of the internet in three marginalised communities: Santo Antônio do Salto(Salto) and Noiva do Cordeiro (Noiva) in Brazil and Pendeen in the United Kingdom. Its main ambition wasto find indications to whether internet could foster micropolitics, "a situational politics based on localknowledge and action" (Feenberg, 1995, p. 105), in subaltern groups subjected to both the domination of 'thecentre' and the resulting capitalist social relations of production that stem from extended urbanisation.

2 FRAMING THE DISCUSSION ACCORDING TO LEFEBVRE'S SOCIAL LEVELS

Lefebvre suggested we discuss social levels—global, urban and the everyday—rather than scales, asthey are a social extension of social relations, rather than a hierarchy of spatial relations (Lefebvre, 1991). Theglobal level is the level of the institutions, and the most abstract one, i.e., the level of the capital markets andthe politics of space. The urban level, or mixed, represents the built and unbuilt domain that mediates theglobal and the everyday, composed of institutional buildings and infrastructure in general. The everyday is thelevel of 'inhabiting', the lived experience, and also where the social relations of production are reproducedand power relations enacted. Indeed, the breadth of the social, political and socio-spatial impacts of theinternet in the rurban cannot be grasped by analysing encapsulated scales. The global permeates thesecommunities, reinforcing and sustaining an international division of labour through an unequal access toinformation and deficient production of knowledge (Dantas, 2006), resulting in consumption of knowledgethat comes from outside and the withering of local knowledges.

Furthermore, the widespread of corporate internet is contributing to the exponential expansion ofthe so called 'gig economy' with the proliferation of apps such as Uber, where workers submit themselves tohighly exploitative labour conditions without being aware of the work relations disguised in the so-called

'sharing economy' (Rosenblat and Stark, 2016). Despite being a global phenomenon, the impact of theinternet in work relations is deemed to be greater in the countries of the South, where regulation and labourprotection are even more feeble. In these places, even when local arrangements lead to alternative socialrelations to those brewed under a capitalist mode of production and result in particular forms of socio-spatialorganisation, there is no significant inside-out or bottom-up triggering effect.

In regards to ICT, the discrepancies in access observed in the rurban suggest the strengthening andthe emergence of socio-technological peripheries, geographical territories connected to centres in anasymmetrical relationship of technology and knowledge production and use. In countries such as Brazil, thiswas already denounced by Marcos Dantas (1986, par. 12): "for Third-World countries forced to integratethemselves internationally, the problems become even bigger, due to the dissipation of the so-calledcomparative advantages, resulting from the application of new technologies in the industrial processes and inthe services." Nevertheless, peripheralisation is not exclusive to the Global South and East—always perceivedas peripheral and therefore exogenous to the 'developed' nations—, but also happens in the Global Northand West—regarded as advanced and the motor of technological development. Central countries are creatingperipheries and divides within their own territories at an unforeseen pace.

Locally, this form of peripheralisation presents itself in accordance to existing socio-spatialprocesses and the ways in which ICTs are being introduced in the everyday. Major corporations successfullyimplement the consumer model (Feenberg, 2012), extracting as much surplus value as possible all over theworld. But it is in the peripheries that this process becomes even more evident: internet provision driven byprofit, and service is often poor with high costs.

On the articulation of the urban level with the everyday, technical infrastructure interacts withspatial infrastructure influencing socio-spatial practices. Understanding the technocratic, heteronomous, economically driven articulation of ICTs gives insight to the processes inherent to planetary urbanisation. Asextended urbanisation encroaches the countryside, the everyday recurrences that characterised the idyllic ruralare gradually becoming an unfinished urban project. There emerges a rurban with the prevalence of aheteronomous order conflictive with reminiscences of moderate autonomous approach to the 'inhabiting'. Astechnology is introduced in the rurban, conflicts that were already in place tend to be reinforced. Figure 1shows the articulations between the different social levels with a focus on the everyday, based on an adaptedversion of Comparative Political Urban research method Denters and Karen Mossberger (2006).

For its richness, this paper will focus on the everyday, the most intimate social level, and, thereforeessential for the reproduction of social relations of production:

> *Implicitly, it is accepted that daily life does not boil down to a sum of isolatedacts: eating, drinking, dressing, sleeping, and so on, the sum total of consumeractivities. Except when society is defined exclusively by consumption (somethingthat is increasingly rare), there is an awareness that consideration of theseisolated acts does not exhaust daily life, and that we must also attend to theircontext: the social relations within which they occur. Not only because eachaction taken separately results from a micro-decision, but because theirsequence unfolds in a social space and time bound up with production. In otherwords, daily life, like language, contains manifest forms and deep structuresthat are implicit in its operations, yet concealed in and through them (Lefebvre,2005, p. 2).*

For Lefebvre (2000), the everyday prevails in the current mode of production, even supersedingeconomics as the defining element of capitalism. "Daily life is key to hegemony and the reproduction ofcapitalism insofar as it is saturated by the routinized, repetitive, familiar daily practices that make up theeveryday in all spheres of life: work, leisure, politics, language" (Kipfer, 2002, p. 132). The everyday holds thekey to as much as the maintenance of the status quo as to disruptions in the mode of production that mightlead to insurgency: "a revolution takes place when and only when, in such a society, people can no longer leadtheir everyday lives; so long as they can live their ordinary lives relations are constantly re-established"(Lefebvre, 2000, p. 32).

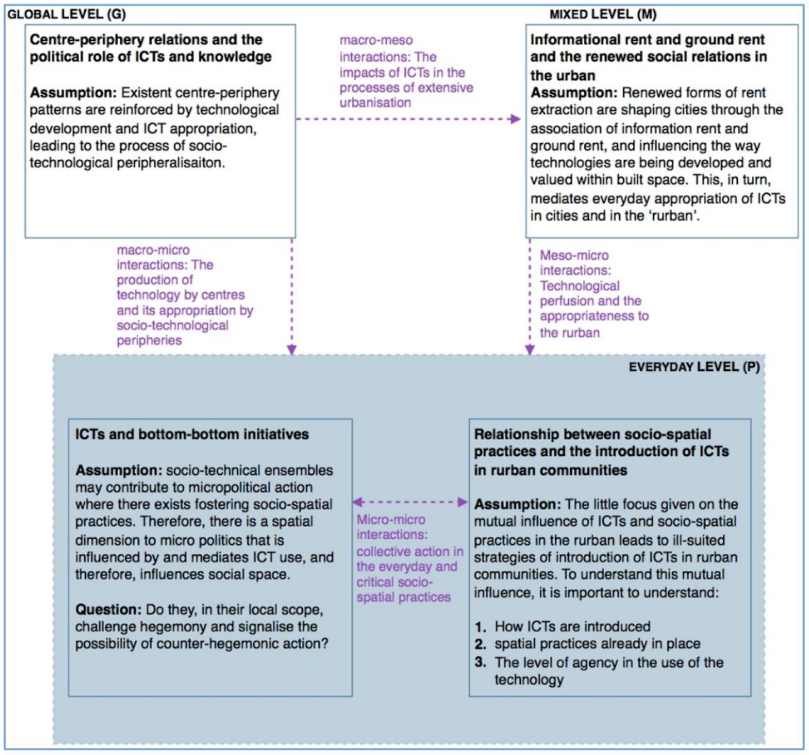

Figure 1: Articulation between the different social levels in regards to ICTs. The author, based on Denters and Mossberger (2006) comparative studies methodology.

Drawing from Lefebvre's theory, Marcelo Lopes de Souza (2011b) defines spatial practices associal practices dense of spatiality. In this paper, the use of socio-spatial practices, rather than just spatial,aims to highlight the social character of such practices. As social practices, they serve both heteronomy—coercion, domination, imposition—and autonomy—emancipation, self-determination and legitimate selfdefence,with the prevalence of the former. According Souza (2011a, pp. 23-24), "at the level of explicitpower, it is guaranteed by the top-down or outside-inside imposition of the nomos, and at the level of 'implicitinfra-power' (which refers to 'subliminal messages', the imaginary), by the weight of transcendence (extrasocialsources and justifications of power) and by alienation". The result is an uneven and unavoidable sociospatialdevelopment that "[…] constitutes, simultaneously, a reflex, means and condition for the functioningand reproduction of the capitalist system" (Corrêa, 2007, p. 63).

The rurban evinces the necessity of the uneven spatial development for capitalism, specially underextended urbanisation. Rurban communities feel forced to enter the circuit of capital accumulation, and do sofrom a marginalised position. The exogenous introduction of urban elements in a previously exclusive ruralfabric contributes to the alienation of the population leading to an outside-inside differentiation of the space.

Salto and Pendeen illustrate this process. The implementation of mining companies in both territoriesimpelled a specific spatial configuration and the development of a roughly urbanised core to serve productionpurposes and industrial flux, hardly considering existing socio-spatial processes already in place. Theeconomically driven division of space affected the social division of space and led to fragmentation. Theresulting incongruous space became evident when the companies ended their activities locally.

3 SOCIO-SPATIAL PRACTICES AND INTERNET ACCESS IN THE RURBAN

Three rurban communities were studied during 2012-2016. The communities were approached asper information found on site and strategies developed according to preliminary assumptions of how

theyimplemented and use internet. The empirical research followed an Actor-Network methodology and thefollowing analyses were based on a Marxian theoretical framework[1]. In Salto, a series of non-structuredinterviews and map aided interviews were conducted, first with known inhabitants and then with a randomsample defined according to the conglomerate method. In Noiva, information was collected through in-depthinterviews with members of the community in four different occasions and previous works conducted bycolleagues at UFMG. In Pendeen, information was collected in the framework of the research 'DigitalNeighbourhoods', in the University of Plymouth. Questionnaires and unstructured group interviews tookplace during 'tea-and-cake' sessions, followed by further in-depth interviews.

3.1 TOP-DOWN ACCESS TO INTERNET IN SANTO ANTÔNIO DO SALTO AND PENDEEN

Salto is a Brazilian district of Ouro Preto, former gold capital of Minas Gerais in the 18th century.The lack of formal historical documents implies its peripherality since the gold mining era. Salto did notconnect important places or developed strong commerce or agriculture. In the 1930s, starving andunemployed villagers saw the political decision to house an aluminium industry in Ouro Preto as crucial. The job offers attracted people from nearby and contributed to Salto's timid urban development. The arrival ofthe aluminium plant settled the population who, not starving anymore, did not have a clear reason formobilisation, and since then the district is dependent on the private sector. The district lacks a socio-spatial organisation able to foster any collective action, contributing to the introspection of the inhabitants. The community gathers in religious festivities and the gastronomy festival, a local event managed by some of Salto's women. Most attempts of mobilisation come from the outside and have failed, such as the villagetourism initiative, where locals could use their own infrastructure to welcome tourists, practice with positive response in other districts in the region. The only attempt of internet provision by the local government wasfrustrated as computers were stolen on the same day they arrived at an improvised telecentre. Currently, theservice, specially mobile internet, is provided by private companies.

Pendeen is a 700-inhabitant former mining village established in 1846 in the Penwith peninsula inCornwall, UK. It developed along the road that connected Trewellard and Higher Bojewyan, both smallsettlements existing since pre-historic times and still heavily rural. In the 18th century, the village became animportant mining hub in the region. The steep increase in population led to the expansion of the village thatbecame a highly self-sustainable parish on its own. The crisis in the mining industry and the closure of thetwo most important mining companies in the 1980s led to out-migration. The village retracted, leading to theshutdown of many of its shops and the consequent reduction in local employment. Currently, Pendeen isamongst the 25% more deprived and isolated areas in UK. The recent arrival of internet was the result of amassive European Union funded programme with British Telecom to provide superfast broadband toCornwall. Owing to the highly technocratic nature of the programme, the service has not yet reached most ofthe population. An initiative of the local community centre and volunteers bridges the gap betweeninfrastructure and local needs, by providing support and infrastructure for the population to benefit from theservice independently from the program.

3.1.1 INTROVERTED SOCIO-SPATIAL ORGANISATION AND USE OF INTERNET IN SALTO

In Salto, the implementation of the mining industry in the region had a great impact on subsistenceagriculture and led to a dependence on external produce, aggravated in the last years by the cash inflow ofcommuters and the implementation of Bolsa Família (a social welfare programme to counter extreme povertyin Brazil, in loose translation: family bursary) by the Federal government. Still, it is possible to observe theprevalence of a family economy, based on male productive labour and female reproductive labour andagriculture, that defines the community's everyday. The socio-spatial dynamics of Salto on weekdays prevailson the private sphere, largely dictated by the division of labour: reproductive labour is performed within thehouseholds and men are often out of the village for work. The recent change in employment dynamicscaused by the shutdown of the local industry suggests a shift in the local economic

[1] The conflicts and possible reconciliation of both fields are dealt in Melgaço and Baltazar 'Anthropophagy In Planning: Building A Theory From The South Through An Association Of Actor-Network Theory And Historical Materialism' in this volume.

and social organisation,with women becoming the primary source of family financial support. For instance, younger generations ofmothers rely on the elderly relatives to help raise their children.

Despite an everyday solidarity at the individual level typical from rural settlements, the introverteddynamics of the community and the absence of basic infrastructures (both social and spatial) contribute to alack of collective engagement and action. It was often stated that problem of Salto is that “each one is forthemselves”. As pointed, “what is missing here in Salto is difficult to get, because what is missing here iscooperation. Here you have, as they say, you know, you just have people to pull you back, right (sic)? Now, tohelp you, that is hard.” Another inhabitant believes that this lack of collective spirit is the elderly’s fault, andthat Salto residents will only be united when “the old die” for the young to take the initiative. Nevertheless,several of the young people interviewed have no interest in taking an active role in the community, and areoften motivated to leave the district.

Currently, broadband internet is available through local providers at low quality and high prices,costing the equivalent of a seventh of the minimum wage. Mobile internet, though also low-quality andexpensive, is more disseminated as pay-as-you-go service with no long-term commitments and no need ofcomputers. Locally, the way they use the internet reflects the way they use their scant public space and showthe overlapping of previously existing physical networks: the use is based on individual needs and is based onexisting social and economic hierarchies. Once Facebook is prevalent, the population has much less access toalternative sources of information and knowledge-building tools, limiting the depth of use of the internet.Furthermore, there is little effort to share local knowledge. Some will use Facebook to advertise theireconomic activities, such as the quituteiras with the gastronomy festival and the local tourism agency. Butstill, most of the population do not know how to use other tools available online. More recently, WhatsApp isalso being used for people to communicate, but again, it is mainly reproducing the networks they already hadbefore. As it is, the internet fosters only a marginal improvement in the quality of life of Saltenses.

3.1.2 THE KEY ROLE OF THE CENTRE OF PENDEEN IN BROADENING INTERNET USE

Pendeen’s current socio-spatial processes also reflect the deprivation and isolation from the 1980’scrisis in the mining industry and the unbalance in the local economic triad: fishing and agriculture wereheavily industrialised, and farmers could not adjust and compete. The lack of open spaces for everyday andspontaneous liveliness means that extracurricular activities are organised by volunteers, mostly in the Churchand the local community centre—the Centre of Pendeen. These activities are essential for those inhabitantswho cannot resort to external sources of leisure or knowledge building.

The Centre of Pendeen is the most recent example of how local community engagement leads tothe improvement of local conditions. The community centre was implemented in the former Men’s Institutefacilities, created in 1931 to alleviate the high unemployment in the region by providing social support andevents. Since then, the centre has become a social and spatial local hub, where inhabitants have theopportunity to meet at social events, such as the farmer’s market, the cinema evening and the different clubs;and to seek advice and help, as the centre organises computer, CV writing and employability sessions run byvolunteers. Nevertheless, the community has a track history addressing common issues collectively. Back in1966, for example, the community raised funds for improvement works to the slipway and path at Boat Cove.

More recently, in 2014, together with St Just’s community, they devised a both online—through socialnetworks and an online campaign—and face-to-face strategies to resist the government decision to reducethe opening hours of the library of St Just. They arranged to continuously borrow books as a symbolicgesture of the importance of the library for the community.

The centre has also an essential role in regards to internet availability. Even though internet wasavailable much earlier, in 2013, superfast broadband was installed in the village as part of the pilot EUprogramme Superfast Cornwall. Nevertheless, the high costs for individual subscriptions and levels of ICTilliteracy it was virtually impossible for a large proportion of the population to access internet. The centre ofPendeen acts as an intermediary, not only subscribing to the service, but also by securing computerinfrastructure and creating different courses, clubs and support sessions based broadening the concept ofaccess to effective use (Gurstein, 2003). With the interference of the Centre, Pendeen is now regarded as oneof the

most successful examples of the Superfast Cornwall pilot. Volunteers advise and tutor the communitycatering for their individual needs and many people will use the internet to gather information and as aknowledge building tool, even if rudimentarily. Others will use internet, especially social media, to mobilise, asit was seen in the attempt to keep the library at Saint Just's open. Even if on the personal level some havedecided to refrain from using the internet on a regular basis, they still see the changes brought by theinfrastructure allied with a supporting place for its use.

Local ties have not changed drastically with the penetration of internet, as people still rely heavilyon more traditional modes of communication, such as landlines or face-to-face encounters. Mobiletechnology and email exchanges have been embraced to solve everyday issues. A clearer change can beobserved on networks at a broader scale. Software such as Skype have become part of the everyday of a largepart of the population, allowing the expansion of social networks.The patchwork club is a good example of how internet access contributes to the expansion of localties. The group, formed in its majority by elderly women, keeps close ties to other clubs located in othercountries, such as the USA. They use Facebook as a common platform and have regular meetings on Skypeto exchange knowledge. Social media is also boosting local small businesses, such as the Lil's Fish and Chipshop, listed on tripadvisor.com. These examples highlight that internet is becoming an important instrumentin the everyday of Pendeeners, but there have been no profound changes in the socio-economic structure ofthe community. Nevertheless, despite its collective appeal, the reach of the Centre's actions is still verylimited, concentrating on the improvement of the quality of life of its inhabitants on an individual basis andnot necessarily leading to any social change.

3.2 NOIVA DO CORDEIRO: SOCIAL DISRUPTION ENHANCED BY INTERNET ACCESS?

Noiva is a community in the fringes of Belo Vale, a 7.000 inhabitant city in Minas Gerais, Brazil.According to local accounts, the community started when, in the 19th century, newlywed Dona Senhorinhaleft her husband for Francisco Fernandes fleeing to the outskirts of a nearby village. Due to strictly catholicrules, the couple was excommunicated and raised their family in isolation, creating a strong bond among thefamily members. Fifty years later, their granddaughter Delina married an evangelical minister who founded arigorous religion 'Noiva do Cordeiro', reinforcing local prejudice against the community. Harsh rules, whichincluded daily prayers, constant fasting and public punishments led the community to extreme poverty. It wasonly in the 1990s, with the minister's death, that the community concerted to fight poverty. Its inhabitantshave started to undergo a process of critical awareness (Demo, 1995) and questioned their own peripherality.

They have created traditions that bond the younger generations together but also reversed their isolation byattracting attention to their own cultural ties. The arrival of steady rural internet in 2011, through the federalprogramme GESAC, expanded and accelerated this opening up process, first allowing the community toimprove the quality of life and then increasing the interface with capitalist activities, contributing to profoundchanges in local socio-spatial organisation.

Noiva has a peculiar social structure when compared to other small Brazilian rurban communities.It results from an internal movement of rupture from local strict ruling based on religious grounds and arecent movement of openness by allowing and creating social interfaces with the outside. Both processes areleading to a systematic re-appropriation of local space. It started with a symbolic change: in the 1990s thechurch was transformed into a 'bar'—a space for celebration. The public space slowly transformed into anengagement arena, where common struggles could be addressed. Overhauled, space marked a shift on theirperception of public contributing to a socio-spatial organisation based on a communitarian spirit that can beacted upon the space itself.

Despite perceiving leadership within the community networks (especially D. Delina, the matriarchand Rosalee, one of her daughters), they organise themselves non-hierarchically to assign the chores and theproductive work. To avoid female out-migration, women ventured in productive activities for income,specially sewing: they started producing lingerie, first joining previously owned non-professional sewingmachines. The factory started with no fixed working hours and they would interrupt production everycropping season, when everyone harvested for subsistence agriculture. Products were initially sold in Belo Vale, at craft fairs in Belo Horizonte and other cities and to visitors that go to the community. Formally, theycreated two associations that allow them to access public funds and legally sell what is

produced. Due to thegroup cohesion, Rosalee was elected city councilor, defending their rights and interests in the governmentalsphere. Since the 2010s, the community ventured in medium-scale agriculture by first cultivating pepper andtangerine to supply the Redistribution Centre of Minas Gerais, and then diversifying production.Specific cultural activities were created to cultivate local bonding and create a common culturalidentity, as well as to produce and share knowledge. These were later developed into Noiva do Cordeiro emShow, diverse professional cultural groups, including a Lady Gaga cover, their most successful number. Fromthe 2000s onwards, they invested in regional networks to counter isolation. They shared their diverse culturaland educational activities with marginalised communities in the region, changing the negative perception. Theforeign interest in the community lifestyle is explored in the form of 'social tourism', with clear implicationsin their socio-spatial organisation that is changed to please visitors, often conflictive with previous practices.ICTs, specially internet, have an important role in this change. If, at first, they were digital illiterate,in 2006 they became a reference in the region for establishing the first rural informatics lab (CIDEC) througha partnership between the local association, the Committee for Democratisation of Informatics and ValeFoundation. Rapidly they became known as rural pioneers. Internet was first available in CIDEC in 2008; andin 2011, a governmental project guaranteed broadband internet at no cost. It soon became an essential tool,used for research and knowledge building, as knowledge was essential for the community's turn: to disruptradical religious beliefs; to overcome prejudice from neighbouring regions; to improve economy, with thesearch for references to the lingerie collections or inspiration for the artistic groups' performances; toreinforce the local lifestyle through courses for younger generations, games and theatre plays; and to learnand exercise their rights.

Regionally, CIDEC gave the villagers a voice in the region leading to a local inversion of powerrelations: Noiva acquired a centrality it never had. The importance of CIDEC faded away in the followingyears, as equipment aged and mobile internet was made possible through the acquisition of a mobile antenna.

Locally, they use mobile phones to talk to each other, rather than knock on doors. The pervasiveness ofmobile internet is observed in the increasing importance of social media in the community, if compared to2013, even surpassing the importance of information and knowledge (Fig. 2).

There are important implications to the pace of explosion to the outside: espectacularisation of thefestiveness of their cultural; the loss in importance of bonds with nearby communities; and an increasedinterface with capitalist activities, observed in the importance given to tourism and the professionalisationand diversification of production, among others, as it can also be seen in the time comparison in Fig 1.

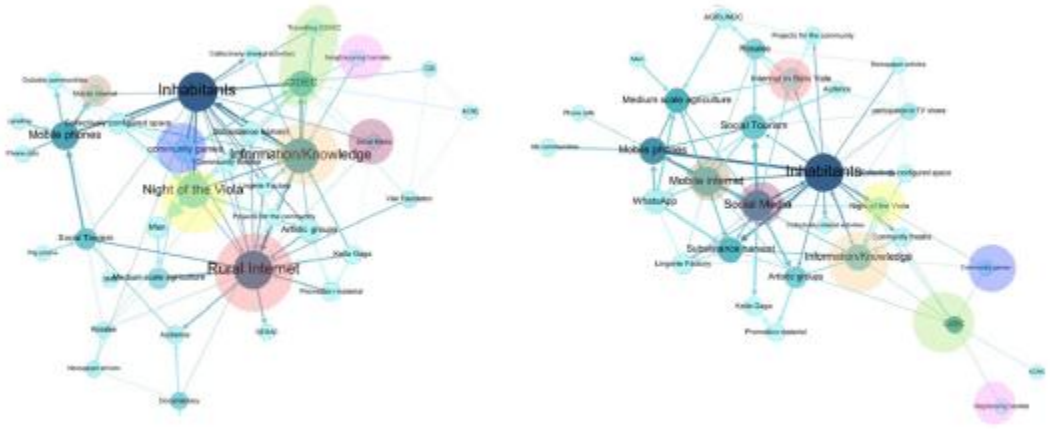

Figure 2: 2013-2014 and 2015-2016 networks of introduction of internet and some elements to be discussed, produced with the use of GEPHI software. Source: the author, 2016

4 CAN INTERNET HELP COMMUNITIES CHALLENGE THEIR PERIPHERAL POSITION?

Socio-economic and geographical peripheries have been often neglected by Eurocentric simplifiednarratives that take the marginalised 'Other' for granted (Noxolo et al., 2012) by pinning centres as fixedpoints that emanate 'proper' knowledge. This macrological approach fails to account the 'micrological textureof power' (Spivak, 1988, p. 279) sealing the fate of the marginalised as eternal recipients of knowledge. WhileICTs reinforce the macro centre-periphery conflict, as technological infrastructure is unevenly distributed inthe globe, it confronts the stability of the centre-periphery dichotomy by allowing for "less contiguous modesof communication are subversive tools for organising new kinds of centrality and horizontal concentration"(Merrifield, 2013, pp. 40-41), time and place specific.

For Andrew Merrifield (2013, p. 42), centrality is no longer being at the centre, "[it] calls out forpeople and acts, for situations and practical relationships". It is never fixed and needs constant negotiationand mobilisation, reflecting the encounter of citizens. That is because centrality is not about fixation—not ofpeople, situations or space. As much as it is related to social relations, it depends on how such relations arespatialised. This study points that communities that have weaker ties tend to reproduce the pattern in thephysical and digital spaces they occupy. ICTs may afford centralities, but also further socio-technologicalperipheralisation, influenced by their implementation in the everyday and interaction with existing socioChallengingspatial practices. Associated with ICTs, space responds to change and acts onto people fostering or hinderingaction. And the way the internet is being introduced in the rurban reinforces peripheralities by validating theexertion of power from the different social levels in the everyday: technology is produced in central countriesand implemented top-down with little bottom-up active response, often leading to conforming uses ofinternet that contribute to the reproduction of the already existing oppressing conditions.

Of all three communities presented, Salto was the one showing the highest level of passiveappropriation of the internet. There, the activities carried online reproduce the dullness of their everyday—"insofar as it is saturated by the routinized, repetitive, familiar daily practices that make up the everyday in allspheres of life: work, leisure, politics, language, family life, cultural production" (Kipfer, 2008, p. 199). Theoverall use of social media reveals a shallow exploitation of the internet that can be grasped by understandingthe hegemonic construction of access and mirrors a hegemonic production of space. Thus, it is possible toobserve that "media (institutions, technologies and representations) disembed social practices, whilesimultaneously making these practices and experiences dependent upon the media as such" (Jansson, 2010, p. 179). Despite its formal centre—where the Church, the square and small commerce are located—it has nocentralities. Its longitudinal spatial configuration, reinforced by two spatial discontinuities—the river and thewater channel—hinders action and contributes to the reproduction of political poverty, the inability of agiven community and its individuals to mobilise in the various spheres of common and individual life (Demo,1994). Despite also being a marginalised periphery, Pendeen has managed to develop a local centrality thatextrapolates its limits with the implementation of the Centre of Pendeen, only possible because of theexisting collective engagement in the village. The centre, in turn, stimulates this engagement through targetedactions that also contribute to marginal micropolitical action. By doing so, the community centre is activelycontributing to the improvement of livelihoods in the region.

Initially, Noiva developed a local centrality by strengthening existing connections and investing inregional connections mediated by ICTs. D. Delina's house (now communitarian) became also a centralityacting as a nodal point for decision-making and bonding. It became a centralised periphery regardless theireconomic-geographical position, which no longer strongly defined who they were. Noiva benefited frombeing on the outskirts of capitalism: they developed their own conviviality rules and created interfaces withcapitalist society when seen fit. With this arrangement, they were able to improve their living conditionswithout compromising their beliefs and social structure. In fact, its centrality was not connected toproduction capital, but to information and knowledge—their lifestyle was a valuable capital to be traded.Nevertheless, the unfolding of the community throughout the last five years leaves the questionwhether centrality is unassailable from centralisation. Noiva became a reference for the nearby communities,as it was provided with something unique—be it technology, knowledge or a social organisation that calls theattention of outsiders. That granted them a symbolic capital that, seen as such, became a source of power.Could Noiva be a new centre that feeds off from its peripheries? Recent developments suggest that no,because it is difficult to operate in the outskirts of capitalism without being swallowed by it. Looking fromoutside, it seems that they are willing to bypass the regional ties built over

the years (and even the centralposition they occupied) in favour of closer relationship to already established centres, such as Belo Horizonteor São Paulo. They seem unaware of the compromises that such a decision demands. Drastic changes in theirworking patterns are being followed by adaptations in their socio-spatial organisation, affecting their owneveryday, and the long-lasting consequences of this shifts are still not clear.

5 INTERIM CONCLUSIONS

The three communities illustrate that appropriation of internet follow, generally, existing levels ofperipheralisation and rarely contribute to a profound socio-spatial development. They also ascertain that, toenvision change from within, communities need to produce fostering spaces for the internet to be betterexplored and for the stultifying tendency of the everyday to be overcome, towards micropolitics. But that isnot enough. Salto and Pendeen suggest a conforming approach to the internet, which is not used toovercome peripherality as such, but as means to improve the quality of life with very limited production localknowledge. Differently from Salto, though, Pendeen has a nodal point, the Centre of Pendeen, that works asa very local centrality and contributes to (moderate) collective mobilisation. In Noiva, the internet briefly wasused a tool to challenge peripherality, despite being a periphery. While they did not innovate internet use, theway it improved on the local production of knowledge impacted on their thinking, and, to a certain extent,questioned the mode of production. Their socio-spatial organisation, coupled with the internet allowed themto become a regional centrality. Still, the same internet increased the interface with capitalism and re-shapedpart of the community, which, on its turn, offset its disruptive potential. Noiva underscores that even if theinternet contributes to the furthering of previously existing socio-spatial autonomy, it may, over time, fosterheteronomous and conflictive socio-spatial practices, illustrating a vicious circle where gains in autonomyallowed by effective use of the internet are further absorbed in the system because of the internet model.To conclude, the more ICTs become essential to the maintenance of capitalist structure, the lesslikely they will formally mediate social change. The way the internet privileges the consumer model shadowshorizontal forms of solidarity, where alternative centralities that not based on structural dependency can bebuilt among peripheries. We need to continue looking for bottom-bottom encounters that blossom with theuse of internet (even if produced by the centre) and understand the socio-spatial practices at place. Thesemight hold the key to new forms of micropolitics, and to the redefinition of centralities as envisioned byLefebvre without relying on the relations established by the capitalist mode of production. Nevertheless,detecting the insurgent rurban is a combination of patience and fortuity. Seeds might abruptly appear, and inthe same intensity, be re-absorbed into the system.

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ID 1380 | SOCIO-SPATIAL JUSTICE: THE SOCIAL STRUGGLE FOR THE ACCESS TO BASIC RIGHTS SUCH AS HOUSING OR SUPPLIES IN SPAIN

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ABSTRACT: About one million and a half families live in Spain in self-built housing with an informal access to the supplies, to which more than 700,000 families have been added after being evicted from their homes after the crash of the real estate market in 2008. The response of Spanish local communities has been the emergence of a networked social movement called Plataforma de Afectados por la Hipoteca (PAH; the Spanish Mortgage Victims Group) that aims at building a sustainable future by claiming the right to housing and other rights like electricity supplies. This networked movement has been fueled by its ability to create a hybrid space between communication networks and occupied urban space in which face-to-face assemblies and protests take place. The modes to operate of the PAH have been replicated by other movements, and their logics have contributed to transforming institutions and their political agenda. In this work we want to show the impact of the economic recession on the access for communities and families to the basics rights as housing or the electricity supplies, as well as the dissemination of the PAH's logics to other actors as the way to address the challenge. In this paper we are willing to unpack the concept of hybrid space, developed by Manuel Castells and informed by the dynamics of the PAH and to other movements emerged by imitation of the PAH. We will also analyze the impact of the struggles of these movements in the transformation of the political agendas made by the new institutional spaces such as in Madrid or Barcelona. All of this will be done by a close look of the PAH and other movements, via participation in assemblies and the observation of other activities such as their use of social networks as well as by interviewing other actors and observing the new policies proposed in the medias regarding the right to housing or to electricity supply. Finally, we will discuss how networked urban social movements as PAH have the ability to create spaces of citizenship that challenge the taken-for-granted principles of capitalism, such as the powerful discourse about the primacy of property rights over the right to housing.

1 INTRODUCTION

According to Alguacil et al. (2013), it is estimated that 30,000 homeless live in Spain and one million and a half families inhabit in sub-standard housing. In addition to these situations, more than 700.000 foreclosures have been initiated since the financial crisis outbreak in 2008[1].

According to Alguacil et al. (2013:188) “there has been an abdication of the public responsibility regarding accessible housing by all the societal sectors, entrusting speculative markets for the satisfaction of the housing accessibility". The housing exclusion problem in Spain continues being a problem of lack of political will[2] to guarantee the right to housing, which is included in the Article 47 of the Spanish Constitution[3].

In this context of absence of effective and comprehensive policies and practices implemented by public administrations, people unable to make effective their right to housing and their supporters have mobilized to generate alternatives that respond to the housing emergency in Spain.

[1] Source: http://afectadosporlahipoteca.com/2017/01/26/el-tjue-vuelve-a-dar-la-razon-a-la-pah-abre-la-puerta-a-exigir-la-nulidad-de-todos-los-procedimientos-de-ejecucion-hipotecaria-y-los-desahucios-desde-1995/ Last access: April 19, 2017.

[2] "We all know that the obstacles to those solutions are not technical but political. Political will is needed to address certain economic interests. No more "(Colau & Alemany, 2013: 29).

[3] The Article 47 of the Spanish Constitution, expresses that: "All Spaniards have the right to a decent and adequate housing. The public authorities shall promote the necessary conditions and establish the appropriate standards to make this right effective, regulating the use of land in accordance with the general interest to prevent the speculation. The community will participate in the benefits accruing from the town-planning policies."

One response from the Spanish local communities has been the emergence of a networked anti-eviction social movement known as PAH, the Spanish Mortgage Victims Group (Plataforma de Afectados por la Hipoteca), to build a more sustainable future through the right to housing. Originally born in Barcelona in 2009, the PAH has successfully spread to over 160 cities and stopped 2045 evictions throughout the country (April 2017). The PAH social movement supports householders in their negotiations with banks to prevent evictions, and has succeeded in negotiating thousands of "payment by account", restructuration of debts, and other solutions improving the conditions of the mortgage payers. The negotiations with the banks are always driven by the householder, advised by other mortgage victims within the PAH, which has resulted in the improvement of the financial literacy of mortgage payers, and hence in their empowerment. When negotiations do not succeed, PAH activists block the evictions, gathering people together by efficient use of social networks. Moreover, PAH provides help and shelter for evicted families, arranges for over 2500 people to rent some of the vacated houses for an affordable price (called the PAH social housing project). The PAH has also led a campaign to change the eviction laws and has succeeded in presenting a popular legislative initiative (ILP) with over 1.5 million signatures. In only four years (2009-2013) the PAH gained the trust of Spanish citizens, as 86% of Spanish citizens claim to share the demands made by this movement (Metroscopia/El Pais, 26/03/2013). This support has served to propose between 2015 and 2017 two new housing laws in Barcelona and Madrid.

This paper examines the ability of the PAH social movement to influence other movements and to regain the right to housing and prompt social and institutional change in Spain in the aftermath of the economic crisis. In the paper, the method followed for the research is presented firstly (Section 2). Secondly, we unfold the main factors that have triggered to this situation: the Spanish property model and the explosion of the housing bubble (Section 3), then we show how the PAH operates and influences other movements, and how these logics have contributed to transforming institutions and the political agenda (Section 4 and 5). Finally, conclusions are drawn (Section 6), showing how the actions and regulatory mechanisms promoted by government institutions in Spain have been characterized by the promotion of housing as a speculative asset serving the interests of the real estate sector, and not as a right of the majority of the society, and how the social network movements organized and with clear goals can fight to transform reality.

2 METHOD

This paper shows the social struggle aiming at making effective the right to housing (Harvey, 2012) and to basic supplies (water, energy, etc.) in Spain, through the analysis of different actions and mechanisms of regulation promoted by different actors that constitute blocks of power and counterpower (Foucault, 1998), as well as the role that hybrid space plays in that struggle (Castells, 2009 , 2012).

The research has been carried out using the case study method (Yin, 1994). Firstly, we analysed the main factors that have led to the current situation of housing emergency in Spain, and more specifically the influence of the Spanish property model and the explosion of the housing bubble in this situation (Section 3). Secondly, we studied how social network movements as PAH operate, that is: what their objectives are, what actions they carry out, with what resources they count and what their achievements are, as well as their capacity to transform reality and to be replicated by other movements (Sections 4 and 5).

Data collection and analysis comprised four stages: immersion (description); systematic data collection (classification); data processing (making connections); and drawing conclusions (producing and account) (Frediani, 2007). All of this will be done firstly by a close look of the PAH and another movement called Assembly of dignified housing for all people (ApT), via participation in assemblies and other activities during the last years, and by the observation of their use of social networks as well as by interviewing other actors and observing the news in the media regarding the right to housing or to electricity supply. Data also comes from texts, photos, and films produced by both social networks movements (e.g. Facebook, Twitter, blogs, YouTube, and websites)[1] .

Our research strategy was pragmatic in that we combined methods (Silverman, 1993) in order to understand the struggle for the right to housing in Spain, and more specifically the actors involved (in particular, government institutions and social movements) and actions implemented as well as the

[1] Sources as: http://afectadosporlahipoteca.com/ or http://viviendadignatodos.blogspot.com.es/

regulatory mechanisms imposed or promoted by each of them (Foucault, 1998). It is also pragmatic in that it is neither purely inductive nor purely deductive, but follows patterns of creative abduction (Schurz, 2008). Inspired by Strauss and Corbing (1990), our data collection, coding, and categorizing involved iterative moves between data sorting, coding, probing, and collecting until we could reconstruct the story of the struggle for the right to housing in Spain.

3 THE MAIN FACTORS THAT HAVE TRIGGERED TO THIS SITUATION: THE SPANISH PROPERTY MODEL AND THE EXPLOSION OF THE HOUSING BUBBLE

The situation of housing emergency that exists today in Spain is based on the implementation and development of a finance-property model that has its origin in the dictatorial regime of General Franco, which has persisted even with the current democratic constitution and remains an anomaly among the main members of the European Union. This model is characterized by:

The housing construction, almost exclusively based on the private property regime for those who can pay it at market price. In 1950, 90% of the Spanish population was living in the largest cities, as for example Madrid or Barcelona, where most of the housing was offered for rental. However, housing for rental currently represent only the 13.5% of the housing while the 78.9% are private properties inhabited by their owners[1]. The changing model has its origin in the last decade of the Spanish dictatorship, which began to consider the property as a mechanism of social control. The Prime Minister of the Housing Ministry said in 1958: "The man, when is homeless, takes over the street ... We want a nation of homeowners, not proletarians" (José Luis Arrese quoted by Colau & Alemany, 2012:34). The credit flow by the end of the XXth century was the final input to this process.

This change has been driven by policies based on the tax relief for the purchase of new properties but not for the rental[2], the restrictions on the property rental market[3], or by promoting the social housing construction destined to private ownership, and more specifically for households with an average income between 2,900 and 3,900 € / month, decreasing the production of social housing units destined to renting almost to extinction. While social rent housing represents between 20 and 30% of the housing in the European Unión, less than 2% is destined to social rental in Spain. Since 2000, the development of social housing has not achieved the 0.4%[4].

The understanding of the housing and infrastructure construction as an investment based in speculation, rather than assets linked to the people needs. The model has encouraged an exponential growth of housing production that responds to speculation, instead of satisfying the real housing demand. It is estimated that 6.6 million homes (ODESC, 2013) were built in Spain between 1997 and 2007, maintaining the percentage of empty housing close to 13%[5].

Deregulation of the land, the housing market and the credit. Urban development has focused on the application of the appropriate law for the mass production of housing and for the implementation of infrastructure. This process has culminated with a territorial law known as the "all building land", although

[1] Sources: Naredo 2012 and population and housing census 2011. Source: http://www.ine.es/prensa/np824.pdf. Last access: July 9, 2014.

[2] The average rental market in the EU-27 was 29.3% in 2010, while it did not reach the 17% in Spain. Source: Housing Statistics in the European Union, 2010 Income and Living Conditions. Eurostat.

[3] The market has been characterized by a shortage of rental units, the absence of a minimum conditions for renting, the imposition of conditions difficult to fulfil (exorbitant prices, guarantees, open-ended contracts, etc.), discrimination for immigrants, indiscriminate increases of the rent every five years allowed by the law of urban tenants contracts, etc.,"and in addition to all this, the proliferation of messages by the institutional authorities and the banking system about the rent as a form for wasting savings." (ODESC, 2013: 11).

[4] Sources: data provided by The Ministry of Public Works, Ministry of Housing and the INE.

[5] Source: http://www.ine.es/prensa/np775.pdf. Last access: July 9, 2014. According to the president of Provivienda, 2 of every 5 empty houses were built less than 10 years ago.

not only this law has failed to achieve the decrease of the housing prices, but also it has caused the prices to be tripled[1].

The over-indebtment became the “only way” for most of the families to effect their right to housing. In the period (1997-2007) the population has been forced to go into debt “beyond the reasonable limits" which granted loans up to 120% above the appraised value. In this way, the debt amount turned from the 55% of the household disposable income, up to the 130% (from € 50,786 to € 149,007), and the average time for a mortgage has increased from 19 to 28 years, with the implications that all of this has on the living. (Colau & Alemany, 2012)

The use of the urban planning as a tool for the production of private property. The economic and financial efforts were aimed to develop new urban areas, leaving two main consequences: the progressive abandon of the city centres and urban sprawl; both unsustainable.

Generalize and systematize the corruption in the financial, political and real estate sectors. The implementation of the speculative model has been possible thanks to the close relationship between the housing-construction sector, the financial banking and the political power. The law of "all building land" decentralizes the responsibility on urban planning[2], promoting speculation and corruption, with democratic consequences for the traditional parties. "The list of cases where local authorities, construction companies and real estate companies work together are so common around the territory that could even be the subject of a monograph" (Alguacil et al.2013: 18). It is frequent to see operations of reclassification of parks and green areas in order to allow building in them, the allocation of public works with substantial cost overruns, the construction of “ghost” airports and neighbourhoods, etc.

All this has revealed that Spain had a structural problem of denial of access to the right to housing that was contemporary to the “real estate boom”, both prior to the financial crisis. By the end of the 2006, following to a visit to Spain, the UN Special Rapporteur for the Right to Housing issued a report pointing out that the main housing problems in Spain were caused by the poor management of the public administration[3]. The report denounced the commercialization of the social housing programs. In the same line, the FEANSA 2008 report highlighted that 20% of the Spanish population was being excluded from the housing market.

In this context, the outbreak of the international financial crisis had hit Spain with devastating consequences. The rise of the interest rates and the interruption in the international credit flow, the construction sector reached the 70% of all the credit (ODESC, 2013), affected seriously to the real estate business, foundation of the "Spanish miracle". This sector accounted for up to the 30% of the GDP and 13% of the employment rate (Colau & Alemany (2012).

In a context of widespread indebtedness, the rise of unemployment, from 8% in 2007 to the 26.6% in 2013, has led to an increase in the difficulties of owners to comply with housing payments: "From 2008 until the present, the impossibility of paying the rent or mortgage has become a major issue for families" (ODESC, 2013: 13). Since 2008, over 700,000 foreclosures have left hundreds of thousands families on the street with a debt for life, condemning them to a social exclusion life.

However, the Achilles heel of the Spanish economy is not the default of the families, but of the real estate companies, the latter estimated to be 4 times higher than that of the families (a 21% of the housing debt corresponds to the families default and in a 79% to the real estate companies). A lot of money has been invested in "toxic assets" which are hard to place again in the market. However, the real estate companies are allowed mortgage releases while this possibility is forbidden for the families (Colau & Alemany, 2012 , 2013).

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[1] Since the adoption of the law in 1998 and until the year 2006, the housing prices have been increased by 150%. In this period, the rate of land prices grew 8.7 times more than the CPI, and the construction price have been increased by 2.3 times.

[2] “With only 15% of government revenues, local governments were facing a very high percentage of public services. In times of massive construction, the differential between income and public spending was covered by urban planning resources. These incomes were considered as an ordinary income when in fact they were extraordinary. For that reason no provisions were made for a subsequent cycle or crisis" (Buron, 2012: 7). The real estate tax revenue reached in Madrid 50% of the city budget and in Valencia up to 60%. Source: Colau & Alemany (2012).

[3] Source: A/HRC/7/16/Add.2, February 7, 2008.

After the outbreak of the financial crisis, the international "markets" also required the repayment of debts, by imposing the socialization of the losses and the implementation of "austerity" measures that have supposed the contraction of the public funds to sectors such as health and public education, social aids, etc., making the situation of individuals and families in risk of exclusion even tougher.

In this context, until February 2009, the public administrations continued denying vehemently the problems of paying the mortgage by the Spanish families. In this way the public administrations have continued largely directing their efforts to protect the interests of the large landowners rather than to to ensure citizens' right to housing: "The goal declared for the Housing Plan was the solution of the problems of the developers, builders and financial institutions, instead of solving the housing problems of the population" (Alguacil et al, 2013:174). A bleeding example of this was the sale, in 2014 at a critical time of housing emergency, of 40% of the scarce stock of social housing for rental to investment funds (Vulture Funds) for a price 30% below the market value and without any requirement for the new "landlords" to rent their properties as social housing[1]. Something that could be done by the municipal government of Madrid because the competences on housing policies are decentralized.

As Colau and Alemany explain, more than a financial crisis, we are facing a "scam circumscribed and protected by law" (Colau & Alemany, 2012:69) with devastating consequences for most of the population, with a poverty risk rate that has reached 20.4%[2]. As the ATD Fourth World Movement said, it seems that "poverty is part of the system and has become a business"[3]. The fact that over 16% of the population are denied their right to an adequate housing[4], while there are over 3.4 million empty homes[5], is at least "a clear example of the failure of the liberal market, both in social and economic terms."(Alguacil et at 2013: 24). This unethical question urged to seek for alternative models.

As it has been explained, the Spanish public administrations have been characterized by the denial of the emergency housing status, generating a feel of guilt in the affected persons, by the lack of significant programs to promote effective access to an adequate housing, and by the application of social aid policies in absence of social housing policies.

Regarding the demands from families living in shelters: the direct expenditure for the public housing development has only accounted the 0.2% of GDP (Alguacil et al., 2013); furthermore, social housing programs have waned, representing a mere 2% of the global housing stock built in the last 35 years[6]. There are only 240,000 homes for satisfying the demand of more than 2 million people who live in inadequate housing.

Regarding the demands from People Affected by Mortgages (PAH): besides ignoring their situation, a new law for foreclosures was issued in 2007 and, although it was declared illegal by the Court of Justice of the European Union[7], it has been implemented affecting more than 700,000 families, while more than 3.9 million homes remain uninhabited in Spain. The affected by mortgages prepared and presented a People's Legislative Initiative (ILP), but its presentation to the Congress found many obstacles and supporters of that process were almost criminalized (Colau & Alemany, 2013).

According to Alguacil et al. (2013. 188) "there has been an abdication of the public responsibility regarding accessible housing by all the societal sectors, entrusting speculative markets for the satisfaction of the housing accessibility." The housing exclusion problem in Spain continues being a problem of lack of political will to guarantee the right to housing, which is included in the Article 47 of the Spanish Constitution.

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[1] Source: Publico.es, July 04, 2015 Source: http://blogs.publico.es/asaltar-los-suelos/2014/05/07/fondos-buitres-ana-botella-y-la-vivienda-publica-en-madrid/. Accessed July 23, 2014.

[2] Source: http://www.ine.es/prensa/np844.pdf.

[3] Source: Compromisos comunes (2012-2017): http://atdcuartomundo.es/que-hacemos/ .

[4] It is estimated that around 7.4 million people are denied somehow their right to housing in Spain. 0.4% would correspond to the homeless (30,000 people); a 28.1% living in inadequate housing conditions (more than 2 million people living in slums most of them gypsy and immigrant populations); a 18.4% have suffered or are in foreclosure process (over 1.3 million), and around the 53% are young people in housing demand (3.9 million young people living at home with their parents).

[5] Source: Census of Population and Housing (2011) in Spain,

[6] See table in Alguacil et al. (2013:46), constructed from data from the Ministry of Public Works, the Ministry for Housing and INE.

[7] Source: http://afectadosporlahipoteca.com/2013/03/14/europa-declara-ilegal-la-ley-espanola-de-los-desahucios/

In this context of absence of effective and comprehensive policies and practices implemented by public administrations, people unable to make effective their right to housing and their supporters have mobilized to generate alternatives that respond to the housing emergency in Spain.

4 THE SPANISH MORTGAGE VICTIMS GROUP SOCIAL MOVEMENT

The PAH was established in 2009 in order to respond to the tragedy experienced by 700,000 families affected by foreclosure processes. It is driven by people linked to the fight for the right to housing, but most participants are people affected by foreclosure processes.

The PAH aims to reverse a model that has had devastating consequences in areas such as: the economic, environmental, political and social affairs, by a strong social mobilization. But in a short term the PAH must give specific and immediate solutions to a population threaten by the financial institutions, abandoned by the administration, and feeling guilty, anxious and depressed.

The first challenge for the PAH was to create a space of trust and mutual support where those being affected could speak and be heard, trying to release the feelings of guilt and to generate an empowerment process. The second challenge was to transform a problem perceived as individual by the affected into a collective problem with structural causes; and the third was to promote collective actions that could transform the reality and turn the impossible into possible.

To achieve its objectives, the PAH implements the following actions:

- The assemblies as a key instrument to create a space of trust that can be established as a mutual support network, in which those affected develop the necessary knowledge and skills to advice other families; a space where victims become fearless, learn to self-organize to act collectively, and to unleash the creative power of anger that turns into hope (Castells, 2009, 2012), in which those affected become active subjects of the change (Colau & Alemany, 2012, 2013) as the preamble of social change.

- Public denounce and campaigns. The collective advice is accompanied by other actions as public denunciation of the situation faced by those affected, so as to contribute to explain the causes of the problem, while responding to the urgent needs of those affected. The following campaigns are carried out:

    - "This bank lies, scams and kicks out people from their home": The campaign is about pointing out the banks as direct responsible of the population's suffering. Contribute to balance the unequal negotiation and to manage the anger and helplessness of the people affected; as they lose their fear "to face Goliath"

    - The retroactive "deed in lieu of foreclosure": an urgent regulation is demanded by the affected by mortgages. Basically, this consists of returning the property to the bank as a sufficient condition to pay the mortgage debt. The deed in lieu of foreclosure is considered as a minimum regulation that would permit the families to "start again", this proposal has and it has an extensive social support.

    - The stop evictions: in a context of lack of solutions by the administration, an unfair regulatory framework[1] and a systematic violation of the affected's rights, the campaign "Stop Evictions" has become the best way to prevent evictions through demonstrations in situ. So far the PAH has paralysed 2045 evictions[2].

[1] The massive foreclosures and evictions for economic reasons of the Spanish government violate, inter alia, Articles 24 (about the effective judicial protection) and 47 (the right to housing) of the Spanish Constitution; Article 25 of the Universal Declaration of Human Rights; Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), ratified by the Spanish government, and more specifically the General Comments of the UN Committee DESC Numbers 3 (obligations of the member states), 4 (the right to housing) and 7 (prevention of forced evictions)" (Colau & Alemany, 2012: 124).

[2] Source: http://afectadosporlahipoteca.com/ Last access: April 17, 2017.

- o PAH Social Work: without a stock of social housing, in a context where thousands of families were evicted, seeing how financial institutions kept collecting empty properties for speculation proposes results from an intolerable violence. The objective of the campaign "PAH Social Work " is threefold: firstly, it aims to recover the social function of the empty property, particularly those that are held by financial institutions result of foreclosures, to avoid the homelessness. Secondly, it exacerbates the pressure on financial institutions to accept the deed in lieu of foreclosure. And thirdly, it enforces the public administrations to adopt once and for all the necessary regulations to guarantee the right to housing. The PAH has managed the relocation of 2500 people[1]. In addition, the pressures of the PAH have been able to force financial institutions such as the SAREB to give housing to the municipalities to offer them to the families at affordable rental prices.

- o The motions to the municipalities: in December 2010, the PAH organized a specific campaign targeting the municipalities. They proposed the creation of hybrid committees (with participation of the administration, PAH, neighbourhood associations, etc.), in order to solve and prevent the evictions, to ensure the resettlement and to alleviate the situation of those affected until the law proposal is approved. They also demanded, among other things, that social workers do not threaten the affected by mortgages with the loss of their children's custody, make a census of empty properties and persecute the anti-social use of properties, the suspension of the evictions and the cancellation of the illegitimate debts. Currently, more than 400 municipalities are supporting the deeds in lieu of foreclosure for the affected by mortgages, some of them governed by the strongest political parties, which reveal contradictions inside the parties (Colau & Alemany, 2013).

- o The Popular Legislative Initiative (ILP): in order to persuade the Spanish Parliament to apply the deed in lieu of foreclosure retroactively, the stop eviction and the promotion of the stock of social housing for rental, a Popular Legislative Initiative (ILP) was presented. For the PAH, a main aspect of this campaign was the social and political process. The ILP was a tool to visualize the problem, to make alliances and collaborations with associations and other groups, and to empathize with citizens. After two years of struggle, in February 2013 the Congress of Deputies admitted the processing of the ILP; however, a few months later the government approved the new law 1/2013 which did not include the deed in lieu of foreclosure, legalized unfair terms in mortgages and kept the forced evictions. In January 2017, the European Court of Justice fails once again in favour of the PAH. This judicial ruling opens the door to demanding the nullity of all foreclosure proceedings and evictions since 1995[2].

- o The PAH Housing Law: over almost 8 years, the actions of the PAH have shown that the vulnerability of the right to housing in Spain has been based on unfair laws that have been declared illegal by the European Court of Justice. "Far from solving the situation of the families, the Congress has been used to carry out measures to protect the banking and the electric, violating the Right to Housing collected in article 47 of the Spanish Constitution. It is time for the citizens' demands to finally come to Congress and be approved so that no family will ever live in the street".[3]

The PAH Housing Law arises in order to challenge the Government and force them to position themselves publicly in favor of citizenship and to legislate to protect and enforce Human Rights, and in particular the right to the housing and to the basic supplies. The PAH Housing Law develop measures to make effective the deed in lieu of foreclosure, the regulation of the rental market to make it affordable and stable, to stop the evictions, to promote a public park of social housing for which payments do not exceed the 30% of the families income, and finally the guarantee of basic supplies as water, electricity and gas by adjusting the prices according to the income of the families.

[1] Source: http://afectadosporlahipoteca.com/ Last access: April 17, 2017.

[2] Source http://afectadosporlahipoteca.com/2017/01/26/el-tjue-vuelve-a-dar-la-razon-a-la-pah-abre-la-puerta-a-exigir-la-nulidad-de-todos-los-procedimientos-de-ejecucion-hipotecaria-y-los-desahucios-desde-1995/ Last access: April 17, 2017.

[3] Source: http://las5delapah.com/ley-vivienda-pah/ Last access: April 17, 2017.

For all this actions, the affected have been the PAH's main resource, but they have also been supported for many professionals (lawyers, urban planners, journalists, sociologists, etc.) that have been collaborate for free; and some research centres such as the DESC Observatory, social organizations, neighbourhood associations and 15-M assemblies. Furthermore, the PAH has promoted the networking with all the institutions who want to listen and support their efforts, such as unions, governments or political parties.

In relation to their economic resources, the PAH has offered its services for free, and its economic support have been based in donations from organizations and individuals. The PAH does not receive subsidies, grants, or any other funding. This approach is vital for the PAH, allowing to continue implementing their actions with complete independence from all the institutions.

The main achievement of PAH has been to show that reality is transformable "if we got organized and we kept on course, we could change things". (Colau & Alemany, 2013: 42).

- The PAH have succeeded to turn an individual problem in a collective problem. Those affected become active subjects of a change and join with others to perform useful actions and to make visible the structural causes of the problem. In this way, an alternative discourse is constructed apart from the official view. "This is not a crisis, it's a scam" (Colau & Alemany, 2013: 36) helping to change the collective perception.

- The PAH has accumulated victories and it has shown that the reality may be transformed. Hundreds of deeds in lieu of foreclosure have succeeded, and there have been thousands of evictions paralysed and families rehoused. It has achieved the administrations to be willing to act and financial institutions to negotiate.

- The PAH has gained legitimacy. Using the social networks and the media to spread their struggle; it had achieved to empathize with the majority's feelings "it has achieved the most difficult: to articulate a demand recognized by the 90% of the population" (Colau & Alemany, 2013: 94). It promotes dialogue and organizes and coordinates a network of professionals, social organizations, unions, etc., to fight for the right to housing. It has achieved to make all citizens aware and gain legitimacy "facing the discredit of rigid and coward institutions. The platforms have become a stable and consolidated reference." (Colau & Alemany, 2013: 56).

- The PAH had changed the politic agenda. In 2013, the ILP was accepted for processing; moreover, in 2014, their demands were incorporated as essential principles in the programs of the newly emerged political formations as Podemos, and in one way or another the housing exclusion becomes a crucial issue in the political program of other parties. Finally after 8 years of struggle, in 2017, the PAH has succeeded in having the European Court of Justice pronounce in its favor, which opens the door to demand the nullity of all foreclosure proceedings and the evictions carried out in Spain since 1995.

The PAH was born with the goal of being replicable both in their actions and in their ways of organizing. Currently it has over 214 nodes spread throughout the Spanish territory. The PAH has also become an international reference. In 2012, for example, an eviction was paralysed in Berlin, replicating the practices of the PAH. In 2014 the PAH proposals has led a "Grundtvig" project which aims to create a European school for the right to housing.

We can conclude by stating that PAH is highly replicable in a context of strong violation of the right to housing where a large part of the society is affected or empathizes with the victims and in a political context of a strong lost of trust in institutions unwilling to defend the rights of those they should represent.

5 A NEW SPANISH SOCIAL MOVEMENT CALLED: "HOUSING ASSEMBLY FOR ALL PEOPLE"

The Housing Assembly for All People was born in early 2015 and is promoted by the international movement against poverty ATD Fourth World, aiming to promote that those historically excluded from the right to housing such as people living in the streets, people occupating housing, slums dwellers, etc., can join the struggle led by those affected by Mortgages (PAH).

As the PAH in the long term, it seeks a change in the model, and in particular of those policies and mechanisms that generate injustice, of which the historically excluded are witnesses and experts. The Assembly joins the social mobilization of the PAH and adopts some of its logics as the creation of a hybrid space between communication networks and occupied urban space in which face-to-face assemblies and protests take place. In a short term, the Assembly must give specific and immediate support to a population historically abandoned, criminalized and persecuted by government institutions.

As the PAH, its main challenges were: to create a space of trust and mutual support where those affected could speak and be heard, trying to release the feelings of guilt and to generate an empowerment process; to transform a problem perceived as individual by the affected into a collective problem with structural causes; and to promote collective actions that could transform the reality and turn the impossible into possible. But the starting point was very different. The affected belong to social groups historically excluded and socially stigmatized which doubles the difficulty of their fight since, on the one hand, the mobilization of those affected will be more difficult, and on the other hand, the possibility of obtaining the support of the majority of the society that they do not see them or do not empathize with their struggles. Therefore, the Assembly intends, as a specific goal, to make visible the struggle of those living in extreme poverty, a struggle that has been witnessed for years by the ATD Fourth World movement (promoter of the Assembly), which has allowed to put this experience into dialogue with the current reality.

The Assembly focuses and develops its work in the municipality of Madrid, and, to achieve its objectives, the Assembly implements the following actions:

It establishes an assembly of affected and those who support them, in order to generate a space of trust in which those affected can share their struggles and seek alternatives for those living in situations of historical housing exclusion.

- The Assembly provides support and visibility to their struggles of the affected. The Assembly provides support to people in a situation of housing exclusion that approaching it and since two years ago it has been present in a slum core of the periphery of Madrid. In both cases the support has consisted in generating spaces of trust and mutual help, informing those affected of their rights, and giving visibility to their struggles through articles in the media and social networks as blogs, Facebook, etc. In short, it make sure that those affected are heard by those who decide on the problems that affect them, such as the legalization of a situation on a floor, or the development of a real-time process, etc.

- The Assembly has produced and disseminated a document called "the 5 commitments and guarantees". Work has been carried out on the analysis and production of key proposals to guarantee the right to housing to the most vulnerable people, including the proposals in this document. Later, this document has been presented by the affected and those who support them to the different political parties at both the local and regional level in Madrid, and has been presented to the Social Housing Agency (AVS), responsible of the processes of relocation and the award of social emergency housing.

- The Assembly is contributing to modify the laws and regulations that have excluded those affected historically. Together with the PAH, the Assembly has participated in the modification of the regulations of the AVS of the community of Madrid in order that the criteria for accessing social housing do not prevent historically excluded families from having the possibility to apply. As an example, in the regulation under review, a person occupying a house could not apply for a social housing. The Assembly is also currently participating in the campaign of the new housing law of the community of Madrid promoted by the PAH.

For all of this actions, the affected have been the main resource of the Assembly, but they have also been supported for many professionals (lawyers, urban planners, journalists, sociologists, etc.) ; and some researchers, other social organizations as the PAH. Furthermore, the Assembly has promoted the networking with all the institutions who want to listen and support their efforts, such as unions, governments or political parties.

In relation to their economic resources, the Assembly has offered its services for free, and its economic support have been based in donations from organizations and individuals. the Assembly does not receive

subsidies, grants, or any other funding. This approach is vital for the Assembly , allowing to continue implementing their actions with complete independence from all the institutions.

The main achievement of the Assembly has been to make visible the reality of historically excluded families, has proved that the combat against the extreme housing exclusion has to take into account the personal capabilities and resources of those living such situations and those supporting them. The struggle of the Assembly have been recognized by other housing movements in Spain, such as PAH. In addition, as the PAH, the Assembly has contributed to show that reality is transformable:

- The Assembly have succeeded to turn an individual problem in a collective problem. Those affected become active subjects of change and join others to perform useful actions and to make visible the structural causes of the problem, helping with its fight to change the collective perception.

- The Assembly has made it possible to create links between the historically excluded and other actors. In the first place, it has contributed to the fact that historically excluded families participate in a broader collective struggle in collaboration with other social movements such as the PAH. And secondly, it has contributed to make that the affected may be heard by technicians and decision makers responsible for housing regulations and policies that impact on them. And sometimes, as in the case of the neighbourhood of the Sabinas, they have succeeded to disseminated their claims by the media, which has forced local institutions to position themselves in favour of their demands.

- The Assembly contribute to transform the society and to modify the regulatory mechanisms that generate housing exclusion. The Assembly contribute to transform the society from the belief that "the real changes and future options need an active solidarity between those who have lived in very difficult circumstances and those who commit with them"[1]. The Assembly has also contributed to modify the regulatory mechanisms that generate housing exclusion through their participation in both the campaign of the new housing law in Madrid as well as in the modification of housing regulations of the AVS.

We can conclude by stating that the main challenge for the Assembly is to mobilize the people affected, with the difficulty and risks that this entails for the people and communities that have been historically excluded, and to make the social majorities support the struggles of these for becoming part of the community, like the others, and that their rights become effective.

6 CONCLUSIONS

This paper shows the struggle to realize the right to housing (Lefebvre 1968; Harvey, 2012) and to basic supplies (water, energy, etc.) in Spain, through the analysis of the different actions and mechanisms of regulation promoted by different actors that constitute blocks of power and counterpower, that is, blocks with capacity to transform the reality, to produce new meaning and to exercise the power (Foucault, 1998). The article also shows the role that hybrid space plays in that struggle (Castells, 2009 , 2012; Álvarez et al., 2015).

The article presents (Section 3) how the actions and regulatory mechanisms promoted by government institutions have been characterized by the promotion of housing as a speculative asset, serving the interests of the real estate sector and not as a right of the majority of the society.

Housing emergency resulting from the blatant violation of right in Spain has led civil society (Sections 4 and 5) to organize themselves to fight to make their rights effective. First, the PAH (a networked social movement) has succeeded in changing the collective imagination. Their actions (stopping of evictions, occupation of empty housing, ILP) have contributed to remove feelings of guilt in the families affected, and to point out to real generators of the problem. They have shown a lack of political will to tackle the challenge, and have shown that "¡Yes, they can! But they do not want to". Their struggle gained legitimacy and the support of a large majority of Spanish civil society, to the point of calling into question the legality

[1] Source: "Decent housing, a right for everyone." Document drafted by ATD Fourth World, Spain.

of the current regulatory mechanisms (Spanish mortgage law) that perpetuates the problem. After 8 years of struggle, in 2017, the PAH has succeeded in having the European Court of Justice pronounce in its favour, which opens the door to demand the nullity of all foreclosure proceedings and the evictions carried out in Spain since 1995. In summary, they have contributed to transforming institutions and their political agenda.

The PAH was born with the goal of being replicable both in their actions and in their ways of organizing. This has made possible the emergence of other groups such as The Assembly (Section 5), which takes advantage of the change in the collective imagination achieved thanks to the actions of the PAH to include in this struggle the families historically excluded from the right to housing.

This networked movements has been fueled by their ability to create a hybrid space between communication networks and occupied urban space in which face-to-face assemblies and protests take place. Finally, they have shown that a civil society organized and with clear goals can transform the reality and question principles were considered indisputable until now, such as the primacy of property rights over the right to housing.

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ID 1391 | REINSTATING SOCIAL PRACTICES FOR SOCIAL INTEGRATION: EXPERIENCING THE BADARO- PINE FOREST AREA IN BEIRUT

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ABSTRACT: This paper addresses how the reinstatement of everyday practices in urban public spaces could lead to social encounter and coexistence within unstable urban contexts, specifically those witnessing political instability and an influx of refugees. The context for this investigation is in Beirut, Lebanon with a focus on the area referred to as Badaro at the southern edge of the administrative boundary of the capital city. This area currently witnesses a juxtaposition between real estate development catering for market-led needs, and bottom up initiatives to generate rhythmic social practices that are affecting Badaro's within role in Beirut. The name Badaro is given to an area holding a street with the same name, which is bordered on one side by the Damascus Road, the capital's war time demarcation line, and on the other side by the pine forest that was the buffer area or no-man's land separating east from west during the fifteen years of war. Badaro was encapsulated in between, which meant the preservation of an urban fabric with pre-war architecture, and other features lending themselves to bottom up initiatives supporting social interaction and encounter, which were lacking following the war period. Examining Badaro's socio-spatial development is based on Lefebvre's approach to everyday social practice as well as the understanding of the role of collective memory in urban spaces in reference to Hebbert. The paper examines the spatial development of Badaro before the war, its dormant state during the civil war period between 1975 and 1989, and its recent reawakening after the rise of bottom up initiatives since 2005. Based on empirical data collected in 2015 and 2016, the conceptual framework linking everyday social practices and collective memories is used to trace the spatial and temporal diversities within this area and the contributions of initiatives to support coexistence among various social groups, in the absence of a planning strategy proposed by the municipality or the planning authorities. These initiatives seek to reinstate public spaces and everyday urban practices. In particular, the initiative for reopening the pine forest focuses on empowering citizens and raising awareness on the importance of public space in offering a healthy everyday urban life. The paper concludes by reflecting on the actions and results of some of these bottom up approaches in enabling the coexistence of diversity in a previously fragmented socio-spatial context.

1 INTRODUCTION

Among the diverse and equally important roles of public spaces in cities, is their role in meeting social needs, and in particular that of facilitating through encounter the integration of different users regardless of their backgrounds. Meeting social needs in situations of uncertainty requires an understanding of the context and its specificities through creative tools for the acquisition of information (Christensen, 1985). One such tool is enabled in public spaces, which is the formation of informal networks of communication (Hillier, 2000) that allow for the exchange of information among individuals and groups, enabling them to identify social needs, and search for opportunities to materialise them (Holston, 1995). This is particularly essential in unstable contexts.

Reflecting on population displacement as a highlight in the recent years in cities worldwide, in 2016, Habitat III in Quito emphasised the role of public spaces as conducive to coexistence, and the nurturing of shared values (UN Task Team, 2015). Among public spaces, streets persist through history and often link different layers of a city over time (Hebbert, 2005). Streets are representations of cities' characters and the urban life reflected in their past, present and potential future (UN Task Team, 2015). They are affected by instability and equally impact people's everyday practices, and activities. The density and duration of activities taking place in streets are indicators of their role of integration (Gehl, 1996). Under unstable situations, the density of activities decreases, perceptions and memories of a space become intertwined with feelings of insecurity, which could lead to avoiding the space (Khalaf, 1998). Reinstating everyday practices changes this perception of insecurity in a space, which is necessary in unstable contexts.

To explore this reconciliatory role of public spaces, this paper unfolds two key terms: everyday practices, and spaces of memory. The former relates to shared activities by people of different backgrounds, reflecting how people live and imprint space. The latter considers public spaces as mnemonic spaces charged with collective memories, but also as contributors to collective memories. The retrieval and reinstatement of the everyday as remembered by different coexisting groups, becomes a potential link to social integration in the present and possibly the future.

To demonstrate the role of public spaces in situations of instability, the past and present of the capital city Beirut-Lebanon is chosen as a context; a city long known for its ability to assimilate differences and influx of people (Khalaf and Kongstad, 1973). In particular, an area known as Badaro will be examined and presented in relation to Beirut's reconstructed city centre.

2 EVERYDAY PRACTICES IN URBAN CONTEXTS

In contrast to programmed events, everyday practices including "the right to stay inactive" (Kostof, 1992, p. 123), are shared and usually inclusive and tolerant to diversity and differences. They are a nexus to approach social integration. Everyday practices could be referred to as:

> *"those minuscule events, barely remarked at the time, on which posterity retrospectively confers the greatness of origins, … there are those nonevents that are immediately charged with heavy symbolic meaning and that, at the moment of their occurrence, seem like anticipated commemorations of themselves." (Nora, 1989, p. 22)*

Practices are based on shared understandings of routine activities that are embodied in individuals. This shared understanding establishes a mutual relation between society and practices. (Schatzki et al., 2001). Social practices are "more persistent and more likely to structure other domains of thought and action when they constitute social relationships" (Swidler, 2001, p. 95). Social relationships among various groups could start in public spaces with their significance of enabling new social practices. Rather than repetition in itself, "the visible, public enactment of new patterns so that 'everyone can see' that everyone else has seen that things have changed" (Swidler, 2001, p. 96) leads to new practices. This relation between individuals with shared understanding, social practices and public spaces are intertwined (Madanipour, 2004). Shifting research from public space as object to research on these relations allows for establishing congruence between what is intended in the space and what is socially needed (Knierbein, 2015), especially in unstable contexts.

A relational perspective is used to understand practices and their spaces, based on the understanding that the nature of practices and their transformations are affected by and affect these ever changing spaces (Shcatzki et al., 2001), which are closely knit to dynamic social, political, economic, and other factors (Knierbein, 2015).

In contrast to the relational perspective stand representations of space (Lefebvre, 1991), which fall into the danger of becoming abstract spaces, devoid of meaning (Knierbein, 2015) and disembodied. Public spaces delivered through the tools of design and planning are often out of pace with the users' changing identities due to population mobility or even displacement. Such spaces often carry the symptoms of neglect and deterioration (Madaniopur, 2004). If there is no sense of attachment or emotional belonging, public spaces could be dominated by specific rather than all user groups and could easily be changed to other uses or simply stay neglected. Differences among user groups emerge in city spaces where multiplicities occur (Holston, 1995). In cases of political instability, and raised security alert, control often results in the "city's disintegrating public spaces and abandoned public sphere." (Holston, 1995, p. 447) resulting in the loss of shared and transformative social practices. This disintegration is manifested in the erosion of public space by protective concrete elements and barbed wire (Németh and Hollander, 2010) that are a common sight in Beirut and other cities nowadays. Other forms of disintegration include closure, long-lasting effects of misuse, or even leaving these spaces on drawings without ever being executed and implemented as planned. The situation differs when there is a sense of attachment to space experientially: either mentally or physically.

On the one hand, mental experience includes the visual and the mnemonic, which act as anchors relating people to spaces imprinting them in their memory through language and names, "iconic elements,

soundscapes, graffiti, media contents" (Tornaghi, 2015, p. 30). Street names serve as a recall, (Hebbert, 2005) or "communal register" and "the safeguard of those continuities of culture and place that made us as street users vastly and substantively older than our age." (Kostof, 1992, p. 243 in Hebbert, 2005, p. 583) This dissipation of clues customises a space according to its local culture and society. It is this network of non-verbal communication, which informs people about the space, allowing them to interact with it.

On the other hand, and as explained earlier, physical experience related to spatial practices (Lefebvre, 1991) takes place in urban space, and defines the routine activities or practices of urban life including encounter, which supports the development of "social relations" (Knierbein, 2015, p. 42). Spatial practices occur in lived space over time, and are essential to healing schisms occurring in unstable contexts. The everyday traffic, buzzing and flow of people in streets are indications of 'balanced' life, as opposed to calm periods following a natural or manmade disaster, where city life comes to a halt. Restoring balance and practices pertaining to it become a shared objective among people. A balanced life in streets refers to: "the normality of street life [that] is a consolation during times of crisis – the impersonal flux of people and traffic 'calms and steadies us'." (Hebbert, 2005, p. 584)

This balance is related to rhythm, and familiarity where reinstatement means regaining the sense of security, promoting a sense of attachment, and reversing a stigma that could become associated with a space or locale (Madanipour, 2004). Rhythm facilitates appropriation through recurrence, yet allows for variations (Lefebvre, 2004). Disasters and conflicts cause changes, and yield instability, which annihilate contextual everyday urban life rhythms, disrupt them or completely alter them, affecting how people experience their cities. Thinking of public spaces relationally as practised space, the combination of non-verbal communication, memories, and social practices allows for exploring possibilities for social change (Holston, 1995), as social integration is one such change. When individuals are given the opportunity to participate in practices (Schatzki, 2001), the possibility for integration occurs, and in turn, antagonism towards the 'other' would diminish with opportunities of encounter in public spaces. In other words, conviviality is realised when individuals are: "… integrated (to varying degrees) into the ways of proceeding that characterize extant practices, where these matters are conserved and novelty and transformation take their start." (Schatzki et al., 2001, p. 21) The transformation of social practices through public spaces requires the consideration of three aspects over time "resources, spatial situations, and strategies" (Lefebvre, 1991, p. 356), which in this paper are related to streets as public spaces, shared everyday practices and collective memory as a strategy.

3 MEMORY AND URBAN SPACE

Everyday encounters in public spaces result in individuals sharing an urban space, which is the glue holding the urban fabric intact (Gehl, 1996). If such practices persist, they lead to embedded collective memories within these public spaces establishing mutual effects between memory and space (Hebbert, 2005). Through memory, spaces and people become intertwined, and associations within spaces help people recall activities and practices (Hebbert, 2005). This is related to memory's nature, which is a dynamic manifestation of "living societies" in constant change, "susceptible to being long dormant and periodically revived." (Nora, 1989, p. 8) Linking people to their present in contrast to history that represents the past.

What is of interest in public spaces is the collective memory, shared by individuals through socio-spatial interaction that allows for the transmission of shared values (Boyer, 1994). Collective memory is perpetuated by "... the living experience of a group or individual." (Boyer, 1994, p. 66) It supports this shared sense of belonging among individuals, so that "The less memory is experienced collectively, the more it will require individuals to undertake to become themselves memory individuals." (Nora, 1989, p. 16). The street as a public space becomes the "locus of collective memory":

> *"It can express group identity from above, through architectural order, monuments and symbols, commemorative sites, street names, civic spaces, and historic conservation; and it can express the accumulation of memories from below, through the physical and associative traces left by interweaving patterns of everyday life." (Hebbert, 2005, p. 592)*

This view is used to examine how a street imbued with memories could support "maintaining, repairing and (sometimes) inventing an everyday public realm that will help its occupants to be ... 'older than their age'."

(Hebbert, 2005, p. 583) This brings us back to relational public spaces as opposed to representations of public spaces.

Hebbert (2005) indicates that one trend in memorialising cities is in fact exclusionist rather than collective, and focuses on the limitation of the preservation of a desired image rather than the lived everyday or as Boyer (1994, p. 54) states: "... these restored city streets and districts turned parts of the city into new visual spectacles and revitalized theatrical decors." These representations mask the users' perception of the space's reality, and without the social practices in these spaces, what is 'real' in the city gets lost (Boyer, 1994). These representations are solely based on the visual and pictorial rather than the experiential. Two contrasting approaches to reinstating public spaces in situations of instability are presented: the tabula rasa approach or selective urban renewal, both resulting in an urban story without a collective memory. Market-led development and its neglect of collective memory often introduces novelty while erasing the past and its extension in the present, and so:

> *"At a moment in history when urban renewal was destroying more of the city's historic patrimony than war and neglect had done, architectural ruins and ornamental styles held out a seductive and nostalgic allure." (Boyer, 1994, p. 54)*

> *"Today our treatment of the city as an essential manifestation of life is determined not by the model of tabula rasa which modernism used to sacrifice existing substance and make way for the new, but by dialogue with the features of place and memory" (Burg, 1997, p. 19 in Hebbert, 2005, p. 591).*

In a relational perspective this situation is avoided through considering architectural buildings as an assembly forming a street or a public space rather than as individual monuments (Hebbert, 2005), allowing for this porous mnemonic vessel to be imbued and to nurture the timeless everyday practices encapsulated in a past, transforming in the present, and reaching out to future generations (Hebbert, 2005; Nora, 1989).

Keeping collective memory alive becomes the strategy that enables public spaces to support encounter and shared social practices, which are required for social integration.

4 THE CASE OF BADARO IN BEIRUT

As explained in the previous section, lived spaces with everyday practices and collective memories establish a rhythm extending diverse users' experiences over time, and enabling a projection into the future. So what about the case of Beirut, whose public spaces have witnessed annihilation, closure, disembodiment, and remodelling due to instability?

The starting point is Beirut after the war period 1975-1989. The "fault line" (Holston, 1995, p. 444) marking differences in this case is the demarcation line that cut through Martyrs Square in the city centre and reached to the pine forest and Badaro at the southern edge of the administrative city (see Figure 1). Examining the relation of the two poles Badaro and the city centre, serves to explore the role of everyday practices in public spaces in reinstating encounter, once in a representation of space, and once in a relational space. First an overview explaining the development of Badaro within Beirut is presented prior to examining its current state. Within an urban planning framework, the following periods are marked: towards the end of the Ottoman Empire around 1900, the French Mandate period between 1920s and 1940s, and the golden period of the Lebanese Republic in the 1950s and 1960s, which was followed by the devastation of the war period between 1975 and 1989, then post-war reawakening.

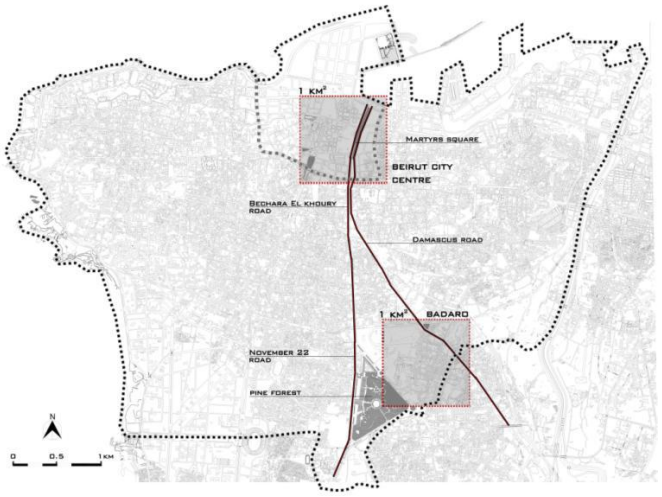

Figure 1 – Location map of Badaro and the city centre

4.1 AN OVERVIEW OF BEIRUT'S DEVELOPMENT

Towards the end of the nineteenth century urban planning in Beirut was marked by the Ottoman emphasis on 'modernizing' Beirut (Hanssen, 1998; 2005), which at the time was confined to its medieval city walls, and Martyrs Square was extra-muros as well as Damascus Road (Davie, 2001) linking Beirut to the hinterland. Beyond the medieval city to the west and south, the peri-urban condition prevailed, characterised by evenly spread coarse and fine urban grain (Saliba, 1998), which was the case along Damascus Road (Debbas, 1986), with cemeteries marking the southern city edge. Following the fall of the Ottoman Empire, French urban planning proposals prevailed between the 1930s and 1960s. Among these proposals was the development of Martyrs Square in the image of the French culture with its cafes and cinema; the square was equally a hub for political, and social practices (Khalaf, 2006). Emanating from it, the formation of a geographically significant axis connecting agglomerations of French presence along Damascus Road- the main trade route for French commerce linking the port city to its hinterland. The agglomeration included the St. Joseph University established by the Jesuits in 1875 (Eddé, 2000), the French Embassy, the Pine residence next to the newly relocated hippodrome, military barracks and hospital, leading southward to the pine forest, which was traversed by a path linking the French quarters to their cemeteries. The Pine Forest dominated the southern limit of Beirut, with Damascus Road and Sidon Road traversing dense pine landscape as reflected in photographic documentation (Debbas, 1986: 160). Saliba's (1998) study of the growth patterns in Beirut, based on the 1932 Danger Plan by two French planners, marked merely rural presence in Badaro during that period, an area that was still marginal and of little urban planning concern, yet abutting the French quarters concentrated in that area.

In the period between 1958 and 1964 under President Fouad Chehab, urban planning was characterised by the modernist approach to planning under the influence of the French planner Ecochard, yet with an emphasis on the development and expansion of road networks (Salam, 1998; Tabet, 1996), the essential infrastructure for trade. Within a physical approach to planning, this emphasis on transportation infrastructure, and establishment of land exploitation zoning (Salam, 1998) disregarded the specificities and needs of each area within the city and its social practices. The state favoured entrepreneurial development as part of its free market economy, neglecting the significance of public spaces. This period was also characterised by regional turbulences resulting in the influx of people and investment from the neighbouring Arab countries (Khalaf and Kongstad, 1973). The bank secrecy policy in Lebanon attracted regional Arab investment to the country (Boudisseau, 1997; Davie, 2001; Davie M. F. 1991; Tabet, 1996), and Beirut witnessed a financial boom, accompanied by real estate development.

During this period, the city centre was predominantly commercial, expanding to the immediate surroundings, and requiring affordable urban land for residential development further out following topography and proximity to main roads (Tabet, 1998). To the east of the centre, the area of Ashrafieh was not attractive due to its steep topography. To the west and in the vicinity of the American University of Beirut established in 1866, Hamra Street in the area of Ras Beirut was developed with its commercial strip, cultural and leisure activities. To the south, the emerging middle class settled around Mazraa and

Moussaytbeh (Khalaf and Kongstad, 1973). In particular Badaro street developed next to Beirut's largest open green space, the pine forest with an area of 300000 m2 (Shayya, 2010). In addition to the presence of pine trees, events, promenades, and music concerts entertained Beirut's residents, particularly those living in the forest's vicinity. This area acquired significant buildings by Lebanese modernist architects (Khalaf and Kongstad, 1973), among them and next to Badaro street the palace of justice constructed by the Lebanese architect Petro Trad in 1959 (Tabet, 1998). Thus, both areas: Hamra and Badaro played the role of 'transition zones' (Khalaf and Kongstad, 1973, p. 5) in relation to the city centre during this period and similarly after the war period.

4.2 THE SCHISM: WAR AND PUBLIC SPACE IN BEIRUT

Similar to the case of Berlin after the fall of its wall (Hebbert, 2005), the dissolution of the division of Beirut into east and west happened physically, but this border severing Beirut generated mental scars still evident to date (Bollens, 2012). Among the so-called war landmarks and associated meanings generated by the war (Khalaf, 1998), Beirut's demarcation line changed at least until the 1990s, how people referred to the eastern and western city parts (Fregonese, 2009; Yahya, 1993). The demarcation line remained as the 'communal register' even nowadays, 28 years after the declaration of the war's end. War disrupted city life, both Martyrs Square and Badaro lie in proximity to the demarcation line running along Damascus Street. The starting point of the demarcation line, Martyrs Square was sanitised of its context, which was completely demolished by bomb shells or bulldozers later during reconstruction. Although located east of the demarcation line, Badaro was encapsulated: to the west it abutted 'no-man's land' the pine forest, and despite its proximity Badaro lost its link to it due to military presence and closure; to the east Sami El Solh Avenue stretching between the Tayouneh roundabout to the south, and to the north the National Museum, and the east-west Abdallah Al Yafi Avenue, which defined the checkpoint with the 'west' at the Museum (Tabet, 1996). Badaro's residential buildings were deserted; scars of fighting across political groups are still evident on some building facades along Sami El Solh, and namely to the south towards the Tayouneh roundabout, where exposure of two neighbourhoods in conflict was maximized. The war not only burnt down the forest, but also resulted in post-war decisions to confine it within highways. Accessibility to the forest was limited, and its closure to the public for 40 years meant that it became a gap in the memory of the urbanites. Khalaf (1998) indicates how after the war, the Lebanese population got stuck between remembering and forgetting. The Beirutees were deprived of their heritage of the pine forest through the burning down and enclosure of this forest, which nevertheless survived in the form of their collective memories. The National Museum with the concrete casings protecting its contents was equally frozen in time until the late 1990s when it reopened.

Following the Taif Agreement in 1989, repopulating Beirut took place gradually and in seemingly selected areas. The vitality to Beirut, and its recreational and leisure activities emerged in specific areas after externalising them from community halls and the living rooms of private dwellings, the familiarity and safety of the known (Khalaf, 1998), to the sterilised shopping centres with their security control. These leisure activities started emerging in the previously 'demarcated' areas around 1994-1995 while the city centre was under reconstruction. These areas offered affordable rent, and spaces not polarised by the war. The displaced population from different parts of the country required time to come to their bearings. War-affected and even war-damaged residential properties were temporarily occupied by refugees. This image resurfaced with the Syrian refugees around 2015 occupying deserted constructions in Beirut. The 'transition zones' of the 1950s-1960s Hamra and Badaro, came back to life after 2005, with everyday practices slowly flowing back into them.

5 CURRENT STATE AND LESSONS LEARNED

This section explores the difference that everyday practices, and collective memory play in establishing and sustaining relational spaces for encounter within unstable urban contexts. Two approaches are considered: the tabula rasa approach with only selected conserved buildings as one approach, and the assembly of buildings, with punctual incisions within the streetscape as a second approach. In both cases, the street network remained as the constant in times of instability, once usurped from its memories, and once along with these memories.

Hillier and Hanson's (1984) emphasised the relation between morphology and social behaviour indicating that increased connectivity and integration in the street network is conducive to social practices. Similarly, the UN Habitat report considers the extent of street allocation and their intersections as indicators of the provision of public space that might be conducive to shared public practices (UN Task Team, 2015). This quantitative tool is used to compare the city centre and Badaro before the war with their current states. As a demonstration, within one square kilometre, the extent of streets, their intersections, and that of open spaces are calculated (see Table 1).

	1961		2016	
In 1 km^2	Badaro	City Centre	Badaro	City Centre
Area of building footprint in m^2	122108	50747	223689	256852
Percent roads	18.0%	33.5%	16.4%	28.2%
No. of Intersections	54	250	113	182
Open space	6.95%	0.75%	7.40%	1.47%

Table 1 – Example

While before the war the city centre had a significantly higher percentage of streets and intersections than Badaro, this difference decreased at present. Note that no new roads have been opened in Badaro, yet in the city centre, the urban fabric was modified according to the reconstruction plan adopted by the real estate company Solidere within a new parcellation plan. Regarding open spaces, Badaro's proximity to the hippodrome and pine forest makes the availability of open urban space higher than in the city centre (see Figures 2 and 3). This overview serves at least to indicate that the two areas differ in terms of their street networks spatially, as resources for public spaces, yet falls short of informing about the spatial practices and memories in these spaces. These are explored through considering the approaches to the two areas' revitalisation after the war.

Figure 2 – Figure ground plans of Badaro and the city centre based on a 1961 map

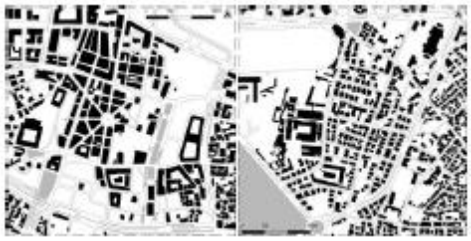

Figure 3 – Figure ground plans of Badaro and the city centre based on a 2016 map

5.1 THE CITY CENTRE

Solidere's reconstruction project for the city centre, or the Beirut Central District or BCD realised under the decree 117/91, had two facets. The first reflected the country's rise after the war, and the reinstatement of its governmental institutions, and its ability to regain its economic momentum within the region. The second introduced a business district, standing on land owned by shareholders, and reclaimed landfill, which in the absence of residents changed to a ghost town, were it not for some restaurants and commercial activities. What was a melting pot for Lebanese from all walks of life before the war became an exclusive terrain, not yet integrated in the minds of the population (Deeb and Harb, 2013). The calculated demolition of the urban fabric within the city centre, and eradication of its open spaces, leaving only few highly controlled spaces and edifices to be admired as objects in an open air museum, and replacement of everyday practices with events together resulted in the loss of the collective memory, and its replacement with kitsch and globalised trends (Khalaf, 1998). A disconnection with social practices and mnemonic spaces resulted from these representations of space. Even remaining streets were changed, the

peripheral ones widened into avenues, disconnecting the city centre from its immediate surroundings. The city centre was transformed, and uprooted from its past, despite Solidere's motto: 'Beirut an ancient city for the future'. Control and surveillance, physical barriers and the sense of heightened security together meant that some parts of the city centre were extracted from people's daily rhythms, and consequently from collective memory. With the progress of the reconstruction, life and recreation slowly crept into the city centre with the exception of areas protected by the military such as the Parliament. Following the assassination of the former prime minister Hariri in 2005 and consecutive demonstrations in the city centre, leisure activities started withering, and the pulse of recreation and leisure started spreading to the immediate vicinities to the east (Gemayze) and west (Clemenceau) again initially in the areas bordering the demarcation line, with former architecture lending itself to spaces of gathering and encounter. Then similar to the boom of the 1950s-1960s, a spill over effect took place after 2005 into Hamra and later Badaro, while demonstrations in the city centre demonstrations prevailed and suffocated any leisure activities around 2014. This is when Badaro returned to the mental map of the population.

5.2 BADARO

With scarce documentation on Badaro, newspapers become a valuable reference on its activities in addition to site visits and observations conducted between 2015 and 2016. While in 2011 the newspapers reported street robberies and complaints by residents about feeling insecure at night, Badaro's media coverage switched to a different representation in 2014, marking its awakening (Iqlimos and Barrak, 2015; Maddox, 2014; Rahhal, 2014; Al Sahily, 2016; Yaghi, 2015). For example, the Arab Centre for Architecture ACA (http://www.arab-architecture.org/) started organising walks in Badaro, introducing visitors to the area's layers of architecture dating to the French mandate and Lebanese modernist periods. The encapsulated area allowed the recalling of events and participation in everyday practices. Badaro's sidewalks are conducive to a culture of street cafes and promenades. These routine activities enable encounter and the engagement of different people. The reuse of ground floor spaces transformed Badaro Street into a lively street hosting panoply of daytime and night time activities, in addition to occasional street festivals, enhancing the existing mixed-use character of the street.

Around 2014 Badaro became an attraction to investors with its location along Damascus Road. A hotel favoured by foreigners: Smallville, was constructed along this road, with a bicycle renting shop in its vicinity. Real estate development capitalised on living in a quiet and central area in Beirut while still enjoying the view or even the scent of pine trees. Apartments by contemporary Lebanese architects are located within gated buildings without dialogue with the street, unlike their modernist forbearers, the residential buildings integrated with the street through the treatment of the ground floor, the entrance, gardens, setbacks and pockets allowing for gathering spaces on a small scale.

In contrast to the market-led development, bottom up initiatives manifested through NGOs and social organisations that chose to locate their offices in Badaro such as zero waste act for recycling, and Kafa among others (http://www.zerowasteact.com/; http://www.kafa.org.lb/). These initiatives created rhythmic social practices such as addressing pressing social needs. A significant bottom up initiative is the activism of the NGO NAHNOO in raising awareness on the significance of public spaces, and negotiating with Beirut Municipality the reopening of the pine forest, which materialised in 2015 (http://nahnoo.org/default.htm; Executive Director at NAHNOO, personal interview, 12 July 2016). Different stimuli are present in Badaro to awaken and nurture collective memories. These include spontaneous uses of the same space differently by locals or refugees allowing for inclusion (sitting down on a green patch, using war-torn buildings as a shelter); minuscule events that enable sharing and participating in practices and routine activities; street names, sounds, and icons; and most importantly, the presence of the pine forest, and pine trees dispersed throughout Badaro's streets. In addition to the daily practices, periodically organised events including festivals such as food, Christmas markets, association of merchants of the area, invite people to reintroduce them to this deserted, frozen in time area. Note that celebrations, parades, group activities, public arts, staging public events, and festivals change the spatial experience (Madanipour, 2004), and enable new transformations of the streets.

Drawing on this overview from the two poles of the demarcation line, some lessons learned are drawn regarding three aspects: first, the public spaces- particularly streets- as resources; second, the social practices in those spaces; and third, collective memories, and their relation encounter and social integration.

First, the BCD with its reconstructed and regulated plan has provided the resource of space, yet dismantled the glue that binds the city centre together with its surroundings. The reconstructed plan introduced new configurations and representations of streets and other public spaces that are pleasant to observe, yet not necessarily able to engage people in shared practices. Badaro's continuity of the street network since the 1930s and persistence of the architecture marking different periods in the evolution of the city, provide the basis of public space as a resource for encounter. The reopening of the National Museum and the pine forest provide anchors for interaction within this area, gradually allowing Badaro to reconnect with its surroundings.

Second, with the efforts of Solidere and other shareholders, BCD's life is sustained through events attracting visitors from time to time. Yet the city centre as a so-called business district, remains sanitised of public facilities such as schools, hospitals, and to an extent residences. Under situations of instability, governmental buildings including the parliament still require surveillance and control, which limit the everyday use of the city centre. In contrast, Badaro's residents and property owners live in the area on a daily basis; activities related to the public facilities, services, and commercial activities in the area generate shared social practices; except next to military facilities, Badaro's control is through 'eyes on the street'. Through the practices taking place in the area both everyday ones and organised festivities, Badaro is slowly returning to people's mental map.

Third, reviving collective memory in Badaro is gradually occurring through the reopening of the pine forest, the National Museum, and practices such as the organised walks that provide knowledge on the area's history and urban fabric, highlighting the significance of the area's architecture to its urban character and people's practices. In the BCD, a 'dual identity' is forged, stuck between the current and what used to be (Khalaf, 1998), with a present not leaving any traces that link it to the past, and Martyrs Square being reduced to an event space during manifestations or a decorated 'kitsch' (Khalaf, 1998) during festivities, losing its everyday significance and central role in the city. Despite its apparent abundance of spaces as a resource, the BCD is limited in practised everyday spaces, and is reduced to an exclusionist area.

The three examined aspects that are conducive to transforming social practices are evident in the case of Badaro, where memory is still "borne by living societies" (Nora, 1989, p. 8), while stories of sporadic events linger in the BCD, experienced by selected users. In Badaro, this continuation of collective memories is evidenced by various minuscule activities that are slowly embedding themselves in the spaces and consequently their users, nesting in streets, ground floors or even war-affected buildings.

5.3 CONCLUSION

The possibility of having public spaces in unstable contexts as spaces for encounter and coexistence goes beyond the design and provision of the spaces. In particular, the focus should be on everyday social practices and collective memories in urban contexts, which are conducive to use equally by local authorities, and bottom up initiatives. The aim of reinstating streets as public spaces within unstable contexts is equivalent to allowing and even enabling streets to weave new collective memories that would knit the past to the present. This would allow for perpetuation despite population changes, facilitation of coexistence, and engulfing of differences, rather than lamenting spaces that are devoid of memories, and left without a sense of attachment. The case of Badaro and the pine forest served as one example of reinstating encounter gradually, despite the pressures of prevailing development trends and instability.

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ID 1474 | TOWARDS CONSENSUS BETWEEN STAKEHOLDERS WITH CONFLICTING INTERESTS: EXPERIENCES FROM URBAN AREAS KALARANNA, TALLINN, AND MEZAPARK, RIGA

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ABSTRACT: The case studies examine the conflicts between local communities and developers duringthe design and adoption of detailed plans for urban areas Mezapark, Riga and Kalaranna, Tallinn. Theconflicts are examined via a series of semi-structured interviews with the actors involved in the conflicts, thecommunities, developers, designers and municipality. Stakeholder opinions are complemented with expertopinions. The case studies aim to discover the causes of conflict during the design and adoption process. Theconclusion is, the conflicts aroiuse due to (1) mutual bias between the stakeholders, (2) inadequateengagement strategy and (3) the lack of flexibility and initiative in the actions of municilipality.

KEYWORDS: case studies, civic involvement, conflict, Kalaranna, Mezapark, planning, public space

1 INTRODUCTION

Following the worldwide planning practice Latvian and Estonian legislation introduced therequirement for public display and discussion of urban plans. The corresponding regulations were included inthe legislation in the end of 1990s. The actual activities, however, emerged in the end of the first decade ofthe 2000s. In the period 2008 to 2016 two plans attracted public attention, the plan of Mezapark, Riga, (2010- 2013), and of Kalaranna, Tallinn, 2003-2016. Both plans were dealt with the planning of public waterfrontareas and caused significant public protests. The debate about these plans highlighted the growing publicinterest in shaping the city, the demand for greater public engagement in planning and the deficiency ofexisting civic involvement strategy, which encourages conflict instead of consensus.

The case studies explore the negotiations between resident communities, developers, designers andmunicipality during the design and adoption of the detailed plans. The negotiations are examined via a seriesof semi-structured interviews with the actors involved. Actor opinions are complemented with expertopinions. The themes, emerging from the interviews are complemented with the facts, derived from planningdocuments and the insights from the scientific research on participatory practices. The aim of the case studyis to understand the drawbacks of current engagement strategies and to sketch possible solutions. The casestudies are conducted in the framework of a broader research on civic engagement in planning in the Balticcountries, which aims to develop a locally viable methodology for public participation.

In the following section the authors briefly touch on key community engagement ideas and positionthe case studies and their context within research on participatory practices. Further on, the authors proceedwith the research strategy, data collection and analysis technique. In the next section the authors introduceMezapark and Kalaranna - the neighbourhoods in focus, and the planning legislation in Latvia and Estonia.The authors proceed with the findings of the research paired together with the discussion and make someconnections to the scientific debate about participatory practices. The authors conclude highlighting thedeficiencies of current civic engagement strategies and make suggestions for possible future improvements.

In the current article word sets public / citizen / civic and participation / involvement / engagementare used as synonyms.

2 THEORETICAL METHODOLOGICAL APPROACH

The discussion about the importance of civic involvement in planning was launched in 1960s bythe classic essays of Davidoff (1965), Arnstein (1969) and Friedmann (1973). Davidoff and Friedmannadvocated the need for co-planning with citizens, for citizens provide experiential knowledge of places, whichare being planned, and are end users of places, resulting from plan implementation. Arnstein, in turn,classified citizen engagement into levels, by the degree of citizen influence on decision-making. Since 1960sparticipatory planning thought was advanced (Forester, 1987; Healey, 1995; Innes, 1998; Sager, 2012) anddiscussed (Huxley and Yiftachel, 2000; Hoch, 2007) resulting into the so-called “communicative turn” inplanning (Healey, 1996). Currently, communicative planning idea gained support among civic leaders andfirmly established itself in the planning practice (Faehnle and Tyrvainen, 2013; Shipley and Utz, 2012).Indeed, civic engagement legitimates planning decisions and promotes public support of plans, thus,facilitating plan ratification and implementation (Sager, 2012; Irvin and Stansbury 2004). According to Irvinand Stansbury (2004, p. 56) the question, weather to involve the public or not, outdated. Instead, the newquestion emerged, what strategy of civic engagement is best.

Throughout its existence public participation in planning was praised and criticised. The supportersof the idea claimed, that it leads to balanced (and hence better) policy solutions, encourages mutual learning,trust and consensus building, promotes civic empowerment (see eg., Hoch, 2007; Faehnle and Tyrvainen,2013; Innes, 1998; Irvin and Stansbury, 2004). The adversaries argued about the managed nature ofparticipation, which results into limitations to certain interest groups and questions, inefficient resourceexpenditure, conflicts and frustration (see eg., Connely, 2006; Doorne, 1998; Huxley and Yiftachel, 2000; Irvin and Stansbury, 2004). Both parties have their evidence, as participation is context and implementationsensitive (Connely, 2006). The engagement strategy which is efficient in the society with establishedcommunities and long tradition of public involvement in municipal policy-making might be inadequate forthe society with emerging communities and no experience of co-planning (Hoyle, 2000).

Furthermore, a wellintentionedparticipation strategy might fail if implemented poorly or partially (McGovern, 2013). The casesof Kalaranna and Mezapark, which are examined in the current research, point out the importance ofcontext and implementation in civic engagement practice.

The current research studies the public involvement in the design and adoption of plans forMezapark and Kalaranna neighbourhoods. For a 25-year history of Latvian and Estonian independence theseplans produced the most resonance in the planning field and, therefore, were chosen as research cases(personal communication with Riga and Tallinn planning department officers). They illustrated how theadvantages of participation can be nullified by the inappropriate participation strategy, leading to informinginstead of empowerment, mutual bias instead of trust and conflict instead of consensus. These plansprovoked outcry from local residents, resulting into long-lasting fierce debates between communities,developers, designers and municipalities. Although, the opponents finally managed to reach a (partial)consensus, all parties were unanimously dissatisfied with the process (personal communication withstakeholders).

The study takes a methodological stance (Creswell, 2007), as the authors started with general studyof the cases, adjusting the research questions and data collection techniques as new information wasdiscovered. Initially, the authors focused on the desired and actual outcomes of the dispute about the plans.As the research proceeded, the focus shifted towards the dispute process, how did it advance and why did itcause dissatisfaction. Indeed, a well-designed and smooth process is likely to lead to satisfactory outcomes.

Whereas, satisfactory outcomes in case of an ill-designed and ill-implemented process is a matter of chance(Christensen, 2015). As the focus shifted, the following research sub-questions emerged: (1) What were thedeficiencies of public involvement process in cases Mezapark and Kalaranna? (2) What are the desiredchanges to the public involvement process in the future? Both questions lead to the following main researchquestion: How does the planning system in Latvia and Estonia should be modified to meet the growingdemand for community engagement in planning?

Answering research questions the authors applied mixed research strategies. The opinionsconcerning the deficiencies of civic engagement process (sub-question 1) and the desired changes (subquestion2) were gathered via semi-structured interviews with actors involved in negotiations. The interviewswere conducted with five actor groups: the citizens, developers, designers, planning department officers andexperts. The interviews were recorded in March - June 2016 and September - November 2016. Eightinterviews were conducted in Riga and six — in Tallinn. The interview length varied from 30 min to 2 hours.

Each interview was recorded, transcribed word in word and analysed with NVivo software. The intervieweeswere asked to comment on the participatory process, actors involved, conflict essence and resolution. Somecommunity activists presented their opinions in the media. These opinions were, also, included in the analysis.

The interviews and opinions were in three languages, Latvian, Russian and English, translated into English bythe authors. Analysing the interviews, the authors searched for common recurring themes and grouped them accordingly. In total, four themes, each containing two to five sub-themes, emerged. The themes aresummarised in Table 1.

The opinions of the interviewees were verified against facts, derived from planning documents.Original graphic parts of both plans were examined. The original cover text for Mezapark plan (in Latvian)was reviewed. The text included building regulations for the planned area, citizen proposals and designercomments on these proposals. The cover text for Kalaranna plan (in English) was derived from thearchitectural competition task for the housing project in the area. The text briefly described the backgroundof the area, the vision and the competition task, which was developed following the building regulations.Additionally, the report describing the sequence of events during the planning process for Kalaranna wasexamined. The information about the cases available to the authors was unequal. For Mezapark there wasmore official factual information about the process and outcomes available to the authors. Resident opinionsabout the plan with designer comments were thoroughly documented. Furthermore, the quality of graphicand textual material for Mezapark was higher than for Kalaranna.

Themes, derived from the interviews, were complemented by the information from academicresearch sources on communicative planning theory, participation case studies and participation evaluationcriteria. The research strategies are summarised in Table 2.

3 INTRODUCTION TO THE CONTEXT

3.1 PLANNING LEGISLATION

Process	Outcome	Planning system	
- mutual bias - absence of trust - absence of dialogue	- Mezapark - dissatisfaction - Kalaranna - satisfaction	deficiencies - late engagement - participation through protest - limitations (groups) - limitations (questions) - passive municipality	desired changes - early engagement - flexibility - transparency - active municipality - research driven approach

Table 1 - Themes derived from the interviews

Analysis of research articles and review articles	Analysis of emerging themes	Case studies
	interviews	planning documents, textual and graphical parts, other documents
complement ->	verify ->	<- support

Table 2 - Research strategies

3 INTRODUCTION TO THE CONTEXT

3.1 PLANNING LEGISLATION

Following international practices, planning legislation in Latvia and Estonia requires publicconsultation prior to adopting binding urban plans. Until 1991 Latvia and Estonia were parts of the SovietUnion, therefore the built environment was planned and developed by governmental institutions in theframework of planned economy and rational planning (Paadam, 2009). Since 1991, after the dissolution ofthe Soviet Union, Latvia and Estonia transferred to free market economy and market driven urbandevelopment. The transition was impetuous, thus, initially planning legislation was copied from otherEuropean countries and later modified to fit local conditions (personal communication with Riga and Tallinnmunicipality officers). Currently, urban development is regulated by relatively fresh documents: “Spatialdevelopment planning law” (Saema, 2011) and regulations Nr. 628 “Regulations about municipal spatialdevelopment planning documents” (Cabinet of Ministers, 2014) in Latvia and “Planning Act” (Riigikogu,2015) in Estonia.

In their essence planning legislations of Latvia and Estonia are quite similar. Municipality managesits own spatial development by means of comprehensive (territorial) and detailed (local) plans.Comprehensive plan is a plan for the whole area of municipality. Detailed plan is a plan for a part ofmunicipal area, which is more detailed, than the comprehensive one. Both plan types are binding and consistof graphic (maps) and textual (regulations) parts. Both plan types require a public display with a subsequentpublic discussion of a plan before sending it for approval to a municipal council. Public display is a time spanof one month when any citizen can familiarise oneself with a plan and submit an opinion or a proposal aboutthe plan. Public discussion is a meeting where citizen opinions and proposals are presented, evaluated,accepted or rejected. If an opinion or proposal is accepted, the plan is modified accordingly. If an opinion ora proposal is rejected, the legislation requires to give a rationale for that. In both countries the final decision,weather to accept of reject the plan, is taken by a municipal council.

As planning legislation is valid for all municipalities, from small settlements (~1 thsd. residents per~185km2, Baltinavas novads, Latvia, PMLP, 2016) to big cities (~700 thsd. residents per ~304km2, Riga,Latvia, PMLP, 2016), it sets minimum requirements for public involvement. Large municipalities are free toorganise additional participatory activities. “I think the municipalities should apply the practice [ofcomplementary engagement activities to those, required by law]… at their own initiative. These [activities]could be as recommendations… and the municipality could apply them, if it wants…”, says a planningdepartment representative from Riga. A planning department representative from Tallinn supports theopinion: “For each municipality it is possible to work out their own methods…the aim of the law is not tobe very precise… because there are so many different possibilities and so many different municipalities withtheir own resources”.

3.2 MEZAPARK AND KALARANNA - THE NEIGHBOURHOODS IN FOCUS

Although, requirements for public involvement in development of urban plans was included in theplanning legislation in late 1990s, actual participatory activities started to emerge around 2010s, when a debateabout the plans for Mezapark and Kalaranna took place. According to municipal officers, interviewed for the case study, plans for Mezapark and Kalaranna had most public resonance compared to other plans. Both plans deal with waterfront public space accessibility issues.

Figure 1 - Left: map of Mezapark; right: Map of Kalaranna (Open Street Map, 2017) from the Old Town by the Lake Kisezers. The park area was included in the city area in 1904.

Forest areas, which constitute 80% of the park area, were shaped between 1920 and 1940, cultural and sportsinfrastructure was built in 1950-1965 and 2008-2011 (Grupa93, 2013; Rigas Mezi, 2017). Currently, Mezaparkhouses the zoo, Song and Dance Festival open air theatre, BMX track, obstacle park for children and adults,playgrounds for children, a beach, a small boat harbour and multiple cafes.

The park is a municipal property area and is managed by the governmental institution Rigas Mezi(Riga Forests). In 2010 Rigas Mezi commissioned the plan of the area to the planning office Grupa93. Dueto legislation changes the plan had two public displays, in 2012 and 2013. It was approved in 2013 with minormodifications. Initially, key elements of the plan were (1) division into four functional areas — for passiverecreation, active recreation, waterfront activities and cultural activities, (2) traffic organisation — separationof motor transport, pedestrians, cyclists, skaters and skiers, allocation of parking lots, (3) allocation of publicutilities, including an amusement park, (4) a solid public waterfront promenade (Grupa93, 2013). In thedebate about the plan there were three points the citizens protested against: (1) the construction of anamusement park, (2) forest transformation for allocation of public amenities, (3) the construction of a solidpublic waterfront, suitable for motor vehicle traffic.

Kalaranna (fig. 1, 2) is a ~7ha brownfield area located between the Northern edge of the Old Townand the sea. In the Soviet time the area was a shipyard for the Union of Fishermen and was not accessible tothe public. After 1991 the area was privatised, industrial buildings deteriorated and demolished, and the

areabecame physically accessible to the public (Pro Kapital Eesti, 2016). Currently, the area houses a small yachtharbour, a fish market and an informal pop-up beach.

The area is a private property and belongs to a developer Pro Kapital Eesti, which bought the landin 2001, demolished the fence around the area and the industrial buildings. In 2003 Pro Kapital Eesti commissioned the plan of the area to an architecture office Nord Projekt. Due to public protests the planhad four public displays, in 2008, 2012, 2014 and 2015. It was approved in 2015 with major modifications.Initially, key elements of the plan were (1) a residential quarter with an underground parking accessible fromthe seaside, (2) an extended yacht harbour, (3) a solid public waterfront promenade (personal communicationwith a planner from Nord Projekt responsible for the project). In the discussion about the plan there werethree main conflict points: (1) the design of the apartment blocks; (2) the access to the seaside; (3) theelimination of the pop-up sandy beach with a swimming place.

Plan for Mezapark and plan for Kalaranna have a number of similarities and differences. Bothplans redesign a strategic space in the city. The size, history and function of the space are different. Bothplans deal with waterfront design and accessibility issues. In case Mezapark the de facto private space wasdesignated for public use, and in case Kalaranna the de facto public space was threatened to becomeinaccessible.Both were subjected to a substantial public critique, which lead to changes in plans. In caseMezapark these changes were minor, but in case Kalaranna - major. Participatory process, however, wassimilar, and caused dissatisfaction among all stakeholders.

Figure 2 - Left: Mezapark waterfront; right: Kalaranna waterfront (authors)

4 FINDINGS AND DISCUSSION

4.1 OUTCOME

The citizens managed to achieve certain changes in the plans according to their preferences. InMezapark the idea about the construction of an amusement park was rejected and the design of thewaterfront was subjected to a competition. The waterfront was a contradictory issue, as there was no unifiedopinion about it among the citizen groups. Some residents wanted it to be solid, accessible for motortransport, while the others were advocating a soft, natural, vulnerable to water fluctuations. The competitionallows for another round of debate for the waterfront design. “If we had a promenade, [Pavu Streetresidents] could use it [to access their properties]. They wouldn’t need to go through the park. Cafe supplierscould, also… avoid entering the park”, argues a developer representative, Riga. “Greece is an excellentexample where due to solid waterfronts the link to the water doesn’t exist… How many places there are in Riga where is it possible to walk with the kids along the natural water edge?… We won’t be able to get anatural waterfront after building an artificial one!”, says a community representative, Riga. Despite theseaccomplishments some residents refer to Mezapark plan as “a lost case”, as two of three conflict issues, theforest transformation and the waterfront redevelopment, remained in the plan. Furthermore, the futuredesign of the waterfront remains unclear. The developer, in turn, regrets, that the amusement parkconstruction was rejected.

In Kalaranna the expansion of the harbour and the construction of the waterfront road weredismissed. The citizens, also, secured a 20 m wide motor traffic free public area along the seaside and a beachwith a swimming place, resulting in 40% of the private area being in public use and managed by themunicipality. The design of the buildings on the site was subjected to a design competition. Participationresulted into

more or less consensual planning solutions. Both conflicting parties, the developer and thecommunity, were satisfied with the outcomes, and the plan was ratified. The developer was satisfied with theopportunity to start developing the area. A developer representative admits: “We came to the decision that[the conditions of the detailed plan] are acceptable for us... Because… the public areas... will increase… thevalue of the area”. The community, in turn, assured the public waterfront and the beach with a swimmingplace it was fighting for. A community representative says: “We had a… long and painful cooperation… andwe… reached quite a good outcome for the public sea-side…”

Civic participation is often blamed for its managed nature and the lack of public influence on actualdecisions (see ex., McGovern, 2013; Connely, 2006). Indeed, according to Latvian and Estonian legislationthe final decision is taken by municipality. Municipal decision can override any proposal from otherstakeholders, such as developers or citizens, and can be argued only in the court. In both cases to a larger orlesser degree residents managed to persuade the municipality and other stakeholders to modify the plansaccording to their suggestions. Thus, the voice of the residents was heard and their opinions wereincorporated in the final plans. Furthermore, participation is criticised for its redundancy, as an individualplanner and a group of stakeholders can arrive to the same conclusions, thus, making a collective decisionsuperfluous (Faehnle & Tyrvainen, 2013). However, in cases of Mezapark and Kalaranna, the changes inplans would be impossible without community input. Besides, the contributions from the citizens, arguably,improved the quality of plans, forcing the developer to preserve and strengthen local values.

4.2 PROCESS

Plan design and adoption process for Kalaranna and Mezapark was hampered by mutual bias andmistrust. Judging by the opinions, expressed in the interviews, developers, designers and, surprisingly,municipality represented a “pro development professional” group, while communities represents a “counterdevelopment “laymen” group. Developers and municipality were sceptical about the competences of theresidents and their ability to provide meaningful contributions. Designers abstained from expressing directjudgements. Developers and municipality claimed, the citizens evaluate plans superficially and subjectively.

“The public… pays attention to visual details not… entering into real topics” says developer representative. A planning department representative supports the opinion: “Usually the opinions of the citizens are subjective”. Furthermore, both parties repeatedly emphasise, that “[citizen opinions] should be evaluated by professionals”.

The facts derived from planning documents proved these bias to be unreasonable. Firstly, bothcommunities had professionals among their members, lawyers (both), architects (Kalaranna) and spatialplanners (Mezapark). Secondly, citizen feedback about the plans was precise and constructive.The designer of Mezapark plan received and documented 21 comments on 55 A4 pages. Three ofthese comments were letters from resident communities, containing 13, 18 and 19 points each. Four of thesecomments were letters from private persons containing 4, 6, 10 and 48 points each. Comments were wellstructuredand well-argumented. The residents supported their arguments with a community wide surveyabout the values of Mezapark, with response rate of 10%. Moreover, some comments pointed out mistakesand inaccuracies in planning documents, which were, later, corrected by the designer.

For Kalaranna plan a similar document providing information about the resident comments wasnot available. However, judging by the interviews with community representatives, the residents studied theplan thoroughly, highlighting controversial points. Furthermore, the community hired a professionalconsultancy to evaluate the plan, which revealed the deficiencies of the plan, including the mismatchesbetween the plan and higher level planning documents (Lindmae, 2014).

The review of co-planning cases shows, the quality of citizen input is a common concern (Doorne,1998; McGovern, 2013; Vayona, 2011). However, the experience from Kalaranna and Mezapark proves theirrelevancy of these concerns for the local context, as in both cases the citizens provided qualitativecontributions. Besides, there is a positive trend in the quality of public input, as municipality representativesadmit, that “[citizens] know more about... urban planning... and… [the share] of constructive criticism… isgetting higher”.

Another recurring argument from developers and municipalities was the resistance of thecommunity to any development, to change, and the tendency towards “no, I don’t like it” attitude. “[Thecommunity]… wish was just to prolong the process and to maintain the status quo”, says a developerrepresentative. A planning department representative supports the opinion: “The residents don’t want anydevelopment”. However, community representatives clearly stated in the interviews, the residents resistproposed design solutions, rater than the development in general. The statement is supported by communityactions. Mezapark community based on self-initiated resident survey produced a balanced development planfor the neighbourhood. Kalaranna residents, in turn, established a beach with self-made street furniture. Acommunity representative from Tallinn emphasises: “What concerns [community name] fight... it has beenabout... the use of sea-side... the access to the sea-side… it has never been against the development”. Theseexamples showcase the resistance towards top-down planning, rather than to change, and the demand forbottom-up approach.

The communities expressed mistrust in developers and designers, and, at the same time, weresceptical about the ability of municipalities to protect their interests. The citizens were struggling rigorouslyfor precise wordings in the building regulations, which exclude any misinterpretation. They feared, that anyuncertainty would be interpreted in favour of developer and referred to these uncertainties as developers“tricks”, which conceal developers true intentions. “In professional language [the designer] can put it in a way, that no one pays attention…and it gets through”, says a community representative from Riga. A communityrepresentative from Tallinn supports the opinion: “[The developer and the city] haven't agreed that… this[area] is in public use. Legal... agreements behind it… the contracts... everything was missing”.

The mismatches in the plans and plan complexity only contributed to the residents concerns. Incase of Mezapark the designer prepared infographics summarising main features of the plan. Originaldocuments, building regulations, maps, street sections, cover text, etc., were available at municipal website.However, some residents claimed, the infographics provided limited information and, thus, were(intentionally?) misleading. “The construction of an amusement park is not reflected in the infographics, thusresidents get a corrupted impression of the essence of the plan”, says a community representative, Riga.In case Kalaranna the residents, on the contrary, blamed the developer and designer for the absenceof infographics as the original plans were unreadable. “Detailed plan is like absurdly complex... in publicdisplay the drawing of the plan was… I don't know... 10 meters long /laughs/…And they expect that oncomputer screen you will understand everything!” admits a community representative, Tallinn.

Developers and designers, in turn, were disappointed by community mistrust. Developerrepresentative points out, “the quality of the land owners who want to establish a new detail plan… hasincreased substantially compared to… 10-15 years ago”, and, currently, the developers are interested in a largepicture, because “the profit comes if the property is good and if the surroundings are good, if the publicspaces are good, if the accessibility is good…". The designers support the argument, stating, that, indeed,there were “a few cases where… let say, there was something in the project, which no one paid attention to…and when the project was realised… it didn’t meet the expectations… But it happened unintentionally”.Developers and designers unanimously agree, it was difficult to overcome the mistrust and to prove, the plansare designed according to the planning legislation and there is no hidden agenda.

Examining the public display process, becomes obvious clear, that “there was a discussion, butthere was no dialogue” (designer representative, Riga). Conflicting parties took defensive positions and, thus,were unwilling to accept opponents concerns and arguments. Inness & Booher (1999) confirm, the inabilityto understand the position of the opponent is a common disease of many co-planning initiatives. Thereforefor the co-planning projects to be successful it is important to start with building mutual respect and trust.

4.3 PLANNING SYSTEM

Although the initial interview setup did not include questions about the planning system, manyrespondents commented on it. Arguably, these were the deficiencies of the planning system, that exacerbatedthe conflicts. As a community representative puts it: “The planning system should be, also, changed!”

4.3.1 ENGAGEMENT FRAMEWORK

A crucial issue which is rarely discussed, is when to involve citizens in planning process and whatquestions to ask. In both cases residents were invited to participate in the end of the process to comment onfinal design solutions. For Mezapark there was, also, a woking group, which discussed design solutions during the design process. However, the working group had a limited public access. In fact, the only option citizenswere left with, was either to approve, or criticise final solutions, without the opportunity to participate in thedevelopment of solutions. “The only way that you can participate is through protests, and this isfundamentally wrong”, says a community representative. “The question is how seriously people take it, howmany and how often participate... many times [public displays] happen when… in some sense it’s too latealready”, admits an expert.

Other stakeholders and experts point out, the citizens have be involved in the beginning ofplanning process, preferably, in setting the agenda for the plan and doing the preliminary research. Adeveloper representativr admits: “It would be good to find a way to involve different parties already in thebeginning”. A planning department representative supports the opinion, saying: “We encourage planners andland owners… to start with... the involvement of community before it's legally necessary… “.

A common argument in favour of community engagement states, that participation increasespublic support of plans, thus, leading to successful adoption and implementation (see ex. Irvin & Stansbury,2004; McGovern, 2013). The examples of Kalaranna and Mezapark illustrate, if the community is involved inthe final phases of plan design and if engagement is limited to approval or rejections of final solutions, thenparticipation is likely to lead to conflicts.

4.3.2 REPRESENTATIVENESS

Citizens involved into the discussion of plans were limited to local communities. Mezaparkresidents were represented by Mezapark development community and the residents of Pavu Street. Membersof the community and Pavu Street residents live mainly in detached houses in the neighbourhoods borderingthe planned area.

In the discussion of Kalaranna plan initially local residents were engaged as individuals. Since 2012the case was overtaken by an official local resident community Telliskivi Selts, which managed to engageapproximately 4000 local residents (counted by signatures to protect the sea-side).

Despite the significance of both areas for entire cities, city wide public was not involved. In caseMezapark the designer and the developer both point out that the absence of alternative resident groups was asignificant drawback of a participatory process. According to them, resident preferences differ depending ontheir housing location and conditions.

> *“…There are two resident groups. Those residents, who live indetached houses in Mezapark neighbourhood, which was historically planned asa garden city… who established the Mezapark development fellowship. Thesecond group are those, who lives in apartment blocks at Ostas Street. Thisgroup hasn’t established any community… And the opinions of these twogroups are quite different…This group [who lives in detached houses]regards… the park as a continuation of their private property. They want it calmand quiet, without people…Without development, without events, withoutanything. And the other group, who lives in apartment blocks, sharing a fewsquare meters with children, for them [Mezapark] is very important. For thesport infrastructure is important, places for walking are important. They wantplaygrounds for children, sport infrastructure for children. The opportunity to visit events… The place where they could enjoy nature… For many Rigaresidents [infrastructure is important]. In Riga there are little places, with theopportunity to have a walk in the forest, with paths, lighting, catering andrecreational places” (developer representative, Riga)As a designer representative points out “the challenge is to communicate not only with the group,which is directly affected [by the plan] and which is against, but communicate with the beneficiaries, with thesilent mass, which is much larger, who sees the benefit”.*

Low participation rates and strategies for involving passive groups is a topical question in thecurrent research on participation practices (see ex., Brown & Kytta, 2014; Thiel & Frohlich, 2017). Donderset al. (2014) support the arguments of municipality officers, emphasising, that the residents, who are usuallyengaged, are not representative of the community. Therefore, as Nienhuis & van Dijk (2011) argue, it isnecessary to introduce strategies, aiming at involving the passive citizens to balance the opinions of activeones. In cases of Mezapark and Kalaranna, despite the fact, that most stakeholders mentioned the need forengaging “the silent majority”, no activities, beyond those, required by the legislation, were conducted toencourage them to participate.

4.3.3 ROLE OF MUNICIPALITY

Municipality officers recurrently argued, that the active minority, who participates in public displaysand discussions, often follows their vested interests. “I often encounter the cases, where [the residents] thinkabout their own benefits, rather then bout public interest”, says a planning department representative fromRiga. A planning department representative from Tallinn supports the opinion: “If we go deeply into thearguments very often it is not in the interest of the wider audience, but in the interest of someone in thecommunity”. Municipalities, in turn, represent public interests. “A municipality is an institution whichrepresents the society, pro-society”, says a planning department representative from Riga. A planningdepartment representative from Tallinn supports the opinion: “A [municipality] represents the public interestmore often than these community groups…”.

Although municipal officers are, partially, right, their arguments cannot be considered sound. Theresidents cannot be blamed for pursuing their agenda as the task of residents is the advocacy of their“selfish” interests. The task of municipality, in turn, is to balance various “selfish” interests, the interests ofvarious resident groups, of land owners, of developers, of entrepreneurs, etc., to find the best possiblesolution, which would satisfy all parties. Furthermore, the task of municipality is to ensure, that these variousinterests are represented during the discussion. The more interests are present, the closer the commonopinion is to “public interest”. “Public interest consists of various interests... at the end of the day the cityhave to decide... what stays on the table… But it… depends on what do you want to get… do you want toget more cars or do you want to get more pedestrians?… I’m talking about… the end resultphilosophically… Who sets the aim? The big aim?.. The City?” says an expert from Tallinn.

The stakeholders blamed the municipalities for taking passive positions. Residents unanimouslycriticised municipality for showing no initiative in mediating the conflicts. “[The municipality] could have helped us with in the planning process... let's meet…let’s… find out a solution… do something extra, thanwhat is required by the planning law. But they didn't show any initiative”, says a community representative,Tallinn. Furthermore, residents repeatedly expressed the concern, that the municipality is not exercising its“legal rights”, “legal power” to steer the development of the city towards equilibrium, where the interests ofthe stakeholders are balanced, and towards sustainable environment. “The task of the municipality to designa sustainable city, where the interests of [residents and developers] are aligned… Developers and residentsneed good environment. The developer can request to build a nuclear plant… And the city should say, whythere can’t be a nuclear plant next to the kindergarten”, says a community representative, Riga.The developers, in turn, urged the city to define the priorities and take the decisions fast, as thecircumstances for development change rapidly together with economic situation. “The City, in my opinion,should have taken clearer decisions faster...than they took”, says a developer representative.The criticism of the municipality is common for local context, whereas in the English literature onparticipatory practices it is, currently, rare. Speaking of the role of the planner, Forester (1987) emphasised,that the planners often have to manage conflicting situations between various parties, therefore negotiationand mediation skills are essential. Shipley & Utz (2012) support the argument, stating that the task of theplanner (or the administrator) to balance different interests and to ensure the fairness of process andoutcomes for all stakeholders. Thus, planners are in a difficult position, as their tasks is to navigate throughconflicting interests and, furthermore, to address political agenda of elected representativeness. Localmunicipalities are just entering the field of communicative planning and, thus, have little experience managingsuch complex situations. It is natural, that currently municipal response is late or showing less initiative thanexpected. Hopefully, the situation will improve in the future, as municipalities gain more experience, learn andembrace their role and legal power.

4.3.4 ROLE OF RESEARCH

Although, not mentioned directly, the residents and the municipality touched upon the role ofresearch in planning. Talking about resident engagement, the respondents from Tallinn repeatedly expressedthe desire to map the values of the residents prior to developing plans. “We would like to map… what are thevalues that people who live in Tallinn see in Tallinn. And if we start by mapping these… values…the masterplan… would develop these values further or reinforce them”, says a planning department representativr,Tallinn. Indeed, supporters of civic engagement idea emphasise, that citizens are the end users of the space,thus, it is important to acknowledge their values, preferences and space usage patterns. In other words, it isessential to gather experiential information which complements the knowledge base for planning, and, thusleads to more balanced and sustainable solutions (Faehnle & Tyrvainen, 2013; Brown & Kytta, 2014).Furthermore, the respondents emphasise the importance of asking meaningful questions to thecitizens. “It depends on the planning document type and on the area, on the [decision type]… and what kindof information for this certain planning document it is possible to get from the residents”, says planningdepartment representative, Riga. As participation is a resource consuming activity, prior to engaging residents,it is essential to acknowledge, what information is necessary for the plan, what information the citizens are able to provide, what it the best way to get this information, and how this information is going to beintegrated into the plan. In other words, it is neccessary to design an efficient, clear, yet flexible, engagementstrategy.

5 CONCLUSIONS

Despite certain deficiencies, the cases Mezapark and Kalaranna sketch a positive participatory trendin planning. The concerns about the inability of citizens to provide meaningful input proved to beunreasonable. Citizens proved their competence by providing well-argumented critique of plans and bypresenting their own, alternative, visions of the areas in focus. Developers, in turn, developed the capacity tomake trade-offs to meet civic demands. Municipalities, however, fulfilled their tasks partially. On the onehand, they were inclined to prioritise public interests over private interests, which is a positive trend. On theother, their performance as conflict mediators was rather poor. Furthermore, the participatory strategy failedto meet current demands for community empowerment and inclusive sustainable city with well-balancedpublic-private interests.

There are the following deficiencies in the planning strategy. Late involvement, in the final stage ofplaning process is likely to lead to conflicts, as the only way for the public participate is by challengingplanning solutions. Thus, other stakeholders get a misleading impression of public resistance to change anddevelopment. Though, in reality, the public resists top-down planning solutions, which were developedwithout their participation and which often ignore public values. Fortunately, the interviewees mentioned theneed for public engagement in the beginning of the planning process. The respondents emphasised theimportance of acknowledging public values before the planning process, to reinforce and develop thesevalues further. Furthermore, there is a clear demand for more inclusive planning process, for co-developingplanning solutions together, instead of forcing top-down solutions.

Partial representativeness, limited to directly affected parties allows municipality officials anddesigners to speculate, that the citizens are following selfish interests instead of representing the publicopinion. The argument is unsound, as every party, including community groups and developers, are advocatestheir vested interests. The more parties are engaged, the more balanced is the voice of the residents, and thecloser it is to the public interest. Certainly, it is hardly feasible, nor necessary, to involve all resident groups topublic discussion of each and every detailed plan, but in case of detailed plans for city significance areas, theopinions of both directly and indirectly affected parties have to be acknowledged.

Passive position of municipality to a certain extent contributed to an inefficient negotiation processbetween the conflicting parties. Conflicting parties did not empathise with the opinion of the opposition,holding to their initial biased positions. Thus, a discussion without dialogue emerged. In this case an activeintervention of the municipality was necessary, serving as a mediator in the discussion, and encouraging theconflicting parties to develop a shared understanding of the issue and find consensual solutions. Themunicipality clearly needs to develop a toolkit to deal with conflicts in planning. Probably the competences ofmunicipal planning officers have to be extended beyond planning, to negotiation and mediation.

To sum up current participatory approach is lacking an essential step — participation strategydesign. Firstly, it should be acknowledged, which parties are directly and indirectly affected by a plan, whatinformation they can provide, what information is essential for the plan and how it can be integrated into theplan. Then, participation strategy has to be designed to collect this information. Based on this information,planning solutions have to be developed and discussed. Thus, participation shifts from the political to aresearch field, being inquiry driven.

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ID 1486 | FROM KNOWLEDGE OF THE TERRITORY TO THE SPATIAL PLANNING CULTURE

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ABSTRACT: Consolidating the paradigm of territorial governance (with civil society increasingly and more activelyparticipating in spatial planning) with the assumptions of sustainable governance comes up against the lack ofrobust knowledge of the territory and a civic spatial planning culture, both from civil society as well aspolitical and technical decision-makers. In this context, it is proposed as a starting question how it is possible to develop a greater awareness on theterritory and a robust civic spatial planning culture for both in these new "actors" and the political and technical decision-makersso they see it as a common good and a scarce resource, ensuring its sustainable development.Underlying this question is another of no less importance: what is the role of school education, morespecifically the Geography discipline of secondary school, in the processes of collective learning about the territory and spatialplanning culture? After the theoretical study of the concept of territory, spatial planning and territorial planning culture,these are confronted with a representative sample of civil society through questionnaires applied to:- Secondary school students (who have not yet intervened in the reconfiguration of the territory),with or without frequency in the Geography discipline (in order to verify to what extent the geography, ofthis level of education, provides a better knowledge of the aforementioned concepts);- Parents guadians, representative of the adult population, who have already intervened, consciouslyor unconsciously, in territorial reconfiguration, but who do not have direct responsibilities in spatial planning.

KEYSWORDS: territory, spatial planning e spatial planning culture

1 OPERATION

With the purpose of assessing the knowledge that the civil society has of the territory, spatialplanning and spatial planning culture concepts, two questionnaires were conceived and were applied to twouniverses of

analysis: school population, without intervention in the territory, and citizens, who may havealready intervened in the territory (parents guardians).

The questionnaires are based on the theoretical basis, presenting three sets of affirmations identifiedas the territory concept (first group), spatial planning (second group) and the spatial planning culture (thirdgroup), that allow the understanding the organization of the questionnaire as a whole. Before eachaffirmation, the respondent chooses between "totally disagree" (1) and "totally agree" (6). It also includesoption 7 that corresponds to "I do not know". The decision of the respondents is decisive to know theterritorial culture of each of the universes of analysis.

It should be noted that the difference between the questionnaire of the students and that of the parents guardians is based on the reduction of affirmations in each thematic group (table 1).

Theme	Territory		Spatial planning		Spatial planning culture	
	Students	Parents guardians	Students	Parents guardians	Students	Parents guardians
Affirmations number	28	18	8	6	20	15

Table 1 – Affirmations number by theme. Source: Sample - Own survey (fieldwork conducted in 2016)

The selected sample focuses on secondary schools located in the cities of Viseu and Aveiro. Thechoice of these municipalities, belonging to the NUTS II Center, is based on the fact that, i) according to thePNPOT, both are part of the Leiria-Coimbra-Aveiro-Viseu strategic polygon with the potential to contributeto a competitive, integrated economy and open; ii) are the two NUTS II municipalities with positivedemographic rends between 2001 and 2011, and ii) have a resident population in 2011 (77 463 and 99 593,respectively).

Of the 358 questionnaires applied to the school population and parents guardians, 190 wereconsidered valid, in the case of the first universe, and 138 in the second one (53.1% of the predicted sample,in the case of the first, and 38.5%, in the case of the second).

2 THE CIVIL SOCIETY VS TERRITORIAL CULTURES

2.1 "TERRITORY" COMPONENT

In the last decades, "territory" has become an important mechanism of political and socialintervention, but the divergences (and ambiguities) in the intrinsic uses and meanings, make it a polysemicterm.

In order to deepen and improve the concept in both samples, we propose affirmations about themultiple perspectives of the territory concept - such a) as physical support, b) as a political-administrativespace, c) resources source (territorial asset/ scarce resource and common good), d) as living space and e) as asystem.

In order to know the territory conceptual perspectives prevailing in civil society - the schoolpopulation (without intervention in the territory) and adults (parents guardians), two criteria were used:

i. a group of ten affirmations - top ten - which obtained the highest percentage values (agreement ordisagreement) and, in this case, reflect a position of agreement with the conceptual perspectives presented;

ii. the frequency with which, in this top ten, the affirmations associated with each of the conceptualperspectives of territory arise;

It is concluded that the three groups - students with or without Geography and parents guardians - present themselves with different positions between the territory conception (table 2).

Position	Students with Geography		Students without Geography		Parents guardians	
	%	Conceptual perspective	%	Conceptual perspective	%	Conceptual perspective
1º	96,8	Physical support	84,4	Resources source	94,9	Political-administrative space
2º	91,5	Political-administrative space	84,0	Living space	92,8	Source of resources
3º	91,5	Living space	81,3	Political-administrative space	92,8	Political-administrative space
4º	90,4	Political-administrative space	82,3	Living space	92,8	Living space
5º	89,4	Political-administrative space	80,2	Physical support	90,6	System
6º	88,3	Political-administrative space	79,2	Political-administrative space	90,6	Resources source
7º	88,3	Resources source	78,9	Living space	90,6	Resources source
8º	88,2	System	78,1	Political-administrative space	88,4	Physical support
9º	86,0	System	78,1	Resources source	88,4	Living space
10º	84,0	Living space	77,9	System	87,0	Living space

Table 2 - Territorial conceptual perspective, by priority. Top ten affirmations (first criterion)
Source: Sample - Own survey (fieldwork conducted in 2016)

But there are points in common.

- Considering that the territory perspective as a physical support has more relevance for the group of students with geography (taking into account the first criterion), it do not stand out in the three universes, when the second criterion of analysis is taken into account.

- In all three groups, the traditional territory conception as political-administrative space is still very much rooted when one thinks of territory.

- For students without Geography and parents guardians, although the territory view as a resources source (territorial asset/ scarce resource and common good) is more recent than systemic view, it is with the latter that both groups show to be less familiar.

In the case of the students with the Geography, and in a first analysis - by order of appearance in the top ten - it is evident that the territory perspective as physical support is the one closest to them (table 2).

But, with a more detailed analysis, these students reveal affinities, mainly, with the territory view that conceives it as a political-administrative space. In a less prominent place, they also conceive it as a lived space.

Both the conceptual perspective that regards the territory as a resources source and the one that sees it as a system are at the same level of importance because, taking into account the first criterion, is the first that stands out in relation to the second, but if the analysis is extended to the second criterion in which the roles are reversed (figure 1).

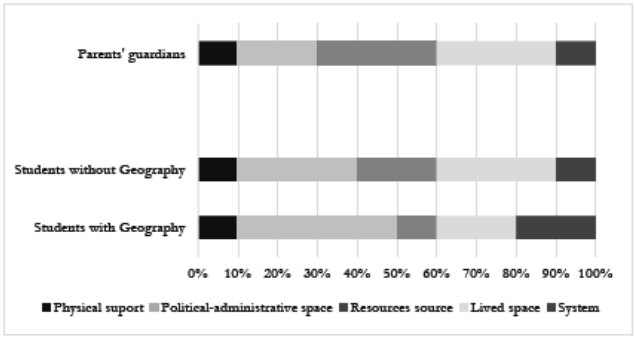

Figure 1 – Territory perspectives of top ten frequency (second criterion)
Source: Sample - Own survey (fieldwork conducted in 2016)

The territory view as a political-administrative space continues to be taken into great consideration,however, the influence of the postmodernist paradigm is undeniable, insofar as it is confirmed by thesestudents, the territory conception as an identity Individual and collective support, anchored in a social spaceand a lived space, placing this perspective in the third position (taking into account the two criteria).As for students who do not have the Geography discipline, the options are different relatively tothe previous group.

Taking into the top ten account, the territorial perspective that presents itself as the first choice is theone that regards the territory as a resources source. This trend is confirmed by the other analysis criteria(table 2).

The following are the perspectives that have the greatest consensus and which conceive it as apolitical-administrative space and as a lived space. However, administrative decentralization and the fact thatthere is not always an explicit administrative territory delimitation, makes this conceptual approachinsufficient so, in order of choice, these students prefer the second.

This is reflected, on the one hand, in the exclusion of the affirmations associated with the concept ofproperty, and on the other, in the approximation to the territory perspective as a lived space, anapproximation that can be understood as an extension of the reference and valuation of the territoryintangible heritage, mentioned in the affirmation that obtained the highest percentage value - “The territory isboth a material heritage (land, forest, etc.) and an intangible heritage (language, culture, etc.)”.

Regarding the territory vision as a lived space, it should be pointed out that it presents itself in arelevant position in relation to what it regards as political-administrative space, which shows that thesestudents are close to the thinking line of the postmodern paradigm, whose space is conceived as influencedby individual and collective (social) experiences.

About the territory conceptual perspective as physical support, even if it is close to them, it does nothave the importance that reached in the first group of students to be placed in a more modest position.

Although the conceptual territory perspectives as a resources source and as lived space are theones that have more adhesion by the parents guardians, since they are ones that hold the highest frequency ofaffirmations in the top ten, which considers it as political-administrative space also has a prominent place(table 2 and figure 1), since it is this vision of territory that reaches the highest value on the part of theserespondents.

As for the territory vision as physical support, it's here too, as in the group of students who doesnot attend Geography, it is little valued.The traditional territory conception as a political-administrative space is still quite ingrained.

2.2 "SPATIAL PLANNING" COMPONENT

The spatial planning was the exclusive domain of researchers, technicians and policy makers but,today, it is spreading to common sense, imposed by the Central Administration, by the guidelines of theEuropean Community or disseminated by the media.

But does civil society use it with content?

Considering several authors and legal documents, it is intended to identify, in the two samples,common points in the conception and functions attribution to the term spatial planning, resulting in theknowledge that with what spatial planning perspective - land use planning and spatial planning - civil societyidentifies itself.

What is spatial planning? What is it for? Who is responsible for its preparation/ application?

These are the questions underlying the affirmations presented in the second part of the questionnairein order to know what the students of the secondary education (eleventh year) and de parents guardiansunderstand by the term spatial planning and what it implies.

According to the options taken, one intends to know under what perspective - land use planning orspatial planning - each of the two groups of students and parents guardians think about spatial planning, that is,with which they are more familiar and which is still far from universal, when it comes to spatial planning.

Although distinct, the affirmations in the questionnaire, belonging to the two sub-themes later, andare analysed according to the same criteria: by the options of both groups of students and parents guardians - of agreement or disagreement - one realizes if they approach the of land use planning or spatial planningperspective.

Analysing the students' options, both groups assume spatial planning as "public policy", "defender of the public interest". However, in view of it as public function, while the Geography students and parents guardians assumes it, without any doubt, the group that does not have the discipline shows some ambiguity in their choices.

As for the second aspect all groups take less defined positions.

According to the criteria mentioned above, in terms of the spatial planning functions and theidentification of those responsible for their elaboration and application, it is verified that there is a clearapproximation to the spatial planning perspective of the three groups.

Two approaches are safeguarded from the perspective of land use planning.

The first, is when it is verified that in most of the students (with and without Geography) and theparents guardians, there is a strong propensity to consider that spatial planning has the regulating function ofthe space use and occupation. Here, there is still an influence of the modern paradigm and consequenttechno-rational territory vision, which lasts until the present day.

	Affirmations		
	Students with Geography	Students without Geography	Parents guardians
Land use planning	2	1	1
Spatial planning	4	5	4
Total	6	6	5[2]

Table 3 - Spatial planning perspectives – Land use planning and spatial planning by affirmations frequency[1]

The other exception is when the behaviour of the two students group is analysed, with respect to theresponsibilities attribution of those who elaborate/ apply it, where there is an approximation to land useplanning, but in an unclear way, since the percentages are very close between agreement and disagreement (1.0% in the case of the students with the frequency of geography and 4.3% in the case of the other studentsgroup).

These two exceptions are a reflection of the stubbornness of the modern paradigm in keeping to thesurface of the change "revolt waters" and consequent techno-rational territory vision, based on therationalism of scientific knowledge.

At the level of spatial planning policies, the transition from land use planning to spatial planning is slow, witnessing even today the coexistence of the two territorial policies.

But if these exceptions may obscure the clarity of the analysis, since they demonstrate that there isstill a strong tendency to "place" spatial planning from the perspective of land-use planning, it is clear that thethree universes of analysis visibly identify with spatial planning vision (table 3).Following the presented and in conclusion, the generality of three groups considers spatial planning:as an integrating and global factor and as a rational utilization territory factor, with the underlying intention ofdeveloping it in a sustainable manner, making it competitive (valuing existing resources), safeguarding thequality of life of the population.

[1] The difference between the questionnaire of the students and that of the parents guardians is based on the reduction of affirmations in each thematic group

Here, there is a government assumptions appreciation based on the sustainability paradigm, which presupposes the allocation of the best territory use, through a reflection on the capacity to resources use without compromising the futures generations.

2.3 "SPATIAL PLANNING CULTURE" COMPONENT

In view of the analysis of the various various spatial planning systems from land use planning to spatialplanning, it is concluded that the spatial planning culture goes far beyond the characteristics of structures,instruments and procedures.

In this way, territorial planning practices can not "turn their backs" to other factors such as values,political traditions, representations about planning actions and competencies, governance structures, etc.,producing different contexts regardless of the planner will.

This theme follows the previous one. If they sometimes seem to interfere, the pretension of theirexistence reflects the desire to know if the students and the parents guardian assimilate a new culture ofspatial planning.

The answer to this purpose is based on the analysis of the affirmations grouped in the threesubgroups entitled “role of the State in spatial planning”, “criteria for spatial planning legitimizing” and“activities of the technicians/ planners”.

	Affirmations		
	Students with Geography	Students without Geography	Parents guardians
Land use planning	1	1	1
Spatial planning	11	11	9
Total	12	12	10[5]

Table 4 - Spatial planning cultures by affirmations frequency[1]
Source: Sample - Own survey (fieldwork conducted in 2016)

Above all, it emphasizes, at once, the hegemony of the State, who persists in maintaining itsascendancy, intrinsic in common sense. This is confirmed by the approach of the three groups against thismatter. However, other choices show that for them the spatial planning goes beyond the influence of theAdministration, demonstrating that they are receptive to a strategic, integrated and visionary territorialplanning.

Here, the consideration of spatial planning as public policy is reaffirmed by all groups, since theyrecognize in the State and entities within their jurisdiction, the legal competence to make decisions within thespatial planning.

The State is recognized as an authority, that it can use in its favour, not with authoritarianism, but asa reference, model, facilitator in the new forms of collaborative territorial planning, increasingly participatedby other agents within its jurisdiction.

The techno-rational question is not neglected, since here also, the majority of the students of bothstudent’s groups and parents guardians, consider that the knowledge and technical contribution is essential inthe territorial planning policies.

Observing the students’ behaviour (with or not frequency of the Geography discipline), and theparents guardians, in general, do not observe significant differences, since all consider the State as legalsupport in the territorial planning policies production and implementation, confirming the general trendalready observed, when the conception of spatial planning is accepted as public policy.

Noting the options of the two student’s groups and parents guardians, in relation to the question"what are the objectives of spatial planning?", It is concluded that, here too, they are clearly next to the spatialplannig

[1] The difference between the questionnaire of the students and that of the parents guardians is based on the reduction of affirmations in each thematic group

perspective, with coherence between the positions taken, with regard to the previous theme and thepresent theme.

The spatial planning conception, as an integrating factor, is reinforced, insofar as it is viewed in aninterdisciplinary and integrated perspective, reflecting the perceptions and meanings of space, philosophiesand planning traditions, cultural rules, norms, traditions and values, that is, the cultural contexts.

Manifestly, cultural diversity leaves the field of social sciences to assert itself as an essential element interritorial policies.

This influence is clear (even for those who persist in ignoring it), inherent to the territoryinterpretation and policies of spatial planning execution, by the decision makers/ technicians, with directconsequence on how the territory is ordered.

This fact had already been revealed in the first theme - Territory - where it was observed an approachto the concept of territory as a lived space, as a support of individual and collective identity, with moreemphasis in the group of students without the discipline of geography and in parents guardians.

The sustainability paradigm is well present in all universes, when we speak about spatial planning. Inother words, taking into account the political decision-makers and planning technicians actions, there is areinforcement of the concepts defended in the previous theme, agreeing that those territorial policiesresponsible should view spatial planning as an integrating factor, rational territory use factor, promoter of abalanced development, at different speeds, but do not forget that this territory is a scarce resource.

But the choices are not limited to the defence of sustainable environmental development. In order toachieve this balanced and sustained development, a prospective vision is required which, if it does not predictfuture transformations, can attenuate them.

As far as stakeholders are concerned, all agree that the participation of this is essential in spatialplanning. It is confirmed here, that the two groups of students and the parents guardians view spatialplanning based on shared responsibility.

2.4 THE GEOGRAPHY DISCIPLINE AS A DIFFERENTIATING FACTOR

Will the Geography discipline be a differentiating factor in the quality of the response between the groups of students (with or without Geography)?

When we observe the results, the conclusion is that there is no difference between two students' groups.

However, it is a conclusion little consolidated because:

i) If one looks at the agreement and disagreement percentages, it is verified that difference between this two options is very close when we talk about the second group (without Geography). This means that these students have not solid positions about the subjects in analysis.

As subject's matter become more complex and less used in common discourse, this difference, between agreement and disagreement, becomes even more insignificant.

This situation is aggravated when the affirmations are related to the themes – spatial planning and spatial planning culture.

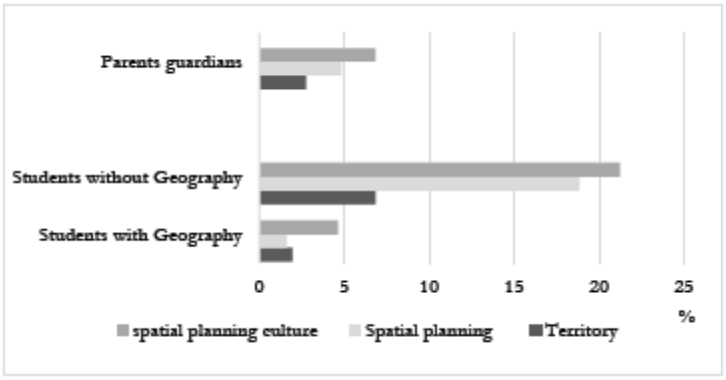

Figure 2 – “I do not know” percentages, in the three themes – Territory, spatial planning and spatial planning culture
Source: Sample - Own survey (fieldwork conducted in 2016)

ii) On the other hand, the option “I do not know” (7), reaches higher percentages in the group without Geography, demonstrating once again that these students show less firmness in their positions than students with geography (figure 2), and which is also aggravated when faced with the spatial planning and spatial planning culture subjects (18,8% e 21,2%, respectively), while the other group of students registers percentages of 1,6% e 4,6%, respectively.

iii) With the Mann Witney Statistic Test, there is statistical evidence that Geography influences the ability to respond, because it is the students, who do not have the discipline, that assume to do not know what option to take before the affirmation presented. This situation is especially evident in the last two thematic groups - spatial planning and spatial planning culture.

Another inference could be gotten. In the present study, there has been an approximation between the positions of the students without Geography and the parents guardians, mainly regarding the conceptual perspectives of the territory.

From here we can draw two inferences.

i) Both, only had Geography in the 3rd Cycle of the Basic Education (more specifically in the students’ case), or geography is "so far" from their lives that they are few curriculum content that they remember.

ii) ii) In comparing the "I do not know” option percentage values, in these two groups, it turns out that parents are more determined in their choices (figure 2). This could be justified by the transition from a representative democracy to a participatory democracy with the consequent need of a present State, but facilitator of the dialogue and moderator in the negotiations between the stakeholders (Where can these parents guardians be).

3 CONCLUSION

The group with Geography is more affirmative in their positions, which proves they know betterthe issues in analysis than the other students group. This fact demonstrates that the Secondary SchoolGeography Programme contributes to a better understanding of these subjects. The political-administrative space territory perspective is yet consolidating in all students andparents guardians. But, the students with geography are closer to this territory concept than the others, whichmeans that Geography discipline accentuates this concept of territory all over the School Programme,because it spoke about Portugal as a Nation and as a European member, and, consequently, about territorypolicies, which are often based on administrative boundaries. At the same time, this perspective is familiar for the students without Geography and for theparents guardians, which, as already mentioned, is associated with the traditional territory conception, inwhich the other group of students is no exception.

With more or less determination, in most of the subjects dealt with on spatial planning issues, all identify with the spatial planning perspective.

ID 1522 | SPACES FOR LOCAL WELFARE. HOW PLANNERS CAN CONTRIBUTE TO MAKE SOCIAL SERVICES MORE INCLUSIVE

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1 INTRODUCTION

1.1 THE FRAMEWORK: INTEGRATION, ACTIVATION, LOCALIZATION

The combined effect of economic reorganization processes, the increasing precariousness in thejob market and the shrinking of the national welfare systems, have progressively eroded traditional socialprotection measures and exacerbated the traits of social fragility in many European cities. The long phase ofeconomic recession is linked both to the general worsening of the economic conditions of large parts of thepopulation, and to the austerity policies and the drastic reduction of public expenditure on welfare.Devolution processes have played a significant role in reshaping the European welfare systems, underliningthe relevance of the local dimension in the welfare policies and in the structure of social inequalities. Theconsequences are even more evident at the local scale, where local governments are facing the need of moreadequate and effective welfare measures and policies with scarcer resources[1]. Moreover, the ageing of thepopulation, increasing migrations flows, the more frequent mobility of the individuals and theimpoverishment of many families have generated new heterogeneous needs, mining the traditional welfaresystems and the administrative treatment of the needs. Meanwhile, the number of actors involved in thegovernance of social policies has increased, highlighting at the same time the potential of innovation and thelimits in responding to these new challenges (Bricocoli, Sabatinelli, 2016). This new panorama seems to orientthe social policies towards three interrelated criteria: integration, activation, localization. These aspects,variously articulated, are addressing the social policies toward the interactions of different sectors (public,private, third sector) and subjects (social housing, new fee-paying or shared services, light forms of assistanceand care, private company welfare services, etc.), promoting the autonomy of the recipients and the resources that can be activated at the local level (Kazepov, 2010). In addition, a renovated attention to the spatialdimension of social services and its generative power (Bifulco, Vitale 2003; de Leonardis, 2003), mainlyreferred to the territorial contexts in their material and tangible sense, often inspires and orientates ideas andresources for innovative projects (Bricocoli, Sabatinelli, 2016).

This contribution aims at analysing the contents and the outcomes of an experimentation led by theMunicipality of Milan and currently under completion. The project deals with the reorganization of the accessto social services in the city, with a particular focus on the home-based services. In this context, theMunicipality is the leader of a partnership of 16 actors that includes the Department of Architecture andUrban Studies, affiliation of the authors of this contribution, who have been directly involved in the designand implementation of the project.

1.2 WEMI: A KEY PROJECT IN THE PANORAMA OF THE REFORM OF WELFARE POLICIES

The welfare system in the city of Milan is organized in different sectors; competences,responsibilities and resources are strictly divided between Departments, Sectors and Central Directions. Thesocial services and policies' provision has been traditionally organised in pillars on a category-based system,rigid and separated in its articulation. According to this structure, each category – which represents a sociodemographicprofile or a specific need (e.g. the elderly, adults in difficulty, disabled, etc.) - corresponds tospecialized municipal offices with distinct staff and targeting particular needs. This organizational model,quite common in local governments across the Country, has been put under

[1] The National Fund for Social Policies has reduced from 1,884 billion euros in 2004 to 344,17 billion in 2013, a reduction of the 80%. Since 2007 the financial resources of the Italian municipalities have decreased of almost 15,8 billion euros. (Anci Lombardia, 2015).

discussion and, starting from2012, the Milano city government has been implementing a significant reform. A main objective of thereform was to better face the tensions between the new social needs, expressed or still unveiled, and theprovided answers, often inadequate or inappropriate. This re-organisation has been developed thanks to theWelfare Development Plan of the city of Milan (i.e. Piano di sviluppo del welfare della città di Milano), a strategicinstrument introduced by the Department of Social Policies[1] starting from 2011. Based on an extensiveanalysis of current and perspective sociodemographic trends and on the composition of public expenditurefor social care and services, the document draws previsions and strategic orientationsfor the development oflocal welfare policies. Along with the implementation of the plan, the Central Direction for Social Policies hasmodified the category-based system, substituting the existing sectors with three new transversal areas, thatcorrespond to the different articulation of the action of social services: residential, territorial and home-based (in Italian Residenzialità, Territorialità, Domiciliarità) (Ghetti, Dodi, 2014). The system has been structured in twodifferent levels: a first level dedicated to basic and preliminary access, aimed at reaching out and welcome allthe citizens who express a need into the different locations spread in the city, without any restriction ofcategory; a second level where, if necessary, entitled citizens could be addressed and benefit from morespecialized services and structures. (Bricocoli, Palazzo, Sabatinelli, 2016).

Within this reorganization process, in 2015 the Municipality of Milan was the project leader (inpartnership of 16 partners including public, private and social enterprises and two university departments), ofthe project Welfare di Tutti (i.e. Welfare for all), which was successfully submitted to a competitive call - Welfarein azione (i.e. Welfare in Action) - promoted by a Bank Foundation (Fondazione Cariplo) funding innovativecommunity based projects. The project, named WeMi (acronym for Welfare-Milan and We-Milan), aims atovercoming the fragmentation of local welfare and at innovating the responses to a more diverse demandsand needs, that still struggle to be represented and satisfied by the existing canals. Within the field of proidinghome-based services, WeMi is structured in different actions, developed in parallel by various working groups,heterogeneous in terms of for professional backgrounds and competences.

A general objective of the project is to favour and support an access to welfare services by a widerrange of citizens, including those who may be wealthy (and therefore not entitled to social assistance) but stillbearing difficulties and expressing needs. With the goal of improving accessibility to the of home-basedservices which are provided by public and non profit organisations under the head of the City, two mainprojects have been conceived. An online platform (wemi.milano.it), which gathers the offer of home-basedservices provided by 58 cooperatives and associations and certified by the Municipality of Milan has beendesigned and implemented. Moreover, the project introduced the idea that new approach and reorganisationas well as a better accessibility to welfare services needed symbolic and concrete artefacts that witnessed theattempt of redefining the interaction between welfare services and the citizens. Three WeMi spaces (i.e. SpaziWeMi), located in different districts of the city (Municipio 8, Municipio 6, Municipio 5) were designed andorganised with the aim of experimenting new solutions in the physical and organisational setting of socialservices. WeMi spaces are places were citizens are welcomed and oriented in the access to the services on thewebsite, listened and supported in finding answers and solutions to their needs and where a specific emphasisis put on the promotion of new forms of shared services that could allow reducing costs through theaggregation of the demand. Laboratories for the creation of condominium-based, corporate and scholasticwelfare services, have been developed in specific places (schools, condominiums, offices) with the purpose ofbetter understanding emerging needs within the daily life of citizens.

The authors have been directly involved[2] in the different phases and actions of the project, with aparticular reference to the conception and design of the WeMi Spaces; this has allowed a close observation ofthe intertwining between organizational change and the spatial organisation (at the urban and architecturalscale) of local welfare services and has encouraged further reflections on the creation of more inclusivewelfare policies.

[1] In 2016, with the elections of the new Mayor, the Department has been named “Department of Social Policies, Health and Rights and the mandate confirmed to Pierfrancesco Majorino.

[2] The working group of the Department of Architecture and Urban Studies has involved Massimo Bricocoli and Stefania Sabatinelli (coordinators), Benedetta Marani, Lorenzo Consalez and Francesco Curci, who collaborated to a first phase of the works.

2 THE SPACE FOR SERVICES

2.1 A STARTING POINT: WHICH SPACES AND PLACES FOR WELFARE?

The topic of welfare services and urban public equipment is a central dimension within the historyand the development of the urban planning practice. The Italian normative introducing urban planningstandards, which played a key role in the whole planning discipline and in the design of welfare spaces, isabout to celebrate the 50th anniversary. While the role of the space in the design, production and provision ofsocial services is a topic of fundamental relevance, it is rather under-investigated by urban planning research (Pomilio, 2009; Munarin e Tosi, 2012; Caravaggi e Imbroglini, 2016). The physical features of the services, interms of geographical collocation and accessibility, the dispositions of functions and activities (setting) andthe furniture (artifacts) are essential elements in the generative power of an organization (Gagliardi, 1990; Bricocoli, 2003; Bifulco, de Leonardis, 2003;). This aspect is even more relevant in the context of the welfarereform introduced by the Municipality of Milan. The new Milanese welfare model brings along the idea of anextension of welfare services: both from the “bottom”, involving the most in need subjects that struggle toaccess the traditional services and structures, and from the “top”, addressing those citizens who are notentitled to social assistance but ask for care and express social needs. Therefore, the topic of the access, in ametaphoric and material sense, represents a key issue. In this direction, the project Welfare di Tutti laid thebasis for a new reflection on the dimension of the virtual access (the web platform to access the services) andof the physical access, through the creation of the WeMi Spaces. During the spring 2015, a working groupcoordinated by Massimo Bricocoli and Stefania Sabatinelli organized the training course “Spaces and Placesfor Welfare”. The course, addressed to the operators that would be involved in the project, has beenstructured to deepen and exchange knowledge on the relations between the services, social work and thespatial dimension. Starting from the concrete reference to practices and programmes[1], through thepresentation of different contributions and explorations brought by the participants, a variety of spaces forservices and the material contexts of welfare have been observed and analysed. From these confrontations, acritical panorama has emerged: most of the spaces for welfare appear inappropriate for their physical orfunctional features, unattractive for their neglected aesthetic, often located in structures owned by theMunicipality, Third Sector cooperatives or Religious Institutions. These spaces contribute to increase thestigmatization of social services (and of their recipients), underlining their category-based access. Throughexamples and references to Italian and European contexts, the course has investigated different ways ofrethinking the spaces for welfare both in terms of content (which functions and setting) and in terms of form (which furniture and artefacts). From this experience, in Autumn 2015, a laboratory of collective design was born to define the activities of the future WeMi Spaces and their spatial solutions.

Figure 1 – WeMi SanGottardo and RAB in Corso San Gottardo 41, Milan
Source: authors’ archive 2016

[1] Some meaningful images of this experience will be presented during the AESOP Conference

2.2 THE WEMI SPACES

WeMi SanGottardo, WeMi Capuana, WeMi Trivulzio represent the spaces of the new Milanese welfare.The first, located in Corso San Gottardo 41, a central neighbourhood of the city, is a hybrid space in whichthe social operators work alongside a literary café. The second is located in a small square in the peripheric Quarto Oggiaro public housing estate and is an extension of an already existing office of third sector services.The third space is coexhisting with “CuraMi”, an existing service dedicated to the research and the offer ofcaregivers located in Pio Albergo Trivulzio, a historic institution in the field of elderly assistance. Thesespaces, chosen for their representativeness or for the attractiveness of the location, are dedicated to the offerof social services, to the concrete meeting with the citizens and to the access to the home-based servicesprovided by third sector bodies certified by the Municipality (Bricocoli, Sabatinelli, 2016).

WeMi SanGottardo is certainly the most emblematic case. As mentioned before, it is located in aformer shop on a main commercial street located in an historic neighbourhood of the city, becomingincreasingly attractive for students and young workers. Inside this space, the social cooperative BarAcca,dealing with the job reinsertion of people with mental disease, manages a literary café that coexists with theactivity of the social services. Four social workers employed by different local cooperatives collaborate with a social assistant from the Municipality and with a junior academic researcher and manage the service four hours a day, in shifts.

The space of WeMi San_Gottardo was designed by the studio Consalez Rossi Associates Architectsin order to emphasize the double identity of bar and welfare service, through the creation of two distinct butcommunicating spaces (Figure 2,3,4). The choice of this distribution derives from two different factors: fromthe one hand the social operators expressed the need of an intimate room for the weekly meeting of the teamor for the private talks with the citizens; from the other, the urban planning rules required a distinctcalculation of the square metres dedicated to the commercial activity and to the social services. In fact, theconfiguration of such hybrid space had no previous reference in the land use regulation of the city andrequired a very intensive work with the department for urban planning that resulted in a pioneering solution,creating a precedent for further experimentations in Milan and in other cities. Another purpose of the designwas to make the double identity of the WeMi space visible from the outside: the double showcase facing thestreet (Figure 1), allows a wide but distinct view on both the bar and the welfare service. This aspect has beenemphasized also by the contribution of the Department of Communication Design of Politecnico di Milanothat is among the 16 partners of the project and that is responsible for the communication and the image ofthe project. Elementary geometries and bright colours were chosen to grasp the attention of who is passingthrough, while an interactive wall encourages the clients of the bar to deepen the knowledge of the project.These graphic tools are likewise repeated in all the WeMi spaces, even if adapting to their own physicalfeatures.

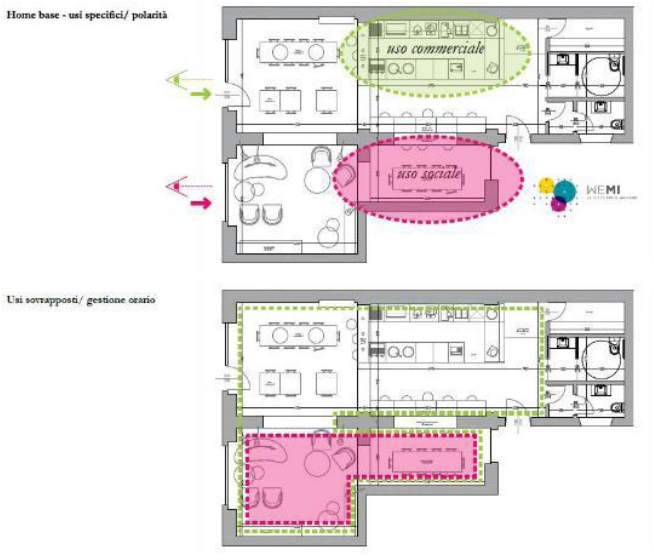

Figure 2 – The plan of Corso San Gottardo 41 and its multiple identity
Source: Consalez Rossi, Associate Architects

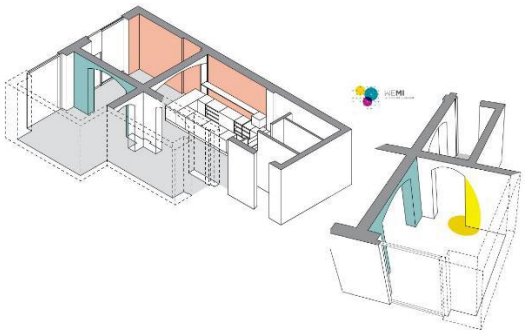

Figure 3 – Axonometries of Corso San Gottardo 41
Source: Consalez Rossi Associates Architects, 2016

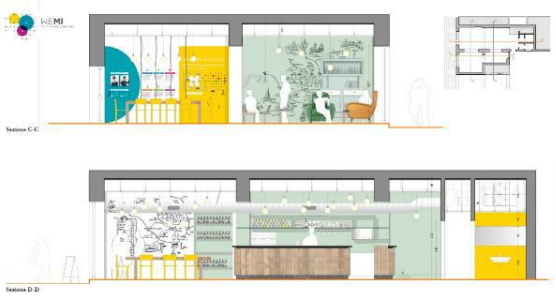

Figure 4 – Section of WeMi San Gottardo with the insertion of the graphic intervention of the Department of Communication Design of Politecnico di Milano
Source: Consalez Rossi Associati, 2016

Figure 5 – Activities inside the space WeMi San Gottardo
Source: authors' archive, 2017

Figure 6 – Activities inside the space WeMi San Gottardo
Source: Authors' archive, 2017

The other two spaces are developed though the insertion of WeMi inside other already existent andconsolidated realities. WeMi Capuana is located inside Spazio Agorà, a multifunctional centre active since the90's in via Luigi Capuana, in Quarto Oggiaro (Municipio 8), a large neighbourhood characterized by a strongconcentration of public housing and the presence of many fragile families. This space mostly providesservices oriented to scholastic and parental support, with the help of the local cooperatives and associationsand within the activities of Save the Children. Through the participation to WeMi, Agorà challenged itself inexperimenting new ways of co-production and co-participation of services with those families who decide toshift from recipients to providers of the answers to their needs. Compared to WeMi San Gottardo, whoseresearch of the location and design of the space required a strong process of concertation between thedifferent actors of the project, WeMi Capuana is a reconfiguration of an already existent space. In particular,the project consisted in the redefinition of the reception desk and of the small adjacent office, with thepurpose of making a more welcoming "first access". Similar considerations can be done for the third case,WeMi Trivulzio, located in the offices of the social cooperative Eureka. As in WeMi Capuana, the organizationdidn't provide a proper architectural project but a reorganization of the interiors and of the colours of anexisting office.

3 A FIRST EXPERIMENTATION: CHALLENGES AND PERSPECTIVES

Even if it is premature to address the results and the outcomes of Welfare di Tutti on the long run, itis anyway relevant to underline some outstanding features of the project. As far as the process is concerned,the experience of cooperation and concertation between the municipality and the third sector bodies andother actors has been extraordinary, both in the creation of the online platform and in the design anddefinition of the new spaces of welfare. The governance asset in which the provision of services results fromthe action of a multitude of actors (public and private) lead by the Municipality is made visible. While thisovercomes the risk of pure externalization it also implies a proactive orientation of social services, thatliterally gained a showcase on the street, as a response to a diffused and consolidated reality

of inaccessible,unattractive and badly maintained offices. The WeMi spaces, in fact, are not only “showcases” for the homebasedservices but are developing into places of loose aggregation for citizens, where to express needs, setnew relationships and create new solutions and services. The space in Corso San Gottardo, thanks to thepresence of the bar and the strong influence of the managing social cooperative, has taken its first steps inthis direction, becoming a major gathering point for most of the initiatives organized in the neighbourhood.

A beautiful, functional and welcoming space it’s not only attractive for the citizens, that couldreconsider the quality of the offer of public services, but also very meaningful for social workers, who aremore willing to face the new challenges and to rethink their role and position in the community. Two are themain solicitation that seem relevant in perspective, with particular focus at the crossroads between welfareand urban planning policies: 1) the project has represented a precedent in the urban planning law, where thehybridization of the commercial and social uses have required a special agreement allowing furtherexperimentations; 2) the Municipality of Milan is going to update and revise the Plan for Services (i.e. Piano dei Servizi) inside the more general local plan (Piano di Governo del Territorio). In the same period the procedures todevelop the new Welfare Development Plan (i.e. Piano di Sviluppo del Welfare) would start. The experimentationof the WeMi project constitutes an important reference to challenge the possibility of integrating twodifferent planning perspective, until now operating in separate and dissociated ways. It is therefore evidentthat the extension and the possibility to repeat this innovative experience in the field of social policies isstrictly bounded to the capacity of urban planning to receive and elaborate its solicitations, both to orient newpolicies based on diverse needs, and to provide the city with new and diverse places in which the local welfareis present and accessible.

4 ACKNOWLEDGEMENTS

We would like to thank the 16 different partners involved in the project Welfare di Tutti for theircontribution in understanding how the innovation on local welfare is challenging the role and thecompetences of the urban planning project. In particular, we would like to thank the coordinator of theproject Doc. Cosimo Palazzo, his staff in the Municipality of Milan and the colleagues of the Department ofDesign of the Politecnico di Milano, coordinated by Valeria Bucchetti.

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ID 1545 | SOCIAL PERSPECTIVES OF URBAN REGENERATION ON NEIGHBOURHOOD-SCALE: THE CASE OF SPANISH QUARTERS IN NAPLES

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1 INTRODUCTION

Social cohesion became a key issue for the European urban policies, supported by programmesaimed to the regeneration of deprived areas through a participatory approach (Fioretti, 2015). The social issuewas definitely introduced into the debate about urban regeneration in the first half of 1990s, also becauseduring the previous two decades, several urban areas across Europe experienced economic, social andenvironmental disadvantages (Wacquant, 2008; Cremaschi and Eckardt, 2011; et. al.). Within the urbanregeneration policies and strategic planning cultural framework of the 1990s, «stakeholders involvements andcivic participation in the public decision-making were often introduced by local governments as policy tools,through which to guide the urban transformation processes» (Saporito, 2016: 8). The trend was to convertparticipatory practices from episodic experiences to ordinary institutionalized practices in order to set upinclusive practices and collaborative tables among the complex network of stakeholders. Within thisframework, the urban regeneration of those deprived urban areas looks at the social cohesion, in order togenerate not only physical and urban transformations, but also to produce well-being, working on theimprovement of local milieu and local resources, deterred by social exclusion processes that cross avulnerable neighbourhood. The attention to the participatory and inclusive practices paved the way for acombined policy framework between urban renewal and social cohesion, where the urban regenerationprocess can be defined through an area-based approach focused on the social issues, looking at the local welfaresystem (Andreotti et. al, 2012; Bifulco, 2015), that can be developed in order to generate well-being. Accordingto these assumptions, the paper grounds its reflection on the implementation of the well-known EuropeanCommunity Initiative called URBAN (1st edition, 1994-1999) in a particular vulnerable urban area of Naples:the Spanish Quarters (in Italy known as Quartieri Spagnoli). According to the focal points of the Programme,URBAN at Spanish Quarters was aimed to regenerate a particular deprived urban area, located in the historicalcity centre. Although URBAN did not generate the expected results, its main strengths, in line with a local welfare approach (based on the combination of place-based and people-based initiatives), provides findings for asocial perspective of urban regeneration on the micro neighbourhood-scale. According to these assumptions, thepaper looks for the answers to the following research questions: how can we look at the social aspects of theurban regeneration process in a deprived neighbourhood? How important is the role of local milieu in thisregeneration process? How the urban planners can work to include citizens' in an urban regenerationprocess? In this respect, the case of URBAN implementation on Spanish Quarters in Naples – an experienceconcluded two decades ago – provides some indications. The theoretical framework is an analytical bridgebetween the capability approach (Sen, 1992) and the territorialisation of local welfare policies (Kazepov, 2009;Clarke, 2008; Bifulco, 2015, 2016, 2017). The third chapter introduces URBAN Community Initiative, andthe rest of the

paper analyses its implementation at Spanish Quarters of Naples. The conclusions illustrate themain findings for further perspectives, which had already taken place in Napoli over the past decades.

The paper presents the outcomes of a qualitative fieldwork based on ethnographic observations andnarrative interviews to some privileged actors involved in the Programme: professors Giovanni Laino,planner of URBAN at Naples, and Daniela Lepore, who contributed to the paper with an expert counsel,Immacolata Voltura, a local operator during the implementation of the Programme, and Daria Esposito, asocial operator proficient in assistance programmes for NEETs. The paper does not evaluate the wholeURBANI CI at European level, but it is more focused on the area-based planning on Spanish Quarters atNaples, analysed from a sociological viewpoint.

2 THEORETICAL FRAMEWORK

Following the participatory framework outlined during the 1990s, the 2014-2020 period ofEuropean policy-making has put the urban dimension at the centre of Cohesion Policy system, in an interwovenrelationship with environmental, economic, cultural and social issues. A core point of the 2014-2020 agendais the integration, seen as a keyword for the EU's Urban Agenda policies in order to cope with the urbandeprivations and disadvantages emerged during the last three decades. It is not by chance that since the 1980spublic policies in Europe have undergone «an increasing process of territorialisation, which has mainlyconcerned two intertwined phenomena: the territorial reorganization of public powers and the tendency totake the territory as the reference point for policies and interventions» (Bifulco, 2016: 628). The focus on theterritory stimulated new approaches to tackle the high concentration of social, environmental and economicproblems of certain urban areas. Since the first half of 1990s, European Union has started to promotecommunitarian initiatives dedicated to disadvantaged urban areas, «pursuing an integrated approach that takesaccount of all dimensions of urban life»[1], and looks at the regeneration of disadvantaged urban areas togetherwith measures to combat social exclusion and to upgrade the quality of environments. A hybridization processhas increasingly took shape, and «in the 1990s and 2000s, policies to improve social cohesion and economic integration were complemented by physical restructuring and tenure conversion» (Uitermark, 2014: 1424).

This process is based on local welfare (Hall, 1993; Andreotti, et. al., 2012; Andreotti and Mingione, 2014;Bifulco, 2015, 2017; et. al.) and it implies «the discovery of the territory as a dynamic entity that is active andunder construction» (Governa and Salone, 2004: 797), where to stimulate citizens' participation and interinstitutionalrelationships, working on the neighbourhood-scale of urban regeneration. This perspective takesinto account citizens' needs, understanding and identifying the most critical problems that afflict a specificurban area, considering the voice[2] of its inhabitants. Hirschman (1970) identifies the voice-option as «a generaloutcry addressed to anybody willing to pay attention and listen to» (Hirschman, 1970: 13), trying to changethe already existent practices. The voice-option is a dimension of the capabilities (Sen, 1992, et. al.) that activatescitizens' agency, providing their positive freedom to choice. In the light of this paper the capability for voice (Sen,1992, Bonvin and Farvaque, 2006) of inhabitants plays a role in the urban regeneration processes oriented tosocial inclusion.According to this perspective, the local welfare approach gives a fundamental role to the territory,seen as the best field to enhance the inhabitants' capabilities in the regeneration projects and processes. A localwelfare system looks for the possible resources that can be activated for the renewal of an urban area within acombined empowerment of places and people. The core principle of this combination is that the policy for placesmust not be divided from those for people, but nevertheless, for several years these policy fields remained apartfrom each other, and the urban issue overwhelmed the social one (Donzelot, 2008). To overcome thisdistinction, the need of an integrated approach has arisen in order to promote «the action on the territorialscope as a leverage to rearrange what public policies treated separately in the past» (Bifulco and de Leonardis,2006), assuming the urban areas as a resources and setting for the public action within an area-basedperspective (Parkinson, 1998). This theoretical configuration between the capability approach and theterritorialisation

[1] Source: http://ec.europa.eu/regional_policy/archive/urban2/urban/initiative/src/frame1.htm
[2] The term voice is used here in the Amartya Sen's perspective, as an instrument to carry out the positive freedom to choice and to do. Indeed, the capability for voice represents a fundamental key analytic of the local welfare approach (see Bifulco and Mozzana, 2011).

of welfare, introduces the case study which, where the importance of local actions and a strongrelationship with the local milieu are enhanced. Before presenting the Neapolitan case, the paper introducesthe analytical framework of the whole URBAN Community Initiative.

3 URBAN: AN OVERVIEW

URBAN Community Initiative (CI) was a European programme aimed to address «the economic,social and environmental disadvantage faced by neighbourhoods across the EU» (Carpenter, 2006: 2146).Two main assumptions influenced the Programme: on the one hand, the necessity to overcome both thehousing growth and infrastructural policies, on the other hand, the intention to continue the successful urbanrequalification policies on neighbourhood-scale realised from the second half of 1980s, particularly in Centraland Northern Europe. The initiative was destined to certain vulnerable urban areas where problems of poverty,unemployment and social exclusion were concentrated. The aim was to provide a spatial, social and economic revitalization of those areas through the involvement of local actors, on the one hand, and a learning-by-doingapproach from the public administrations, on the other hand. The Programme was articulated in two editions(1994-1999; 2000-2006) and defined by five macro-objectives: (1) social cohesion, (2) economiccompetitiveness, (3) sustainable development, (4) promotion of equal opportunities and (5) integration ofimmigrants. The European Commission emphasized the role of the cities as territorial scope to set the socialexclusion problems in a relationship with the urban renewal; 118 European cities were involved, of which sixteenItalians in the first edition and ten in the second one. A communitarian approach was designed «to addressurban deprivation through an integrated approach to the problems faced by run-down neighbourhoods, usinga partnership approach that involved local authorities and target communities to design and implement theprogramme» (Carpenter, 2006: 2148). Due to the heterogeneity of its objectives, the Programme was dividedinto five Objectives (Misure in Italian) (CEC, 1994):

1. Support of the already existent local businesses and encouragement for new activities
2. Promotion of employability among local populations
3. Support of new services and enhancement of those already existent
4. Urban spaces renovation and re-functioning of transport systems and accessibility
5. Involvement of local actors in communication and information about the on-going projects.

In the Italian context, the Programme was aimed to promote horizontal inter-institutionalintegration, and to overcome a sectorial and fragmented approach to the urban problems (Bricocoli, 2007)and «the interventions on the physical space was predominant» (Laino, 1999: 71). The first edition started anexperimentation that yielded positive outcomes, both on the target areas and on the administrations that haverearranged themselves in an unprecedented ways (Palermo, in Balducci, 2001: 11). The contents of URBANaffected at the same time the physical city and the social city (Palermo, 2002). Moreover, the targeted areas –divided into four categories (see Table 1) – were different from one another, also in the Italian case[1].

Type of neighbourhood – URBAN 1st Edition (1994-1999)	Number	Percentage %
Peripheral urban area: districts in the edge of urban areas, with public housing estates from 1960s to 1970s	44	37
Inner city: the core of the city, characterised by abandoned industrial buildings, dilapidated housing and a neglected environment	37	32
Historical city centre: areas with historical architecture and the potential to develop cultural heritage	23	19
Mixed: areas which combines the above characteristics	14	12
Total	118	100

Table 1 - Type of neighbourhood targeted by URBAN
Source: Carpenter (2006)

Although the inclusion of citizens was an important keyword of the programme, several experts(see Chorianopoulos, 2002; Carpenter, 2006) state that the community involvement was not

[1] Three main target-areas in Italy: Historical city centres (such as Spanish Quarters at Naples; Cosenza and Lecce), marginal peripheries (Syracuse, Reggio Calabria and Cagliari), and industrial areas in crisis (such as Genoa and Venice).

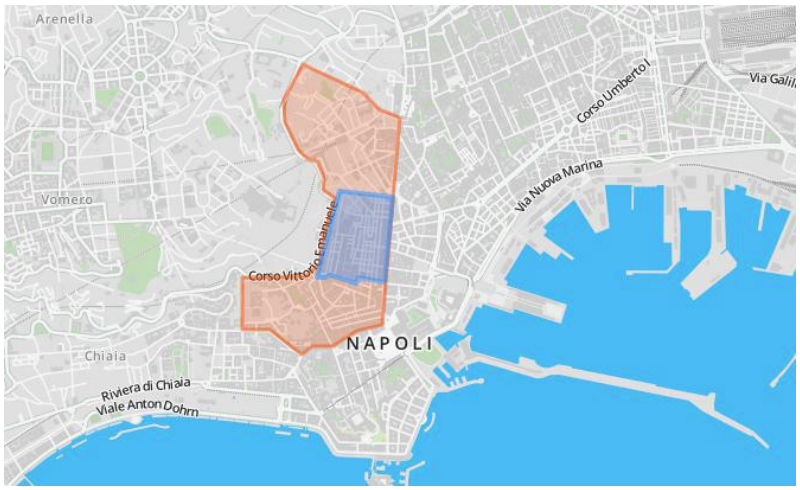
completelyrealised. The heterogeneity of the local contexts together with the stringent European guidelines affected theProgramme, creating a conflict with the need of an error-friendly approach, i.e. the ability to re-arrange a re-definethe practices during the planning activity (see Laino, 1999).

About the financing, a total of 900 million euros of EU investment was allocated, althoughEuropean Commission has spent only 720 million euros by June 2003. The expenditure was divided asfollows: 38% for physical and environmental regeneration, 32% for entrepreneurships activities, 23% for thesocial inclusion projects, 6% to technical and IT assistance, and 2% for «other types of initiatives», strictlyrelated to the particularities of each city (Carpenter, 2006). About Naples, the European URBANCommission identified two areas: Rione Sanità and Spanish Quarters.

4 CASE STUDY: URBAN AT SPANISH QUARTERS, A QUALITATIVE EXPOST EVALUATION

4.1 THE SPANISH QUARTERS AREA

Spanish Quarters (SQ) is a district located in a sloping area between Via Toledo and the hill ofCertosa di San Martino, in Naples' historical centre. Its urban structure is «a dense gridiron founded during theSpanish domination (15th century) […] unaltered over the centuries» (Lieto, 2013: 148).Figure 1 - Identification and boundaries of Spanish Quarters.



Legend. Blue area: historical Spanish Quarters; Orange area: large Spanish Quarters area.
Source: author's construction with Open street map based on REVES data (2015).

Traditionally, «SQ is the area bounded by via Toledo to the east, Augusteo-Ponzano axis to thesouth, corso Vittorio Emanuele to the western side, and the axis Saint Pasquale-Concezione a Montecalvario,to the north» (REVES, 2015; see the blue area in Figure 1). Some of the local actors of the third-sectoridentify a wider area with similar cultural identities from Chiaia at South to Montesanto at North (see theorange area in Figure 1). The area has 14.000 inhabitants.Viceroy Don Pedro from Toledo built the area in 1536, during a period of demographic increase.

Since their birth, Spanish Quarters has been considered an enclave separated from the rest of the city, despiteits central position. Therefore, the area remained isolated from the urban dynamics and exposed to thecriminal organisations. Since 20th century the neighbourhood has turned into a front door of Naples forheterogeneous social classes, from middle-classes to immigrants until new bourgeoise (see Laino, 2001, 2012)[1].

[1] Spanish Quarters populations (Laino, 2001, 2012): eduardiani (simple middle class in rented accommodation), viviariani (vulnerable families exposed to poverty and social exclusion), low-middle working class (usually public servants), new immigrants (not only foreigners), and new bourgeoisie (the latest, new owners of renovated apartments).

The area is characterized by an historical handcraft tradition: a report done in 2008 (S.I.Re.Na) catalogued209 basements (bassi), of which 76 used for craft activities and 82 for commercial activities. Previously, in1998, an Infocamere census counted 350 craft activities. This means that services sector substituted handcraftactivities over the past years (see REVES, 2015). Since 1980s Spanish Quarters became a laboratory ofcontinuous planning between several uncertainties, due to three main features (Pirozzi and Rossi-Doria,2010): social exclusion and poverty of some families, high presence of early school leaving, and the politicalinstability of public institutions.

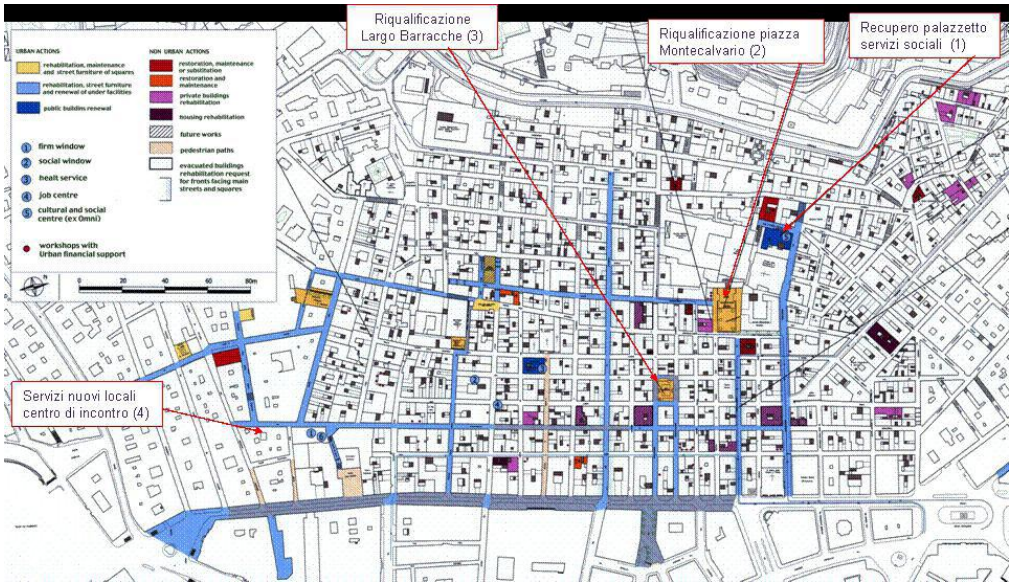


Figure 2 - URBAN implementation at Spanish Quarters.
Legend: 1. Palazzetto URBAN; 2. Regeneration of piazza Montecalvario; 3. Regeneration of Largo Barracche; 4. New social services centre. Source: Laino (2012), REVES (2015)

During the 1990s the area turned into a construction site for place-based policies sustained by theEuropeanization, during a phase of progressive local welfare, which represented the peak of a policy cycle notreproduced in the following years (Giovanni Laino, Interview, 20 October 2015). URBAN was an element ofthat important planning phase, it proposed some important spatial renewal to the area (see Figure 2), andproduced heterogeneous outcomes.

4.2 URBAN AT SPANISH QUARTERS

URBAN CI at Naples was planned for the encouragement of local small-scale craft activities andthe promotion of educational initiatives as area-based socio-health services, taking care the inhabitants'participation through a double-binded pathway: one related to social dimension, the other oriented to theregeneration of open public spaces (see Laino, 2012). On SQ, URBAN was influenced by Regie di Quartiere (Laino, 2002, 2012): a group of associations which act as local agency[1], promoting partnerships amongmunicipalities, public housing operators and inhabitants' associations, and characterised by a strong territorialconnotation and a pluralistic approach to the local economy. Here, the URBAN planning was much closer tothe social policy field, in order to build relationships among local actors and public administrations. Indeed,the organisational structure was flexible and semi-informal (Lepore, 2002), whereas an intense partnershipwas designed as a guarantee of effectiveness, regarding the Measures 1 and 2 (support to local craft activities), andas a chance of empowerment, concerning the social activities of the fifth Measure (ibidem). Table 2 finds the mainfeatures of URBAN implementation at SQ (for a more detailed overview, see Lepore, 2002; REVES, 2015).

[1] Bonvin and Rosenstein, 2012 define the local agency as organisations that work for the inclusion and the activation of local population's *capability for voice*.

URBAN – SPANISH QUARTERS	
Programme	URBAN CI (I) 1994-1999
Sources of funding	Naples Municipality through EU funds
Financing	€ 693.214
Period of activity	1997-2001
Responsible of the implementation	Naples Municipality; delegation to the Alderman of social policy
Other stakeholders	Spanish Quarters Associations
Objectives 1-2: socio-economic	Support to local activities – support to education, formation, local employment, social services
Objectives 3: infrastructures - environment	Renovation of buildings dedicated to social services; Urban renewal
Objectives 4 -5: *weak-willed* (Lepore, 2002)	Seminars for maintenance and safety; Implementation and spreading of outcomes among inhabitants

Table 2 - Info about URBAN at Spanish Quarters of Naples
Source: author's construction based on REVES data (2015)

At SQ, URBAN paid more attention to the enhancement of the existing resources, «seen as tieswith logical and formal rules repeatable or further improved through a good design» (Lepore, 2002: 156). Theimprovement of endogenous resources of the area was an idea by Professor Giovanni Laino, the planner ofthe Neapolitan URBAN experience:

> *The planner – Giovanni Laino – stimulated an intelligent thinking to the simple project ofgentrification to attract trivial craft activities on the pretext of spreading new local enterprises, ashappened in Cosenza or Salerno. However, in these two cities, the historical city centres hasbeen emptied. On the contrary, here at SQ the idea was not to import craftsmen, but toreinforce the existing economies. Thus, through this idea the Objective 1 brought the bestoutcomes. (Daniela Lepore, Interview, 18 November 2015)*

Despite the numerous initiatives and projects implemented by URBAN at SQ (see Figure 2,paragraph 4.1) only the first two Objectives brought the expected result, according to a locally based process.The support of local craft activities began in 1996 with a detailed research-action task aimed to an empiricalcensus of local productive activities. Doctor Immacolata Voltura – who worked for the data-collection tasks– explained this census activity to me in an interview. Four local operators, two from SQ and two from RioneSanità, three economists and an architect, composed the multidisciplinary team set up for the census, also tofoster the integration between heterogeneous fields. The SQ area has been empirically examined street bystreet, with the aim to offer a complete overview of the economic situation, even reporting those activitieswhich were not present in the Infocamere lists (provided by the Camera di Commercio), used as a preliminarydocument. Once concluded the empirical on-field census, planners promoted the renewal of craft workplacesthrough a call for financial aid and a contract notice for craftsmen. Meanwhile, a safety problem emerged in thearea: the conformity with regulation 46/1990[1] obliged the provision of a new lighting rig to the streets of SQthat lead to via Toledo. Therefore, the need to secure the workplaces has prompted the former Alderman for Dignity – Maria Fortuna Incostante – to ask for the involvement of building supervisors and security expertsin the renovation of craft activities. In this way, the renewal of workplaces was accompanied by an empiricalevaluation of working conditions and security standards. Within six months, 148 renovation projects weresuccessfully approved[2] and then finalised thanks to the EU funding and the credit institution Artigiancassa,which provided money for those craftsmen who could not guarantee 10% of the total expenditure, asrequested by the Programme's guidelines. Alongside this research-action census activity, an initiative calledsportello-impresa was developed «to create relationships of trust between URBAN administrative structure andthe potential recipients» (Lepore, 2002: 75). This street-level office has been a great device to facilitate therelationship between the URBAN operators an the local craftsmen in the renovation project:

> *At the beginning, there was scepticism between the citizens. Once we obtained the sportelloimpresa, we achieved more credibility and the inhabitants' understood the*

[1] L. 3 March 1990, n. 46: Norme per la sicurezza degli impianti (Standard for the safety of installations)
[2] Immacolata Voltura, Interview (18 November 2015), see also Lepore (2002)

importance of theProgramme. We were present on the area as "co-active" operators. (Immacolata Voltura,Interview, 17 November 2015)

The Spanish Quarters Association (SQA), lead by Professor Giovanni Laino and Anna Stanco, playedan important role in the implementation of the socio-economic Obejctives (1 and 2), promoting local actionsstrongly rooted with the urban area, thanks to a strong network. The close connection with the local context,channelled by the sportelli-impresa, had a positive impact on the calls for financial aids, which were ad hoc drawn upfor QS. Sportelli-impresa together with the job centre was the main strength of the socio-economic Measure 2.

The job centres were temporary desks to help the inhabitants to find small jobs or training activities. Theimplementation of these devices has been possible thanks to SQA and its relationship with the area and itsinhabitants. The micro-scale of the implementation of Objective 1 (renovation of craft activities) and 2(sportelli-impresa and job centres) made possible a renewal of the area from the labour market side. For Measure1, the voice of craftsmen has been stimulated by the street-level census, and the recipients of the renewal actsplayed an active role. Nevertheless, the support-services developed by Objective 2 declined over time, turninginto an interim experience that did not generated a long-term planning to maintain a local welfare system (seeAndreotti et. al., 2012; Bifulco, 2015, 2016) in SQ area:

URBAN at Naples was only an interlude concluded without a continuation in the following years.The whole programme not stimulated the start of a new welfare phase. Today, the only localwelfare structures in the area are those of SQA planning. (Daniela Lepore, Interview, 18November 2015)

This comment enables to introduce the weaknesses of URBAN at SQ that shows the reasons whyis possible to state a missed territorialisation process. The URBAN framework and guidelines were successfullyapplied for Objective 1 and – partially – Objective 2. However, Objective 3 (infrastructures and environment,i.e. urban renewal) and 4-5 (safety and citizens' participation) reveal a lack of locally based planning, thus theresults are incomplete – in the case of Objective 3 – or even non-existent.

4.3 A MISSED TERRITORIALISATION

The main differences between the first Objectives and the others can be found in the governancefield. The renewal of craft activities was supported by a well-structured policy-making, where the Municipality(thanks to the Alderman Maria Fortuna Incostante) and the planners (led by Giovanni Laino) workedtogether. On the contrary, for the Measure 3 (infrastructures and environment) proposed urban renewalinterventions with non-linear governance (Lepore, 2002b). Almost twenty years later, the aims of an urbanrequalification oriented to «caring of places», have not been realised.

The case of ex-OMNI building is an example of this inefficiency. In 1997 Antonio Bassolino – the former mayor of Naples – glimpsed a more dynamic period for SQ, thus he decided to expand the URBAN planning adding Palazzetto URBAN at the ex-OMNI building, an abandoned kindergarten acquired withURBAN funds and then transformed into a multifunctional structure with aggregating duties and service tocitizens. It was opened in 1998 and its utilisation has still constantly increased: from 13.546 accesses in 2006to 21.474 in 2009 (Cherubino, Pierce, 2011, in REVES, 2015). 12.151 entrances during the first months of2010 were encouraging. However, in June 2010, the municipality of Naples decided to change the currentstructure into an accommodation service for evacuated families due to building collapses, cleaning out theprevious social service activity.

The closing of Palazzetto URBAN was a watershed. The Palazzetto had become a reference pointof the area, but its transformation in an accommodation area for displaced families demonstratethe institutional lack of interest to maintain Palazzetto URBAN, because actually other spaceswere available for that emergency. (Daria Esposito, Interview, 14 October 2015)

In the governance of Objective 3 the municipality started the planning of social service and thenit began to take over more and more spaces where to place not so innovative services, such asthe police headquarter or the health service desk, that were already

existing. Afterwards, it alsotransformed the Palazzetto URBAN, deleting an innovative and inclusive street-level service.Moreover, the Objectives 4 and 5, dedicated to social inclusion and citizens' participation, werenot implemented at all. The attention on Naples was more on the other Objectives, but inObjective 3, for instance, a lot of money was not spent, hence some architects decided toinclude the pedestrianisation of via Toledo in URBAN planning. Actually, it was not a specificproject for Spanish Quarters and it brought some traffic problems to the historical area,temporarily solved by a local bus. (Daniela Lepore, Interview, 18 November 2015)[1]

The pedestrianisation of Via Toledo was an ex-post side project desired more by the Municipalityrather than by inhabitants. «It was planned with a loophole to bypass the spending efforts and underline thehidden aspects of the Programme» (Lepore, 2002b: 164), but in practice it overlapped the communitarianapproach of URBAN with simple restyling aims. The more visible urban renewal project also had unexpectedresults. A demonstration is the renovation of Largo Barracche, an area previously dedicated to illegal traffics.

At the beginning, URBAN proposed the placement of a soccer field, but the consultation with inhabitants'opted for a playground area dedicated to kids. Just one year after the requalification, the area returned to astate of abandonment (see Figure 3).

The renewal of Largo Barracche has gone wrong. Once the playground was built, the area hasbeen damaged; the bench were burned due to unknown reasons, but I suppose it has somethingto do with organized crime. For the basement located under the square, a community centrewith inclusive duties was designed, but it has never been realised. (Daniela Lepore, Interview, 18November 2015)

Figure 3. Evolution of Largo Barracche: before, 1 month after and 1 year after URBAN.
Source: kind concession by Professor Daniela Lepore

Today, Largo Barracche comes as a square without any service, facilities or community centres (seeFigure 4). The playground has never been renovated and the basement is empty since 2011. A significantEuropean Programme did not completely develop an area-based planning due to a weak relationship with thelocal milieu in the governance of urban renewal projects, and the significant experience of Palazzetto URBANwas not reproduced elsewhere in SQ area. A territorialisation process did not completely take place.

Figure 4. Largo Barracche, October 2015. Source: author's photo

[1] For further details about the side-project of via Toledo, see Lepore (2002c), Approfondimento. Il Progetto sponda Via Toledo, in L'attivazione e l'uso dei progetti sponda a Napoli

Piazza Montecalvario, unlike Largo Barracche, has been completely transformed. During the 1980s,the square was used as a car-parking area without any criteria, then repaved and pedestrianized throughURBAN. Shortly after, the square was vandalized, and a requalification project was completed in 2013 thanksto the opening of a subway exit (stop Toledo), which gave a new face to one of the biggest square of SpanishQuarters. Moreover, Istituto Paisiello, the most important educational institute of the area, is located there, and itwas the recipient of a PON 2007-20139, financed by European Social Funds. However, after this importantrenewal, Largo Montecalvario has not changed (see Figure 5). Overall, the implementation of URBAN at SQ was focused on a normalization of the area (Lepore,2002), aimed to reconstruct the urban open spaces, to turn abandoned buildings into areas for social scopes,and to renovate public facilities (street lighting, traffic signs and public transports). However, in a frameworkcharacterized by both integration and Europeanization of the local practices, URBAN at SQ did not affected[1] the territorialisation process. A complete integration of social and urban issues within the local rescaling of welfare policies did not took place, except for those projects developed with the help of Spanish Quarters Association.

Figure 5. Largo Montecalvario, October 2015. Source: author's photo

URBAN at Spanish Quarters did not bring the expected results and twenty years later it can beidentified as an important European planning disappeared into a simply useful but uneven requalification.The important opportunity of activating a new kind of planning influenced by URBAN practices was notexploited. The success of Measure 1 was due to a great understanding of specific characters of SQ area, madepossible by the network of relationship built by SQA during several years, since the 1970s. In the EuropeanURBAN framework, Spanish Quarters Association has been able to catch its important economic resources, putinto practice the URBAN guidelines where was possible. SQA played an important role in stimulating theparticipation of local-level groups in the implementation of the Programme. Indeed, «the inclusion of localauthorities in partnership mechanisms with economic and social bodies as an essential was viewed as essentialfor tackling urban deprivation» (CEC, 1998: 6). This inclusive relationship was built just for the renovation ofcraft activities, but more generally, the regeneration of the area has been more urban than social, hence thecombined regeneration of place and people did not happened, providing only short-term effects. The absenceof long-term effects is due to the inability of local administrations to pursue an area-based planning and tolearn from the approach proposed by URBAN. In Naples, as stated by professor Lepore, a new phase ofintegrated policy did not begin, and when the former major Antonio Bassolino moved to Regionalgovernment, followed by Alderman Maria Fortuna Incostante, a gap in Naples municipality was not filled,and the local welfare remained a weak topic in the urban agenda of the Municipality.

> *A territorialisation of social policies has partially taken place with URBAN CI. If we look at anintegrated approach to the local areas, this happened in Naples on a small-scale. The Objective 1 triggered some labour activities reinvigorating their productivity. Today, new pathways for localapproaches on local scale should be proposed by the*

[1] PON 2007-2013 was a National Programme to renovate school buildings, financed through ESF (European SocialFunds) and the European Regional Development Fund. A second 2014-2020 phase is established.

governmental institutions, but this hasnever happened, and SQA has been left alone in the local welfare planning for SQ. (ImmacolataVoltura, Interview, 17 November 2015)

SQA is still the main local agency of the area, it launched an area-based social planning long timebefore URBAN, juggling among several uncertainties, due to three contextual factors: (1) the extent ofpremature social exclusion of NEET, (2) the absence of a vocational way out from compulsory education,and (3) the unreliability of local institutional administrations, unable to consolidate the existing good practicesover time (Pirozzi and Rossi Doria, 2010). This pluralistic approach for urban regeneration implies «aresearch-action process […] of designing and implementation of social spaces for regeneration, that can takesyears to occur, in a pathway not free of setbacks and re-definitions» (Laino, 1999: 79). This process did notprecede the implementation of URBAN at Naples, except for Measure 1. Although the Programme wasbased on partnership principle (CEC, 1999), at Naples it put into practice a downgrading of local resources dueto «an opposition to recognize and strengthen the already existing local actors» (Lepore, 2002: 164). This lackof local engagement was observed also for other URBAN implementations (see Carpenter, 2006: 2155).

5 CONCLUSION

The specificities of URBAN CI at SQ outline a framework where the territorialisation of localwelfare was just partially developed, and the principles that drove the Programme were not fully applied,expect for Objective 1, where the voice of craftsmen has been included in planning activity. This last part ofthe paper aims to identify the social perspectives of urban regeneration, in the light of the theoreticalframework and the analysis of URBAN experience at SQ. The outcomes of the renovation of craft activitiesprovide us a recommendation: to strengthen the social inclusion of inhabitants in planning projects designedto their neighbourhood, the role of a local agency which manage the relationship between the local milieu andthe institutional programme is fundamental. In the governance of a programme like URBAN, focused onsocial cohesion within urban regeneration, local actors determine the effectiveness of the results. The lacksexperienced by Objectives 3, 4 and 5 shows that the focus on social cohesion is weak if not sustained by astrong knowledge of the specificities of each local context. As we saw for the renovation of Largo Barraccheand Piazza Montecalvario, a European Programme is able to develop a top-down planning, even if it is focusedon a communitarian approach. The rigidity of timeline and guideline of URBAN has met with thepeculiarities of SQ, affecting the bottom-up aims. Therefore, is important to look at the urban regeneration ofdeprived areas with a less naïve conceptualization. «Frequently, there is a research-action phase, characterizedby the dissemination of opportunities, the ideation and implementation of requalification of social spaces, in aprocess that can takes a long time, not without risks and possible mistakes» (Laino, 1999: 79). Expect forObjective 1, this kind of process did not take place at the Neapolitan URBAN and the experts noticed «anopposition to acknowledge the existent local networks» (Lepore, 2002: 164), therefore the importance ofsocial aspects was particularly limited. What was missed in URBAN at SQ was a shared definition of the main general aims and constraints. On the contrary, the governance of programme preferred to work towardsprocedures instead of toward aims, i.e. without a more flexible policy-making adapted to the particularities of theneighbourhood. This approach, for instance, took place in the transformation of Largo Barracche, where thevoice of some inhabitants pushed for the construction of a playground instead of a soccer field.Unfortunately, the following planning did not proceed on the same way.

The theoretical framework of the paper identifies the territorialisation of welfare (see Kazepov, 2009;Bifulco, 2015, 2017; et al.) as the best filed for area-based initiatives where to include the capability for voice (Sen,1992) of inhabitants, but this frame has to be supported by a practice of adaptation to the local context,characterized by two features: on one hand, it needs a dancer planner, i.e. a «professional requirement fordesigning and planning urban regeneration among different re-elaborations, experimentations, negotiationsand redefinition of the problems» (Laino, 1999: 96), opened to error-friendly practices and able to keep theattention more on the objectives of the programme than on the procedures of the planning activities. On theother hand, the adaptation on neighbourhoods' peculiarities needs a reflective practice (Schön, 1993) to cope withthe agency of the inhabitants, that is not a precondition but the outcome of a training path which takes intoaccount all the environmental characteristics of the area, the spoken communications of the inhabitants (Pirozzi andRossi-Doria, 2010) and the local milieu where to stimulate capabilities in a pluralistic planning framework.Not by chance, «the participation of local-level interest-groups in all the phases of the programme» (CEC,1998, in Chorianopoulos, 2002: 714), was a key

novel aspect of URBAN, viewed as essential «for tacklingurban deprivation and promoting economic competitiveness» (ibidem). At SQ, the only Objective 1 and 2experienced this approach, whereas the other Objectives were not enough focused on the local-level groups,indeed, the urban deprivation has been tackled just with physical projects that ended with the conclusion ofURBAN. A reflexive practice was not developed for the entire URBAN, and the local administration did notreproduced the potentialities of the Programme in other subsequent initiatives. On the contrary, SQA(Spanish Quarter Association) has been able to develop a reflexive practice in the regeneration process of SQ,thanks to strong ties between its planner Giovanni Laino and the local milieu of SQ. It is not by chance thatsince late 1970s SQA produced several innovative projects aimed to strengthen the endogenous resources ofSQ's inhabitants. This NGO association acts as a local agency for the co-production of social policies «takinginto account local expertise and knowledge, as well as local circumstances [...] promoting a reflexive andsituated view of public action» (Bonvin, Rosenstein, 2012: 75). Local agencies here are identified as importantdevices to promote a kind of planning like that proposed for URBAN.

The main weaknesses of URBAN implementation at SQ, i.e. a missed territorialisation of welfarewhich only produced a physical restructuration one the one hand, and the lack of a learning-by-doing approachin a reflexive way, on the other hand, fits with the limitations noticed also for the whole URBAN planning atEuropean level. Indeed, the importance of more precise conceptualisation of urban governance differences inthe EU policy-making process became increasingly apparent (Chorianopulos, 2002). URBAN at Naplesconfirms that area-based approach is useful policy tool to cope with urban deprivation, when applied in citypolicy framework that work in the same direction and aimed to concretely generate social inclusion and social cohesion through an on-going process. Area-based policies need support from local administrations and adeep knowledge of urban deprivations, to be most effective. This support and this knowledge were more inthe hand of Spanish Quarters Association instead of Naples Municipality.

URBAN has contributed to demonstrating how is possible to create the conditions to improvewellbeing in deprived urban areas through an area-based planning. But it appears that the key to tacklingdeep-rooted disadvantage in urban neighbourhoods lies in complementary macro policies that address thestructural causes of poverty and disadvantage. It is through a combination of macro and micro policies thatthose facing deprivation in Europe's most disadvantaged neighbourhoods have the greatest chance ofmoving out of poverty (Carpenter, 2006). Atkinson (2000), in the same way, argues that area-based initiativesneed a support by wider policies (on the economy, employment, social protection)—in other words, placebasedpolicies need to be integrated with people-based policies.

In Spanish Quarters, URBAN has been a significant European Programme that brought physicalimprovement to the area, but it yielded concrete outcomes only for the Objective 1, where Spanish QuartersAssociation played an important role for the social cohesion aims. In addition, the local administration didnot plan other initiatives or projects based on URBAN framework. SQA continued, sometimes alone, theplanning activity to deal with urban deprivation of SQ through participative processes aimed to socialcohesion. Its long experience (see Laino, 2012, 2015) paved the way for new projects of social innovationwithin SQ area, developed from the third sector. The social perspectives of urban regeneration define anintegrated approach between the physical renovations and the in-depth relationship with local environment,on one hand, and between European and local administration on the other hand, for a well-structuredparticipatory governance, where the local institutions are informed about the patterns of deprivation of thefragile areas. Without these forms of integration, social cohesion and participation remain simple assumptionsjust added in the urban regeneration discourse, but not developed in planning activity.

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ID 1587 | LEVELS AND SCOPE OF PARTICIPATED PROJECTS: CASE STUDIES IN THE PORTUGUESE CONTEXT

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ABSTRACT: In Portugal, there has been a growing concern, in recent years, about the participation of citizens inarchitectural and political decisions. The ineffectiveness of the traditional processes of participation of thedemocratic system proves incapable of responding to the contemporary problems of the citizens. In parallel ithas been seen in recent years the deepening of the economic and financial crisis of 2007/2008, which, inPortugal, led to a sharp rise in the levels of unemployment in the architecture market. The lack ofcommissioning of building projects and plans, that had previously generated work, led to new concepts andapproaches in particular in newly formed architects. On the one hand, there have been numerous collectivesof architects motivated by issues related to political intervention and dynamics of social and territorialinnovation. On the other hand, political decision-makers implemented new participatory instruments tosupport decision, such as Orçamento Participativo (Participatory Budget). This program has beenimplemented widely among municipalities in Portugal. Citizens' participation in project decisions is a recurring theme in the 1960s and 1970s, whichreappears with a new configuration at the beginning of the XXI century. These days are marked by years ofeconomic crisis and the universe of facilitated circulation of information in a wide network system accessedby a large number of citizens. However, some questions arise concerning the levels and scope ofparticipation. Since a conventional project involves a certain level of involvement of decision-makers,architects and users (Carlo, 2010), two questions arise: how can we now achieve a higher level of participationand involvement of stakeholders (citizens, Architects, policy-makers) in the project? How can we achieve areal bottom-up procedure, in which context problems find the best formal solution (Alexander, 1964), duringa process implemented in most cases by groups of architects outside the community of citizens for whomthey work? Starting from a reflection on SAAL, a housing program promoted by the Central Government inthe post-revolution period of April 1974, research is carried out through the assessment of the participationlevel (Arnstein, 1969) of referred participated

projects. From a different typology, two Municipal programswith relevance at regional scale - OP Cascais and BIP ZIP Lisbon - are analyzed. The study of twoexploratory case studies - Casa do Vapor (Almada, Portugal) and "Building Together" (Guimarães, Portugal) -and an investigatory proposal - "City Mosaic Collective" project (Mendes et al., 2017a) – complete theselection. "City Mosaic Collective", which I am a founder member, aims to achieve a higher level ofparticipation, “Partnership” (Arnstein, 1969). The research points to conclude that even for the cases studied that do not reach the highest levelsof participation (partnership), the initiatives reveal valid potential for their evolution.

KEYWORDS: Participated project; Partnership; Cova do Vapor; Building Together; City Mosaic Collective.

1 INTRODUCTION

The recent financial crisis has underlined the failures of a system of intervention in the public spaceas dependent on political power and public investment (Bourdin, 2011). In recent years Portugal witnessed ageneral reduction in resources available for public works. Following a government commissioned demand,University do Minho conducted a study about municipal investment reduction. The level of municipalinvestment dropped 74% from 2001 to 2014. During this period the largest investment fall occurred beforethe Portuguese adjustment program of the troika. Between 2010 and 2014 the lowering of investmentsituated on 39%, but in absolute terms the reduction was sharper in previous years, starting at the beginningof the decade (Esteves, 2015). The aftereffect repercussions of divestment rely on the lack of commissioning of building projectsand plans, which had previously generated work. This situation has led to a sharp rise in unemployment inthe area of architectural design. In consequence the largest group most affected demonstrates greatavailability to explore new paths related to the universe of architecture. New concepts and approaches arise,in particular in newly formed architects. Numerous collectives of architects motivated by issues related topolitical intervention and dynamics of social and territorial innovation.

The reduction on the available budget has direct repercussions in promoting public works andmaintenance of the public space. This fact leads to situations of stagnation and degradation of environmentalquality of public space. On the other hand we are witnessing a growing civic consciousness about thelimitations of local government capacity to respond to the needs and problems that arise in day-to-day citizenlife. This awareness is associated with the economic crisis and the dissociation between citizens and thepolitical power. The difficulties of communication and interaction between citizens and political power areaccentuated by the ineffectiveness of planning instruments set. At the basis of this problem there is arepresentation deficit. Citizens do not identify with their decision-makers and decision-makers are unable toestablish effective means of sharing or communication their decisions. From the holistic design of the map that connects the economic situation and their consequences,the instituted political power, stakeholders, the citizen and the architectural designers, several questions ariseabout a recent growing participation phenomenon: We face a wide and complex range of issues. In order tofocus, this paper investigates on how to achieve a higher level of participation and involvement ofstakeholders (citizens, Architects, policy-makers) in the project and how to reach a real bottom-upprocedure, in which context problems find the best formal solution (Alexander, 1964). To reach thisgoal the approach is made analyzing three types of programs involved in participative projects: First SAAL, aprogram promoted by the Central Government national wide scale. Secondly two municipal programs withrelevance at regional scale (OP Cascais and BIP ZIP Lisbon). Thirdly two small scale implemented initiatives(Cova do Vapor and Building Together) and an investigatory proposal (City Mosaic Collective) that aims ahigher level of participation.

2. AUTHORITARIAN METHODOLOGY

Before addressing the analysis of case study, it is relevant to go through the methodological processcommonly used for the realization of an architectural, in the universe of public entities. We face a participatedprocess, characterized by a reduced participation level, with a reduced variety of agents. This methodology itis classified, according to Giancarlo de Carlo, as authoritarian (Carlo, 2010). Design process is definedthrough different phases of development and implementation of an architectural project. The architecturalproject is understood, in this article, through a wide scope of view. Urban and built elements, the citystructure and its buildings are inseparable universes and part of the whole which is the

city (Rossi, 1977).“An Architecture of the Participation”. is the article title of Giancarlo de Carlo (Perspecta: YaleJournal, in 1980). The article approaches the different phases and procedures of project methodology. In asimple and clear perspective the project methodology is addressed on the distinction between an authoritarianplanning and a participative approach. According to Carlo (2010), the project methodology is defined in threemain phases. The first phase is focused on the problem definition. The second corresponds to thedevelopment of the project, and the third relates to the evaluation of results.

The authoritarian methodology is characterized by a rigid sequence of the different phases. Thearticulation between the different stages is reduced and at the end of the second phase (design) the project ismostly completed. This type of approach is commonly used in the development of architectural projects. It ischaracterized by being carried out in separate phases in which the results of each phase little interfere witheach other. On the other hand the design process is highly centralized in the design phase of the project. Thedesigner, the political power and their technicians assume the central role and monopolize the decisionprocess. This way aesthetic and use issues are taken for granted and imposed to a wider group of citizens. In a certain way the users and the use associated to the project end up having a reduced influence on the finalresult (Carlo, 2010). It is a level 3 (Informing) of tokenism (Arnstein, 1969). Citizens are just informed of theresult. The decision-making is kept in the sphere of the political power and the designers. It is anauthoritarian approach, centered on the design process of the project, focusing on policy-makers (Carlo,2010) and designers.

It is now relevant to detail each stage of the authoritarian methodology. The problem definitionphase starts with the order of the project and the subsequent data collection about the context (Alexander,1977). At this stage the proceedings fall into an intuitive and non-systematic approach of gatheringinformation. The selection of data and the definition of problems is strongly centered on the designer andpolicy makers’ options. The defined goals are taken for granted and the possibility of an expanded discussionwith the users is excluded. The issue subject to be discussed is centered on the costs of the operation,technique and aesthetics aspects. The prospect of future users is rarely considered or subjugated to theinterests of political power or the designer's idea.

The stage of project design development runs since the presentation of the first interventionproposals to the conclusion of the project construction. Throughout this period the project is regarded as anabsolute entity that responds to the principles set out by the designer (technician) and the public developer.The scope for changes is scarce. In case of inadequacy minor changes are introduced or in extreme cases thesolution can be rejected and replaced by another proposal. If the promoter accepts the project, the work willbe executed and delivered to their users. Sometimes the users who will use the space are different from thosethat initiated the project process. However the project keeps unchanged. The users have a small share ofinfluence in the drafting of the project and in the final solution to be built. The knowledge potential of all theinvolved actors in the process is not fully explored.

The third phase focuses on the evaluation. Most often corresponds to a greatly neglected moment.The final work tends to be considered and evaluated exclusively from the aesthetic point of view. Thesubjective dimension overrides the rational and objective approach. The objective issues accessed focusmainly on financial aspects related to the cost of the work. The overvaluation of the aesthetic and financialcomponents leads to a deterministic perspective. The process as an integrated whole is neglected. The endresult is not the result of a broad outlook process, but rather an isolated case that responds to the will ofpolitical power and the designer intentions. This corresponds to Giancarlo di Carlo (2010) definition ofauthoritarian planning.

3. A PIONEER EXPERIENCE FROM THE SEVENTY’S - SAAL

Following the April 1974 revolution, the democratic regime faced the challenge to build a newsocial, economic and cultural structure. The heritage from the authoritarian regime registers a lack of housingof about 500 000 dwelling. In order to face this problem Nuno Portas, the Secretary of State for Housing and Urban Planning (Ministry of Social Equipment and the Environment, and of Internal Administration of the1st Provisional Government) decided, in August 1974, to create SAAL - Serviço Ambulatório de Apoio Local(Ambulatory Support to Local Residents). The population target belongs to a social and cultural disqualifiedsector that inhabited in very precarious and poor conditions.

Before addressing the SAAL program a previous participated project experience has to bementioned: the project to Associação de Inquilinos Lisbonense (Association of Tenants Lisbonense) led by theAtelier of Nuno Teotónio Pereira with Bartolomeu Costa Cabral. The architectural design developed, fromMid-fifties, involved the participation of the future users. The operation of 100 dwellings developedtypologies from T1 to T5. (Bandeirinha, 2007). In parallel, with the objective to replicate the experience, anexhibition was organized. The widespread event exhibited drawings, models and a prototype, in real size ofone house. After the visit to the model house, the visitors were asked to fill an inquire. The inquire askedabout the general impression about the house, as well as more specific issues concerning materials, spatialrelations, compartment location, etc. The impact among the media and architects community was significant,but the results from the inquiry were not properly compiled. The character of SAAL pointed to the direct involvement of the future users in the search ofsolutions regarding the land, infrastructures, technical assistance and financing. The program basis consideredthe direct involvement of the users and their representatives on a process of deep engagement in planning,and construction of their neighborhood and hoses. This processed was shared with teams of architects andtechnicians, social workers, and students. During two years (1974 – 1976) 170 projects for over 2 259 houseswere on process. This process involved 41 665 families (Conselho Nacional do SAAL, 1976).

SAAL objectives centered on the empowerment of citizens thought the support of the governmentand technical skills of the involved technicians. We are on the higher levels of the “Ladder of citizenparticipation” (Arnstein, 1969) where decision and work have a shared relation (Wates, 2014). Although inOctober 1976 the new constitutional government ended the program, under the argument that self-organizedteams and neighborhood representatives surpassed the limits of defined objectives of the program. Somehowthe new government considered that SAAL was being used for political intervention and not for solving localhouse and neighborhood problems.

4. OP CASCAIS

Considering the municipality of Cascais where participative processes have been successfullyimplemented it turns out that the number of voting citizens for local elections has consecutively decreasedfrom 2009 on. In the other direction the figures for abstention show an increase tendency (Pordata, 2015).Looking for solutions to fill the gap of citizen involvement in decisions about the planning ofpublic spaces, local authorities launched initiatives such as the OP - Orçamento Participado (ParticipatoryBudget). Referring to the case of the Municipality of Cascais, the focus is placed on the idea of strengtheningthe participation of citizens in the definition of budget priorities. The total budget available for the program isEur 1,5 million/year to be applied in projects that do not exceed 300 000,00 euros. The case of OP Cascais, the number of presented proposals (from 2011 to 2015) totalizes 891. The winner projects are 65, selectedwith a total of 160 740 votes, that reach the investment of 11 000 620,00 euros(Cascais, 2015a). Implementedproposal embrace interventions on public space, schools and rehabilitation of buildings.

This instrument, which has been spread by various municipalities in Portugal (In Loco, 2017), aimsto create a proximity scale and stimulate civic participation of citizen. It represents an attempt to overcomethe problems of communication and involvement of citizen in local governance decisions. The processcomprises a collection of proposals presented by citizens to a municipal working committee. Themunicipality multidisciplinary committee legitimates and selects the proposals to be submitted to popularvote. The voting process is held by mobile phone application, a large range access technology. Citizens areconsulted on the solution to be implemented, but the development of the project rests under the domain ofpolitical power. We are facing what Arnstein (1969) classifies as tokenism. Citizens are heard and informedbut do not have the power to ensure that their prospect will be fully answered. The level of participation is onthe 3rd and 4th level, which corresponds to Informing and Consultation respectively. These levels ofparticipation do not introduce significant changes on the status quo. The participatory process is focused onthe consultation of the existing problems and informing of the selected proposals to be implemented. Still,development of architectural design decisions still under the control of the local authority. However thepopular involvement on the Participatory Budge of Cascais is significant. In 2014 the number of voters forthe project proposal selection reached 41 005 votes (Pincha, 2015). Looking at the 2013 municipal election(Cascais, 2015b) there were 65 546 voters of a total of 172 537 registered voters. Considering that the politicalcoalition elected (PPD-PSD / CDS- PP) had 26 455 votes, there is a larger number of voters (plus 14 550) onthe Participatory Budget process.

5 BIP ZIP CM LISBOA

Created by the municipality of Lisbon in 2011, Bip/Zip Lisboa (Lisboa, (2017a) is a public policyinstrument and an outcome of the Local Housing Programme. This programme aims to recalibrate the publicpolitics on housing, “not focussing only on municipal housing estate but to expand its scope to the wholecity, especially in order to include vulnerable areas and neighbourhoods” (Lisboa, 2017b). - Final report PLH,March2012). Once these vulnerable territories were identified, a map was created – Bip/Zip map - (Lisboa,2017c). in which 67 territories in the city, with an estimated population of 141,126 residents, are pointed asPriority Intervention Zones and Priority Intervention Neighbourhoods. Each project developed for theimprovement of these areas can be financed up to €50 000 and from a minimum of € 5000.In order to add a social dimension to the approach to these territories and to contribute to a widerterritorial cohesion of the city, the Bip/Zip Programme supports strategies and actions specifically shaped forthese territories. Projects must be local based, created by partnerships, which can bring together the localauthority, citizen organizations, informal groups and other local-based stakeholders, which somehow relate to the territory and to its critical issues. This is a way of enhancing local resources and existing knowledge aboutcritical situations, stimulating at the same time, new dynamics and a policy of greater proximity, with the aimof improving the habitability of these places.

The program takes place through a cycle of 7 phases: 1.Preparation; 2. Communication andEmpowerment; 3.Application submission; 4. Application Approval; 5.Signature of the protocol; 6. Executionof projects; 7.Evaluation of the program (Lisboa, 2017d). Without exhaustive description of each phase, wewill focus on some aspects, in order to describe the level of participation promoted by this programme:

- During phase 2, the programme is publicized and workshops are developed so that, in addition totraining potential partners, their network for action increases in their territories.
- The application process includes the presentation of a diagnostic of the territory, a strategy forintervention and its activities, all prepared by the local partnership. In the diagnostic phase, prepared by thepartnership and using its diverse knowledge of the territory, the more community elements are heard andengaged, the more valued the application can be.
- From here, the partnership develops a strategy that consists on a set of activities that respond to agreater and a few specific goals, within the themes already predefined by the program itself, for they arestructuring for the main goal of territorial cohesion – the themes can go from improving the neighbourhoodimage, to inclusion and prevention and public space. Nevertheless, there is a considerable degree of freedomfor the construction of the proposals.
- -The selection of the winning applications is made by an external jury although takes into consideration the level of participation of the project.
- The funding is handed to the sponsoring entities that are part of the partnership; they manage it and materialize the projects in an independent way - although they have to submit reports.
- The evaluation of the application and subsequent monitoring consider several indicators that present the number of involved partners, the number of people in the community to whom the actions / interventions are intended.
- Whatever the amount attributed to each project, its sustainability must be guaranteed for a year or two depending on the amount attributed, ensuring that the dynamics created remain in the territory, as well as its materialization.

The first edition had 77 proposals, with a foreseen cost of 2,5 million euros, far above the availablebudget. For the 34 intervention territories, 33 projects, from 31 promoters and 53 partner organizations, wereselected to complete 50 interventions, totalling 1,249,843.48 € (2011 and 1st quarter 2012. (Lisboa, 2017b) In 2016, 122 applicants were admitted, the requested amount was 5,248,564.00 € and a total of1,606, 806 € was allocated to 42 selected projects. This involved 186 entities (52 promoters and 134 partners) that will promote about 250 interventions in 53 territories (Lisboa, 2017e).

From 2012 to 2016, a total of 591 applications were presented and 199 were supported. Fromparishes (local government) to civil society organizations, the bip/zip partnerships network has 528 partners.One can conclude that, in Bip/Zip it’s a tool to impulse and activate action and partnerships. Fromthe development of the application, to the signature of the protocol and to the implementation of the actions, although under a monitoring process, there is a great deal of autonomy in decision making and action by thepartnership. There is also autonomy in managing the funding that goes directly to the partnership and it’spredicted that its capacity for action goes beyond the time subject to funding.

If we consider the participation matrix of Nick Wates (2014), which evaluates the level ofcommunity involvement in the various phases of the project, we can say that despite being a programmepromoted by the municipality and started jointly between local government and community, unleashes aprocess of great community control - self-help - in the remaining phases of planning, implementation andmaintenance. One can conclude that this programme is designed be on the higher levels of the “Ladder ofcitizen participation” (Arnstein, 1969).

6 CASA DO VAPOR / BUILDING TOGETHER

The two following case studies – Casa do Vapor and “Building Together” - integrate an initiative ofCapital Europeia da Cultura - Guimarães 2012 (European Capital of Culture – Guimarães 2012). Both arecharacterized by their ephemeral character. Another common characteristic is their local micro scale type ofintervention.

Curator’s Lab was the kick off program for a sequence of experiments characterized by interventionsin the field of art and architecture. The initiative integrated in Capital Europeia da Cultura - Guimarães 2012(European Capital of Culture – Guimarães 2012), occurred at the disused ASA Factory, located 2 km awayfrom Guimarães.

The transdisciplinary collective Ezyzt was invited to lead the public workshop “Building together”,a three weeks collective residency. Around 30 art and architecture students, along with others participants,were involved on the construction of the facilities for the residency: a shelter (with kitchen and sleepingareas), working, meeting and living areas combined with public social spaces. As for the dynamic element ofthe proposal, an auditorium was built using wood elements and constructive system. During the constructionprocess local community was invited to participate. A survey to the population, some of them formerworkers from the factory, established the connection with the local community. Construir Juntos (BuildTogether) was the symbolic name given to the fanzine published by the Lab editorial. Its contents registeredthe process and the evolution of the project. Thought this document the reuse potential and future dynamicof the ASA factory was enlarged. During the workshop the idea of reusing the wood elements of theauditorium configured a desire to be developed in a future collaborative project. (Braga, 2017). The reuse of the wood elements of the auditorium of the former ASA factory (“BuildingTogether”) provided the material support for the project at Casa do Vapor. Another link to the previousproject is the leading team - Ezyzt (Ezyzt, 2017)/Constructlab - and their foundational principles: conceptand construction merge in specific site action. This approach stands as a contemporary alternative to theauthoritarian methodology. Casa do Vapor (Steam house) is inserted at Cova do Vapor (Steam Cove), a small informalneighborhood located in the estuary of Tejo river, 20 km south of Lisbon. Its origins go back to the twentiesof XX century, with a spontaneous small fisherman village. Due to its privileged location several threats to itsexistence occurred. The first on the forties, the second around the post-revolutionary period (after 1974) andthe latest dating from 2002. The existing small village is mostly organized by 350 self-built houses occupiedby around 200 inhabitants (Ramòs, 2013).

The enterprise is grounded on the analysis of the community expectations and it aims to respondwith a material proposal to local needs. The intervention aspirations are based on social issues and points tocreate a gathering point between the local community and the exterior (Catarina Ferreira). The programimplementation - artistic residency, surf school, a common kitchen, a concert venue, an open-air cinema –supported by Cova do Vapor Residents Association, was built around the idea of creating a centrality, wherepeople can meet and develop leisure and cultural activities (Ramòs, 2013). Another significant fact allowedthe project to be accomplished: the financial and legal support provided by the Almada Municipality.Casa do Vapor was built with the wood from the workshop at Guimarães Capital da Cultura:Construir Juntos. Although the organizing and financial process came mainly from outside the neighborhood,local community and local associations were involved. Most of the volunteers involved came from outsidethe community. Nevertheless some residents involvement occurred. In this case the level of participation issomewhere in between “informing” and a “partnership” (Arnstein, 1969) level.

Ended the time period of the legal permit for the construction, Casa do Vapor was dismantled andthe existing public library installed at the facilities of Associação de Moradores da Cova do Vapor (AMCV)

7 CITY MOSAIC COLLECTIVE

Reacting to a liberal urbanism which has characterized the last three decades with a lack of place fora scientific approach, multiplication of actors and power holders, generating too complex, unclear andincomprehensible operations and languages (Bourdin, 2010). “City Mosaic Collective”, which I am a foundermember, aims to establish an operative methodology to be implemented. This methodology responds to thecurrent Portuguese context where economic resources are scarce. It aims to answer to local needs andcontribute to citizen empowerment through participated projects of streets public space valorization (Fig.1).The process is to be triggered by local and dynamic citizens, associations, municipalities, companies,entrepreneurs, and other institutions. Through a collective architectural design project and IT it is possible toimplicate design and IT experts, policy-makers, private and public interests on the support of meaningfulsocial and participative process. Through this form of collaboration it is possible to achieve improvements inthe better living on the streets and reach meaningful social changes (Manzini, 2015).

In contrast with the exposed conventional, authoritarian methodology of project, “City MosaicCollective” (Mendes et al., 2017), proposes the overlap between a conventional architectural designmethodology with a participatory process (Bourdin, 2011; Slocum, 2003) and IT knowledge. The intersectionof these two components pretends to establish an operative methodology of intervention in the public space.It seeks to establish the foundations of simple and direct instruments to communicate and implement inspecific cases. Issues such as programming, architectural design and implementation (Quaroni, 1977) applyand overlap to a bottom-up approach (Mendes et al., 2014). The proposed methodology develops a blendbetween a conventional architectural design methodology and a participatory process and IT knowledge. Theproposed strategy is based on the conventional architectural design phases – analysis, architectural designproposal and implementation on building site - and tools – free-hand sketches, plans, sections, detail andaxonometric drawings. The working methodology establishes a systematic perspective for each project. Eachproject is case-sensitive to a particular context, time and space scale.

Figure 1 – “City Mosaic Colective” methodology.

The project target aims to enhance community quality of participation along with the improvementof public space living. In parallel, individual and group civic awareness will be reinforced by City MosaicCollective tool. The implementation process will be developed with a flexible pattern and will go throughvarious steps (Fig 1). From the detecting and reporting of a challenge/problem, using a mobile phone or withdirect contact, the data will be analyzed and organized through a Web site. Afterwards the solutions are developed with citizen, decision makers and stakeholders. Through a participated process, full of advancesand setbacks (Alexander, 1964), the final solution will be implemented. All the agents will be involved in adynamic and positive process (Mendes et al., 2017b).

8 CONCLUSIONS

With the exception of SAAL, the programs analyzed have been developed in the last 10 years. Thisis a relatively short period for a definitive evaluation to be made. However it is possible to draw someconclusions namely concerning the levels and scope of participation. The SAAL program was

developed during about two years. However, it is the proposal with a highdegree of participation, between partnership and self-help (Wates, 2014). Despite its short duration, it is anational and international reference. The purpose of the program centered on the empowerment of citizensthought the support of the government and technical skills of the involved technicians. Its implementationwas decisive in the housing offer for disadvantaged populations. Due to the program scale the projects andconstruction did not stop with the end of the program. This led to future housing initiatives fordisadvantaged classes being developed along with the completion of the works begun.

For the two municipal programs - OP Cascais and BIP ZIP Lisbon – we face different levels ofparticipation. Concerning the OP Cascais, citizens are consulted on the solution to be implemented, but thedevelopment of the project rests under the domain of political power. Citizens are heard and informed butdo not have the power to ensure that their prospect will be fully answered. The level of participation is on the3rd and 4th level, which corresponds to “Informing” and “Consultation” respectively. The participatoryprocess is focused on the consultation of the existing problems and informing of the selected proposals to beimplemented. Still, development of architectural design decisions still under the control of the local authority.

We are facing what Arnstein (1969) classifies as tokenism and on the level of “Consultation”, according toNick Wates (2014). On the other hand Bip/Zip can be placed on a higher level of participation, once itworks as a facilitator tool to impulse and activate action and partnerships. From the development of theapplication, to the signature of the protocol and to the implementation of the actions, there is a great deal ofautonomy in decision making and action by the partnership. There is also autonomy in managing the fundingthat goes directly to the partnership and it’s predicted that its capacity for action goes beyond the time subjectto funding. According to the participation matrix of Nick Wates (2014), which evaluates the level ofcommunity involvement in the various phases of the project, it is possible to allege that despite being aprogramme promoted by the municipality and started jointly between local government and community,unleashes a process of great community control - self-help - in the remaining phases of planning,implementation and maintenance. It is possible to conclude that this programme is designed be on the higherlevels of the “Ladder of citizen participation” (Arnstein, 1969).

“Building together” workshop should be placed on the specificity of the event. It was anephemeral event, focused on the experimentation between art and architecture to intervene on an disusedfactory. The intervention involved a restricted number of direct participants, although the population was called to participate. In a straight sense the level of participation is not high, situated around tokenismArnstein (1969) and “Information” Nick Wates (2014). Nevertheless the objective to draw the attention, oflocal population, to the potential asset of the disused factory was accomplished.

Casa do Vapor is a case where most of the resources came mainly from outside the neighborhood.The majority of the work and decisions was done by volunteers from outside the community. Even thoughthe local community and local associations were involved. In this case the level of participation is somewhere,in an ambiguous position, between “informing” and a “partnership” (Nick Wates (2014) (Arnstein, 1969) level.

City Mosaic Collective has also to been seen on its specificity as an investigatory methodology. Itaims to enhance a high participation level, reaching the level of “partnership” (Nick Wates (2014) (Arnstein,1969). Although it lacks confirmation with concrete processes and experiences. So far the collective has beenstruggling with difficulties in finding local structures of organized citizens. In the same direction has faceddifficulties in financing proposals and implementations outside the systems of organized power.The complexity and effectiveness of design project of public spaces requires a high level ofintegration of disciplinary insights, stakeholders, political representatives and citizen perspectives combinedand developed through time constraints and location conditions. Therefore, more effective decision supportsmethodologies and programs, which are able to improve citizen participation on the construction of a betterfit between the context and the designed form are needed.

The research points to conclude that even for the cases studied that do not reach the highest levels of participation (partnership), the initiatives reveal valid potential for their evolution.

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ID 1628 | URBAN REGENERATION PROCESS AS AN ASSET TO RISE ACTIVE CITIZENSHIP: THE HUMAN CITIES EXPERIENCE WITH USING PHOTOSTORIES AS A TRIGGER

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ABSTRACT: While the rapidly developing world is facing a rapid urban growth, these processes have been in a fullswing much earlier in the s. c. western world. Many of the western cities thus face a need for a redevelopmentand regeneration of the already aged-up urban quarters constructed in the periods of their fast growth. Typicalexamples are the modernist urban neighbourhoods built in the decades after WWII which offered newstandards of living when constructed, but need renewal and up-gradings to cope with the needs andexpectations of contemporary urban population that is much more individualised in its life-styles. The paperputs light on the new approach to participatory urban regeneration process that is developed around revealingresidents' perceptions of their living environments through crowdsourced analytical photography and attacheddescriptions. The approach was developed in Ljubljana, Slovenia, as an experimentation programme of theEuropean Human Cities project running from 2014-2018 in eleven European countries. The project aims toencourage and enable civil society across Europe to actively contribute to urban regeneration of livingenvironments in participatory way.

1 INTRODUCTION

Many European cities that grew very quickly after the second world war face a big need for urbanregeneration nowadays. This does not apply only to some historic parts of the cities or the abandoned industrialareas, but more and more also to the large housing estates that were built to accommodate new working forcein the times of post-war redevelopment of the cities in 1950-1970 period. In many parts of Europe these areasare in a big need for the improvement of the rise of material standard of living in order to be competitive andin line with the expectations of the contemporary urban dwellers. It seems that the advancement of technicalsolutions and development of smart technologies successfully addresses these issues.

However, as an urban anthropologist Lisa Redfield Peattie (1998) argued, for our happiness creativeactivity, empathy and other values of community are of equal or even bigger importance than material standardof living. Her knowledge is created through numerous peace actions about urban planning that seeks socialchange by including all interests and groups in the planning processes. This reminds of the importance tounderstand the community's experience with its living environments. In order to do so, revealing people'sperceptions of their living environments is essential (Sarason, 1974 and 1986, Chavis and Pretty, 1999).This can be partly addressed by research of the shared values that residents of urban environmentshave in common. Knowing these values is important for setting up common visions for the future of localenvironments. Once the collective values of a local community are identified they can backbone the bottomupaction plans of community improvements with the active participation and involvement of the inhabitants.Shared visions for future developments are especially important in the field of urban public spacesas these are the common spaces aimed to address the needs of people of all walks of life. The new approachesto participatory redesign of public space are in the focus of a European project Human Cities that is runningunder Creative Europe program in eleven cities from 2014 to 2018. Its main aim is to test new approaches tourban regeneration by participatory improvements. Project partners are

proposing and testing new tools tomake participation in urban regeneration operational through public space (re)design.

One of the project teams is based in Ljubljana, the mid-sized city of about 280.000 inhabitants witha number of aged-up large scale housing estates that need comprehensive approach to urban renewal (City ofLjubljana, 2014; RRA LUR, 2013). The team is experimenting with the new approaches to reveal inhabitants'values in relation to their living environments. As one's perception of space is a subject to a constant change,revealing the values of the users of urban space proves to be a theoretical and practical challenge (Walter, 1988,Thwaites and Simkins, 2007). The following topics are highlighted in the research:

- How to reveal the common values of the local community related to their living environments?
- Shall established methodologies (interviewing, perceptual mapping, cognitive mapping, etc.) be upgraded/combined with new technologies and social networking media? What is the general usefulness and real value of information technologies and crowd sourcing in revealing people's attitudes towards their living environments?
- How to track changes in the value systems and how to integrate them in the urban regeneration process? What kind of urban design solutions are robust enough to stand the changing nature of value systems over time?
- Is a more and more atomized society an appropriate playground for linking the design of living environment to the value systems of its users? Does a growing individualization mean that the common denominators will get harder and harder to be identified?

These complex issues have been addresses in the Human Cities project in different ways. This paperwill focus on one single approach that aims to develop an innovative tool based on the usage of the newtechnologies and applications in our daily lives. It is based on the new forms of communication used incontemporary society where photography and short texts play an important role. The next chapter dips intosome selected theoretical approaches in this field.

2 THE IMAGE AND ITS CAPTION – THEORETICAL BACKGROUND

Photo tory is composed of images and descriptions which form semiotic codes. This forms amultimodal message where images and captions are in an interaction and develop their relation to form a sign.The interpretation of a sign depends on both the creator and the reader of a sign and is strongly culturallyconditioned (Barthes, 1977, Kress and van Leeuwen, 2006). The goal of visual communication is not only thecommunication of the message but also the exchange of the meaning. Mitchell (2009) argues that the act ofreading does not only refer to the reading of text, but also of everything that surrounds us, including the signsand phenomenon, therefor the receiver of the message can be called the reader.

When the image and the word meet in the multimodal message, the reading approach is differentcompared to the classical reading. The reader has to set up the meaning. This process depends on reader'sexperiences and knowledge, trust into the source of the message and the influence of social environment. Eco(1979) introduced a term »ideal reader« to stress that the reader is the one that concludes the process of passing(in this case artist's) message to the others – the reader is called ideal as he/she is awaked and aware of existenceof numerous interpretations of the image.

The image and the word are included in a dynamic process, and represent two different ways of visualcommunication - non-verbal and verbal. A combination of both represents one of the most powerfulcommunication strategies (Kress, 2004, Lester, 2006). The image is an effective way to transfer knowledge andinformation. The image attracts the eye of the reader and arises his curiosity (Nikšič, 2008). Muhovič (1998)points out that the images facilitate the flow between empiricism and theory and increase flexibility whenoperating with the experience. Using imagery encourages the reader to think and communicate, and makes himmotivated to take a different view. The advantage and communicative power of the image is in the fact thatone can use it on a small area to display a large amount of information that would, if expressed in words, requiremuch more space. The images show data at several levels, from a wide view to the fine detail. To decode themeaning of the image does not require knowledge of writing and understanding of language as it applies to thetext, but requires knowledge of visual language and symbolism. The image can easily be detected, whiledecoding is less straightforward as it can lead to different interpretations, which is especially true for the imageswithout captions.

Therefore, the image is often accompanied by the text in the form of captions. The reasons for this are varied. It could be that the image is very ambiguous and vague so its contents can not be clearly defined. The word can more accurately and clearly explain the content of the image. Captions are essential if we wantto make the reader clearly understand the message. Sometimes it is enough to decode the image by a couple ofwords only, but even if few they are indispensable.

This intimate relationship between the image and the text was intensively explored by Barthes (1977)who argues that we rarely see the image without a caption, even if it is only for the subtitle that denotates verybasic information such as time and location. For Barthes the importance of the image is always associated withtext and depending on it as images on themselves are too polysemic and too open to different interpretations.In his opinion, we need words that determine the image of a definitive meaning. The text accompanying imagecan assist in narrowing the wide spectrum of possible interpretations. To explore the city's image, it is important to note the work of Kevin Lynch too. His urban analyticscontributed a methodological innovation that brings the senses a step closer in the understanding andenjoyment of a city. Lynch (1960) has pointed out that the view of the city, no matter how uneventful the cityitself might be, represents a special pleasure. The dynamic parts of the city, especially its users, are just asimportant as are the built structures of the city. Lynch also believed in the ability and the power of the users ofurban space to participate in shaping their living environments. He believed that perceptual studies can supportand enrich the design of urban space.

3 REVEALING SHARED VALUES OF LOCAL RESIDENTS THROUGH PHOTOGRAPHY AND ADJOINING TEXT

To go beyond planning practices in the urban territories, the Human Cities partner cities arespecifically enhancing unplanned activities within a frame of 13 shared values that have been identified by theproject consortium as relevant. Table 1 list them and indicates the definitions of these s.c. Human Cities SharedValues (HCSV) as they were revealed through the review of more than 170 civil initiatives reclaiming publicspaces across Europe (see the Human Cities web archive for more information: http://humancities.eu/casestudies/).

Shared Value	Description
Empathy	The ability to understand and share the feelings of others, despite different backgrounds and life experiences. Empathy creates a bond between individuals that ends up becoming part of their shared identity.
Wellbeing	A state of feeling healthy and happy. It is a contribution to society through knowledge, culture, design, music, ecology, healthy food or the renovation of public spaces. The main goal of wellbeing is to improve living conditions so that people can achieve better physical and mental health.
Sustainability	Sustainability is about meeting the needs of today's population without compromising those of future generations. It includes environmental, social and economic aspects.
Intimacy	The possibility of feeling a sense of closeness with people, objects or places.
Conviviality	Live together, share ideas, activities, discussions… Create a common spirit, a sense of belonging, around which people can gather and find joy.
Mobility	The capacity to make citizens leave their private spaces and join the public one.
Accessibility	Being open to everyone and easily reachable. It has both geographic and social meaning.
Imagination	Mentally creating images, ideas, concepts, and the like. Imagination is the main provider of solutions to our daily problems, and of dreams for the society to come.
Leisure	Free time, away from the demands of work or duty, when one can rest, take ease, and enjoy hobbies or sports.
Aesthetics	A visual attribute aiming at beauty, creativity and innovation, which provides an identity to a place.
Sensoriality	The mobilisation of a person's senses, whether hearing, seeing, tasting, smelling or touching.
Solidarity	Solidarity is a unity of people sharing the same interests in order to help each other.
Respect	Respect is showing due regard to people's lives, opinions, wishes and rights. It implies there are no barriers or stereotypes that come between us.

Table 1 - Human Cities Shared Values

The relevancy and interpretations of these values from the side of the inhabitants were investigatedthrough different activities and tools. One of them is newly developed tool called Photostory of ourneighbourhood. In a broader sense this is a photo contest in a form of a participatory on-line album of photosand their captions which offers an insight into today's state of the art of living environments as seen andinterpreted by the inhabitants themselves. The album is created by residents and visitors of urbanneighbourhoods themselves and aims to reveal the neighbourhoods and their life through the eyes of all of uswho live or occasionally spend time there. The tool has three main missions:

1. it invites residents to start observing and thinking of their local environments, their assets and problems, and thus become more conscious of the characteristics of the living space they inhabit
2. it reveals peoples' perceptions and interpretations of living environments to urban planners who often lack this layer of information and thus do not include it in regeneration strategies
3. in a long term, it aims to evoke inhabitants' readiness to take an active role in one or another form in participatory urban regeneration processes which take place in their living environments.

It is largely based on the public contribution of combined graphical materials and their captions. Anyregistered visitor to the web page can submit up to 10 photos with captions. After uploading the image and itscaption to the web portal the author must also link it to the Human Cities shared values that seem appropriateto the image and its caption, as well as classify it into one of the pre-defined categories.

The categories were set up by the project team to remind the residents of some important aspects ofcommon life in urban environments. They were described in a form of lead questions to awake one's thinkingof the important aspects of life in an urban neighbourhood as shown in Figure 1.

Most pleasant place in my neighbourhood
We usually spend a major part of our time in our neighbourhood, therefore its arrangements importantly influence the quality of our life. Which are the spaces in the neighbourhood that I like, I find interesting and like to spend time in? What makes them pleasant? Activities and people that spend time there, street furniture, presence of natural elements, maybe the light and colours or details on surrounding buildings? Try to show the places of your neighbourhood that you find pleasant, and explain what makes them attractive, through the photo and its subtitle.
Professions in my neighbourhood
Good neighbourhoods are not merely sleeping spaces, but places where different activities and programs take place which cater the inhabitants of the neighbourhood and the city. The baker at the end of the street, the shop-seller in a local shop, the driver of a bus stopping in the neighbourhood, the local greens care-taker etc. are only few more visible professions which importantly contribute to the quality of life in a neighbourhood.
At the same time, there are many other professions which are more hidden to our eyes – people with different skills, abilities and knowledge. Present their activities through a photo and its subtitle.
My neighbour
Fast rhythm of life and new ways of communication supported by new communication technologies are changing and often weaken the contacts between people living in the same space. With the help of a photography and its subtitle catch moments showing that social beings inhabit neighbourhoods that despite changed ways of life still gather, support and help each other. Street play, chatting on a bench in a local park or ringing neighbour's door when running out of flour when baking biscuits are examples of activities that join people in a neighbourhood. Photos with subtitles in this category shall show that in vivid neighbourhoods

reside people, who make neighbours and not complete strangers to each other.
Borders of my neighbourhood
Until where reaches my neighbourhood? What is its border and what defines it? Is it physically, functionally or symbolically defined? Borders may sometimes be clear and exact, sometimes blurred and fluid. Getting to know the borders is welcome for someone to be able to overreach them. Or strengthen the distinctive identity of space within. Present the borders of your neighbourhood with a help of photography and its subtitle.
Shared values in my neighbourhood
Which are the shared values among inhabitants of my neighbourhood? Which ideals unite us as a community? How are they reflected in space? And can they be a basis for common action of inhabitants in the endeavours to improve the living conditions in a neighbourhood? The values are an immaterial category, nevertheless often reflected in the physical, real environment. In this category, we are collecting the photos which will show the state of the art of the neighbourhoods reflecting the values of their inhabitants.

Table 2: Five categories of Photostory of our neighbourhood.

Photostory is »written« by the residents themselves and thus reveals their own notions of their livingenvironments, as well as their personal values in relation to these environments. This allows an insight into thevalues that are shared among local residents. These shared values can become an important step stone inpreparing shared visions of urban regeneration and future development of local environments which would beadopted by residents and thus more likely implemented with their active participation and contribution.

The next chapter reports the results of the first launch of the Photostory of our neighbourhood in2016, it mainly focuses on the shared values that were exposed during the contest. It explains how this kind ofstorytelling can be used in rising active citizenship in urban regeneration processes.

4 THE RESULTS OF FIRST LAUNCH OF PHOTOSTORY

The Photostory of our neighbourhood was launched in autumn 2016 and promoted via newschannels of UIRS and affiliated partners, Museum of architecture and design (MAO) and local civil initiativeSkupaj na ploščad! among others. It was a parallel activity to an exhibition held at MAO which presented thelegacy of neighbourhoods built in socialist times. This exhibition represented a good momentum andopportunity to encourage the inhabitants to rethink the questions of planning, maintenance and quality of livingin urban neighbourhoods.

The activity was organised as a competition. The main prize was the exhibition of the winning photosand their captions at the travelling Human Cities exhibition as well as print in a form of a postcard. To selectthe winners, the international jury was set up, which selected 5 winning photos in each category, so 25altogether.

There were 172 entries received to the call (see some examples in Figures 1 -5). As 10 of them weresubmitted without all relevant information (caption or attached shared values), 162 entries were taken intoaccount and analysed.

The analyses were approached from two different angels:

1. The most/least often indicated shared values no matter its position on the first, second or third place
2. The most/least often indicated shared values within the range (within the values that were named on the first place, second place etc.)

These analyses were done for all the materials that were submitted to the call. To compare theparticipants' and jury's point of view, the same analyses were then done once more for the 25 winning imagesand their captions.

The most often mentioned value (taking into account any ranking – first, second or third place) waswellbeing (60x) followed by leisure (48x) and then aesthetics (44x), conviviality (43x) and imagination (42x).The ranking of other categories was as follows: empathy (36x), intimacy (33x), sensoriality (33x), sustainability(32x), respect (30x), accessibility (25x), mobility (20x) and solidarity (10x).

When we look at the number of recalls within each of the five competition categories, the results are a bit different.

In the category Most pleasant place in my neighbourhood wellbeing (27x) and leisure (23x) were indicated most often, followed by aesthetics and sustainability (23x). The least often indicated values were mobility (1x), solidarity (2x) and accessibility (4x). In the category Professions in my neighbourhood, the mostoften indicated shared values were sustainability (9x), conviviality (8x) and respect (8x), while intimacy wasindicated most rarely (2x). In the category My neighbour none of the shared values is standing out, they haveall been indicated more or less for the same number of times. Solidarity was the only shared value that did notget any vote. In the category Borders of my neighbourhood two most often indicated shared values wereaesthetics (18x) and sensoriality (17x). Solidarity was again the least often mentioned value (1x). While in thecategory Shared values leisure (15x) and wellbeing (12x) were indicated most often, and the least often aesthetics(1x), sensoriality (2x) and solidarity (4x).

When taking into account the importance of each value to the participant (first, second or third placeon the list of three values that describe the submitted photo best), it gets clear that in all categories well-beingis the strongest one (53x), followed by empathy (35x) and sustainability (25x). Four shared values have neverbeen indicated as most important ones (never named at the first place): leisure, respect, sensoriality andsolidarity). The values most often named at the second place are conviviality (27x), aesthetics (18x) andimagination (17x). While at the third-place leisure (36x), respect (30x) and sensoriality (26x).

To make a comparison we did the same analyses for the 25 winning photos chosen by a jury. Thestrongest value (taking into account any ranking – first, second or third place) was conviviality (13x), followedby leisure (9x), while solidarity ended up last (1x).

Once more, when we look at the number of recalls within each of the five competition categories, the results are a bit different.

In the category Most pleasant place in my neighbourhood most often accessibility, intimacy,conviviality and leisure were indicated (all of them 3x). In the category Professions in my neighbourhood, themost often indicated shared values were wellbeing, conviviality and respect (all of them 3x). In the categoryMy neighbour mobility is stepping out (6x). In the category Borders of my neighbourhood the most oftenindicated shared values were wellbeing (3x), followed by intimacy, sustainability, accesibility and imagination(2x). While in the category Shared values conviviality was most often (4x).

When taking into account the importance of each value to the participant (first, second or third place on the list of three values that describe the submitted photo best), the jury's results differ from the participants'.

In all categories wellbeing is the strongest one (9x), followed by sustainability and conviviality (5x). The value most often named at the second place is conviviality (8x), while at the third-place leisure (7x). These two values (most often named at the second and third place) coincide with the original indications from the participants.

Figure 1 – Photo submitted to category The nicest place of my neighbourhood by Urška Podgrajšek: In a small corner at the edge of the neighbourhood there is a secret place, where the whole communitygathers, from mothers with babies to competitive youths, and grandmothers who observe their growinggrandchildren with an unseen pride. (attached shared values: conviviality, imagination, leisure)

Figure 2 - Photo submitted to category Professions in my neighbourhood by Lea Piškur: A small centre for the elderly was opened in our neighbourhood not so long ago, meant for socializing, exercise and other activities. The lady in the photo has just been sweeping autumn leaves in front of the entrance. (attached shared values: wellbeing, leisure, respect)

Figure 3 - Photo submitted to category My neighbour by Maruša Račič: Balcony tales, 2015 (attached shared values: conviviality, imagination, aesthetics)

Figure 4 – Photo submitted to category Borders of my neighbourhood by Tisa Neža Herlec: The border of my city is the horizon, when I exceed this - the sky becomes the limit. (attached shared values: wellbeing, accessibility, imagination)

Figure 5 - Photo submitted to category Shared values of my neighbourhood by Tisa Neža Herlec: With my childhood friend, we are but shadows, just memories in the neighbourhood where we were growing up. We return sometimes and recall our memories. (attached shared values: conviviality, imagination, leisure)

5. PHOTOSTORY AS A TOOL TO ENCOURAGE PARTICIPATION IN URBAN REGENERATION

The urban renewal process has to be undertaken in a participatory way nowadays, therefor theregeneration strategies shall be built around the values shared by local inhabitants and different stakeholders,such as NGOs, and local businesses. There is a need to reflect on the distinctive social and cultural valuesexpressed in public space, resulting in the finding that place attachments and idenfication with places aredifferently experienced and encountered by individuals. The main obstacle is being the neoliberal drift that,by spreading individual and strictly private interests, is excluding instances of more vulnerable anddisadvantages groups.

The good respond to the call Photostory of our neighbourhood within Human Cities experimentationindicates that residents are ready to contribute to the urban regeneration processes in new, previously not seenways. The approach following the new social media repertoire of sharing graphic materials and short textualdescriptions seems an approach that residents can embrace. Urban planning professions shall build on suchgood examples and develop new well-structured tools to encourage truly participatory involvement of localresidents and their notions in regeneration processes. Such tools must not stay at the level of commonly spreadsocial media practices, but shall be adjusted to the numerous and specific demands in the complex process ofurban regeneration within planning system. At the same time they have to stay simple and straightforward touse in order not to discourage the potential users.

One question that stays open is the integration of data gathered in these new innovative ways into theexistent planning procedures. As the cities are getting more dynamic, the traditional master plans are gettingless appropriate to manage the (re)urbanisation processes and must be upgraded with new tools. However evenif some new tools and approaches are already existing, their integration in the official planning procedures islagging behind and this issue must be addressed more thoroughly in the future.

The Human Cities experiment with a Photostory also shows how subjective the spatial perception isand how it changes through times and reflects the spirit of the current social reality. The 2016 experimentrevealed that values such as well-being, leisure, aesthetics and conviviality are currently the ones that are moststrongly shared among local residents, while some others, such as e. g. solidarity, that were much stressed inthe previous socio-economic framework of socialism, are much lower on the ranking lists. These results remindthe professionals that they shall not assume they can guess residents' notions about their living environmentsin any sense.

The Photostory also opened a number of completely new perspectives of positive aspects of living insuburban neighbourhoods even if they are rather aged up. These new perspectives of the neighbourhoods cannot only help strengthening their identity and rise self-esteem of the residents, but also represent newopportunities to develop new niches in the local economy, e. g. in tourist sector by spreading the tourists' flowsfrom central attractions to more hidden ones that would not be recognised without the expertise of localresidents. This approach represents a new window of opportunities for less attractive areas in the cities that areusually loosing in the global race for getting attention of potential visitors and investors.

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ID 1698 | VALUE ADDED AS A TOOL IN PARTICIPATORY APPROACH TO URBAN REHABILITATION PROJECTS. A CASE STUDY IN YEREVAN

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1 INTRODUCTION

1.1 BACKGROUND

In the conditions of ever growing urbanization and continuous societal transformations as well as the increasing prominence of the sustainability agenda the issue of urban quality is subject to prior consideration worldwide (Brenner and Schmid, 2015). As acknowledged by Healey (1997), it is difficult to avoid the impact of economic restructuring on the landscape and social and economic life of many cities which were used to grow within certain economic structure and also supported by the state. In many post-socialist countries the issue is even more pressing due to existing urban decay as a result of major institutional transformations, economic crisis and political discrepancies. In particular, the collapse of the socialist system in these countries was followed by a number of economic, social and legal reforms, due to which the land and property ownership in most of the countries has been transferred from public to private sector. However, in most cases the state transferred to private hands not only the ownership to the property but also the problems related to the quality of that property as well as the responsibility for its further maintenance. The issue has a specific importance with regard to multi-unit housing since the latter occupies the largest share of urban fabric in many countries worldwide, and in majority of post-socialist countries in particular.

If considering that the most fundamental idea of sustainable development determined in the World Commission on Environment and Development (WCED) Report is “development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987), yet, building deterioration will inevitably result in higher economic loss, more environmental waste and poorer social living conditions, in other words in decrease of urban quality.

Alterman (2010) claims that the issue regarding sustainable legal-financial mechanisms to ensure the long-term maintenance of condominium buildings has received very limited attention so far. She points out several factors that make multi-owned tower buildings particularly vulnerable to deterioration and decreased property values, e.g. that they are more complex and therefore create higher maintenance costs and less possibilities of structural modifications, which causes a greater risk for a diminished relative value and faster deterioration, that large investments are needed for large scale repair, upgrading and renovation, and that because the costs are not consistent over time makes it more difficult to find a mechanism for financing the long-term maintenance.

In many former socialist countries uncertainty in private and common ownership parts within residential urban space as well as imperfect management schemes resulted in gradual depreciation of common parts of apartment buildings and surrounding land, which has led to decline of urban quality.

Armenia presents certain specificity with this regard. Major transformations in the country took place mainly from the late 1980s and beginning of 1990s associated with the collapse of the soviet planned system and commence of movement towards capitalism.

This recent history of Armenia has its implication when considering the role that property management features might have on countering urban decline. In particular, due to immature institutional framework as well as lack of property management schemes and limited public resources, the first decade after the collapse of the soviet system in the country can be characterized by an underdeveloped real estate market and a rapid deterioration of the urban neighbourhoods, including housing and other property.

As a result of privatization almost all real estate property belonging to the state both in urban and rural areas was transferred into private ownership of the users/dwellers[1]. With regard to apartment buildings the residents of apartments became owners thereof; however, the right to common property within the apartment buildings as well as to the land attached to the buildings remained uncontrolled due to lack of supportive legislation. The uncertainty between public-private ownership rights had its negative impact on most of the urban neighbourhoods throughout the territory of Armenia, and especially in Yerevan. In many cases the common use properties in the urban neighbourhoods, including within apartment buildings have been left to their own fate and were subject to volunteer intervention by the residents. Also, due to imperfect regulation of management and maintenance of apartment buildings and lack of urban and property management in practice the buildings started to deteriorate rapidly thus lowering the quality of urban space.

Notwithstanding the appearance of neoliberal movement in urban development of Yerevan, as well as a number of state-supported projects on management and maintenance of apartment buildings, the quality of urban space has been suffering intensively and continuously up to now. Hence the declining quality of urban space in Yerevan can be represented in two main directions: 1) low quality and unplanned new developments mostly in the centre of the city paralleled with 2) lack of maintenance and management of existing housing and real property stock, inherited from the Soviet period.

The methodology that is proposed within the framework of on-going research project envisages the development of tools through using collaborative management schemes in order to enhance citizen (residents) participation and integration of private investments in urban renewal projects, in particular regarding residential and mixed-use urban spaces, thus minimizing the share of public funding. In this paper the authors will discuss one of such approaches, which is the condominium management, as well as the prerequisites for successful application of such approaches, namely the enhancement of value-added by the project to each participant.

In the conditions of scarce public resources the promotion of private property-based investment projects may become a sound solution in regenerating urban residential spaces and in overcoming urban decay. Such projects shall become successful if applying a collaborative approach through public-private partnership models where the enhancement of value added to the project shall serve as a main tool.

Thus the current paper will discuss the role of “value-added” and “participatory approach” in improving the quality of urban space and illustrate it through a case study analysis.

1.2 AIM AND METHOD

The aim of the current discussion is to disseminate the observations achieved while conducting research on the theme “Property-based urban management models and urban decay in post-socialist transitional societies”. For the purpose of discussion, the urban space is composed of private and public space within boundaries that correspond to a specific problem-area; the urban space is envisaged as mixed-use, though at this stage we have in mind mostly the residential use. The quality of urban space is explored through selected literature review with the aim of finding an adequate list of indicators for the purpose of the research (Annex 1). The participatory approach we intend to explore for the improvement of the quality of urban residential space is based on the idea of management of common property and so we resort to the discussion of the condominium management approach as a settled example of common property management. The land attached to apartment buildings is included in the common property to be managed since the former is taken as an indelible part of the latter. The pivot-concept for launching the participatory approach is the value-added to property by the urban renewal project for the defined urban space. A purposeful concept of value-added is therefore introduced, based on theoretical discussion and

[1] In fact, 96% of the republic’s housing stock was privatized by 2000 (HfH Armenia, 2010).

illustrated through a case-study based on an analytical approach. The data used for the calculations is provided by stakeholders acting in the urban development field in Armenia as well as collected through several surveys previously conducted in the field. The aim of the case study presentation is more illustrative at the current stage rather than comprehensive and is subject to further elaboration within the framework of the on-going research project.

2 THEORETICAL FRAMEWORK

2.1 QUALITY OF URBAN RESIDENTIAL SPACE

Historically, in British planning debate the discussion of the impacts of development has been closely linked to the question of betterment, or in other words to the improvement of urban quality (Healey et al. 1995).

If considering the quality of urban space with regard to urban design and architectural issues the definition of the concept is provided through more specific features within the framework of the Bristol Accord. Among these features are included: (1)"Sense of place – a place with a positive 'feeling' for people and local distinctiveness" (2) "Appropriate size, scale, density, design and layout, including mixed-use development, that complement the distinctive local character of the community" (3) "High quality, mixed-use, durable, flexible and adaptable buildings, using materials which minimise negative environmental impacts". The Commission for Architecture and Built Environment CABE (established in 1999 by the first mandate of Tony Blair's Labour Government) has provided a broad range of publications to clarify what is meant by a Well Designed and Built city or project. The assessment tool used by the CABE is the Design Review, based on the principle that "Good design is fit for purpose, sustainable, efficient, coherent, flexible, responsive to context, good-looking and a clear expression of the requirements of the brief". A valuable attempt has been made in UK to combine expert assessments with the opinions of stakeholders (end users, investors, developers, building managers, neighbourhood associations, etc.), which is the Design Quality Indicators (DQI) - "a method of evaluating the design and construction of new buildings and the refurbishment of existing buildings"(Borghi, 2010).

The concept of urban quality is differently explored by Insch and Florek (2008). The authors tried to illustrate the interrelation of the value, quality and expectations of residents with regard to place satisfaction. In their discussion on place satisfaction in the case of the city's residents they claim on a direct link between the quality of life and the quality of place or environment where people live (Insch and Florek, 2008). According to the authors, research in the field of human ecology and sociology more closely examines the interactions of humans and their environments and in the case of cities focuses on the neighbourhood as a place to live. In addition, they state that from the aspects of psychology and marketing measures the neighbourhood satisfaction contains objective neighbourhood characteristics, such as level of urbanism (city, urban, suburban, and rural), socio-economic status, income, population density etc., and subjective mental constructions of the neighbourhood, including such qualities as social environment (neighbours), noise, traffic, neighbourhood maintenance, safety and security, convenience for shopping, etc. Through referencing La Gory (1985) the authors mention that subjective assessments of the physical and social context of the neighbourhood significantly influence their satisfaction, whereas objective contextual variables, related to satisfaction, showed little causal impact (Insch and Florek, 2008).

Some indicators of the quality of urban space are considered as an important factor also for attracting future investments. According to Sarău (2015), in order to be a strong competitor in attracting investments, a place must demonstrate convincingly that their city residents enjoy a higher level of well-being and satisfaction than the competitive places.

According to Insch and Florek (2008) when considering the urban space as the city itself or a larger compound of the city, important factors taken into account include the welfare and satisfaction, employment, infrastructure, transport network, education and learning and development opportunities. Therefore, achieving a high level of satisfaction of residents should be an objective of places. Furthermore, they argue that the ultimate goal of the places is not financial success but the welfare and satisfaction of their residents. The authors prove their argument by referencing Guhathakurta and Stimson (2007, cited by Insch and Florek, 2008) as: "after the decline in quality of life crosses a threshold, growth may slow down or even become negative". This statement proves the very distinct relation of urbanism with the

economic growth of the country, thus proving the actuality of the selected research problem and the methods to approach it.

Song and Knaap (2007) offer a quantitative classification of neighbourhood type, through identifying relevant attributes of physical form and computing indicators of those attributes, such as street pattern, plot density, land-use mix, accessibility, transportation infrastructure and open spaces, based on parcel-level Geographic Information System (GIS) data. Factor analysis is then used to derive generalized dimensions of neighbourhood character based on the raw attribute data.

Quite a different approach to the quality of urban space is introduced by Cilliers et al. (2014), who argue again that the urban space is valuable due to people attached to it and that the old spaces which have story behind them and thus are characterized by their identity, can be much more valuable than the new developments. This idea supports the intention of the on-going research project to improve the urban space quality through redevelopment and through adding value to the urban space instead of complete demolition and rebuild.

2.2 CONDOMINIUM MANAGEMENT AS A PARTICIPATORY APPROACH IN IMPROVING URBAN SPACE QUALITY

The discussion of condominium-based management models shall be based on exploration of the concepts: ‘condominium’, ‘common ownership’ and ‘management of apartment buildings’.

Condominium (apartment ownership) can be considered as a form of three-dimensional (3D) property right. It includes the use of a three-dimensionally delimited part of a building. Condominium is a common and wide-spread form of 3D property utilization and exists all over the world in e.g. Australia, Canada and South America (van der Merwe 1994; Paulsson 2007). Discussing an example of Vancouver, Harris (2011) reflects on the capacity of condominium as a certain form of residential property ownership and its contribution to the transformation of the urban landscape. According to Lippert and Steckle (2016) the inner governance of condominiums profoundly matters for understanding urban governance and life but has so far been neglected in urban studies.

There are two main forms of condominium, namely the condominium ownership type, or the dualistic form, and the condominium user right type, or the monistic form (Paulsson 2007). In the condominium ownership type each apartment owner owns the certain private space he or she occupies, and the common parts of the building and surrounding land usually are owned jointly by all the owners of the building. This type can be found, for example, in most of the former Soviet countries, including Armenia, and was recently also introduced in Sweden (Paulsson 2007; Paulsson 2013). The condominium user right, on the other hand, is a type where the apartment occupants jointly own the entire building and surrounding land together, including private and the common parts, but the share of the property each owner has, gives the right to occupy a specific private space in the building. This type exists, for instance, in the Netherlands (Paulsson 2007).

There are also more indirect forms of condominium where a legal person stands between the resident and the property as the formal owner (Nordisk Ministerråd 1997). The legal person could be e.g. a co-operative, an association or a limited company, such as a tenant-ownership form in Sweden (Lilleholt et al. 2002) or a limited company system for apartment ownership (also called stock cooperative or share-block scheme) in Finland (Falkenbach et al. (eds), 2009).

Within the condominium scheme each private owner has got a share of the common property of the building and surrounding land and other facilities that the private owners own or control in common. This share can be based on e.g. equality, relative size or relative value of each private space, or a combination of such. The ownership fraction can determine the responsibility each owner has for the costs of management of the building and association, as well as for maintaining and repairing the common parts of the property (Grigoryan, Paulsson, 2017).

The land that exists below and around the apartment building is usually included in the common property. This land becomes common property if the building is not surrounded by municipal or state land. In those cases easements are granted for the owners to use the land for access to their building, such as roads or

pavements (Rabenhorst 2001). However, in former socialist countries this may cause difficulties. When buildings and surrounding land went from public to private ownership, how much land to include was fixed to the “footprint” of the building, i.e. the land under it, which creates difficulties for the apartment owners as to getting a right to use the surrounding land. Solutions that are applied are to include the land just under the building, or including the land to one meter around the building as well, although it might still be unclear to whom the land beyond this belongs. Another solution has been to let the municipality keep the ownership of the land and to grant long term user rights to the association, by which the owners will be responsible for maintaining the land (Rabenhorst 2001). In Armenia, for instance, this type of solution was applied to the existing (inherited from Soviet period) privatized housing stock, (RA Government Decree No 1855-N dated 30.11.2006). If more than one condominium building would like to use the land between the buildings, the owners in these buildings will jointly have to decide how to use and manage this land.

When studying condominium internationally, there are several factors that seem to have created problems and that can be considered as important for creating a successful and lasting system for apartment ownership (Paulsson 2007). Thus, a factor that seems to create problems is management, which in general is important when dealing with individuals sharing the same resources (Ostrom 1990). A structured and efficient organisation for management is crucial for the commons and the community of owners to function properly, as well as for financial institutions with an interest in the property. This becomes more difficult when a large number of co-owners are involved, where there is also a need for enforcement mechanisms to promote cooperation and efforts from the co-owners (Tracht 2000).

The above discussed condominium management practices provide viable schemes for management and maintenance of common interest properties, and although used for management of common ownership within apartment buildings, they can successfully serve as basis for management of urban spaces within the city neighbourhoods.

2.3 VALUE-ADDED IN URBAN RENEWAL PROJECT

Based on conceptualization of the value by CABE (2006) provided below in Table 1, it is obvious that the benefits of identifying a linkage between better urban design and enhanced economic value, as well as social and environmental value, are potentially significant. The research conducted by Carmona et al. (2002) provides analysis of key stakeholders in urban design and their detailed views on the importance of a good urban design for the value added.

Based on this research, the authors state that the positive results which might flow from being able to demonstrate the positive effects of well-designed spaces are potentially large (Carmona et al., 2002). They further claim that through illustration of the value added as a result of better urban design, or assessing its costs and benefits, is part of the effort to link design quality to the decision-making logic of private sector development interests. From the other side there is a need to develop an understanding of how the public sector can modify the institutional incentives and barriers and the regulatory context in which decisions about design are made (Carmona et al., 2002, p.146).

Type of value	What does it mean?	How it is measured?
Exchange value	The building as a commodity to be traded, whose commercial value is measured by the price that the market is willing to pay. For the owner, this is the book value, for the developer the return on capital and profitability. Also covers issues such as ease of letting and disposability.	Book value Return on capital Rental Yield
Use value	Contribution of a building to organisational outcomes: productivity, profitability, competitiveness and repeat business, and arises from a working environment that is safe in use, that promotes staff health, well-being and job satisfaction, that encourages flexible working, teamwork and communication, and enhances recruitment and retention while reducing absenteeism.	Measures associated with occupanc such as satisfaction, motivation, teamwork. Measures of productivity and profitability, such as healthcare recovery rates, retail footfall, educational exam results, occupant satisfaction.
Image value	Contribution of the development to corporate identity, prestige, vision and reputation, demonstrating commitment to design excellence or to innovation, to openness, or as part of a brand image.	Public relations opportunities Brand awareness and prestige The recognition and 'wow' factors.
Social value	Developments that make connections between people, creating or enhancing opportunities for positive social interaction, reinforcing social identity and civic pride, encouraging social inclusion and contributing towards to improved social health, prosperity, morale, goodwill, neighbourly behaviour, safety and security, while reducing vandalism and crime.	Place making Sense of community, civic pride and neighbourly behaviour Reduced crime and vandalism.
Environmental value	The added value arising from a concern for intergenerational equity, the protection of biodiversity and the precautionary principle in relation to consumption of finite resources and climate change. The principles include adaptability and/or flexibility, robustness and low maintenance, and the application of a whole life cost approach. The immediate benefits are to local health and pollution.	Environmental impact Whole-life value Ecological footprint.
Cultural value	Culture makes us what we are. This is a measure of a development's contribution to the rich tapestry of a town or city, how it relates to its location and context, and also to broader patterns of historical development and a sense of place. Cultural value may include consideration of highly intangible issues like symbolism, inspiration and aesthetics.	Critical opinions and reviews Professional press coverage Lay press coverage.

Table 1. Types of property value (Source: Value handbook, CABE, 2006)

According to the case studies made by the authors in UK, it is obvious, that notwithstanding various barriers (certain commercial pressures, decisions that are often made by the bodies far removed from their impact on the ground), through demonstrating the positive, even if potential, return from the better urban design, the positive change in private investment as well as public institutional decisions shall emerge. In addition, a demonstration that better urban design adds value might provide a powerful incentive to overcome many of the barriers that together hold back a general improvement in urban quality (Carmona et al., 2002). However, it might be taken into account that at the same time other institutional, investment, social and cultural barriers still remain challenging and of course not all the stakeholders will change their approach and persuasions during rather long period.

Based on various motivations and perceptions of different stakeholders of urban design projects, Carmona et al. (2002) divided them into two main groups: with public interests and with private interests, provided that the community interests may relate to both groups (Table 2.).

According to a number of researchers, in this process the key concern is not with an absolute measurement of value but with the processes through which stakeholders change their perception of the value.

Based on six different case studies on requalification of urban spaces conducted in UK the authors claim that “indeed from the perspective of key stakeholders better urban design adds value and does so in economic, social and environmental terms. In addition, the results indicated that almost all stakeholders see for themselves the value added by the project. In particular, in case of everyday users, the latter benefit from the economic advantages of successful regeneration, including access to a better-quality environment and an enhanced range of amenities and facilities.

Stakeholders with private interests	Stakeholders with public interests
Landowners	Planning authorities
Funders (short-term)	Highways authorities
Developers	Fire and emergency services, police authori
Design professionals	Building control
Investors (long-term)	
Management agents	
Occupiers	
Local communities	

Table 2. Main stakeholders of urban design project (Source: Carmona et al., 2002)

Based on the conducted analysis it can be also mentioned that it is not necessary to make huge investments in order to add value to the project. Instead, according to Carmona et al. (2002, p. 165) “…better urban design can then be used as an important sales pitch to differentiate products with modest, but fundamental, improvements in urban design, such as better external linkages, more ‘life-giving’ uses, and configuration of buildings to face public spaces”.

ILLUSTRATION OF THE VALUE ADDED IN THE URBAN DEVELOPMENT PROJECTS

Following the research focus we intend to suggest a model which, based on the power of the private ownership and collaborative management will improve the quality of urban space by adding value in both social and economic context. The social, cultural as well as environmental contexts of value and value added in urban development project have been reflected previously. Under this section we are going to highlight that the involvement of private owners in an urban area upgrading has to go through evidencing that a significant part of the net benefits of the intervention will be allocated to them. Thus the composition of enhanced economic value of the urban intervention project is going to be revealed hereunder. Based on valuation theorists the property shall have development potential once an element of latent value can be released by the expenditure of capital upon it (Ratcliffe et al. 2004). Generally this may arise through different types of intervention, including development of a plain site according to approved urban plan, or redevelopment through demolition and replacement of existing buildings or even through upgrading the quality of existing buildings and/or urban space. In other words the financially balanced nature of urban planning projects shall be explored through value added by the intervention. The calculation of the ex-ante value added is considered as an important instrument for various property-based approaches in urban management, namely the public-private partnerships (PPP), land readjustment schemes (like the “perequação” tool in Portugal) and even condominium-based management models. In this context the value added can be interpreted as planning gains, which principally differ from planning obligations, since the latter are non-negotiable compulsory contributions of real estate developer to the public domain required by the profile of the specific development business. Whereas the planning gains are the outcome of a voluntary negotiation between the public and private parties, through which a share of the developer’s normal business margin is given up in favor of the local community or private property owners.

It is quite important for the urban development project to potentially contain this share of added value, since it has to be the part of the global value derived from the urban development project that is not assigned to costs and to the minimum business margin the developer requires. This share or the so called “shareable value” is indeed the value added of the urban project. We must however acknowledge that the minimum business margin the developer might be willing to accept may not correspond to the normal business margin regarding his other previous real estate developments. This is the core concern for revision of the urban intervention project and negotiating on higher expected returns.

Thus the enhanced economic value of the urban project, including the “shareable value” will be possible to calculate through urban development valuation, whereas for the mentioned purpose the residual method

shall be applied (Ratcliffe et al. 2004). The conventional approach to a residual valuation is based upon the following simple equation:

Gross development value – (costs + profit) = residual value

The assumption is therefore that the value added is the difference between the expected value (i.e., some future value expectation but without knowing if, when and how that expectation would be fulfilled) and the "value of the set of properties included in the urban development project once the urban design is defined" (i.e., in their present condition but with the development potential settled). The expected value has to be discounted for time period and uncertainty (considering the discount rate). Thus, taking into consideration the above equation the value added in the urban intervention project will be determined as follows:

EV – TC – FC – BM – RV, whereas
EV - value of the properties generated by the settled urban design
TC - total costs required to achieve the urban layout that corresponds to the new properties
FC - financial costs
BM - developer's business margin
RV- value of the set of initial properties

These subtractions take place within the methodological framework that allows for the determination of the Net Present Value (NPV) and Internal Rate of Return (IRR).

The above presented theoretical approach will be applied to a previously selected residential urban space in one of the neighborhoods of Yerevan, Armenia and will be illustrated in the following section.

3 CASE STUDY OBJECT IN YEREVAN

A mixed-use urban space within an urban neighbourhood in Yerevan (Figure 1) shall serve as a sample for illustration of the improved quality of urban space and enhancement of value-added for the residents and project stakeholders.

Figure 1. Illustration of present plan of the urban space according to property types and ownership types (the scheme is developed by the authors based on data provided in www.e-cadastre.am)

Total area of case study object is 4.77 ha. Total area of private property (lots) in the case study object is 2.61 ha. The area can be described as a residential urban space in the big centre of Yerevan which includes:

- Single family houses (0.5 ha)
- Apartment blocks inherited from Soviet period (1.4 ha)
- Newly built apartment building of Post-Soviet period (0.1 ha)
- Construction site conserved for indefinite period (0.03 ha)
- Public road in a poor condition (0.72 ha)

The quality of urban space is low (based on indicators provided in the Annex 1), however the market value of the properties in the area is rather high (due to land value), thus potentially, the property owners of the area can be interested in improvement of urban space quality in the area. In order to substantiate the

potential increase in property value for the case study urban space, a newly developed area in close proximity to the case study object (however located in the land zone with less market value) occupied with mixed-use (residential-commercial) buildings has been analysed and compared with the case study object. Based on this analysis the main comparative qualities of the newly developed area include:

- Considerable share of public and green space within urban space (about 27%),
- Developed infrastructure, including roads,
- New and fresh look of the buildings,
- Existence of underground parking zone
- Well-organized management and maintenance of the urban space.

Considering these qualities the average market value of residential space in both areas vary as follows:

Case study object[1]

- EUR 600/sq m (apartments in the buildings from Soviet period)
- EUR 800/sq m (apartments in the buildings from Post-Soviet period)

Comparative object[2]

- EUR 1150/sq m (apartments in the newly built multi-unit buildings)

Based on the comparative analysis the newly proposed urban plan aimed to improvement of the quality of urban space and increase of the value of properties for the case study object is illustrated below (Figure 2.):

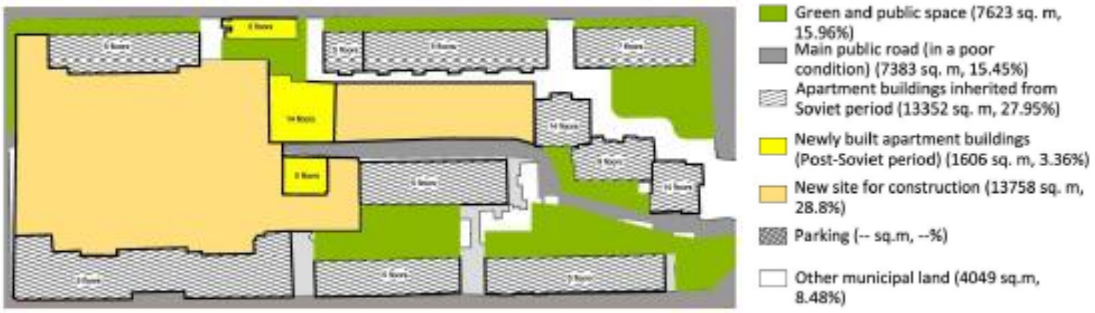

Figure 2. Illustration of proposed plan of the urban space according to property types
(the scheme is developed by the authors based on data provided in www.e-cadastre.am)

According to this plan and to data analysis, the value of existing properties will increase even in the case where only public space improvements and parking zone are implemented in the studied urban space. Thus, based on the calculations made according to the above stated formula of value-added, the value of the properties in the case study object will increase as follows:

- EUR 812/sq m for the apartments in the buildings from Soviet period
- EUR 1150/sq m (apartments in the buildings from Post-Soviet period)

Therefore, considering the total new value of existing properties (EUR 104,419,459) and by subtracting the discounted (8%) costs of property to be purchased for implementing new development (EUR 13,898,318) and the costs for land development[3] (10,733,449) as well as the developer's margin, the value added by proposed urban renewal project is estimated about EUR 2,608,092.

However, it is worth mentioning that achievement of proposed quality improvement requires responsive and collaborative approach of residents of this urban space. Furthermore, in order to maintain the quality achieved by the proposed urban plan the case study urban space has to be duly managed and maintained which supposes additional constant expenses by residents. Thus sharing costs through condominium

[1] Source: www.akcern.am, www.cadastre.am
[2] Source: official inquiry by the authors from "ERAZ" residential complex
[3] Official data provided by "Avetisyan Construction" developer company, ww.avetisyanconstruction.am

management schemes could probably provide a quite effective solution for the raised issues thereby approaching the model of closed condominiums or gated communities.

4 CONCLUSION

While the above reflection on certain concepts was conducted within a wider framework, including various social, economic, environmental and cultural aspects, however it obviously proves the importance and requirement of consideration of the value added in each urban development project. Also, it may be definitely stated that, for successful improvement of urban space quality, the collaborative approach is required particularly with integration of residents and everyday users of the urban space.

The conducted survey proved that the concept of value added in each specific urban development project has an important role for all the project stakeholders, as well as for successful urban development at a larger scale. This statement facilitates much to use the value-added as a tool for implementation of urban regeneration projects through integration of and cooperation with various stakeholders.

Hence, further research proposed in the field of urban management with the focus on improvement of urban quality is aimed to enhance the role of value-added in urban regeneration projects mostly in residential areas. The allocation of value-added among property owners is proposed to be introduced through a land/property readjustment ("perequação" in Portugal) algorithm, which is assumed to be of use if it is adapted to the specificities of private property ownership, particularly through co-operation schemes once value enhancing features are evidenced to the property owners.

ANNEX 1

URBAN SPACE QUALITY INDICATORS

1. Monotype and non-degraded façade of the building, including:
    - Construction and exterior
    - Condition of balconies
    - Condition of windows
    - Condition of general entrance(s) of the building
2. Apartment buildings with proper roof and rainwater removal facilities
3. Public space provided for general socializing of residents, including playground for children, green space surrounding the building, corresponding to urban planning norms
4. Proper condition of internal road providing access to the main street or highway
5. Minimal distance from the nearest public transportation station
6. Proper lightening of the urban space
7. Proper and timely garbage removal
8. There is a territory adjacent to the building which corresponds to the urban planning norms for proper functioning of the building and its maintenance
9. Car parking established in proximity to residential buildings and corresponding to urban planning norms
10. Proper isolation of the half-built construction existing in the neighbourhood and the term of construction conservation

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ID 1709 | INSURGENT CITIZENSHIP AND ITS UNFOLDINGS IN THE OCUPE O COCÓ INITIATIVE

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1 INSURGENT CITIZENSHIP

The understanding of citizenship runs through the centuries and changes as civilizationschange. Greeks and Romans of antiquity already questioned the relationship between State andNation (Miraftab, 2012), shaping the bases for a structuring of what is now understood as SocialContract. This concept, created at the end of the seventeenth century, emerged in the period oftransition from the medieval regime to the modern democratic regime, from the replacement ofsocial control exercised by feudal kings and lords, by a society in which its citizens abdicate theirindividual freedoms in exchange for representation and equal treatment before the law. These newrelations of the individual with society presuppose that the State grants and guarantees rights fromthe consensus of the Nation that makes it legitimate, in contrast, affiliated citizens agree with a set ofduties and obligations (Miraftab, 2012).

The modern concept of citizenship encompasses the rights, expectations, andresponsibilities associated with belonging to a political community framed by the Nation-State(Miraftab, 2012). The State is not able to guarantee the minimum rights to citizens in an unequal way,therefore, a differentiated treatment between citizens is perceived. The pressure on the part of thepopulation that is more dependent on services and public policies provokes questions and increasethe perception about the condition of citizens living on the margins of society, who are deprived of fundamental rights, such as housing, transport, education and health. Thisimbalance in the representation of different social groups makes evident the crisis in the modernmodel of citizenship.

To reinforce this point of view, Castells (2013) emphasizes that society is formed by powerrelations and those who have it build institutions according to their interests. It is only throughcounterpower that the excluded actors challenge the norm installed in the institutions of society withthe intention of questioning their values. This claim contributes to the construction of a new modelof citizenship, which Holston (2008) named as an insurgent citizenship based on the citizen as anactive agent that creates new ways of achieving their rights that go against the practices ofdifferentiated citizenship. Holston (2008) uses the term "differentiated" to describe Braziliancitizenship, in which citizens, even though they identify themselves as belonging to the same nationare not able to materialize their rights given current power relations. A process of manipulating thelegal system is clearly expresses in the phrase “for friends, everything; for enemies, the law”.

In this context, the potential of urban planning as a tool of spatial planning of the Statethat directly affects the daily life of society is highlighted. Planning can be and it is considered amediator between the needs and demands of the various agents in contemporary cities. Souza (2013)highlights several typologies of traditional urban planning that have some characteristics in common,such as technocracy, the distance from reality and popular pseudo-participation. Thus, we understandthat social participation strategies are innovative instruments in the face of the traditional planningmethodology, insofar as it is admitted that the State serves diverse interests and elaborates a specificspace for collective interests. However, these environments are rigid and limit popular participationto one-on-one consultations, making the previously established Social Contract fragile since manycitizens do not have their rights guaranteed. Recognizing the limits of participation in thedecision-making, it is necessary direct actions by cititzens. Recognizing this limitation, Miraftab (2012) introduces the concepts of invited spaces and invented spaces. In this way the invented spaces become an unforeseen mechanism to reinforce the State’s responsibility to comply with the Social Contract. The inefficiency of the invited spaces, represented by participatory planning, demonstratesthat a parcel of society is not considered in decision-making process of city. It promotes theemergence of a new model of urban planning, which Miraftab (2012) named as urban insurgentplanning. It highlights the following characteristics:

- Direct action undertaken by a marginalized group as opposed to an established order that does not favor collectivity;
- Creation of an autonomous and non-institutional space for discussion;
- Claims of specific interests and values that were not met by the state and by the hegemonic powers.

This new extent of urban planning has emerged in several countries in recent years through manifestations, occupations of public spaces and other forms of expressionof the discontent of the population with the current order. Among the main examples are theoccupation of Tahir Square in Tunisia and Occupy Wall Street in New York, the first being thepioneer and the trigger for the other demonstrations, and the second being the most representative interms of questioning the neoliberal regime adopted by one of the greatest economic powers in theworld. Understanding the influence of this worldwide movement, our objective here is to analyze aninsurgent action that occurred in the Brazilian context from the point of view of its maincharacteristics, identifying the actors involved and the main current norm challenged, and its impacton institutions that have the power of decision. To this end, the Ocupe o Cocó movement was chosen because it was a manifestation that occurred simultaneously to the “Jornadas de Junho” in2013 in Brazil. It constituted a camping on the place where some trees were cut within a protectedarea to give place to a road overpass. The camping was a measure of protection and visibility of theimpact of the road work. The participants of this direct action of protest aimed at defending thecommunity by demanding the protection of diffuse rights to environment and urban mobility.Initially a theoretical discussion about the construction of insurgent citizenship in Brazilwill be made, using two movements as landmarks: (1) urban social movements of there-democratization period that succeed in the institutionalization of their demands through theapproval of the federal bill name Estatuto da Cidade em 2001; and (2) the “Passe Livre” movement,whose influence exploded in June 2013 in a series of street protest in all major Brazilian cities thatbecame known as “Jornadas de Junho”. Next, we turn to the scale of the city of Fortaleza and thehistory that involves the Movimento Ocupe o Cocó in Fortaleza and its unfolding years after the endof the occupation is presented. Finally, an analysis is made based on the theoretical concepts initiallypresented in the attempt to perceive the reach of the movement and its impact on the norms andpublic institutions in force.

1.1 INSURGENT CITIZENSHIP IN BRAZIL

The construction of Brazilian society is defined by several waves of insurgenciesinterrupted during periods of suspension of the democratic regime. According to Sader (1988 apudBarroso, 2013) during the period of the military dictatorship, between 1964 and 1985, the housingsocial movements were gradually extinguished and those left over were subordinated to thegovernment under a clientelist and patrimonialist relationship.

In the mid-1970s, some movements supported by the Catholic Church began to reorganizethroughout Brazil, Da Paz (1993 apud Barroso, 2013) highlighted the União dos Movimentos deMoradia de São Paulo e do Interior (Union of Housing Movements of São Paulo and Interior,UMM-SP) as one of the country's main social movements in this period. The UMM-SP defended the struggle for housing and for serviced land and worked through landoccupations and public buildings, manifestations, marches and negotiations with the government. Inaddition, the internal organization of the UMM-SP was characterized by merging traditionalinstruments of mobilization of the population with instruments of direct participation, besides havingfixed and renewable leaderships recognized in plenary sessions and enjoying regional autonomyguided by general principles.

In 1987 and 1988, the number of land occupations for housing purposes increasedconsiderably, and at that time the Movimento Nacional de Reforma Urbana (National Urban ReformMovement, MNRU) was founded with the aim of bringing together movements and entities todiscuss and include the issue of elaboration of the new Federal Constitution. Based on thisarticulation, the chapter on Urban Policy inserted in the Constitution of 1988 was elaborated and,later, the Estatuto da Cidade (Statute of the City) was enacted (Barroso, 2013).

The Estatuto da Cidade provides new mechanisms of popular participation for publicpower, so in the 2000s an effort was made on the part of the State to create institutionalenvironments capable of promoting dialogue with the population, among them conferences, councilsand public audiences.

From 2005 to 2015 Brazil has experienced a period of economic growth, accompanied by areal increase in the minimum wage, higher employment rates and policies for housing financingparticularly through the Minha Casa, Minha Vida (My House, My Life) Program (Freitas & Pequeno,2015). This scenario of improvement in access to means of consumption and the rise of a politicalgroup linked to the grassroots movements of Urban Reform caused many social movements to settlein institutional spaces (Maricato, 2014). In addition, the institutional channels of popular participationare dominated by groups linked to the real state market or to the public power, so in many situationsthese spaces of discussion have become inefficient.

These processes of accommodation and institutionalization of housing movements inBrazil were accompanied by political, social and economic transformations at the international level,which brought about a new format for the social movements that claim the Right to the City. Fromthe second decade of the twenty-first century a series of protests around the world with a strongpopular adhesion occurred, such as the Arab Spring and Occupy Wall Street. Although varied, therewere common patterns to this new generation of movements, such as dissatisfaction with the worldeconomic crisis and the crisis of representative democracy. In general, the protesters claimed greaterparticipation in political decisions than voting (Castells, 2013).Most of these actions were followed byphysical occupation of a public space or building in order to increase the visibility of the movementand create new spaces of dialogue analogous to the concept of invented spaces.

In Brazil, the climax of this international conjuncture occurred in June 2013, a period known as the Jornadas de Junho (June Days). If compared with the movements pre- Estatuto da Cidade, it is observed that both have insurgent characteristics. However, themost recent mobilizations have no clear claim, since their struggle is broader: they fought for a fairercity in several aspects, such as mobility, housing and the environment. Another difference is theorganizational structure, the most recent movements do not have easily identifiable leaders and areorganized in a horizontal way, without direct influence of political parties, which are often deemedundesirable (Brasil and Cavalcanti, 2015). Other characteristics of these new movements are thedense and complex social diversity of the participants and the use of social media to amplify theirmobilization (Alves, 2012).

The trigger for Brazilian new wave of protests in 2013 was the increase in publictransportation tariffs in São Paulo. O "Movimento Passe Livre" organizou, consecutivas marchascom bloqueio do tráfego de automóveis da Avenida Paulista, which echoed throughout the countrythrough social networks, and influenced protests in 388 cities in Brazil, among them Fortaleza(Estadão, 2013).

2 INSURGENCES IN FORTALEZA: OCUPE O COCÓ

Fortaleza is one of the densest metropolises in Brazil, with around 77 hab/ha (IBGE,2010), and has a history of disorderly urban growth, marked by spatial and social fragmentation. Thisprocess culminated in a growing problem involving the environmental issue, as well as theconsolidation of a clear social inequality pattern, which is often evident within the geographicterritory of the city.

The Fortaleza Environmental Inventory (Inventário Ambiental de Fortaleza), published in2011, quantified about 786 hectares of free green areas, parks and plazas, representing only 2.35% ofthe total area of the city (Moscoso, Lavor, 2011). In 2007, Fortaleza had 3m 2 of green area perinhabitant, while the minimum recommended by the World Health Organization is 12m 2 (Rocha,Lima, 2009). Nevertheless this theme historically occupies only a secondary place in the agenda ofthe public managers of the city.

The existence of areas with landscape and recreational potential has always been a demandof the organized movements of neighborhoods and representative entities. Nottingham (2006, apudCosta, 2014) makes a historical recovery and points out that the environmental movement ofFortaleza arose around 1976 with the creation of the Sociedade Cearense de Defesa da Cultura e doMeio Ambiente (Ceará Society for Defense of Culture and Environment, Socema) that had asguidelines the preservation of the Cocó River, and later gave rise to the Fórum da Sociedade CivilCearense sobre Meio Ambiente e Desenvolvimento (Forum of the Civil Cearense Society on Environment and Development). In addition, Costa (2014) lists 18 other entities related to the struggle for green areas of the city in the period 1972 and 2012.

The sequence of events described below aims to characterize the process of negotiating thedelimitation of the Cocó Park, between State and civil society, highlighting the main developmentsand the insurgent character of this action. The information came from two main sources, (1) a 2015 academic piece about the ephisode (Brasil and Cavalcanti, 2015) and (2) a video published by “FrenteCocó” . It was also complemented by document analysis and participant observation on diverse[1] ephisodes by the authors.

Figure 1 - Aerial view of the green area extension. Photo taken by Fernando Travessoni, accessed at: http://diariodonordeste.verdesmares.com.br/cadernos/cidade/parque-do-coco-deve-ser-oficializado-com-1-050-ha-1.1531156.

As a direct consequence of worldwide and national protests, the same strategy ofoccupation of public spaces mentioned before was observed in Fortaleza. The most representativemovement denominated “Occupy the Cocó” consisted in a reaction to highway project thatcompromised a stretch of green area of the greater park of the city, the Park of Cocó. Although thereis no official delimitation that protects this area, it is undeniable its environmental value, since it ishome to one of the main rivers of the city, the Cocó River, and has two conservation units alreadydemarcated in its vicinity, the Natural Municipal Park of Sabiaguaba’s Dunes (Parque Natural Municipal das Dunas da Sabiaguaba) and the Sabiaguaba Environmental Protection Area (Área de Proteção Ambiental da Sabiaguaba).

Besides the environmental impacts, the construction of the higway overpass has also provoked controversy around the theme of urban mobility. As part of the TRANSFOR (FortalezaUrban Transport Program), developed by the City of Fortaleza, which aimed at the implementationof exclusive bus lines and requalification of roads, a project of a viaduct complex was elaborated that caused the deforestation of a stretch of the green space. This project was intended to relieve the intersection of Engenheiro Santana Júnior and Antônio Sales avenues and made no mention of preservation or use of the Park in activities of low environmental impact,nor did it favor non-motorized modes of travel, such as pedestrian and bikes[2], his priority was the execution of the viaduct as a great public work (Brazil and Cavalcanti, 2015). The project waselaborated in 2003 when an Environment Impact Assessment (EIA/RIMA) was elaborated andapproved by state agencies. Yet, 10 year later the work that was being constructed was significantly different from the design proposal of the Impact assessment, and this was one of the main reasonsfor the several embargos on the work (EIA/RIMA is out of date - O Povo, 2013). It is worthmentioning that the EIA/RIMA elaboration body consists of an invited space of participation ofcivil society on the decision making processo of the city, as it is seen as an instrument for thedemocratization of information. However, what is perceived is that both the EIA/RIMA of the 2003 project and the 2013 did not foster a participatory process through discussions with the population, but were conducted only to abide to a provision regarded as a bureaucratic legal requirement.As soon as the news of the project was broadcast by the mainstream media, there was resistance to the proposal accompanied by the creation of the hashtag #viadutonão (no viaduct) insocial networks by groups that were against the investment. Public hearings were taken by themunicipal power (ou state?) in order to initiate a dialogue with the population. Despite thequestionings, the City Hall advanced with the works and overthrew 74 trees. On June 16, 2013, thework was stopped by

[1] The Frente Cocó calls itself "Front of social movements for the regulation of the Cocó Park". Available at:https://www.facebook.com/pg/FrenteCoco/about/?ref=page_internal. Accessed on: November 30, 2016.

[2] According to Law 12.587/2012, which establishes the guidelines for National Urban Mobility Policy, urban mobility systems should treat pedestrians, non-motorized vehicles and public transport as priorities in order to promote universal accessibility.

the Public Patrimony Department, which alleged that the land was FederalGovernemt property, and city hall had no permit to use that land. At that moment, demonstrators setup camp in the deforested area (Brazil and Cavalcanti, 2015). The camper have said that theoccupation was the only form of preventing another tree-cutting episode, as the first was undertakenduring the night in order to avoid protests (Pinheiro, 2014).

The articulation and dissemination of activities was consolidated by social networks, astrategy that added more support to the occupation, both from other social movements and fromisolated individuals. Pinheiro, (2014) says that although all participants of Ocupe o Cocó had incommon the goal of defending the Park, people were very different in their conceptions of socialmodel. It had people of various ages, sexual orientations, creeds, ethnicities, races, from the variousareas of knowledge that went from the popular to the academic.On the other hand, there were opposing reactions to the protests, which were positionedin favor of the viaducts through the hashtag # viadutosim (Brasil and Cavalcanti, 2015). Openlyelitist, the countermovement arose n response to the questioning of the privileges of the elite in theface of collective yearnings. These two movements are representatives of the two citizens who live inthe country, the insurgent and the differentiated. For Holston (2008) the confrontation between them creates an inherently unstable and dangerous space of citizenship in contemporary Brazil.

In parallel to the occupation, on July 17, a contest of ideas occurred to suggest alternativesto the City Hall project and reinforce the technical arguments against the construction of theviaducts. A total of 10 proposals were elaborated that had principles regarding environmentalmaintenance and preservation, pedestrian, cyclist and public transport prioritization. The proposalswere presented in the occupation and also to the City Hall, who claimed the alternative proposalswere not feasible because they were not concrete proposals (Brasil and Cavalcanti, 2015).

Figure 2 - First page of the file with the ten proposals. File at:https://issuu.com/cacauufc/docs/caderno_____concurso_de_alternativa.

Figure 3 - Call to open meeting about the viaduct project, organized by the population itself. Accessed at: https://www.facebook.com/groups/DireitosUrbanosFortal/

Another articulation front of the population that strengthens the character of the OccupyCocó insurgency beyond the occupation itself was the creation of an online platform called DireitosUrbanos Fortaleza (Fortaleza Urban Rights), which aimed to discuss urban issues in search of a fairercity and democracy. This initiative can be considered an invented space as it aims to fill a gap about aspace for discussion and from it radiates various actions and proposals formulated by civil society.At dawn on Aug. 7, after xx days of camping, the city guard invaded the camp in an action without legal and truculent authorization, using non-lethal weapons,expelled the occupants. The Shock Battalion and the Military Police Cavalry were ordered to avoidany attempt to reoccupy. Days later, demonstrators won the right to re-occupy in justice, and thistime the occupation was done in an artistic and symbolic way. After a court decision, the works werereleased and protesters continued to press for the delimitation of the Park by other communicationchannels (Brasil and Cavalcanti, 2015). Once again, the insurgency actions extrapolate the occupationperiod and take place in other places in a more lasting way.

Figure 4 - Presentation of the ten proposals, at the camp. Photo taken by Hector Rocha, 2013.

Figure 5 - Example of alternative proposal to the viaduct. Image created by José Otávio, accessed at: https://www.facebook.com/groups/DireitosUrbanosFortal/.

Figure 6 - Artistic intervention at the camp. Photo accessed at: https://i.embed.ly/1/display/resize?key=1e6a1a1efdb011df84894040444cdc60&url=http%3A%2F%2Fblogs.diariodonordeste.com.br%2Folharesdiarios%2Fwp-content%2Fuploads%2F2013%2F08%2Fnatinho-RODRIGUE0005-C%25C3%25B3pia.jpg&width=810

Figure 7 - Protestants x Policemen. Photo accessed at:http://www.pstu.org.br/fortaleza-nota-do-pstu-em-defesa-do-parque-do-coco/.

A important development of Ocupe o Cocó movement was the creation of the CocóForum , on January 20, 2015, as an initiative of the Federal Public Ministry. This is a multidisciplinary[1] discussion space made up of scientists, researchers, technicians, lawyers, members of municipal andstate public authorities and representatives of civil construction (Federal Public Prosecutor's Office,Ceará State Attorney's Office, 2015).

After a series of debates, the Forum presented a proposal that was constituted in a Unit of Conservation of Integral Protection of 1,435 hectares that was delivered tothe State Government on August 26, 2015. The governor created through Decree No. 31,741 of2015, a multidisciplinary group among state, municipal and federal agencies that met behind closeddoors and organized the physical demarcation of the park, still in 2015 (Frente Cocó, 2016).In April 2016, this group linked to the government issued a new proposal for thedelimitation of the park called Official Proposal. The Cocó Forum in possession of the OfficialProposal organized a counter-proposal enumerating divergences of the Official Proposal. TheOfficial Proposal, differing from the Cocó Forum Proposal, delimited an area of 1,050 hectares, thatis, there was a reduction of almost 400 hectares outside the protection area of the Cocó Park. Thejustification for the exclusion of this area was the scarcity of public resources for expropriations.Aqui cabe a figura com a official proposal e a counter proposal.

[1] The Cocó Forum was created with the objective of adding efforts for the implementation and, above all,preservation of the Cocó Ecological Park, the Federal Public Ministry in Ceará (MPF/CE) proposed, in apublic manifesto published on January 20, 2015, the implantation of a permanent forum for theimplementation of the Cocó Ecological Park, the so-called "Cocó Forum. Through weekly meetings, the forumbrings together about 20 entities with the objective of supporting the Government of the State of Ceará in thedecision-making process that has as its objective the establishment of a model of environmental managementcapable of providing the ecosystems that make up the Cocó region with effective and definitive protection,integrating these areas with the environmental, cultural, social and economic patrimony of the city of Fortalezaand the state of Ceará". (Retrieved from http://www.prce.mpf.mp.br/conteudo/forum-coco/forum-coco)

In search of a configuration that harmonized the governmental, forum and communitydemands, the Cocó Forum made a second counter-proposal suggesting that several areas be includedagain in the Park. As an alternative to the high cost of expropriations, the Government suggestedcombining Ecological Interest Area and Environmental Protection Area (ZPA), which wouldmaintain ownership of the land for the owner, but would prevent deforestation (Cocó Front, 2016).Due to the lack of an official commitment of the City of Fortaleza that is made visible bythe absence of the Secretary of Urbanism and Environment in the public hearing held on the CocóPark, the tendency is that ZPAs will not be created after the regulation of the Park (Cocó Front,2016).

The struggle to delimit and establish a Conservation Unit in the Cocó Park has been goingon for more than 30 years, but only with the occupation made against the construction of theviaducts, the agenda has surfaced as an urgency of Fortaleza.

3 FINAL CONSIDERATIONS

Urban policies of both Government of the State of Ceará and the Municipality ofFortaleza, have clearly not been able to meet diffuse collective interests, such as the guarantee ofurban mobility and environmental preservation. in this sense we can affirm that there was a breakingof the Social Contract. State actions on the territory primarily serve the demands of social groupswith greater power and political influence, such as the civil construction industry and middle-class carowners. Faced with this context, disadvantaged groups are insurgent through practices consideredillegal, such as occupation of the green area and obstruction of the progress of public works. Theseactions provoked a change in the way of managing the territory, being incorporated or neutralized bythe urban public policies.

We can consider the Occupy Cocó initiative as an instance of insurgent planning practice, the encampment and the contest of ideas are direct actions carried out bypart of the population that has their right to the environment urban mobility threatened,. This samegroup opposed an established order that does not favor the collectivity, that is, it opposes theconstruction of a viaduct complex that threatens a portion of the green area important to the city. Inaddition, this action was able to create autonomous spaces of discussion, the first of them inside thecamp, and later in the social networks. The main agenda of these created spaces of participationbecomes the delimitation of the Cocó Park, a specific agenda that was not attended by thehegemonic powers and by the State.

The Occupy Cocó provoked other developments in the urban planning of the city thatprove the power of this type of action, such as resumption of the discussion about delimitation ofthe Cocó Park, forgotten by many years. Although the road work was executed as originally planned,the protests forced an increase in the dialogue of marginalized groups with the City Hall. After theprotests, other urban conflicts were also mediated through direct action such as the re-design ofPraça Portugal, which was announced in 2015, has undergone several changes in an attempt to meetdemands of civil society; and the painting of the Ana Bilhar Street cycle lane, organized by thecollective Massa Crítica, which was latter incorporated by oficial bycle lane system.

Figure 8 - Viaducts in operation after construction. Photo accessed at: http://tribunadoceara.uol.com.br/noticias/cotidiano-2/manifestantes-relembram-momentos-de-luta-dois-anos-apos-ocupacao-do-coco/attachment/dsc_8396/.

Although relevant, it is important to emphasize that this movement was led by organizedgroups that do not represent the active peripheral militancy in the city, especially with regard to theproblem of homelessness. With a population that possesses strong political capital, the contestedinterventions were inserted in an economically privileged area of the city, fact that granted greatermedia visibility to the movement. The Occupy Cocó represents a specific group of the urban society,which are not predominant in the history of insurgent movements in Brazil, but which are notpredominant in the insurgent movements observed in Brazil. Therefore, we can affirm that OccupyCocó contributed in the development of an insurgent citizenship that is consolidated through the popular control of the alterations of public spaces proposed by the State.

The struggle of the Occupy Cocó protesters was not only against the trees - cutting and thepreservation of the park, but for the fundamental right to actively participate in decisions about thecity. The strong mobilization demonstrates the questioning power of the population of Fortaleza,refused projects that do not dialogue with the collective demands. The eighty-four days ofoccupation ended violently, amidst bombs, raids and wounded, but left a deep mark on themobilization consciousness of those who accompanied the movement. Ramon Cavalcante, one ofthe occupants, gave us the following statement about the Ocupe o Cocó experience:

> *In the year that we learned to set a limit, even ifit was for twenty cents, we decided to fight for almost 80trees. But it was not just the 80 trees, of course, there wereso many others and it was to establish a limit for this cityproject that, systematically, destroyed the Cocó. And it wasan incredible dispute, however much the press, thegovernment, and the elite, in general, tried to discredit themovement, the trees, the occupiers. The creation ofalternative proposals, the deliberations for the (still notconquered) demarcation of the Park. It was a hugelearning about the right to the city, about collectiveconstruction, institutional dispute, fight and policecowardice. There were two violent evacuations conductedby the municipal guard. And a defeat, because the viaductswere built, the trees were overturned. But it was a defeat,delayed, conquering day by day and an enormousstrengthening of struggle, achievements in the people thatwe meet again in several other disputes, in Alto da Paz,Vila das Artes, Vila Vicentina, wherever.*

The Occupy Cocó can be considered as insurgent urban planning instance because it is adirect action of occupation that demands a quality urban space, a greater attention for the urbanmobility in the scope of the pedestrians, cyclists and collective transport and questions the modusoperandi of urban public policies that privilege specific groups to the detriment of the community.

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ID 1725 | PARTICIPATORY PLANNING: THE ROLE OF NGOS IN NEIGHBOURHOOD REGENERATION IN RIGA

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ABSTRACT: In the last decades urban regeneration has become an important part of urban policy. Availability offinancial opportunities were the engine of change in the approach to the revitalization of many urban sites. Atthe same time even if the number of projects concerning development of new infrastructure, both social andtechnical, increased, they didn't always lead to the improvement of the quality of life. The participatoryapproach involves the wide range of stakeholders in the common process of planning. One of the ways ofcooperation at the level of neighborhoods, is a work with active neighborhood residents, not only regularlyinforming them about the ongoing projects, but also to enable them to express their views and vision.Neighbourhood organizations are the mobilized section of a human group (the neighbourhood) which isunderpinned by a local support network. The nature of these bonds of solidarit y is a factor that determinesthe potential of local organizations for action and for their inclusion in any kind of democratic process. Riga,the capital of Latvia, has 58 neighborhoods, and more than ten of them have their own neighborhoodassociations and activist groups in social sites that are actively and constructively defend their neighborhoodcitizens. The paper examines the main fields of public activity and identifies the main challenges in cooperationprocess between different stakeholders involved in urban regeneration.

1 PARTICIPATORY APPROACH IN URBAN REGENERATION

Urban regeneration is a way to reorganise and upgrade existing places rather than planning newurbanisation (Puppim de Oliveira and Balaban, 2013). Factors underlying the adoption of urban regenerationpolicies and projects include pressures from major short- or long-term economic problems, deindustrialisation,demographic changes, underinvestment, infrastructural obsolescence, structural or cyclical employment issues,political disenfranchisement, ethnic or social tensions, physical deterioration, and physical changes to urbanareas. Typically, urban regeneration actions involve economic, social and physical/ environmentalimprovement measures in the areas under intervention. Urban regeneration at its most basic contributestowards the implementation of sustainable development through the 'recycling' of land and buildings, reducingdemolition waste and new construction materials, as well as reducing demand for peripheral urban growth andfacilitating intensification and compactness of existing urban areas (Turcu, 2012).

Over the years', the participation of residents has become an indispensable instrument to facilitate asustainable "bottom-up" implementation of neighbourhood regeneration initiatives. Participatory processes areexpected to contribute to identifying the needs of the people, to empowering local groups, integrating localknowledge systems in the design and planning, reinforcing a learning process and to ensuring political support.The list of possible objectives to achieve with these participatory processes (such as generating ideas, identifyingattitudes, disseminating information, reviewing and implementing design proposals) can differ at every placeand time. Once the objectives of community participation are stated, it then becomes clear that participation isperceived according to the type of issue and the people involved (Sanoff, 2005).

In Eastern Europe, participatory planning is mandatory and it is regulated by the planning legislation.However, due to the relatively little experience in participatory planning, its implementation has become amajor challenge. Community-driven initiatives and NGO-led actions can bring together the different actorsinvolved in urban regeneration processes. These activities include problems of practical implementation ofpublic participation and access to justice pillars. The pressure by short term political and economic interestscould leave out public participation and reduce transparency. Public participation is often perceived more justas an additional procedure and not as an opportunity. Quality of communication between the various interestedpersons in the urban regeneration projects is a crucial issue since the people involved need to understand theimportance of each stage of development, in a way that they can easily recognise. Thus, a developer, planneror any other specialist coordinating the public participation process should be a communicator, andcommunicate in a manner which not is only professional, but also readable and understandable to the recipient.Communication should be diversified and with this said can occur in various forms, for example, the modellingof the development versions.

2 LOCAL COMMUNITIES FOR BETTER NEIGHBOURHOODS

Participatory actions in the neighbourhood regeneration are of special importance because theystrengthen community spirit and consequently intensify community-driven initiatives. The engagement ofinhabitants can significantly increase the efficiency of planning proposals and facilitate other viewpoints that are normally not considered in a formal planning process. If sustainable development is a main objective, thenit should include participatory processes to organise and manage the continued demand for effective solutionsto neighbourhood regeneration (Laws et al., 2004).

In urban regeneration, self-organization means that the urban actors are enabled to contribute to the shapingof their places by themselves; it is not simply to give them a voice, but to enable them to take responsibilityand action for their places, by their own contributions, in bottom-up grassroots processes (Boonstra, 2011).

Nevertheless, the extent, the outcomes, and the methodologies with which urban selforganization can bemanaged are largely debated (Bond and Thompson-Fawcett, 2007; Innes and Booher, 2004.)In this context, the neighborhood level, which sits between the city and the building levels, appears tobe particularly interesting in operational terms. It is well suited to experimenting with the specific practicesaimed at improving the urban environment. This allows to look at the urban reality at a scale that is large enoughto address themes that clearly exceed the scale of a single building, while remaining small

enough to examineconcrete actions. By addressing targeted issues, this type of approach can result in innovative solutions throughthe application of certain technological developments as well as through the redefinition of the processes ofgovernance and participation. The neighborhood is situated exactly at the crossroads between the art ofconstructing buildings and the art of managing a city, two areas of action in which the various stakeholders areproceeding independently from each other. While the neighborhood does not necessarily exist on a legal level,it is still an important operational meeting point between the public and private sectors.

The neighbourhood regeneration of individual small-scale projects, where inhabitants can participatenot only in planning but also in the implementation process, contributes to the formation of a sense ofbelonging and identity, creating conditions for further participation of people in building managementprocesses. In small-scale settings, people have a better perception of the problems and are more involved intheir solution. Smaller projects require fewer resources and can be carried out in a shorter time-frame and theoutcomes can be quickly perceived. Besides, these interventions can serve as a springboard for publicparticipation in large-scale projects, and promote the confidence in the participation of urban regenerationprocesses. The barriers to effective participation of people from stressed communities in partnerships withgovernment and business include: relative lack of capacity and resources; low levels of interest and risk ofactivist burn-out; worries about community 'representativeness'; need for long-term commitment; differencesin organizational cultures (different modes of working and behavioural expectations).

3 INTRODUCING THE NEIGHBOURHOOD CONCEPT IN RIGA

The capital city of Latvia, Riga, is currently facing a new challenge: how to prepare a new citydevelopment plan that would be sustainable, that would satisfy all the interested parties, and that would solvethe most urgent urban design problems, that is, de-urbanization, polarized economic growth, increasedpollution, conversion of brownfields into greenfields, maintenance of historical sites and buildings, insufficientfunding for fulfillment of public needs, and so forth (Barvika et al., 2015).

City Development Department of Riga City Council describes the concept of neighbourhood as aresidential environment of suitable size with its own service, identity and character, arising from theconstruction type, physical borders, landscape and togetherness of residents. One of the main reasons for theidea of neighbourhoods is efforts to improve the planning of city development and life quality of citizens.Currently data on each neighbourhood of the city – Bolderaja, Bierini, Mezaparks, Purvciems etc. are collectedin total for 58 neighbourhoods. These neighbourhoods are not planned as administrative units, but the collectedinformation on neighbourhoods will serve as a precondition for development of investment policy. The maintopics are relating to urban planning, statistics and community engagement. The main goal of neighborhooddevelopment is to create the conditions for sustainable socio - economic and spatial policy in the Riga. Thisapproach will contribute to the strengthening of the identity of residential neighborhoods, residentsawareness of belonging to their neighborhood, support of territorial balance and improve the livingenvironment.

In order to activate the neighborhood movements as one of the ways of inhabitant self-organization,a series of support tools have been created during the last decade in Riga. The main emphasis in ideacompetitions organized by the neighborhood associations is on the local community interests and inhabitantproblem solving with mutual residents and municipality cooperation. Municipal co-financing is available forthe organization of neighborhood forums, community integration activities, cultural activities, as well as forthe surrounding environment improvement. A website www.apkaimes.lv collects information onneighborhood development opportunities and activities in neighborhoods, public participation and involvedopportunities to operate at the level of neighborhoods, as well as local authorities and non-governmentalorganizations in the process of strengthening neighborhoods.

4 NGO ACTIVITIES IN RIGA NEIGHBOURHOODS

About 1/3 of the neighbourhoods in Riga have created their neighbourhood associations -NGOs. Observing the neighbourhood character and activity, a link can be found between the scale and activity-

although most of inhabitants of Riga (60%) live in large-scale residential areas, the cooperation of residentsin these neighbourhoods is weak, almost nowhere any neighbourhood associations and other activitymovements have been established. Conversely, in small, often marginalized neighbourhoods with a historicalidentity people are much more interested in neighbourhood regeneration and development. Summarizing thedata from the sources who finance the neighbourhood initiatives, the different websites and other sources ofinformation we can conclude the main fields of activities.

FIELDS OF ACTIVITIES	NEIGHBORHOOD ASSOCIATIONS
Strengthening affiliation to community	Čiekurkalns, Grīziņkalns, Sarkandaugava, Maskavas forštate, Trīsciems, Vecāķi, Bolderāja
Preservation of cultural heritage	Čiekurkalns, Mežaparks, Vecāķi, Āgenskalns, Bolderāja
Improving quality and accessibility of education	Mežaparks
Social integration of community	Grīziņkalns, Sarkandaugava, Maskavas forštate, Bolderāja
Environmental protection	Sarkandaugava, Mežaparks, Trīsciems, Bolderāja, Mangaļsala
Strengthening of local identity	Čiekurkalns, Grīziņkalns, Vecāķi, Bolderāja, Miera iela
Activation of local enterprises	Čiekurkalns, Miera iela
Participation in urban planning process	Mežaparks, Dārziņi, Āgenskalns, Mežaparks, Bolderāja, Mangaļsala
Regeneration of public space	Čiekurkalns, Grīziņkalns, Sarkandaugava, Mežaparks, Maskavas forštate, Vecāķi, Āgenskalns, Bolderāja, Mangaļsala

Table.1 Fields of activities in Riga neighborhoods

Activities of neighborhood associations are specified by several factors: the neighborhoods location:for the neighborhoods near the River Daugava or lakes the main objective is environmental protection; theneighborhoods history: historical neighborhoods strengthen community identity with protection of culturalheritage etc. Specific problems such as school closures will serve as strong promoter for public participation.Activities regarding the urban planning are the leading causes of many communities' initiatives. Rail Baltica,relocation of sea port terminals and other major development which could bring any risk to quality of life inthe neighborhoods, have been important motivators for consolidation of the population. However, the mostcommon field for every neighborhood is regeneration of public space.

5 PUBLIC SPACE: A PLATFORM FOR CO-CREATION

A readily accessible public open space is a centre of public activities which may affect the everyday life ofpeople and development of the entire neighbourhood (Rapoport 1985). The public open space is beyond thecontrol of individuals, it is an element linking the private living spaces of inhabitants and it is used for differentfunctional and symbolic purposes (Madanipour 2003). Public open space in the residential environment is themain platform for socialisation as well as an essential component of a dwelling, "an extension" of the personalliving space into outer world (Belanger 2007). The quality of public space, in terms of respect for rights ofassembly and expression, is the most important long-run parameter shaping civil society organization, strengthand capacity to act. In this dimension there is a striking variation of conditions across the post-communistspace as well as significant changes over time. once residents begin to think of themselves as content andplatform co-creators and as active players who can not only react to design proposals and planning initiatives,but also devise their own, it becomes possible to develop tactical approaches based on small scale localinterventions where weak constituencies can even take a leadership role, and which can spark catalytic processesat a large scale, as in the urban acupuncture approach (Iaconesi & Persico, 2014; Landry, 2005). The publicdimension of such space is another key resource to harness the full potential of inclusive participation, in thatit gives visibility and social salience to

practices that, however relevant and transformational, could beoverlooked or even misunderstood by some constituencies (Sharp, Pollock, & Paddison, 2005). It is, quitedifferently, turning public space into a co-creation arena where the very fact of being a resident sets theconditions to become part of the design process. In practice, co-design approaches vary greatly from beingclose to consultation and information gathering to facilitating people in generating their own ideas andsolutions.

The positive co-creation and self-organization synergies result in a grassroots process of local informationand knowledge, aimed at improving places and driven by actors' lived experiences. Co-creation methodologiesaim to enable people, laypersons as well as experts, with a very broad range of knowledge and know-how tohave a creative contribution to the design processes (Sanders, 2002). The European Design Leadership Boarddefines co-design as "a community centred methodology that designers use to enable people who will be servedby a design outcome to participate in designing solutions to their problems" (Thomson et al, 2012). Co-creativeprocesses are the outcome of a shift in urban design; they move from experts towards giving actors thecapability to directly contribute their experience (Sanders and Stappers, 2008).

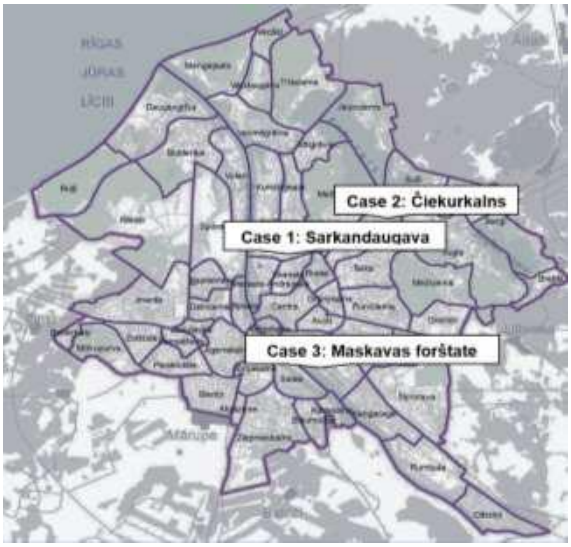

Figure 1. Case study neighbourhoods in Riga context

CASE 1. REGENERATION OF A SQUARE IN SARKANDAUGAVA

Sarkandaugava is a historical industrial district, located in the northern part of Riga, with 18 095 inhabitants.

According to a survey conducted in 2013, 34 % of Sarkandaugava population would be willing to participatein the activities linked with courtyard or other public open space improvement , 26% would be willing to engagein their neighborhood clean-up. Answering the question "which territories should be targeted first in the cleanups"the respondents most often mentioned apartment house surroundings and courtyards (34%) and therailway surroundings (22%).

Sarkandaugava neighbourgood association has been active since 2013. Association aims to promote thedevelopment of the Sarkandaugava neighborhood and to improve inhabitant life quality. They are representingthe interests of Sarkandaugava residents in Riga municipal institutions, also being a communication tool for theexchange of ideas between the active Sarkandaugavas neighborhood residents as well as promotingneighborhood residents responsibility for their surrounding environment and encouraging mutual tolerance.The Association is one of the most active neighbourhood associations in Riga, with activities related toenvironmental issues - industrial pollution reduction, mitigation of negative impacts of the port and alsodifferent cultural activities.

One of the most succesful projects in Sarkandaugava is Alekša Square regeneration. Till 2013 Alekša Sqarewas abandoned, polluted and degraded place next to the district's main street. In 2012 an initiative "Labas vietasTALKA» created series of events, in which neighborhood residents together would create ideas to improve aspecific location in their district. Alekša square was chosen to be the location for impovement and development.The action started in 2014 with several clean-ups including different activities for shifting the squares visualappearance, functionality and liveability respecting the identity of the neighbourhood.

Figure 2. Regenerated Alekša square in Sarkandaugava neighborhood

CASE 2. DEVELOPMENT OF A PLAYGROUND IN ČIEKURKALNS

Čiekurkalns is a historical industrial district with 7 794 inhabitants. According to a survey conductedin 2013, 40 % of Čiekurkalns population would be willing to participate in the activities linked with courtyardor other public open space improvement , 35% would be ready to participate in the restoration of the residentialbuildings visual appearance. Answering the question "which territories should be targeted first in the cleanups"the respondents most often mentioned apartment house surroundings and courtyards (47%) and also thesidewalks and streets (22%). Čiekurkalns Neighbourhood Association is active since 2014. Associations missionis to target Ciekurkalns neighborhood development. The activities are mainly related to the revitalization of theneighborhood identity by organizing various events for the inhabitants. Significant activity was the TEC historicbuildings protection. One of the most striking projects has been Čiekurkalns playground creation. Before thisproject there was no place in the neighourhood for children to spend their free time actively. In 2015 for thispurpose a fundraising campaign was launched. In 2016 this initiative was noticed and implemented by the RigaCity Council.

Figure 3. Development of a playground in Čiekurkalns

CASE 3. REGENERATION OF A COURTYARD IN MASKAVAS FORŠTATE

Maskavas Forštate is a neighbourhood adjacent to the Riga city centre with 27 155 inhabitants (Census,2011). An important factor in the development of the Maskavas Forštate has been the multiplicity ofnationalities and religions of inhabitants that in the course of time populated this neighborhood. More thanhalf of the inhabitants of Maskavas Forštate (59%) are willing to participate in activities linked with courtyardor other public open space improvement. Answering the question "which territories should be targeted first inthe clean-ups" the respondents most often mentioned apartment house surroundings (35%), as well as streets,sidewalks and all courtyards (23%). The Maskavas Forštate neighbourhood association was founded in 2011 tounite the society and to activate the educational, social, health, cultural, integration and environmental spheres.The association actively participates in environmental management, social and cultural projects. In cooperationwith the other active associations and movements project "Sun courtyard" was developed. During the "Bigclean-up" children's playground was upgraded and improved, new greenery planted, new benches and differentdecorative installations installed. The project partners were the Riga Technical university students andprofessional landscape architects. The project was funded by Rīga|2014 foundation.

Figure 4. Regenerated courtyard in Maskavas Forštate

6. CONCLUSIONS

Public participation in neighborhood regeneration relates with a number of advantages: communitieshave a fresh perspective, and can be seen often issues new kinds; community involvement helps deliverprograms that better target local needs; as a result, projects are acceptable to the local community. Still, thereare plenty of challenges in cooperation process between different stakeholders involved in urbanregeneration. On the one hand, there is considerable activity of the marginalized communities that require ahearing and respecting of their opinion in the development and planning processes. On the other hand, inmany cases, public participation is a decorative and is accepted unless it does not interfere with financiallysignificant development projects.

Public participation in neighbourhood level needs different types of public participation, at differentstages and with different levels of involvement. The public also have an opportunity to exercise itsresponsibilities when the ideas are put into practice, and even afterwards, when they are inhabiting the spaces.An optimal participation process would be one which engages the people in the definition of the problem,seeking the solutions, and collaborating in the realisation of the proposals.

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ID 1756 | LOCAL PLANNING INSTRUMENTS - IF ONLY WE KNEW HOW TO PLAY

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ABSTRACT: We know little about how the implementation of planning instruments are communicated to the members of the community by the planning profession in terms of complexity of language and process, power relationships and how this impacts upon an individual's ability to engage as an active citizen in the development assessment process. In order to create more value for community engagement in the development assessment process, we need to better understand how local planning instruments are perceived by members of a community in terms of ease of navigation, interpretation and application to development proposals. It is particularly in the role of community as submitters to a development application that these perceptions may be best explored as it is an opportunity for non-planners to interact with planning instruments perhaps for the first time. This paper will discuss the type and nature of submissions made by non-planners to development applications within two case studies and identify barriers to non-planners effectively participating in planning discussions and decision-making about development applications. The research will undertake data collection and content analysis of six (6) submissions from each case against development proposals within a regional city context. The content analysis will aim to match the de-identified public submissions with what the planning profession considers valid urban and regional planning grounds expressed in local statutory planning instruments. This will help to ascertain the submitters' effectiveness in understanding and applying the local planning instrument to the site specific issue that has ignited the active citizenship response. The paper will seek to answer questions about what is the engagement framework within which submitters can participate in planning, how are planning schemes navigated, applied and interpreted by non-planners lodging submissions to proposed development and what knowledge and skills do community members need to participate in the development assessment process as submitters ?

1 INTRODUCTION

In order to build trust many local governments and Local Government Acts are based on values and codes of conduct that include transparency and accountability. This is no less important for the planning profession if it is to be seen as legitimate, open, honest and fair in the way it communicates issues around development proposals and development assessment.

In Queensland the Statutory Instruments Act 1992 (Queensland, 1992) defines the meaning of an Instrument and identifies that a local government planning scheme is a statutory document prepared under the planning act applicable at the time.

The Integrated Planning Act and Sustainable Planning Act provides for community consultation relating to development proposals in Queensland. It transfers appeal rights in the Planning and Environment Court to those submitters that have made properly made submissions within a required timeframe.

2 CONTEXT

Two case studies have been selected for this research. The cases are based in a regional city in Queensland, Australia with a population of 165 000 people. The first case is referred to as Maridhadi and the second is referred to as McDonalds. The cases were selected using the criteria that the development applications were to have been decided by the Local Government between 2009 and 2013, they must have drawn more than ten submissions following public notification, they must have drawn media attention and they must have involved a development that had been approved and one that had been refused. This comparative case study approach seeks to determine if the submissions made to the development application are considered to contain knowledge with validity and therefore are material matters to consider in development decision-making.

Maridhadi was an impact (not preferred) assessable application for a secondary school (educational establishment) located in a residential neighborhood proposing reuse of a heritage listed building on the edge of the Great Dividing Range escarpment. A group calling themselves CASE Citizens Against School Establishment secured the assistance of a planning consultancy to write a submission against the proposal and this submission formed the basis of the 74% pro-forma submissions received against the proposal. Twelve different pro-forma letters are evident in the total number of submissions. 681 submissions were received over two advertising periods against the proposal. 25% of these were from people living outside of Toowoomba. There were 32 not properly made submissions. There were also 212 submissions received in support of the proposal. The Council overturned the assessment managers recommendation in this instance and refused this application.

McDonalds was an impact (not preferred) assessable application for a number of café/restaurants and supermarket in a Residential Mixed Housing zone. Thirty two submissions were received opposing the proposal of which 31 were properly made under the legislation. Six of the properly made submissions took the form of a petition. The assessment manager provided responses to the submissions and also sought responses to the submissions from the applicant's consultancy team. There is clear evidence of knowledge validity testing in the submissions and the "experts" responses. The Council approved this application.

Both of these cases were heard in the Queensland Planning and Environment Court and both matters were dismissed. In the case of Maridhadi the applicant appealed the decision and the proposal did not proceed. In the case of McDonalds the submitters appealed the decision and the proposal was built and is operating today.

3 APPROACH

The research method used for this paper involved content analysis, using nVivo software, of both the planning officers reports to the Local Government and twelve (12) of the submissions received from submitters during the public notification period. Content analysis has also been conducted on various media and social media publications and posts.

The content analysis of the planning officer reports adopted a process to create categories or codes of words and phrases within the text used by Weston and Weston in previous research with some additional codes added for emotive submissions (Weston & Weston, 2012). The codes should then be able to be replicated.

The research also used a readability tool to analyse the complexity of text within the planning officer reports and assign it a rating equivalent to schooling age. The Gunning Fog Readability Index will be used to measure reading difficulty rather than reading ease. The Gunning Fog Index counts words and divides by the number of sentences to find an average sentence length. Rather than counting syllables, as compared to Flesch's Reading Ease and Human Interest Formula, Gunning's method counts the number of long words with three or more syllables. All proper nouns, verbs in which the third syllable is an –ed or –es and compound words made from two short words like workable are excluded. To apply the formula the author will use Readability-Score software programmes that take the average sentence length and add it to the number of long words per 100 words and then multiply the total by 0.4. The resulting score is roughly equivalent to the grade level of difficulty. A score of 12 for example indicates that an average high-school senior should be able to read the material. In practice, no general–audience newspaper or magazine would rate above 12 on the Gunning Fog Index. Time magazine rates 11, Readers Digest scores about 5 and comic books score 6 (Readable.IO, 2017).

To overcome some of the limitations identified in the literature with computerised readability indices the Readable IO software takes an average across the material to use several different readability formulas. This enabled a range of readability scores to be produced providing more confidence in the results. Other determinants outside the scope of this paper may include legibility, motivation of the reader, learnability of the text, usability, relationship among words, sentences and sentence parts and the level of abstraction of the reader by the material (Hiebert, 2011).

The submissions were subject to analysis that involved a coding approach to determine if submissions were made about material planning matters referred to in the local planning instrument or if they were not relevant to the tool against which the applications could be assessed. This has led to discussion in the conclusions part of this research in regard to questions about the validity of knowledge and particularly what non planners need to know in order to be able to enter the field of contestation as it relates to decision making on development applications (McClymont, 2011).

4 READABILITY AND TRUST

Even local government elected officials with experience in discussing and deciding on planning matters can find themselves at a disadvantage when reading through planning documents. During a recent meeting at a Council within the case study area in Australia a discussion regarding the adoption of amendments that would see a transfer of authority over development assessments was met with confusion. (Backhouse, 2017)

Calls for a 'layman's reference' to help elected officials (without planning qualifications) understand the policy changes were made by one Councilor who stated he would have to 'take a leap of faith' that the proposed change would be in line with previous decisions. Throughout the exchange the technical expert in the meeting – the manager of the council's development assessment branch – advised that a more detailed report could result in 'hundreds of pages being produced that might not result in the document being any clearer.' Despite the misgivings aired by the elected officials the Council endorsed the motion and the amendment was recorded (Backhouse, 2017).

This paper primarily looks at how accessible planning documents are to members of the general public, and given the difficulties described above it is not hard to form an opinion that even those non-town planners who work in government may still occasionally have trouble discerning meaning.

To this end, when considering this it should be noted the various employment streams involved in the drafting of a planning report. Town planners obviously are involved in the process and provide the bulk of the content, however other specialisations within the local government structure play key roles; legal experts, for example, provide guidance on interpretations of the relevant Act and on more specific matters as required, environmental specialists may be called on to provide data used to recommend certain courses of action and politicians themselves may call for adjustments to aspects of a report.

Each actor in the process of delivering a planning report uses language and knowledge specific to their particular field, and in the course of doing so provide further depths of encoding that members of the general public need to navigate, to interpret and to understand before being able to respond. All of this is

completed in what Tait (2012) notes as a 'contested societal activity, characterized by fractious processes and disputed outcomes.' The use of complex language in the form of jargon and industry-specific terms can make, to the layman, the reading of a planning report an arduous process (Tait, 2012).

If anyone is free to make a submission and thus become an actor in the progress of a development application, and the language of the supporting documents create a barrier to effective communication and subsequent understanding does it 'create opportunities for mistrustful relationships to emerge, as groups with different interests cannot always come to a compromise' as Tait (2012) suggests? Interestingly, Goldthorpe (1982) noted a greater level of trust between professionals and society in the past 'emanating in part from social respect for the specialist knowledge and expertise of the former.' In the modern interconnected world perhaps Rydin's statement that 'knowledge now has a variety of sources and takes a variety of different forms' is truer than ever. ((Goldthorpe, 1982)Rydin, 2007)

With greater access than ever before in human history to a global repository of knowledge, albeit unregulated, the modern person is able to seek information faster and, increasingly, from more locations as the use of mobile handheld devices increases. Pre-Internet stakeholders in a certain scenario would seek information from subject matter experts and would, usually, trust that advice to be accurate. The plethora of information available online today makes it difficult for individuals to not search for answers before consulting with a subject matter expert, so much so the wider medical profession is credited with coining the term 'Webchondriac' to describe patients who enter a consultation with their own diagnosis, courtesy of any number of professional and amateur medical websites (Austin, 2014). The sheer volume of information available on the Web, including University-level lectures and presentations, means that virtually anyone can access information similar to that used in a recognised degree course but with the significant difference that this information is not placed within a pedagogy of a considered structure of learning with formal assessment criteria thereby earning the participant a qualification. In short, the Internet lays the world of information at our feet, but not necessarily the ability to adeptly use it in a professional context.

This brings the argument neatly back to the question of trust; what is it and why is it crucial to the relationship between town planners and the public they serve? The second part of that question is simple – without trust there is no comprehension, no receipt of offered information let alone action taken on it. At the core of comprehension are three factors – accessibility, readability and trust.

Accessibility is accomplished through standardised procedures according to local law. In the case study area it is a requirement that information pertaining to town plans as well as development applications are made public for consideration by all stakeholders. Readability refers to level of education required by an individual to read and comprehend a document. Professional report writing styles typically, and in the case of town planning reports almost always, require a high level of education to understand and apply various terms and wider concepts. Underpinning readability is trust – perhaps defined as 'one party's willingness to be vulnerable to another party based on the belief that the other party is (a) competent, (b) open, (c) concerned, and (d) reliable.' (Mishra, 1996) The need for this trust to be evident and true is highlighted by the many number of stakeholders in a typical round of submissions to a development application, and of the differing roles of submitter, applicant, facilitator, technical expert and politician, amongst others. In the post-modern approach to planning Rydin (2007) notes the planner takes on a number of roles where, for example, 'a community report on the experience of living in a village will be different to an expert assessment of the quality of life or natural capital in that village.'

Rydin (2007) further outlines the need for engagement forums 'engaging expert with expert, lay perspective with lay perspective and lay and expert perspectives in examination of each others' claims' in a process that effectively initiates discussion, acknowledges differences and defines essential facts as part of a decision-making cycle, and without trust this cycle cannot be completed. In terms of this paper we looked at two particular development applications and the subsequent submissions in terms of readability and barriers to comprehension (Rydin, 2007).

Tennoy & others (2015) identify five different types of knowledge necessary in planning:

1. Expert knowledge including the theoretical, empirical and methodological
2. Knowledge of project/objectives
3. Knowledge of context, including lay knowledge;
4. Process knowledge includes knowing about laws, regulations and procedures of planning and

5. Other kinds of knowledge (Tennoy, Hansson, Lissandrello, & Naess, 2015)

Rydin (2007) goes further to identify a typology of knowledge claims in planning. These include current state, predicted state, societal process, planning process, outcomes state, planning –societal interaction and normative knowledge. Planning is by its very nature a normative process (Rydin, 2007). For the purpose of this paper we will focus on both typologies identifying process knowledge and planning process as important knowledge types and knowledge claims. This type of knowledge is fundamental to learning how to play the local planning instrument and all of the associated and hidden processes that go with that instrument in a field of contestation relating to development decision.

4 RESULTS AND ANALYSIS

4.1 CODING

This paper adapts the coding developed by Weston & Weston (2012) to reflect the aspects of language within written documents that are unclear or appear coded (Weston & Weston, 2012). They provide us with examples of exclusionary language. The codes used in the nVivo software against the two case study planning reports and six submissions from each case are as listed in Table 1.

Description	Code Name	Code
Reference to a type of application, legislation or policy without an explanation of what that reference means or where an explanation can be found.	Unknown appliction	UNAP
Use of an abbreviation/acronym without explaining its meaning within two pages of its use.	Unknown abbreviation	UNAB
Use of encoded terminology without explaining its meaning.	Encoded terminology	ENTE
Use of unexplained encoded information without referring to the location of the key/code book when one is provided.	No key reference	NOKE
Use of terminology or phrases only used by those familiar with the fields of planning and transport without an explanation for others.	Planning terminology	PLTE
Use of terminology or phrases only used by those familiar with the fields of urban design and architecture without explanation for others.	Design terminology	DETE
Reference specifically directed at committee or council members.	Council exclusivity	COEX
Third party comments rejected without explanation.	Unknown comments	UNCO
Third party comments provided but not commented on.	Unanswered comments	UNAC (Weston & Weston, 2012)
Third party comments that relate to the local planning instrument.	Material Planning Comments	MACO
Third party comments that do not relate to the local planning instrument.	Non-material Comments	NOCO
Emotive comments that do not relate to planning matters.	Emotional Comments	EMCO

Table 1 – Content Analysis Coding

The results from the coding are included in Tables 2 and 3 below in both hits and a percentage of the total.

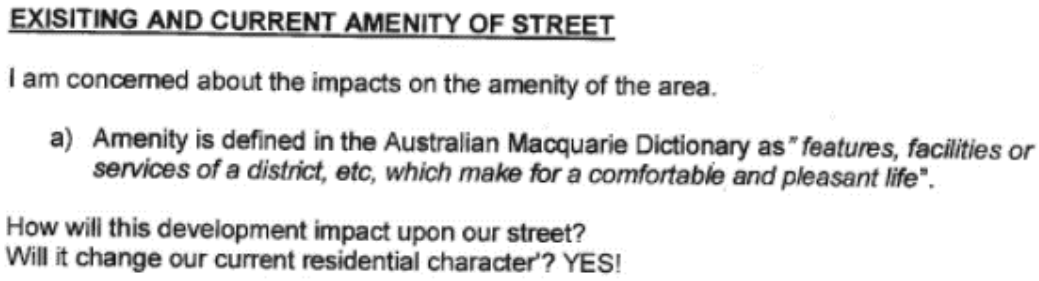
Codes	UNAP	UNAB	ENTE	NOKE	PLTE	DETE	COEX	UNAC
Total number of hits	32	13	5	11	53	6	11	0
Percent of total hits	24%	10%	4%	8%	41%	5%	8%	0

Table 2 – 2 Planning Reports Results by Code

Codes	MACO	UNCO	EMCO
Total number of hits	17	25	12
Percent of total hits	31%	46%	22%

Table 3 – 12 Submissions Results by Code

The first issue to note is that overwhelmingly the results point to a significant use of Planning Terminology making up 41% of all coded material. An example of PLTE is the location of a residential use on an arterial road is undesirable due to amenity issues. These terms are often used and understood by professional planners not however by those with lay as opposed to expert knowledge. The concept of establishment of need or amenity impacts is not defined categorically in legislation nor in the planning instrument itself. Indeed one submitter went to the Macquarie Dictionary to try and understand the concept.



EXISITING AND CURRENT AMENITY OF STREET

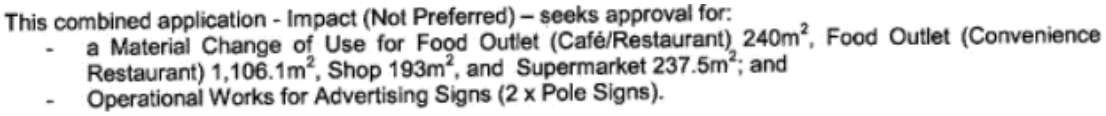
I am concerned about the impacts on the amenity of the area.

a) Amenity is defined in the Australian Macquarie Dictionary as *" features, facilities or services of a district, etc, which make for a comfortable and pleasant life"*.

How will this development impact upon our street?
Will it change our current residential character'? YES!

Figure 1 PLTE Example

The second issue to note is that 24% of coding relates to UNAP or an unknown application. Most of this coding refers to terms or actions that are contained within the legislation or approach to performance based planning. A UNAP example is referring to a proposal as Impact (not preferred) and a Material Change of Use with no reference to the planning legislation and the process knowledge that is inherent in those terms. Another example is reference to a concurrence agency without any explanation of the referral stages within the development assessment process.



This combined application - Impact (Not Preferred) – seeks approval for:

- a Material Change of Use for Food Outlet (Café/Restaurant) 240m^2, Food Outlet (Convenience Restaurant) 1,106.1m^2, Shop 193m^2, and Supermarket 237.5m^2; and
- Operational Works for Advertising Signs (2 x Pole Signs).

Figure 2 UNAP Example

4.2 READABILITY SCORES

Using the Readability IO software available online the two assessment manager planning reports were given an average score relating to the conclusion and recommendation of those reports (Readable.IO, 2017). The findings are represented in the figures below.

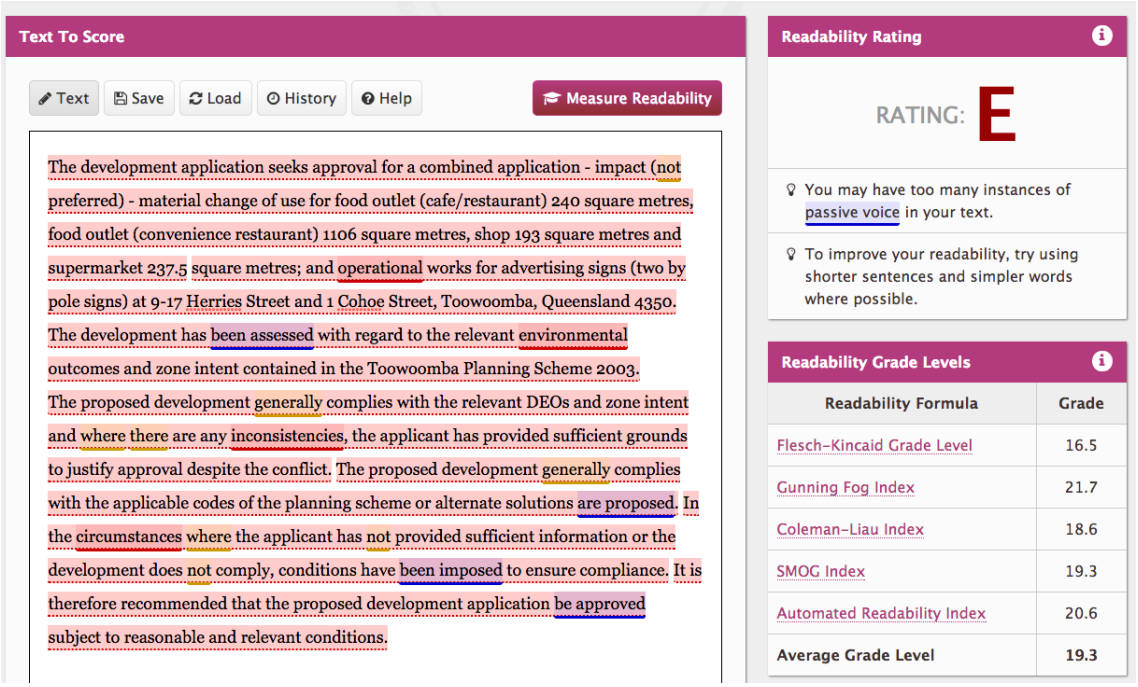


Figure 3 Readability Score Average McDonalds

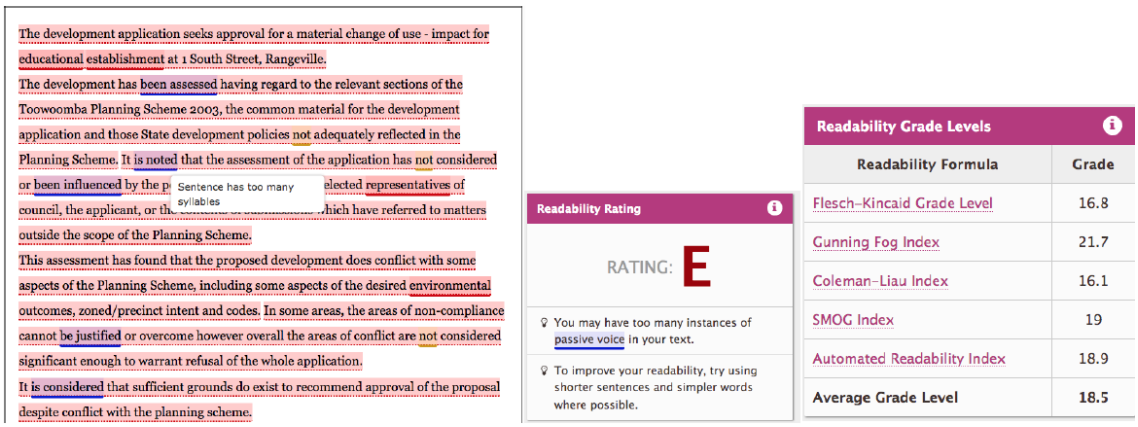


Figure 4 Readability Score Average Maridhadi

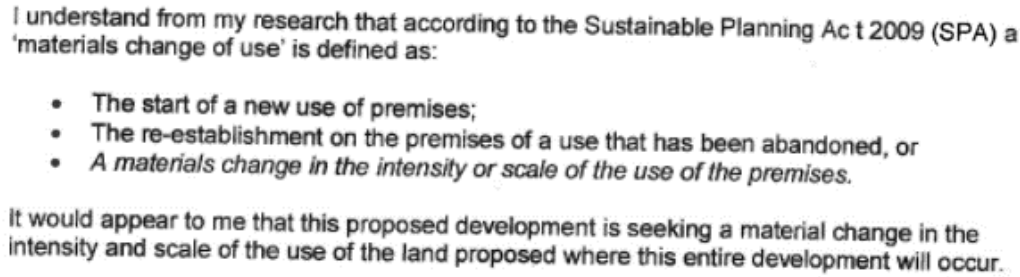
Both planning reports have been scored as an “E” rating according to the Readable.IO software. This represents an averaged readability grade level of 18.5 for the Maridhadi report and 19.3 for the McDonalds report. The scores demonstrate complexity in the planning reports. This exclusivity in communication is clear when the score requires a post graduate qualification and 79% of the case study population has no more than a Year 12 educational qualification (ABS, 2017).

5 DISCUSSION

Many of the submitters were able to identify material grounds for their submission e.g, intent of the zone, demonstration of need and impact on amenity. The barrier for the submitters appears to be translating that into evidence. This lack of evidence and indeed an ability to interpret the application of that to proposals e.g. the intent of the zone particularly seemed to relate to an absence of expert knowledge or understanding of the performance based planning system upon which the legislation is based. This points to a lack of process knowledge and expert knowledge. Most of the indignation and mistrust came from an assumption that zoning meant certainty in terms of land use. Indeed the performance based system aims

for flexibility over certainty and this appeared to be an important expert and process knowledge gap when the submitters were trying to grapple with what appeared to be inconsistent with the intent for the locality (Tennoy, Hansson, Lissandrello, & Naess, 2015).

There are a number of examples where submitters have clearly done a great deal of research to try to place this development proposal within the context of the legislation and the planning system in which it is situated:



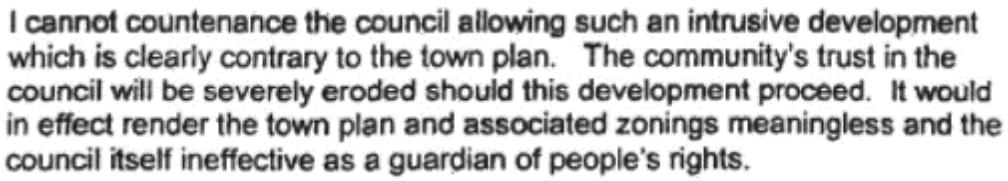
I understand from my research that according to the Sustainable Planning Ac t 2009 (SPA) a 'materials change of use' is defined as:

- The start of a new use of premises;
- The re-establishment on the premises of a use that has been abandoned, or
- *A materials change in the intensity or scale of the use of the premises.*

It would appear to me that this proposed development is seeking a material change in the intensity and scale of the use of the land proposed where this entire development will occur.

Figure 5 UNAP Example

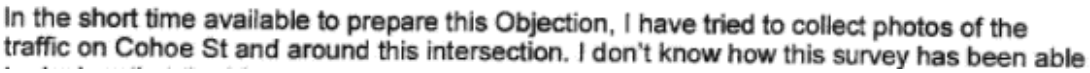
The connection between seeing zoning as certainty and the feelings of loss of trust within a performance based planning system is evidenced in the extract from a submission below:



I cannot countenance the council allowing such an intrusive development which is clearly contrary to the town plan. The community's trust in the council will be severely eroded should this development proceed. It would in effect render the town plan and associated zonings meaningless and the council itself ineffective as a guardian of people's rights.

Figure 6 Intent of the Zone and Trust Example

In addition to the complexity of language, process and context properly made submissions must be made within the statutory timeframe. This means that submitters have only a compressed amount of time in which to identify, gather and understand the material issues. This is an added barrier to non-planners entering the field of contestation legitimately in development decision making.



In the short time available to prepare this Objection, I have tried to collect photos of the traffic on Cohoe St and around this intersection. I don't know how this survey has been able

Figure 7 Statutory timeframes Example

6 CONCLUSION

Throughout the examination of the case studies a recurring theme was the confusion generated by hidden and unexplained reference to the relevant legislation and the principles of 'Performance Based Planning underpinning it. By reading a planning report alone it is not evident how the legislation affects the recommendations and this gap in a non-planners' knowledge makes higher-level consideration and comprehension a particularly difficult feat. It is this process knowledge gap that makes entering the field of contestation for development decisions very difficult for the lay person. Within the wider planning approach, however, the content appears to be accessible even if the concepts are not.

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T04 | URBAN DESIGN, PUBLIC SPACES AND URBAN CULTURE

CO-CHAIRS: ALI MADANIPOUR; GABRIELLA ESPOSITO DE VITA; PEDRO GEORGE

This track brings together the themes of urban design, public space, and urban culture. Papers are invited to explore the nature and the relationship between these themes, and any of their subthemes. The processes of shaping, managing, and inhabiting the urban space have a direct relationship with the political, economic and cultural conditions of cities. Theoretical, methodological and empirical papers are invited to discuss any aspect of this interface between spatial development processes and the urban conditions in Europe and elsewhere.

What are the relationships between urban design and urban and regional planning, and in what ways are they responding to the conditions of globalisation, economic austerity, social inequality, cultural diversity, and climate change? How can they be theoretically, methodologically and empirically enhanced to address these challenges? What is the relationship between these diverse demands on cities, and are they being given the attention they need? What are the current approaches to the public space in Europe and in what ways can these approaches be assessed? How can spatial design and development, and the articulation of urban spaces, reconcile the rich cultural heritage of European cities with their rapidly changing circumstances? How can the research in urban design meet the needs of the EU Cohesion Policy 2014-2020 in terms of smart, sustainable and inclusive cities?

ID 1324 | EVALUATING THE ROLE OF PUBLIC SPACES IN PROMOTING SOCIAL INTERACTION IN DIVIDED CITIES. THE CASE STUDY OF NICOSIA, CYPRUS

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ABSTRACT: Social interaction is the contact between individuals, groups and environments. There are different levels of social interaction, starting with superficial ones, i.e. observing other individuals and greeting them, to a high level of interaction that can be found in neighbourhoods where individuals form communities and share emotional investment in the same things. Public spaces such as streets, plazas and parks have the ability to facilitate and promote social interaction, because they create opportunities for people to interact in the form of activities and special events. The UN-Habitat defines social interaction as an element of public space. Divided cities originate as the result of divisions within a nation. With little to no relation between the two sides of the divided city, they continue to develop independently. In cases where the citizens of the divided cities are allowed to move across the border, one place where they still come in contact with each other and have an opportunity to interact is the public space. Thus public spaces have the potential to build connections between different groups, and cultivate good will, friendship, compassion and tolerance. This paper analyses the ability of public spaces in a divided city to facilitate social interaction. It uses a mixed method design, building an index of social interaction to quantify the ability of public spaces to promote social interaction, and conducting expert interviews to design and validate the index and its results. The results show that the public spaces in Nicosia are not used to their full potential and there is a tendency for inhabitants to focus on spaces that offer activities such as shopping, cafes and restaurants, and festivals. The public spaces which had a larger number of such activities had a higher ability to promote social interaction. The social dimension of public spaces demonstrated a high level of significance. The presence of both communities in the public spaces, as well as the occupant density had a great impact on the outcome of the index, and therefore, on the ability of public spaces to promote social interaction.

1 INTRODUCTION

Nicosia is both the capital of the Republic of Cyprus and the Turkish Republic of Northern Cyprus. A UN-administered buffer zone still divides the island and passes through the centre of Nicosia. This buffer zone, also referred to as the “dead zone”, can only be crossed through checkpoints. Currently there are three crossing points in Nicosia, around which several public spaces exist, ranging from commercial streets to parks and markets. This paper analyses opportunities for social interaction in a divided city, by focusing on the ability of public spaces in Nicosia to enable this social interaction among the divided communities.

Divided cities originate as the result of nation divisions (Kliot & Mansfeld, 1999). With little to no relationship happening, the two sides of a divided city continue to develop independently. The spatial division of a wall creates a distinct urban environment on either side of it. This division of space has a physical function as much as it affects the administrative and political structure, thereby creating an imbalanced distribution of resources and opportunities (Abdelmonem & McWhinney, 2015). It also becomes a negative feature that deters mobility, interaction and social cohesion. The built fabric becomes an object of remembrance that is paradoxical and contested, with different meanings and connotations (Bevan, 2007).

However, in cities where the citizens are allowed to move across the border, public spaces provide one option for shared spaces where people can interact (Pullan et al., 2012b), can become a common space for shared functions and social activities, and important catalysts for change which allow people to experience life on the other side and bond with their neighbors. This interaction discourages stigmatization of “the other” through shared experiences that promote mutual trust and respect. Hence public spaces, if accessible to both sides of the city, become places of exchange with a significant social role as a complex

system of open socio-spatial engagement (Marcus & Francis, 1998). Even streets can act as shared spaces and binding factors within divided cities (Bollens, 2006, UN Habitat, 2013).

Researchers have long focused on divided cities, and on public spaces within these divided cities, particularly focusing on the political or historical aspect of the division (Till et al. 2013, Öngül 2012). Others stress the importance of public spaces as binding mechanisms in divided cities, and analyse the physical aspect and the ways people use the space (Nagle, 2009). Where a physical barrier that divides the city sends a clear message of exclusion, public spaces contest this notion by presenting a shared space where everyone is welcome. Gaffikin et al. (2010) analyse the role urban design plays in divided cities, concluding that public spaces provide an opportunity for social contact, which can lead to social interaction. Others observed how people interact with the public space and within one (Abu-Ghazzeh 1999, Talen 1999).

In this paper we developed an index that measures the ability of public spaces to promote social interaction in a divided city, and confronted the index's conclusions with expert interviews. The results show that public spaces in Nicosia are not used to their full potential and there is a tendency for inhabitants to use public spaces where semi-public activities occur outside, in the street or in the square. The public spaces which had a larger number of such activities had a higher ability to promote social interaction. Focusing on public spaces located around the two pedestrian border crossings, we could also observe how an area marked by infrastructures of conflict (Till et al, 2013) such as the UN-administered buffer area and the wall, were slowly converting into areas where the two communities came together.

Following this introduction we discuss what are divided cities and how public spaces can enable social interaction in these cities. We then introduce Nicosia and the public spaces that were analysed, how the data was collected and analysed and how the index was built. The results will focus on the public spaces that scored highest and lowest in the index, followed by discussion and conclusions.

2 PUBLIC SPACES ENABLING SOCIAL INTERACTION IN DIVIDED CITIES

2.1 DIVIDED CITIES

Divided cities have been defined as a city comprising two or more distinct entities that have to be spatially separated, mutually exclusive and relatively homogeneous enclaves (Nagle 2009). Van Kempen (2007), and Marcuse (1993), consider highly fragmented cities to be divided cities, whereas O'leary (2007), refers to this phenomena as a political partition, where an entity becomes divided by a barricade, in form of a wall, fence or other type of physical obstacle.

The physical borders dividing cities have a practical and a symbolic function. They represent "infrastructures of conflict" (Till et al., 2013), such as walls, barricades and buffer zones, which are not only a physical divide, but also a social and symbolic one (Pullan, et.al., 2012a). The symbolic divide may be the deepest one. It causes stigmatization, feelings of insecurity and disassociation from the population on the other side (Pullan et al., 2012a). Symbols of divisions can also be "Infrastructures of peace" (Till et al., 2013), for example the "Home for Cooperation", a revitalised building in the buffer zone of Cyprus, located on a neutral territory and administered by both Greek and Turkish Cypriots. These send a message of unity and cooperation, and turn an artefact of conflict into a promise of peace (Till et al., 2013).

Even in cases where the members of the divided communities are free to move across the divide, they often opt for not to, due to personal beliefs or out of principal (Pullan et al., 2012b). In the case of Nicosia, some of the members of the Greek Cypriot population consider that by crossing the divide and showing their identification at the border, they acknowledge the legitimacy of the Turkish Republic of Northern Cyprus (Webster & Timothy, 2006).

PUBLIC SPACES

Any space accessible to the general public and part of the built environment could be considered a public space. Squares, streets, gardens, cafés and markets, among others, qualify as public spaces. Dymnicka (2010) argues that a public space is formed by the interactions of its users, while at the same time,

shaping their interactions. However, what determines a public space is a set of rules and restrictions that applies to it, and determines who can use it and how. Amin (2002) argues that most public spaces are 'places of transit' where meaningful interactions among strangers are unlikely. However there is potential for chance encounters among strangers "and in such serendipities rests the opportunity for exchange and learning that can help break barriers" (Gaffikin et al., 2010, pp. 498). In divided cities the motivation for using public spaces may arise from daily tasks, rather than to integrate with neighbors (Pullan et al., 2012b).

Public spaces have been studied based on their functions at the city level, their use and the roles of different stakeholders in shaping them (Madanipour, 2010). In its physical sense, public spaces are urban generators that stimulate communication channels with morphological, environmental and aesthetic values (Lynch, 1960; Marcinczak & Sagan, 2011; Woolley, 2003). Culturally, public spaces are points of convergence that host numerous traditional functions that allow for symbolic value embedded in identity and sense of place. The cultural and political meanings of these spaces are vital in day to day life (Low, 2000). Politically, they are spaces for demonstration, an arena for negotiations of conflict and of political actions (Van Deusen, 2002; Low, 2000; Mitchell, 1995). They can host clashes among oppositions but tensions can change over time, and the resulting effect can be witnessed in shared spaces.

The functions and activities that public spaces allow diverge extensively and so do its users. Activities in public spaces are determined by the socio-economic characteristics and political ideology of its users (Aziz, Ahmad, & Nordin, 2012; Aratani, 2010) and can change the way people behave in these spaces. Public spaces are experimental environments that groups use to legitimize themselves through decisions of where to stay, gather, and socialize (McCann, 1999). They gain genuine significance where groups can react to the condition of co-existence and overcome boundaries of division in a quest to build a consensus of shared living (Abdelmonem & McWhinney, 2015) .

Thus the roles, function and even definition of public spaces can have varied connotations. In this paper, we consider a public space as an urban structure, including but not limited to streets, squares, cafés, and parks, accessible to everyone pending a set of rules applied to all users, visible and accessible from the street level, and determined by and determing the interactions of its users.

2.3 SOCIAL INTERACTION

Social interaction is the contact between individuals, groups, and environments (Talen, 1999). Individuals and groups feel the need for social interaction, and find opportunities for it within public spaces (Drucker and Gumpert 1998, Marcus and Francis 1998).

Social interaction can happen anywhere, between any two individuals or groups. Being such an elusive phenomena, it is difficult to measure. Researchers often emphasise the importance of social interaction in public spaces on a local level, i.e. neighbourhood, or residential area. Talen (1999) found that public spaces that are attractive to visitors promote a sense of community. Hickman (2013) found that much of a neighbourhood interaction takes place in spaces such as cafés, parks and shops. One of their most important characteristics is their functional role, for example acquiring goods, entertainment or recreation.

There are different levels of social interaction, starting with very superficial interaction, i.e. observing others and greeting them, to a high level of interaction, which can be found in neighbourhoods where individuals form communities and share emotional investments in the same things (Talen, 1999). When communities are physically separated by a divide and neighbourhoods are relatively homogenous, any level of social interaction becomes relevant and contributes to the social life of a divided city.

SOCIAL INTERACTION WITHIN PUBLIC SPACES IN DIVIDED CITIES

The two major communities of the divided city perform most of their daily activities on their own sides of the divide. The places where they come in contact are limited. Public spaces provide an opportunity for people to interact, by offering a shared space where people can come in contact (Hickman, 2013).

In order for public spaces to attract visitors from both sides of the divided city and become places of social interaction, they must possess certain qualities. The aspects that influence the ability of public spaces to attract visitors and interaction can be grouped in three dimensions – Physical, Social and Activities. The physical dimension includes size and accessibility, both of which define the public space – how will it be used, how many activities and visitors can it accommodate, wheter big events can be hosted. The social dimension links back to visitors and their diversity. People attract more people, therefore increasing the possibility for social interaction in public spaces. Also different types of visitors, from different communities and age groups influence the atmosphere of the public space, potentially making them more inclusive. Activities determines what types of activities and events take place in the public space, which increase its appeal, and provide reasons for people to use it. The combination of these dimensions determines the way the public space will be used, and influences its ability to accommodate and promote social interaction.

3 METHODOLOGY

3.1 DATA AND METHOD

Data was collected through expert interviews and fieldwork observation. The interviews were semi-structured and aimed at obtaining information about the social interaction between the two communities and the public spaces in the city, the way they were used, what affected the social interaction in public spaces and how the public spaces influenced social interaction. A total of 13 interviews were conducted with Turkish and Greek Cypriot experts, and international experts involved in bicommunal work.

The indicators of the index were selected through a review of the relevant literature, and further aligned based on the expert interviews and fieldwork observations. The indicators were calculated in their own unit and then standardized to values from 0 to 1. The same formula was used for standardizing the indicators, considering that all of them present benefits:

(The value of “X” -Minimum value) / (Maximum value -Minimum value) = Standardized value of “X”

Where “X” stands for the value of an indicator for a public space, while the minimum and maximum values represent the lowest and highest values of the public spaces for the indicator in question. To determine the weights for each indicator, the indicators that were prioritized are those assumed as having the biggest influence on social interaction, according to the experts’ testimonies (table 1). The exceptions are the indicators “Presence of different age groups at the public space”, that was given a value 1, if members of all age groups were present during the counting sessions, and a value 0, if any age group was not present. In “Number of events taking place in the public space”, the first category (<2 events/ month) was given the value 0. The second category (3-8 events/ month) was given a value of 0.5, and the last category, (>8 events/ month), a value of 1. The “Cafes and restaurants” sub-indicator was given a sub-weight of 0.2, while the other sub-indicators were given a sub-weight of 0.1, adding up to a total of 1, because during the expert interviews this activity was mentioned as more likely to promote social interaction.

Indicator	Data collection and measurement	Rationale	Weight of indicator
Surface area (m2)	-Extracted from the map of Nicosia. The surface area of any structure which was not a public space was deducted from the total surface area.	Surface area determines the capacity and number of different activities that can happen in the public space. More activities make the public	0.1

		space potentially more attractive and generate opportunities for social interaction (Van Deusen, 2002)	
Accessibility[1]	The road network was used to calculate the distance of each public space to the nearest crossing point. Distances were measured considering all possible combinations with every street. The closest distance was chosen as the best result.	A public space must be accessible to the population it serves (Whyte, 1988). Public spaces that are easily reachable and at a convenient location have more visitors (Shaftoe, 2008)	-
Number of different types of activities carried out	-Guided observation Activities were counted and grouped under: Shopping; Cafes and restaurants; Education; Art and culture; Religion; Private businesses; Beauty services; Non-governmental organizations and International organizations.	The variety of activities attracts more visitors to the area. Activities can be the instigator for communities to cross divide and participate in social interaction (Pullan et al., 2012b)	0.1
Number of each type of activity carried out [2]	-Guided observation	A higher number of activities of the same type offers a wider choice to the visitors, increasing chances of getting the visitors interested and spend time in the public space	0.1
Number of events taking place	Information about events in the public spaces came from websites of different organizations, expert interviews, and social media. Grouped as 2 or less per month; 3 to 8 per month; more than 8 per month.	Events such as festivals or concerts have the ability to build solidarity among participants (Shaftoe, 2008). Events attract visitors and make the space more interesting (Holland et. al. 2007).	0.15
Occupant density, walking	-Guided observation Counting the number of people in the public space and dividing it by surface área.The unit of this indicator is people per square meter. Public spaces are divided into sections, of approximately the same size, via imaginary lines, called "gates", which are observed in five-minute counting sessions. Only the people who cross the imaginary line are counted. The counting sessions are repeated at each gate at different times of day (Grajewski & Vaughan, 2001). The counting occurred at three times of day, 8am to 10am, noon to 2pm and 4pm to 6pm.	The more visitors circulate through the public space, the higher the opportunity for social interaction. The occupant density can also indicate the popularity of the public space	0.15
Occupant density, static	-Guided observation Similar to indicator "Occupant density, walking". Number of people standing or sitting in the public space, inside each section. People who were sitting in cafés and restaurants were only considered if sitting outdoor.	The more visitors spend time in the public space the higher the opportunity for social interaction. The occupant density can also indicate the popularity of the public space	0.15
Presence of different age groups	-Guided observation The age group classes are: 0-14; 15-24; 25-44; 45-64; 65 and older (Provisional guidelines on standard international age classifications,	Presence of all age groups in the public space indicates that it meets diverse needs and that it is safe and inviting	0.05

Table 1 Indicators, data collection, rationalle and weight of the index of social interaction

1. The indicator of accessibility was not relevant in the case of Nicosia, because all the public spaces identified were equally accessible, and at a close proximity to one another. Thus it would not have a significant contribution to the outcome of the índex.
2. During the expert interviews, it was determined that locally owned shops and cafés have a greater impact on social interaction. Thus the locally owned activities were given a higher weight.

3.2 CASE STUDY

This paper focuses on the divided city of Nicosia, in Cyprus, which is divided by an UN-administered zone, also known as the “buffer zone”, which can only be crossed through checkpoints. Currently, there are three checkpoints in the city. The Ayios Dhometios (Metehan) crossing, located in the western suburb of Nicosia, is mostly used by cars. The Ledra Palace crossing is located just outside the Venetian walls that circle the old town, the center of the city. The Ledra Street crossing is located in the very center of the old town. Ledra Palace and Ledra Street are intended for pedestrians. Opening the border crossings has helped the economic development of both sides of Nicosia, and revived the public spaces in the area (Gaffikin et al., 2010). The analysis focused on public spaces in the vicinity of Ledra Palace and Ledra Street. The public spaces analized also needed to: be accessible to everyone, and no entrance fee charged; the users occupy it for an amount of time longer than needed just to pass through it; the space is used on a daily basis, not only during special events; it is used by the members of both majority communities in Nicosia. Based on field observation and expert interviews seven public spaces were considered, three of which are located on the Greek side of Nicosia (Ledra Street, Faneromeni Square and the Municipal gardens), three are on the Turkish Cypriot side (Lokmaci Street, Buyuk Han market, and Bandabulya market), and one located entirely in the UN buffer zone (Markou Drakou Street) (figure 1).

Figure 1 Location of crossings and public spaces analysed

Ledra Street is a pedestrian area with many shops, cafés and restaurants. A department of the University of Cyprus is also located there and brings students and young people to the area. According to the experts, Ledra Street and the surrounding areas were revived after the Ledra crossing opened in 2008: “Ledra Street became more alive, right now, after the borders were opened. It’s more commercialised (than the north side), [...] there are many communities, not just Greek Cypriots, and Turkish Cypriots, but many tourists walking and visiting the place.” (Interview 7).

Faneromeni Square hosts one of the oldest schools in Cyprus, a church, a mosque and a museum. The area also includes a plateau and a network of alleys with cafés and shops and is very popular with both communities. “Faneromeni is not being used because it’s a square, but because it’s part of a café. If cafés bring their chairs outside, it is still public in that sense.” (Interview 1).

The Lokmaci Street was the street of craftsmen and tradesmen, and this tradition lives on in the types of shops found nowadays. There are also local cafés. The area gained significance after the Ledra street crossing was opened. “This area emerged after the borders were opened. It was deserted before the checkpoints opened, now they have come alive. They have attracted new and interesting uses, like cafés, [...]visited by all sorts of people. The mixing of different people creates a culture of diversity.” (Interview 11)

The Buyuk Han market is used as a market and a public space, hosting cafés, restaurants and several shops, locally owned, that sell hand-made products and typical Cypriot ornaments, artist workshops and studios. Several festivals take place here, as well as food markets and live music sessions. Every Saturday, there is a standing meeting for Greek and Turkish Cypriots at one of the cafés and everyone is welcome to join -“Buyuk Han is a prime location, where Greek and Turkish Cypriots meet.” (Interview 11).

The Bandabulya market is a municipal market dating back to 1939, located in the old town. Vendors, mostly Turkish Cypriot, sell fresh fruits and vegetables, meat, ornaments and souvenirs. There are art studios, cafés and restaurants. The market attracts tourists and Greek and Turkish Cypriot population. However, the majority of the users who sit in the cafés and spend time here are the members of the local, older population. “Bandabulya is the old market. [...] here you would see the Greek Cypriots also, but I don’t know if you would see them spending a lot of time. They would go there for shopping” (Interview 6).

The Markou Drakou Street, located entirely in the buffer zone, offers a neutral ground for Greek and Turkish Cypriots, with many meetings and political discussions taking place here. International and non¬governmental organizations are situated here, mainly in the “Home for Cooperation”, an educational centre, where events, dialogues, workshops and Greek and Turkish language courses take place. It also hosts a café where events are organized, such as bicommunal music nights, dance lessons, and festivals. Some experts observed that the visitors of the Markou Drakou Street are always the same people. Several private businesses also locate here, and a restaurant where many diplomatic events take place: “This space here ok, it’s controlled by the UN, but it’s usually very quiet unless somebody arranges an event or something. [...] The “Home for cooperation” is very active” (Interview 10).

The Municipal Gardens are a large park, one of the few in Nicosia. Besides benches, a children playground, and one café, there are no activities here. According to some experts, they are used mainly by other minority communities during weekends, or during events. “The Municipal Gardens are frequented by Sri-Lankans and Filipinos. The Asian minorities use it more than the Greek and Turkish Cypriots.” (Interview 13).

4 RESULTS

The main outcome of the index is a score for each of the public spaces, representing their ability to promote and facilitate social interaction between the Greek Cypriot and the Turkish Cypriot communities. The results as well as their position relative to the border and the distance from the nearest crossing are shown in Figure 2. The public spaces are presented on the map in graduated symbols, where the darker colours represents higher scores of the index and the lighter colours represent the lower scores.

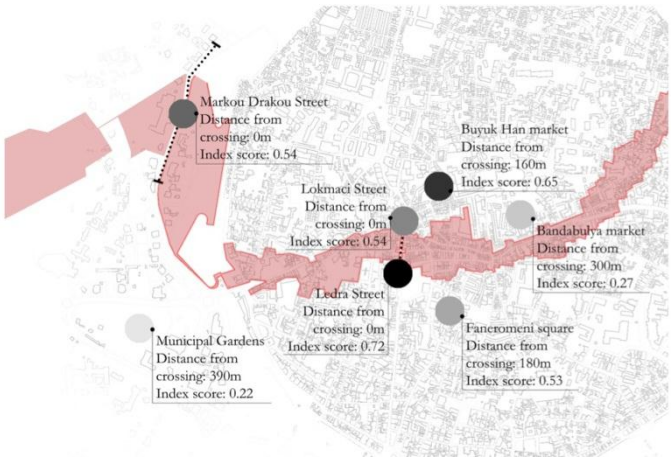

Figure 2 Graduated map of the results of the index for the public spaces.
Source of base map: University of Cyprus, 2016.

Figures 3 to 5 show the results of the standardized values, from 0 to 1. Figure 3 illustrates the physical and social dimensions of occupant density. The public space with the biggest standardized value of the surface area indicator has the lowest occupant density, both for walking and static visitors.

Figure 4 shows which of the public spaces are visited by both members of both communities and members of all age groups. Figure 5 presents activities in public space. We can see that the pattern of activities and events does not vary extremely in the public spaces analysed.

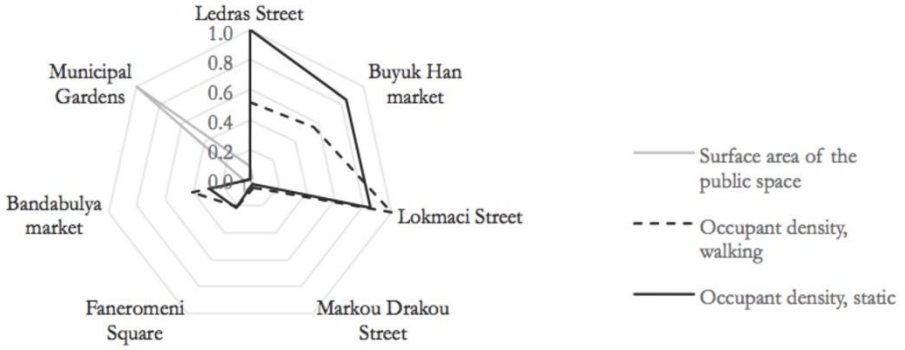

Figure 3. Standardized values of the indicators for the physical and social dimensions of occupant density of public spaces

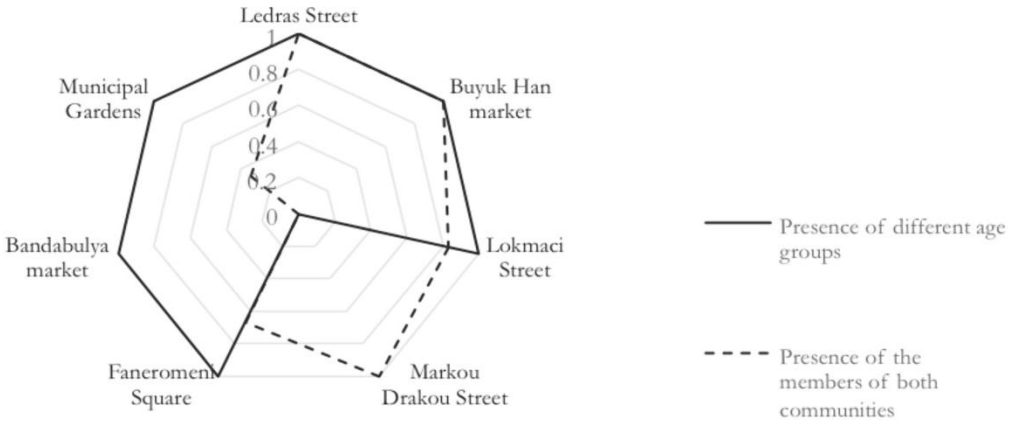

Figure 4. Standardized values of the indicators for the social dimension of diversity in public spaces

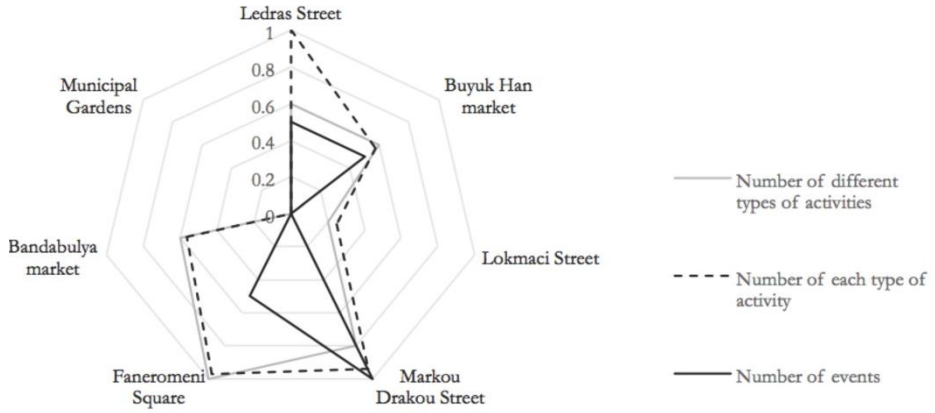

Figure 5. Standardized values of the indicators for the activity dimension of public spaces

We will present only the public spaces with the highest and lowest score in the social interaction índex: Ledras street and the Municipal gardens. The results for the Ledra Street are dominanted by the fact that the area has the highest number of shops and cafés and restaurants among all the analysed public spaces, both local and brand owned. There is also a high number of people occupying the public space, standing or sitting, considering its size, as seen in Figure 3. This can be related to the high concentration of cafés and restaurants, most of which have a sitting area outside, therefore making the outside area of the café a part of the public space, in the functional sense (figure 6).

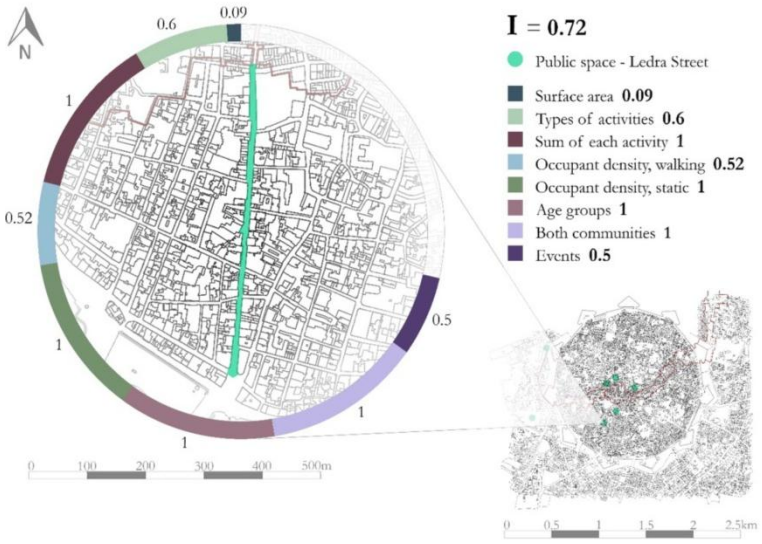

Figure 6 Result of the index of Social Interaction for Ledras Street. Source of base map: University of Cyprus, 2016

The results of the index of social interaction for the Municipal Gardens are shown in Figure 7. In most of the indicators the public gardens score 0. However, this does not mean that the occupant density for visitors that are walking or spending time in the Municipal Gardens is 0 people per square meter, it simply means that the value of these indicators was the lowest among all of the public spaces before they were standardized. Some of the experts mentioned events that happen in the Municipal Gardens, but due to the low frequency of these events, this indicator also had a low score.

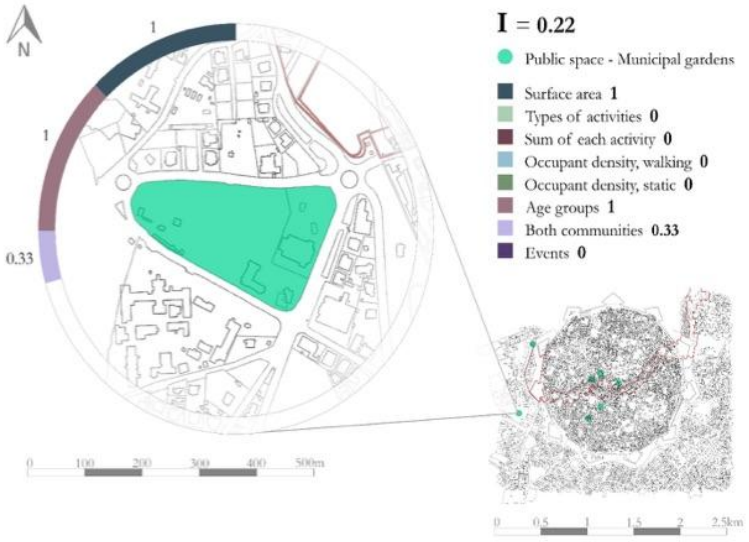

Figure 7 Result of the index of Social interaction for the Municipal gardens.
Source of the base map: university of Cyprus, 2016

5 DISCUSSION AND CONCLUSION

This paper analysed the social interaction in public spaces of divided cities. An index of social interaction was designed and used as a tool to quantify the ability of public spaces to promote social interaction, and applied to the divided city of Nicosia. Different public spaces have different characteristics and qualities that attract visitors, therefore making it harder to compare them. The results of this index were confronted with the input of experts, to better understand why the characteristics of the analysed public spaces might enable or hinder social interaction.

All public spaces analysed are publicly owned areas and properties, with free access. The majority of these spaces are located within and around the center of the city, and in the vicinity of the crossing points. Until the opening of the Ledra Street crossing, this area was heavily militarized. Even though the area was used, it became significantly more visited and lively after the crossings opened. Some of the public spaces in this area were also revived and reopened. For the newer generations of Cypriots, frequenting and sharing these spaces with the community from the other side of the divide is still a new concept. People are going back to using, or learning to use the area of the walled city and the public spaces within it for social and civic life, as opposed to having these spaces used for militarized, border defining purposes. “Infrastructures of peace”, like the “Home for Cooperation”, are being built around and replacing “infrastructures of conflict” (Till et.al. 2013) namely the militarized area. One of the main streets and public spaces in the pre-conflict era was the Ermou Street. Now, the UN buffer zone passes through the majority of the Ermou Street, restricting access to it. However, the citizens of Nicosia still remember the cooperation and sharing the spaces of the city, and commemorate it through a festival called “Ermou 1900”, organized by the “Centre of Visual Arts and Research”, an example of events happening in public spaces that evoque memories of conflict and division, but also or reunion and peace: “Greek and Turkish Cypriot craftsmen, peddlers, come here in Ermou Street, and we dress up people as they were in the 1900s, and they sell their products, as they used to in the 1900s at Ermou Street.” (Interview 12). Ermou street is an example of a public space that vanished with the division. Others emerged from it, like Markou Drakou Street that hosts the “Home for Cooperation”.

According to the experts testimonies, the role of public spaces as places of social interaction is significant because these are the rare spaces where the two communities come in contact and have the opportunity to interact. This implies that the city is acquiring new “places of contact” (Abu-Ghazzeh, 1999; Farida, 2013; Talen, 1999) between the two communities, the challenge now is how to turn these casual interactions into ocasions to overcome the city’s divide: “I think that public spaces help people to come together, and be active, instead of being individuals. They become part of a team. It’s a place to connect. [...] I think it’s a great way to have people in an open space and react with each other” (Interview 9).

The qualities that influence the ability of the public space to promote social interaction are incorporated in three dimensions: physical, social and activity in the public space. It is the representation of these dimensions and their combination that determines the ability of public spaces to promote social interaction. The physical dimension includes the size and the accessibility of the public space. Size was considered as beneficial due to the increased surface area available for hosting various activities such as shops, cafés, events and festivals, hence more people. However, the public space with the largest surface area is the one with the lowest score of the index of social interaction. This finding concurs with the study of Abu-Ghazzeh (1999), who found that, in the context of residential areas, smaller open spaces felt more inviting and intimate to residentes. Residents also prefered smaller public spaces because its users were then more recognizable. Even though that study was applied to public spaces in residential areas, it lends some insight into why in Nicosia, it is the smaller public spaces that have a bigger role in promoting social interaction and instigate the stronger connections between their users.

The social dimension of public spaces included the indicators of occupant density walking and static, and diversity (of age groups and communities). The public spaces with the highest score are the ones with the highest occupant density and presence of diferente age groups, expect for Markou Drakou Street. Activities included the different types of activities, their individual number and the number of events in the public space, important aspects in Nicosia’s relationship with public spaces as seen from the expert interviews. Markou Drakou Street has the single highest score in the indicator of events in public spaces, and significantly high scores of the different types of activities and each type of activity.

The social interaction in Nicosia is place-dependent. The majority of experts agree that the form of interaction between the Greek and Turkish Cypriots depends on the place where it’s happening. However, it is present to a certain degree, especially in cafés and in areas with high concentrations of both communities.

Experts’ testimonies on the use of public spaces and their role in Nicosia acknowledge that they are not used to their full potential. There is a tendency for inhabitants to use public spaces where semi-public activities develop outside, in the street or in the square. This is the case of cafés and restaurants, via their esplanade areas, but also shops or events that “spill over” into the public street. The public spaces which had a larger number of such activities had a higher ability to promote social interaction. This might be

related to the fact that the area where most of these spaces are located is close to the buffer zone, and only recently became available. “I think the role of public spaces is not very prominent in the Cypriot culture. It’s not particularly visited or populated. It’s not a major element in the city. Of course it’s there, and people put chairs and they sit there and they have coffee, but people go to the restaurants, they go to cafés. If you go to any part of Nicosia, you find people in cafés, rather than in a square.” (Interview 11)

“I think these are the spaces which were previously the border areas that people had common memories of those spaces, and now they have been opened up. And because they are spaces gluing the city together, or linking the city together, they are available for interaction. It is also convenient because they are accessible. People who live for example in the north, they come to the area near the border, near the buffer zone, it’s the same with the Greek Cypriots.” (Interview 11).

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ID 1332 | THE COLLECTIVE SPACES SYSTEM IN COASTAL AREAS PLANNING – THE IMPORTANCE OF BUILDING A THEORETICAL FRAMEWORK OF EVALUATION OF THE APPROACH OF DIFFERENT TOOLS

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ABSTRACT: The specialised literature links the collective spaces system (SEC, in its Portuguese abbreviation) to: the foundation that structures the urbanized areas; the network that coordinates the different aspects of urbanisation, relating them to each other; the set of spaces the individual travels and from which he interprets and understands the city; the grid which organizes the building and which endures beyond it; an urban value, able to trigger, on its own, other economic or cultural processes,

leading to investment and local initiatives; a driving force of local experiences; and the pillar of a Corbusian balance. Thus, inter alia, – for reasons relating to: the need of structuring the urbanized areas; the urgency of coordinating and relating the constituent aspects of urbanisation; the importance of providing interpretation to the city; the significance of organising the building; the promotion of local initiatives and local experiences; and the urban improvement itself – the role of the SEC in planning should be, nowadays, a central issue of debate. In coastal areas, where – due to agricultural productivity, fishery or energy production, or even for reasons relating to infrastructure concentration, cultural heritage and these spaces potential for touristic and leisure activities – the concentration of population is 3ultimately significant, this debate becomes all the more important. However, despite the fact that coastal areas planning tools have been directing a multitude of operations for the improvement of collective use spaces in these areas, these measures' contribution regarding the planning of the above areas is still unknown. Furthermore, upon consideration of thirty nine coastal areas planning tools, evidences that the improvement of collective use spaces has been promoted with environmental protection goals were, predominantly, found. If these evidences are verified, then limitations might arise with respect to the contribution of these tools for the coastal areas planning. This article aims to highlight the need of building a theoretical framework which, when applied to different cases and contexts, allows us to undertake this evaluation.

KEYWORDS: collective spaces system, coastal areas planning, coastal areas planning tools, theoretical framework of evaluation.

1 INTRODUCTION

Once acknowledged the sensitivity of coastal areas, as well as these spaces' propensity for the development of a range of activities that are, not always, in line with its carrying and use capacities, several national and international initiatives where its planning was discussed were carried out.

Worldwide, no initiatives have been identified as having the coastal areas planning as the focus of the debate, although six initiatives where this issue was ultimately discussed as a means of responding to other concerns stand out.

In the European context, six initiatives where the coastal areas planning was the focus of the concerns and eleven where this issue was discussed as an operational tool aimed at the materialisation of worries of a different nature have been identified.

Lastly, at Portuguese level, eight initiatives that focus on the coastal areas planning and eight where this issue was discussed as a means of responding to other concerns have been identified.

Despite the multitude of roles given to the SEC by specialised literature, in the context of the identified initiatives, we seem to primarily find evidences that the improvement of collective use spaces has been promoted with environmental protection goals.

If this assumption is verified, then limitations might arise with respect to the contribution of these tools for coastal areas planning. This article aims to highlight the need of building a theoretical framework which allows us to test this assumption.

2 CONCEPT OF SEC

According to Portas et al (2011), the Collective Spaces System (SEC) is:

1. the foundation that structures the urbanized areas;
2. the network that coordinates the different aspects of urbanisation, relating them to each other;
3. the set of spaces the individual travels and from which he interprets and understands the city;
4. the grid which organizes the building and which endures beyond it.

Alternatively, Portas (2012) presents collective use spaces as an urban value, able to trigger, on its own, other economic or cultural processes, leading to investment and local initiatives. By way of example, he lists the cases of pedestrianisation, boulevards, squares, parking, waterfronts, urban parks, promotion of intermodal transport networks, conversion of urban voids and integration of equipment of excellence.

Silva (2015), while focused on a specific type of collective use space – the square, highlights its role in merging the unit and its importance in boosting local experiences.

Lastly, Sequeira (2012), in a perspective resulting from his review of Le Corbusier projects, links collective use spaces to centralities and points out the balance in its construction.

For Sequeira (2012), this balance specific to the collective use spaces of Le Corbusier results from a symmetry and eurhythmy – according to the original meaning of the terms – that Le Corbusier had known. In other words, this balance is based on relations established between each part and the unit , between the different dimensions of each part, and between the different dimensions of the unit , representing a construction with no hierarchy, where the perspective is not aimed at a high point.

3 EVIDENCES RESULTING FROM THE APPROACH OF THE ANALYSED TOOLS TO THE SEC

Of the thirty nine coastal areas planning tools that have been analysed , evidences have predominantly reinforced that the improvement of collective use spaces has been promoted with environmental protection goals. More precisely, with a view to combat pollution, preserve biological diversity, promote sustainable development, maintain coastal defences or adopt an integrated response to combinations of objectives.

3.1 COMBATING POLLUTION

In order to prevent marine pollution resulting from the discharge of harmful substances, the MARPOL Convention provided the basis for the rehabilitation/construction of ports that incorporate appropriate infrastructures for receiving and repairing ships that carry said harmful substances.

In the interest of protecting and preserving the marine environment from sources of pollution, the construction of waste treatment facilities derived, among other factors, from the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.

Aiming at reducing the combined greenhouse gas emissions, the Kyoto Protocol made way for a myriad of interventions, including the promotion of projects pertaining to the profitability of tidal energy.

With a view towards protecting the environment from the adverse effects of waste water discharges, the Directive on Urban Waste Water Treatment encouraged the construction of collection and treatment systems for urban waste water.

In order to reduce discharges into the sea, especially illegal discharges, of ship-generated waste and cargo residues, the Directive 2000/59/EC of the European Parliament and of the Council, of 27 November 2000, promotes interventions for the improvement and construction of port facilities that allow for the reception of such ships.

Since mitigation is one of the means to fight pollution in order to, inter alia, protect coastal waters, the Water Framework Directive resulted, among other things, in measures of remediation of water bodies; injection of water in geological formations, mines and quarries; injection of natural gas or liquefied petroleum gas (LPG) in geological formations; and construction of catchments.

3.2 CONSERVATION OF BIOLOGICAL DIVERSITY

Taking into account the conservation of biological diversity, the Biodiversity Convention lead to a wide range of initiatives, such as the establishment of the system of protected areas and the promotion of a

series of measures aimed at protecting, rehabilitating and recovering degraded ecosystems and endangered species.

In order to preserve wild flora and fauna, as well as their habitats, the Bern Convention resulted in, among other measures, several interventions aimed at protecting natural habitats and relevant areas for migratory species, as well as banning temporarily, or locally, its exploitation and introducing native species.

To protect, manage, monitor and regulate the exploitation of species of wild birds naturally occurring in the European territory, the Birds Directive introduced a variety of interventions aimed at the creation of protected areas; upkeep and management in accordance with the ecological needs of habitats; re-establishment of destroyed biotopes; and creation of biotopes.

To ensure the conservation of natural habitats in Europe, as well as of wild flora and fauna, the Habitats Directive promoted, among other measures, the development of interventions aiming at maintaining and recovering a favourable conservation status of certain species and habitats.

In an attempt to develop sustainable fisheries that will not undermine the conservation of marine resources, while guaranteeing fishermen's jobs and incomes, the European Union's Common Fisheries Policy lead to a multitude of interventions, particularly regarding aquacultures.

3.3 PROMOTING SUSTAINABLE DEVELOPMENT

In the pursuit of a model for sustainable development , a series of measures stemmed from Agenda 21 regarding conservation and restoration of habitats;, suppression of deterioration and erosion of the coastline; and improvement of coastal settlements in terms of water supply, sewage system, solid waste and industrial effluents.

With the goal of fighting against situations of imbalance caused by the demand and occupation of coastal areas, the European Coastal Charter lead to, inter alia, the construction of raised walkways designed for pedestrian movement without disturbing coastal dunes and the use of native plants at green spaces level.

In order to promote the sustainable development of the European Union's coastal areas, the European Commission's Demonstration Programme on Integrated Coastal Zone Management promoted 35 demonstration projects, including, among others, the following: Strymonikos, Rade de Brest, Vale do Lima, Mar de Wadden, Dorset and La Gironde.

3.4 COASTAL DEFENCES

Prioritizing objectives of environmental protection, the Recommendations of the European Parliament and of the Council concerning the implementation of Integrated Coastal Zone Management in Europe were at the background of protection measures for coastal settlements and its cultural heritage, as well as of the creation and improvement of certain collective use spaces.

In order to recover the natural functions of coastal systems and, therefore, the natural resilience to erosion and flooding, from the EUROSION Project stemmed interventions designed to maintain, or improve, the level of protection granted by some specific construction works relating to new defences; to relocate people and goods ; and to re-establish balance sediment and the necessary space for the occurrence of coastal processes.

3.5 COMBINATIONS OF OBJECTIVES

Among other goals in terms of nature conservation and defence, the legal texts on the drafting and implementation of POOC lead to measures of promotion and improvement of beaches classified as strategic due to environmental or touristic reasons.

Striving for the protection and promotion of certain coastal areas considered sensitive and for the improvement of estuaries, port areas and other degraded areas, as well as for urban rehabilitation and recovery of beaches, dune systems and cliffs, the FINISTERRA Programme lead to a multitude of interventions.

These interventions include measures regarding: recovery and artificial reinforcement of dunes ; beach recharge; regularisation of mouths, sediment transposition of bars and reinstatement of dredged spoils; cliff stabilisation ; maintenance and construction of groins and protective walls; demolition and removal of structures in risk areas; beach rehabilitation ; promotion of public spaces and built heritage; implementation of garbage collection systems and cleaning of beaches; creation of basic infrastructures; rehabilitation of degraded urban centres and settlements; management of habitats considered a conservation priority; artificial opening and dredging of coastal lagoons; revitalization and recovery of salterns; planning, construction and maintenance of facilities and infrastructures relating to artisanal fisheries, aquaculture and activities of recreational navigation; recovery and creation of environmental education centres; and construction of walkways, footpaths, equestrian paths and bicycle lanes.

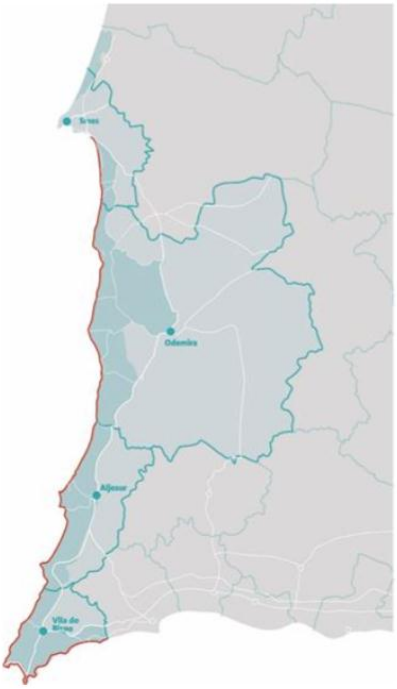
To ensure environmental quality standards at an European level, the "Livro Branco da Política Marítimo – Portuária Rumo ao Século XXI" lead to interventions in terms of modernisation and recovery of existing terminals, construction and improvement of accessibility networks and logistical platforms, and promotion of security, quality and technological development.

In order to protect and enhance environmental resources, several interventions were promoted within the framework of "Polis Litoral", such as the framework for action of "Polis Litoral Sudoeste", which will be explained below.

Denomination	Nature of the intervention
"Proteção e recuperação de sistemas dunares e arribas" [Protection and recovery of dune systems and cliffs]	- Buoying and stabilisation of cliffs and risk areas - Building of accesses and parking - Shutting-down and renaturation of unnecessary paths and unpaved roads
"Reposição das condições de ambiente natural pela recuperação e proteção dos sistemas costeiros" [Reinstatement of natural environmental conditions through the recovery and protection of coastal systems]	- Buoying and stabilisation of cliffs and risk areas - Shutting-down and renaturation of unnecessary paths and unpaved roads - Building of accesses and parking - Demolition of constructions in compliance with a future study - Renaturation of areas generated by demolitions and of other degraded areas - Rehabilitation of Lagoa de Santo André, Cabo Sardão – Entrada da Barca, Arrifana, Amoreira – Monte Clérigo and Ponta de Sagres, recovering existing structures and creating new support structures in line with the current needs - Recovery and renaturation of dune systems through planning and signalling of pedestrian movement, construction of wood raised walkways and placement of fences, eradication of alien plant species and planting of indigenous vegetation, and preparation of cleaning actions - Planning of building centres and its infrastructures
"Renaturalização da área designada por Vila Rosalinda" [Renaturation of the area known as Vila Rosalinda]	- Demolition of existing buildings and routing of demolition waste to its appropriate final disposal - Environmental and landscape rehabilitation of degraded spaces, namely through renaturation with indigenous vegetation
"Valorização da Reserva Biogenética da Ponta de	- Restoration of existing road network - Blocking the access for motor vehicles in some especially vulnerable places - Placement of land signs and information about existing heritage and natural values - Promotion of cleaning activities and landscape improvement of the area

"Valorização e qualificação de espaços balneares" [Promotion and improvement of bathing areas]	- Rectification and completion of interventions already carried out or proposed - Planning and signalling of road traffic and regulation of vehicle parking - Improvement and recovery of road and pedestrian access to the beach - Construction of fences, walkways, places of stay, palisades - Placement of land signs and information about existing heritage and natural values - Promotion of cleaning activities and landscape improvement of the surrounding area through recovery and renaturation of degraded areas
"Requalificação de pequenos aglomerados costeiros" [Rehabilitation of small coastal settlements]	- Creation of pedestrian paths - Construction of public spaces (pedestrian areas and squares) - Dredging and excavation of the basin - Demolition of existing supports for fisheries and construction of new ones - Licencing and construction of a restaurant in the pier - Placement of fingers, stakes and other mooring equipment for recreational and touristic boats - Creation of a bicycle lane - Rehabilitation of public spaces - Control of access, parking and motor traffic - Improvement of conditions for road traffic and pedestrian movement - Placement of quality urban furniture that will further strengthen the identity and consistency of the location - Intervention on the urban ecological structure and green spaces, creating new places of stay - Improvement of the urban image - Improvement of urban centre's public spaces - Rehabilitation of the public space on the riverside near the settlement's fishing area, according with a project drawn up by Vila do Bispo Municipal Council - Development of a green space area within the framework of cliffs, integrated in the urban rehabilitation project of Vila do Bispo Municipal Council regarding the fishing area
"Ecovia e ciclovias do Litoral Sudoeste" [Bicycle lanes of the southwestern coast]	- Adaptation of existing rural paths to bike lanes - Placement of land signs and information (touristic and environmental) - Creation of landscape observation and rest areas - Landscape rehabilitation of areas surrounding the bicycle lane, fostering cleaning and removal of weed species, as well as planting of indigenous vegetation - Construction of bike lanes enabling easy and alternative access to beaches - Placement of land signs and information (touristic and environmental) - Creation, where necessary, of landscape observation and rest areas - Landscape rehabilitation of areas surrounding the cycling lane, fostering cleaning and removal of weed species, as well as planting of indigenous vegetation
"Estruturas de apoio ao recreio e lazer" [Recreational and leisure support structures]	- Promotion and improvement of picnic sites and places of stay, emphasising these spaces as a support to guests

Table 1 – Framework for action of "Polis Litoral Sudoeste"



It is clarified that "Polis Litoral Sudoeste" is an "Operação Integrada de Requalificação e Valorização do Sudoeste Alentejano e Costa Vicentina" [integrated endeavour of rehabilitation and improvement of Sudoeste Alentejano and Costa Vicentina], which covers an area of 9 500 ha, located in the municipalities of Sines, Odemira, Aljezur and Vila do Bispo, and includes 150 km of coastal front (see Figure 1).

Furthermore, in the specific case of "Polis Litoral Sudoeste", the interventions identified in Table 1 were promoted around the three strategic axes indicated below and the territorial distribution of these interventions is explained in Figures 2, 3 and 4:

Figure 1 – Area covered by "Polis Litoral Sudoeste"

1. promotion of the natural and landscape heritage — incorporates the protection projects regarding dune systems and cliffs (outlined in light green in Figure 2), the reinstatement of natural environmental conditions through the improvement and protection of coastal systems (outlined in dark green in Figure 2) and the measures regarding de rehabilitation of the natural heritage (marked with circles in Figure 2);
2. territorial improvement supporting traditional economic activities — incorporates the interventions of improvement and promotion of fishing centres (marked with blue in Figure 3), of small coastal settlements (marked with orange in Figure 3) and of bathing areas (marked with yellow in Figure 3);
3. diversification of experiences in the territory, enhancing indigenous resources — incorporates the projects and actions aimed at promoting sustainable mobility (path marked in Figure 4), creation of support structures for activities of contact with nature and implementation of equipment for dissemination of natural and cultural values specific to this territory (marked with circles in Figure 4).

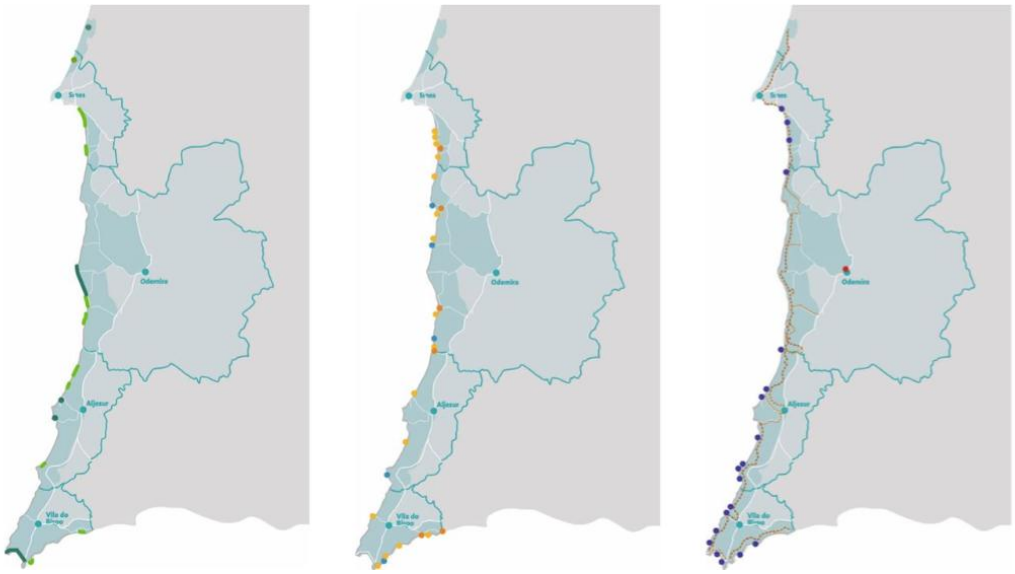


Figure 2 – Interventions fostered around the axis of promotion of the natural and landscape heritage | Figure 3 – Interventions fostered around the axis of territorial improvement for supporting traditional economic activities | Figure 4 – Interventions fostered around the axis of diversificationofexperiences in the territory, enhancing indigenous resources

4 CONCLUSION

The specialised literature links the collective spaces system (SEC) to: the foundation that structures the urbanized areas; the network that coordinates the different aspects of urbanisation, relating them to each other; the set of spaces the individual travels and from which he interprets and understands the city; the grid which organizes the building and which endures beyond it; an urban value, able to trigger, on its own, other economic or cultural processes, leading to investment and local initiatives; a merging component of a unit, which contributes to boosting local experiences; and a set of centralities, which are built upon a Corbusian balance.

However, of the thirty nine coastal areas planning tools that have been analysed, evidences have predominantly reinforced that the improvement of collective use spaces has been promoted with environmental protection goals. More precisely, with a view to combat pollution, preserve biological diversity, promote sustainable development, maintain coastal defences or adopt an integrated response to combinations of objectives.

From the interventions promoted to combat pollution, it is worth highlighting the rehabilitation/construction of ports that incorporate appropriate infrastructures for receiving and repairing ships that carry harmful substances, the construction of waste treatment facilities, collection systems and urban waste water treatment and the remediation of water bodies.

Regarding the interventions promoted for the conservation of biological diversity, it should be underlined the establishment of the system of protected areas, the promotion of a series of measures aimed at protecting, rehabilitating and recovering degraded ecosystems and endangered species, the creation of biotopes, and the formation of aquacultures.

Some interventions were encouraged in order to promote a model for sustainable development, such as suppression of deterioration and erosion of the coastline, improvement of coastal settlements, construction of wood raised walkways for pedestrian movement, renaturation, and some demonstration projects.

Regarding coastal defences, some interventions to build new defences were promoted, while other measures aimed at maintaining, or improving, the level of protection granted by previous construction works. Moreover, some interventions pertained to the relocation of people and goods and to the re-establishment of balance sediment and the necessary space for the occurrence of coastal processes.

For an integrated response to the combinations of objectives previously listed, several interventions were promoted, such as: promotion and improvement of beaches classified as strategic due to environmental or touristic reasons; cliff stabilisation; demolition and removal of structures in risk areas; artificial opening and dredging of coastal lagoons; revitalization and recovery of salterns; planning, construction and maintenance of facilities and infrastructures relating to artisanal fisheries, aquaculture and activities of recreational navigation; recovery and creation of environmental education centres and construction of walkways, footpaths, equestrian paths and bicycle lanes.

Since the implementation of these interventions was based on the development of specific projects that, although being promoted for the aforementioned purposes, eventually reflected other concerns, it is important to verify whether or not they convey the roles defined on specialised literature for the SEC. Thus, the need of building a theoretical framework that allows us to undertake this evaluation is seen as justified.

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ID 1333 | PLANNING OF URBAN GREEN AREAS BASED ON GIS TOOLS

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ABSTRACT: Decision processes regarding the use of public resources in green infrastructure requires new approaches capable of providing on-going evaluation and trade-off analysis concerning the level of service that new urban green areas can provide in social-ecological terms. Such information is critical either to improve decision-making, planning practice (e.g. new locations) or even to improve landscape design processes. In order to solve these concerns, the present study aims to provide a model-based tool that allow to estimate service areas in Oeiras municipal ecological structure, but also capable to geographically identify socially meaningful areas for public investment regarding new urban green spaces. The study was developed in two phases. Grounded on kinematic laws and multi-criteria decision principles a conceptual model was initially shaped. Incorporating criteria and sub-criteria such as (i) the friction of slopes and (ii) the friction regarding physical conditions of the pedestrian public space (e.g. materials, dimensions, accessibility conditions, and others) into the model, the results revealed to be consistent with reality. This allowed developing a decision support system based on GRASS GIS and Bottle, in a second phase. The application was developed in Opensource environment using the Phython language, which allows programming the model and having as outputs the simulation of green space service areas and the

identification of geographical locations for new ones, improving decision-making in landscape planning context and optimizing human and financial public resources.

KEYWORDS: Service area; Green spaces; GRASS; Python; GIS processing; Web-Based DSS.

1 INTRODUCTION

The importance of urban green spaces nearby residential areas, as well as solid accessibilities from such areas are increasable related with quality of life indicators (Madureira, 2012; Schipperijn et al., 2010; Figueiredo et al., 2016), and became a priority issue in terms of good governance practices. The present study aims to contribute for better decision making, concerning the optimization of public resources (e.g. financial and human) in local administrations regarding management of urban green infrastructure.

The accessibility of urban green spaces is an important issue regarding the contribution for the quality of urban environment in cities (Herzele & Wiedemann, 2003). Therefore the estimation of 'green space service areas' (GSSA), can provide a good framework for understanding the social influence of a given green space, by combining territorial coverage with a set of external attributes that can influence user's behavior (e.g. physical conditions in road network or slopes). By using Geographical Information Systems (GIS), we have created spatial illustration of distances by measuring accumulated distances through an accurate representation of urban pedestrian network in Oeiras municipality (e.g. promenades, plazas and pedestrian streets).

This accurate representation of pedestrian network and it´s physical characteristics, allows obtaining a more realistic framework for decision-making, when comparing with alternative approaches based in direct Euclidean distances analysis and considering the territory as an isotropic feature. Firstly, we have combined classical mechanics principles and kinematic laws within a classification system for representing physical conditions of public pedestrian network. We used a multi-criteria analysis model in order to obtain a weighted representation of pedestrian conditions of accessibility along urban network, according to municipal experts. Combining results (accumulated distances) with demographic census information, allows visualizeing the influence of existing urban green spaces, and permits a geographical identification for new potential locations in the future.

Secondly, we develop a web decision support system based on GRASS GIS and Bottle in order to operationalize the model. The advantage of this system is the fact that it is simple and straightforward, and does not require expertise in GIS applications, but only being familiar with web and the basic concepts related with green urban areas modelling.

2 METHODOLOGY

Service areas are directly related with pedestrian accessibility conditions and mobility. Beside physical conditions of users, accessibility conditions are influenced by public space attributes (e.g. quality and type of pavements, street dimensions, existence of architectural barriers) and topographic conditions (e.g. slope values along pedestrian network). The relation between pedestrian travel speed, it is also related with topographic conditions or slope degree (Figure 1).

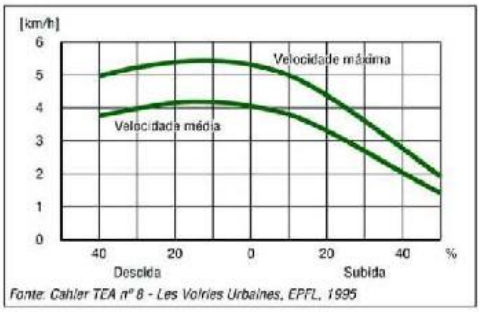

Figure 1 -Pedestrian speed according to different slope values

We consider the maximum speed of 1.5 m/s (5.4 km/h) in a flat surface, as reference value for an adult in regular physical form. We also consider that an elderly person or someone in a wheelchair under the same topographic conditions can travel at an average speed of 1.2 m/s (4.3 km/h) (Silva, s/d). The slope (D) establishes a relation between the altimetric values of the terrain (□H) and distance (d), corresponding to the tangent of the angle of the terrain (□), and can be expressed as a percentage:

$$D_{\%} = \frac{\Delta H}{d} * 100 = tg\ \varphi^{o} \quad [1]$$

The image bellow represents an extract of a slope map generated from Delaunay triangulation (Figure 2).

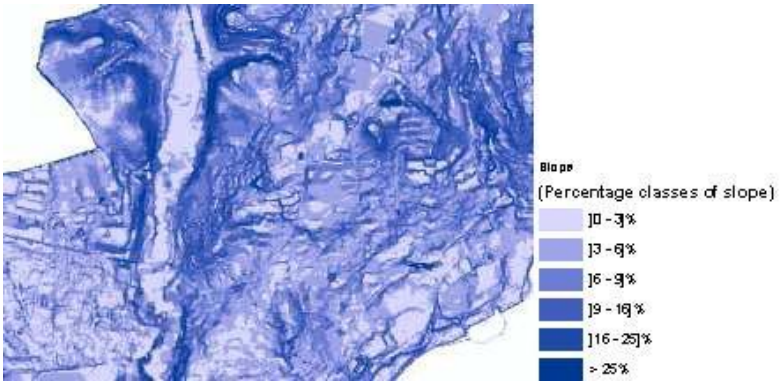

Figure 2 -Pedestrian speed according to different slope values

Modal walking width (m) Typologies of public spaces	Average walking speed, (V) (m/s)	Average walking speed, (V) (Km/h)
]0,00 – 0,90]	]0,00 – 0,75]	]0,00 – 2,70]
]0,90 – 1,20]	]0,75 – 0,98]	]2,70 – 3,50]
]1,20 – 1,80]	]0,98 – 1,22]	]3,50 – 4,40]
> 1,80	]1,22 – 1,81]	]4,40 – 6,50]
Footpath	]1,81 – 2,40]	]6,50 – 8,60]
Zebra crossing	1,22	4,40
Road / parking / crossings	0,75	2,70
Car traffic separator and roundabout interior	0,00	0,00

Table 1 -Pedestrian average velocities (m/s and Km/h) according to different characteristics of public spaces. Based on Silva, n/d; Seabra et al., 2011; Seco et al., 2008.

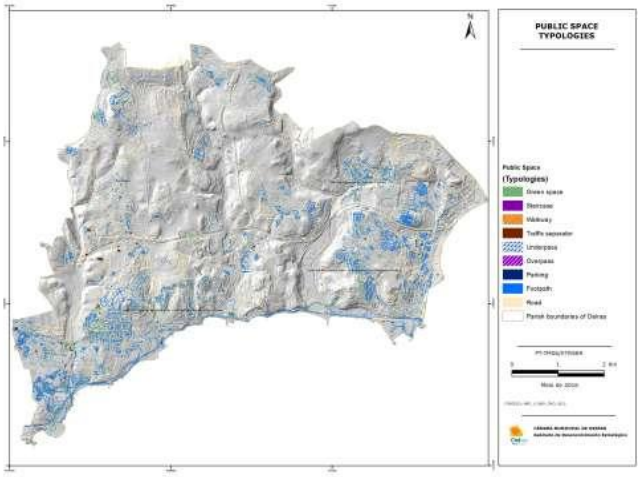

Figure 3 -Different typologies of public space in Oeiras municipality.

Through classical mechanics formalizations (Halliday, 2009), it is possible to represent space (e, in meters) and time (t, in minutes), on a friction surface (2D) using the following algebraic expressions, where R represents a spatial resolution (in meters):

[2] $$t = \frac{60.e.R}{v.10^3\left(\frac{km}{h}\right)} (min)$$

[3] $$e = \frac{v.10^3\left(\frac{km}{h}\right).t\ (min)}{60.R} (m)$$

By generating accumulated cost surface in public space, it is possible to represent several pedestrian velocities according to different values of slope friction and distinct architectural characteristics. Weighting 60% for slope friction and 40% to characterize public space friction, a global friction surface was obtained as well as global velocities. After testing 'in situ' in a limited number of places, the results seem to be consistent with the perceived reality. As result, we propose a friction surface that represent the crossing time over each pixel in public space (Figure 4).

Figure 4 - Pedestrian velocities according to different typologies of public space.

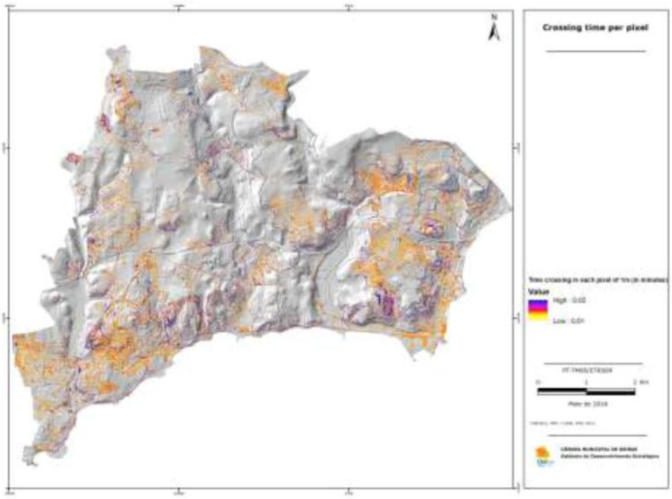

Figure 5 -Time crossing in each pixel (in minutes).

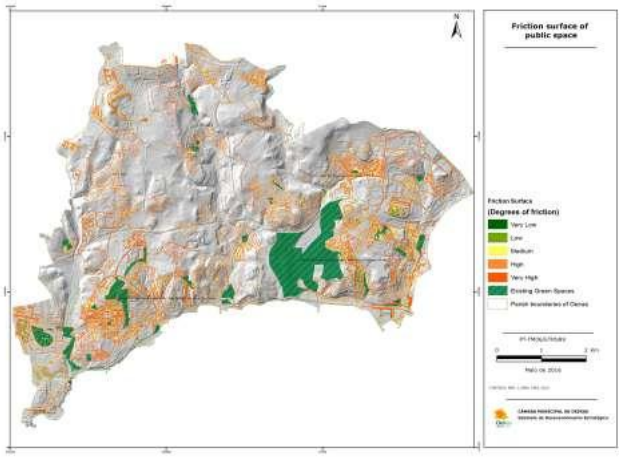

Figure 6 -Friction surface of public space.

2.1 ACCUMULATED COST SURFACE

The accumulated cost surface matrix represents the irradiation of pedestrian mobility, in 'time-distance' thought public space network, from each green space. Therefore, the influence of their distances were defined through time intervals in minutes (Figure 7), and time-distance can be represented by time-space in meters (Figure 8). The cumulative values of each pixel allows generating distances (fluxes) of influence from the radiation points or in this case, each green space. The geographical information was generated using Spatial Analyst extension from ArcGIS10.1 software.

Figure 7 - Detail of the friction surface in public space.

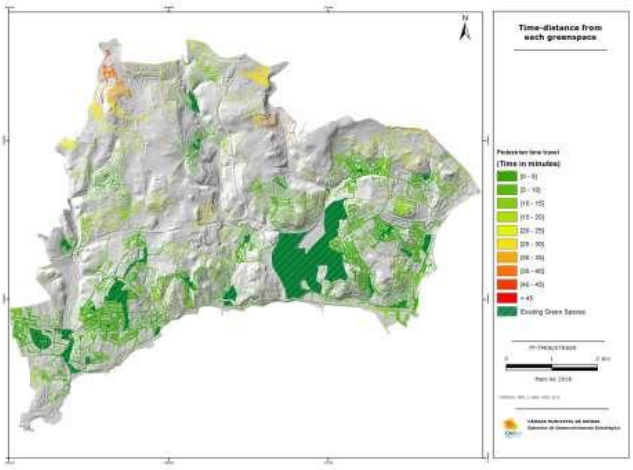

Figure 8 -Pedestrian time travel from each greenspace (accumulated cost surface).

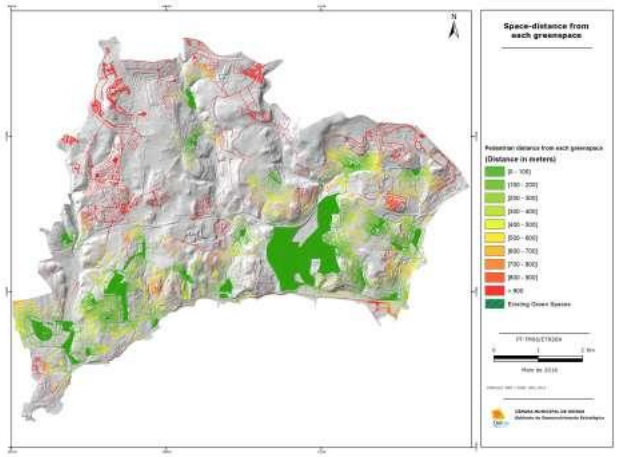

Figure 9 -Pedestrian distance from each greenspace (accumulated cost surface).

2.2 GREEN SPACE SERVICE AREA

After generating accumulated cost surface, we have conducted a reclassification in order to obtain time-breaks (in minutes) and distance-breaks (in meters). This information was intersected with census polygons (BGRI) in order to obtain a green space service area (GSSA), Figure 10.

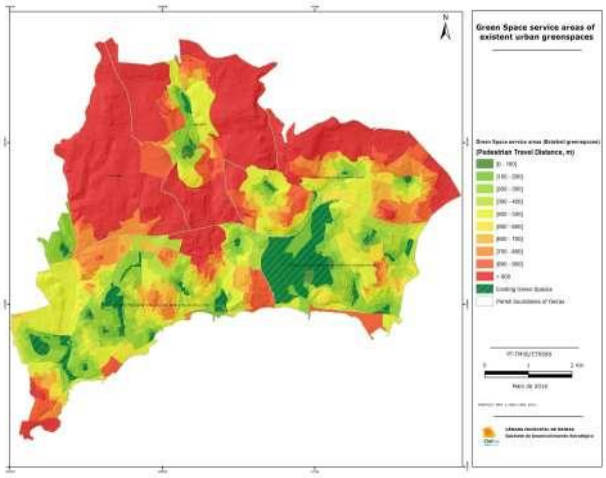

Figure 10 -Green Space service areas of existent urban greenspaces.

This analysis allowed modeling the spatial coverage of green spaces, by identifying which areas are near or distant from urban green spaces. Based on literature, we adopt 500 meters as initial reference distance in which an average individual might be willing to move in to a green space.

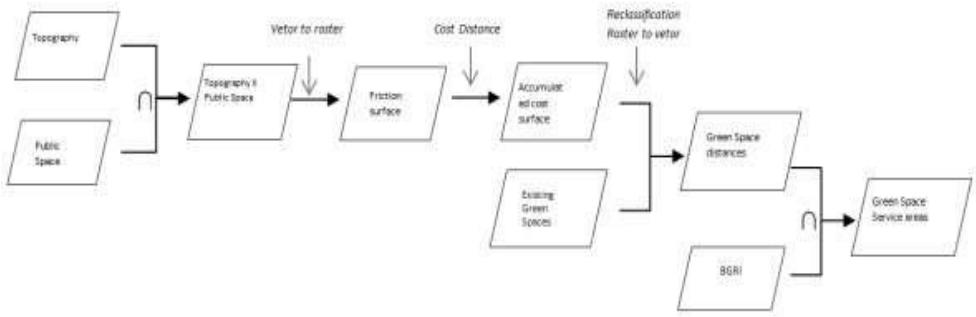

Figure 11 -Workflow for green space service areas.

Intersecting GSSA information and BGRI polygons, allows merging statistical data (e.g. individuals, families, residences, buildings) with urban plots, in order to obtain socio-demographic, socio-economic and socio-urban profiles.

2.3 COVERAGE ANALYSIS AND DETERMINATION OF PRIORITY LOCATIONS FOR NEW GREEN SPACES

In order to prioritize investments regarding new urban green spaces, we choose to use a multi-criteria decision analysis (MCDA) model, and specifically the weighted sum model. Taking 500 meters as reference distance for accessing urban green space, we have estimated low coverage areas (figure 12), as well as criteria and value scales (Table 2). Considering C1, C2 and C3, we rank C3 > C1 > C2, and after applying Swing Weight technique (Goodwin, 2004) the result was WC3=0.37, WC1=0.34 e WC2=0.29.

	Criteria	Value-scales
1	Population density. This allows to identify low, medium and high density area	]0 – 25] inhabitants/hectare – low density;]25 – 50] inhabitants/hectare – medium density; > 50 inhabitants/hectare – high density
2	Cost distance	]500 – 600] m,]600 – 700] m,]700 – 800] m;]800 – 900] m and >900m
3	Transferred areas (green spaces) for public domain or potential areas loca municipal domain	Binary (yes/no)

Table 2 -Criteria and value-scales for MCDA model.

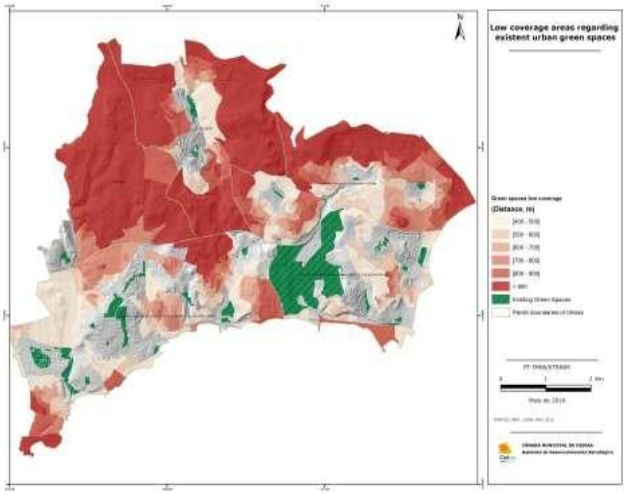

Figure 12 -Low coverage areas regarding existent urban green spaces.

In order to normalize criteria increasing (from 0 to 100 percent) and binary (yes/no) scales were used (Table 3). The priority level (P) of each green service area (alternative) is expressed in percentage and it's given by the weighed sum model [4], in which Wi express the weigh in each criteria and Ci express the value in each criteria. This model is also called 'weighted linear combination model' and has the advantage of enabling weighting criteria and allowing ranking the results (Goodwin, 2004).

C_1-Population density (Hab/ha)	C1 (Value 0 .. 100)	C_2-Cost-distance (m)	C2 (Value 0 .. 100)	C_3-Transferred areas for public domain (Yes; no)	C3 (Value 0 .. 100)
0 (null)	0	]500 – 600]	25	no	0
]0 -25] (low)	25	]600 – 700]	50	yes	100
]25 – 50] (medium)	50	]700 – 800]	75	-	-
> 50 (high)	100	]800 – 900]	85	-	-
-	-	]800 – 900]	95	-	-
-	-	>900	100	-	-

Table 3 -Value-scale normalization.

3 RESULTS

3.1 COVERAGE ANALYSIS AND DETERMINATION OF PRIORITY LOCATIONS FOR NEW GREEN SPACES

Figure 13 expresses, in quartiles, the priority level for each green service area (alternative) inside the low coverage areas. The areas above 75% represents the ones that should be consider 'priority areas' regarding the installation of new urban green spaces. The result allows programming new green spaces that have the potential for being socially relevant, and that should be critical to better rationalize public resources, particularly in periods of great restriction regarding public investment. These reserves for urban green spaces are accessible in a maximum distance of 400 meters for the secondary ecological structure (e.g. neighborhood gardens and small parks) and 800 meters for main ecological structure (e.g. urban and metropolitan parks, urban forests).

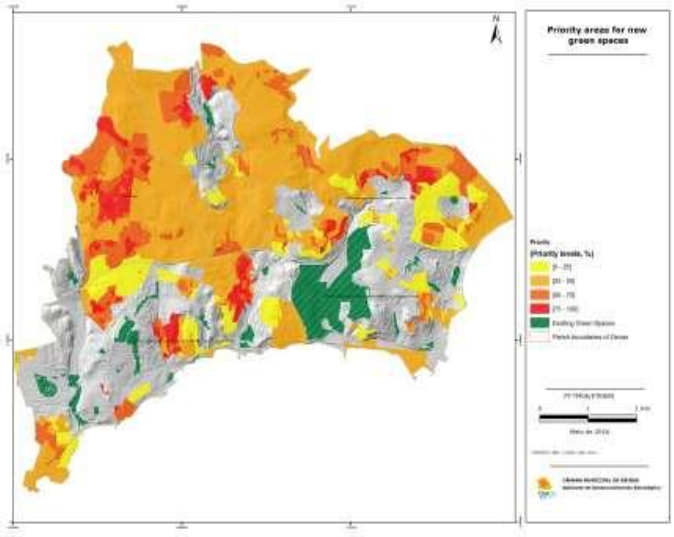

Figure 13 -Priority areas for new green spaces.

3.2 DESIGNING AND DEVELOPMENT GUADSS

The web green urban areas decision support system is based on the client\server model, following the structure shown in figure 14. The client\server approach has a three tiered consisting of: Tier1: web browser; Tier 2: web server, GIS Server, web-framework for Phython and a geoprocessing server; Tier 3: data.

The system was developed using Python Tools for Visual Studio, Java Script, and GRASS Python Scripting Library for the geoprocessing functions implementation.

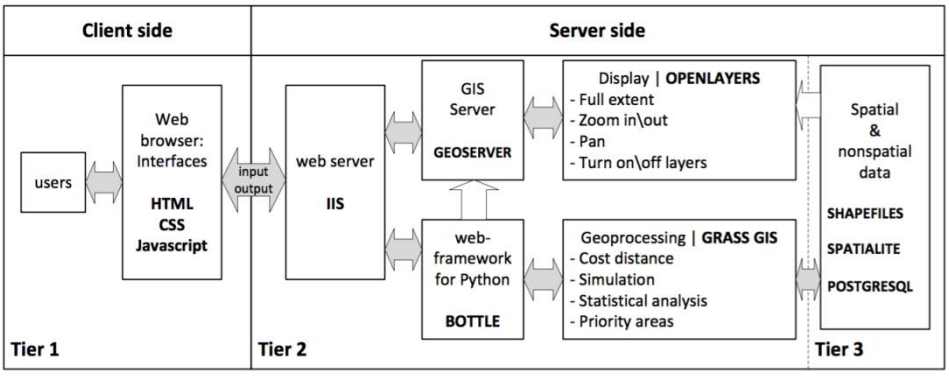

Figure 14 -GUADSS architecture.

The information flow is as follows:

1) Users initiates a request setting the input layers, the cost surface and priority layer weights and drawing (or importing the geometry) the new green urban areas on the web browser; 2) the web server passes the requests to the geoprocessing server to do the processing such as cost distance, influence of the new green urban areas, statistics and priority areas definition; 3) the geoprocessing server creates the intermediate data, the final layer and passes the results to the web server and GIS server; 4) the geographic output is displayed using Geoserver, the statistics graphics are displayed using D3 javascript library; and 5) the web browser displays the results using Ext and jQuery javascript libraries allowing all the outputs to be downloaded.

3.3 THE DECISION SUPPORT SYSTEM -GUADSS APPLICATION

The application was developed and tested using Oeiras municipality data and was deployed only for the municipality intranet users. Figure 15 shows the main interface, where it is possible to access the general GIS functions like full extent, pan, zoom in, zoom out or layer turn on/off. The three buttons near the general GIS functions are the specific tools that allow the users to upload new input layers or delete existing layers, start the processing system and access the results.

Figure 15 – GUADASS main interface.

The user needs to go through the seven sequential interfaces to start a simulation process (Figure 16). The first interface is an overview of the system. The second interface is used to select the input layers, like existing urban green areas, ceding areas, statistical sub-sections and reclassification rules. In the third interface, the user must draw the new urban green area in the map or upload a shapefile (e.g. polygon) with the urban green area project limit. The following two interfaces are used to define the cost surface and priority areas by defining weights. The weights have default values, but it is also possible to create different scenarios by setting them. In the next interface, users need to set the output workspace and output name. Since the processing takes some time, it is possible to receive an information e-mail when the process is finished. Finally, users just need to click the processing button and wait for the email, or wait until the page displays the end process message.

Figure 16 -GUADSS main interface.

Figure 17 exemplifies an analysis result, for a new green urban area in Porto Salvo parish, based on the default parameter settings. The results interface gives the possibility to download or delete the output layers, add the areas of influence of existing and planned green spaces layer as a WMS to the map window and access a statistical analysis. This statistical analysis is based on the simulation process results and over nine 2011 census variables (population, age structure, school grades, buildings), and allow a more effective support to decision making.

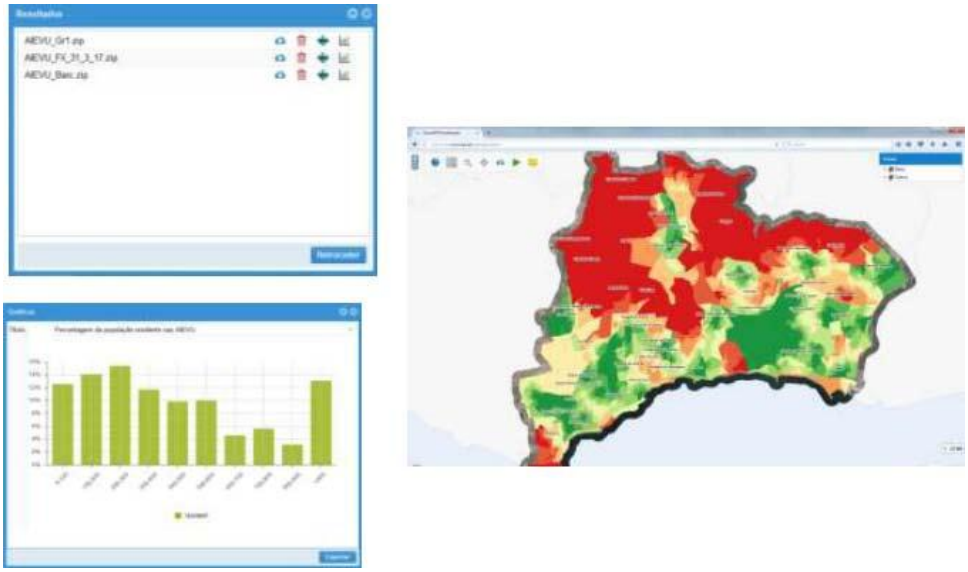

Figure 17 -GUADSS results interface.

4 CONCLUSIONS

The methodology that was used appears to be appropriate and innovative because it considers pedestrian mobility and accessibility over public space from an integrated perspective, by exploring MCDA models, which allowed considering diverse points of views in decision-making. The information regarding public space typologies in the municipality of Oeiras was characterized from considering factors like terrain roughness, architectural features and characteristics of the public space. Based on classical mechanical principles, we explore the potential given by a simple and reliable model that is able to represent pedestrian speed, travel time and space traveled. By using BGRI information, we add useful statistical information (e.g. individuals, families, residences and buildings) which allows drawing GSSA. Those were then typified by using non-euclidian intervals of 100 meters, enabling to identify low, medium and high coverage classes for the entire municipal territory. Using criteria like population density, cost-distance and the availability areas for new green spaces, we used a MCDA model that enables a geographically identification of priority areas for future green spaces. The model also provides better decision-making because it improves transparency and robustness regarding the allocation of public resources (e.g. human and financial). Regarding decision support system GUADSS, the experiments indicates that this web geoprocessing approach have several advantages when compared with the traditional desktop solution. The main advantage is time saving and the simplicity of using it. With friendly user interfaces, GUADSS allows any user to simulate different green urban areas scenarios without having specific GIS knowledge. Timely response is critical to attract the application users. However, geoprocessing with large datasets and with complex tasks takes time. This performance issue is being analyzed and all the hardware and software improvements are being considered. Another direction for futures development includes some

algorithm improvements to solve problems related with areas that don't have public space. For this problem, a possible solution could be based on the iteration over adjacent or not null results to obtain the average.

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ID 1337 | “VILLAGE IN THE CITY” IN CHINA AS PRODUCT OF POPULATION TRATIFICATION AND SOCIAL RELATIONSHIP REPRODUCTION-CASE OF JIANGDONG VILLAGE IN NANJING AND XIBALI VILLAGE IN XI’AN

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1 THE NATURE OF FAST URBANIZATION IN CHINA

According to Marx’s definition, capital is a value in motion, and value is decided by social labor time necessarily put in the production of commodities. The capital’s motion can be divided into four phases: production, realization, allocation and value proliferation. The four phases form a cyclic process. Through this process, capitals go through infinite reproductions. It is an upward spiral course, but this cycle won’t continue perfectly forever.

David Harvey says, when consumption is weak, in order to mitigate the overcapacity crisis caused by excess capital accumulation in production field, productive consumption is needed to stimulate economic growth. Current large scale infrastructure construction and urbanization construction in China is this process. These constructions consume a large amount of means of production like steel and cement, so values of steel and cement are realized, and excess capacity is used. Also, the Cold War after the Second World War and the large-scale urbanization of suburbs in America were effective measures of using productive consumption to mitigate excess capacity in production field.

But the scale of Chinese urbanization is much larger. Within three years from 2011 to 2013, China consumed 6.5 billion tons of cement, which was even more than the total volume 4.5 billion tons consumed in the 20th century in America. The construction activities alone absorbed 25% global steel production. But Harvey believed that capitals transforming from production field to urban built environment just transferred and postponed the problem of excess accumulation of capitals but didn’t eliminate the problem. He also views the initial stage of current global economic crisis as ‘urbanization’s financial crisis’. Urban investments normally take a very long time, and it takes even longer time to get mature. So usually it’s very hard to judge when capitals are over accumulated or when over-accumulation will occur on investing in built environment.

The investments on fixed assets (broadly defined construction index) in China in 2014 accounted for 80% of the GDP. Since modern era, no country has ever reached such a high investment level. Even in Japan, in the 80s of the 20th century when construction industry was in peak, it was merely 35% of its GDP. As for America, the number has always been around 20% of its GDP. Looking in the long run, activities creating and producing spaces are obviously speculative, though these activities originally aim to eliminate over accumulation. But later on, the risk of even larger scale of over accumulation will perhaps occur in the construction and environment fields. Therefore, both urban construction and infrastructure investments have characteristics of having crisis easily. This can be seen from the periodicity presented in such kind of investments in America and Britain in the 19th century. (Figure 1, figure 2）

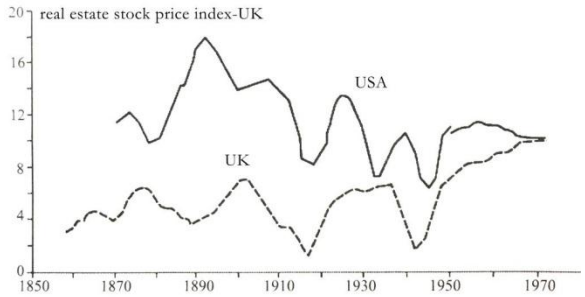

Figure 1 – Different Built area Inveatment Rhythm of UK and USA

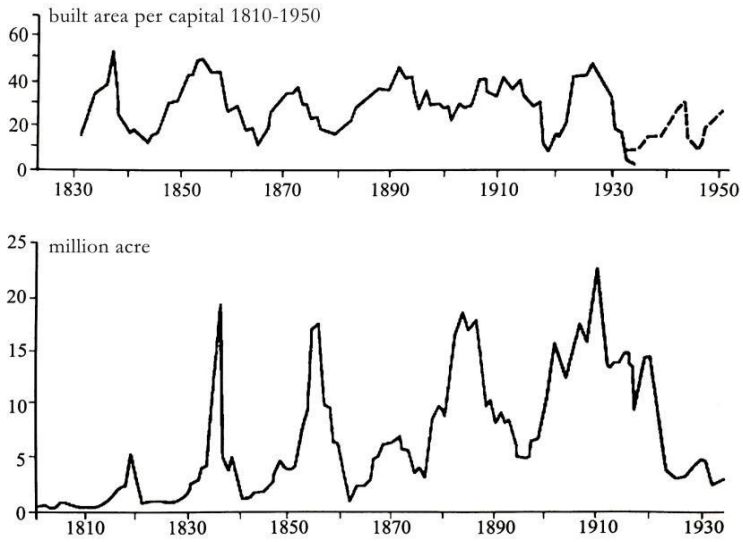

Figure 2 –Built area per capital and land selling in USA

This large scale urban construction activity was what had been said by Lefebvre, 'Change from the production in space into the production of space itself', namely capitalized space or the urbanized capitals. So, urbanized capitals mean capitals transform from the production itself to the urban built environmental production, to mitigate over accumulation in production field, meanwhile drive the urbanization process. The essence is that space after absorbing capitals, means of production and labor's work time, turns into a commodity with certain value that can go through transactions in the market. Housing or other urban space products when they are sold out or consumed again and again, their values get realized in this way.

Lefebvre applied the logic of Marxism to social space field, he pointed out 'space production is the reproduction of social relationship'. He views space as a kind of massive social resource, which is impacted and shaped by many factors such as history, nature, society and etc. It is factually a complex product filled in with various ideology and social production relationships, a process of social relationship reorganization and social order construction. Lefebvre went on to say, 'No matter where, what's in the center is the reproduction of production relationship.'

2 THE CAUSES AND MAIN PROBLEMS OF "VILLAGE IN THE CITY" IN CHINA

In China, the urbanization process since 1990 is also a process of over accumulation of built environment. In 1994 when tax distribution system reformed in China, local government gained some financial autonomy as well as bigger competition pressure. Over 20 years since then, real estate development had been one of the most important work contents of local government. 'selling lands' was local governments the principal source of revenue. When most cities in China adopt this kind of urban development module, serious excess and over accumulation in built environment will be caused.

During 1998 – 2004, the built urban area had increased by 9027 k㎡ in China that was the equivalent of nearly 14.5 times of Singapore's land area and 1/4 of the Taiwan Island area. Land acquisition area had expanded from 515.54k㎡ in 1998 to 1612.56k㎡ in 2004. And in 2002 it reached the peak at 2879.86k㎡. This indicated Chinese cities are spreading outward at an unpreceded speed, which was called by international and domestics medias as 'Chinese way of building cities'.

However, urban villages are precisely the frontier of Chinese urbanization development, the most vigorous districts in the expansion of urban space, but meanwhile many problems exist in villages in the city.

1. Illegal buildings are many. In the fast expanding process in the city, villages are quickly surrounded by high-rise buildings. Land price, property price, rentals are also pushed up and increase greatly. Driven by rental and compensation for housing demolition, villagers make use of every bit of space to make private constructions, such as 'filling the gaps', 'new expansions',

'build upon old constructions' etc. Various illegal constructions are banned a number of times but never stop.

2. Environmental hygiene is poor. Basically, villages in the city don't have fences, thus unable to implement closed property management. There are many external tenants, mixed and disorderly people, poor environmental management, and various safety hazards in existence. Besides, various facilities are poor, public green space and sports utilities are in shortage, which become neglected corners of public hygiene in the cities.
3. Land utilization is low. Villagers' buildings in urban villages are mostly single family type, which occupies large area with high density. As a result land occupation rate is high but utilization rate is low. What's more, many urban villages took up privileged locations in the city, but their comprehensive development is far lagged behind the surrounding areas, which is a huge waste of land resource. In modern urban life, people cares living environment and also the cultural environment. Villages in the city are the city's failures by the appearance with poor internal social security and low population's quality. Ordinary residents are unwilling to live in the neighborhood, so the value of lands and housing nearby urban villages is impacted and devaluated.
4. Social security problem. The public infrastructure construction and maintenance in urban villages hasn't been perfectly incorporated into the city's system. Large parts of residents in the urban villages haven't enjoyed the same social securities as ordinary urban residents do. Public infrastructure maintenance, villagers living subsidies, old pension, medical insurance and etc. are largely paid by village's collective economy, subsequently collective assets are eaten away over time.
5. Employment problem. Because the incomes from collective economy's dividends allocation and private house rentals are very nice, residents over the age of 35 are lack of education and labor skills and 20-year-old young people have psychological barriers with their talents smaller than ambition problem.So residents in urban villages are drifting away from the city's employment system.

Traditional villages tied with blood relationship, affinity, geography, Chinese clan, folk religion and village rules is being split rapidly as population influx increase rapidly. "Village in the city" becomes mixed habitation of villagers, immigrates and low-earned city dwellers. Thus, village in the city is the third space between city and village, which is filled with interest friction and cultural conflict, communication and cohesion. No doubt, immigrates want to integrate into city life while villagers still want to keep their rural residence.

The paper uses Jiangdong Village in Nanjing and Xi Bali Village in Xi'an as examples to analyze how the reproduction of social relationship works in the transition of village in the city.

3 CASE ANALYSIS 1. REPRODUCTION PROCESS OF THE SOCIAL RELATIONSHIP IN JIANGDONG VILLAGE

3.1 THE TRANSITION PROCESS OF SPACE IN JIANGDONG VILLAGE

According to Professor Zhang Jingxiang's research, before mid-1980s, Jiangdong village used to be a classic village based on traditional agriculture in Yuhua District in the suburb of Nanjing.

In the end of 1980s and early 1990s, mobile population was found in Jiangdong villages, they were mostly from remote areas outside Nanjing municipal scope coming to work primarily on small private businesses. At that time, most local villagers had their houses repaired or rebuilt. They prevalently changed original mud houses, tile houses and brick houses into cement steel ones.

Since 1995, along with urban economy's growth and space expansion, part of villagers' farms was taken away to run private small-sized factories and the district owned enterprises. The government granted a settlement for peasants lost their farms which was 'With farms taken away, people can work in factories'. Approximately 1-2 people in one family entered the factories and became workers, their household registration turned into urban household registration, but they still own housing in the villages. In this stage, traditional agricultural villages evolved into industrial villages.

In 2002, Nanjing municipal government made the 10th National Sports Game's main stadiums in the new district where Jiangdong village was. Along with the constructions of roads, railways and the like infrastructures, the boom of neighboring businesses and arrival of large scale shopping centers, Jiangdong village was irreconcilable with surrounding environment hence became a typical 'village in the city'. At that time, the ratio of immigrated population and local peasants in Jiangdong village was 5:1, and the immigration from outside of Jiangsu province outnumbered people within Jiangsu province. All peasants became landlords living on rentals and gained a lot of economic benefits.

In 2007, middle-class communities and CBDs bloomed in Jiangdong village's neighborhood. At that time, Jiangdong village's native inhabitants had all moved out. This urban village had already totally become a living place of mobile populations.

In 2008, the land of Jiangdong village was sold to Suning Group for the construction of international communities and commercial service facilities.

3.2 THE TRANSITION PROCESS OF SOCIAL RELATIONSHIP IN JIANGDONG VILLAGE

When Jiangdong village was converting from an agricultural village to an industrial one, the villagers were changing from peasants to workers. But in the enterprises, they were called as 'contract migrant workers' or 'unofficial workers' because they were stratificated based on knowledge and status difference. They were in the brink of classes amongst labor force. When Jiangdong village became a typical urban village, villagers all gave up work and lived on rentals. They leased houses to migrant workers who were on the even edge of the labor force structure.

4 CASE ANALYSIS 2: REPRODUCTION PROCESS OF SOCIAL RELATIONSHIP IN XI BALI VILLAGE OF XI'AN

Prior to the economic reform and opening-up, the urban-rural structure was clear. The city was a place where nonagricultural activities and nonagricultural people concentrate. Its suburbs were countryside where vegetables and meats were sourced for central city and outer suburbs were vast tracts of farmlands. At that time, Xi Bali village was close to a village in the traditional sense. There was widespread basic characteristics: Population density was low; Economic structure was single; Occupation structure was simple; Community members' values were similar and social organizations put families in the core.

Along with the 3rd industry's development, urban fringe villages utilized the geographic advantages, setting up various small industrial and service businesses, as the city kept optimizing and adjusting the industrial structure, many factories and enterprises relocated to the urban fringe. Various elements of the city like population, industry, commerce and residential properties were moving to the city's surrounding areas constantly, which had directly eaten the agricultural lands and countryside near the city. At that time, mobile population from outside of Xi Bali village began to flush in and the 3rd industry replaced the 1st industry to be the dominant power. Traditional rural communities started to decay. One story reinforced concrete buildings could be found everywhere and small shops lined up along both sides of the main roads. Countryside marks gradually declined and some farmlands, more or less, remained in places far away from main roads.

After 1997, Xi Bali village was gradually incorporated into the urban construction land. When the lands were taken away and villagers received expropriation compensation, they had a certain amount of money in the hands. Improving the living conditions became the top issue. The village in order to improve transportation conditions, built hard surface roads; In order to improve educational environment, they reconstructed primary schools. Villagers all teared down old houses for overhauls. Most reconstructed houses had 2 or 3 stories. One house had 4 stories and another house had 5 stories. In the village, except several homes people were doing transportation business outside, most of the villagers stayed idle at home, killing time by enjoying sunlight, playing billiards and mahjong. They lived a leisurely life as immortals would do, but the original plain social atmosphere in countryside settlements had obviously disappeared. People doing business in the village were all mobile population, none of them was native of the village, even the stores were all run by outsiders. Apart from rentals, the land expropriation

compensations were basically supporting their lives. The only remaining farmland was deserted, ploughed by no one. Villagers deserted the lands in advance through comparing farming profits and land's expectations. So much unused farmlands were there quietly waiting to be incorporated into urban construction lands for land expropriation compensation.

What's been increasing fast along with the city's swift development was urban lands. A lot of agricultural lands surrounding the city were all taken away by the city. Only some rural settlements remained in the cycle of urban built areas, thus forming 'villages in the city'. At this time, a lot of mobile populations flushed into Xi Bali Village, the Village became a mixed community with native inhabitants, mobile populations and urban residents. Mobile population's large demands for housing hence huge rent market had driven villagers to add and expand their houses endlessly. Houses were built in a way like sticking in a pin wherever there's room, so building density of urban villages went up rapidly, and formerly ordered space in the village started to become disordered. Large amounts of mobile population had stimulated individual businesses to grow in the urban village, which facilitated some main streets to evolve into commercial streets Indispensable to the life of the village's residents. This not only created convenience to village's residences but also opportunities of gaining profits for villagers and external businessmen. Xi Bali village's villagers had transformed from previously simple peasants to current rentier class while migrant workers from outside became a new peripheral class.

5 MIGRANT WORKERS BECAME A NEW CLASS ON THE EDGE—A RESULT OF THE REPRODUCTION OF SOCIAL RELATIONSHIP

Migrant workers are main part of mobile population. From the end of the 50s and the early of the 60s in the 20th century, there has been dual economic structure in China universally. Urban and rural was opposite. Urban communities set many barriers against peasants. Household registration system was the sign of the separation of urban and rural, and became the most fundamental guarantee system when the dual urban-rural structured society runs in the status of mutual separation. Chinese citizens thus were divided into two very unequal classes in both social and economic perspectives namely the urban residents under protection and the peasants being excluded by it.

In early 80s of the 20th century, Chinese country reforms facilitated the changes to dual urban-rural structure and the loose of the mutual relationship. As for household registration management policy separating urban and rural, this was a profound crack. From then, the city opened access to peasants. What had cracked urban vs rural barrier most directly and deeply was the so called 'the tide of migrant workers' meaning people left farms to search opportunities in the cities. Rural system reforms and family joint production contract responsibility policy taking into effect, the change of values and concepts held by peasants and the fast growth of urban economy… many of these elements had created unprecedented conditions for 'the tide of migrant workers' came into being.

The number of rural surplus labor force flowing into cities are counted in tens of thousands every year in China, of which significant amount of populations always needed to rely on urban house-renting market to solve their lodging issues. Peasants entering the cities became the main body of dynamic economy. They usually chose 'urban villages' to live collectively after considering the comprehensive elements like traffic situation, rental, housing supply etc. Therefore, in a certain 'village in the city', there would be many migrant workers temporarily living together who had different backgrounds of hometowns, occupations, lacked general characters but widely interconnected. Because originally built houses couldn't meet all rent demands of large populations of migrant workers, local villagers were all lured by economic benefits to rebuild their houses thus a large batch of illegal built houses of low quality and high density appeared for the lease market. Newly built houses in the urban villages were all above 5 stories.

Unnecessary to work, native inhabitants could gain a series of profits from collective dividends and house rentals that were much higher than migrant workers do. This doubtless had been a remarkable contrast for migrant workers living under the same roof. Migrant workers became a new peripheral class, which was a result of the reproduction of social relationship in the evolution process of urban villages.

The unbalance between urban and rural development had reached to an extreme state. Average urban vs rural income gap was 1.5 times in the world, whilst it was 3.3 times in China, which was number one in the

world. Zhang Jingxiang perceived that the huge achievements of urbanization in China was gained from active creation of urban and rural difference and the plunder and exploitation of rural resources. In economy planning era, rural assets were grabbed through scissors cross of industrial products and agricultural products, rural human resources grabbed through the attraction of urbanization, and then to rural land resources grabbed through dual urban and rural land policies.

From the actual incomes of urban and rural residents, salary incomes were only a part of the family's total incomes. The gap between urban and rural residents in the asset incomes is further expanded. Continued increase of urban property price has made urban families assets significantly increase, whilst made migrant workers' late wage increase in vain. According to Professor Zhao Ming's research, the total income gap was revealed to be 5.4 times by comparing per capita income of urban families in areas receiving mobile population and that of rural families in areas losing populations, and gaps of property incomes and transfer incomes were very high with 10.5 times and 18.6 times respectively. This meant that the middle aged -centered first generation of migrant workers' families were remarkably lagged behind of the urban resident's families in terms of asset accumulation. Such a gap had weakened social mobility and would cause the solidification of classes. It was really hard for migrant workers to integrate into the cities. The gap between urban and rural was solidified.

6 CONCLUSION

The nature of fast urbanization in China is the capital urbanization. It is 'Change from the production in space into the production of space'. The production of space is actually the reproduction of social relationship and productive relationship. The result of fast urbanization in China is cities surrounding countryside, forming a large number of isolated island type of villages in the city. The process of countryside becoming urban villages was actually the reproduction of social relationship. The result of reproduction of social relationship is that migrant workers group became a new peripheral class. Due to the gap between urban and rural residents on asset incomes, the urban and rural gap was solidified, which further caused population stratification and class solidification.

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ID 1338 | STUDY ON THE RENEWAL OF TRADITIONAL COMMUNITIES IN THE URBAN-RURAL CONCURRENT BUSINESS BEHAVIOR - A CASE OF GUOYANG COMMUNITY, BAISE

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1 INTRODUCTION

With the new type urbanization, the Chinese urbanization rapidly develops under the industrialization accelerating development. In 2011, the Chinese urban population exceeded the agricultural population at first time in thousands of years, and it marked a new development stage that China had began to enter the

period of urban social orientation. This also means that the characteristic of rural society which sustains thousands of years has changed. People's mode of production, occupation structure, consumer behavior, life style, concept of value has changed greatly. The life and production mode transform from agricultural production to urban-rural concurrent business behavior. These essential changes greatly broke the original stability of rural communities, and workers of rural migrants and those who go backwards and forwards between rural and urban areas exerts a great influence on the style structure of traditional communities. The traditional community can not rely on their own strength to deal with the challenge, and can not complete the system structure transform of their own. Under our country polarization development of urban and rural areas for a long time, the revival of the traditional community is ignored, therefor the traditional village style no longer exists, and what is showed in front of people is the scene that is lack of the design and planning, additionally, there is no way that residents have nostalgia. I have a deep feeling after interviewing main streets of Guoyang Community. We should calm down to trace the root of ancient village of traditional architectural culture and reflect advantages and disadvantages of the current rural construction pattern to find a way for the protection and the renewal of traditional architecture.

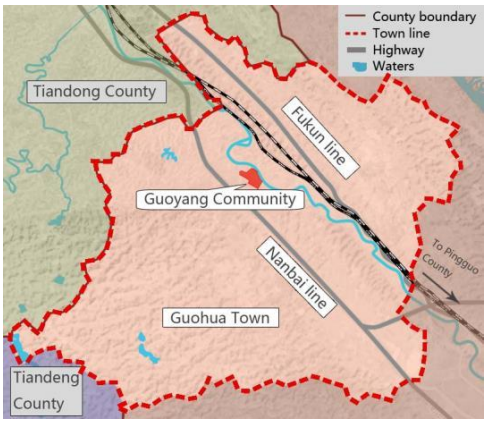


Figure 1- Guoang Community area bitmap

Figure 2- Guoang Community satellite bitmap

2 THE GENERAL SITUATION OF TRADITIONAL COMMUNITY DEVELOPMENT IN GUOHUA COMMUNITY

Guohua Town is located in the southwest of Guangxi Province, nearing You River, and there are 24 kilometers away from Pingguo County. The northwest border with Tiandong County, and the southwest is adjacent to Tiandeng County. The railway across the zone, and there are two important highways of Fukun Line and Nanbai Line. These two mainly traffic lines are respectively lay on both sides of You River, linking the northwest to the southeast, and the lines lead southeastwards to the Pingguo County (Figure 1, 2). Local residents are mainly Zhuang, but also some han. The town has a long history. The natural environment is beautiful, and the unique cultural landscape is formed slowly in history. There are famous Guanyue Temple and Dudu Temple, and there are also unique sceneries of Youjiang Rocky Beach and Moon Bay, which are valuable to the tourism development. Guoyang Community is the location of the town government, and there retains many residential buildings that are built in 20 Century 30 to 40s. From the aged solidification, we can still recall the scene at that time.

2.1 ESTABLISHMENT

Guohua Town was established as Guohua before Song Dynasty. In 1369, it belonged to Tianzhou. In 1530, it belonged to Nanning. In 1913, Guohua Town belonged to Yongnan Province. In 1914, Yongnan Province was renamed Nanning Province, therefore Guohua belonged to Nanning Province. In 1915, after Management System Reform, Guohua Town and Guide Town merged as Guode Town that belonged to Nanning Province. In 1932, it renamed as Guohua Country that administered Centre Street and West Street of Guohua, Huaiqian, Miaoguan, Liukon, Tongshe, Naji, Diliang, Shanxin and Keheng. In1949, Guohua Country restructed as Guohua Sencond Area that administered Guohua Country, Boli Country and Lerao Country, and the area’s government located in Guohua Street. In 1958, it was renamed as Red

Flag Commune. In 1962, it was renamed as Guohua Administrative Region. After 1970, it was renamed as Guohua Country. In 1984, it was Removed the ship of country to build the town .

2.2 NATURAL ENVIRONMENT

Guoyang Community is located beside Yang River, and the terrain is relatively flat . The river flows through the northeast and the landscape environment is beautiful (Figure 3). In addition, there are various mineral resources in Guohua Town, and is rich in aluminum, coal, iron ore. However, in recent years due to the excessive development, the resource depletion and environmental pollution are serious problems. Natural environment have been destructed, and the most outstanding performance is that the water quality of You River is deteriorated, in addition, the residents can not swim in the river .

Figure 3- Guoang Community Environment

2.3 COMMERCIAL TRADE

In the period of land transportation absence, the transportation is mainly through water. with its great geographical advantages, the commercial trade was prevailing in history. During the late Qing Dynasty to the Republic of China, the commercial trade of Centre Street in Guohua amounted to peak, and attracted a lot of foreign businessmen engaging in business. But under the Japanese invasion, inflation and land transport complement, its commercial trade showed depression. After1980 sub-fields on the basis of households, collective ownership of business circles disintegrated. Funds and goods distributed to individuals, so that business recovered. So far, a farmer market where become the center in Guoyang Community is built, and there business is relatively prosperous, but there are few foreign traders.

2.4 RESIDENTIAL BUILDING

The residential building form at Center Street and Xinxing Street in Guoyang Community is sotto portico ‘Bamboo House’ that empty the bottom part along the street for pedestrian passageway and the homestead is slender like bamboo. Residential buildings of other streets are similar to Center and Xinxing

Street’s, but the bottom part along the street is not empty. In 1937, the residential building at Center Street was required to rebuild the front room to the form of Sotto Portico that first flood along the street was empty 3 meters for sidewalk, so that people could trade on the sidewalk, and not exposed to the sun and rain. In order to expand the business, Xinxing Street was opened up, and retained the form of Sotto Portico[1]. The following is the example of Xinxing Street(Fingure 4).

（1）Plane Function Layout

1. The existing traditional Sotto Portico building (built in 1930~before the Liberation). The building width is almost same that is nearly 5 meters. The building is narrow and deep, in order to ensure that each household to frontage for commercial operation. Each household has a Central Room, and most would combine with the Secondary Room and the Subsidiary Room. Beginning from the street, there is an arrangement followed by the Central Room, the Secondary Room and the Subsidiary Room. The first floor of the Central Room was used for business in the past, and the second floor was used to residence, and the local three floor is shelving goods. But the Central Room now has been changed to live or idle. the Secondary Room includes living, kitchen and dining room, and the main features of the Subsidiary Room

include the bathroom and henhouse. The Central Room, the Secondary Room and the Subsidiary Room are combined by the courtyard that makes each room is exposed to ventilation and lighting(Figure 5).

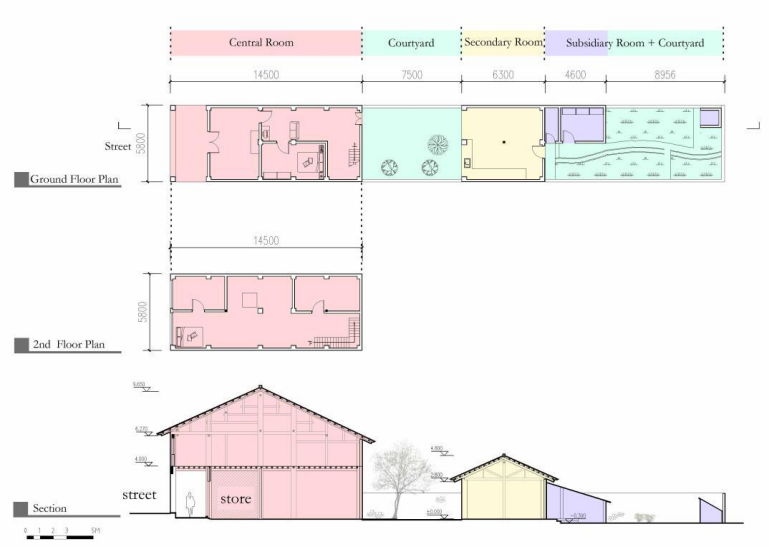


Figure 5- The Form Of Trdictional House

2. The new residential building (built after the Liberation). Recent years, it replaces the traditional house at a rapid speed. The traditional form of courtyard combination is abandoned. The plane function layout has been readjusted to adapt the recent needs of people, and the function of keeper and business in the new residential building is weakening.

（2）The style of vertical plane ornament

The building time of existing buildings at Xinxing street spans a hundred year. There retains the residential buildings of various periods that since the street has been established, and there are many significant differences in the form, style, color, material, height and so on (Figure 6). according to my survey, it is found that there is a correlation between those elements and the construction age. Therefor the existing residential building in Xinxing Street can be divided into three types: ①Building in 20 Century 30, 40s; ②Building in 20 Century 80, 90s ③ Recent Building(Table 1).

Characteristics of various types of buildings	
Types	Characteristics
Building in 20 Century 30, 40s	The building structure is brick-wood, generally two layers. The bottom zone is a store, and the form is open, due to the door plank can be fully opened. The 2nd layer use brick or wood as the window wall material, and the horizontal window that can be entirely opened occupies almost the entire wide of house for exposing the lighting and ventilation as much as possible. It can be found from the facade unit that the material is including brick, wood, tile and whitewash. Building colors are black, gray, white, dark brown. And the overall tone is uniform.
Building in 20 Century 80, 90s	The building structure of the building is brick combines with concrete. The building is generally 3 floors and has a roof terrace. The railing of the top balcony though artistic treatments that some are built beautiful patterns by brick and other are built by prefabricated hollow lattice. In addition, rich people use the colorful ceramic tile to cover the wall.
Recent Building	The building structure is brick combines with concrete, and is generally 3 to 5 floors, additionally, it has a roof terrace. Some of the external walls straightly expose the structure, which do not cover whitewash, showing the red brick and concrete cray. Some cover ceramic tiles, and it is common that the color of tiles is warm, such as orange, pink, beige and so on.

Table 2- The Type Of The House In Xinxing Street

Figure 6- The Type Of The House In Xinxing Street

2.5 THE DILEMMA OF THE PROTECTION AND DEVELOPMENT OF TRADITIONAL ARCHITECTURE

2.5.1 LIFESTYLE CHANGING AND RURAL HOLLOWING

Some structural members of the brick-wood building have exceeded its service life, and many have been damaged or corrupt structure in different degrees. Some empty houses with protective value are lack of daily care, suffering serious aging, and even become dangerous buildings (Figure 7). The internal facilities are old and shabby. Some of the kitchens have not been improved into the electrification, and are still burning firewood to cook, making it easier to cause fire and smoke (Figure 8). Because the building is narrow and deep, the ventilation, lighting and health conditions hardly meet the basic requirements of modern living. At the same time, local adults generally become migrant workers causing the Hollow Problem.

Figure 7 and 8- Abandoned Traditional House

2.5.2 BUILDING MATERIALS AND TECHNOLOGY UPDATING, AND CONSTRUCTION METHODS CHANGING

The price of traditional materials is increasing, but the price of concrete and other masonry materials is relatively low, so that local villagers gradually abandon the traditional brick-wood building.

With the growing migrant workers, the male who mainly engaged in the construction work takes back to the city's construction technology, and it becomes an accelerator that the construction technology about cantilever beam, ring beam, grade beam, structural column and so on places a great change to native buildings. With the development of construction technology, buildings can be expanded on the vertical space horizontal space, it also enrich the building plan through the bay window and the cantilevered balcony. Therefor the local building gradually separate from the original shape.

2.5.3 PROTECTION IS ABSENT, AND THE TRADITIONAL STYLE IS ENDANGERED

Firstly, due to the general economic level and the weak awareness of the historical and cultural protection, residents will not repair traditional residential buildings that are damage unless there is negative effect. Some households migrate away, and their empty houses are without reasonable use.

Secondly, the new building is lack of the architect guidance, and the villagers are indifferent to traditional culture, therefor it is a result that new buildings are lack of native characteristics, cultural connotations and artistic sense.

Thirdly, although the government and other relevant departments pay attention to the historical buildings, the funds, technology, human resources and other aspects are limited, therefor effective protection measures can not be took.

3 TRADITIONAL COMMUNITY PROTECTION AND RENEWAL METHOD BASED ON RESIDENT BEHAVIOR

3.1 ESSENCE OF PROTECTION

3.1.1 TRADITIONAL STREET SPACE

The corridor of Sotto Portico first flood along the street is the vague border to interior space and exterior space, and there are many features as the transition of internal and external space.

（1）Traffic Space

The climate of Guangxi is hot and rainy. As the main traffic space, the street is influenced by weather factors, and the corridor along the street creates a more comfortable traffic space for passengers, which makes people against the sun and rain.

（2）Commercial Space

The corridor is the extended commercial space. The space under the eaves is convenient for people to stay for completing trade activities. But now we can not see the prosperous business scene at Xinxing Street, and the business is mainly concentrated in the local farmers market.

（3）Living Space

The interest of life in rural areas is fully reflected in such the space. Usually, residents do housework at the corridor, and children play at here (Figure 9).

The Continuous Sotto Portico creates a sense of metrical vision. The continuous corridor is the linear space of material circulation, and also is the most interesting life space. This kind of space like a blood vessel, and it not only facilitate the trade, but also promote the communication of people. It shapes the live of the resident .

Figure 9- Traditional Street Space

3.1.2 ANCIENT ARCHITECTURAL STYLE AND DECORATIVE ART

The traditional building materials source from location, which mainly include the wood, the stone, the brick and the tile, and colors are white, black, grey and ochre. People with general economic conditions do not use the abundant decoration. But the rich make the style of windows and doors elegant, for example the wall under the window is embossed with birds and animals, and there are molding pillars, additionally the style of color and decoration is elegant. (Table 2)

The Doors	
The Windows	
The Pillars	

Table 2- Ancient Architectural Style And Decorative Art

3.2 THE ADVANTAGES AND DISADVANTAGES OF RESIDENTS' INDEPENDENT CONSTRUCTION

The residents' independent construction in a certain extent can meet needs of occupants, and is consistent with living habits of individuals. But it also has a lot of problems that we should pay attention to and avoid when designing the housing renewal.

1、Functional Layout Is Unreasonable

Function layout and traffic lines are unreasonable. Although the houses are large, it is not enough to use. A lot of space need ventilation and lighting, but there are not enough ventilation and lighting. Some room where people frequently pass by need quiet.

2、Infrastructure Chaos

Because the independent construction, it is lack of unified management and planning. Due to the different construction time, basic facilities of water, electricity, gas and so on are generally set by the household, therefor it not only bring some hidden dangers, but also cause the problem of basic facilities link to interior house.

3、Architectural Style Is Not Uniform

Due to the lack of an unified guiding standards, each household according to their own needs designs their house, showing the various architectural features. This also leads the disorder skyline, and the chaotic street interface (Figure 10).

Figure 10- The Sence Of Xinxing Street

3.3 TRADITIONAL AND MODERN RESIDENTIAL RENEWAL

In order to meet the residents' diversified needs, it is necessary that villagers participate in the process of designing and building. In consideration of the coordinate overall style, the villagers participation can not be too free, and should balance between the overall control and individual participation.

Firstly, the basic pattern of overall unity should be determine to control the overall style. And then the independent construction bases on the basic pattern. The unified part can be guided from the following aspects:

1、Architectural Style Guide

（1）Color And Material Guide

We distill the building color and material type from the cultural relics (including cultural relic protection units and buildings of outstanding historical value) and historical buildings (including valuable historical buildings and general historical buildings) by sampling survey and collection, and we obtain 4 colors and 4 materials (Table 3). The building should be rectified and reformed according to the color area and the part to separate primary colors, auxiliary color and harmonious color, and then according to their function, material, environment select from the recommended color and material.

Color	
Material	

Table 3- Color And Material Of The Traditional House

（2）Guidance Of Building Facade

The protection and renovation of the building facade should follow the strategy mode of protection, control and renewal, so as to repair the old as the old, and the facade decoration style is distilled from the traditional building.

2、Building Function Guidance

The function space layout of the house should be moderate guided, refer to following several principles: 1, separation of human and animals; 2, dry wet partition; 3, dynamic partition; 4, public and private zoning. In addition, to developed the local tourism, it is a problem to solve the passenger accommodation in the village. Rather than building the hotel, developing B & B is better. There is hollow phenomenon that most

of family members live in the ecdemic field except holidays, which makes the room of local house empty. Additionally, because of empty room with neglecting, it will make the living and health conditions decreased. If the room changes as the B&B, the unused room can be use when it is empty. Compared with living in a standardized hotel, the B&B can exhibit the more about the native culture, which visitors can eat and live with villagers. The mode also attracts immigrant workers coming bake to the tourism industry, and it will promote the rural revival and solve hollow.

Under the guidance of the Guoyang Community building renovation and reuse, there is following several ways:

(1)、The Adjustment Of Old Building Function

In order to promote the tourism development of the village, local Guanyue Temple except sacrifice and festivals can become the exhibition space, and it can be the multi-function space that include exhibition village history and tourist reception.

(2)、Repair And Reconstruction Of Old Buildings

Old buildings of the preserve value should be repaired, and other old buildings should be rebuild basing on the traditional style. The structure and facade of the building are preserved by restoration, and the local style of history of the structure and facade is optimized with increase the appropriate decoration to change the monotonous facade. The interior should be adjusted according to status, and the kitchen is renovated according to the standard of the transformation of electricity. Toilets would be added, and the water supply and drainage facilities would be regularized.

(3)、The New House Transforming

Although the new building is the structure of brick and concrete, the building should be built with the standard traditional village style. In the construction of the new building, the building can retain identical with the traditional style through the facade material, the proportion of doors and windows, the roof form, the architectural decoration and the combination of the house. The new building that has been built should be adjusted the above, in order to coordinate with the traditional architectural style. In addition, the transform should be integrated the concept of ecological technology, which includes the water reuse, the use of pavement that is permeable to water (figure 12, 13) and so on.

4 INSTANCE DESIGN

4.1 RECONSTRUCTION DESIGN OF XINXING STREET FACADE

As mentioned above, through the excavation of the essence of the local culture and the extraction of traditional style elements I disign the facade of Xinxing Street (Figure 11).

Figure 11- Reconstruction Design Of Xinxing Street Façade

4.2 INTERIOR RENOVATION OF NO. 27 HOUSE, XINXING STREET

<table>
<tr><td colspan="4">The Basic Information Of The No.27 House, Xingxing Street（Figure 12）</td></tr>
<tr><td>Subject</td><td colspan="3">Content</td></tr>
<tr><td>Building Age</td><td colspan="3">In 1930</td></tr>
<tr><td>Renovation And Expansion</td><td colspan="3">In 1980, the second floor wooden board is replaced.
In 2002, the kitchen is removed from the Secondary Room to the Subsidiary Room, and the pigsty of the Subsidiary Room is eliminated.</td></tr>
<tr><td>Users</td><td colspan="3">Users are two over sixty years old people. Their offspring settle other places, and during some festivals they come back here. Now the two users do some business in their spare time, mainly selling shoes.</td></tr>
<tr><td rowspan="11">House Information</td><td colspan="3">The homestead width is 4.2 meters and the depth is 24.9 meters. The household is constituted by three parts : the Central Room, the Secondary Room and the Subsidiary Room. And those parts are combine with the courtyard.</td></tr>
<tr><td>Central room</td><td colspan="2">The part width is 4.2 meters and the depth is 8.6 meters. The structure is brick-wood, and the form of the roof structure is that the crossed wood beam bear the purlin. It is a Sotto Portico building.</td></tr>
<tr><td></td><td>Building Function</td><td>Past</td><td>Present</td></tr>
<tr><td></td><td>The 1st Layer</td><td>Business</td><td rowspan="3">Living</td></tr>
<tr><td></td><td>The 2nd Layer</td><td>Living</td></tr>
<tr><td></td><td>The 3rd Layer</td><td>Storage</td></tr>
<tr><td>Secondary room</td><td colspan="2">The part width is 4.2 meters and the depth is 7.5 meters. And there are 3.3 meters among the depth, which occupy the courtyard and are built later. The 1st layer is brick concrete structure, and the 2nd layer is brick-wood.</td></tr>
<tr><td></td><td>Building Function</td><td>Past</td><td>Present</td></tr>
<tr><td></td><td>The 1st Layer</td><td>Cooking</td><td>Living</td></tr>
<tr><td></td><td>The 2nd Layer</td><td colspan="2">Storage</td></tr>
<tr><td>Subsidiary room</td><td colspan="2">The part width is 4.2 meters and the depth is 4.8 meters. The building function includes a bath room, a kitchen and a henhouse.</td></tr>
</table>

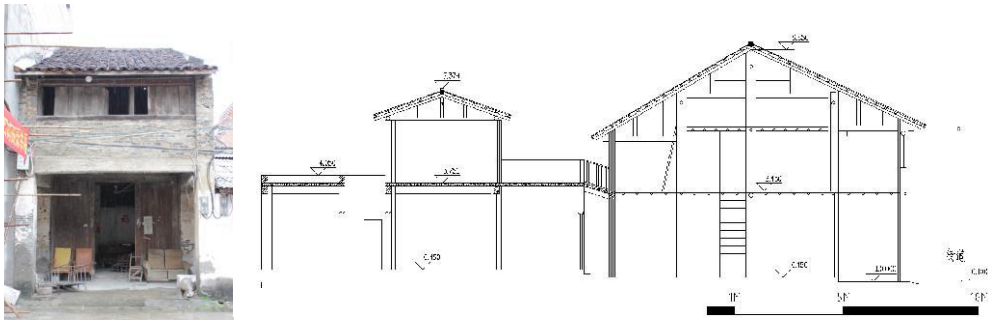
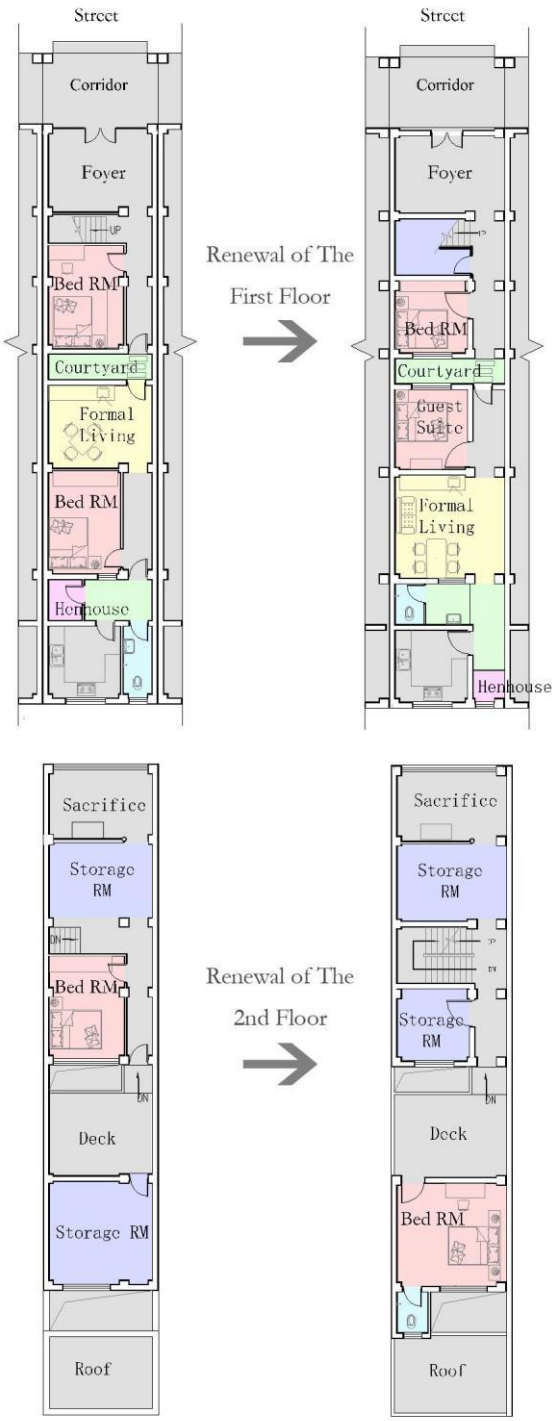


Figure 12- The Facade And The Profile Of The No.27 House In Xinxing Street



The Renewal of No.27 House:

Replace damaged components.

Widen the stairs.

Increase the quantity of the storage space, and use the space that is under the stairs.

Share the side wall with the neighborhood.

Separate static and dynamic spaces. The bed room moves away from the kitchen.

Separate clean and dirt spaces. The henhouse moves away from the living room.

Change to B&B. Increase the guest space and the bathroom (Figure 13).

5 CONCLUSIONS

Guoyang community landscape environment is good, and is rich in property. There are some cultural relics, and the local Guanyue temple has a great historical and cultural value. The traditional house type is worthy to study. Under such conditions, there are the potential of tourism development and the value of history, architecture, aesthetics and so on. Whether the advantage can be took needs the reasonable

measures of protecting and updating. The old building should be protected on the structure and the facade, and the internal functions layout should be adjusted and updated. New buildings should retain the style of the traditional building. The new building that has been built should be adjusted to match the style of the traditional building.

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ID 1340 | TRANSNATIONAL URBAN DESIGN FIRMS AND LOCAL IMPLICATIONS FOR PLANNING

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ABSTRACT: International architects and urban designers are considered to be crucial for creating new urban projects and more generally for growth. Indeed, transnational firms tend, to provide complex packages of services that reassure investors and politicians, often by elaborating positive narratives such as sustainability or the smart city. By following strategies for being highly distinctive (star architects) or highly reliable (corporate-like) in the global market, design firms are now widely used by developers and investors to package and legitimize their projects. This may occur without any specific reference to local planning processes. Design firms have grown into multinationals with hundreds (sometimes thousands) of employees and they work in multiple cities sharing the same (standardized) knowledge, technologies and, most importantly, similar planning solutions that are ostensibly replicable. Public opinion and the media seem more interested in the narrative (or the technologies, or the esthetics, or the persona) than the actual urban project. In this way solutions are more and more often depicted as merely technical matters, de-politicized and privatized by developers or ad hoc local planning agencies. By investigating two critical examples of firms working on multiple continents (i.e. one star-firm Foster+Partners and one less famous, Broadway Malyan), this chapter will show that these transnational firms can operate in the absence of local planning powers (e.g. in emerging Asian countries or the Middle East), eventually be out of touch with the local physical and functional context and instrumentally use the specificities of given urban places. In the end this serves pro-growth local players. It seems important to understand these strategies and their implications for local planning, since the work of transnational design firms is becoming more and more relevant for many global and second tier cities in Asia and the Americas, as well as in Europe.

1 INTRODUCTION

In recent decades, global cities as well as capital cities of Asia have witnessed the effects of a steep increase in the transnational circulation of architects, urban designers and planners. It has become more and more common to expect world-famous “archistars” and “urbanistars” to design not only “iconic” or spectacular pieces of architecture, but also to outline the master plans for infrastructure hubs, corporate headquarters and institutional compounds or university campuses. Similarly, other sorts of large-scale development projects have resorted to branding for building political consensus and media visibility. Despite their pervasiveness, the problematic practice of transnational planning and design - both in terms of local democratic decision-making process and in terms of its urban effects - has been left to a large extent to the architectural debate.

It is recurrent to find assumptions linking the work of architects and planners to the economic performances of given cities in public debates. In particular large-scale projects and innovative solutions are intended as an opportunity for the production (via real estate appreciation) and redistribution of wealth among citizens, in terms of new infrastructures, public facilities, employment, etc. (Logan and Molotch,

1987; Clark, 2004). International planning and architecture experts are considered to be crucial for urban growth. Transnational firms tend to provide complex packages of services that reassure investors and politicians of this pro-growth rationale (sometimes supported by academia: Jencks , 2005; sometimes criticized: Easterling, 2005, Saunders, 2005; Sudjic , 2005).

According to the work of Leslie Sklair, iconic and spectacular architecture has been serving contemporary forms of globalized capitalism to proliferate and fuel the rhetoric of inter-urban economic competition (Sklair, 2010 and 2012). In other terms, one can interpret the spectacularization of contemporary architecture and of the urban environment as a means for global players to work more easily in given urban contexts. At the same time, this condition seems functional to the commoditization and commercialization of architectural design on a global scale. In fact an architectural project is at the same time a product and a media representing a city, a client or even a place, or a real estate product to market.

Several firms have grown into multinationals with hundreds (sometimes thousands) of employees and they work in multiple cities sharing the same technologies and, most importantly, the same libraries of solutions. Design service has reached unprecedented global scales. Geography and urban studies literature have focused on the characteristics, strategies and the role of international architectural studios in urban matters (see, among others, the interesting work of Donald McNeill, 2009; Leslie Sklair, 2005 and 2006). The reasons why star architects are selected for particular projects and how they compete have been studied (Ponzini and Nastasi, 2016). Despite the significant expansion of global demand for architectural design and planning services, the mechanisms of distinction are quite important with reference to the internationally most visible projects. The studios which are capable of entering the architecture star system or the circles of the rich and powerful states' elite are in fact less vulnerable to global competition for certain types of works, such as outstanding public facilities, museums, concert halls, institutional and corporate headquarters, luxury housing and so on (Kloosterman, 2010). Architectural firms may indeed be appointed for these projects through invitation-only calls or even directly by public and private clients. From this point of view, architectural studios benefit in the long term from their established reputation and networks.

One can say without hesitation that star architects rely on their distinction, technology and aesthetic style. Most innovative and renowned architectural firms are often related to the personality of particular designers or to the extraordinary ability of completing special tasks. In literature, two strategies are recognized as relevant for architectural firms to organize their work and sell their services in the framework of contemporary global competition and international mobility. Coxe (Coxe et al, 1986) synthesized organizational strategies for architectural studios: a strong idea, strong service (and strong delivery, which is not relevant to this paper). The first concentrates on supplying unique competences for innovative and creative projects, where the star or an exceptional expert can prove to be decisive. The second, strong service, targets experience and reliability in complex design, development and implementation processes. The charisma and personality of an individual designer is often at the heart of strong idea studios. Typically they are groups of workers closely collaborating with this star-like figure or using their name as a brand. They typically work in different geographical contexts, since their high level of specialization is requested on few occasions in each city.

The strong-service strategy is highly reputed because it follows efficiency criteria in the organization of the design and implementation work cycle. Time and cost reliability is appreciated by investors and leads to higher profits. These studios are not centered on the figure of a star but they tend to have a corporate image. These organizations are sometimes articulated into branches following the whole life cycle of an architectural product (including engineering, public relations, city and community planning) and they can specialize in given items: office towers, skyscrapers, stadiums and so on.

2 FEATURES AND REASONS FOR THE TRANSNATIONAL MOBILITY OF URBAN DESIGN AND ARCHITECTURAL PROJECTS

Urban geography and planning scholars have tried to cast light on the mobility of urban policies and urban development schemes. Building on the work by Manuel Castells (1996) and John Urry (2000; 2007b) and others, scholars showed that multiple urban actors tend to make policies, ideas, and approaches to urban planning, design and architecture travel from one place to another. The Journal of Urban and Regional

Research recently dedicated a symposium to these aspects (Harris and Moore, 2013), discussing the mobility of dominant models of intervention in contemporary cities (Helaey and Upton, 2010). McCann (2011) suggested adopting a wide interpretation of mobilities as a complex of agents, practices and performances that adapt ideas while they are circulating. The transnational mobility of ideas and technologies is not a linear process; one can expect different local adaptations, hybridization and assemblages with reference to local planning systems, institutional framework, actors and interests involved (Guggenheim e Söderström, 2009). Faulconbridge and Grubbauer (2015) maintain that in general the mobilities of architectural design firms and the circulation of their knowledge are strictly related to global market forces. Their ideas and knowledge are often packaged and marketed as effective globally, but indeed design ideas must be adapted locally in order to gain traction.

The organization and networking of such design firms have been investigated by geographers (Knox and Taylor, 2005; Faulconbrigde, 2010) providing insight into their rationales and localization, though without reconnecting these with any involvement in designing given types of interventions in specific urban contexts, nor providing a sound link with their specific urban implications. Innovative studies showed the relevance of such investigations for understanding current urban transformations (McNeill, 2009).

Tim Bunnel (2015) explained how cities tend to generate policies by using antecedent cases in terms of prototypical examples, hierarchical imaginaries of other (highly-ranked) cities, paradigmatic and successful city models. Real estate investors tend to duplicate projects and packages of investments that have proven to be feasible and to generate adequate returns. This often includes similar building typologies, or diagrams for master plans, at times only the brand of a name architect that is expected to ease the planning process and make the real estate product more visible for global investors and local politicians (Ponzini and Nastasi, 2016).

Policy makers, planners and architects are not the only mobile actors in the game of transnational urban development. Real estate investors and developers seem to be more and more capable of working under quite different geographic conditions, depending on the institutional arrangements for allowing their business to land (Gotham, 2006). Clearly, the international movement of investors' and developers' resources, modes of planning and design are not politically neutral and they carry, as well, a bundle of socio-economic and cultural values that reverberate over globalizing urban environments.

3 THE TRANSNATIONAL CIRCULATION AND TRANSFER OF URBAN PROJECTS

In general terms, the simplest explanation refers to the tendency of multiple actors to reduce uncertainty and risk, whether by using similar designs, real estate investment schemes, policy tools (e.g. public-private partnerships) or other means. This short overview showed the multiple meanings and facets of transnational mobilities, which might or might not be related to design. More specifically, design-related concepts can only be partially derived from literature (which is still inconsistent). I use the terms "circulation" and "transfer" (Ponzini, forthcoming).

The circulation of urban and architectural projects implies that specific design-related aspects migrate among projects in multiple and geographically distant places. This has been recurring systematically for centuries with reference to common and generic architecture and urban design, but it seems more and more relevant once it is referred to spectacular buildings, complexes, infrastructures and urban environments that are supposed to be iconic and uniquely important for one city or place. The world-wide circulation of building types is quite recurrent. King (1984, 2003 and 2004) showed how circulation involved a specific history, regarding the creation and evolution of one building type, its adaptation in different contexts, and its diffusion and impact in diverse societies and cultures. Since modern times the discussion of the circulation of typologies has fostered a number of discussions targeting architectural features or their implications for local societies and ways of organizing cities.

The import and export of master plans and attention-catching architectural projects, if compared to the past, has assumed a relevant magnitude and geography, as well as an unprecedented pace in the last few decades (Nasr and Volait, 2003). A new frame of reference is available today for researching and discussing the transnational mobility of spectacular architecture, but is not fully deployed, nor systematized. Knox and Pain (2010) argued that the circulation of types and of similar buildings is part of the homogenization push of globalization, i.e. due to increasing the financiarization and de-materialization

of the real estate market, to the competing and neoliberalizing attitudes of cities, and hypermobility and indulgence of design professionals. It is important to specifically note that this circulation can be detected with reference to central facilities and urban infrastructures (e.g. stadiums, museums, etc.) or clearer transfers of actual projects. Matti Siemiatycki (2013) offers a long term view of larger “waves” of the circulation of mega-urban projects. In particular he suggested the interest of historically and geographically tracking particular kinds of urban projects (e.g. electric tramways, urban freeways, light rails) and explaining policy trends with a concrete reference to the local interests and policy arrangements, public discourse and politics, and ultimately the physical environment. In particular, Siemiatycki outlines a theory of urban project circulation based on long-term waves and (for certain types of megaprojects) in phases of trendsetting, promotion and local adaptation, spread and decline. These waves can radically vary in their length and outreach depending on cultural but also local conditions, since projects are adapted and pushed forward by local interests and coalitions.

The second design-related way of importing and exporting spectacular projects can be described as a specific transfer when substantial features of one given building or landmark, of one master plan or of the structure of one exiting area is directly translated from an original place to one or more geographically distant destinations. Of course, the transfer concept can imply direct imports and exports having different degrees of accuracy in practice (with reference to building features: height, overall surface, functions, main materials, building structure, relationship to the master plan for the area or to infrastructure and public spaces).

From the point of view of the firm it is clearly more efficient to design one solution and apply it multiple times, eventually adapting the technology, aesthetics and narration to the local environment. Various types of design software in use among strong-service firms (and strong-idea as well) allow firms to buy or develop libraries of solutions that are shared by branches across the world: building information modeling is one example. Narratives like the “Bilbao effect,” the smart city and the like are reinforced when repeated and enacted locally. Real estate developers (and the investors backing their project) are reassured by projects that proved to be successful elsewhere, expecting marginal adjustments to be needed to obtain the same returns. Local politicians use the architect’s name and fame to cast positive light on the projects and themselves in the media. Other auxiliary actors (service providers, academia, intellectuals, etc.) can be in favor of growth in more or less general terms according to the project.

In this picture the connections between the key players in urban development are clear, though the urban implications for planning and effects at the local level have been investigated less. The profile and projects of two different transnational firms can help explore these aspects.

3.1 BROADWAY MALYAN AND THE TRANSNATIONAL CIRCULATION OF WATERFRONT COMPLEXES

The UK-based firm Broadway Malyan was founded in 1958. It covers all the typical expertise of architectural practice, from master planning to interior design. They have a quite mixed portfolio and wide array of clients in over 60 countries. According to the firm (Broadway Malyan 2013) they have a high rate of repeated business. For this paper I could find solid data only with reference to projects from the late 1990s to the present (deriving most information from the official website: www.broadwaymalyan.com). The localization of their satellite offices (sixteen overall with more than 500 employees) was both due to the expansion of the firm and to a set of partnerships with other offices (e.g. Latin America). Outside the UK they are mostly concentrated in Asia, with offices in Singapore, Shanghai, Mumbai and the Middle East. The 65 analyzed projects show that the firm increased its presence in Asia in the late 2000s, due to the economic slowdown in Europe. In particular, the spread from the UK and Europe to the East is quite evident (Fig. 1). This also implied a change in the political environment in which they operate, from fully democratic and free countries to partially free and not free countries (see Fig. 2).

Figure 1 – Localization of completed projects by Broadway Malyan in the 1998-2016 period

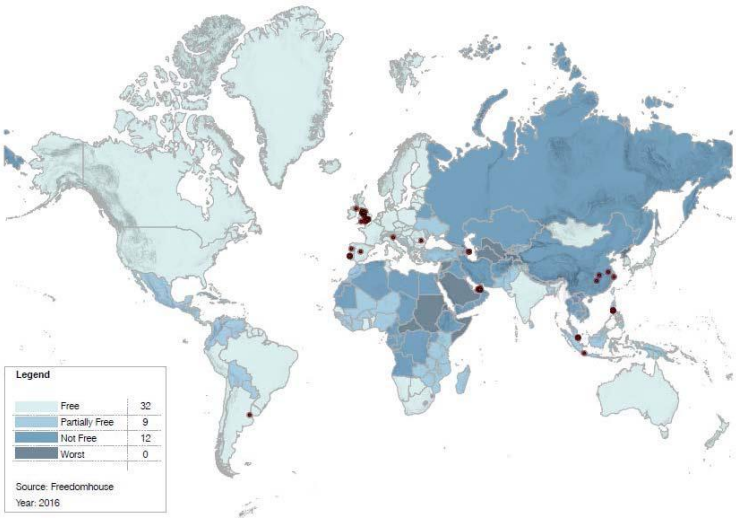

Figure 2 – Localization of completed projects by Broadway Malyan in the 1998-2016 period with reference to the level of freedom in each country, using the classification and data by Freedomhouse.com (Free, Partially Free, Not Free, Worst)

The presence of offices and the orientation toward repeated business clearly brought the firm to strengthen their relationships with local decision makers. In the Persian Gulf region, for example, they established two offices (one in Abu Dhabi and the other in Dubai). In 2009 Broadway Malyan was appointed to deliver and develop prototypes of architectural design for schools and educational centers in Qatar with the Ashgal programme and in Abu Dhabi for the ADEC School Programme (Ashgal is the national agency for public works of Qatar, while Abu Dhabi Education Council manages the educational system of that country). This means that they were in charge of developing one flagship school project and eventually dozens of others (more precisely forty in Qatar and twelve in Abu Dhabi). It is clear how this strategy implies the circulation and transfer of similar design solutions across one country and region, potentially developing common functional and aesthetic features.

An evident circulation of design features can be seen in the case of waterfront complexes in the UK, UAE and Azerbaijan. In the UK the firm experimented a receding floor system to enhance the presence of terraces overlooking the waterfront. This solution is known, but found success in the NV Buildings in Manchester and some obstacles in St. George Wharf in London. The residential complex using the same building type and overall scheme of Battersea Reach in London started in 2003 but took a long time to implement, being competed in 2014. In the same years the firm developed two similar projects, respectively in Abu Dhabi (Al Bandar) and in Baku (Port Baku Residences) (for a systematic comparison of the three projects see: Matevska, 2016).

Figure 3 – From the top, the complexes of Al Bandar in Abu Dhabi (photograph by Michele Nastasi), Battersea Reach in London (photograph by Michele Nastasi), and Port Baku Residences in Baku (image retrieved from: https://it.pinterest.com/pin/237987161536546943)

The development in Abu Dhabi involved the redesign of the shoreline and radical transformation of the environment lead by the real estate developer Aldar. The latter is the leader in development in this Emirate and one of the largest operators in the Middle East. It has developed several quadrants of Abu Dhabi and its most iconic buildings, such as the hotel and Formula 1 track on Yas Island. Its Headquarters building stands as a landmark for Abu Dhabi as well. Its portfolio includes entire islands near the main island of Abu Dhabi and a number of commercial and residential projects.

The Al Bandar project was started in 2007 and completed in 2011. If compared with the antecedent of Battersea Reach it has similar height and a slightly larger scale (90,000 sqm as opposed to 70,000 in London). Quite similar design solutions and materials had quite different effects, due to the different contexts: a former industrial site in a predominantly residential area in London; new man-made landfill and coastline removed from the city and marketed for its exclusivity and direct access to the sea.

These and other Broadway Malyan projects inspired the development of Port Baku in the capital of Azerbaijan, Baku. It was initiated in 2011 and was completed in 2014. The same system of receding floors was adopted for a much larger scale (about 400,000 m²) and less direct exposure to the waterfront (which is a few hundred meters away from the complex). The surrounding area is much more mixed in uses and more valuable if compared to the other two.

The developer and investment bank Pasha is extremely influential in the Azerbaijani national system, being closely related to the Aliyev family (in power in this oil-rich country since 1993, after the Soviet Union's collapse). The Port Baku project is part of a new residential and commercial development of the area and connected to a large mall. The complex does not have direct access to the water but faces a buffer zone of public spaces towards the waterfront. While the London project had to face a slowdown in the real estate market, in the cases of Abu Dhabi and Baku the project was completed at a dramatically high pace. In part this is due to the different planning systems and regulations, but one must notice that the market plays a less relevant role where "government-led urban elites … define the political economy of the city and future development" (Valiyev, 2014, 45).

Besides the Port Baku Residences, Broadway Malyan designed another flagship project in Baku, completed in 2015. The National Gymnastic Arena originally was a key project for Baku's candidacy for the 2024 Olympic Games bid. The power structure is quite centralized and personalized (see: Guliyev, 2012) and the connection with it is of central importance in this country. Multiple commissions in this country may imply coming to terms with this monocratic and clan-like elite, and with its view of the city and urban growth.

3.2 FOSTER+PARTNERS AND THE TRANSFER OF A COMPLEX FROM ABU DHABI TO ASTANA

Today Foster+Partners is a multinational firm with several branches. Their initial work during the 1960s-1980s was mainly completed in the UK, but rapidly reached international recognition. The major breakthrough was the completion of the Hong Kong Shanghai Bank Headquarters in Hong Kong in themid-1980s. Procurements came from Europe (e.g. Germany and France) and subsequently from other continents. Since the mid-2000s the firm started to work more systematically with emerging countries. The firm has been in the spotlight for several decades now and for multiple reasons, spanning from technological innovation, ecological care, architectural aesthetics, to the ability of designing and implementing iconic new buildings, of retrofitting existing heritage buildings and of managing complex development processes. It has attracted substantial attention among architecture, urban geography and planning scholars (among others: Mc Neill, 2005 and 2009; Poli,2010).

Figure 4 – Localization of completed projects by Foster+Partners

One of the explanations for the transnational strategies of the firm can be derived from a documentary movie dedicated to it: “Foster has become placeless to quite an extraordinary extent. Bashes with bankruptcy have overshadowed many architects’ careers. So once Foster had the chance to work outside Britain, he saw that building a global practice was the key to survival. Downturns on one continent can be compensated for by booms on another. The experience of working on a world-wide scale has transformed Foster and his work. You can see now that there is a certain level of impatience with the way old Europe does things. He wants to bring home what he has learned.” (Carcas and López Amado 2010)

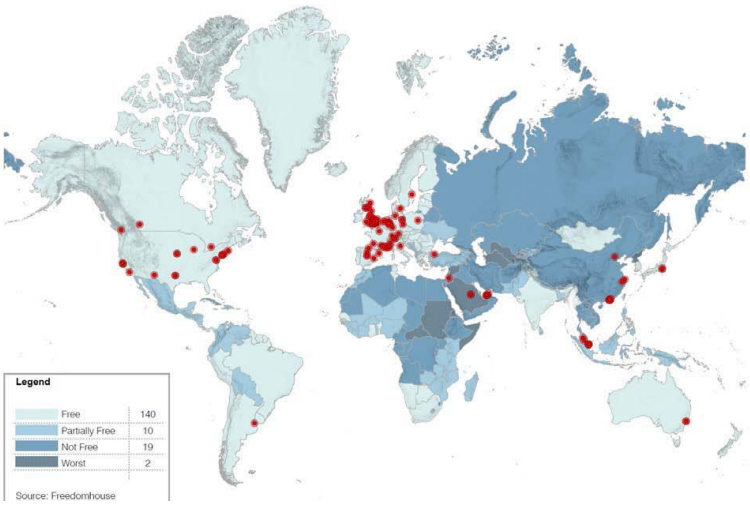

Figure 5 – Localization of completed projects by Foster+Partners with reference to the level of freedom in each country, using the classification and data by Freedomhouse.com (Free, Partially Free, Not Free, Worst)

The firm has worked in a number of countries and different institutional arrangements, including autocratic countries. Among the emerging countries where Foster works, the UAE and Kazakhstan seem very important in explaining the relationship with the elite and its transnational features. The firm was involved in a number of key projects in both countries, which were very important for their practical and symbolic relevance. In particular Foster designed the UAE pavilions for the 2010 Expo in Shanghai as well as the 2015 one in Milan, the Index in Dubai and the Masdar Institute master plan. The latter was intended to be the first zero-carbon eco-city, but was only partially completed (Gunel, 2016; Cugurullo, 2013).

One evident example of transfer of a Foster+Partners design can be considered. The site of Abu Dhabi’s central market was once the place of a lively souq of mixed-income shop owners and users. The new project designed by Foster+Partners - also known as the World Trade Center Abu Dhabi - is a mixed-use facility including exclusive offices, luxury residences, a mall and shopping area and a hotel. Its design

involved specific architecture and aesthetics and technological devices for thermic comfort which, according to the designers, are a contemporary reinterpretation of traditional bazaars in the region. In the firm's words: "Central Market will be a reinterpretation of the traditional market place and a new civic heart for Abu Dhabi." (cited in Elsheshtawy 2008b, and retrieved from http://www.fosterandpartners.com/news/archive/2006/11/abu-dhabi-central-market-to-be-transformed).
The height of the main tower (Mohammed bin Rashid Tower) is also considerable not just because it is the tallest building in Abu Dhabi, but also compared with ones in the neighborhood, which have medium-rise average. Besides the expulsion of the lower strata of shop owners and users, the place lost its souq atmosphere in favor of a spectacular impact on Abu Dhabi's skyline. The project has a direct link to a distant place. The president of Kazakhstan, Nursultan Nazarbayev has been in office since independence from the USSR in 1990. He has planned a new capital city – Astana - leveraging the country's booming gas economy to generate tremendous expansion (from a small village to over 800,000 people now) and international visibility (Anacker, 2004; Koch, 201; 2013a and 2013b). Two of the most iconic buildings of the new capital were commissioned to Foster: the Palace of Peace and Reconciliation and the Khan Shatyr Entertainment Centre.

One of Astana's most notable complexes of luxury hotels, retail, office and housing space - the Abu Dhabi Plaza – followed quite literally Abu Dhabi's Central Market development format. Norman Foster+Partners designed the master plan for this development, which was in fact promoted by Aldar and backed by President Nazarbayev. The official press release of the design firm reports that "the scheme is inspired by its sister project in Abu Dhabi - the Central Market Redevelopment" for "creating a new landmark on Astana's skyline" (http://www.fosterandpartners.com/news/archive/2007/11/designs-unveiled-for-a-new-mixed-use-development-in-astana-kazakhstan/). Despite their opposite climates, Abu Dhabi and Astana (with peaks respectively of +40C and of -40C), shared a similar rationale in design terms since some parts of the mall were expected to draw on the traditional Kazakhstani bazaars (in the firm's words "reinvention of a traditional marketplace" http://www.fosterandpartners.com/news/archive/2007/11/designs-unveiled-for-a-new-mixed-use-development-in-astana-kazakhstan/) and to implement the newest technologies for maximizing the gain from solar light during winter. The project is located nearby the monumental axis that includes most representative and institutional buildings of the city and the nation. The Abu Dhabi Plaza project in Astana derived from a special agreement between Kazakhstan and Abu Dhabi, involving the creation of a Special Economic Zone, waiving taxes for both construction and management of the compound and expecting further direct foreign investments. It is clear how the local and national government supported Aldar, despite the fact that local critics and Members of Parliament contested the fact that the municipal budget will not benefit from this operation, which is located in a prime site in the city. In particular, the political relationships between the Abu Dhabi and Astana transfer are quite personalized and generated ad hoc conditions for specific projects (Anceschi, 2014). The sub-culture of the elite counts and can have paradoxical effects for planning and more general state policy (Jones 2015). These were conditions that did not grant any particular planning restrictions for the project.

After a grand public and international announcement, the final design was handed to HKR Architects, which describes itself as "an architectural consultancy for the new global economy […] Our network of offices in the UK, Turkey, Russia, Kazakhstan and the UAE enables us to offer a full scope of services to our clients, delivering international experience and local knowledge to each project, regardless of location" (Retreived from http://www.hkrarchitects.com/about-us/ in April 2015, italics added by the author). Construction started in 2009; the main tower (over 350m) will be the tallest building in Central Asia. In the process several adaptations were made, losing the innovative signature design and aesthetics of Foster. The fact that this building (the tallest in the city and the country) will be adjacent to the monumental axis of the capital ironically show that the only actor fulfilling its goals is the real estate developer Aldar. The client has a more costly and less iconic complex, the state cannot levy taxes on the new development, the design firm lost the job along the way and eventually citizens will have a less interesting urban realm than expected with the approval of the project.

Figure 6 – From the top, the complexes of the Central Market in Abu Dhabi (photograph by Michele Nastasi) and the Abu Dhabi Plaza in Astana (image retrieved from: : http://www.aldar.com/en/Commercial-Properties/Pages/DevelopmentDetails.aspx?DevID=Abu-Dhabi-Plaza)

4 CONCLUSIONS: TRANSNATIONAL DESIGN FIRMS AND LOCAL URBAN PLANNING

The analysis of the architectural firms' international strategies and trajectories highlights their quite simple rationale of following the opportunities for working, establishing new branches and relationships where urbanization occurs with a higher intensity of investment, in the Western world and in certain booming cities in Asia. Very little has been done in Latin America, nothing in Africa. Of course, this paper has a very limited scope: two firms only, from the same country and, all in all, having similar profiles, despite the fact that Foster+Partners and Broadway Malyan have different approaches and specialties. However, one can see that the trajectories are clearly related to the international circuits and elites of the countries welcoming the work of international design firms. Repeated works depend on the designer's quality and reliability, but also on strong relationships of the firm .

Star architects' clients seem interested in the functional outcome of architectural design as well as in the returns in terms of reputation that the figure of a renowned architect can induce. As the two cases showed, famous architects are not hired for the expected positive urban impact only, but also for other symbolic and political reasons both at the macro (promotion of the national or urban image) and micro level (same operators). Representing architectural aesthetics, technological innovation or general narratives as determinant factors does not respond to the actual procurement processes. Nonetheless, the firm's distinctiveness has been the means for disseminating certain types of behavior among decision makers and has provided architects, pro-growth politicians, real estate developers and other actors with favorable conditions for their business (Sklair, 2006 and 2010). Despite the fact that architectural and urban design become a means to reassure local actors about the feasibility and innovation of projects to be more or less literally transplanted (which is efficient for the design firm), the final outcome depends on a series of

adjustments. The latter may mean the simplification (and eventual banalization and cost-cutting) of the original project that was delivered under different conditions.

A broader picture may derive from this analysis. The economic crisis, or the Arab spring did not change much in the development of large-scale projects in the Middle East (Barthel and Vignal 2014). The recent slowdown of the Chinese economy did not stop the rapid urbanization process. In such countries, design firms can experiment new solutions (among others: the abovementioned eco-city of Masdar in the UAE) and eventually implement them at the highest speed. The availability of money, concentration of power, the absence of democracy, urban tabula rasa and other conditions may sometimes be extreme. But designers understand what this means for their business. Owen (2009, 10) gives a clear example: "Foster's Terminal 3 in Beijing was designed and completed in four years, the length of the public enquiry into Richard Rogers' Terminal 5 at Heathrow – a project that reportedly took a total of 20 years to complete." The firms' mobility does have an impact in the way they operate (e.g. a more economically efficient design process implies standardized solutions to be replicated, with incremental customization according to the occasion) and the knowledge they carry around as they travel. At the moment the long-term implications related to the trajectories of important transnational actors who operate in different geographic contexts in search of favorable conditions has not yet been observed. What they eventually "bring back home" after their mobilities in countries with radically different political and institutional settings and rather simplified planning systems and processes may imply some problems.

The global financial crisis of the late 2000s was in part originated by the functioning of the real estate market and its financial arrangements and it had significant repercussion on urban policy and planning (Ponzini 2016). When both public and private resources become scarce, urban policymakers and planners may tend to lower the standards and quality of the planned interventions, in order to keep the available investments flowing and maintain political consensus among relevant stakeholders. This is quite visible in several cities of the Western world, especially in Southern Europe. A quote from Norman Foster may summarize the designers' point of view: "We now have a tremendous amount to learn from the best of those emerging economies and the way in which they are thinking big, thinking strategically, taking bold initiatives. Hum… examples in a way almost so obvious. Thus I wonder why it takes so long for the penny to drop" (Carcas and López Amado, 2010). It is difficult to tell if this is a blunt call for technocracy or a more nuanced inclination toward the import of eventual models for large-scale and fast-track projects that derived from Foster's experiences in the UAE, Kazakhstan, China and elsewhere. For sure, one can see how the same technologies, aesthetics and narratives circulate internationally making the life of the rent-seeking and local elite easier (Sklair 2017), but not necessarily delivering better plans and projects.

In the case of Foster's transfer from Abu Dhabi to Astana, the developer Aldar is presumably the only winning actor at the end of the game. The design firm lost the job on the way. President Nazarbayev wanted an icon on the monumental axis and had in return a quite generic complex, designed by a lesser-known and eventually place-indifferent firm. I am not sure if these are the kinds of planning processes and outcomes that cities in the West may be able or want to experience in the near future.

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ID 1343 | CHINESE RETURN TO THE PUBLIC BENEFIT AFTER THE WAVE OF MASSIVE URBANIZATION - A CASE STUDY OF THE SHENZHEN BAY RECREATIVE SEAFRONT BELT

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ABSTRACT: Shenzhen is located on the South of China; east of the Pearl River Delta; while bordering Hong Kong on its south. It is one of the fastest growing cities in China with a strong economic vitality. Started from a small fishing village in the 1970s, Shenzhen has become a mega city with a population of twenty million in 35 years. As a developing coastal city, Shenzhen had most definitely neglected its residents need of leisure. Especially recreational use of waterfront space. Shenzhen's municipal government activated the relevant works of Shenzhen Bay leisure seafront in 2003. The project started west of the Nanhai Hotel, all the way east to the Mangrove Nature Reserve Area. It spans throughout the east coastline of Shenzhen Bay, with a total length of 15 km. The project objectives are specific in the followings: comprehend the importance of coastal natural resources of Shenzhen Bay, make full use of the shoreline. Construct a complete form of ecological system while improving the current ecological function basing on the Mangrove Nature Reserve Area; opens the closed seafront; returns the natural waterfront space to the public; uses international consultation as the standards to reshape the coastal characteristics; encourage public participation in the process of planning and design. Holding these objectives, 9 kilometers of coastline on the east side were completed in 2011. Upon its opening, the Shenzhen Bay leisure seafront belt had won the public praised and regional recognition the Shenzhen and Pearl Harbor Delta area almost immediately. It had then become the symbol of Shenzhen, as a modern coastal city. Summary: This leisure project demonstrated that urban space is not only a carrier economic development and construction. For a better life tomorrow, adhering to the people-oriented, nature-oriented, and positive concepts are needed. They are there to guide urban planning and construction activities in the city tomorrow.

KEYWORDS: Public space, Public interest, Coastal Characteristics, Shenzhen, China

1 PREFACE

The Shenzhen Bay is an estuarine bay shares between the city of Shenzhen and the city of Hong Kong. The west end of Shenzhen bay, bounds to the Pearl River Estuary, while the east bounds to the Shenzhen River; the bay holds roughly 80 square kilometers of area. The water depth gradually shallows from the east to west. The shallowest depth of the water holds at 1 meter. The Shenzhen Bay referred in this article is within the administrative boundaries of Shenzhen.

The new Shenzhen coastal waterfront emerged when the reclamation of the new Shenzhen Bay Checkpoint and Shenzhen Bay Bridge were completed at the end of 2003. Under this circumstances, the municipal government of Shenzhen began to reflect the urban development of past 20 years, including the significances of the Shenzhen Bay regarding to natures, urbans and the publics.

The Shenzhen Bay Coastal waterfront space has superior geographical location and unique landscape resources. It would be an unreasonable wasted, if Shenzhen Bay was not able to convert into public use due to the lack of reasonable use objective. Meanwhile, the shoreline has become increasingly prominent as the inner marine of Shenzhen and the gateway to the city image. Unfortunately, it has no coastal features.

For all the illustrated reasons, Shenzhen municipal government started the relevant works of Shenzhen Bay recreative seafront. Which spans 15 kilometers west from the Nanhai Hotel, along the Shenzhen Bay shoreline till east to the Mangrove Nature Reserve Area.

Figure 1 – Location of Shenzhen Bay

2 REFLECTING TOWARDS THE DEVELOPMENT OF SHENZHEN BAY

2.1 FUTIAN CITY CENTER'S COASTLINES SERVED MANLY FOR INDUSTRIAL PRODUCTS, NATURAL AND RECREATIONAL SHORELINES ARE RELATIVITY SCARCE

The earliest economic development of Shenzhen was the opportunity of undertaking Hong Kong's manufacturing industry. Due to the fast-paced industrial urbanization, the city ignored people's needs and basic living. Many production facilities were set up along the administrative boundaries. The city developed rapidly from its east side towards its western base on its geographical and market factors. Uses of shoreline were mainly industrial; however, the public hydrophilic coastline was almost non-existence.

While most of the coastline were industrial, Shenzhen do have one unique feature of nature at its city center. The Futian National Mangrove Nature Reserve is a the only natural coastline of Shenzhen Bay, as well as is the only urban center nature reserve in the entire world. The Futian National Mangrove Nature Reserve and Hong Kong Mai Po wetland composed an important transit point for the international migratory birds in the eastern hemisphere. More than ten thousand of migrant bird rest and stop in the Shenzhen Bay every year. Since the nature reserve is a closed manage facility, and only 120 visits can be taken under reservation daily, most of the public has difficulties to reach and connect to this magical land.

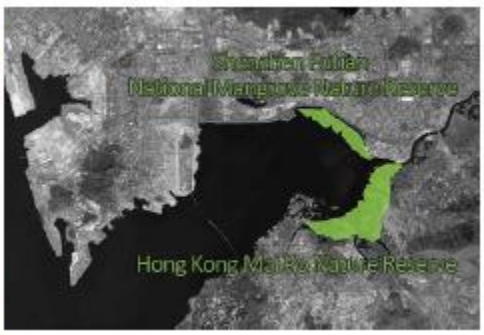

Figure 2 - International Migratory Birds in Eastern Hemisphere(Left)
Figure 3 -Nature Reserves in Shenzhen Bay(Right)

2.2 SHENZHEN'S COASTAL SPACES WERE CLOSE FOR VISIT WITH MANY NEGATIVE IMAGES. THEREFORE, THE SHENZHEN BAY AREA SERVED NO RELATIONSHIP WITH EVERYDAY URBAN LIFE

Early planning and design of the water did not fully consider public's leisure and spiritual needs. Coastal regions were often occupied by non-penetrable buildings, ports, checkpoints and expressways. Sea sight could not be reach by urban population. The Shenzhen Bay area served no relationship with its urban

population. Rapid urbanization ignored the social public space consciously, and the real embodiment of the city charm of the city spirit was given way to the market economy.

2.3 SHENZHEN AS A COASTAL CITY HAD NO COSTAL REVELATION

As a rapid growing city, the demands for land were highs. The water area of Shenzhen Bay was reclaimed as land, and it was reduced from 108 square kilometers in 1977 to estimate 83 square kilometers today. Massive extrapolation on reclamation was to meet the needs of city's early economic development; nevertheless, the original waterfront space and environment were not considered under the early planning stage. The construction of large-scale port and transportation facilities resulted shorelines to be enclosed and revitalized. These constructions had also changed the ecological resources in the city environment. Expressways such as Shahe and Binhai are acting as border walls that separates the urban population and the seafront spaces. Locating on the coastline, but cannot sense the sea. It's an embarrassing impression of Shenzhen as a coastal city. Coastal features of Shenzhen were facing endanger threat from the it rapid development.

2.4 AS THE CITIZEN'S LIVING STANDARD RAISES, HIS/HER SPIRITUAL NEEDS ALSO INCREASE. THE PUBLIC STRONGLY DEMANDS THE REOPENING OF WATERFRONT SPACE

Water is the source of life; human nature is hydrophilic. Ancient Chinese had a saying where "live beside the water, habitat by the water ". Nowadays, waterfront space does not only bear the city public activities, cultural heritage, ecological conservation, but it also reflects its city spirit. The value of waterfront space depends and changed on the public demands during different stages of city development. It was used for agriculture production at an early age, and progressed to industrial and manufacturing services during industrialization. With the transformation of urban industry and improvement of resident's buying ability, the function of waterfront space needed to be reevaluate and reassessed. The waterfront spaces will return to urban life as a citywide trend.

3 THE PROCEDURES OF SHENZHEN BAY RECREATIVE SEAFRONT CONSTRUCTION

3.1 COMPREHEND THE IMPORTANCE OF COASTAL NATURAL RESOURCES OF SHENZHEN BAY, MAKE FULL USE OF THE SHORELINE. CONSTRUCT A COMPLETE FORM OF ECOLOGICAL SYSTEM WHILE IMPROVING THE CURRENT ECOLOGICAL FUNCTION

An ancient Chinese sage Lao Tzu explained the relationship between man and nature two thousand years ago. "Everything exist together in a delicate balance, human being has to respect and learn from the earth, the sky and the entire nature."

Therefore, to take better care of the sensitive and fragile ecological environment, we must give priority to the primary needs of the natural biosphere. Including the birds, mangroves and so on. Pay full respect to the mangrove reserve's international influence and its sensitivity. Large-scale constructions are forbidden near the reserve land. Ensuring no disturb wildlife habitat, we need disperse the pattern of human activities and controls the types of activities that are taking place near the reserved land. To reduce the impact of human activities on the wetland ecosystem, human activities are taken far away from the mangrove, where the birds live.

The Shenzhen Bird Watching Society also participated regarding on the overall layout and functional organization for the mangrove. Goals to preserve large natural mudflats for benthic ecology and migrant

birds. In this new aspect of urban development, humans and birds, city and nature all coexist harmoniously.

With the establishment of large-scale physical hydraulic model, we can then simulate the artificial shoreline filling form and scale for the Bay area water flow. It can encourage a substantial contraction of reclamation area. Bay reclamation can be done per the needs of coastal activities, and moderate adjustment of the Shenzhen coastline can be taken to an accurate account.

Figure 4 - Establishment of Physical Hydraulic Model

3.2 REOPENS THE CLOSED SEAFRONT, RETURN THE NATURAL WATERFRONT SPACE BACK TO PUBLIC

Alleviates the physical isolation of the expressways, improves the connecting facilities such as overpasses, underpasses and traffic accessibility to the coastal area. Many measures can be all taken place to reshape the richness of coastlines and create a subtropical city coastal leisure space, while increase the chance of various functions, such as leisure tourism, occasional sports, fitness and so on. The connections and bounds of public activities will entitle the impression of this coastal city, promote the idea of the Shenzhen Bay from the urban edge to an undeniable urban function. It achieved the goal of psychological and social connections through physical transformation.

3.3 USES INTERNATIONAL CONSULTATION AS THE STANDARDS TO RESHAPE THE COASTAL CHARACTERISTICS

3.3.1 ACQUIRE HIGH DESIGN THAT QUALIFIES FOR AN INTERNATIONAL WATERFRONT

In 2003, the city planning bureau established the design, bidding with a clear task. It had received 58 design application worldwide. A team of experts selected 7 qualified design firms for the competition, and a committee of both domestic and foreign experts, elected the four most prominent proposals from these 7 firms. The design that scored the project is a collaboration work of China Academy of Urban Planning and SWA Group. In the following two years after its successful bid, the team had an abundance of time to improve their design. After the design and engineering had fallen into places, the project started its construction in 2006.

Figure 5 – Winning Design

Figure 6 –Improved Design

3.3.2 AVOID ADMINISTRATIVE INTERFERENCE, STAY LOYAL TO THE ORIGINAL DESIGN, AND ESTABLISH HIGH STANDARDS OF ENGINEERING

Phase one construction of Shenzhen Bay Recreative Seafront started in 2006 and continues till 2011. The design team acts as the general coordinator and it continues to advise government departments, stakeholders, drafting units as well as the construction company. Ensuring the spirit of design being unaltered.

3.4 IMPLEMENT PUBLIC PARTICIPATION THROUGHOUT THE ENTIRE PLANNING AND DESIGN PROCESS

Ever since the consultant information had issued internationally, the project of Shenzhen Bay had grabbed the attention from national, provincial and local media. Example as the People's Daily Paper, China Southern Metropolis Daily Paper, Shenzhen TV Broadcast Company…, etc. They had carried out detailed follow-ups regarding of the process of this project.

The planning bureau had displayed the top four designs on the government website and related planning exhibitions. Goals to communicate and gather publics' ideas. The responses that were received displayed a great public interest in the planning process. Not only did the public browsed planning exhibition site, went online and filled out questionnaires; they had also suggested through phone, email and on-site.

The design with the most public votes happens to be the same one chosen by experts. The public had displayed these following reasons for their choice: it conforms to the natural environment; it highlights the themes of ecology and leisure; it is suitable for modern lifestyle that requires sustainable development; it has a clear and rational layout; it creates a unique environment for the city; it enriches cultural elements that this city desperately needed; and it is full with local characteristics.

While the display design was available to the public, the municipal government organized a public meeting that invited hundreds of general publics, real estate entrepreneurs and design institutions. The meeting had reached a consistent decision after a fierce discussion: the outpost of Shenzhen Bay should advertise the development of the entire bay area in the future, and the real estate companies should bear more social responsibilities regarding on this mission.

At the end of the public involvement, the planning bureau received 736 responses with comments. They included ecological preservation, regional functionality, and implementation strategies…, etc. The planning bureau and the design team had analyzed these responses and corresponded to all the public suggestions. Fortunately, the design team had considered and perfected their design base reasonable suggestion from the publics.

Figure 7 – Public Participation

4 RESPONSES FROM THE SHENZHEN BAY RECREATIVE SEAFRONT PROJECT

The 9-kilometer coastline on the east side finished its construction in 2011. It had gained Shenzhen and the Pearl River Delta region's public recognitions and was praised almost immediately; It had become the symbol of Shenzhen as a modern coastal city; it had received numerous awards, including the 2014 China habitat environment award, and the ninth International Federation of landscape Architects Award.

Figure 8 and 9 –Citizens' Favorite Public Spaces

5 PERORATION

The core idea of urban planning is to ensure the city's livability and provides citizens a peaceful, convenient, and enjoyable environment for work and life. This project of Shenzhen Bay Recreative Seafront is a reflection and a breakthrough of modern city concrete forest stereotype. Shenzhen often received this stereotype of as a public space and nature ignorant; nonetheless, this project demonstrates a rational decision of rus in urbe after twenty years of insane urban constructions. Urban space will no longer serve as the urban economic development sorely; urban spaces in the future will be people-oriented, nature-oriented. Only incorporating public leisure spaces, ecology preservation, and sustainable living into urban planning will guarantee a better city tomorrow.

Figure 10 - Shenzhen Bay Recreative Seafront Belt

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ID 1348 | USE AND DESIGN OF NEIGHBORHOOD PARKS AS PAROCHIAL REALMS BY MOTHERS AND ELDERLY: A CASE STUDY IN IZMIR, TURKEY

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1 INTRODUCTION

Neighborhoods parks are core living environments that create an important part of the public life which help to fulfill residents' social needs and satisfaction through social relations of neighborliness and familiarity. Neighborhood parks can ideally provide various opportunities for the well-being of especially those whose daily lives are bounded to their place-of-residence, such as women, children and elderly people. In fact, they can be used as parochial realms by these "groups-in-need." In daily life, however, not all of these groups do and can use neighborhood parks in the ways as desired, because the access to park use is not equitable among all. In order to improve urban planning and urban design strategies that

support equitable access to neighborhood parks, we need to investigate the factors causing inequitable access to the use of neighborhood parks and especially how neighborhood parks evolve on daily basis as the parochial realms by the groups-in-need.

Literature mostly tends to analyze neighborhood parks as public realms. However, as Bose (2005) also state studies that are limited to “binary conceptualization (public-private)” loose the interconnections between public and private realms and obscure the experiences of women in betwen these realms as (Bose, 2005). So this study considers that especially “groups-in-need” use neighborhood parks as their parochial realm. Ultimately, the physical and social factors that cause these perceptions should be investigated.

Parochial realms are shaped as a result of a sense of shared benefits among acquaintances or neighbours who are a part of close interpersonal networks that are located within communities of neighbourhood or workplace (Lofland, 1989). Parochial realms are areas where people accept the physical, cultural and social differences among themselves and share the commonalities. Hunter (1985) and Lofland (1989) define public realm as the world in streets, parks, public transport or commercial spaces that create chances for strangers to come accross, while personal affair of each individual in the homeplace can characterize the private realm (Hunter, 1985; Lofland 1989). Parochial realms are located at the intersection of public and private realms and the boundaries in between these realms are fluid and flexible. Such flexibility helps these areas to function like ties in between and makes it easier both physically and psychologically for people to travel in between public and private realms (Gehl, 2011). According to Wessendorf (2013) the differentiation among private, parochial and public realms depends on the degree of social relations and familiarity among people (Wessendorf, 2013). Familiarity can be defined with “a sense of commonality among acquaintances or neighbors who are involved in interpersonal networks that are located within “communities.”” (McKenzie et. al. 2006, p. 118).

More than defining a physical territory, parochial realm of neighbourhoods define close relationships of daily lives and can house to various narratives and ways of lives especially for people who are bounded to residential environments due to variety of reasons. As number of close ties in a public space and the level of intimacy among the inhabitants and their knowledge of the space increases, the spaces start to function as private realms for its inhabitants. Negotiation on the activities starts at this point. Negotiation means that inhabitants start to treat those areas as they are treating to their homes and they start to use those areas for their own private purposes with more informal and casual behaviours which are different than the original intentions for those spaces and people start to behave as if they also own the proprietary rights of those settings (McKenzie et. al., 2006).

In order to improve the use of neighborhood parks, we need to investigate factors affecting the perceptions regarding neighborhood parks especially for groups-in-need. Along with the importance of familiarity and social relations, this study highlights the importance of several other factors that may affect the perceptions of neighborhood parks as important examples of parochial realms where uses can be easily transformed and negotiated by users according to their needs. These factors are design of neighborhood parks and their surrounding environments, their accessibility, social relations among users and their feeling of safety; and secondly the socio-economic characteristics of users such as their age and gender.

To understand the role of these factors, questions of “how physical and social characteristics of neighborhood parks and their immediate surroundings, and potential park users’ socio-economic characteristics affect perception of parks as parochial realms?” and “how does the perception of neighborhood parks as parochial realms affect park use by people whose daily lives are bounded to residential space?” is answered in this paper.

2 FACTORS AFFECTING THE PERCEPTION OF NEIGHBORHOOD PARKS AS PAROCHIAL REALMS

Together with users’ socio-economic characteristics, parks’ physical and social characteristics affect park uses and perceptions differently and thus, might cause inequitable access to parks (Van Herzele and Wiedemann, 2002; Carr et. al., 1992; Low et. al., 2005). Socio-economic characteristics and resulting traditional daily responsibilities can play an important role especially for groups-in-need with physical,

social, economic and cultural limitations to use city space and have limited access to other public spaces. These factors may bind them to the neighbourhood space. Yet Neighbourhood parks may provide opportunities for women with children and housewives to socialize (Mackenzie, 1989; Kaplan, 1997; Greed, 2007); prevent social exclusion of elderly people with limited mobility (Chaudhury et. al, 2016);serve facilities for children to gain the habit of exercising as they are close to home place and easily accessible and arguably safer (Coşaner et. al., 2014). These opportunities cause groups-in-need to perceive neighbourhood parks as parochial realms – as the extension of their private spaces – and they may use neighbourhood parks for interaction with their immediate environment.

In order for groups-in-need to perceive and use neighbourhood parks as parochial realms, parks' physical characteristics such as design of neighborhood parks and their surrounding environments, their accessibility in relation to home or workplace of users, and parks' social characteristics which is based on the social relations among users, opportunities that parks provide such as cultural and social activities in parks and the relationship between different familiar groups of people who are using the park and the surrounding environment together.

Physical characteristics and quality of green spaces have serious effects on the determination of behavior patterns, chosen activities, the ways and frequencies of park visits, ideas and feelings regarding their immediate environment and the chances of escaping from the stress of the daily life (Van Herzele and Wiedemann, 2002 cited in Kemperman and Timmermans, 2008). While park design can promote opportunities for socialization, and, encountering with nature, when parks are not well designed to fulfill the needs of potential users, than those same parks can be used for incivilities including homelessness, voyeurism, exhibitionism, sexual gratification, drug use, thievery and so on (Byrne and Wolch, 2009)

Studies indicate that higher levels of park use is also related with the accessibility of parks which means the availability of attractive, pedestrian friendly walking routes (Booth et al., 2000; Michael et al., 2006). Accessibility of parks increases the likelihood that especially groups-in-need can visit a park and potentially engage in physical activities. Specific characteristics of parks' surrounding environments such as slope of the terrain, park density, connectivity, land-use mix, attractiveness and physical appeal can be associated with the active park use and the life satisfaction of residents (Moudon et. al., 2006 and WHO, 2007 cited in Donder et. al. 2013; Parra et. al. 2010). Negative issues and problems in the access to the parks such as crossing roads and walking on rough pavements, or a poor general overall appearance can be strongly felt negatives (Fokkema et al., 1996; Scharf et al., 2002) and they can work as barriers to use a park.

Social characteristics of both users of neighborhood parks have a crucial role in neighborhood's social life since they provide chances for building and maintaining a certain level of social relationships (Hunter, 1985; Bedimo-Rung et al., 2005). Additionally, relations of neighboring provide support, feeling of safety along with personal identity and place attachment (Kusenbach, 2006).

3 CASE STUDY: NEIGHBORHOOD PARKS OF BALÇOVA, IZMIR

The research focuses on the findings of the case study site in Balçova, a district of İzmir, a metropolitan city on the Aegean coast of Turkey . Balçova is located in the south of İzmir Bay with a total of 6km long shore (Figure 1). Balçova has the oldest population when compared to other counties of İzmir and Balçova is the mostly preferred county by retired people in İzmir (Balçova Municipality, 2016). Balçova's location between shores of İzmir Bay and hills of Teleferik Mountain, provide many waterfront and mountain recreation area opportunities. In addition to waterfront open green spaces; there are 32 neighbourhood parks (Balçova Municipality, 2016) in variety of sizes and characteristics depending on the residential settlements, level differences on the north-south direction and dense traffic routes.

3.1 STUDY METHODOLOGY

For this study, we had observations in each parks of Balçova, a user survey in 4 elected parks, and interviews with parks users at 2 parks. Oservations were about land-use at park surroundings, park design and amenities, use of parks, and physical thresholds around parks. As a result, we selected four parks according to their number of users, surrounding land use diversity, park's physical characteristic and

amenities and surrounding thresholds. At these four parks, we had a user survey with 159 participants about people's personal park use habits such as use frequency and durations, their perceptions regarding parks' physical and social settings, and surrounding environments, their experiences in relation with their socio-economic characteristics. Ultimately, we determined the number of regular and non-regular park users and their park satisfactions in four parks. Out of these four, we focused on two parks, Duru Park (See Figure 1, 2 & 3) and Süleyman Ersever Parkı (See Figure 4, 5 & 6) according to number of non-regular park users, satisfaction level of regular park users, characteristics of parks' surrounding environments, total park area and provided amenities in parks. Ultimately we developed in-depth interviews with 30 park users, 5 focus group interviews with women at nearby community houses and also interviews with 8 men working in these parks to find the details of people's park perceptions and park use experiences.

3.1.1 CHARACTERISTICS OF PARKS WHERE THE STUDY REALIZED DURU PARK

Figure 1 Map of Duru Park

Figure 2 and 3 - View from Duru Park

Figure 4 Map of Süleyman Ersever Parkı

Figure 5 and 6 - View from Süleyman Ersever Parkı

3.2 RESULTS AND DISCUSSION

Two parks that we focus on in this study have different physical and social characteristics, which cause major differences in perceptions and uses of neighborhood parks. Paper outlines findings of the study in three main parts. The first part concentrates on the importance of feeling of familiarity as a factor that supports the sense of safety and comfort in neighbourhood parks and perceives them as parochial realms. The second part focuses on the physical characteristics of parks such as park design and provided amenities and parks' surrounding environments such as land uses and their users as factors that make users perceive and use neighbourhood parks as parochial realms especially by mothers and elderly users. The last part raises the importance of accessibility. Being in close vicinity of mothers' and elderly's daily routine routes can increase the use of these parks' as they have higher accessibility and can easily be reached by walking. So they are used as a space for socialization opportunity with others but usually with the ones who have same daily responsibilities.

3.2.1 FEELING OF FAMILIARITY TO SUPPORT THE SENSE OF SAFETY AND COMFORT IN THE PAROCHIAL REALM

This study finds out that being together with familiar people affects park use preferences of women significantly. According to interview results in Süleyman Ersever Parkı, different than Duru Park, most of the users are frequent users and they have a familiarity towards each other and the environment. This familiarity in Süleyman Ersever Parkı is partially based on the relative residential stability of the surrounding neighborhood, existence of school nearby and the existence of the café which is being run by the same family for the last 15 years. These support the feeling of familiarity. Most of the respondents mention that they feel like a family and they never experienced any negative looks or actions towards them in Süleyman Ersever Parkı. Especially women whose children are at the school mention that they can sit together with other mothers while waiting for their children and socialize in the park. Observation results indicate that women get together in the park in large groups, bring food from their houses and buy beverages from the café and spend long hours in the park. Sometimes the same group of women also comes to park during the weekends for birthday parties of their children and use the park as a spot for getting together with neighbors.

"There is family environment. I know who is coming here why. If a stranger comes, I can recognize. If I feel discomfort, I can go and tell this to Murat Ağabey (owner of the café) and he takes care of it" (Woman, 40, married with one child).

Whereas in Duru Park, the level of familiarity for women users is much lower due to surrounding commercial facilities and their users who are coming from all parts of Izmir. In between shopping these outcomers use the park for resting. Existence of tea houses around the park, their male users, the way that they extend their tables to the interior of the park and use of the park by people who are not from the same neighborhood affect the feeling of familiarity especially for women.

One of the dominant user groups of Duru Park is elderly men of the neighborhood. As most of them are retired and want to spend their time in open air with their friends they prefer to come to Duru Park and

spend all day there. However, dominance of male users is perceived as discomforting for women users of all ages. So while elderly men use the park for longer hours for sitting and chatting with their friends, mothers prefer to use the parks for their children and elderly women for resting for very short periods.

“I go Duru Park but I do not like there. Men are looking at women with dirty eyes. Especially elderly men! I heard an incident. A man sat next to a woman i and asked her whether she is a widow. He told that he wants to marry. I heard this I swear. He told that he has a car and a house. So I am worried about these things. They should leave the park to women” (Woman, 53, married with one child)

On the contrary to women users, results of the interviews with men who are working in the park indicate that elderly men use Duru Park very comfortably together with their friends for very long hours. These men come to park early in the morning; most of them sit on the same benches everyday. They chat together about daily matters and order tea from the teahouses and spend all their leisure time in Duru Park.

“I’ve been living almost for twenty years. We all know each other here. When I come to this park I always meet with my friends. I know all the users of this park, all of them are from this neighborhood and I come here everyday to see them” (Man, 62, widow with one child, sitting at the same bench all day and everyday)

Neighborhood parks not only create socialization opportunities for children but also for their mothers. While children can easily find playmates in the playground who are living in close proximity and going to the same school, mothers also meet with other mothers while realizing their traditional daily routine of childcare.

“The playground in Duru Park is very important for my daughter to get rid of her energy and more importantly to socialize with other children. As we come here very often, she had many new friends and I also met with their mothers. So her socialization helped me to socialize as well” (Woman, 26, married with one child)

3.2.2 PHYSICAL CHARACTERISTICS OF PARKS AND SURROUNDING ENVIRONMENTS INCREASING FEELING OF FAMILIARITY

Surrounding uses and users affect feeling of safety and comfort based on their socio-demographic characteristics. Overall user survey results indicate that 44% of the respondents feel positive (comfortable and safe) when parks are surrounded by residential facilities. A larger group, almost %50 of respondents, state that they feel negative (overwhelmed and insecure) when parks are surrounded by commercial facilities. While most of the respondents in Süleyman Ersever Parkı which is surrounded mostly by residential facilities feel positive (34%) about having residential facilities and negative (30%) about having commercial facilities around the parks; in Duru Park which is surrounded mostly by commercial facilities mostly feel negative (36%) about having residential facilities and positive (50%) about having residential facilities (Figure 7 & 8).

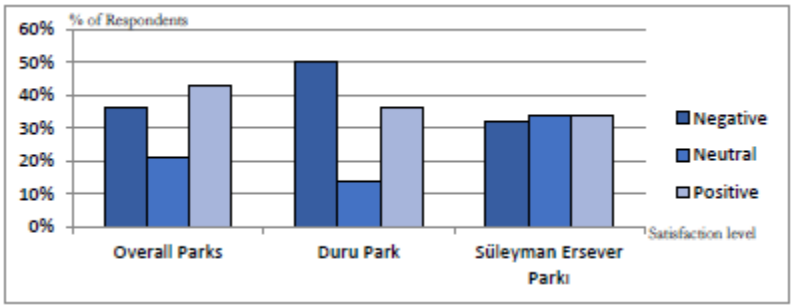

Figure 7 Perceptions of having residential facilities around parks

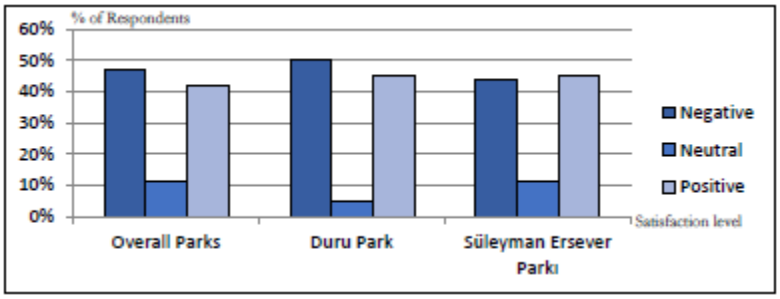

Figure 8 Perceptions of having commercial facilities around parks

Yet depending on gender of the respondents, satisfaction about the kinds of land use at park surrounding show differences. When there is the dominance of a single user group whether men, elderly, or children, the other users may start to feel uncomfortable and they do not feel welcomed in those areas. While men do not have any complaints regarding the surrounding stores or tea houses, women mostly comment negatively having tea houses or other activities that have dominant male population around the park.

“Existence of too many men in Duru Park is very disturbing. I cannot spend time there comfortably. Tea houses are too much integrated with the park. For instance in Süleyman Ersever Parkı, men and women can sit together, it is not disturbing. Because all men are from this neighborhood and they are parents of kids from the school. So no one disturbs each other” (Woman, 40, married with two children).

In addition to the characteristics of the park surrounding, parks’ design such as the availability of amenities like seating units, tables, pergolas, lighting elements, different play and sports equipments, cafes, and programming such as periodical activities like courses, concerts and celebrations at the park play a crucial role on the feeling of safety and comfort of the users.

LACK OF SITABLE SPACE AFFECTING THE USE OF NEIGHBORHOOD PARKS

Duru Park can be divided into two main areas, pool side and playground side. On each longitidunal sides of the pool there are 6 fixed benches with a shading element on top. However, on the playground side there are only 2 benches with no climate protection. In Süleyman Ersever Parkı, there are three main areas, cafeteria, playground and pool side. Cafeteria has its own movable chairs and tables, and only a portion of it protected from rain and sun. The playground side has no seating elements. In the pool side there are few fixed stone benches with no climate protection other than a couple of shade trees next to benches. Results indicate that lack of sufficient number of seating units in the close vicinities of playgrounds where mothers can have eye contact with their children is a major problem in both parks and either force people to use the utilities cafes and spend money or wait for their children standing. In addition to insufficient number, lack of protection from weather conditions is another problem.

“I wish there was more shade in here. Especially, we, mothers, need to sit by the playground but it is impossible in summer. There should be something to block the sun” (Süleyman Ersever Parkı, woman, 38, married with two children).

According to user survey results, mostly complained problem in neighborhood parks in Balçova is the lack of climate control (28%) in relation with seating areas (Figure 9). 43% of the whole respondents state that they want solutions for climate control problems (54% of this group is women).

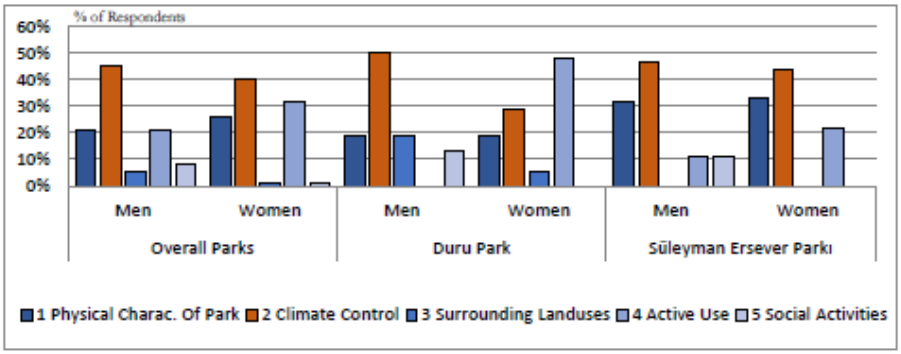

Figure 9 Climate control as the mostly complained issue in parks

According to detailed observations in Duru Park at the same times of the days during spring and summer, user number significantly decreases during summer time observation and respondents complain from lack of shade elements, planting and water elements that can cool down the air. During summer there are almost no children and women around the playground and almost all users are elderly (Figure 10 & 11).

Figure 10 Duru Park on a mild temperature spring day

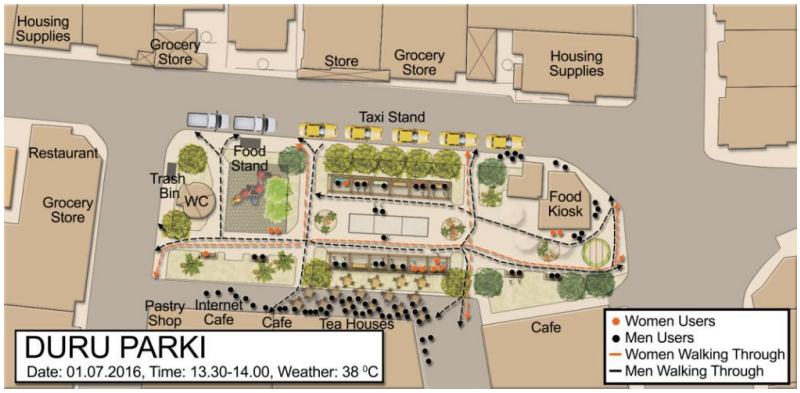

Figure 11 Duru Park on a hot summer day

Flexibility of the seating units and existence of tables is also important especially for young park users so that they can change the layout according to activities and use together with friends to chat, study, do handcrafts, rehearse music rehearsal, picnic or celebrations instead of just sitting and watching the passer bys.

"They put benches in military order. They are close to each other and fixed. Two rows of benches are looking face to face. Everytime I walk in between these benches, this layout gives me the feeling that all eyes are on me. They do not give the chance of moving according to what I like. So if I come here in a group of 3 or 4 we cannot chat properly" (Duru Park, woman, 26, single).

Existence of Food Related Amenities and their Effects on Perception of Familiarity

Considering the importance of eating activities in Turkish culture like in most Mediterranean societies, the provision of suitable physical conditions in parks for such activities is crucial. According to interview results, along with the importance of the type of the food, the location of it, quality and price the most important factor that affects the feeling of safety and comfort is the familiarity of the staff that run the place and the users of those food activities.

While existing döner or kokoreç kiosks are being complained constantly due to their concerns about hygiene, smell, prices and dominant male users in Duru Park mostly by women, the café in Süleyman Ersever Parkı is being appreciated and used often especially by the mothers who are waiting for their children getting out of the school. Those women express that they feel comfortable and safe as they know the owners who is a family from the same neighborhood and thrust them for years whereas in Duru Park the staff of the döner kiosk is all temporary and changing often.

“I come here everyday to be together with my friends, drink tea and chat. This café is a resting place for me. I like it so much. We know the owner Murat Ağabey. If we need something he helps. We can live our bags and he keeps an eye on it.” (Süleyman Ersever Parkı, woman, 53, married with one child).

Park Use after Sunset and Feeling of Safety

As Madge (1996) also state feeling of fear is directly transferred to the public space use behaviors and creates a hesitancy for using certain spaces at certain times of the day (Madge, 1996). In neighborhood parks of Balçova, the level of night use is very low when compared to other time frames during the day. Almost all respondents highlighted the importance of lighting in the night on the feeling of safety.

“I can use parks anytime I want in Balçova. Of course if the lighting wouldn’t have been enough or it was isolated I could not be able to use the park, then I would be afraid. Lighting is very important for safety.” (Woman, 35, married with one child)

According to user survey results, majority of the respondents prefer to use the park before sunset (91%). Mostly mentioned reasons for such use are the lack of suitable lighting and lack of activities. Especially existence of an activity which creates human crowd and well lit environment affects safety perception.

Although Duru Park also has a special lighting design (different than all other parks in Balçova), since it is surrounded mostly by commercial facilities, after a certain time those stores close off and the surrounding of the park becomes very dark and isolated so the night use is very low. However, when we look at Süleyman Ersever Parkı, even if it is not much, there are few users in the evening as well. Especially during Ramadan, municipality organizes activities and such activities attract people in the evening to the park.

3.2.3 ACCESSIBILITY OF NEIGHBORHOOD PARKS INCREASING THE CHANCES OF BEING A PART OF PAROCHIAL REALM

Study results indicate that especially women with children and elderly people see parks that are on the route of daily routines and accessible by walking as extensions of the private space that they are assumed to belong, an area where they can create opportunities to get together with their friends and carry certain household habits to which starts to convert these public spaces into areas of parochial spaces.

“I have two daughters and we like to have our breakfast here. We leave across the street. So for breakfast, I prepare everything and come here to the park. We sit on the picnic tables and have our breakfast. It creates a change. When we are here, I also see my friends and they join us. We sit for very long hours. It is so nice to have these opportunities near home” (Women, 45 married with two children)

Accessibility of the park is a very important issue especially for elderly people. Since a large group of park users are elderly people with limited mobility in Duru Park, busy traffic around the park, taxi stop with several taxis parked in front, food vendors and their customers at the edges of the park create accessibility problems in Duru Park. For instance during the observations, there was a case when a women with her old mom wanted to get into the park and sit on the benches, the elderly mother had difficulties in crossing the

street and between the parked taxis at the edge of the park. So couple of taxi drivers had to help them and carried women to the benches. When we talked to these women, we found out that the mother likes this park a lot and wants to benefit from the sun but day by day it gets harder for her to come because of the increased traffic and the “wall” (she defines the cars, food vendors and trash bins) around the park.

Accessibility of neighborhood parks can also be defined as connecting routes of daily routines to users’ homes or to workplaces, childcare facilities to shopping activities or providing amenities that can also help women to turn their traditional daily responsibilities into an opportunity to be a part of parochial realm. Although literature defend that due to traditional daily responsibilities such as taking child to the school or going to grocery shopping roles, women end up giving up with using public spaces for leisure or socialization purposes (Kaplan, 1997), accessible parks can enhance women’s chance of participating to social life. Existence of different landuses and resources around attributes different uses to parks (Dines et. al, 2006) and improve parks’ accessibility.

Neighborhood parks not only create opportunities for children’s recreation needs but also create an opportunity as a meeting place for women from the surrounding neighbourhood to get together to talk with friends and relatives (Hutchinson, 2009). In neighbourhood parks women justify their park use through their children. Since children wants to be in the park they state that (to their husbands, family members or curious neighbour sitting on the window) they have to come to park. These strategies give them the courage to negotiate on uses of public realm of neighborhood parks and turn them into a form of parochial realm.

“Usually women work and after they go home and continue working. I got off from work. I should have stayed at home and cook but I needed to do shopping. As we got outside my daughter started crying to go to park. After the park I will continue shopping and go home” (Duru Park, woman, 26, married with one child).

Süleyman Ersever Parkı’s location next to the school is one of the great opportunities for women to turn their duty of taking child to school and picking up from school into a socialization opportunity to sit together, drink tea and chat with friends while waiting for their children. It is a good example how women use their daily responsibilities as an opportunity to socialize and be a part of parochial realm. The most dominant user group in Süleyman Ersever Parkı is mothers of the children who are in school.

“Most important thing is comfort of my child. I wait in the park in case she may need something. We are lucky to have a park next to school to sit and wait our children. I also have the chance to see my friends. In case I run late, I ask my friend to take care of my daughter” (Woman, 40, married with two children).

When school is closed park use level significantly drops. Neither the mothers with children nor the people working in the school come to this park during summer. This indicates that parks are not sufficient to attract users without a well considered surrounding environment. (Figure 12 & 13).

Figure 12 Limited use of Süleyman Ersever Parkı when the school is closed

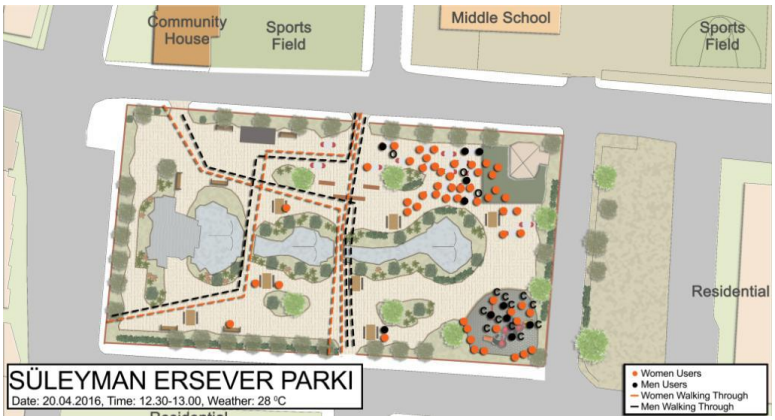

Figure 13 Increased use of Süleyman Ersever Parkı when the school is open

4 CONCLUSION: PERCEPTIONS OF NEIGHBORHOOD PARKS AS PAROCHIAL REALM CHANGING THE PARK USE EXPERIENCES OF USERS WITH DIFFERENT SOCIO-ECONOMIC CHARACTERISTICS

Neighborhood parks are used and perceived as parochial realms especially by mothers with children and by old women and men, especially retired ones. While Lofland (1998) defines parochial realm as the world of the neighborhood, workplace, or acquaintance network, in this study, neighborhood parks appear with the extensions of activities that are assigned to private realm and opportunities for frequent users' (especially mothers' and seniors') socializing around these activities. Next to users' gendered roles and responsibilities shaped by their aging, these socializing opportunities are also highly influenced by design and planning of neighborhood parks and their surrounding areas.

Land uses in parks' immediate environment (e.g., schools, tea houses, commercial or residential uses), design of parks' layout and provided amenities in parks (e.g., cafes, vendors or taxi stops) carry a great importance for perceiving neighborhood parks as "safe" and welcoming parochial realms. For instance, while a nearby school attracts more mothers with children to parks and creates a meeting point for middle-aged women, tea houses around another park attracts mostly elderly men and serves as a socialization opportunity.

Types of the provided amenities in relation the needs of potential users (e.g., playgrounds, seating units or shading elements), the ways these amenities designed (e.g., flexibility and size of seating units and tables or lighting design of the whole park), and the location selection of amenities are also other factors that affect the perceptions regarding neighborhood parks and enable people to negotiate on the existing uses according to their needs. While design and location of existing shading elements and seating units in relation with the design of playgrounds are quite important for mothers who wants to sit, chat and eat together with their friends or do hand-crafts while keeping an eye on their children; location of seating elements and their relationship with each other and distance to other park amenities like playgrounds is critical for comfortable park use of elderly women and men who wants to have some level of privacy and quite time.

On the contrary to common suggestions for crime prevention by lighting design (Atkins et. al, 1991; Lab, 1997), this study suggests that lighting design cannot fully create safety perception and highlights the importance of familiarity on the safety perceptions. For comfortable park use not only lighting but also working hours of the surrounding landuses and familiarity of the other users is crucial.

Familiarity of the users of the park and the surrounding facilities, and also the familiar staff of the café or vendors in the park affect perceptions of safety of women and men differently. For instance while owner of the café whom women can depend on for the maintenance of the park or familiar people in the park whom mothers can thrust for the safety of their children or men sitting at the café who creates a safety feeling in the case of any negative event are important factors for women, such factors do not have any effect on the safety perceptions of men.

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ID 1366 | URBAN NIGHTSCAPES: SPATIOTEMPORAL NARRATIVES AND LIVED PERCEPTIONS, THE CASE OF NIGHTTIME LISBON

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1 INTRODUCTION

The basis in writing this article is the dialectical relationship between urban space and human, focusing on the interaction that these two factors demonstrate during the night. In this context, the research interest is directed on the way the urban nightscape experienced from users on the possibilities of (public) space at night and how they affect human behavior and management of leisure, and conversely, on how the nightscape is affected and reshaped by the behavior and social practices of the users, especially young people.

2 AIM AND GOALS

It has to be noted that selecting the investigation of the urban nightscape as culture forming space, it was assumed that research will be primarily based on the behavioral approach of night life in the city. Moreover, the urban experience is examined in the aspect of the night as a leisure or recreation time, therefore, it does not concern those who consider night time as working hours. Additionally, in this case, the time limits of night are specified approximately, in order to meet research needs. If we consider that at midnight according to the etymology of the word has been signified as "the middle of the night", night lasts from the time the sun goes down (between 19: 00-20: 00) to 21: 00- 22:00, followed by initiation of the night, lasting until dawn (5:00 to 6:00). Therefore, to overcome this ambiguity, it has been chosen to be noted as the beginning of the night, the time period of 22:00, which coincides the time out for many people and especially for youths.

3 THEORETICAL TOOLS AND BACKGROUND

The dialectic relation of absolute, relative and relational space in correspondence with the spatial triad (Figure 1) according to the dialectics of space theory (Lefebvre, 1974), drives Harvey in an expanded frame interpretation of socio-spatial relations, the "grid of spatial practices".

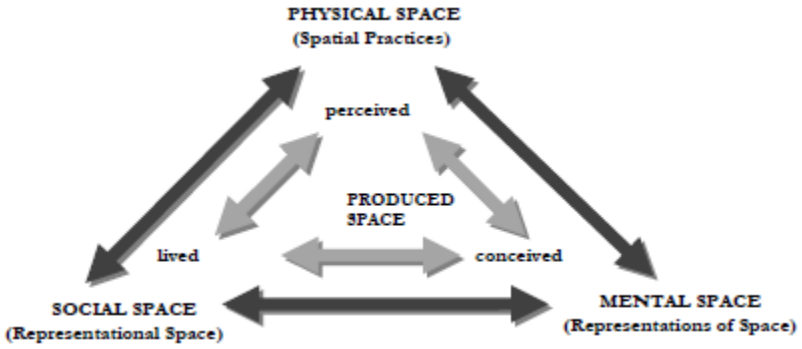

Figure 1.: The spatial triad by Lefebvre Source: Urban anarchy, 2014

In addition, it is taken into consideration the concept of psychogeography, which is a methodological tool in some modern approaches of the city, as originally expressed by Guy Debord and the Situatinists (1950) who were influenced by Lefebvre. Psychogeography concerns the dialectic of the geographical environment and the human psyche. It is also applied the method of wandering (flânerie) and the technique of city discovery through the spontaneous, continuous rotation of the urban environment (dérive) which highlighted to identify “hidden desires” and reshaping everyday based on these desires.

Moreover, the concept of “ambiance” refers to a feeling or mood associated with a place, to its character, tone, or to the effect or appeal it might have. It is also used to refer to the place itself, especially to the small, neighborhood-sized hubs of the city called unities of ambiance, parts of the city with an especially powerful urban atmosphere. The "entry" into a concept (here: state), or - using the Harvey definition - in a relational space (time), perceives a spontaneous homogenization of the subject's mood.

The environments that combined together create the atmosphere of the place, are according to Debord (1958), the "soft" environment which concerns the presence or absence of human activity and the type of light, sound, time and ideas, and the "hard" environment on the structured, stable environment. The most "powerful" atmosphere basically involves the flow rate, the feeling and the 'pulse' quality mainly sizes which somehow are the measure.

The multiple atmospheres sections of the urban landscape, and the alternatively space qualities, since they are interrelated parts of a single structure, meet each other creating that which the Situationists called "atmospheres nodes" to identify those areas that function as connecting links and attract the wandering, so switched to them (Moras, 2005). The structural features (infrastructure, morphology) of public space at night show a diversity that is usually decisive in its use. The layout and orientation of the public space, the interaction distances allowed, the urban equipment, the obstacles, the altitude difference (levels) and the natural green, affect the human activity. For example, the centrality of a street or a square often determines the observed mobility and use of space when the darkness falls. In particular, in the night, the presence of adequate lighting contributes to the feeling of safety when somebody is wandering in a public space, or its absence, makes this public space potentially dangerous. These elements are sufficient “to concentrate human activities or to disperse, integrate or isolate them, attract or repel them, facilitate or impede them” (Kostourou, 2012).

When somebody moves within the city, almost every sense of you is being activated, so that the mental images, the representations of the urban landscape are the composition of all these senses (Lynch, 1960). The composition of the city's image at night varies considerably from day to day as the concentration of activities shifts and their content varies, groups of people change, and the sensation and aesthetics of the landscape changes. The mental map comprised by the city users essentially concerns the personal representation of each of them for the urban space. Moreover, it is inevitably influenced by the culture, social background, emotional state, etc. The personal experiences of each user of the urban space highlight value codes and perceptual filters.

4 METHODOLOGY

The followed methodology includes the qualitative analysis method, as long as most of the data are qualitative.

At the same time, bibliographic research has been a guideline and assessment of the validity of few early conclusions, while it has been complementary finding historical and other elements. Finally, the results of the research, when it was possible, have been graphically represented through map production using GIS software (Qgis). The produced maps (Table 1) were based on Harvey's spatial practice grid (1990), from which two of the four categories were selected.

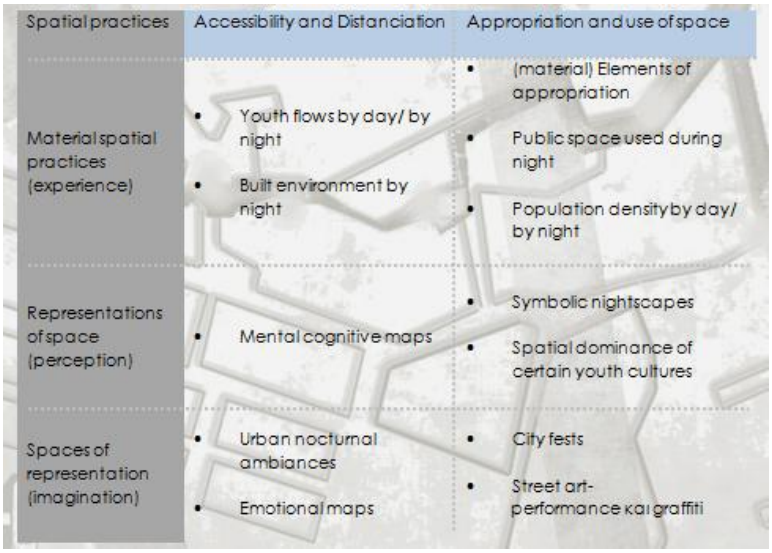

Table 1. Standardization of spatial practices grid Source: personal editing

4.1 FIELD WORK

- Case Study, conducted in the historic center of Lisbon within 5 months of duration (March-July 2015), of which a more systematic process took place during the months of April-May-June. The choice of the historic center is attributed to a markedly increased concentration of night activities, its historicity and symbolic significance, the multidimensional identity of its users, the abundance of public spaces, and the increased number of young people presence at night.
- Observation and documentation of land use during the night, the structure of public space, elements of architecture and urban planning at night, night activities, different nightlife rhythms, behavior and habits of users.
- Carry out measurements of human flows and population density in the public space at night, as well as soundscapes at night. The duration of systematic measurements is not unvarying but ranges between 2-5 hours per point of interest, with a frequency of 5-7 visits per public space.
- Interviews: 15 interviews were conducted among 19-25 year old people, ages that basically have a stronger involvement in the nightlife of the city, to cover as many areas as possible of the historic center. This restriction reduces the sample, increasing this way the chances of converging behaviors and batch results. Also, the method of selecting the interviewed persons approximates the cluster or cluster sampling, since the respondents were chosen randomly based on specific geographical clusters. In particular, the historical center of the city was divided into zones - some corresponding to neighborhoods - in which random number of people were selected (Figure 2).
- Questionnaires: In order to reinforce the information obtained, some questionnaires were created with similar content of these interviews. Additionally, images from the urban night scene of the study area were added, which respondents were asked to evaluate for their emotional reaction. This choice served the purpose of the survey by exposing all respondents to the same visual "controlled" stimuli, while making the completion process more attractive. The questionnaires

were personally sent to 35 people, while they were posted to fill in some local cultural site websites and official university web pages in Lisbon. Overall, the received answers came to 50.

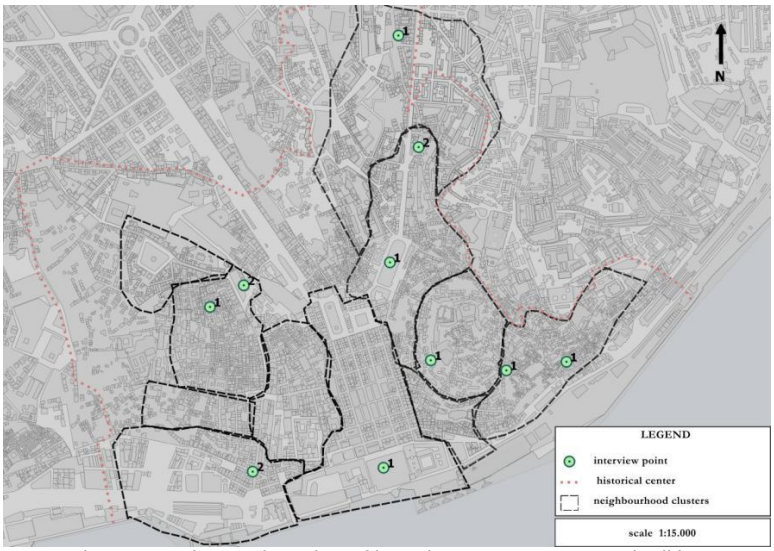

Figure 2.: Points and number of interviews Source: personal editing

The type of interviews approaches the semi-structured, as the goal was to map out a distribution of behavior. Beyond that, as it turned out to be, in practice, the structure of the interview left room for freedom in the debate, which often provided valuable information. The duration of the interviews ranged from half to one hour, and the content of the questions related to regular night activities (frequency and duration), night out areas, public space at night and the respondent's relationship, culture preferences, and the people's character and, respectively, of the space-social practices, the emotional experience in the urban night landscape and the view of the city wandering at night.

5 RESULTS VISUALIZATION

5.1 ARRANGEMENT AND MORPHOLOGY OF URBAN SPACE

There is a difference in the size of the building blocks between the areas of the historic center. The older quarters, which survived the earthquake consist of smaller building blocks and, while respectively the most recently rebuilt quarters, larger and often single building blocks. Accordingly, the distance of the intersections shows a variation between these districts. Frequent crossings and small property in the districts of Alfama, Mouraria, Castelo São Jorge and less in Bairro Alto and Bica, facilitate communication between residents and enhance the feeling of neighborhood and spatial cohesion.

Figure 3.: Street layout - patterns
Source: gis database by Camara Municipal de Lisboa, personal editing

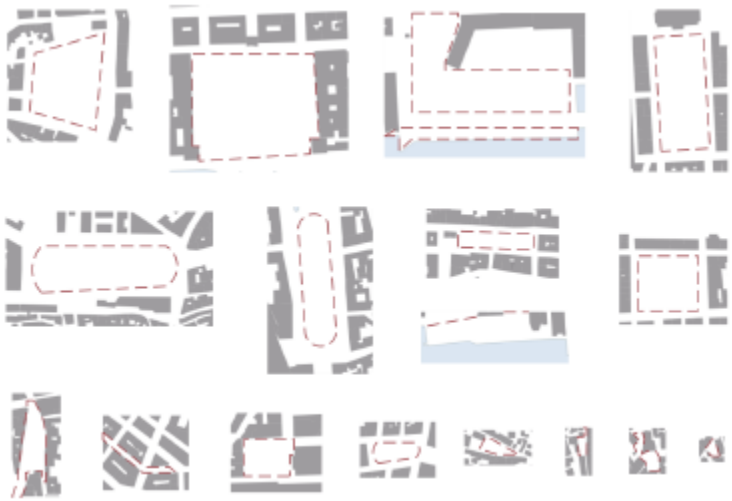

Figure 4.: Typology of public space - squares and pedestrian streets
Source: gis database by Camara Municipal de Lisboa, personal editing

Figure 5.: Typology of public space - miradouros
Source: gis database by Camara Municipal de Lisboa, personal editing

The scale of public space varies, with paved, large-scale squares in central locations, while in the most densely populated districts (Alfama, Mouraria, and Castelo) public space appears to be limited in size and with a more spontaneous and discontinuous pattern. In addition, its form is different, offering a variety of landscapes and sensations, favoring different types of night activities and meetings. For example, the most popular spots with privileged location and excellent view (miradouros) are scattered across the seven hills of the city. Their acreage varies, with São Pedro de Alcântara being the largest in Bairro Alto.

Figure 6.: Meeting points in public space Source: Flickr, personal archive

Furthermore, the street, in Lisbon's case, is particularly important in nightlife, as an organic part of the public space. The fact that the largest area of the historic center has limited traffic creates the right conditions for the pedestrians to take up narrow streets. Particularly in the Bairro Alto, Alfama and Mouraria districts, where the streets are narrow and the distance among the square blocks small, casual

users of bars or random people of each region take the streets, creating a human-scale situation that gives vivacity and attractiveness.

5.2 URBAN LIGHTING

In fact, urban lighting defines the city's image and experience at night, since it acts as an indirect guide and scenographer at the same time, capable of "turning the simple crossing of a landscape into alternating zones in which everyone can behave in different ways" (Mbembe and Nuttall, 2004, as reported in Rink, 2013).

Public street lighting, facades of buildings, and lit shops make up disparate urban environments that mark the center of Lisbon. Further, they shape the urban visual and emotional experience, while on the other they act as the "face" of the city, giving it a specific identity. Both the traditional lamps on pavements and facades of Lisbon buildings, as well as the most modern street lighting equipment, give a warm yellow light, which refers to earlier times. In addition, the intensity of light varies from region to region, creating alternations of the atmosphere and the emotional experience, causing admiration, romance, nostalgia and fear sometimes. “Lisbon as a maze - city with dark and low-lighted streets causes a mixture of prolonged agony and awakening but at the same time of intimate comfort” (A. Robello, 2015- interview).

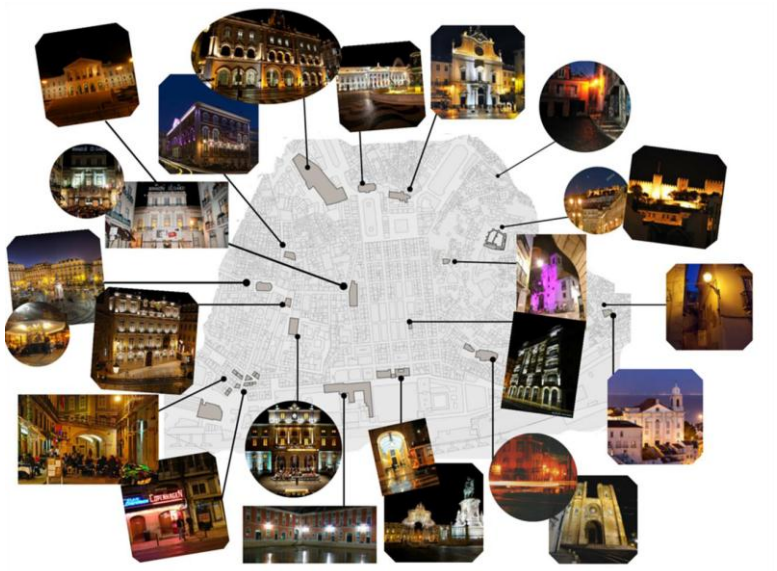

Figure 7 - Characteristic Lighted Buildings in historical center. Source: personal editing

5.3 SOUNDSCAPES

Overnight, the greater part of the historic center enjoys its quietness, since the rare traffic of vehicles minimizes noise pollution. At the same time, the concentration of nightclubs in certain neighborhoods allows the rest of the city to "sink" into the night's silence. In addition, a sufficient portion of the public space is located well away from the road, whether squares and openings surrounded by buildings, or miradouros, of which only one side has a face on a road and usually not a highway.At night the generally low noise levels caused by scattered speeches, laughs and other urban sounds make up the soundscapes of the city. At the same time, the range of musical sounds that are heard in public places is interesting. These data, as recorded, are represented in terms of intensity and duration (Figure 8).

The sounds in the urban night landscape from a psychogeographical point of view are a stimulus decisive for the wanderer route choice. Depending on his psychology, each person evaluates the sounds differently and he/she is attracted or repulsed by selecting or excluding parts of the urban fabric.

Figure 8: Soundscapes by night
Source: Results from personal measurements (2015), personal editing

5.4 COGNITIVE SHAPES OF URBAN NIGHTSCAPE

The familiar Lynch categorization (1960) was used, according to which, people tend to form mental images of the city in relation to five formations of urban space. Adding the night-time dimension as a limitation it attempted to attribute the urban iconography of the center of Lisbon to the texture and character of these formations. In essence, based on the experiences of the different surveyed people through their descriptions, the mental map (Figure 10) of the city at night was emerged.

Figure 9: Lisbon night images according to Lynch theory of spatial cognition
Source: Flickr, personal archive

Figure 10.: Mental-cognitive map of the historic center at night
Source: personal editing

In Lisbon, the majority of young people at the historic center at night distinguish nine districts, based on different criteria. The three are the Bairro Alto, Bica and Cais do Sodré areas, and the other four, Mouraria, Castelo, Alfama and Anjos, represent a combination of night-time wanderings, alternative fun and underground culture. The latter two, Chiado and Baixa, function more as transitional areas at night, since they serve the passage of passers-by to and from other areas. These areas, at night, are presenting "liquidity" in terms of their identification by visitors/users. Everyone's mental map encompasses or blocks spatial data, depending on the degree of frequency and personal experience. Comparing the mental map with population density measurements during night and day (Figure 11) it is observed that the pattern of the mental map approximates that of the population density map at night. Consequently, the mental map actually gives a picture of the city at night based on the orientation and frequency of use in urban sites.

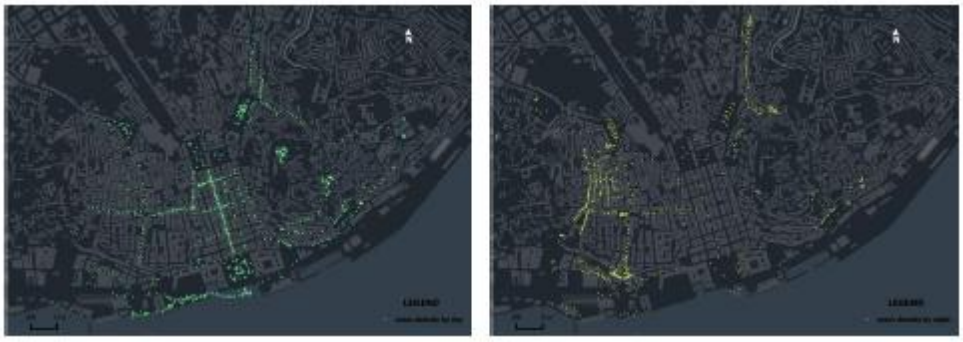

Figure 11: population density by day (left) and by night (right)

6 SOURCE: PERSONAL EDITING

6.1 YOUTH CULTURES AT NIGHT

In the attempt to map and categorize the youth groups and (sub) cultures that make their presence noticeable at night and exhibit distinct spatial practices, the following table emerged (Table 2). Apart from the academic groups of praxe and the social-political collectives, the other three categories are of varying degrees of heterogeneity, so they do not represent universally and strictly all young people who meet individual criteria. Nevertheless, a general picture of young people and how it moves to the historic center at night are being explored.

((Sub) cultures of young	Biophysical space (historical center)	Characteristics	Communication Codes	Community Sense
Student group Praxe	Public space, squares, parks, miradouro Neighborhoods: Upgraded and 'Secure' : Chiado, Bairro Alto, Bica, Cais do Sodré	Mutual clothing / appearance Strong hierarchical organization Sense of prestige	Strict adherence to orders and internal rules Authoritative behavior of higher to inferior in the hierarchy	Strong cohesive bonds Moving by groups High Sense of community
Alternative and artistic young groups (hipsters, new boem, new hippies, etc.)	Public space, as an organic part of the urban landscape, squares, urban gaps, miradouro Neighborhoods: mainly those with monumental and symbolic capital features Bairro Alto, Bica, Alfama, Castelo, Intendente, Mouraria, Cais do Sodré	Distinct clothing and style Special music preferences and more prone in drug use Modernized simulation and revival of finite political trends Moderate degree of commercialization of the culture and often involvement with substances	Special vocabulary and phrasing Extraversion and mood for interaction Relaxation and emphasis on fun and art	Loose cohesive relationships depending on the group / company Solidarity and companionship Medium sense of community and usually with spatial report
Socio-political youth collectives	Public space, as an organic part of the urban landscape, squares, urban gaps, miradouro, street Ownership (former occupation) of buildings and creation of self-	Horizontal organization and uninterrupted structures Logical self-realization (DIY) and autonomy	Specific vocabulary and phrasing Challenging attitude to modern capitalist morality Dialogue through anti-	Strong bonds of solidarity and companionship Collective decisions on actions on political and social projects
	organized sites (heterotopias) Neighborhoods: Intendente, Mouraria, Graca, όμοια Alfama	Legitimate lawsuits and actions Radical politics of social development Transcendental culture (transgressive) with elements of delinquency and possible use of drugs	hierarchical assemblies Respect for the different, equality, anti-sexism, antipatriarchy, Restrained extroversion and mood for interaction	High Community sense
Ghetto Youth cultures	Limited territorial separation (concentration of slums out of center) Public space (often more isolated) Cheap bars and dance scenes Neighborhoods: Intendente, Mouraria, Alfama, more rarely Bairro Alto	Special clothing and style of the '80s -'90s Particular musical hip-hop preferences with African elements (tribal) and African dances Transgressive culture with elements of delinquency and possible use of drugs	Local dialect and peculiar phrasebook Distant behavior, sometimes offensive and aggressive towards the "others" Physical contact, directness in communication	Different bond level depending on group and race Abstract but high community sense
Broader mainstream cultures	Mainly private space: shopping malls, bars, restaurants and clubs Public space when hosting a specific official cultural activity Neighborhoods: Bairro Alto, Bica, Cais do Sodré, Principe Real, Chiado, Baixa	Social (and class) heterogeneity Trend for unprecedented modernization and consumer behavior Communicative aesthetics Indifference to the public Rare drugs involvement	Often competition tendency Reproduction of social stereotypes and acceptance of social hierarchy	It is not detected

Table 2: Standardization of youth cultures at night in the city center - Source: personal editing

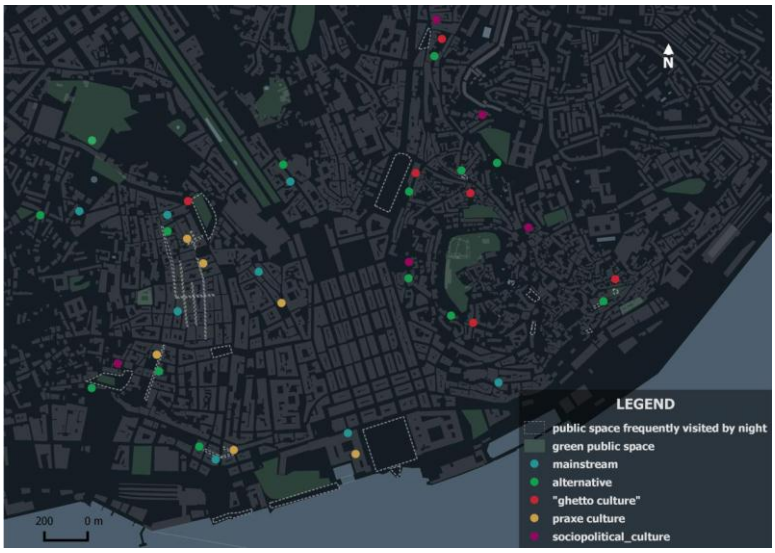

Figure 14: Spatialization of youth cultures by night
Source: personal editing

6.2 THE EXPERIENCE OF URBAN NIGHTSCAPE

Lisbon's historic center is a major nightlife attraction for most young people despite the fact that there are two younger entertainment clusters in the east and west of the city. The economy produced at night arises from the entertainment sector and is therefore interwoven with the frequency and timing of the use of space by residents. However, the time of use does not mean exclusively the mediation of a financial transaction, since the public space in the historical center varies in size and morphology, accommodating different social groups but at the same time favoring social mixing and coexistence. So, it seems that young users usually seek a combination of bar and public space, with a high percentage of them looking in priority, gathering and entertainment in the public space of the city.

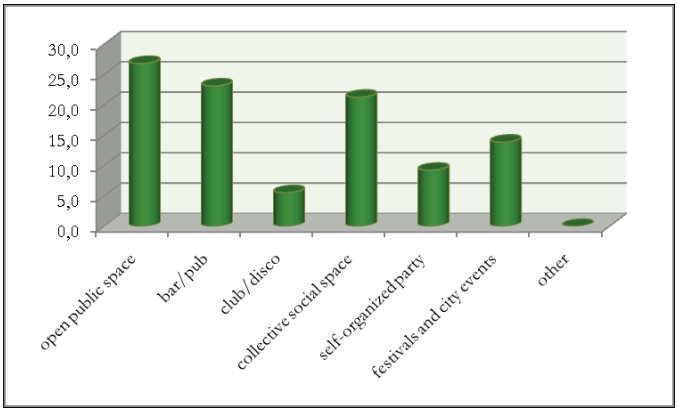

Figure 15 : Youth gathering places at night, by category (%)
Source: questionnaires and interviews (2015), personal editing

Figure 16: Preference of young people in nightlife in neighborhoods
Source: data from questionnaires and interviews (2015), personal editing

Figure 17.: Preference of young people in nightlife in neighborhoods
Source: data from questionnaires and interviews (2015), personal editing

The night atmosphere that exudes historic center based on the experience of young people (Figure 16) is evaluated by most as multicultural, reflecting the degree of social mixing and orientation of the night economy. The experience of the urban night landscape offers a varied selection of music, taste, image and culture, as in Lisbon anyone could find people from diverse racial, ethnic and cultural backgrounds. Second in importance appears to be emerging alternative view of night city, both because of the abundance of artistic and cultural event and the trend of adopting alternative models (night) life and entertainment, such as tolerance to drugs, alternative shops, the abundance of graffiti etc. As for the modern look, this inevitably resemble the western-European model, which is inextricably interwoven with night economy and tends towards globalization and homogenization of urban nightlife, something that currently is in a process in Lisbon.

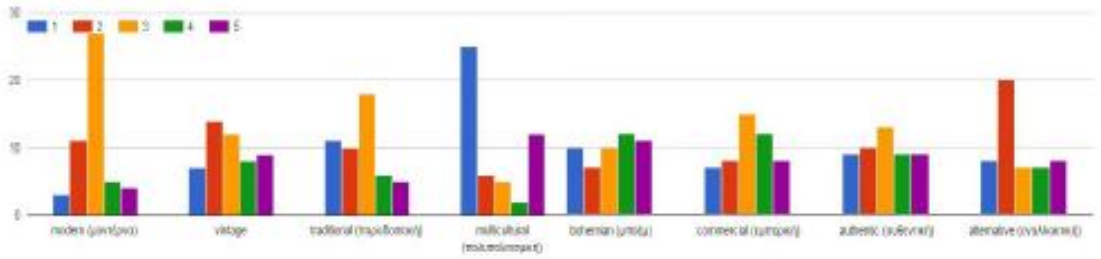

Figure 18: Evaluation of urban nightlife in the historic center
Source: data from questionnaires (2015), personal editing

Especially at night, the subjective perception of space is clearly influenced by the textures and qualities of situations involving any urban place, which shape the aesthetic and atmosphere of the landscape. Consequently, there is a fragmented picture of the city, composed with different "ambiances", in succession with each other, like the scenes of a theater.

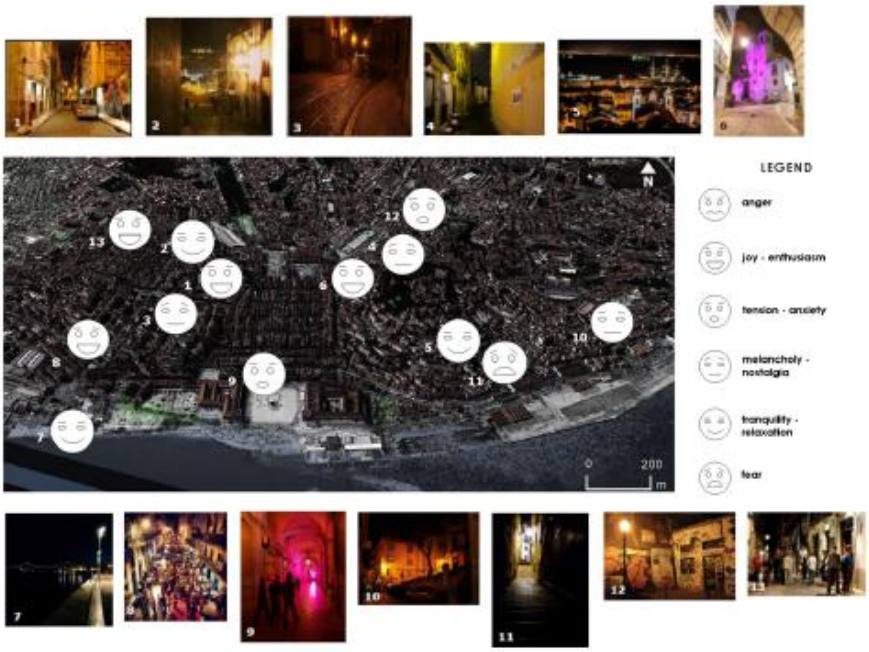

Figure 19: Unities of ambiance at night by emotional state of users
Source: personal editing

6 CONCLUSIONS

The various elements of intimacy that occur in the public space of the city incite its increased use at night. Both the human scale of design, which allows a sense of comfort during the arrival and stay in an open space, as well as the variety of surfaces for attitude and relaxation, resulting from the terrain and the architecture of the city, create the conditions for wandering, gathering and collective action.

Nevertheless, as has been noticed, even among young people there is no single identity, but different cultures, social perceptions and spatial practices are distinguished. There are various groups of young people who act within the bounds of the established social organization to differentiate each other (hipsters, mainstream people, 'sk8er guys', etc.) without, however, displaying or pursuing clear claims.

The different trajectories of young people at the urban nightscape tend to either converge across regions (Bairro Alto, Bica, Cais do Sodré) and under certain circumstances (city festivals, spontaneous parties) either to diverge and collide by delimiting and temporarily encoding meanings in the urban space (marches and actions of a rightful and emancipatory character, cultural festivals and events, artistic interventions).

In the end, the city at night is seen as the field where every change, remodeling and experience is possible. Diversity in both the urban landscape and the social groups allows us to choose each time a different role and to experience an out-of-bound experience, to lose to the different cultural elements and symbolic images of space and finally creating the imaginary space-time where our identity is unique and instant.

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ID1370 | ASSESSING THE QUALITY OF NEIGHBORHOOD PUBLIC SPACES, A CASE STUDY OF MISURATA CITY, LIBYA

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ABSTRACT: The public space of the city neighbourhoods is one of the major indicators of the urban quality and the residents´ satisfaction (Carmona, 2010, Carr, 1992, and Gehl, 2013). In Libya, the government has adopted a redevelopment scheme of providing new homes to the local residents, to build thousands of new housing units around the country since 2005. This plan was aiming to offset the shortage in housing numbers due to the high growth of population and rapid urbanisation (Worldometers.info), 79% of the country population live in urban areas (Salhin, 2011). This high demand of providing houses to the citizens all over the country has made a significant change of the urban planning composition of the country, especially the residential areas. This paper focuses on two samples of a typical neighbourhoods in Misurata city as case studies. It investigates the role of public spaces of the traditional neighbourhoods (TN) and governmental neighbourhoods (GN). It compares the conditions of public spaces in both types of neighbourhoods in terms of physical and intangible qualities and examines the relationship between the residents in terms of social integration and community cohesion in both types of neighbourhoods. In addition, it attempts to find out whether this new strategy has affected the social relationship of the local community or not and finding out the extent of possible impact on the daily activities. Furthermore, the paper discusses the extent of interaction among the residents regardless of their age, gender and cultural background. This research is based on mixed methods approach including qualitative and quantitative methods through case studies of two neighbourhoods in Misurata City, Libya. 158 Questionnaires were distributed to an adequate sample of the neighbourhoods´ population. The in-depth interviews conducted that included three categories, a) residents b) decision makers c) professionals. Moreover, according to the possibility of limitations in the data collection stage, site observation was used to focus on the residents´ activities as a supporting tool. The results show that residents in TNs feel more attached to their community, socially satisfied and comfortable while this perception was lower in the GNs. Research also found out that the relationship between the residents of the neighbourhood plays an essential role to improve and promote the social satisfaction of the residents which therefore will contribute to high-quality communities. Hence, it assists the development of the urban quality in significant parts of the city.

1 INTRODUCTION

This research was based on the impact of the latest policy of Libyan government when it planned to construct a large number of housing units, not only in Misurata city but all around the country. This policy was set mainly to make a solution of the shortage in the housing units as well as to regulate the rapid urbanisation within a developed plan for a period of 20 years from 2005 to 2025. The construction of new housing units by the government aims to provide comprehensive projects of neighbourhoods in line with the increase of the population growth. The government claims that this new strategy aims to fill the shortage of houses within the shortest time which planned for a maximum of five years as a first stage of the whole mentioned plan from 2005 to 2025. Therefore, a phenomenon of establishing communities with mixed users has started to emerge newly in the country, which is different than traditional residential settings. The Traditional Neighbourhoods (TN) often includes families who live together as neighbours for a long period of time, all residents know each other very well and this form usually has strong community cohesion. However, the Governmental Neighbourhoods (GN) has indicated a less social cohesion due to the differences in the cultural background of their residents (Lee et al., 1994). Hence, this research attempts to assess the quality of both types of neighbourhoods GN and TN from a social perspective through deep qualitative discussion, in order to establish a specific framework of the future neighbourhood projects which may contribute to the urban development of the city, indeed, to the other cities of the country.

In this research, 'public space' is defined as a space being used and shared by all the people who live in the neighbourhoods of the city regardless of their age, gender, status and cultural backgrounds (Iveson, 2011). Examples of public spaces form in the neighbourhoods such as parks, squares, gardens, children playgrounds and green spaces (Madanipour, 2013). This type of public space plays a significant role in the urban development and quality of life (Das, 2008). This research investigates the social satisfaction of people using the public space of their community. Therefore, there should be an examination of the quality and effectiveness of the public space within the neighbourhoods by measuring the availability and provision of many elements such as playgrounds, facilities, and green areas in order to assess the residents' satisfaction (Kim and Kaplan, 2004). In addition to that, the research examines the social aspects and the level of the interaction between the residents (Cattell et al., 2008). Due to the moderate temperature and humidity conditions in this region during almost of the year, people usually use open public spaces in all seasons but not enclosed spaces as it is not popular in this country because of the climate conditions. Thus, this research focuses on the open public spaces of neighbourhoods in particular regarding the case study in Misurata city, Libya, with taking account of the advantages of the weather conditions in this region.

2 RESEARCH CONTEXT

According to the former mentioned policy of the Libyan government that planned to build a large number of houses within a short time, this action may create some negative affection such as social isolation, less interaction and community disorder (Behrad and Bahrami, 2015). Potentially the new residents of these new GNs do not know each other before moving in, because they likely come from different parts of the city and probably from another cities of the country, so they are not ready to have a strong interaction and social communication. And also, the new neighbourhoods contain hundreds of housing units, occupied by users from different backgrounds, which means that they have different habits, status, education levels and different mentality. This large number of residents meeting each other in a first time make the social interaction and involvement in social activities such as sharing the public spaces in their new neighbourhood a challenging task. Hence, it is important to know how the residents feel about themselves and about others, how they use the open spaces around their houses and what activities that link their interests, in order to provide opportunity for these residents to interact and participate effectively in the public spaces around them. Creating a sensible attractive spaces for the users encourages them to engage and interact with others which is the first achievement to enrich the community. Watson and Kessler (2013) states that there is an evidence shows that the design concept and green areas have fundamental impact on the users in these neighbourhoods in many aspects such as their health, comfort and feeling of safety and security (Jalaladdini and Oktay, 2012). Thus, the investigation should not excludes the physical characteristics such as, sidewalk/paths design, seats, green areas and playgrounds, in order to gain the insights of the community composition and to evaluate the impact of these elements on the local community.

3 METHODOLOGY AND CASE STUDIES

Initially, there are three advanced approaches to collect data of research: quantitative, qualitative and the mixed methods (Creswell, 2013). Nevertheless, these three methods may seem separated, but practically they are used in various approaches for different purposes depending on each discipline and the nature of the study, the elements of the research methods in which the result become more contributable (Beins, 2012). The mixed methods research is placed in the central position between the two other methods, because it integrates components from both quantitative and qualitative approaches.

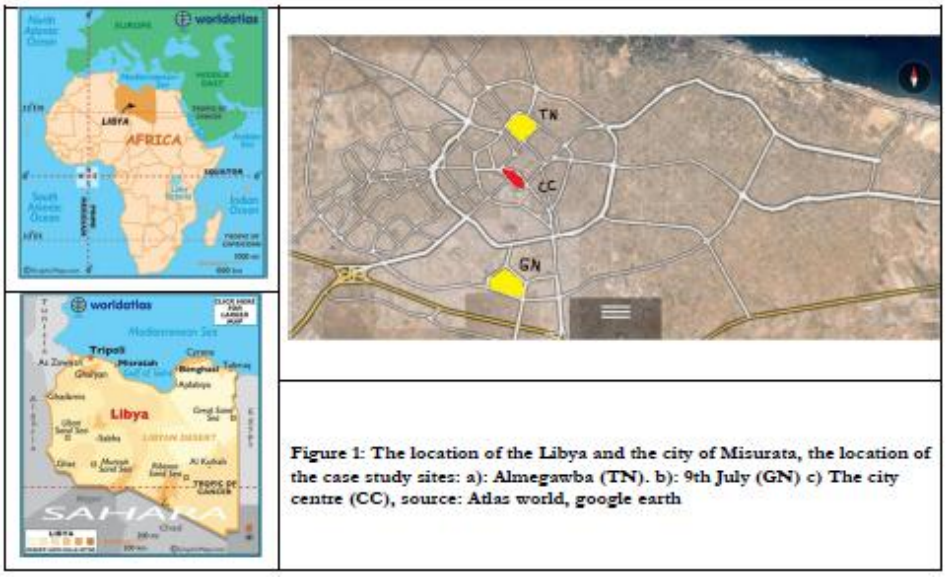


Figure 1: The location of the Libya and the city of Misurata, the location of the case study sites: a): Almegawba (TN). b): 9th July (GN) c) The city centre (CC), source: Atlas world, google earth

The case study approach which usually is identified as a qualitative study design, 'e.g., quantitative experiments or qualitative case study (Creswell, 2013). It has been suggested from many scholars and professionals that the appropriate research approach in such a research which has a social and technical aspects is the mixed approaches method. This approach is a combined of quantitative and qualitative case study work (Merriam and Tisdell, 2015, Yin, 2013). The case study includes two sites, a) Site 1 named 'Almegawba' which is a traditional neighbourhood (TN) and b) Site 2 named '9th July' which is a governmental neighbourhood (GN) in the city of Misurata, Libya, as per figures (1, 2 & 3). All the quantitative data gathered from the questionnaires has been input to the statistics programme 'SPSS' to be able for analysis and Nvivo version 10 software has been used for the qualitative data gathered from the in-depth interviews. A mixed strategy used in terms of data collection including random and snowball policies to ensure the accuracy of the information and avoiding bias answers (Woods et al., 2015).

Figure 2: 9th July Neighbourhood (GN)

Figure 3: Almegawba Neighbourhood (TN)

3.1 QUESTIONNAIRE

200 questionnaires were sent out to the residents of the two above sites, a total of 158 questionnaires were returned as following: Almegawba neighbourhood 81 participants and 9th July neighbourhood 77 participants. The questionnaires include a number of open-ended, closed and multi-choice questions.

Oppenheim (2000, p43) stated that "A sample's accuracy is more important than its size", a 2000 sample can give us more reliable results of a population of millions. In order to define the appropriate size of the survey sample, tables were used with a precision (e) of +/-10%, and from the population of (2000-3000), 80 was determined as an adequate sample size, with a confidence level of 95% (Israel, 1992) and (Kotrlik and Higgins, 2001).

3.2 SAMPLING STRATEGY

A sample selection was obtained using a snowball technique, "This involves asking people who have participated in a survey to nominate other people they believe would be willing to take part sampling continues until the required number of responses is obtained" (Kitchenham and Pfleeger, 2002 , p19). Participants joined to take part of the research through an invitation from other residents and so on. Data collection was stopped when the appropriate number of questionnaires (81 for the TN and 77 for the GN) has been reached and repeatable answers from the last few participants were noticed (Kotrlik and Higgins, 2001).

3.3 INTERVIEWS

In-depth interviews were conducted to provide a further understanding of the existing situation as well as to gain clearer features about the quality of the public spaces of the case studies. Moreover, firstly, to collect appropriate evidence that clarifies the research issue and contributes to solving the research matter. Secondly, to create a coherent framework to be used in the future policies. There were total of 16 interviews conducted during the field work as following: 4 Decision makers (governors), 4 Professionals (independent), 4 Residents of GN and 4 Residents of TN.

4 THE RESIDENTS' RELATIONSHIPS

This paper focuses on the social side of residents' relationships in the public spaces of neighbourhoods. The residents' relationships within the residential areas and cities' neighbourhoods are one of the most fundamental issues that urban quality is facing in the country of the case studies (Salhin, 2011). In the following section, research attempts to illustrate the significant of these relationships and its impact on the urban development of the residential areas including the both types of common neighbourhoods of the local region the GN and TN.

5 THE SOCIAL INTERACTION BETWEEN THE RESIDENTS

Establishing an effective relationship between the neighbours depends on many factors. Creating the opportunity to meet and interact is one of the important steps. Public space is one of the places that provide this opportunity for the residents to get involved in several activities. Behrad and Bahrami (2015 , p89) clearly states that "People have an innate need to establish social relationships and therefore, they can provide opportunities so they can experience the social relationships". Social relationships in the local community of Libya are one of the most important elements that residents appreciate and hope to improve because it impacts on the social satisfaction and psychological comfort within the neighbourhood. This can be noticed from the Libyan history, there are more than forty famous traditional terms explains the importance of the neighbour-ship, for example "people should buy the neighbour before the house". And "be neighbour of the happy people you will be happy" (Mohamad, 2005 , p1) which highlights the crucial role of these community characteristics.

According to the research data, it has emerged that the relationship between the residents of the neighbourhood is one of the strongest characteristics in the local community within the two sites. Firstly, it can be seen in Figures 4, 5 and 6 that around 75% of the participants are either agree or strongly agree that residents should have a good relationship, support each other and exchange favours. This belief from the majority of the respondents reflects the perception of the residents toward the value of the social relationships. The results are similar in the two types of the neighbourhoods which indicate the strength of

this element and it is the same in the two types of neighbourhoods, however this result show the desire of the residents. The evaluation of the current situation show a lack of achieving this desire in the GNs due to the lack of social interaction and level of involvement in the public sphere. Therefore, this point can be considered as a permanent characteristic of the local community which is desired by all types of residents regardless to the change of the neighbourhood variables.

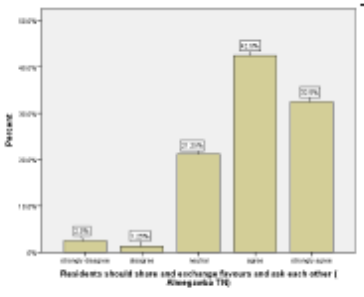


Figure 4: The value of the relationship between the residents in TN Almegawba

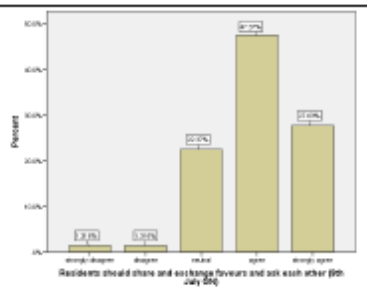
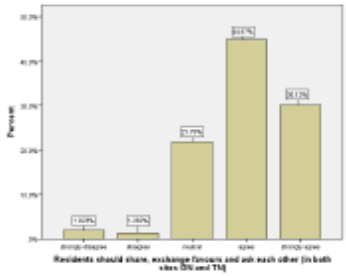


Figure 5: The value of the relationship between the residents in the GN 9th July

Figure 6: The value of the relationship between the residents in the both sites GN 9th July and TN Almegawba



All the participants of the residents' interviews also provide similar information, interviews data shows an insistent desire from the majority of the respondents to have an active and positive relationship with their neighbours. Moreover, most of them pointed out that the public spaces of the neighbourhoods is the most appropriate place to practice their social activities. For instance, activities such as watching children in the playground, sitting as groups or families and walking in the public space increase the interaction and the communication between the residents. In the same way, Behrad and Bahrami (2015 , p92-93) clearly concluded the following statement from a similar research in Pavan Residential Complex of Sanandaj, Iran. "The results of this study indicate that public spaces having attributes such as socialization are an important supplement to the socialization of individuals. Furthermore, the socialization of public spaces promotes a spirit of solidarity, personal growth, development and improvement of appropriate behaviour patterns". This natural relationship of the residents creates a kind of familiarity among the residents, thus, it leads to a stronger relationship.

On the other hand, some of the participants from 9th July GN expressed their disappointment of the minimal opportunity of communication with other residents of the neighbourhood due to lack of quality public spaces in this regard. Residents have less chance to build up their relationship with other neighbours through interacting activities in public spaces. As a result, many of them have a strong relationship and social communication with the close neighbours which about four to six next families rather than the whole neighbourhood as the TNs. This has limited the range of communication to very important and large events only rather than integrating the whole neighbours together. According to the qualitative data from the in-depth interviews, the reason of this low level of relationship between the residents of the same neighbourhood is because of lacking of high quality public spaces that could encourage people to meet and talk to neighbours. Respondents clearly stated by many of the interviewees such as (participants, IB and FB) that "this weaknesses of the social relationship between some of the residents of the same neighbourhood is due to the lack of the public spaces". Public space enables the residents to meet outside of their houses in a more casual and flexible manner because this space belongs to everybody and their children can enjoy playing comfortably at the same time (Carpiano and Hystad, 2011).

6 CHILDREN'S ACTIVITIES IN THE PUBLIC SPACE

In the local population of Libya, children represents a big percentage of the whole population of the country which is around 32.8% for the age from 0 -15 years as per Figures 7 and 8. This high percentage means that there should be significant consideration towards the needs of this category of the residents. In addition, the children and young residents aged between 5 up to 15 years particularly are stated in numerous research as the main beneficiaries of the open spaces either the public or the semi-public of the neighbourhoods (Woolley, 2006). These activities have a major impact on the people during their childhood which is one of the most important periods of our life (Islam et al., 2014). Being a period of time that almost everyone could remember, it has significant impact on the person's personality and their social skills, such as the way of communicating with others in the later age periods of life (Woolley, 2008). Therefore, understanding the social and health benefits of involving this category into the open spaces is crucial to the research. And also, finding out what kind of impact that may improve the quality of their life through the design of public spaces is important for the future success of new neighbourhood developments.

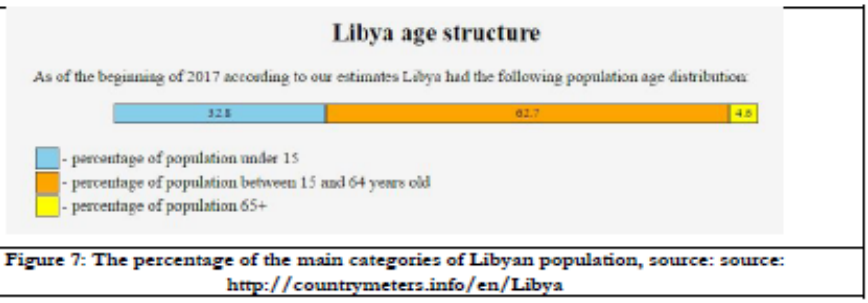


Figure 7: The percentage of the main categories of Libyan population, source: source: http://countrymeters.info/en/Libya

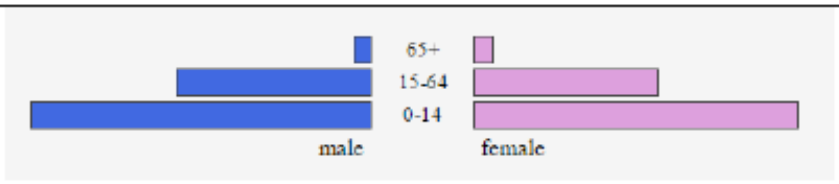


Figure 8: The Libya population pyramid of 2017, source: http://countrymeters.info/en/Libya

According to the research literature, there are many essential points have risen regarding the healthy environment of the children and the health benefits of applying the physical activities on open spaces. Gehl (2011, p21) highlights that "people in general inspired to others action, children see other children at play and get the urge to join in, or they get ideas for new games by watching other children or adults". One of the measurement tool in this research is discovering the ease of using the open spaces around/near the houses clusters. Almost 70% of the participants disagree to the statement "Children have easy access to the public space such as the play area, playground and open green space" which illustrate the weaknesses of the connection quality between the houses and the public spaces. Figures 9 and 10 show exactly the percentage of the respondents about this issue in both neighbourhoods.

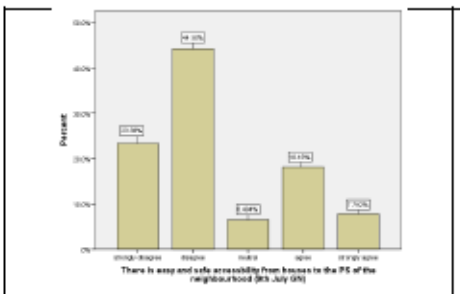


Figure 9: Residents' attitude towards the use of open space by the children in the GN 9th July

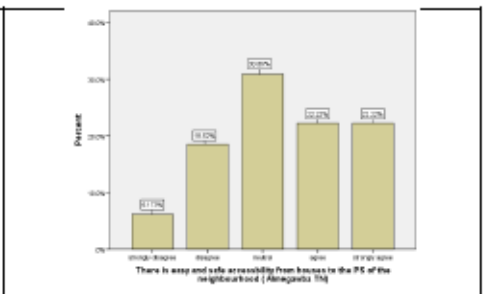


Figure 10: Residents' attitude towards the use of open space by the children in TN Almegawba

Regarding the answers from the respondents, there is a lack of physical equipment on the site such as the play area, football pitches, facilities and green spaces. Residents complain that the ability to use the public spaces of this neighbourhood is limited because the government does not build playground and such facilities for children due to poor management system in Libya as stated by the decision-makers group in the interviews. The priority of the government is to provide houses for the people as an essential need, there is a lack of understanding the importance of the landscaping and providing facilities for the open public spaces in the neighbourhood. Therefore, the children have no better place to practice their activities and making new friends. They have to use the other surrounded space rather than designed public spaces for their outdoor activities, which may not be appropriate for the activities and also have serious concern regarding on health and safety issues, see Figure 11. It can be seen that children play along the main road which might cause a car accident.

Figure 11: Children play football outdoor, by researcher, location 9th July GN, 15/08/2015

With regard to the social aspect of the children activities, there is clear evidence from the research data that children's areas play a fundamental role not only in terms of children entertainment but also in strengthening the integration between the families of the community as (participants FI, MG and SM) who are residents of these neighbourhood stated that they have strong and positive social relationship with the neighbours whose children play together with their children. Hence, one of the key interactions among the residents is the place of the children in the public area of the community. That is when people usually get involved in the basic communication such as greeting, chatting, sitting and sharing some food or drink. This spontaneous and natural way for the neighbours to meet each other at the first time is high value, thus, these actions are likely to be developed by the time to a stronger relationship.

Figure 12: Shows the types of activities that children apply in daily bases activities,
Photos by author 20/10/2016 9th July GN neighbourhood

Regarding the age groups in this research, results show that children often use public spaces as a place to discharge their energy and making friendship with other children during the play activities in their free time. Therefore, the successful open space is not only there to provide space but also to make it attractive to the

residents especially the children. Findings show that in terms of social impact, the children have a strong impact to support the social relationship for the adults through the opportunity that can gather all the categories of the neighbourhood in one place. This chance of enabling the neighbours to meet together is more likely to be developed in a deeper interaction and very close communication, as per Figure 12.

The other factor which relates directly to the activities of the children, especially in the open spaces, is safety. Participants pointed out in the interview data that the largest concern is letting their children play outside their houses due to issues of safety. As there is limited area of the appropriate place for the children activities which need to be secured and safe. For instance, the available places are not surrounded with fences which might be dangerous for children, especially in early ages. In addition, some of these areas are located near the roads which pointed out by some of the respondents, they are trying to provide indoor toys to fulfil the children desire to keep them engaged rather than outdoors. Although, residents are aware that playing outside and having physical activities is much more beneficial to their children in many aspects including the health advantages. This can show the importance of safety of the outdoor play facilities. To sum up, neighbourhoods of the city are facing a real challenge in terms of supporting children activities. In this sense, there should be significant care regarding this issue for the development of the open public space of these neighbourhood to be more convenient and appropriate to fulfil the children needs in terms of quality, safety and social aspects.

7 COMMUNITY INTERACTION AND SOCIAL VALUE

In terms of social interaction, the majority of the participants of both sites stated that neighbours often used to meet in the semi-public space near their houses to drink coffee, chat, and discuss the life's challenges and exchange ideas and advice. They believe that these social activities are very important for their quality of life therefore to their feeling of happiness. A similar study conducted by Zhang and Lu (2016 , p32, 34) in Beijing, China to compare the satisfaction of the residents in traditional neighbourhoods and redeveloped ones. One of the crucial findings of this study is that, "The residents in traditional neighbourhoods are generally more satisfied with their physical environment than the residents in redeveloped neighbourhoods". This outcome due to the importance of social and traditional activities as the study states, "In traditional neighbourhoods in Beijing, courtyards and hutongs provided semi-public spaces for neighbourhood interactions. Thus many daily activities, such as washing clothes, washing vegetables, and playing with children, took place in the courtyards and hutongs". This high level of social interaction has made the residents feel more integrated as one of the participants stated "Courtyards, to some extent, can be seen as our public living rooms". In this research also, one of the interviewees, (participant, L SH) who is a psychologist highlighted that based on a recent study and long experience about communities' interactions, that public space in the neighbourhoods plays a fundamental role to improve the quality of the residents' life by providing a direct communication through the daily activities which are happening between the houses such as gathering over a coffee, playing a traditional 'card games' and watching children play. In traditional neighbourhoods, respondents stated that the level of interaction between the residents is positive because they have known each other for a long period of time. This sense of familiarity enable them to get involved in the social and daily activities more easily which is relatively limited in the GNs, especially in the first few years.

One of the keys of having a good opportunity of human interaction is having the appropriate space to encourage them to be present which can help initiate the social interaction (Peters and de Haan, 2011). Rasidi et al. (2012, p465) clearly suggests that "A sense of interaction among urban residents provides an opportunity to get to know their neighbourhoods and as well as their friends in the area". In similar line, Abada et al. (2007 , p2013) emphasise the important of the place making and highlights the social negative impact when there is lack of interaction "… lack of integration may contribute to feelings of hopelessness, thus increasing the risk of depressive symptoms". A previous research illustrates that people have a better chance to interact in the favourable spaces for activating social interaction, although, newer communities recently may have less social interactions with strangers, because in some cases investors focus more on the physical elements and providing modern architecture rather than considering the cultural and social dimensions of these spaces (Mahdavi and Habib, 2016). Most of the people might feel more comfortable communicating within the groups that are belong to rather than to be open for the social interaction with others (Pinkster, 2016). Thus, it can be concluded that interactions with strangers are likely to be less common than those with known people either individuals or as groups (Rasidi et al., 2012). In this context, there is a sensible need to apply these characteristics in the new developed

neighbourhood to provide keep the social value and the level of social interaction in a good quality, therefore, to achieve a better successful neighbourhoods which have a social quality in addition to the physical and design qualities.

In fact, the social value of the community is directly linked to the open and public spaces as they are the main spaces regarding interaction (Gehl, 2011). These activities create a better chance for the residents to interact, therefore, this will strengthen the level of relationship between the residents by involving them in activities that can build a good level of communication (Gehl, 2013). Moreover, the social function of the public space can help to get residents more involved and promote the level of participation between the neighbours. Indeed, the poor quality of public spaces is also having significant impact on peoples' interactive behaviours (Weaver, 2016). Instead, they use the private spaces in their houses such as gardens and open area most of the time. Therefore, both lack of appropriate public spaces and low quality spaces have resulted in less interaction that have weakened the social value of the community.

From a social perspective many participants indicated in the interviews that when the revolution in Libya was started on Feb 2011 many social problems had happened in the GNs such as serious arguments and force some of the residents to leave the neighbourhoods. On the other hand, less problems were occurred in TNs because most of the neighbours know each other from long time and they care about each other, thus they had to take the same decision to the majority of their neighbours. This sense of unity and trust between the residents of one neighbourhood in a very difficult situation indicate the strength of their relationship which clearly is far less in the GNs where the residents are less interacted and don't know each other well. This case confirms that the relationship between the residents of the same neighbourhood was not enough to support the residents who come originally from other cities. Many residents had to move from a certain neighbourhood to another, as they acted differently to what their neighbours were expecting. Therefore, the residents who are not originally from this community prefer to return to their original area or city because the social links was very weak. While in TNs this situation did not happen because all the residents knew each other and they face all the problems and the reaction of the government during the revolution together and they help, share, cooperate and support each other.

To conclude, the most common forms of the social interactions between the residents in the public spaces of the neighbourhoods are meeting other residents, exchanging ideas and chatting (Iveson, 2011). These activities creates a high level of social integration which confirms the preference of the integrated communities.

Therefore, based on the research findings, public spaces of the neighbourhoods is the most effective area that impacts the level of interaction between the residents and therefore to the cohesion of the community.

8 THE FEELING OF EQUITY AMONG THE RESIDENTS

The equity in this research means that every one of the neighbourhood has the same opportunity to practice their own activity regardless to their gender, age and other elements, because…?. Residents need the same chance of participation in the public space of the neighbourhood where they are supposed to enjoy their daily activities such as social, entertainment, play and sports activities. For instance, Musterd et al. (2016, p234) argues that "We expect that households prefer to move to areas in which residents are not very different from themselves". This expectation is based on a case study which shows clearly that inhabitants prefer to live in the community which they feel the sense of equity in their status in this case. In other cases, people might have different perception as they probably consider the equity of religion or the culture background is a priority to them. Therefore, understanding the features of the residents who are going to use this place is the key of providing the right solution in the appropriate form that meets their needs. The urban design of the neighbourhood should be based on a deep investigation of residents perception in order to fulfil their desires, thus to provide them equal opportunities that enable all the categories of the residents to get involved together and interact socially within the same neighbourhood.

It has been argued by many scholars that to create a preferable and successful public neighbourhood, there should be a balance provision of economic, environment and social dimensions including equity and justice (Saha and Paterson, 2008, Walker, 2015, Jacobson and Forsyth, 2008). Hence, the social aspects such as equity is one of the intangible elements that impact on the quality of the neighbourhood, this lead

to the key of its importance to be analysed in this research to find out a comprehensive understanding of its impact on the local community.

The Figures 13 and 14 highlight the attitude of the respondents of both sites towards the equity among the residents. The figures show the percentage of the respondents who agreed or disagreed to the following "This public space is appropriate to all the residents' age group, gender... etc." and it can be seen very clearly from the figures that more than 75% of the respondents in the GN 9th July disagree to this statement. In TN Almegawba also about 55% of the respondents disagree. It appears that in both neighbourhoods, especially that most of the participants in the GN, are not satisfied in terms of equality within their neighbourhoods. The results also show that many of the neighbourhood's residents are facing a lack of equivalency such as female, elderly and disabled people.

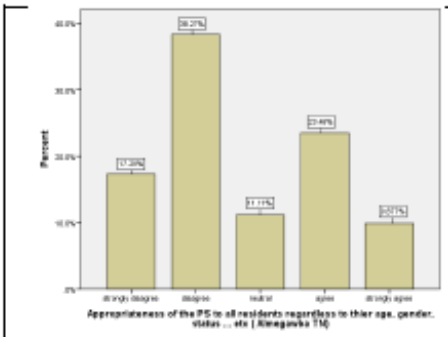


Figure 13: The respondents' opinion towards the appropriateness of the public spaces in their neighbourhood regardless to their gender, TN

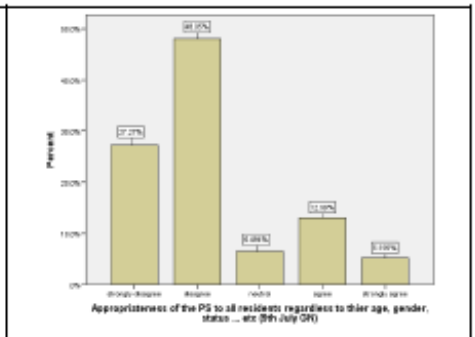


Figure 14: The respondents' opinion towards the appropriateness of the public spaces in their neighbourhood regardless to their gender, GN

According to the survey findings, the total percentage of the respondents who were disagreed to the previous statement in both sites together is around 65%. Furthermore, in-depth interviews highlight that there are three main categories of the residents who are feeling lack of equity in using the public spaces of their neighbourhoods. a) The youth: this category who aged from 12 up to 20 years are facing a lack of amenities such as football pitches, tennis courts and other sports equipment, also a lack of prepared landscaped open space which can be used in many adequate activities for this specific age. b) The disabled and the elderly: disabled residents feeling isolated from other residents who are in their age due to the lack of the creation and infrastructure that can help their movements from place to the other. Elderly who also cannot find a place where to spend some time with the people of their age. C) Female residents: this category has expressed their feeling of injustices in many parts of the research methods. These three categories should be taken on account in any future development as they are representing almost 60% of the residents. This overall result points out that more efforts need to be applied to create more opportunity for the rest of the residents who could not find their appropriate place such as female spaces, quite sitting area for elderly and special pathways, routes and slopes 'ramps' and for the disabled people.

9 CONCLUSION

To conclude, the research has pointed out that both physical and intangible elements have a major impact on the quality of the public spaces of the neighbourhoods. These elements in fact related to many factors, including the relationship between the residents, social interaction and cultural aspects. It has been noticed in this research that the relationship between the residents depends very much on the time of neighbourship. The longer time for the neighbourship is the stronger the relationship will be. As Nasar and Julian (1995 , p180) state that "Sense of community is a key psychological construct that the residents of urban neighbourhoods build over a period of time". Therefore, the length of residence thus becomes important in fostering a sense of community, in addition to neighbourhood association and mutual cooperation" (Chitrakar, 2016 . p215). This indicator illustrates why in the TNs the relationship of the residents often is much higher and stronger than it is in the GNs. The main feed for this relationships is the social communication such as greeting, sitting, chatting and sharing activities. In both sites, the result has discovered a reasonable range of social interaction between the residents but, yet need more improvement in order to make integrated community which is one of the aims of this research.

The children of the neighbourhood are one of the most active and vital of the residents categories, they have more energy and wide range of activities to be shared as Gehl (2013 , p158) importantly indicates that "Children's play has always been an integral part of city life". The research has emphasised that children play a fundamental role in improving the social interaction and enhancing the residents to get involved in more social activities. For instance, the playgrounds and sports activities usually bring the parents and adults together and encourage them to communicate in these places. Moreover, it can be seen from the results that the TNs are more integrated and have a higher community cohesion, this indicator has been explored due to the strong communication and social involvement between the residents of the TNs. On the other hand, similar elements have been observed only in a small groups in the GNs which is built up by the time through daily interaction than to a more social communication.

Finally, this research has revealed that there are a few categories of residents who have less opportunity to enjoy the outdoor spaces, these categories being the female, the disabled and the elderly. They are not provided equally with the local needs and the appropriate spaces to apply their social activities in the public or semi-public spaces of the neighbourhood. It has been widely emphasised that public spaces such neighbourhoods parks should serve all types of inhabitants as Rouhi et al. (2016 , p458) indicates that "The best parks are those that pay attention to the social, cultural, psychological needs of different age and sex groups and provide charming and appropriate atmosphere for them". The research has concluded that these categories need more attention in the future urban development and in the new projects in order to maximise the community and personal value of the public spaces for these particular users. The research may have several limitations such as covering only two sites to compare and measure the intangible and tangible elements, it could have be more comprehensive if covers more sites. Also, there might be another methods can be apply to investigate deeper and to gather more specific information regarding the local community characteristics. It can be suggested that more investigation is required in this topic especially in the social relationship and traditional elements which are relevant not only to the urban redevelopment, but also to the quality of the residents'' life and their social satisfaction.

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ID 1375 | GOMM PARK. INEFFICIENT MANAGEMENT (DUE TO) AND CAPITAL PRESSURE, SOFTENED BY THE COMMUNITY AND COLLECTIVE CREATIVITY

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1 INTRODUCTION, OBJECTIVE AND CONTEXT

The article demonstrates the challenges faced by a Collective when it claimed back a communal space - with a strong social and cultural salience, high environmental interest, which had previously been protected -but was 'escaping' via financial and capital pressure. This had been occurred in Curitiba, a city which call itself 'socially and ecologically just" The space in question is the Gomm Park, comprised by Casa Gomm (1913) -a unique house, built in Massachusetts style -and its bosk, both listed as Parana's Cultural Heritage.

This paper will provide remarkable records, from press articles and interviews , to fragments of social media posts from 'Salvemos o Bosque da Casa Gomm' (Help The Gomm's House Bosk) -the group who decided to fight for the communal heritage and the immaterial resource the "space" now represents.

The relationship between people and power, when this is a part from those, it's the so called democracy. The Greeks, in Agora, met and decided, with one vote each, all the subjects in the current agenda. Time took its toll and weakened this dynamic, but its essence lasts in all current democracies, either direct or indirect, which are sometimes consensus others subjected to maneuver of power, depending whether people's influence in decision making is high or low.

On evolved democratic societies we are faced with people's participation and transparency templates, which aim to provide better life quality with consensus use of public resources, and as consequence, increase social and justice equality.

Many theories and templates such as 'Gobernanza2.0' or 'open government' provide examples of thought and design of successful methodological process, but the kickstart to positive results can only be reached through will and detachment of the constituent power, otherwise conflicts of interest will always be extinguished without resignation, and in most cases, in favour of few against the collective interest.

According to Manuela Carmena , "urban litigation, in case of subject to the Justice, produce a complicated outcome, because the Commercial Justice, which adjudicate on process related to City disagreements, is now misplaced when it comes to adjudicate any urban process, therefore a new approach should be taken when judging urban conflicts, such as territorial, social, environmental, etc".

The objective is to expose the reality and make a statement for the next public administration regarding the importance of people's voice and wishes, instead of ceding in favor of power and speculative capital.

2 "THE HISTORY"

Curitiba, a city of explored by Portuguese colonization -similar to many other Brazilian cities in the upcoming year 1808 -when the raw materials of the South region of Brazil, like wood and yerba mate, produced wealth to their masters, and foster the emergence of an local aristocracy, the country houses and mansions of the Batel, neighbourhood along with Alto da Glória, where are the main "surnames" of the city.

Figure 1: picture of Gomm's House when lived the Gomm's family. - Facebook Salvemos o Bosque da Casa Gomm

Batel, even today, is the neighbourhood of Curitiba, with highest income per capita among all districts of the city and many other favorable economic indicators.

At the beginning of the 20th century, English industrialist Henry Gomm -married with Isabel Withers Gomm, creator of the Red Cross in the State of Paraná -had business of yerba mate in Antonina.

In 1913, inaugurates the wooden house in a grove of Batel district.In the years 1930/1940¬Harry Blas Gomm, son of Henry and Elizabeth, marries Luisa Bueno, daughter of diplomats. The couple settles in Curitiba and going to live in the mansion of Batel Avenue. The mansion becomes a meeting place for foreigners, intellectuals and industrialists. Blas becomes British Consul in Paraná (Figure 1).

In the years 1950, 'Monsieur Le Consul to Curityba', composed by Marc Hevral (one of the abitués of the Gomm's House), Fernand Vimont and Henry Le Marchand, sing in the French radios and takes the Grand Prize of the French song, from that era.

In 1958 (Figure 2), Luisa Gomm moves to a different part of town, named Los Angeles Gardens. The “Gomm's House” is then rented out to third parties. Louise Gomm dies in 1986.

“Built in Curitiba in 1913 like a Massachusetts style with boards of Araucaria, anglo-brazilian family. A 'single' in the architecture and landscape of the city, even more unique because it accompanied by a magnificent, verdant forest (which was inseparable). A House with a rich cultural history”

Figure 2: picture fragment 'view of bird' taken by Cid Distefani (1936-2015) in 1958, where the center see the Wood and the Gomm's House. -Gazeta do Povo. Nostalgia column. Own Eddition.

The decline of the extractive economy with the emergence of industrial processes, put an end to many economic interests, you haven't heard see or boost your business. The Gomm, were a few of them.

“The property was sold by the family in the early 1980, when the City of Curitiba then tried to establish there the Batel Park (1987), which today would be a Central Park in a verticalized urbe. However, the new owner defeated the city, knocking over the Public Utility Decree for the building on highest instance of Brazilian Justice. In 1989, the brick and mortar Gomm’s House, and its bosk were, listed by the Historical and Cultural Heritage of the State of Paraná, which in principle 'protected' it from destruction. But it still wasn't enough.

The bosk would be gradually cut in subsequent years, losing its splendor. The House, little by little, was almost destroyed by 'greedy and exotic termites'. All too soon it almost became a hotel or a convention center or a club etc. Many projects were drawn and later discarded, due of limitations arising from the listing Decree.

But the solution is not going to fall from the sky.

Years later, the same State of Paraná which had listed the House agreed to misrepresent the Listing Decre: the House would be dismantled (to be 'treated') and reassembled in the back of the old family property Gomm, where before there were stables for horses, near the bottom Valley of Ivo River. The bosk, drastically diminished, and became ‘squeezed’ into a specific real estate registration, as a result of the break-up of the area in five batches. The House would then be donated to the State of Paraná and the bosk and gardens donated to the Municipality.

In the midst of all this, the result is a huge piece of land, ‘free’ from the burdens of the listed building and its bosk, for which it would be possible to be built in its entirety in titanic proportions.

It was a sophisticated 'bypass' to the listing regulations, signed off by State Governor Jaime Lerner.

In 2013, with the great 'Mastodon' shopping center about to inaugurate, the leftovers of the Heritage would be once again massacred by the opening of an asphalt street for cars, in a project approved by IPPUC and the coordination of the Cultural Heritage of the State of Paraná (same body that protected House and Bosk in 1989).

Help The Gomm's House Bosk (SBDCG), stood-up and said No to this street. One of the main arguments put forward at the time, was that a street would eventually finish segregate the House from its enveloping area (bosk and gardens), creating a mere simulacrum, permanently surrounded by cars in motion -and not a garden to give it some sense, as stated in the Listing Decree of Parana’s Cultural Heritage”

Earlier, in mid-2011, the IAB-PR (Institute of Architects of Brazil-Paraná), took a proactive attitude in formally addressing the owner of the real state, the Shopping Patio Batel, to proposal a partnership and make public use of the House and the remaining forest (not that one listed in the Decree).

Maybe if the proposal had been accepted, it could have democratized the space, unfortunately the shopping had already been inaugurated. We transcribe below what had been the proposal (item 3 of the document), which included also the Design Center Batel.

“Draw up a STUDY to identify the conditions and provide technical solutions to facilitate the unification of the remnants of 'Batel's Bosk’, installation of new urban equipment, allowing the local population and also customers of two shopping centers to make use of the space as leisure equipment, adding value to enterprises.

Prepare the STUDY with a view to transforming the Gomm's House in cultural equipment to the memory of architecture and Batel District, as part of the activities of both commercial enterprises”.

“The urban design as a tool for planning, if facing the powerful forces of the speculative capital appropriates of the city. The urban property becomes the object of transfer and concentration of capital and globalizes the great metropolis. The town became object of purchase of major investors.”

3 "EL ESTADO DEL ARTE"

The forms of governance today, seek to encourage community participation, as a best practice for the governance of cities, which told us Carlos Giménez "have always been adverse and diverse", thus the inequality is not something that occurs by chance but something political and therefore must be planning something equally political.

“The city is a human and collective creation, so politics and should be regulated by legal landmarks, that there are not always satisfactorily.”

Among the first milestones for participatory urban planning, is the Alboorg Letter that came to be the screen for formatting of Agendas21 and soon Local Agendas 21 or AL21. This important initial step to adopt a participatory policy in the early 1990 was and is crucial.

The municipalities that today lead 15 to 20 years or more, with use of local agendas, already have a vision beyond the processes of AL21, where raise issues such as information and transparency and the renovations to Open Government, participative democracy and transparent rendering of accounts.

The sense of participatory democracy is seen to form intra-administrative (personal, economic and legal), with actions and results, with updated systems of indicators and constant visibility of the impacts of AL21 governance.

In this sense, the new technologies (in particular the Apps) for dissemination and communication are very useful, as well as GIS for timely diagnosis and planning are among others.

The current demands of society, require more and more issues such as transparency of public administration and popular participation, especially when it comes to large projects or strategic projects to a municipality or a region, otherwise not work agreed upon nor did appropriate to the results obtain.

Alberto Ortiz de Zarate Tercero suggests different scenarios of citizenship, on considering the form of activity of the Government and the scope or surroundings where they are inserted, generating active or passive and civic citizenship.

However, if there is a simple structure, enabling mechanisms for governance and popular participation, which guarantees to associations and citizens, cooperation and democratic practices, independent and autonomous administrations and technicians (working groups and academia), they can apply their knowledge, standards, mechanisms of action with transparency, could reach a successful conclusion.

This set of agents, we should add a coordinating or Council to plan and a follow-up Committee that would give independent progress for each project.

This form may be reproduced to a greater or lesser extent, but your essence must contain the expectation resulting from such diversity and adversity that is a city and that is satisfactory to the interests of the collectivity, never in favour of speculation, even of those who profit from inside information or influence (personal, economic and legal).

4 GOMM PARK

“The community and civic experience of the Gomm's Park's -even if not a park there was -a victory for the whole city. From 2013, curitibanos from of every neighbourhood, of all ages and from various political groupings come together, occupy, sow, reap, sing, paint, composted, swap, join pieces, interact, take care and live in PEACE in a modest symbol of the resumption of urban planning of Curitiba. This is-and will remain-to Help The Gomm's House Bosk (SBDCG), not just in a tiny Park at Batel, but in the whole city.”

The collective, SBDCG (who 're-proposed' the creation of the Park), managed to develop with the IPPUC, a project in which everyone agreed, though, after all this a new deception, there were news that contradict this agreement.

“Yes, the Park project deployment now devastated what we had sown (literally) and does not reflect the needs and desires of the community. Park's draw was signed in 2014 by public authorities and citizens was refurbed by the municipal government, which decided in 2015-2016 for composing politically and with the coordination of the Cultural Heritage of the State of Paraná the existence illegal parking site enclosing all areas and 'confiscate' to the city 2/3 Gomm's Park. In other words, the city kicked, back a step and succumbed to the autocratic wishes of 'State House', doing 'overlook' for trespassing by the municipal State Parking ...

... And the emergency way? Ah, the emergency way!

In place of simple cobblestones seated in sand at the same level of the grass, ran a base and highway infrastructure, with meters of excavations and gravel. A plan mapped out not to think of a fanciful road evacuation of the Mall, but a 'Trojan Horse' in future paving and 'binarization' in the area-large enterprises that disfigure the four corners of the city, promote a excluding a city urbanism unsustainable ...

... The House is even more segregated and sealed without the landscape values. The visual effect of a 'turkey at sourcer', tells Mrs. Irene Gomm, the last resident of the House still in life, was sharp. If the House was already tight 'in' a real estate registration too small, the emergency way just squeezed more.”

It is observed in these reports, as well as in the history of the century-old property, which always aroused interest because your privileged location, and your high ecological, cultural and economic content, and increased disputes between various urban actors, that governance was very shy throughout the period in which the House was no longer a House of the aristocracy and became the object of these interests since, by one way, created all protection mechanisms, with a public decree, by other, gave way to the subdivision and to trading with speculative capital.

“Found in the records of the action filed against Municipality, Soifer, Group Paraná State and Municipal Secretary of Environment in the 5th Public Farm Curitiba audience. Was presented by the State of Paraná in your rebuttal to that action and is part of the administrative process of tipping the House Gomm and your Woods (started in 1987 and that would occur in 1988).

In it can see a plant may 1987 (figure 3), prepared by Roberto Requião (Mayor of Curitiba) management IPPUC, named 'PARQUE DO BATEL'.

According to the master plan of this park, the area that would later be knocked over (whose owner was Soifer, Berman & Cia Ltda.-19,430 m2) and TWO MORE areas of other owners (Egon Alwis Mueller and Marese Lanconi, respectively with 2,818 m2 and 1,002 m2) – all in a grand total of 23,250, m2 -would be aimed at creating a beautiful complex environmental, cultural and leisure in the midst of the city's central area.

The House Gomm and your garage both in their historical positions would be fully restored original and intended for a Museum, library, library and video room. In other existing buildings would be deployed a restaurant with terrace for outdoor tables, a tea house, an outer deck, etc.

In addition to the existing Forest, would be planted new trees and shrubs and lawns to deployed flowered walks and contemplation. And note well: connecting the two sections of Hermes Fontes Street would be made with a hiking trail for PEDESTRIANS and cyclists, of little width and integrated into nature.

A beautiful outdoor stage and amid the trees would be destined to small musical events. Banks for passers-by would be equipped with hearing sound of music in headphones (!).”

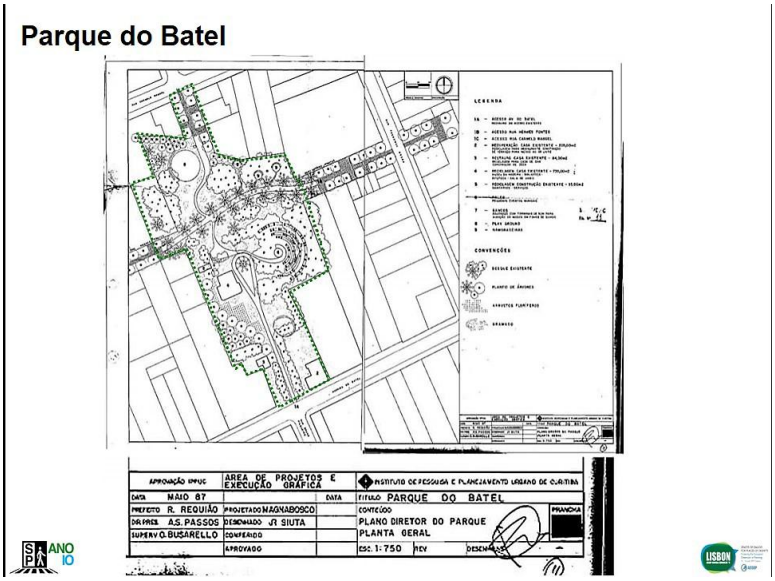

Figure 3 : Schematic of the Parque do Batel-IPPUC (1987) source: SBDCG, own Edition

In 1989, the public decree The House, the Bosk, the Valley of the River, began to throb as limiters of the interests of the new owner of these 19,430 m2 situated on Avenida Batel, 1829, acquired four years earlier.

Figure 4: source: 1989 ENGEFOTO File, own Edition | Figure 5: source: IPPUC 1999 – database, own Edition

Figure 6: source: IPPUC 2003-database, own Edition

Figure 7: source: HERE Maps-Nokia 2016, own Edition

This graphical sequence, well presented, since the decree signed in 1989 (Figure 4); When put into gear the 'bypass' in 1999 (Figure 5); the change of place of home (which nearly ended up in agronomics, at school of the Wood Engineering), in 2003 (Figure 6); and finally, the denouement of the Mall and the formalization of the Park in 2016 (Figure 7), synthesis in chronological order, the administrative inefficiency and the power of capital.

It remains therefore applaud the collective SBDCG, your determination and power of conquest, although having to accept the charges and have to swallow the interference of those who have the pen in hand to sign decrees, because without this good roll and mobilization the Park hardly exist.

Figure 8: Gomm's Park design and signed by all – SBDCG

“For now, Gomm's Park is still a sketch, in the municipal decree signed by Gustavo Fruet (mayor) – this, a documentary and legal victory of the movement.

In the real world, the Park (Figure 8) would have us swallow is not the Park we used four years ago, in an obvious symptom of disconnection of public (regional and local) with the community they claim to represent.”

5 THE CASE OF CURITIBA (IS NOT BY A CHANCE...)

Curitiba, enjoys international renown due to the deployment and subsequent implementation of the master plan of urbanism of 1965, prepared under the direction of architect Jorge Wilheim who contributed a new way of doing things, opposed to the guidelines of the 'Plan Agache -it was envisioned under the concept of urban's functional zoning -to the idea of growth along the structural axes.

The result of this strategic plan, the IPPUC (Institute of Urban Planning and Research of Curitiba) as a body designed to draw the future strategies and urban interventions for the city, in addition to proposing certain immediate actions that were performed by the city.

Between this, actions, already in the early 1970 the closing car circulation of a number of streets in the Centre, around the 'XV de Novembro' Street and the creation of structural axes, were later circling the 'express'

These urban trends were the vanguard, which later came to be the object of playing in cities of the five continents and which made the projection in the city of Curitiba, as a role model.

The city, proceeded to make a fuss of its achievements and modernity. In the years 1980 if the self-titled debut 'ecological capital' and in the late 1990, with the new paradigms of participatory governance the 'social capital', but a series of articles and thesis , demonstrate the opposite, that there was no environmental improvement and social capital of Paraná, even a big city-marketing around that occurred at that time, for almost three decades.

In counterpoint, a belated initiative of the State Government, through the Department of Water Resources and Environment, tried fruitlessly to spread the idea of creation and implementation Local Agenda 21, including an international seminar, celebrating in Ponta Grossa, along with the UEPG, which later gave rise to a document called 'PARANÁ – 2010 SUSTAINABLE PACT', where some general guidelines were agreed in the thematic tables points of debate during the seminar in screen.

In Curitiba, the lack of mechanisms of citizen participation promoters if notes in most performances of the municipality. Although there is the call for participation in the LOA (Annual Budget), occurs in reckless and shy, with diffusion of press releases on the web, often with little time, sometimes in difficult times, the same occurring with the 'public hearings', both mandatory practices according to the status of cities law.

Performances as the bidding of public transportation in 2010 and the proposal for a subway to Curitiba (2009), which had a boot with the project of the 'modern tramway' (1992), demonstrated a predisposition of municipal administration, to limit exclusively to law enforcement, with regard to participatory mechanisms. In the case of the bidding of public transportation, this came to occur only after judicial sentence, and 10 years of the start of past demand filed by prosecutors.

The results provided insignificant improvements to the collective.

In the case of public transport, this new regiment has given to those who were already the system operators, a status that until then had not, the dealers of public transportation (they were just with permission to explore, the concession was the URBS) and were almost as much 25 years perpetuated.

For the subway, with poor project to the city, which just replaces the modal BRT by subway, implying in costly disorders, during the works and low benefit, beyond just the increasing transport capacity and some reduction of air pollution; When through a project of this size, with a new track, it could perform an urban transformation in underserved areas or degraded in the city.

In both cases, public hearings, not translated or contributed anything to the project, which was already consummated. There was no even an initial exposure than it was intended to accomplish, to be discussed, there was no debate, no discussion, and of course there was low turnout.

Prior to that, previously to the landmarks of citizen participation (Letter of Alborg, 1994) could be saw a case – the 'Connector 5' or the 'New Curitiba' or 'Ecoville' (1972) – which also raises comments on the appropriation of the speculative capital over the city, a mega refurbishment operation of land use.

Make use of fragments of my DEA Thesis to report the case.

“From the 'Campina do Siqueira', passing by 'Mossunguê and reaching the 'Campo Comprido', became what until then were areas of little farms and inhabited, in 1974, sanctioned law No. 4,773 defining a new zoning for the city and creating the connector routes (which already existed physically in a total of four and the proposition of a new connector, with a special zoning) for the purpose of spatial integration with the Industrial City (CIC).

The initial proposal for the deployment of this new axis, format and constructive potential of structural axes, would be to build houses for the new CIC workers who come from other regions of the State or the Country.

For the implementation, in the late 1970, would be taken two distinct programs and funding agents, one of them the BID (Inter-American Development Bank) for implementation of the road system and another through the BNH (National Housing Bank) for the construction of housing estates over these.

The first line of credit was contracted, but the second, inexplicably, was left aside, for reasons apparently unknown, but you can think of a clear goal: large enterprises and real estate speculation, which resulted in the present day”

“Governance has to be legality and not private interests. The privilege of information is at the service of private interest” Further, recently, the revision of the master plan: The revision of the Curitiba master plan, began at IPPUC, in 28 March, and provided for public consultation, in the period from April 12 to 15 August 2014 for submitting questions, criticism and suggestions. Also the Forum of the Curitiba master plan that had your first public hearing in 15 April 2014.

The series of ten public hearings and six groups of studies, events that made up the Forum, intended to support and collaborate with the discussions surrounding the Curitiba master plan review, planned for the year 2014. The Forum was open to all entities and municipalities organised civil society and has been a Commission proposal of town planning and public works of the city of Curitiba.

“So, as a corollary, that as much as administrations, professional associations, trade unions, academies, citizens associations have to do with any participatory process to occur, these attempts are either shy, or devoid of vanity, enough to make advances that are not only self-serving, undermining dialogue and the general interest”

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ID 1386 | AN INDOOR SOUNDSCAPE SURVEY ON THE USER'S COPING METHODS FOR NOISE ANNOYANCE, DISTURBANCE AND LOSS OF CONCENTRATION IN PUBLIC STUDY AREAS

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1 INTRODUCTION

During last decades, group study areas has started to be a common feature, especially in libraries. Unlike a traditional library, where the students are delivered library services, these spaces are encourage students to take command of their own (Bennett, 2007). These spaces are also popular especially among undergraduate students as they incorporate academic work and social activities by providing informal grounds (Applegate, 2009; Bryant, et. al., 2009). The flexibility of usage allowed open learning spaces to be used for both collaborative and individual study. In contrast with the strict silent zones of traditional library study areas, these informal study areas are prone to possible issues regarding the sound environment.

In silent study areas, sound levels can become a source of frustration (Çankaya & Yilmazer, 2016; Harrop & Turpin, 2013), but in the informal public study areas, the students can get to adapt the sound levels even though it possible gets much higher than silent zones (Bryant et al., 2009). It was also expressed by the students that sound levels expressed a positive contribution to the social identity of space in open learning areas (Harrop & Turpin, 2013). This positive contribution to the place identity is not solely caused by the sound levels but by the expectation which is highly related with the context of sound environment. With this regard, the acoustic environment of the public study areas should not be evaluated solely based on the sound levels, but also with the individuals' perception of the soundscape.

According to the ISO, soundscape is defined as the “the acoustic environment perceived or experienced and/or understood by a person or people, in context” (ISO, 2014). Soundscape approach has become popular during the last decade. Numerous case studies showed that it is not always the sound levels that matter, but also individuals’ interpretation and the content of sound (Acun & Yilmazer, 2015; Acun, et. al., 2016; Bora & Yilmazer, 2015; Brown, Kang, & Gjestland, 2011; Davies et al., 2013; Mackrill, Cain, & Jennings, 2013).

Public study areas are mostly found within the libraries but it does not mean that they are limited to the library building. Especially in last couple of years, public study areas are created in various locations in Bilkent University Campus. One of the aims of this research is to explore the acoustical environment of four distinct public study areas, compare students’ satisfaction with the sound environment, perceived loudness and overall satisfaction for each area. The second objective is to identify the sound sources and their contribution to the sound environment and satisfaction. Finally, to identify the coping methods employed by the students when the sound environment causes disturbance or dissatisfactory.

2 METHODOLOGY

The research was conducted at four public study areas located within the Bilkent University Campus. These study areas were located within the 77th dormitory, the library, the Faculty of Science (SA building), and the Faculty of Fine Arts Design and Architecture (FC building) (Figure 1). Each of these locations has slight differences. The FC building housed a Starbucks right next to the study area. The study area of SA building was located in the atrium of the building and had a small fountain. Setting chosen within the library was the common study area, which was crowded most of the time. In contrast to this, the dormitory study area was more of a desolate space.

In-situ measurement of sound levels (LAeq) were held in each study area to provide a brief information about sound levels of these spaces. Bruel & Kjaer Sound Level Meter type 2230 was used to measure the LAeq. Sound level meter is placed at central locations of all areas, at the height of 125 cm, and measured over 15 minute time intervals. Number of measurement locations differed for each space, based on the shape and floor area. All measurements are conducted simultaneously with the questionnaire survey.

Questionnaire survey was conducted with 30 student from each study area, with a total of 120 students. The age of the sample group ranged from 18 and 26, 45% being male and 55% female. All the participants are chosen among those who were studying and those that were performing unrelated activities were avoided. It took participants average of 5 minutes to complete the questionnaire.

In order to conduct a perceptual of the public study areas’ soundscape, a questionnaire was prepared. The questionnaire used a 5 point Likert scale and started with demographic information, the frequency and length of visit. For the second part, participants were responded to statements such as “ I am satisfied with this study area”, “ This sound environment is not loud” and “Sound environment of this study area does not disturb my concentration” (1-Strongly Disagree, 5-Strongly Agree). These are followed up by questions regarding the indoor environmental quality of the area (natural lighting, ventilation, etc.) with emphasis on the satisfaction with the acoustic environment (1-Very dissatisfied, 5-Strongly satisfied). This part also included questions concerned with the methods employed by the students to cope with an unsatisfactory sound environment. For the last part, participants were asked to rank the given sound sources based on how frequently they hear them (1= Very rarely, 5= Constantly) and based on disturbance (1= Very disturbing, 5 = Not disturbing at all).

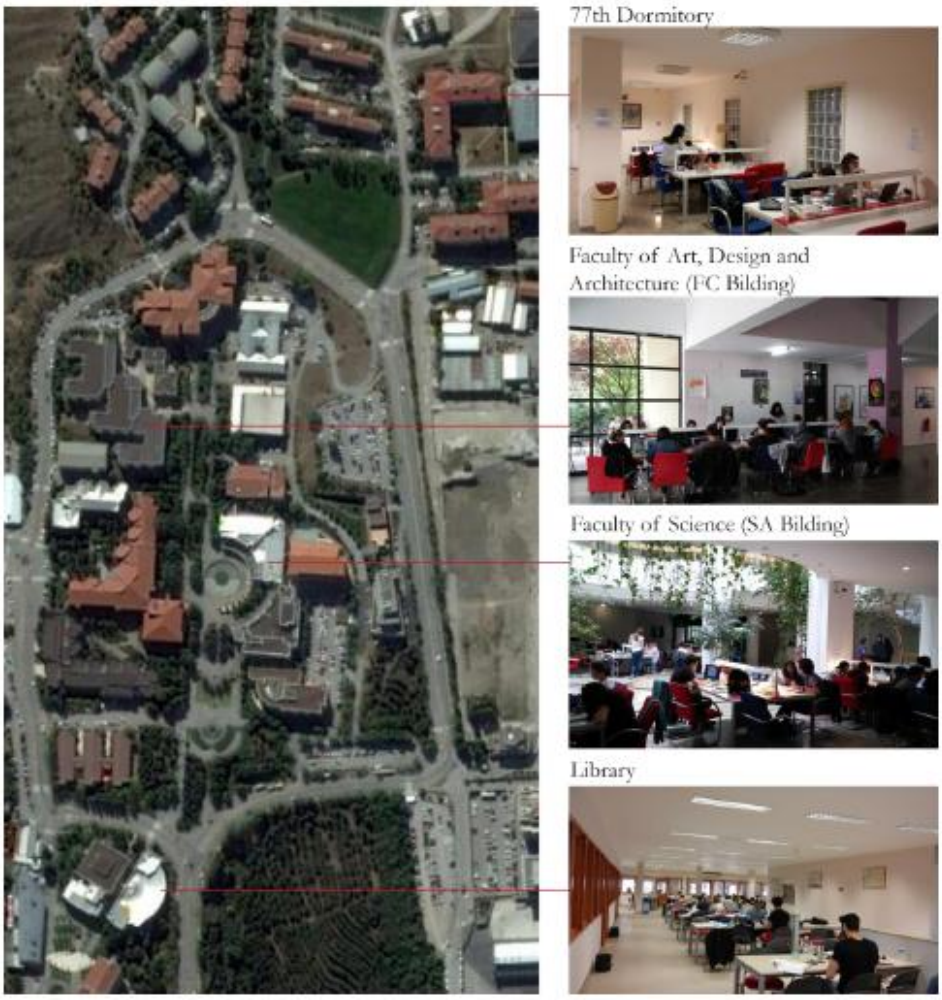

Figure 1: Locations of the case study setting shown on the Bilkent University Central Campus.

3 RESULTS

3.1 THE SOUND ENVIRONMENT

Statistical analyses were conducted using IBM SPSS Statistics 21. The Cronbach's α obtained for the questionnaire is 0,706. According to the descriptive statistics 57,5% of the participants are satisfied or very satisfied with their study environment while 24,2% is neutral and only 18,3% are unsatisfied or very unsatisfied. However, total of 28,3% of the participants expressed that they are dissatisfied and 10% expressed that they are very dissatisfied with the sound environment (Figure 1). Also, 47,5% of the participants disagreed with the statement of "This study area is not noisy"(Figure 2).

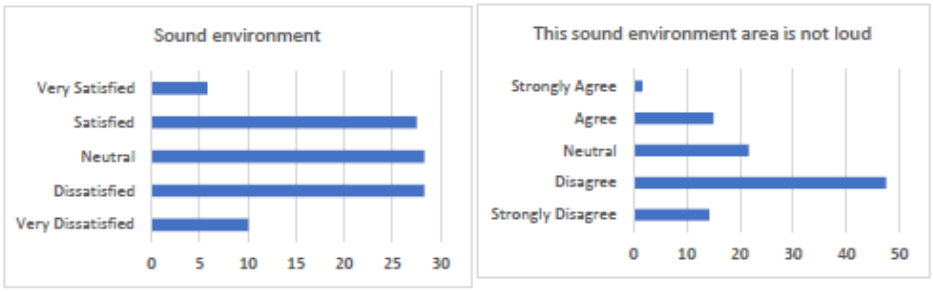

Figure 2: On the left, participants' satisfaction with the sound environment. On the right, participants response to the statement of "This sound environment is not loud".

In-situ measurements showed that mean Equivalent Continuous A Weighted Sound Levels (LAeq) for all the study areas are; 55.7 dB(A) for SA building, 57.2 dB(A) for FC building, 62.2 dB(A) for library, and 47.2 dB(A) for 77th dormitory. ANOVA F-Test is used to compare whether there is any difference between the study areas in terms of perceived loudness and satisfaction with the sound environment. In terms of perceived loudness, no statistically significance is found between the study areas ($F(3,116) = 2.681$, $p > 0.05$). Similarly, no statistical difference has been found among the study areas in terms of the satisfaction with the soundscape ($F(3,116) = 2.412$, $p > 0.05$). It was interesting to see no difference between these study areas, in terms of satisfaction and perceived loudness, even though there was almost 14 dB(A) difference between the quietest (77th dormitory) and the loudest (library) study area.

Overall satisfaction with the study areas were also compared by ANOVA F-Test. However, Levene's test for equality of variances was found to be violated for this variable ($F(3,116) = 2.818$, $P = 0.042$). Therefore, analysis continued by using Kruskal-Wallis H-Test, as it is the nonparametric equivelent of one way ANOVA F-Test. Kruskal-Wallis test indicates that there is a statistically significant difference between the study areas in terms of overall satisfaction ($\chi 2(3) = 8.133$, $p = 0.043$). Tamhane's T2 post hoc test suggest significant differences in overall satisfaction were obtained between library and 77th dormitory ($p = 0.023$).

3.2 ASSESMENT OF THE SOUND SOURCES

Sound sources found within each study area were identified through open ended questions during the pilot study. Based on this, nine types of sound sources are identified. These sound sources were, intelligible speech, unintelligible speech, laughing, footsteps, ventilation, water sound, music, computer sound (keyboard, mouse, fan), and environmental sounds (door, chair, etc.).

As part of the interview, participants were asked to rank frequency of perception for each sound source, from "1 – Very rarely" to "5 – Constantly". The most frequently heard sound source in the study areas are all human generated sounds (Figure 2). Unintelligible speech is the most frequently heard sound, with 32% of the participants stating that they heard it constantly. It is followed very closely by intelligible speech (30%) and laughing sound (29.2%). Water sound (74.2%) and ventilation (63.3%) sound are the least heard sounds, with vast majority of the participants saying that they heard them very rarely. However, the water sound coming from the fountain is exclusive to the SA building. Therefore, ventilation is the least heard sound in reality.

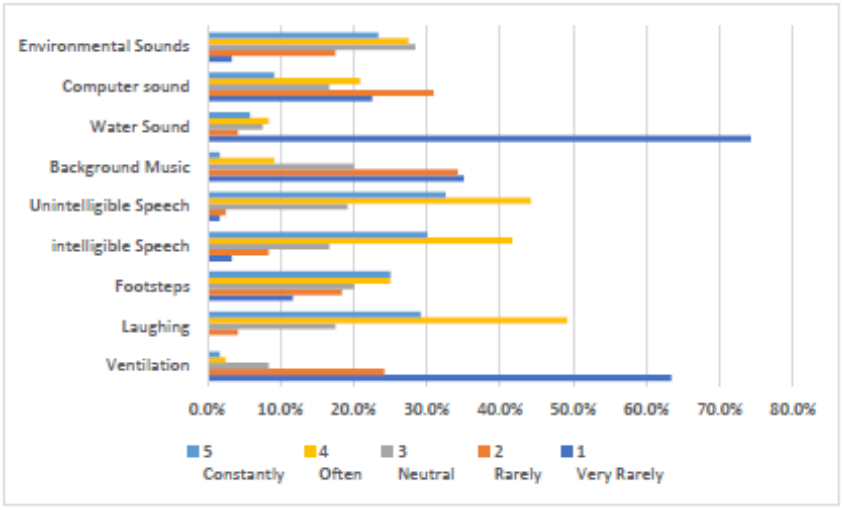

Figure 3: Frequency of perception of the sound sources for all four study areas

When the participants were asked to evaluate the sound sources based on disturbance, intelligible speech is most disturbing sound (Figure 3). One fifth of the participant found intelligible speech very disturbing and 43,3% said that it is disturbing. Laughing sound is also very close to intelligible speech, with 15.8% of the participants stating that it is very disturbing and 45.8% disturbing. Consistent with the literature, unintelligible speech is found to be less disturbing then the intelligible speech(Pierrette, Parizet, Chevret, & Chatillon, 2014).

The disturbance caused by the sound sources and students' perceived loudness are compared with their satisfaction with the sound environment. Calculated Spearman's rank correlation coefficients can be seen at Table 1. Based on these results, a statistically significant relation is observed for 7 of the items. When we consider the correlation between the satisfaction with the sound environment and the statement of "this sound environment is not loud", there is a moderate positive association. In order to properly interpret this result we need to consider that the Likert scales for satisfaction is "1 = very dissatisfied and 5 = very satisfied", and Likert scales for loudness is "1= strongly disagree, 5= strongly agree". This indicates that satisfaction increase as they perceive the sound environment less loud (r(120)=0.540, p< 0.01).

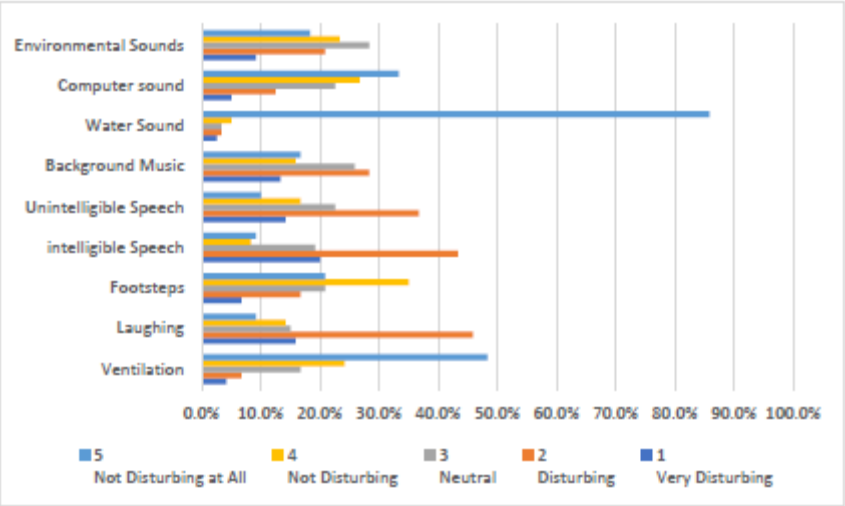

Figure 4: Disturbance caused the sound sources.

Strongest amount of relation has been observed for laughing sounds, among all sound sources. There is a moderate strong positive association between the disturbance caused by the sound of laughing and satisfaction with the sound environment (r(120)=0.511, p< 0.01). This can be interpreted as, the students get more satisfied with the sound environment (1-Very dissatisfied, 5-Very satisfied) as they get less disturbed by laughing sounds (1 – Very disturbing, 5- Not disturbing at all). Laughing is very closely followed by the unintelligible speech (r(120)=0.502, p< 0.01) and intelligible speech (r(120)=0.471, p< 0.01), with both having moderate positive association. No significant relation has been observed for background music, ventilation and water sounds (Table 1).

	Satisfaction with the sound environment	Self-rated concentration
Loudness	-0.540**	0.472**
Ventilation	-0.027	0.051
Laughing	0.511**	0.531**
Footsteps	0.250**	0.357**
Intelligible Speech	0.471**	0.529**
Unintelligible Speech	0.502**	0.538**
Background Music	0.076	0.177
Water Sound	0.067	0.093
Computer sound	0.192*	0.308**
Environmental Sounds	0.237**	0.279**

Table 1: Spearman's rho correlation coefficients for disturbance caused by sound sources (*p<0.05, **p<0.01).

Loss of concentration caused by the sound environment is self-rated by the participants. They were asked to respond to the statement of "Sound environment of this study area does not disturb my concentration" from "1= Strongly disagree" to "5=Strongly agree". Their response to this statement is correlated with disturbance caused by each sound source (Table 1). Moderate positive association is found between the perceived loudness and self-rated concentration (r(120)=0.472, p< 0.01). Possible reasons why this relation is not stronger will be discussed in the discussion chapter. Similarly with the satisfaction, highest correlations are observed for unintelligible speech, laughing sound, and intelligible speech. However, this time unintelligible speech has the highest correlation coefficient (r(120)=0.538, p< 0.01), and having

moderate positive association. This indicates that self-rated concentration increases as participants get less disturbed by the unintelligible speech.

3.3 COPING METHODS

During the pilot study, students were asked what they do when they are unsatisfied with the sound environment. Based on their responses, five coping methods were identified. These methods are, putting on earphones (to listen to music, etc.), moving to a quieter place, leaving the study area, intervening to the sound source, and not doing anything at all. Afterwards, as part of the questionnaire survey participants were again asked to choose from “1= strongly disagree” and “5= strongly agree” for each condition.

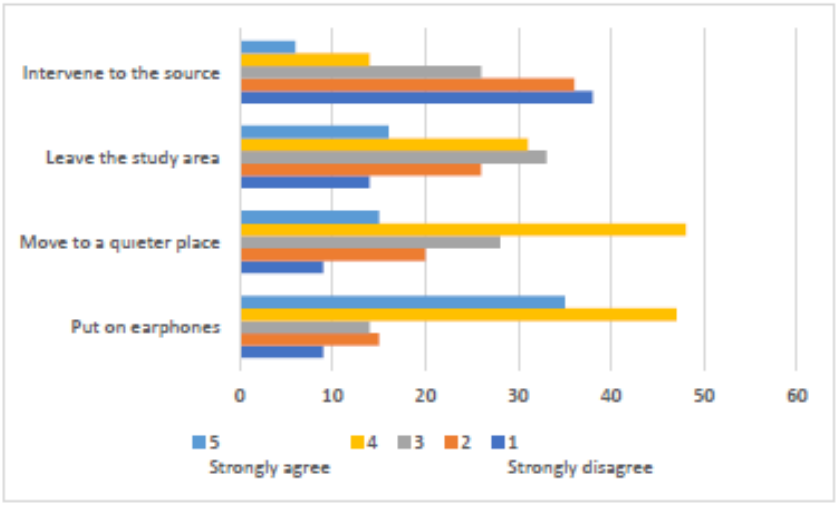

Figure 5 - Coping methods employed by the participants

As seen in Figure 4, majority of the students stated that they would put on earphones (39.2% agree, 29,2% strongly agree). Another common method of coping is relocating to a quieter place within the area (40% agree, 12.5% strongly agree). Leaving the study area is another common method, with 25.8% agreeing and 13.3% strongly agreeing. In contrast, intervening to the sound source is absolutely not favoured among the participants with 31.7% strongly disagreeing and 30% disagreeing.

4 DISCUSSION

This study investigated the sound environment of four public study areas found within the Bilkent University Campus. The study areas are compared in terms of overall satisfaction, perceived loudness and satisfaction with the sound environment. In-situ measurements of the LAeq are also conducted. The statistical comparison of perceived loudness and satisfaction with the sound environment showed no difference between study areas, even though there are differences between the spaces in terms of sound levels. Only difference is observed for the overall satisfaction in two of the study areas.

The most frequently heard and disturbing sounds are all caused by human activities such as, laughing, walking, intelligible and unintelligible speech. When these are compared with satisfaction with the sound environment, results indicated moderate associations. Same activities also caused moderate effect on self-rated concentration. When exposed to negative or dissatisfying sound environment, the most common coping method is found to be putting on earphones.

One of the issues that came up during the research is regarding the fountain in the SA building. As the other three study areas do not a water element, the descriptive statistics regarding the water sound is very limited. Although, according to the ANOVA F-test results there is no difference between the SA building and the other study areas in terms of overall satisfaction, perceived loudness and satisfaction with the sound environment.

An interesting finding is related with the loudest (Library) and the quietest (77th dormitory) study areas. Even though the inferential statistics found a difference between this areas, this difference is not regarding the satisfaction with the sound environment or with the perceived loudness but with the overall satisfaction. The in-situ measurements also found average of 14 dB(A) LAeq difference between these two study areas. These findings support those found within the literature. It is clearly seen that sound energy alone is not enough to make a judgement about the perception of soundscape (Brown, et. al., 2011)

Even though the option of “leaving the study area” is stated as a coping method during the pilot study, it should not be considered as an actual method of coping with the soundscape. As the setting is an indoor space when you leave the area you also leave that sound environment. Thus, it is more like not coping with the unsatisfying sound environment.

The option of intervening the sound source is spread into two types of intervention. First one is to verbally intervene a human generated sound (such as laughing). Other option is to physically intervening a non-human sound source, such as the sound of the ventilation system or the coffee machine. One of the reasons why this option is strongly opposed by the participants is that it is not always possible to actually intervene the source. This could either be due to practical or social concerns.

Putting on ear phones, the most commonly accepted coping method, raises some issues. Earphones cause an isolation from the sound environment. It was even mentioned by a number of participants (even written on the questionnaire) that they do not have too much to say about the sound environment as they use earphones almost the whole duration of their study period. This situation can possible be the reason of relatively low strength of association between the self-rated concentration and perceived loudness ($r(120)=0.472$, $p< 0.01$). If the sound environment is loud, students put on earphones during concentration demanding tasks. Thus, loudness does not effect their concentration as much as it should. During the survey, it was observed that earphones are most commonly used during individual study. Those engaging in a collaborative study do not use earphones and as it was also indicated by the literature do not easily get distracted by loud sound environments with exception of peak sounds (Bryant et al., 2009).

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ID 1412 | ARTS AND CULTURE STRATEGIES FOR ACTIVATING NEIGHBOURHOOD PUBLIC SPACES: BRINGING ARTS TO THE HEARTLANDS OF SINGAPORE

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1 INTRODUCTION

In 2011, the National Arts Council (NAC) Singapore started an initiative of establishing the 'Community Arts and Culture Nodes' in Singapore's heartlands that extend beyond the traditional art venues, such as museums, art galleries or theatres to incorporate various public spaces and facilities. The objectives of this initiative are to provide greater access to arts through regular quality arts programmes in the local housing neighbourhoods, to activate neighbourhood public spaces through arts and culture and to increase the opportunities for social interaction and community bonding. 25 of such nodes are envisioned to be established island-wide by 2025.

With reference to 'Community Arts and Culture Nodes' strategy, this paper discusses the capacities of five Singaporean neighbourhoods to create culturally rich and vibrant environments through unique art experiences and participation opportunities for the local residents. The key focus is the neighbourhood spatial opportunity analysis that involves mapping and assessing available neighbourhood spaces, their characteristics, strengths and weaknesses, as well as the symbiotic relationship between the quality and capacity of space design and programming in relation to arts and culture events and activities. The process and findings of neighbourhood analysis provide a guide for choosing the most suitable spaces for the arts as well as the strategies to activate community spaces through arts and culture activities.

1.1 WHAT CAN ARTS DO FOR SPACE AND COMMUNITY? - ARTS AND PLACEMAKING

The concept of placemaking has emerged as a response to the systematic destruction of human-friendly and community-centric spaces of the early 20th century. In a reaction to top-down planning, scholars and urban sociologists, since 1960s, began questioning how public space was appropriated (and by whom) and for what it was used (Gehl, 2010; Stern and Pray, 2014; Whyte, 1980). According to Silberg and colleagues (2013), the practice of placemaking concerns the deliberate shaping of an environment to facilitate social interaction, improve community's quality of life, increase public engagement, boost civic pride and empower urban dwellers. In this view, public arts, which is defined as all work of art that is displayed or performed in the public realm, including community arts (Artscape, 2016a; Cartiere and Willis, 2008), is considered a particularly fruitful means of placemaking.

Art can be a powerful medium that informs our imagery of an area and this power to literally produce places is used differently in different geographical, economic and cultural contexts. Arts and culture strategies help to reveal and enhance the underlying identity, value and character of the physical and social form of a community (Soule et al., 2016).

1.2 WHAT CAN SPACE DO FOR THE ARTS? - CULTURAL ECOLOGY

According to Gehl (1987), the overall physical quality of urban space influences the type, nature, mode and frequency of activities occurring in that space. While for the 'necessary' activities (such as going to school or a bus stop, for instance), the design quality of space would not influence the use significantly, for 'optional' and 'social' activities (such as reading, resting or family gathering, for instance), well-designed conducive environment is often critical. The premise is that, since arts and cultural activities belong to optional or social activities, the design quality of urban space would be of great importance.

For the arts to make a significant difference in an urban neighbourhood, one needs to consider its entire cultural ecology rather than focusing on individual assets (Stern and Pray, 2014). An arts ecosystem refers to all 'hard' and 'soft' resources. 'Hard' infrastructure includes not only arts-related facilities, such as studios, exhibition halls or galleries, but also function rooms, workspaces, cafés, commercial spaces, streets and public spaces that provide critical social and economic spaces for interaction, production and promotion of arts activities (Artscape, 2016b; GovHK, 2015). These can be classified as: (a) arts-related spaces - spaces for performance and exhibition (art consumption); spaces for education and training (rehearsal); and spaces for arts production; and (b) supporting infrastructure - various public amenities; and good public space and spaces for interaction. These spaces, each infused with a mix of uses, meanings and experiences, play multiple roles as places of inspiration, connectivity and expression that make up the creative urban fabric.

'Soft' infrastructure refers to a blend of community, educational, recreational, cultural, entrepreneurial and entertainment institutions and non-profit organisations, their associated stakeholders (interest groups, cultural producers, artists, entrepreneurs and residents) and the formal and informal networks formed between them (Stern and Pray, 2014). Committed supporters, including fellow artists, local businesses, audiences, community groups, volunteers, residents' associations and politicians, are also essential for a successful and sustainable cultural scene. The concept of cultural ecology is, thus, particularly useful for understanding how to leverage the potential of clustering of creative resources and activities within an area. The presence of creative and cultural sector workers and businesses in a neighbourhood results in face-to-face networking and social exchange, which further facilitates collaboration, finding of markets and suppliers and cross-fertilisation between various stakeholders (Artscape, 2016b). The amount of informal arts activity in the neighbourhood significantly correlates to its stability and improvement and provides evidence of 'magnetisation' of the area (Taylor, 2008). The idea that neighbourhoods can be "magnetised" by participatory arts practices is powerful, and it appeals to civic leaders.

Therefore, to fully benefit from the presence of arts and culture in local communities, it is necessary to foster an environment that allows for exposure to the arts in many ways. In that sense, different publicly accessible spaces in a neighbourhood can serve the multiple spatial needs of cultural ecology.

1.3 ARTS AND CULTURE INITIATIVES IN SINGAPORE

According to the most recent 'National population survey on the arts' (2015), the number of Singaporeans expressing an overall interest in the arts has significantly increased since 2005. Moreover, both arts attendance and participation experienced their peaks in 2015. The survey also reveals that Singaporeans tend to attend art events and activities mainly because they find them enjoyable and as venues for spending time with others. Such positive findings might be related to recent trends in Singapore's arts and culture initiatives that reveal stronger intention to activate the neighbourhood spaces for better accessibility to arts within the community and encourage social interaction through arts. Such trends also align with the recent shift in Singapore's cultural context from focusing on the 'hardware' of art and culture to the 'heartware' through more community focused policies and programmes. Since 2010, the government has implemented the 'Framework for Arts Spaces' to support the changing needs of a growing and increasingly diverse arts sector, provide platforms where artists and arts groups can collaborate with each other and to

bring arts to the surrounding communities (NAC, 2016). The framework offers artists and arts groups a variety of accessible space options to practice, display and interact, as well as numerous financial incentive schemes.

In 2012, the 'Arts and Culture Strategic Review' (ACSR) was launched to chart a course for Singapore's cultural development till 2025. Since then, various community arts and cultural initiatives and programmes have been conducted intensively. The People's Association (PA) launched the 'PAssionArts Movement' in 2012, with an aim to energise neighbourhoods across Singapore by carving out spaces for collaborations between professional artists, community talents and grassroots organisations. It also enables the residents to volunteer and actively contribute towards developing the arts in their community.

Also under ACSR, the NAC initiated the 'Community Arts and Culture Nodes' strategy to create a network of arts touch-points for the residents at their neighbourhoods, with regular activities and events occurring throughout the year. In order to sustain this initiative, NAC has partnered with various neighbourhood institutions, as well as non-profit organisations, and created a network of nodes at 3 levels, namely: regional nodes, neighbourhood nodes (in partnership with Community Clubs, Libraries and SAFRA Clubs) and street level pocket nodes, which incorporate more informal venues for the arts, such as various public spaces in the neighbourhood. Not only does this approach bring more vibrancy to the arts and culture sector in the neighbourhoods, but also creates more diverse experiences and opportunities for the local communities to enjoy arts on a regular basis.

2 APPROACH AND METHODOLOGY – NEIGHBOURHOOD SPATIAL OPPORTUNITY ANALYSIS

Five nodes and their surrounding neighbourhoods (areas of 400m radius around the node) were selected for case study analyses of spatial opportunities for arts and culture venues. Community arts and culture node partners are all different in nature, with their specific visions, target audiences and spatial capacities, ranging from indoor spaces within nodes' premises to public spaces within the neighbourhood.

Case study 1: Kallang CC (Community Club) is one of the oldest neighbourhood nodes whose main target audiences are families with children and senior citizens. It organises regular events on a monthly, quarterly and yearly basis. Besides its own premises offering an indoor multi-purpose hall, open courtyard and smaller indoor facilities, this node also extensively utilises various public spaces in the neighbourhood, such as Boon Keng Plaza next to the subway station or a nearby mall street (Figure 1). The CC is a home to several local artists and arts interest groups who programme in the neighbourhood as well as across the island.

Figure 1 - Arts Venues at Kallang: CC Courtyard (left) and Boon Keng Plaza (right) (Source: by authors)

Case study 2: Woodlands Regional Library (WRL) has been a node partner since 2013 catering mainly to families with children and young adults. With a strong focus on the performing arts and workshops, WRL has established a 'Monthly Music Series' called 'RE:SOUND' and 'Art Fresco Theatre Club' for children. Various spaces inside the library are used as venues for arts events, such as an auditorium, programme zone, functions rooms and exhibition spaces (Figure 2).

Figure 2 - Arts Venues at WRL: Auditorium (left) and Programme Zone (right) (Source: by authors)

Case study 3: Singapore Armed Forces Reservists' Association (SAFRA) is a club for national servicemen and their families. Traditionally known for sports activities, SAFRA Jurong has recently embraced the arts programme termed 'ARTS@SAFRA' and started organising various art events on quarterly basis at the entrance atrium as well as other rooms within the club (Figure 3, left).

Case study 4: Tanglin Halt (Block 88), Queenstown is a one of the first street-level 'pocket' spaces initiated to develop Queenstown as a neighbourhood node, partnered with My Community, which is a non-profit organisation, whose aim is to showcase the diversity of intangible cultural heritage of the neighbourhood and to provide a sustainable platform for budding local artists. Music, theatre plays, traditional local arts, visual and literary arts, are some of the art events organised within the neighbourhood, the majority of which are held at a sheltered public space at Tanglin Halt (Block 88) next to the subway station, supermarket and a foodcourt, an area with high pedestrian traffic (Figure 3, middle).

Case study 5: Bedok Town Square is another 'pocket' node space in which NAC organises art events, yet without a regular partner. Located at the town centre, which contains a shopping mall, integrated public transport hub and a hawker centre, this recently built large sheltered plaza with high pedestrian traffic, serves as a space for community events and gatherings (Figure 3, right).

Figure 3 - Arts Venues at SAFRA Jurong: entrance atrium (left); My Community, Queenstown: Tanglin Halt open space (middle); Bedok Town Square: sheltered plaza (right) (Source: by authors)

The neighbourhood spatial opportunity analysis consisted of three main steps.

Step 1: Literature Review – Research Framework Development. A set of criteria was derived from literature review concerning attributes of good public space as well as features that contribute towards favourable venues for the arts. Good public space, a pre-requisite for an optional activity such as arts participation, is understood to possess a combination of physical attributes and socio-perceptual qualities (Cho et al., 2016). In addition, walk-through interviews with key community members, who have experience with organising events in the neighbourhood and have detailed knowledge of the community and spaces, were conducted. The intention was to gather qualitative data from the ground and to validate and refine the criteria distilled from the literature. The result is a framework for the evaluation of neighbourhood spaces in reference to their suitability for arts and culture events and activities.

Step 2: Primary Data Collection – On-site Investigation. All publicly accessible spaces in the neighbourhood were identified. A series of observational methods including visual ethnography and on-site observation of activities were carried out to evaluate these spaces against the criteria derived in Step 1.

Step 3: Data Analysis and Synthesis – Map Overlay Technique. The primary method of gathering and analysing collected data is visual mapping. The maps, indicating the presence or fulfilment of the criteria set by the framework, are then overlapped to reveal neighbourhood spaces with conditions that are the most conducive for holding arts and culture events or conducting arts-related activities. Map overlaying proved to be a fruitful means for filtering or distilling the most suitable spaces in the neighbourhood for arts and culture. Such filters, however, should not be taken as prescriptive, but rather indicative.

2.1 FRAMEWORK FOR NEIGHBOURHOOD SPACE EVALUATION IN REFERENCE TO ARTS AND CULTURE

The overall aspects mapped and evaluated form the framework for identifying neighbourhood spatial opportunities, which includes: Filter 1 - general spatial conditions; Filter 2 - locational aspects (intensity of pedestrian movement and stationary activities); and Filter 3 - criteria for good public space and suitability for art and culture events (Figure 4).

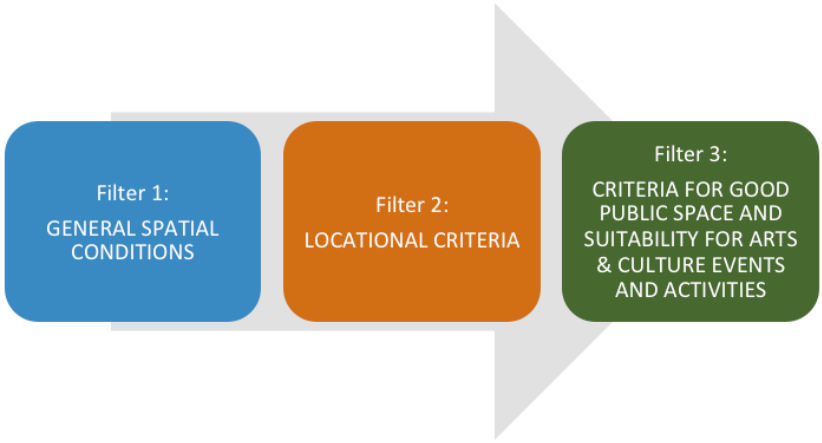

Figure 4 - Framework for Identifying Neighbourhood Spatial Opportunities (Source: by authors)

2.1.1 FILTER 1: GENERAL SPATIAL CONDITIONS

General spatial properties, including scale, shape, enclosure level and type of floor surface, describe the basic pre-conditions of neighbourhood spaces to become arts and culture events venues (Table 1).

Scale. The scale of the space (categorised into S, M, L, XL and XXL) is determined by the number of audience it can accommodate. In general, the larger the space, the more people it can accommodate and, therefore, the more desirable it is as a venue for big art events. However, large venues pose some challenges. There is a maximum distance at which the performers are visible to the audience, beyond which the connection between the two is lost. While crowds attract crowds, the opposite is also true; large spaces might make the audience seem scarce, discouraging new audience from joining the event. The largest spaces, more often than not, tend to be unsheltered or unpaved, which makes the logistics required to host events there more extensive than in smaller venues. Finally, some art activities demand smaller and more intimate venues.

FILTER 1: GENERAL SPATIAL CONDITIONS	
SCALE	S - Small: up to 200 m^2 M - Medium: 200-500 m^2 L - Large: 500-1000 m^2 XL: 1000-5000 m^2 XXL: larger than 5000 m^2
SHAPE	Linear Compact Fluid/Hybrid
LEVEL OF ENCLOSURE	Open Covered Enclosed
GROUND SURFACE	Paved Unpaved

Table 1 - Filter 1: General Spatial Conditions

Shape. Spaces can be classified as linear, compact and fluid/hybrid according to their shape. While linear spaces may be favourable for certain kinds of art interventions, the majority of arts events benefit from being held in a compact space with good sightlines towards the performance.

Level of enclosure. In terms of exposure to weather conditions (sun and rain), spaces are categorised into open, covered and enclosed. Arguably, the enclosed spaces, like classrooms or auditoriums, offer the best environment since they allow control over background noise and weather conditions. However, such spaces are often less accessible to incidental audience than open public spaces.

Ground surface. Paved surfaces (hardscape) are considered more preferable than unpaved ones (softscape) as they offer a more rigid surface to place seating and equipment, better acoustic conditions, and easier maintenance (among other benefits). In Singapore, the possibility of it raining is high throughout the year after which, unpaved ground can get slushy and inaccessible without additional flooring provisions.

The process of overlaying layers mapped in Filter 1 in the Kallang neighbourhood is shown in Figure 5. Darker areas indicate spaces of greater suitability for the arts and culture venues.

2.1.2 FILTER 2: LOCATIONAL CRITERIA - INTENSITY OF PEDESTRIAN MOVEMENT AND STATIONARY ACTIVITIES

While physical characteristics, without a doubt, contribute to quality and identity of a space, good public space is also a function of its users and the activities it accommodates. From the point of view of community arts engagement, sites adjacent to major movement paths have the most exposure to potential incidental audience. Moreover, according to Whyte (1980), a high proportion of people in groups for social or optional activities (those who are using the space out of choice rather than necessity) can be seen as an indicator of ‘selectivity’ and vibrancy. This step, therefore, involves evaluation of neighbourhood spaces in terms of both their proximity to the frequently used circulation paths within the neighbourhood and the number of people engaging in stationary activities within them (Table 2).

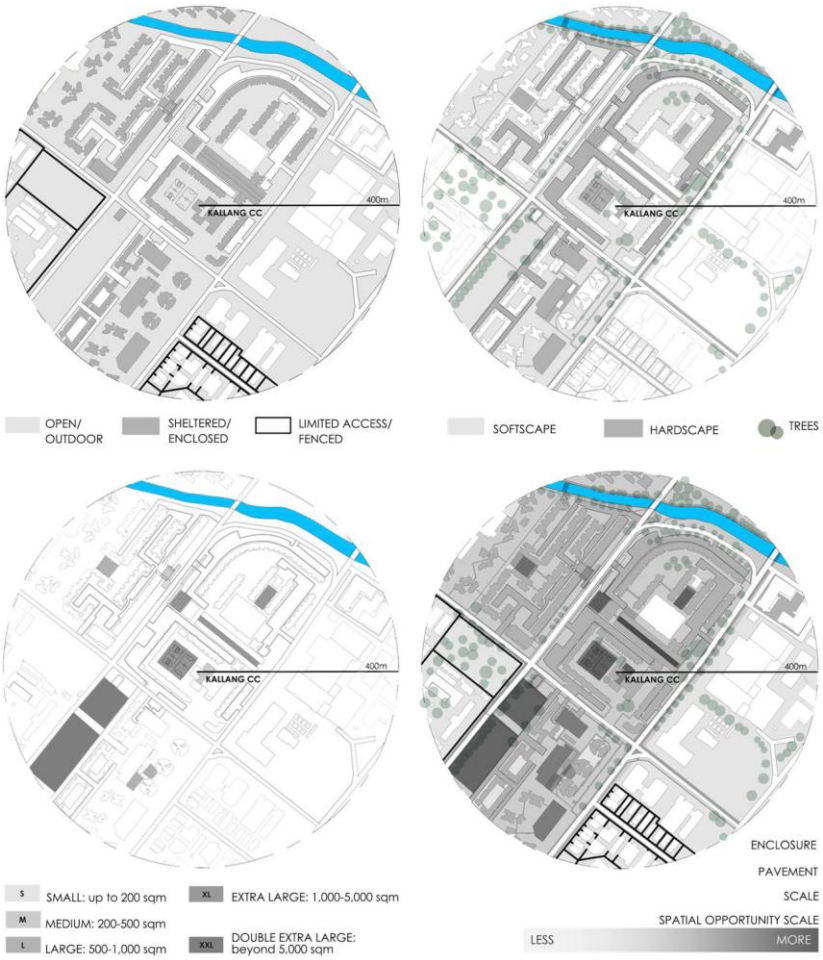

Figure 5 - Filter 1: Mapping of neighbourhood spaces around Kallang CC node according to Levels of Enclosure (top left); Types of Ground Surfaces (top right); Scale (bottom left); and Overlaying of all layers in Filter 1 (bottom right) (Source: by authors)

FILTER 2: LOCATIONAL CRITERIA
Intensity of pedestrian movement – proximity to most frequented pedestrian movement paths
Intensity of pedestrian stationary activities – proximity to well-used spaces

Table 2 - Filter 2: Locational Criteria

Tracing moving patterns and people counting. Groups of pedestrians were discreetly followed from points of origin such as the train stations and the housing blocks to identify the most highly used routes through the neighbourhood. The hierarchy of movement paths, identified by tracing, was then verified by counting the number of people passing by carefully selected points of observation across the neighbourhood. Counting was done for two minutes at each observation point at three different times of the day as well as during one weekday and one weekend day. The pedestrian routes were then traced on the maps using different thicknesses of lines to indicate relative volume of transient usage.

Presence and type of stationary activities. In this step, stationary activities occurring in and around each observation point were noted down to understand whether the space was used for necessary, social or optional activities. The number of people within each observed space is indicated on the map. The size of circles is proportionate to the total number of space users involved in both stationary and transient activities.

The process of overlaying layers mapped in Filter 2 in the Kallang neighbourhood is illustrated in Figures 6.

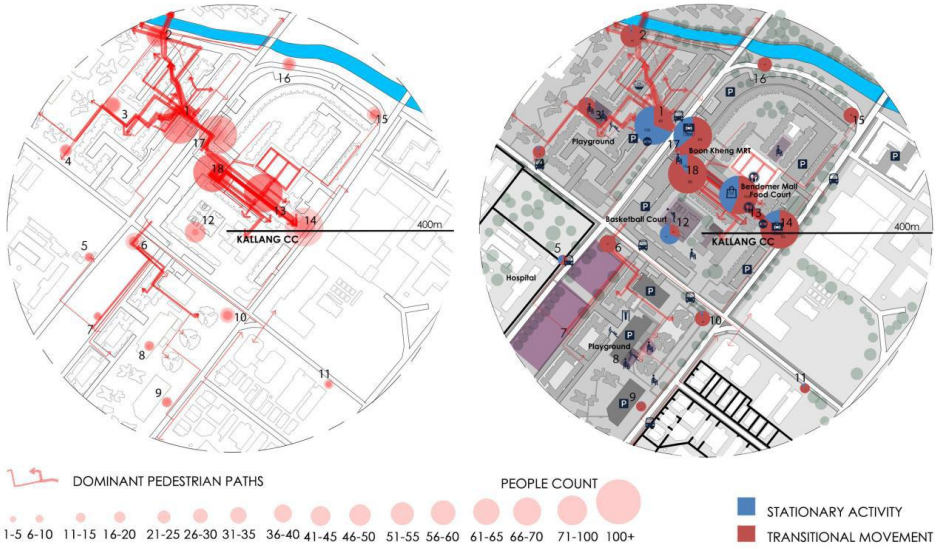

Figure 6 – Filter 2: Mapping of Pedestrian Movement Patterns and Stationary Activities (left) and Overlaying with shortlisted spaces in Filter 1 (right) in the Kallang CC neighbourhood (Source: by authors)

By super-imposing maps in Filter 1 and Filter 2, four main categories of neighbourhood spaces emerged, namely: (A) spaces next to major pedestrian movement paths and stationary activity; (B) spaces away from movement paths but contain stationary activity; (C) spaces next to major pedestrian movement paths but without stationary activity; and (D) spaces away from both movement paths and stationary activity (Figure 7). These categories provide an indication of how an arts and culture event might synergise with the space and available amenities. This will further be elaborated on in the conclusion.

Figure 7 - Examples of categories of neighbourhood spaces: (from left to right) Category A - Bedok Town Square, sheltered plaza next to the subway station and a shopping mall; Category B - Space adjacent to food court, badminton court and a green open space in Woodlands; Category C - Paved open space between the housing blocks in Woodlands, next to a frequently used covered walkway; and Category D – An empty underused amphitheatre in Bedok

2.1.3 FILTER 3: CRITERIA FOR GOOD PUBLIC SPACE AND SUITABILITY FOR ARTS AND CULTURE EVENTS AND ACTIVITIES

In this final stage, all shortlisted spaces (resulting from Filter 1 and Filter 2) are evaluated against an extensive list of criteria for good public space and suitability for arts and culture events (Table 3). Different types of art events have different requirements and this detailed evaluation of spaces is meant to act as a guide to indicate which types of events the venue is most suited for. These criteria are classified under ‘hardware’ (design values) and ‘software’ (programming and socio-perceptual values). Under ‘hardware’, we evaluate the physical qualities of the space, such as accessibility, flexibility and configuration, which contribute to making it good and suitable as an art and culture venue. In general, ‘software’ relates to programming and social value of urban space and focuses on the relationship between people and the space with issues related to diversity of uses, choice of activities, seating amenities, interactivity and privacy, as well as ambience/image, to name some.

The outcome of Filter 3 is a detailed evaluation that can help organisers to understand the specific strengths and weaknesses of each space and synergise it with the requirements of a particular art

program. For example, the Tanglin Halt Node satisfies many of the Filter 3 criteria. It also has a variety of adjacent activities that are synergetic with the art venue. Namely, it is located between a food court and a supermarket, both of which are essential amenities that are well used by the local residents on regular basis (Figure 8). The food court has an indoor seating area where the audience can have dinner before the performance and also an outdoor area which serves as an extension of the event area from where people can watch the performance while they eat. The challenge of the space is that its favourable location creates competition for use.

In the case of the events organised by the Kallang CC, the challenge of the open air venue is that if it is raining at the time of the event and a temporary shelter is not put up, the stage has to be moved from the plaza to the shelter of the subway station (Figure 9). This also demonstrates the strengths of the node - both in the ability of the node partner to make timely decisions and manage the logistics required for such a change, and in the flexibility that the venue allows to accommodate such a change.

FILTER 3: CRITERIA FOR GOOD PUBLIC SPACE & SUITABILITY FOR ARTS AND CULTURE EVENTS AND ACTIVITIES	
HARDWARE – spatial design criteria	
ACCESSIBILITY	Is the space visible from a distance? (Marcus and Francis, 1997; Project fo Public Spaces, 2009; Talen, 2011)
	Is its interior visible from the outside? (Carmona et al., 2010; Carr et al., 1992; Project for Public Spaces, 2009)
	Can people use a variety of transportation options to reach the place? (Project for Public Spaces, 2009; Urry, 2007)
	Does the space function for people with special needs? (Carmona et al., 2010; Levine, 2003; Project for Public Spaces, 2009; Shaftoe, 2008)
CONFIGURATION	Is the space free from columns and other obstructions? (Kallang CC Chairman, 2016)
LOCATION	Is the space adjacent to noise sensitive areas? (Kallang CC Chairman, 2016)
SUPPORTING INFRASTRUCTURE	Does the space have electrical points? (Cho et al., 2016)
	Does the space have adequate lighting? (Levine, 2003; Marcus and Francis, 1997; My Community, 2016)
	Does the space have public toilets? (My Community, 2016; Shaftoe, 2008)
SOFTWARE – use and socio perceptual criteria	
MULTI-FUNCTIONALITY	Is the space multi-functional i.e. do multiple uses and activities happen in the space? (Evans, 2001)
SOCIABILITY	Are there opportunities to talk and listen? (Project for Public Spaces, 2009)
	Is the space used by people of different ages? (Project for Public Spaces, 2009)
	Are people in groups? (Project for Public Spaces, 2009; Whyte, 1980)
	Are there places to sit and stay? (Project for Public Spaces, 2009)
	Are there choices of things to do? (Carmona et al., 2010; Gehl, 2010; Project for Public Spaces, 2009)
IMAGE	Does the space make a good first impression? (Project for Public Spaces, 2009)
	Is the space clean and free from litter? (Cho et al., 2016)

Table 3 - Filter 3: Criteria for Good Public Space and Suitability for Arts and Culture

Figure 8 - Supermarket and Food Court adjacent to Tanglin Halt (Queenstown) node (Source: by authors)

Figure 9 - Stage and performers moved from the original location at the unsheltered plaza (left) to an adjacent sheltered space next to the subway station (right) (Source: by authors)

3 DISCUSSION

In reference to four main categories of neighbourhood spaces identified through spatial opportunity analysis, certain strategies to activate urban spaces can be discussed. The discussion of the preliminary findings is framed by the three key question posed in this study: (1) What can space do for arts?; (2) What can arts do for space?; and (3) What can arts and space do for the community?

3.1 WHAT CAN SPACE DO FOR THE ARTS?

Spaces close to movement paths and containing stationary activity (Category A) provide greater access to the arts at the neighbourhood level. These spaces generally have the highest number of users in the neighbourhood and are situated near subway stations, town centres or other major amenities, like food courts and shopping centers. They are the most favourable venues in the neighbourhood in terms of greater exposure of the arts and culture activities and, therefore, suitable for diversifying and broadening the audience for the arts (McCarthy and Jinnet, 2001). However, the challenge of these spaces is that they are often designated for commercial activities that also benefit from the high pedestrian traffic, resulting in an intense competition between different users. Moreover, these are also spaces used to perform necessary activities and may not be designed to encourage people to linger. As a result, they can also be over-crowded and noisy, which may not necessarily provide the most conducive atmosphere to enjoy certain types of arts and culture events and activities.

Spaces that are not adjacent to major movement paths but contain stationary activity (Category B) in Singapore's housing precincts are numerous. They are community gathering spaces, such as schools, Community Clubs (CCs), basketball courts, hawker centres, playgrounds or simply green lawns. These spaces often function as gathering places for residents with limited mobility, such as mothers and maids with young children and the elderly and can act as ideal venues for art and culture activities and performances. Art activity can be introduced into these spaces to further foster social bonding between residents and deepen arts engagement.

3.2 WHAT CAN THE ARTS DO FOR SPACE?

There are also spaces near movement paths but without stationary activity (Category C), such as void decks, pavilions and covered linkways. These spaces are frequently passed-by by the residents, but since they are not next to amenities, almost nothing encourages people to stay there for a little while. Performing arts can capitalise on the potential audience in these spaces while simultaneously magnetising and enlivening them with a sense of fun (Taylor, 2008).

Performing arts can also be used to test out possibilities in underutilised spaces that are away from both movement patterns and amenities (Category D), so-called "white elephants", such as amphitheatres and roofs of car parks, for instance. In fact, many of these spaces often provide very conducive environment for art events. Through temporary alterations of aesthetics or programming to set the stage for an event,

arts can help to test out or discover various ideas which could lead to permanent improvements being made to the space. Finally, there are also spaces, such as ground car parks or school amenities that may be only temporarily available or less accessible, but can also be considered for re-use and holding occasional arts and culture events.

4 CONCLUSIONS - WHAT CAN ARTS AND SPACE DO FOR COMMUNITY, AND VICE VERSA?

Social interactions between people in the neighbourhood public spaces are likely to be of greater depth than those in city centres as places in residential streets are accessed by a limited number of people (Whyte, 1988). This indicates the greater potential of neighbourhood spaces to sustain or form social interactions between audience at art and culture events than public spaces in city centres. Arts and culture events magnetise by creating shared experience and therefore encourage people to spend more time in a space, increasing the exposure of neighbours to one another and providing more opportunities for them to progress along the stages of 'neighbouring', namely: familiarization with strangers (passive face-to-face contact), mutual recognition, shared experience, further interaction and friendship (Grannis, 2009).

Moreover, arts can encourage community participation and volunteerism, which are critical for building sustainable, creative and resilient communities. The resources needed to organise frequent arts events at the neighbourhood level present a challenge that can be met with a stronger neighbourhood arts ecology. The involvement of professional artists can play a role in the transference of skills and mentorship to amateur neighbourhood performers in the form of workshops or participatory arts projects. The community arts and community interest groups, for instance, play an important role in the organisation and (return) audience building for the quality arts programs. In Kallang, for example, the organisers, professional artists, interest groups, volunteers and some audience members together support the quality/professional art programmes. The ecology of a continuous community art practice in the Kallang neighbourhood is crucial to sustaining the organisation of the quality arts performances (Figure 10).

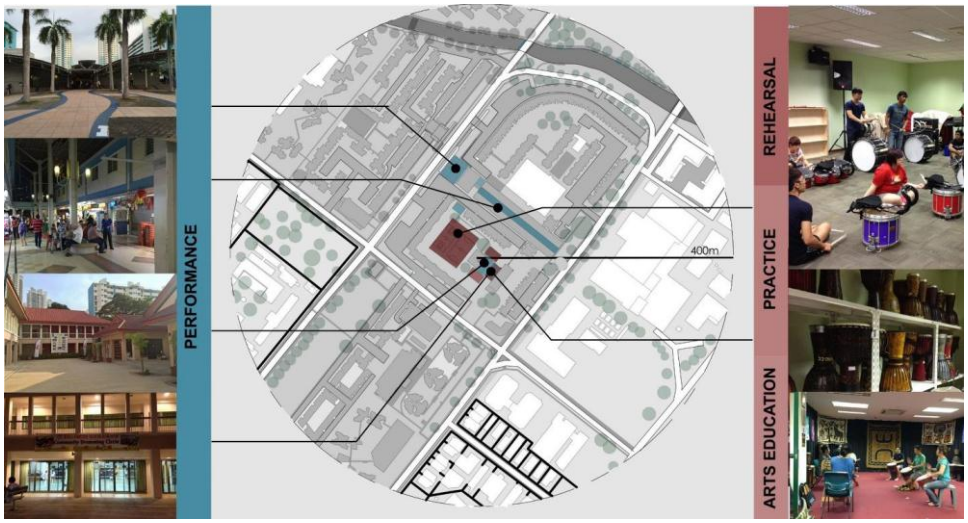

Figure 10 - Neighbourhood Arts Ecology for Community Arts in Kallang (Source: by authors)

Community art, public space and cultural facilities together help in building community cohesion. In other to achieve this, among other factors, it is important to: understand the neighbourhood and the community and all its material and human resources and skills (community assets); provide adequate infrastructure and programming to boost vibrant neighbourhoods (formal and informal arts and culture venues - arts ecology); empower the community to take an active creative initiative (community engagement, ground-up initiatives and volunteerism); and develop collective community vision and partner network.

Cultural planning is a process that inevitably begins with identifying the key goals and strategies, including both overall (common) and specific goals set by each arts and culture node (together with NAC and local community). The choice of spaces for holding arts and culture events and activities in the neighbourhood

would depend on the establishment of such goals and strategies. Accordingly, the filtering process explained in this paper serves primarily to assist in decision making, rather than being a prescriptive tool. With the guide for choosing and activating spaces (and communities) in the neighbourhood, this study hopes to contribute to the establishment of a vibrant neighbourhood cultural ecology with an aim to bring the arts into individual's everyday lives, boost a stronger sense of neighbourhood identity and attachment through arts, diversify, broaden and deepen arts and culture provision and engagement, and encourage stronger community bonding.

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ID 1422 | THE GATED COMMUNITY IN CHINA: ETHICS AND THE PATTERN OF SETTLEMENT

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1 INTRODUCTION

Recognized as a global phenomenon, the gated community has provoked heated discussions from various perspectives, including social, political, economic, anthropological, and geographical ones. Particularly due to the obvious spatial demarcation and social segregation embodied by the fortress-like forms, the social-spatial aftermath of gated community, has become the major focus of those multidisciplinary debates. Moreover in the practical world, despite the fact that the gated communities, have embraced unprecedented levels of prevalence, pervasion and variety, notably in China where such patterns have become the standard form of contemporary residential development and widely welcomed by all social classes and groups, it has been gradually noticed that the predominant gated communities in China have raised other public issues than social and spatial segregation, such as the greatly reduced land-use efficiency, the restricted transportation network and the negative impact on the well-being of public spaces (Huang and Feng, 2008; Wang, 2010; Wang, 2014). Under such circumstances, Chinese government has officially announced the reforms of the current urban residential wards in China by gradually removing the gates of the contemporary gated communities and “danwei” (work-unit compounds), which has inevitably provoked a variety of controversies (Liu, 2016).

As any materialization of place and locale as urban form is not a result of arbitrary architectural or planning interventions in the urban realm, but is fundamentally shaped by and embodies the deeper, more enduring social, political and cultural forces that emanate from the whole process of the urban development (Lefebvre and Smith, 1991). Therefore the paper will attempt to identify the significance and specificity of the social and historical context in Chinese cities that substantially resulted in the adapted gated communities in specific loci and to understand how ethics have influenced the pattern of residential settlement. Finally the paper will aim to suggest some pivotal elements that should be preserved in the face of housing reforms in China.

2 THE GATED RESIDENTIAL PATTERNS IN CHINA: ORIGIN AND EVOLUTION

The gated enclosure has been an ingrained feature of the urban residential pattern in China. Following a chronological sequence, the closed pattern has experienced two typical periods: the traditional walled residential wards and inward courtyards in the feudal monarchy; the “danwei” (work-unit compounds) in the socialist era and the contemporary gated community that have emerged since 1978. The section will review the traditional form of settlements in Chinese history in order to find out the historical origins of the contemporary gated community and the morphological characteristics inherited from the traditional enclosed forms.

2.1 THE FEUDAL MONARCH

With a rigidly hierarchical and controlled social structure, Chinese cities before the Song Dynasty (960-1279 AD) were physically characterized by walls and fortresses. The most typical model, Tang Chang’an (618-906 AD) is a walled city that has been divided into 108 “fang” (rectangular residential wards) and two designated markets by eleven north-south and fourteen east-west major streets (Heng, 1999). The residential quarters (fang) were fortified with earthen walls and within the quarter, there were organized courtyard dwellings and an internal road system (Dong, 2004).

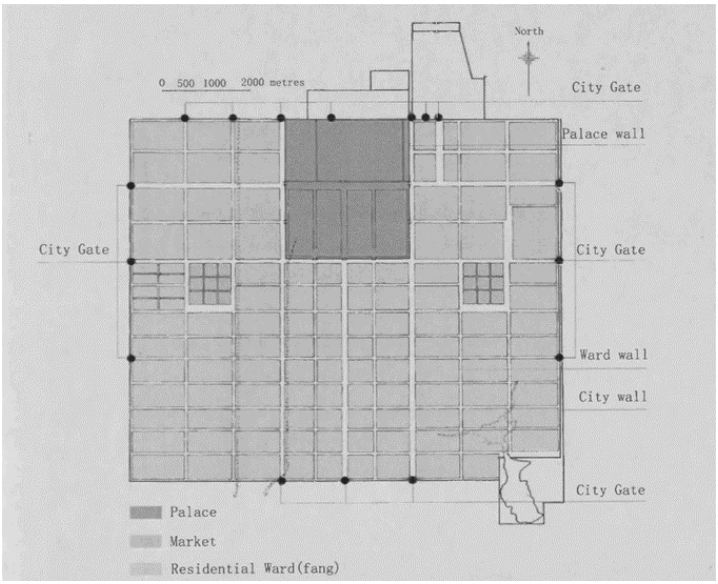

Figure 1 – “Li Fang” in Tang (Wei and Yao, 2012, p.2891)

Later in the Song Dynasty (960-1279 AD), the economic growth, facilitated by long-term social stability and the revolutionary improvement in agricultural technologies, became the decisive stimuli to overthrow the previous demarcated and restricted urban residential form (Heng, 1999). Despite the main street-block structure remained, the ward walls and the street encroachment have been demolished (Heng, 1999), which resulted in the emergence of ‘hutong’, a street connecting the dwelling units in ‘fang’ (Dong, 2004). Although it functioned a linear communal space providing a strong sense of community, the “hutong” was generally restricted to local inhabitants with a door and a nameplate at the gateway (Ibid).

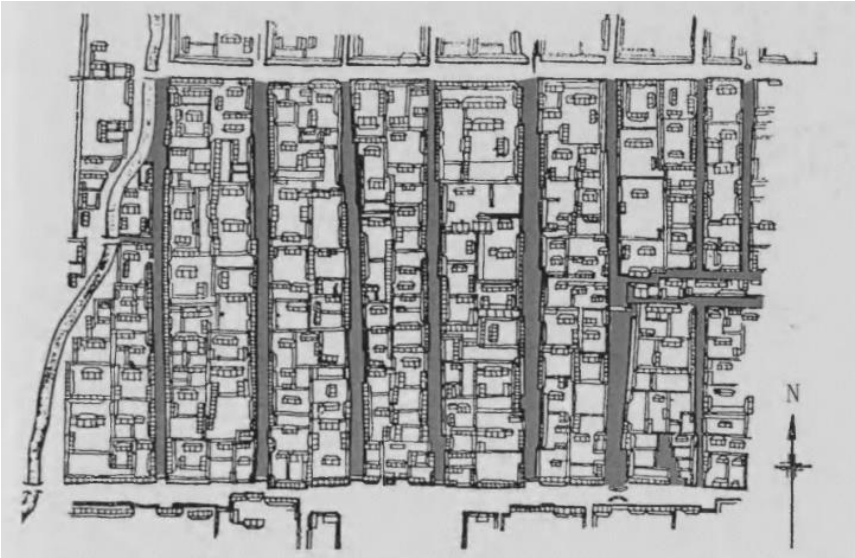

Figure 2 – “Fang Xiang” in Song (Wei and Yao, 2012, p.2891)

In all, notwithstanding the fact that streets (hutong) have become more accessible to passersby with the ward walls being dismantled, it were still the high blank walls rather than the dwellings that continuously and directly confronted the street (hutong). Hence, the residential pattern has still remained enclosed in the following feudal monarchies, with the walls as an elementary component in the reformed urban form to separate the private family space from the public urban environment.

Schulz (1985) has posed two fundamental aspects of the meaning of places which are identification and orientation respectively. Through identification of the surrounding environment, humans possess their social identities while orientation indicates the spatial organization which allows life to take place. Thereby residential forms have manifested the ideal living environment desired by a social or cultural group and revealed the social and cultural meaning behind these places (Rapoport, 1969). That is to say, traditional residential patterns have inevitably became a medium, through which to exhibit and Confucian ideologies and social structure in Chinese society. One of the core concept in the Confucianism is “Li” (propriety), which referred to an all-embracing system of defined ritual social behaviors (Lin, 1938). As was stated by Confucianism (Analects, 8.2),

“Respectfulness without the rules of propriety becomes laborious bustle; carefulness without the rules of propriety becomes timidity; boldness without the rules of propriety becomes insubordination; straightforwardness without the rules of propriety becomes rudeness……. It is by the rule of propriety that the character is established”.

Hence “Li” was codified as the main social grammar for Chinese people to direct them to the appropriate hierarchy of behaviors and interpersonal relationships to achieve a harmonious asocial order. As a result the hierarchical philosophies and ideologies of the Confucianism has impelled Chinese to highlight the spatial order in the residential pattern, which could be defined and maintained by the walled-enclosure. Moreover the elementary ideology of social interaction in Confucianism is “Xiao” (Filial Piety). From the Confucian perspective, there was a direct linkage between family and the nation, as was claimed that “when the family life is regulated, then the national life is orderly; and when the national life is orderly, then there is peace in this world” (Lin, 1938, p. 197). As a result, Chinese people were generally “family-minded” instead of “social-minded” (Lin, 1989, p. 172). In Confucian society, the primary concern was not the people’s obligations to the society but their loyalty to their families. Hence the enclosed multi-courtyard housing has somehow symbolized and strengthened the coherence of a family. Furthermore as was described in the proverb “Si Dai Tong Tang” (Four generations under one roof), the big Chinese family comprised of a long patrilineal line was traditionally accommodated in the multiple-courtyards housing compound (Huang, 2006). The rooted Confucian propriety (Li) believed that the best spatial organization of a house should not merely felicitously embody the hierarchical kinships between, but also maintain the individual privacy among family members. For instance, the segregation of gender was a considerable concern in Chinese family (Lin, 1989), as was regulated in the Book of Rite that “The men should not speak of what belongs to the inside (of the house), nor the women of what belongs to the outside…….

Things spoken inside should not go out, words spoken outside should not come in". Hence the High walls has restricted the access to the inside spaces for unmarried females to minimize the interaction between the inside and the outside. In this regard, according to Knapp (2000)'s description, a housing with a series of wall-enclosed courtyards was the best layout to apply the Confucian approach to resolve the tension separateness and togetherness, through a spatial sequence created by the transitions between individual spaces, the communal spaces shared by the family members and the outer society.

The traditional residential wards have universally exhibited three major morphological characteristics, namely the collective living pattern, the closed courtyard, and the gated enclosure. Moreover such long-existing gated tradition and collective and inward living patterns have been found to continuously play a significant role in urban settlements in China during the Socialist Era.

2.2 THE SOCIALIST AND POST-SOCIALIST ERA

Since the People's Republic of China was founded in 1949, China has stepped into the Socialist Era, during which the Chinese institutional economy and urban planning were significantly influenced by the former Soviet Union (Dong, 2004). However the urban residential patterns under Mao were far more than the replica of Soviet models with the distinctive Chinese invention of "danwei" (work-unit compound).

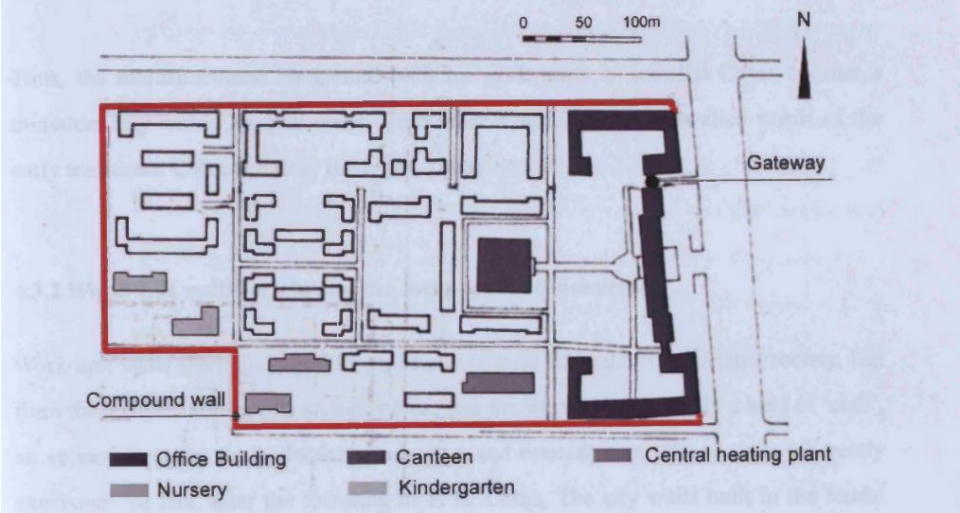

Figure 3 – Work-unit Compound (Hua, 2006, p. 45)

Unlike the spatial separation of residential districts and workplace in the Soviet models (Bater, 1980), the work-unit compound (danwei) in China resembled a miniature society which has endeavored to integrate working and living space in close territorial proximity with the provision of social services (Lu, 2005). Enclosed by overwhelmingly ubiquitous presence of walls and guarded gates, the work-unit compounds were merely open to the workers and their family members (Ibid).

At the end of the 1970s, cities in China have witnessed an overwhelmingly housing shortage and poor living condition (Wu, 2005). Hence a series of housing reforms programmes have been successively launched, in accordance with the reforms social market economy, to tackle the housing deficiency in 1980 (Fong, 1989; Wang and Murie, 1996), which hence resulted in a nationwide boom in commodity housing markets in the following decades (Chen and Gao, 1993; Wu, 1996 and 2005). Consequently, as the maintenance and management of commodity housing were taken over by specialized estate management companies, the enclosed residential developments became gradually pervasive in China by means of the reproduction of the exclusive feature of the "danwei", which exhibited a strong echo of the global phenomenon of the "gated community" (Wu, 2005).

After decades of reform, "gated community" has become the predominant residential pattern in China whereas previous work-unit compounds have still played an indispensable role in the urban housing sector (Ibid). However as was widely noticed by researchers in their survey on a variety of gated communities around the country, the contemporary gated community has witnessed distinction changes compared with

the work-unit compounds and the enclosed residential wards in the feudal age (Li and He, 2007; Wei and Yao, 2012; Wang, 2014)

Figure 4 – Gated Community Model: Central Garden (Li and He, 2007, p. 94)

Fundamentally, the size of enclosure has changed dramatically from the residential ward in Tang dynasty to the contemporary diversified gated communities. Starting from the residential area accommodating hundreds of households in the Tang dynasty which was strictly controlled by aristocratic power with depressed commercial activities, it has then shrank to the courtyard housing for one household per unit during Song dynasty with the rise of the mercantile society. Thereafter in Socialist era, the enclosure size increased in the work-unit compound which is like a large spatial entity encompassing workplace and residence for thousands of workers and their families with the provision of most supporting facilities and services. Finally like the palimpsests of successive layers of the growth of size over time, the contemporary gated communities have manifested a hierarchy of enclosure, with courtyard style buildings, enclosed in the “hutong” like residential groups and ultimately gated in a loose grid residential community which has significantly inherited the Soviet model of “super-block and wide-avenue”.

Figure 4 –Wall in “Hutong” (Author, 2015) | Figure 6 –Wall of “Cheng Nan Yi Jia” in Chengdu (Author, 2017)

Moreover, the boundaries had changed greatly that have been shaped by the monotony in aristocratic controlled feudal empires and diversified thereafter from the socialist time.

Despite the fact that the contemporary urban settlements are continuously featured by the traditional form of gated enclosure, these greatly varied elements have been identified to significatnly exacerbate the social, spatial segregation and even resulted in other urban issues (Huang and Feng, 2008; Wang, 2010; Wang, 2014).

3 THE CULTURE CONNOTATIONS OF GATED COMMUNITIES

The section will critically evaluate the cultural ideologies and values which have arguably resulted in this gated tradition and the identified spatial characteristics. Based on the study the section will attempt to explore how ethics have influenced and shaped the pattern of residential settlements in China's history.

3.1 THE CULTURE OF COURTYARD

One morphological characteristic is too vital to be ignored of contemporary gated communities is the gated open space which resulted from the obsession of introverted courtyards among Chinese. Such ingrained attachment to the introverted courtyard has arguably conformed to the willingness to pursue the ultimate nature-human harmony in Daoist philosophy and the interpersonal harmony from the Confucian perspectives.

3.1.1 DAOIST NATURE-HUMAN VIEWS

In the philosophy of Daoism, "yin" (negative) and "yang" (positive) are two basic components of the universe that should be integrated in perfect balance to create the ultimate harmony of the world (DAODEJING). Therefore, as buildings and structure were solid which have generally represented the force of "yang" (positive), an open space defined by walls and gates were seen as void and natural that form an enclosed courtyard space to complement the negative component in the gated community (Knapp, 2005). Hence the movement between buildings and the courtyard was deemed as the interaction between "yin" and "yang" (Du, 2004).

Furthermore, From the Daoist perspective, the courtyard was deemed as the pivot between the heaven and the world, the nature and human, the void and the entity. (Zhou and Yang, 1998). Hence, Chinese people tended to situate their dwellings inside the enclosed courtyard, with a manmade garden in order to communicate with nature (Knapp, 2005). In this way, humans could indeed sense the order of nature and realize the harmony with nature in their courtyard, and finally achieve the ultimate dream of "Tian Ren He Yi" (unity of the heaven and human beings). As was described by Hu (2008), "When a resident stood in his courtyard, as if he stood in the universe, he could be in touch with the sun, fresh air, winds, rainwater, his family, and even his gods" (p. 359).

3.1.2 CONFUCIAN "YUE"

Another essential concept in the Confucianism is "Yue" (music). As was stated by Confucianism, ""Yue" is (an echo of) the harmony between heaven and earth; "Li" reflect the orderly distinctions (in the operations of) heaven and earth" (Confucius,). Hence, in terms of the social relationships among Chinese. "Li" restrained people's behavior to maintain the social order while "Yue" focused on the emotional communications and interactions between people to facilitate the harmony of the society. Therefore, as the medium between the private and the public realm, the courtyard on the one hand has enhanced the interactions between local residents and emphasized the engagement in the collective life (Gehl, 2011). On the other hand, the semi-public features allow the quiet and peaceful inward courtyard to be relatively segregated and enclosed from the chaotic external society, which strengthened a sense of self-protection (Newman, 1996).

In all, the enclosed courtyard form has perfectly fulfilled the demand of the physical and psychological space among Chinese.

3.2 THE CULTURE OF WALL

As the old saying goes: "Guo you feng bi cheng, jia you feng bi yuan" (The nation is safeguarded by the Great Wall while the family has been protected by the ward walls), China has the largest amounts of walls and walled structures (Nuttgens, 1997). Walls, as the physical boundaries and thresholds that explicitly defined the interior and exterior spaces, were deemed as the symbol of places in China (Xu, 2008). In the

long history, the wall has developed into a cultural phenomenon which reflects the Chinese patterns of thinking and behaving (Hu, 2008). Therefore the strong reliance on such physical boundaries have arguably represented the territorial consciousness, the introverted personality and the awareness of identity among Chinese.

3.2.1 THE TERRITORIAL CONSCIOUSNESS

Originated from villages and tribes, the Chinese cities have been dominated by agricultural civilization for thousands of years, during which, land has provided the material foundation for the survival and reproduction of Chinese generations. As a result, Chinese people have attached great importance to the land. As was claimed by Xunzi that “De di zhe sheng, Shi di zhe si” (A man with land could survive while a man without land would die) (Zhou and Yang, 1998, p. 131), the land was regarded as a dispensable component in a Chinese’s life. Moreover as was advocated by Confucians, human beings were an element of the earth (Du, 2004, p. 7). Such strong attachment and obsession to the earth manifested in the philosophy of Confucianism has implied that Chinese has been traditionally possessive towards space and land. As consequence, the strong territorial consciousness would push Chinese to explicitly define their personal realm by physical and visible boundaries, such as walls to enhance their sense of territory (Altman, 1975).

3.2.2 THE INTROVERTED PERSONALITY

“Xu” and “Jing” were firstly proposed by Guanzi as two essential approaches to cultivate a decent and noble personality (Dai, 1996, p. 11). “Jing” referred to the peace and quiet inward state while “Xu” indicated the distance between the inward state and the outside society. In terms of the ideologies of Confucianism, the introverted personality was widely affirmed to acquire the honor and grace via remaining peaceful inner state. Hence, Chinese people have always showed a consistent tendency to isolate themselves from the external turbulent world so as to depend their sense of well-being entirely upon their inward state.

Furthermore, Chinese believed in the positive correlation between “Xu” and their moral characters, meaning that the more distant they were to the external environment, the more quiet the inner state is, and hence the more virtue could be cultivated (Dai, 1996). Therefore, walls and gates have been built in order to increase the physical and psychological distances to push away the outside away from the inside.

3.2.3 THE AWARENESS OF IDENTITY

As an old Chinese proverb says, “Birds of a feather flock together.” The worldview and the value of an individual would be reflected by his social network. Hence one of the core principles for social intercourse in the philosophy of Confucianism was “Those whose courses are different cannot lay plans for one another” (Confucius), meaning that a noble-minded person would merely interact with and build a friendship with those who shared the same aspiration and interests, followed the same moral codes and obtained the same level of education. From the Confucians views, what kind of friends did a person have has revealed who he was. Moreover, considering the introverted personality has resulted in the close social intercourse among neighborhoods within a community instead the wider society, therefore, Chinese people preferred to use physical boundaries to delimit their neighborhood, as well as their social circle to fulfil the awareness of identity.

4 REFLECTIONS AND CONCLUSIONS

The essay has explored the historical development of enclosed settlement patterns in China by looking at four typical models, dating back to the walled residential wards in Tang Dynasty, through to the enclosed work-unit compounds of the socialist era and pervasive and diversified gated communities to date. It has been identified that the contemporary gated communities, though being introduced from Western countries (Wang, 2010), is ubiquitously the continuity of the traditional enclosed settlement pattern which has been

shaped by the deeply rooted Chinese civilization and dominated by the philosophy of Daoism and Confucianism. Moreover three morphological features are remarkable for this morphological continuity identified in the study, which are the persistent tradition of collective living patterns, the introverted courtyard-style housing complex and physical boundaries clearly defined by walls and buildings. This, on the one hand, presents a comprehensive historical and cultural background for understanding the performance and prevalence of gated communities in Chinese cities today; on the other hand, it has manifested the ingrained worldviews and values behind the cultural ideology of walls and courtyards among Chinese. Therefore, these features should be carefully considered, sustained and adapted to show respect to the long history and rich culture in China.

However the discussion of the conservation of certain enclosed characteristics as historical legacy and the alternative ways forward for today's community design should be centered on the interaction between the gated community and the well-being of neighboring public realm in order to promote a more integrated urban form. What are the possible impacts gated communities could bring to the qualities of local public realm, and how could they be mediated by means of physical adjustment to conventional gated community design practices? To answer the intricate questions, two design features have been identified by the author in the reviewing of the entire development process of gated community in China.

Firstly, the gated communities in contemporary Chinese cities have been noticed to manifest a loose grid urban structure which fundamentally resulted from the wide-road-and-large-block pattern in the lengthy feudal empires and the Soviet model of 'super-block and wide-avenue' in socialist era. However the enclosure size should be stipulated and properly regulated in the regulatory plan to reduce the negative impacts of the gated community on the wider surrounding pubic space. On the one hand, the appropriate scale of enclosure will help to ensure a permeable, accessible and walkable urban districts. On the other hand, neighborhoods with medium or small gated areas could embraced more diverse communities with a variety of prices, housing types, or tenures. With the guidance of appropriate planning and design policies, the whole neighbourhood could be developed into a socially and physically heterogeneous districts, in which, each smaller size gated community remains the homogeneity and expresses the shared interested by the residents within it. Therefore, the careful subdivision of land and relevant policies to control the enclosure size could effectively guide subsequent developments towards a mixed use and heterogeneous urban neighbourhood centered on local public spaces, notwithstanding the presence of gated communities.

Secondly, the boundary is where the gated community encounters the public realm, which demarcates the gated community and the surrounding public realm not only spatially but also functionally in terms of its supporting role in facilitating activities in the adjacent areas (Bobic, 2004). The linear feature has been characterized by a series of the elements including the length, the materials, the frontages, the permeability, and the surveillance conditions, which play a crucial role in promoting and enhancing the interaction between the gated community and its adjacent areas. For instance, the exclusive and hostile wall could be made softer and friendlier by means of lower height, transparent materials or different sorts of plants providing a rich variety of forms and colors (Bobic, 2004). Moreover new development could be framed and defined by building frontages facing outwards which can potentially introduce various activities, which nevertheless, should be accompanied by detailed design with regards to the scale and material of frontage, the accommodated uses and access from the street. In particular, the ground floor façade and uses are curial in the interaction between the gated community and passers-by (Gehl et al., 2006) Finally, the last potential intervention for the boundaries is to introduce ambiguous space for public uses, such as lakes, public parks, squares, etc., which could not only function as buffer areas between gated communities and the bustling public environment, but also be mutually shared, physically or visually.

All boils down to one point, despite the globally criticized social, spatial and physical challenges and problems in the gated communities with respect to the quality of the neighboring public realm and the local urban area as a whole, these specific patterns in China enjoy particular historical and cultural legacy. Therefore urban designer should carefully sustain the physical structures and characters to respond to the Chinese residing tradition but appropriately "open" the gate via introducing more human-scale enclosed community and much friendlier boundaries to accord with the contemporary urban life style.

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ID 1423 | RECLAIMING SPACES: FAMILY INCLUSIVE URBAN DESIGN

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1 INTRODUCTION

Following the current trend of global urbanisation and the growing attraction of cities for families with children, urban environments are becoming principal contexts wherein new generation of children will thrive and grow. Though cities were traditionally designed for adults and cars and not children, Zukin (2010) observes an ongoing shift in her book 'The Naked City'. She notes that through gentrification Western cities are experiencing a revaluation of streetscapes through commercial and cultural activities. Boterman and Karsten (2015) have titled this ongoing urban transition as 'the march of city families worldwide'. Examples can be found world-over, in European cities like Paris, Berlin, the Scandinavian capitals and London (Authier & Lehman-Frisch, 2012; Butler, 2003; Karsten, 2013; Lilius, 2014). Not restricted to the west, examples can also be found in countries that are on the rise like India where 41.2 million children under the age of six live in urban spaces. An increase of children in cities comes with rising analytical and policy interest for families with children in urban environments through child friendly cities, and in children's geographies.

Ongoing work on child friendly cities explores and highlights the role of housing, transportation, community networks, play and green, and governance as important prerequisites for living in the city with children. With the expanding reach of children's studies within the social sciences, urban analysis is essential to improve contextual understanding of children's contemporary problems and needs in the city. Particularly the designs of neighbourhoods influences the geographies of everyday life for children, though the neighbourhood is a mere backdrop for many full-time employed and commuting adults (Carroll, Witten, Kearns, & Donovan, 2015). However in neighbourhoods where families settle for example, patterns of varied consumption, activities, and needs are more evident (Karsten, 2013), reflecting an intensive consumption of the city and also new practices of public parenting. Karsten (2014) argues that this transformation goes with the production of a new city. Families as consumers claim their own urban environment through the development of a range of family facilities that can be summarized in three types: child directed facilities, family directed facilities, and child and family friendly public space. Sidewalks are being transformed into places to play and to socialise.

Occupying the outdoors used to be typical working-class behaviour, today has become part of the behaviours of middle-class families. The rise of this family friendly consumption spaces is in part initiated by the families involved, but also by governments, NGO's, and developers. There is also an ongoing push from academia towards policy to encourage family directed consumption spaces within inner cities.

This paper positions the possible learnings for urban planning and design within the creation of child friendly environments. Structured as follows, the first section provides a literature review on planning for

families with children. Following this, context of planning for children in cities in the Netherlands is expanded on. The second section outlines the objectives and methodology used to develop on existing typologies of indicators on three important daily living domains – street, green spaces and play spaces within four neighbourhoods of Eindhoven in the Netherlands. The third section, provides analyses of three important daily living domains – street, green spaces and play spaces - through observations, surveys, workshops and interviews. Discussing the increasing need for family and child directed consumption spaces in city areas. Data from the four neighbourhoods reflects that though there are processes in place that progressively contribute towards the inclusion of changing urban lifestyles, importance of outside play, the concerns on safety, and separation remain high. These concerns can be addressed through planning and design by employing small DIY solutions or larger interventions at the neighbourhoods or/and city level.

2 CHILDREN, PLANNING AND CITIES

Rapid urbanization around the world is now a well-documented trend. This ongoing development has a number of effects including a shifting trend where not only young urban professionals are choosing to move into city- areas, but also families (Boterman, 2012; Bowles, Kotkin, & Giles, 2009; Karsten, 2013). Families moving into or deciding to stay in inner city-areas belong largely to a well-educated middle classes with enough resources to buy themselves an urban family home, and afford daily care of children (Karsten, 2013). It is estimated by the UN that 60 per cent of the world's children will live in cities by the year 2025. What this is indicative of is that for millions of children the contours of their everyday life and experience will be shaped by city environments. This has renewed an interest on children's lives in cities within the fields of social sciences, geography, planning and design (Karsten & Vliet, 2006b; Matthews, 2003; Wridt, 2010). The impacts of these ongoing demographic shifts have initiated a discussion on urban planning discourses for their inclusiveness of family life in cities. These discussions are focused on social and psychological aspects, health, education, and a growing awareness of the role of urban planning and design.

The advantages of city living are many, services, social networks, cultural resources, shorter commutes between work and home, and it is this daily combination of tasks, preferences, and budgets that motivates families to opt for an urban residential location (Hjorthol & Bjornskau, 2005). What this implies for urban planning is (re)defining the nature of planning for families in urban areas. Karsten and Vliet (2006a) for example have identified the lack understanding and recognition by planners of the importance of the local scale in the everyday lives of children and their parents, and plea for more family inclusive policies. With obesity levels increasing and social capital decreasing within children (Niekerk, 2012), themes such as importance of outside play, independent mobility, urban health, are pushing the role that planning can play in the creation of child friendly cities. These foci can be well served by developing an urban understanding of the interdependencies between different dimensions shaping child-friendly spaces and their impacts.

Creating child friendly communities is central to building strong and vital neighbourhoods, cities and regions. Though planning for children is not new, from mid 1940's UNICEF has been advocating for rights of children, creating initiative's such as 'Mayor Defender of Children (1992), 'Child Friendly Cities' (1996), and developing frameworks for defining and developing a Child Friendly City. To facilitate this there is a growing body of research into the development of child friendly communities. While much of this research focuses on addressing challenges within neighbourhoods for children, the research on the role of design and planning tools for improving practices related to child friendly communities is still on the rise. Various initiatives around the world are pushing the conversation on family friendly strategies for inner cities. Examples include, 'Playful City', a non-profit organisation KaBOOM! is dedicated to bringing balanced and active play into the daily lives of all kids, particularly those growing up in poverty in America (Kaboom, 2017), the 'Child and Youth Friendly City Strategy' of Surrey (Canada), is an example of increased policy interest for inclusive design with families. Through community engagement, creation of community spaces, housing choice, youth programming, and community partnerships, planning can be used to bring together various stakeholders.

3 RESEARCH APPROACH

In order to develop insights into the role of planning and design for family friendly cities, the paper analyses three important daily living domains – street, green spaces and play spaces - through observations, surveys, workshops and interviews in the city of Eindhoven (NL). By using environment-focused planning indicators connected to aspects to the built environment, quantitative and qualitative data was collected. Divided into two phases, the first phase consisted of semi-structured interviews and surveys with 204 families living in three inner-city and one suburban neighbourhood, we identified use, challenges, and requirements for families with children under the age of 12. Three of the four neighbourhoods are centrally located within walking/cycling distance of the city centre, and the fourth neighbourhood is served by good public transport connections to the centre. The neighbourhoods were all working households with varying levels of education from middle to higher levels, socio-economic status, and gentrification.

The interviews covered, among other topics, housing preferences, play areas, green spaces, daily activities, commute, advantages and disadvantages of having children and living in an urban environment, and mapping activities to point out preferred walking route and locations. The interviews were fully transcribed and the results of the survey collated. The families and parents interviewed used the city and various facilities on a daily basis in various ways, with positive and negative experiences. The interviewees spoke about their daily involvement and experiences, and the transcripts about the city from the perspective of family friendly planning. Results from the four neighbourhoods were compared with each other to identify the best possible neighbourhood to carry out the next phase of the research. Phase two of the work was carried out in a gentrifying inner-city neighbourhood that is facing demographic changes, has active participation from parents of the neighbourhood and schools in the area. We held two intensive workshops for children and parents, at the school and a community centre, to verify challenges and identity methods of possible co-creation to address planning for families. Apart from this, neighbourhood coordinators and policy-makers were interviewed to document current attempts at addressing changing needs and existing initiatives. Finally, we conducted both desk-based studies of literature and policy documents on the initiatives in the city and global responses.

By using the findings, elements for the construction of alternative urban discourses rooted in the daily experiences and challenges can be identified. This paper is a small step in broadening the scope of urban planning discourses in the direction of family friendly cities.

4 THE NETHERLANDS: CENTRAL ROLE OF PLANNING FOR CHILDREN

Cities have always been full of children, and city children have somehow always found outdoor spaces to play in. The rise and decline of play spaces in urban areas can be seen as a metaphor for the changing dynamics of families living in cities. Karsten (2014) describes the historical dynamics of families in cities. At the start of the nineteenth century, streets were the most important space of play for children at the time, but also not the most suitable. Children had to share the streets first with traffic from horses and later by cars and various economic activities taking place on the street. However, this changed dramatically with the success of the private car around 1960 when mass suburbanisation started. The city was seen as overcrowded, unsafe and unhygienic. Families that could afford it left the city to surrounding districts. The suburbs became the child-rearing district of society (Ward, 1977). The Dutch VINEX-policy cemented the wave of families moving to the suburbs.

Following this, extensive urban renewal of Dutch cities resulted in central urban areas becoming increasingly attractive as living spaces. Manufacturing industries, the harbour and other industrial employment in cities are replaced by new forms of clean employment: a service economy, culture and tourism. Cities regained popularity as centres of new employment and possibilities for consumerism and culture (Zukin, 1995), and are becoming hubs for young families as well. With a population of more than 17 million people and still growing, the Netherlands is a densely-populated country, positioned as the twenty-second within density rankings (World Bank, 2017). The Dutch Environmental Assessment Agency (PBL) also highlight that in the following decades three quarters of the population growth will happen predominantly in urban areas (PBL, 2016b). Currently about 75 per cent of the population lives in cities. As a consequence of constant growth and transformation, the built environment of the Netherlands has substantially grown in the last decades and is today characterized by a polycentric urban structure, and as a melting pot of urban cores at relatively short distances from each other.

For a long period, families with children were considered to be a non-typical city household. The years of suburbanization of mostly middle-class families led to the almost 'natural' idea that families do not belong in the city. Households who stayed within the city were often considered to have weak socio-economic positions (Musterd & Ostendorf, 2012). Today we are experiencing a modest countermovement, it is mostly the highly-educated professionals who are increasingly choosing to remain in the city after the birth of their children. The city acts as a magnet for young people, especially when they pursue higher education, progressively finding their first job, housing, and eventually starting a family in the same place. The creation of more single-family housing and child-friendly neighbourhoods in places like Leidsche Rijn (Utrecht), IJburg (Amsterdam), and Ypenburg (The Hague) has enabled families to stay in urban areas (PBL, 2015). Parents are 'reinventing' the city as a place to live (Karsten, 2014).

As a response to and recognising that cities within the Netherlands are 'engines of the economy', in 2015 the Dutch Government launched 'Agenda Stad' (Rijksoverheid, 2015). A national urban agenda to promote economic growth, improve liveability and stimulate innovation in urban areas. As an addition to this agenda the PBL (2016a) published a report titled 'De stad: magneet, roltrap en spons. Bevolkingsontwikkelingen in stad en stadsgewest' (The City as a Magnet, an Escalator and Sponge) where a long-term vision on the population and spatial development is envisioned. This report highlights that there is a renewed interest for living in the city, also among young families. The metaphor of 'the magnet, escalator and sponge' is used to describe the shifting population dynamics in cities and their increasing popularity as places to live and inhabit. Cities also grow as a result of (im)migration, and this cohort belongs to the age group who are just before or in a stage of life where they are looking to have children (CBS, 2017a). This can be seen through the growing number of families with children in the four main cities (Amsterdam, Rotterdam, The Hague, Utrecht) of the Netherlands, while this number is decreasing at the national level. Driven by the large number of people in their twenties and thirties in these cities, more babies are born in these four big cities than the rest of the Netherlands.

Living in the city also has obvious downsides, the lack of affordable family housing being one main deterrent, and the image of space, quietness and green of suburbia influences many parents' decision to leave the city for suburbia (Boterman, 2012). Not for all families however. Various studies have shown that families deliberately choose to live in the city and the trend of young people moving from cities to suburbs once they have a family is slowly changing. Research by Karsten (2007) for example analyses why these households disconnect the seemingly traditional relationship between families and the suburbs. Underlying their settlement choice are identified as, (1) Time and geographical reasons: Residential location is a key factor to combine childcare with paid work, which often takes place in the same city. Not only the location of the workplace is a strong determinant of their residential location, also the broad range of urban cultural activities that the city has to offer; (2) Social embeddedness: The diverse composition of the city provides many opportunities to connect with other people. This can have a mutual benefit for both the parents and the children. Children connect families who live in close proximity, these connections can then develop into supportive communities with the mutual benefits for exchange of assistance and advice; (3) Identification as true urbanites: Families living in cities construct an identity of themselves as resolute families that can deal with negative sides of living in the city. They recognize there are serious considerations for living in the city but define themselves as city people who could not live anywhere else. As Karsten (2007) notes, "the choice of residential location is subject to continual reflection and renegotiation".

Questions however still remain on if the increase of families in cities is a structural or a temporary phenomenon. Boterman and Karsten (2015) expect that this trend of urban families in cities will persist for a while. In particular families with strong cultural capital ties who will want to stay in the city. More so as cities are increasingly becoming tailored towards their lifestyles and preferences. Traditional lines of separation between domains that exclusively belong to adults and exclusively to children are fading. Some neighbourhoods specialize in this kind of environment. In Amsterdam for example this is visible in increasing family consumer patterns. Cafes serve 'babychino' (a child friendly variant of cappuccino), cultural programs in the city made for children (museum activities) stores aimed especially at children are a few examples (Leclaire, 2015). These city neighbourhoods are transforming to welcome the settling of families. It will not be the increasing number of migrants, their birth-rates are shrinking, it is the middle class that bring new children to the city (Boterman, 2012). Other examples include municipal initiatives from the city of Rotterdam, 'Building Blocks for a Child Friendly Rotterdam' or 'Kindvriendelijke bouwblokken', or the development of the Kindlint as a safe route for children that encourages independent mobility through the neighbourhood, connecting the most important facilities like the school, play areas, the park, etc. through visible markers.

5 EMPIRICAL CASES: FOUR NEIGHBOURHOODS IN EINDHOVEN

Eindhoven over the last decade has been increasingly transforming into a city for young adults and families. In 2015, the PBL reported that in the year 2000, the city had an overrepresentation of people in the age groups between 20 to 40. The surrounding region in contrast showed an underrepresentation of this age group. In last years, this disparity between the city and the region is becoming starker, while the city is attracting younger people the surrounding region is aging (Jong, Vriens, & Beets, 2016). The reasoning behind this shift according to PBL is the presence of various higher educational facilities and its growing innovative high-tech cluster. However, there appears to be a growing trend where many students are choosing to move to other regions of the Netherlands once they finish their education. Between 2005 to 2016 we can observe a slight decline within the representation of population group between 20 to 40 years from respectively 32,5% to 31,8% as a percentage of the total population (CBS, 2017b). The same pattern is also visible for children of 0 to 14 years from 15.9% to 14.9% on a city average for the same duration. Eindhoven in this sense is different from the other four large cities in the Netherlands Amsterdam, The Hague, Rotterdam and Utrecht where children between 0 to 14 make up respectively 15.3%, 17.6%, 16.4% and 17.4% of the population (CBS, 2017b). To analyse how the city is responding to the changes in population and need for better child-friendly planning, the research looked at four different neighbourhoods within the city: De Bergen, Blixembosch-Oost, Woensel-West and Lakerlopen. With relatively young populations, three of the four neighbourhoods were inner-city, and one was in the suburbs. The cases were selected based on three factors: Firstly, the social economic status and cultural background of the neighbourhood. This was done on the basis of financial indicators such as the average home value (WOZ-waarde) and the average income per household. Ethnic composition of the population was also considered. Second indicator was the location of the neighbourhood within the city. The four neighbourhoods should reflect the diverse geographical pattern of Eindhoven. One neighbourhood in the city centre was chosen, one neighbourhood within the inner-city ring, one outside of the city ring and one at the edge of the municipal boundaries. Third indicator was the appearance of the neighbourhood and measured with the housing composition and urban morphological type.

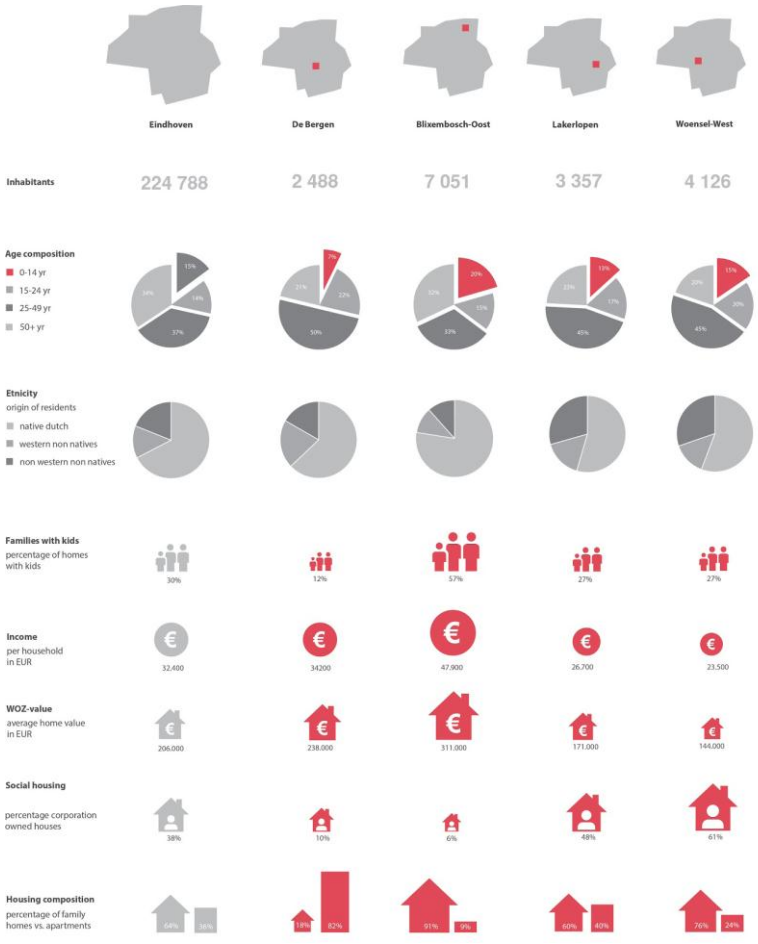

Figure 1: Location and demographic information of the four neighbourhoods. Source: Authors.

6 POSITIONING LEARNINGS IN CONTEXT

Based on the findings from the quantitative and qualitative data from the four neighbourhoods, we can position specific learnings and challenges of the neighbourhood along certain thematic lines. With the help of indicators based on the urban environment and systematic methods of data collection, cities can assess their levels of addressing child friendly planning and understand the changes over time.

6.1 STREETS AND PERCEIVED SAFETY LEVELS

Despite the various measures taken for street safety within all the four neighbourhoods, perceived safety in the street is low in all of them. In three out of the four neighbourhoods (De Bergen, Woensel-West, Lakerlopen) more than half of the parents admit that they do not find the streets safe for their children to play in. A recurring observation was the number of cars on the street and the attitude of the drivers, apart from these, reasons such as speeding cyclists in De Bergen to bad visibility in the streets of Blixembosch-Oost deter parents from encouraging their children to play outside. While some parents are able to cope with this and appeal to common sense, like this parent in Lakerlopen, "...don't do stupid things, then it's safe", for most parents this is not the case. Interestingly, in De Bergen children were even less satisfied with their safety than their parents. Of the children who participated in the intensive workshop within the neighbourhood only one third of the children found the street safe to play in, but half of the children said they do regularly play in the street (responses were a mix of personal and parents' choice).

Of all the four neighbourhoods, Blixembosch-Oost was the neighbourhood where parents considered the streets most safe. Blixembosch-Oost, a suburban VINEX neighbourhood, consists mainly of access roads that also have a low intensity of use. Although traffic safety remains a challenge, two third of the parents were satisfied in this neighbourhood with regards to safety. One parent answered, "as a mother I am not satisfied, but in comparison to other neighbourhoods, then yes I am. If I had to give it a grade, it would be a seven (out of 10 ed.)". Though levels of perceived safety were quite high, play activities in this neighbourhood do not take place on the street but more within assigned play areas (e.g. playgrounds). The abundance of play facilities around the neighbourhood appears to deter from playing on the streets.

Parents from De Bergen on the other hand were concerned about the speed of traffic, and when asked on how improve this situation, all pointed towards traffic calming and more safety: "Make the neighbourhood car-free, make the bike lanes safer and provide less parking for tourists." One of the parents mentioned speeding cars that crashed into people's home. Others stressed on creating better signages and control. Though it was not only traffic related reasons that contributed to lower perceived safety levels. Social and environmental factors were also associated with a lower perceived neighbourhood safety. In line with earlier research 'stranger danger' appears to be causes of parental anxiety in relation to their children's safety in the neighbourhood (Carver et al, 2008). Findings from this research follow the same pattern. Examples include the presence of homeless people in De Bergen and (activities related to) prostitution and drug abuse in Woensel- West. Not only adults contribute to an unsafe feeling where also older peers of the children (teenagers) appear to be a reason to avoid certain places as the workshop in De Bergen showed.

The perceived safety levels can also be related to the popularity of walking around the neighbourhood. The findings show that Woensel-West is considerably the least popular neighbourhood to walk in. Respondents say that the situation has improved from previous years though some parents generally do not let their children walk or play around the neighbourhood unsupervised. Parents generally check up on them after some time or make agreements on how far the kids can go, one example being "the kids walk on the streets by themselves. I let them walk to the playscapes sometimes, but after a few minutes I will check if he is alright". De Bergen and Blixembosch-Oost are considerably more popular neighbourhoods to walk in, with Blixembosch-Oost being praised generally for its safety and social control.

6.2 DESIGNATED PLAY VERSUS UNDESIGNATED PLAY

The importance of outside play has been stressed in the literature ranging from health to children's geography (Aarts, Wendel-Vos, Oers, Goor, & Schuit, 2010; Christian et al., 2015; Hinkley, Crawford, Salmon, Okely, & Hesketh, 2008; Vries & Veenendaal, 2012). Within our research, we found that the

majority of children play outside every day, and that they play mostly in designated play areas i.e. places of organized play (such as the playground, sports field, schoolyard, park) rather than undesignated playing areas (such as streets or side walks).

The ample availability of designated play areas in all the four neighbourhoods can be identified as the primary reasons for this behaviour. We should note here that though designated areas are easy to identify visually and spatially, undesignated playing areas are more difficult to determine. More so as these spaces cannot be identified through analysis and observation alone, and need input from children and/ or parents to point out where else play happens. Between the four neighbourhoods, designated outside play was most evident in Blixembosch-Oost and undesignated play areas were most evident in De Bergen.

The number of designated playgrounds in Blixembosch-Oost (almost double when compared to the others) appears to encourage playing outside. Though a number of parents complained about the quality of playgrounds and that there weren't enough spaces tailored for older children. “We need more for teenagers, all playgrounds are for little children. And I see teenagers hanging around the playgrounds”, says one parent of two children under the age of ten. Parents appeared largely satisfied with the quality and number of available facilities. Other observations included the need for variety of playgrounds, natural, sport, and creating more attractive play and activity spaces (urban farms for example). In comparison to Blixembosch-Oost, quarter of outside play in Woensel-West happens on the streets. It is also the neighbourhood (along with Lakerlopen) that has been identified as a transition neighbourhood, and is also the most diverse in population. Woensel-West is also the only neighbourhood in the city where the Kindlint was introduced to provide a safe route for children through the neighbourhood connecting school, playgrounds, and the park (Wassenberg & Milder, 2008). Based on a workshop with elementary school children in the neighbourhood about the Kindlint showed that the children are yet to grasp the meaning or knowledge of the various safety elements along the route (e.g. posts for a safe crossing). Interestingly, the children indicated various elements along the route - designated or not - as places for play. Though levels of perceived safety were low, children were still allowed to play on the streets, more so as the number of designated play spaces were also the lowest.

Between all the four neighbourhoods, parents emphasised the need for more centralized and diverse play spaces, and improvements of the playing environment. Like a participant in Woensel-West said: “I want the play areas to be bigger and more together. Not one piece of play-equipment on every street, but a bigger dedicated place where not only children but also parents can gather”. A common observation was the absence of activities for parents or waiting spaces while the children played in designated spaces. It was also striking that all the answers about improvements were about designated play areas and nothing was mentioned about adapting undesignated play areas. One of the advantages of undesignated play spaces is the accessibility for all children (Wilson, 2012). The workshop with children in De Bergen revealed children indeed appreciated undesignated play areas because it’s close to their home, especially when designated play areas can be more difficult to reach. Moreover, children temporary own and imagine these spaces, encouraging a large variety of play themes: what game can I play here? (Frost, 1992). Car-parks that are accessed by placing a brick under the garage doors, some appropriation of sidewalks and private courtyards (e.g. Bourbonhof in De Bergen) are very popular to name a few. As streets are considered unsafe by children in De Bergen, a private courtyard of a gated community appears to be a popular alternative to cope with the capricious city environment.

Of the interviewed children in De Bergen, there was also a big difference in preference of play spaces between genders. Girls are much more negative about the place and name bad maintenance as a deterrent to play, variety of play equipment and the threat of older teenagers are other nuisances pointed out. Boys would like to see improvements on the maintenance of the soccer field, and additions of more sport facilities. Interestingly they both point out that more attention needs to be paid to diversity of ages within the neighbourhood.

6.3 URBAN GREEN SPACES

Urban green spaces (UGS) over the past years have become central to a number of research themes, sustainability, physical health, mental health and safety (Barrera, Reyes-Paecke, & Banzhaf, 2016). Studies show that accessibility to and the presence of green attracts play, which is important for physical, social and cognitive development of young children (Amoly et al., 2014; Louv, 2005). Children’s access to

local child-friendly environments, including green spaces, contributes to sustainable development in several ways, like diminished car transportation and support for children's healthy development, physically active free play and concern for the environment (Jansson, Sundevall, & Wales, 2016).

The issue of accessibility to UGS is one of the crucial aspects of sustainable urban planning and it is linked to the growing concern on the wellbeing of urban population, particularly in children (Gupta, Roy, Luthra, Maithani, & Mahavir, 2016). Studies from the perspective of the child on the design of urban green spaces show that children felt that the management of their local environments was not adapted to their preferences (Roe, 2006). This appears to be the case for Eindhoven as well in terms of use and accessibility of urban green spaces. While the data was collected independently for play and green, in practice however they are closely related to each other. The embedding of playgrounds in green areas, green spaces often provides opportunities for play (natural playground) or just an informal patch of green in front or back of the house.

Within the inner-city neighbourhood of De Bergen, the park is the most visited greenscape for play according to findings from the children's workshop. This was confirmed by the data from the survey with the parents. Remarkably, this park has no specific play facilities for children. The children invent their own games or make creative use of what is already there, like using an art object as a playset to climb on. The design of the Anne Frankplantsoen (De Bergen's city park) and its enclosed character also provides possibilities for informal group play, like hide and go seek for example. During the workshop, an eight-year-old girl described how through their own imagination she created a park that was the exclusive domain of the children. This description fits in line with the research that shows that play in a natural environment is more varied than play in non-natural play spaces. Play in natural environments is also more sensational, explorative and constructive (Berg, Koenis, & Berg, 2007). Natural playgrounds, like the ones that can be found in Blixembosch-Oost, are especially suitable for this.

Blixembosch-Oost is the neighbourhood with the most greenery from the cases researched. Because of its suburban character, it has the highest volume of private gardens, which also contributes to the green character of the neighbourhood. At the same time Blixembosch-Oost has the least amount of solely aesthetically purposed green. Most greenery in Blixembosch-Oost has a double function as it is a playground as well as a grass field for aesthetic purposes. This doubling of function translates to a high quantity of different play opportunities in this neighbourhood. This quantity and quality of green also appears to contribute to the high rate of outdoor play in designated spaces in Blixembosch-Oost.

With the other neighbourhoods researched, quality and access to green was much lower. A number of parents raised this issue including a parent in Lakerlopen: "A larger park would be nice, there are a large number small green patches in the neighbourhood, but still a single large one would be nicer". Parents also gave examples of what they would like in terms of greening streets and addition of play spaces. Findings of the workshop also highlighted importance of greening schoolyards. These findings fit in the line with a push towards increasing green Dutch schoolyards (NOS, 2017).

6.4 IMPACTS AND ROLE OF THE SOCIO-CULTURAL ENVIRONMENT

Within a community, the physical (built and natural) environment cannot be detached from social, economic, and political realities of the neighbourhood. While the role of the physical environment is central to the wellbeing of children, from the need for walking and cycling facilities to the preservation of green space, social and cultural features also shape behaviours and permeate into activities. Though contestations exist within research on parental values between high, middle and lower class families on raising children, the difference between access to activities and amenities was evident through this work. Between the four neighbourhoods studied, it is relatively easy to demarcate lower class and upper-middle class families. Families belonging to the lower-middle classes are neither rich nor poor, though have limited to medium resources (cultural and economic capital). The relatively rich neighbourhood of Blixembosch-Oost appears to have very different forms of activities and capital in comparison to Woensel-West or Lakerlopen. With diverse immigrant status ranging from Turkish, Moroccan, other African and Asian backgrounds, Woensel-West and Lakerlopen typify a very visible generational upward mobility of migrant families. The gentrifying De Bergen is a neighbourhood composed of a well-educated upper-middle class families where almost all have a native or highly skilled immigrant background.

Given the diversity in the spatial layouts and demographic composition of these neighbourhoods, it is noteworthy, that the parents were generally satisfied with the wide range of social services in the neighbourhood and the quality of the social environment. Not restricted to social capital of residents, parents with children feel most welcome to local business in Blixembosch-Oost, and value the friendly environment of semi-private and commercial spaces within the neighbourhood. An interesting observation is found in De Bergen, where semi-private and commercial spaces are considered least inviting children. Although there are some very positively rated commercial spaces (e.g. those especially aimed towards children), residents identify the conflict of interest between the commercial (restaurants, bars etc.) and the living areas as an issue of future improvement. While commercial activities formerly exclusively belonged to adults, parents note that lines between adult and child oriented spaces are fading.

As one of the more affluent neighbourhoods in the city, within the four-researched neighbourhood Blixembosch-Oost also has the most number of private and commercial activities available for children organised through neighbourhood organisation. Blixemkids, one such example, is a group of volunteers organising activities for children, an interviewee expands: “We celebrate for example Sinterklaas, and on National play day Blixemkids brings waterslides, inflatable bouncers and more”. Although positive, multiple interviewees identified the importance of (and absence of) mixture of people with different backgrounds: “We think the culture of the people in this neighbourhood is 'too white'. Nowadays we live in a multicultural society and I want my children to grow up knowing this multicultural society”.

In contrast to Lakerlopen, where activities for children are not as common (“there are a few activities, but they’re organised just once a year”, says one parent) and support groups for parents are less known or even wanted. A parent who is aware of such activities highlights “There is a support group for parents at the elementary school, but we don't go or need that”. Based on the small sample size here it is hard to position the reason behind this. Similarly, low levels of participation can be observed within activities organised by the neighbourhood association, where turnouts are low. One of the interviewee observed that the organization itself, and therefore the activities, might be a bit outdated since there are only seniors on board. In line with Bell et al (2008), who underpins the importance of a varied group of citizens participating in for example community groups, and the need for feeling of ownership to the success of any participation process. By far the most diverse neighbourhood within the study, Woensel-West has been successful in banding together to realise the Kindlint, and organise various community activities. The diversity of this neighbourhood, also lead parents to comment on the need for more inter-communal activities. “...add more common activities for different groups, promote more mixing of people or children with different backgrounds”, says one parent. Some parents raised concerns on the presence of the red-light district close by, and other noted that the differences in socio-economic status implied variance in access to amenities. “While they have the means to access services and special care, not all families have that ability (lower income, lesser social networks). Also, improvement of (mis)communication between people in the neighbourhood through lack of Dutch language comprehension”, is a noteworthy example of the differences between the four neighbourhoods.

Interestingly, De Bergen, also a neighbourhood in transition attracting skilled and affluent native and international workers, has been successful in encouraging various co-creative initiatives for child-friendly environments. Reflecting on the active involvement of its residents and civil society organisations, Stadstuin de Bergen located in the heart of de Bergen is one such example. The aim of the resident led initiative is to transform a decayed parking space andplayground through greening activities into an environment that facilitates interaction between residents, children, and civil organizations such as a home for veterans and social day care facilities for disabled people. The initiative is supported though municipal funding, but also in kind by the various neighborhood organizations and local entrepreneurs.

7 CONCLUSIONS AND RECOMMENDATIONS

The results of this research from four neighborhoods in Eindhoven on child friendly spaces both confirm patterns of consumption and use as reported in literature, but also add new insights for urban design. It is useful here to distinguish between the following, role of urban planning and design can play in highlighting the importance of children’s geographies, the levels of possible interventions, bottom up and top-down, and accommodating for changing demographics in cities. The role that urban planning and design can play in highlighting the validity and agency of children’s geography in planning processes is vital within the changing profile of cities. This can be seen through the issues raised on repeated concerns regarding

safety, awareness, maintenance, and more family friendly spaces, which can be addressed at various scales and levels of interventions as seen below through selected examples.

Level of recommendation	Concern addressed through possible interventions
Micro: The smallest level of intervention possible	
Playful street furniture	Streets are potential places for children to learn and play. Research identifies adding urban furniture around the neighborhood could facilitate observing children at play. Adding a bench between the street and home can have two functions, a buffer between private and public spaces, and increase opportunities to connect with neighbors and others children.
Sidewalk games	Outside play is not restricted to designated play spaces only, but should extend to public space at large. Playing games on the sidewalk encourages more types of social play, introduces a larger variety of play themes, and increases social interaction. Sidewalks also provides access to all children to use it as a play space.
Street green	Literature shows that the design and management of urban green does not always reflect the needs and preferences of children. Underlining this, neighborhoods resident's plea for small scale greening. The importance of turning hard gray urban spaces to softer, natural aesthetics is vital and can also help with rainwater drainage.
Climbable objects	Any object can become an element to scramble up on: a piece of art in the park, some steel objects on the sidewalk, a tree. For children, climbing on objects is more than just fun. Scaling an object teaches them vital lessons, such as dexterity, risk assessment, focus and planning. They have to decide how high they're comfortable to climb and find the best way to get there.
Alternating pavements	Traffic safety and awareness levels can be addressed in many ways, one of the easier DIY solutions is creating awareness through design interventions. Informal demarcations are a subtle but clear way to mark different zones of ownership or use of space through alternating tile patterns, using colors within pavements etc.
Temporary street closure	Streets safety is a repeated concern for families in urban areas. A temporary solution is the closure of a street for a day (once a month for example) to create a play-street. Due to its temporary nature residents can be stimulated to create a festive day to set an example for alternate possibilities.
Natural play areas	Children's access to local green spaces supports healthy development, physically active free play and awareness for the environment. Natural play areas are more suitable for different age groups and offer another type of play-space and meeting space. Creating softer alternatives to urban landscapes.
Shared space	A recurring observation in the research is the number of cars on the street and the attitude of the drivers. When streets are not considered safe to play in, less play happens on streets. One way to increase safety levels and at the same time improve the walkability streets is through the introduction of shared space.
Narrowing: visual and physical	The attitude of drivers is an important determinant when trying to improve traffic safety. Physically and visually narrowing the street can help to reduce the speed of drivers.
Lighting	Adding better street and floor lighting is a solution that can have immediate effect. Through the use of adaptive and LED lighting, neighbourhoods can create special atmospheres, and increase safety. One could also think of creating an illuminated path (with various colours) along the child route, resulting in a pleasant route by day and night.
Maintenance and awareness	Concerns related to dirty and depreciated play equipment, pet feces in play spaces, old sidewalks and general neglect of play equipment and play spaces can be deterrents to play. Clean streets, attractive open and green spaces, well maintained signs, buildings, and roads all contribute to high spatial qualities of a neighborhood.
Flexible schoolyard	Schoolyards are locations that are only used at certain times of the day and mostly only during weekdays. School yards have a potential to become much more than just a playground during school hours. For example, they can be opened up for brining and dropping children at school, play spaces in the weekend, etc.
Meso: An intermediate level of interventions at the district or neighborhood level	
Multiple use of spaces	Schoolyards are locations that are only used at certain times of the day and mostly only during weekdays. School yards have a potential to become much more than just playgrounds during school hours. For example, they can be opened up for bringing and dropping of kids at school, play spaces in the weekend, etc.
Neighbourhood child route	Cities are growing in attraction for families with children, renewing interests in child geographies. Cities are now responding to this growing trend by actively looking at family friendly developments. Though there is a long way to go to create family friendly cities, incremental shifts can create more awareness.
Macro: The highest and the most complex level of intervention at the city level	
Encouraging child participation	Children are often overlooked when it comes to decision making. Adults decide for children what needs to be done or how it should look like. The rich local knowledge of children and families often remains an untapped source of information.
Family friendly city strategy	A family friendly strategy starts with various public and private stakeholders; governments, developers, NGO's, residents. Rotterdam (NL) is a successful example in developing and evaluating Child Friendly Cities, by adopting 'child friendliness' as a valuable urban planning tool to design a livable, sustainable city.

In the context of the Netherlands where increasing institutionalization is visible in a number of cities, Amsterdam, Rotterdam etc., the importance of children's geography in planning and design is growing. However, these forms of institutionalization need to be balanced between top-down and bottom-up approaches. With growing diversity in urban areas, cities and planning needs to develop mechanisms through which the interests of young children and families are better represented and articulated within planning and design.

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ID 1425 | WHAT IS PUBLIC SPACE'S SERVICE VALUE? SOME RELEVANT RESEARCH QUESTIONS

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1 INTRODUCTION - A RELEVANT RESEARCH QUESTION?

In spite of its 'youth', Public Space theory is now facing recognition of its role in space production of contemporary urbanity. However, public spaces' conventions (naming, codes, laws, rules, standards...) generally are not referred to by the needs they cover, neither by the services they provide, but as 'qualities and attributes' those spaces must possess. This practice leads to a notion of public space based on 'exceptionality' and on quality perception prevalence, rather than relational and organizational factors related to its production, use and meaning. So while awareness of Public Space has positive effects on available resources, mainstream concepts are narrowing representation of public space values.

This is the knowledge deficit that PSSS research aims to tackle: to give conceptual primacy to needs public space must satisfy, requiring a critical analysis of space production processes (both of its hardware and its software) and leading us to a model focused on service, on the public value it involves and on the systemic way it is organized. For this purpose PSSS – Public Space's Service System (an interdisciplinary research project led by IST - Lisbon University, with Oporto and Barcelona Universities' urban research centres) aims to develop new concepts and tools to foster awareness of public space service value. We shall offer an integrated assessment methodology – through literature review, study of public space production and its interdisciplinary framework, case-study presentation and stakeholders' interaction.

So we need to agree upon theory, naming relevant questions or problems, so as to allow a discussion on physical and cultural contexts with relevant urban diversity trends: What are the current motivations for public space production? What approach is needed to 'translate' those motivations into notions of public space service, and its values, as a part of urban systems?

2 A SHORT REVIEW ON PUBLIC SPACE AND ITS THEORY

If Urban Design 'geographies' show relevant and globally spreading conceptual diversity, its 'history' is still a short story of last decades of public space observations and assessments, with ongoing discussion. Final outcome need theoretical 'refurbishing' to understand space production: its economic, social, morphological and ideological components, with different interpretation of public space return values.

During CIAM crisis of the 50s to 60s, Jose Luis Sert's activity at Harvard University showed opportunities for new reflections on recently coined Urban Design matters. Studies from pre-World War II attempts out of architecture field (Chicago progressive sociologists), until post-war approaches of Sert and Giedion launching centrality's theme (Sert, 1952), and in the sixties the new critical generation of 'Team 10', showed that Urban Design opportunities would come through Modern Movement criticism and not just from trading between architects, landscapers and planners' disciplinary gatekeeping.

Lynch (1960), Jane Jacobs (1961) and first followers, such as Alexander (1965), Gehl (1971), Leslie Martin (1972), Whyte (1980), Appleyard (1981) and others observation on urban life and peoples' perceptions of outdoor activities, led to the revalorization of streets and street life as a major urban structuring element. In that turning point, different theoretical inspirations led many towards a nostalgic reaction to functionalism: on the one hand by returning to European architectural historicism references (Krier, 1984; Rossi, 1966), on the other hand moving towards new ecological and environmental psychology concerns on spatial character and contexts (Cullen, 1961; McHarg, 1969; Norberg-Schulz, 1980). In Urban Design practice a line of thought came to light with diversity – in some cases, with nostalgic conservative agendas, such as "New Urbanism", influenced public awareness about Public Space.

With socio-geographic theoretical base for urban globalization critics, coming from Harvey (1990), Sennet (1992), Zukin (1995) and others mostly in USA, were promoted new reflections on public space economic and social contradictions. In Europe, structural lines of thought from Lefebvre's "Production de l'Espace" (1974), and Castells' "Information society"(1989), to Ascher's "Metapolis"(1995), gave a structuring sense to new theories on Public Space and on urban value global theory. Connections between theory, practice and politics converged in new policy actions under European left governments, at the end of the 20th century, such as in Barcelona's transformation for '92 Olympics (Bohigas, 1985; Borja, 2003) or, in the UK with Urban Renaissance (Urban Task Force, 1999 under Rogers coordination) and CABE (2001, 2006).

For the purpose of PSSS and the understanding of different interpretations of "what is Public in space", we may recall two state of the art reflexive inputs, leading our work and our research questions:

"In this «American» model of public space, the ideal city no longer influences the real city. Instead, the stores, entertainment complexes and art museums that are important interventions in public spaces are shaping an ideal city based on consumption (…) the projects of «public space» people talk about – without irony- include growing numbers of coffee bars, «Disneyfied» streets, and large interior shopping complexes that provide attempt to provide an overarching spatial metaphor for social identity." (Zukin, 1998)

"El espacio público nos interesa principalmente por dos razones. En primer lugar porque es donde se manifiestan muchas veces con más fuerza la crisis de la «ciudad» y de la «urbanidad»" (y del urbanismo?) "Y en segundo lugar porque las nuevas realidades urbanas, especialmente las que se dan en los márgenes de la ciudad existente, plantean unos retos novedosos al espacio público: (…) las nuevas centralidades y la fuerza de las distancias que parecen imponerse a los intentos de dar continuidad formal e simbólica a los espacios públicos" (Borja & Muxí, 2003)

Figure 1 - Barcelona's transformation, by public space production. In the 1980's and 90's Barcelona is a reference for urban regeneration projects (Source: Archivo Fotográfico de Barcelona)

3 PUBLIC SPACE PRODUCTION - DEFINITION AND MOTIVES

If Public Space itself is rendered as a subject of quality perception, we may ask: are spaces quality perception the same everywhere? Do we really know how to define it? Is it self-defined, as a motivation?

The fact is that twenty years after publishing "The Image of the City" (1960) Kevin Lynch made something rare in urban theory by putting under suspicion the concept of "spatial quality perception" he himself had launched twenty years before: "Enquiry sample size being too small(…)" he asked:

1. "What was not foreseen, however, was that this study, whose principal aim was to urge on designers the necessity of consulting those who live in a place, had at first a diametrical opposite result… professionals were imposing their own views and values on those they served."
2. Method had no sense of development dynamics in it... On how perceptions might change in future based on experience, or on cities modification. This fed the designers' illusion: "that a

building or a city is something that is created in one act, then to endure forever" (…) mistaken as a matter of value.

3. "Interesting as this work is, it labors under the difficulty that places are not languages: their primary function is not the communication of meaning". If they can be considered not only as a silent discourse on the past… in their own nature… meaning could bring to richer results.
4. "Last, perhaps I would criticize our original studies because they have proved so difficult to apply to actual public policy (…) to change the way in which cities were shaped (…) True city design -, dealing directly (…) in collaboration with the people who sense it – hardly exists today". (Lynch, 1984).

More than 30 years after (until now), this honest intellectual reflection is still passing by more or less 'incognito', while all the rising interest on Urban Design and public space projects production all over the world, has been growing without a credible Public Space assessment being done.

Nowadays it seems that 'spatial quality' and 'vibrant urban environments' are representation for the same globally desired urban lifestyle (UN-Habitat, 2015). In fact, a high percentage of urban design motivations call for the same attributes for leisure, tourism and cultural use, soft mobility or pleasant landscaping contexts, with a tone in management, more and more based on consumption models. These actions have been somehow 'translated' from global affluent real-estate market, images of 'quality of life' are reproduced everywhere with narrowing 'colonized' representations of space values' criteria. In this direction, public resources are invested in public spaces, focused on image and fostering economic value of urban leisure spatial types (touristic historic styled places, waterfronts, iconic cultural or commercial developments).

Figure 2 - Ronda Litoral and Port Olimpic, Barcelona (Source: Archivo Fotográfico de Barcelona)

In Barcelona's '92 Olympics, besides the event promotion itself, the main goal was to develop in a short period of time, a new centrality's space system – where public space as an urban recipe is the basic feature continuity of leisure activities, street life, public Art, consumption centres, waterfronts, new urban parks, etc., meeting a larger rank of objectives including new infra-structuring system's and maybe landscape adjustments' updating strategies (Figure 2).

Not far in time and space, in Portugal, a specific turning point can be traced down to Lisbon's EXPO1998 World Exhibition project, where issues as environment, quality of life, public space and leisure were being targeted by policies and design actions, from central and local governments. Connected to a cycle of economic growth and large public investments, symbolic relevance as paradigm of "new Portuguese society" the event marketing theme was Portuguese discoveries (Figure 3).

Figure 3 - Parque das Nações, former EXPO ’98 area. Lisbon. (Source: Ana Brandão 2009)

Visibility and success of these events had important spill-overs not only by setting new standards for urban transformations and public space, but also by generating urban values (Brandão, 2006) several public investments (and also private operations) disseminated the new paradigm over both countries. In Portuguese cities, cases like POLIS and PROCOM programs, supported dozens of urban projects, in historic central areas, waterfronts, urban parks and leisure facilities, with important political components of central and local government, and stakeholders demands for images of public space ‘quality’ (MAOTDR, 2007).

Whatever the scale, aesthetics and model’s dynamics may be, we may even consider it familiar looking at Dubai’s instantly coming from nothing (Figure 4) to a global leisure-consumer centre, and in many other places worldwide, with similar approaches in space production - where ‘space quality factors’ (liveability, vitality, vibrant, attractive, delightful, distinctiveness, …) are presented as the means to explain anything anywhere as space ‘imagery’, and still running to fame... when global urban images are selling ok.

Figure 4 - Waterfront sidewalk in Dubai (Source: travel4all.org)

Truth is, however, that not all urban contexts and spaces respond easily (or adequately) to standards or desires of so called ‘qualities’. For instance, in disperse or more peripheral areas – suburbs, peri-urban spaces, the diffuse city – there is a larger diversity and superposition of dynamics that do not typically correspond to clear paradigmatic urban models or recipes: “fragmented and discontinuous urban form is the result of a layered urban landscape with a big variety of urban patterns”(Valle & Travasso, 2014).

What is the need for (and what kind of problems are posed by) public spaces as founding elements of urbanity in these areas? (Figure 5)

Figure 5 - Urban dispersal in the northwest Portugal (Source: Filipe Jorge)

This is a relevant question that current planning instruments, research production and design knowledge are not solving. Several European recent policy's initiatives on urban regeneration are leaning on institutional programs and planning logics, using Public Space as the main ground to conduct transformations and deliver valued benefits. Despite these strategy, it is not uncommon that these actions focus on isolated units or segmental goals (air and noise control, energy saving, environmental risks, etc.) supported on legal legitimations, more than true effects on valued public benefits that may be related to funding sources, management structures, stakeholders' action, or a policy trends favouring appealing urban areas.

Frequently, Public Spaces lack integration with other urban systems to provide sustainability and social, cultural or economic returns and we acknowledge weakness in social cohesion, economic activity, basic landscape promotion, due to poor evidence of networks structure. Meanwhile there is growing interest on systemic approaches to urban problems – especially in relation to ecological and infrastructural aspects of urban spaces connection. Considering that such policy issues still remain apart from each other, it is obvious that new Public Space production needs an integration concept - as a public space services system.

If we broaden our perspective about public spaces of contemporary urbanity, we may find that it should no longer be restricted to a feature of urban life based on traditional city spatial references. Some programs are now understood within urban changes: increasing mobility, social and economic connectivity, new 'time typologies' (24h spaces, shared spaces…) of heterogeneous and conflicting characteristics.

Public space production is now embedded in all urban dynamics and requires interdisciplinary and integrated approaches: "What is clear is that contemporary trends in public space design and management are resulting (over time) in an increasingly complex range of public space types" (Carmona, 2010). Once Urban Design has recognition as an interdisciplinary area of urban knowledge and action, the time has come for deeper collaborative reflections on Public Space and new questions to ourselves:

- What is public and what is public in space? Isn't it public to serve public deeds?
- What is its service or benefits to the public? Is it connected to common needs?
- Is Public Space organized by design styling units? Or as a system of public service?
- Can we define service needs by design goals? In different and changing urban contexts?
- What defines a public space service system? And how to define its value or values' service?
- How do kinds of space services express kinds of value? Is there a taxonomy of urban values?

4 VALUE OR VALUES: WHAT IS VALUED IN PUBLIC SPACE?

Much of public investment, supported by a notion of Public Space benefits, is based on affluent leisure enjoyment in connection to representations of “happy lifestyle”, fostering natural or cultural “styles of life”, identity and even wishful thinking. More often in peripheral urban settlements, desires for urban self-representations are expressed in roundabouts, entrances and other visible locations with ‘works of art’, referring to concepts of value, added to commercial activities and real estate surroundings, “plaza” types of public spaces. But what are today’s mainstream Public Space values’ assessment focusing on? Do they regard ‘public values’, or just qualities of space’ marketability, as commodities with ‘exchange value’?

Many studies on interaction of people with spaces have as a starting question “What attracts people?”. As the questions’ motive is to understand users’ options, to identify reasons why some spaces are used and others aren’t, meaning ‘what works and what doesn’t’ (Carr, Francis, G.Rivlin, & M. Stone, 1992; Gehl, 2010; Whyte, 1980). These approaches may use simple tools and methods to answer basic questions about space frequency, like “How many?”, “Where?”, and “For how long?”. They rely on the sense of observers’ judgment, to address setting’s complexity and simultaneous activities, using techniques such as direct observation, mapping users’ activities and behaviours, complemented with interviews and a direct involvement in space’s activities (Gehl & Svarre, 2013).

Other assessment methodologies, developed for community’s users, intend to raise awareness of public space issues and demonstrate how to address them. They are mainly based on on-site diagnostic tools that gather perceptions to initiate a constructive debate between diverse actors. Confrontation between different perspectives allows to identify problems and seek improvements to be introduced into spaces (CABE, 2007; Cowan, 2001; Project for Public Spaces, 2000). More specific research analyses urban design quality effects in space performance and value generation translated into benefits (CABE, 2001; McIndoe et al., 2005). This idea, that space generates values, is developed by distinguishing positive effects that may arise as a sum-up of diverse (contradictory?) values, like use value, image value, social value, environmental value, cultural value and so on (CABE, 2006).

Finally, approaches focused on design process and space management aim to incorporate aesthetic objectives with economic requirements and users’ preferences. These methods combine guidelines and project recommendations with qualitative assessments regarding space’s success, highlighting the engagement of different stakeholders, especially users (Brandão, Águas, & Carrelo, 2002; Marcus & Francis, 1998).

In general, evaluation of public space is based on features and assets normative (usually quite extensive) that a successful public space must have or provide, identifying a set of “universal” positive qualities for public spaces (Carmona, Magalhães, & Hammond, 2008): clean and tidy; accessible; attractive; comfortable; inclusive; vital and viable; functional; distinctive; safe and secure; robust; green and unpolluted; fulfilling with the premise that a higher quality space has them all. Although these attributes may express ‘qualities’ that a space must satisfy, it is not easy to identify them as evaluation issues, nor to dissociate them from urban, social, environmental, economic, or other contexts they integrate (Khan, Moulaert, Schreurs, & Miciukiewicz, 2014).

Mainstream ‘state of the art’ assessment of Public Spaces seems now inadequate, with the use of flue expressions ‘place making’ and ‘place pride’ as kinds of tools, while a service fields criteria is missing in assessments models. PSSS tools for upraising Public Space Service shall be considered in three service types:

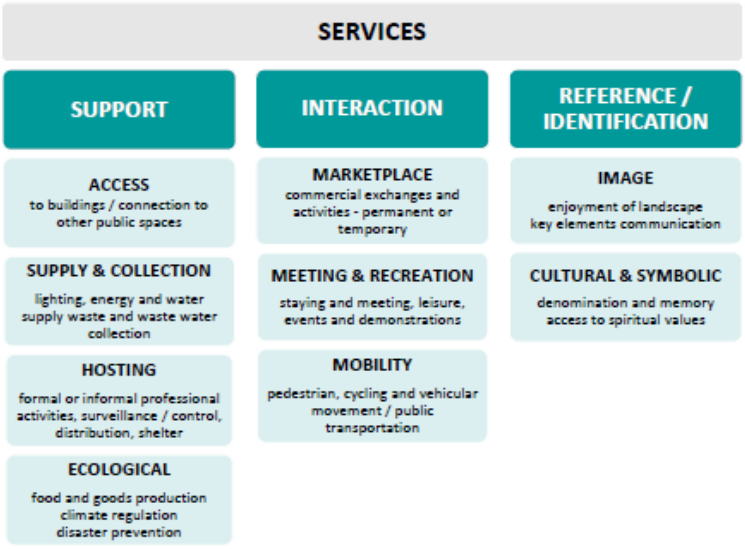

Figure 6 - Public Space Services. Organization in progress (Source: PSSS, 2017)

5 A SERVICE FOCUSED SYSTEM - TO CLEAR EPISTHEMIC TROUBLES?

Several epistemic clarifications are needed, as cultural differences in urban matters of theory and practice are often due to differences in language (disturbs happen between languages and how they generate confusion about common words ambiguous meanings, such as “city”, “urbanism”, “plan”, “project”, “development”, “speculation”, “common”, “liberal”, and so on…). So as to clear epistemic base regarding ‘Public Space Service System’ (this project) we must clarify what is Public Space and what is a Service System.

Although ‘service assets’ concept referred to Public Space(s), basically have identical expressions and meaning regardless of regional or local diversity, in some environments they may not correspond specifically to the same thing – just to give an example, in many Latin American cities, sidewalks are privately owned and some streets may have entrance gates – is it a contradiction? On the other side, if we see a difference between ‘public sphere’, referring to interaction areas of social life (Habermas, 1989), and ‘Public Space’, referring to physical spaces, may we correctly word both the same way? So wording precision is needed both in Latin and English expressions, regarding fields of media and ideological concepts (like the meaning of “publicness – the quality of being public” that may translate as “publicity” - “advertising”).

The same is true for older concepts: such as the “Commons” notion (more specific in English expression), meaning an open property, accessible, usable and cared for by a community, while “Public Space” means “publicly used, cared, managed…” and in specific cases “owned by public authority”. It may then be more effective a definition as “commons”, when there is less than an “ownership” meaning, but more than a “functional” meaning. Anyhow, when we say something is “Public” that is understood as something that is not personal, but somehow shared, referring to a community group, or else to everyone.

Sharon Zukin (1998) while naming gentrification and privatization as the “USA model”, expressed it with the example of New York “success” of Collective Space (like Times Square, Nike Town, Bryant Park), as specific demonstrations of a perversion sense of what is “Public” in Public Space (Figure 7).

Figure 7 – New York perversion of what is “Public”: Times Square, Nike Town, Bryant Park.
(Source: nycgo.com, nyhabitat.com, formatmag.com)

In what regards notions of “service” and “public value”, they generally refer to what is “public”, or to a “public character”, that everyone may commonly expect from Public Space, although some “nuance” may exist between political interest, ideological interpretation and lay people discourse, in urban matters.

Regarding language in technical literature, it refers to Public Space as the type of open and freely used spaces in urban context (sometimes related buildings fronts, named as “urban landscape”, option that could be rejected by professionals) and a Public specification is different from Collective (privately owned spaces, opened to more or less free use or passage by people generally referred to as clients, rather than users or citizens). Differences between “service” notions may exist between the understanding of Public Space values in connection with Economy subjects (service as trade), and with Social subjects (such as in public services). Finally, in Urbanism, Engineering or Ecology disciplinary areas, “service” meaning is generally equivalent – either in concepts regarding infra-structural service, eco-system’s service, or urban morphology service, with the acceptance of Public Space as a service concept – an ethical base for administration’s accountability, defining urban citizenship as its final objective, within an urban deliberative process.

Despite its importance and its central role in the city, Public Space turns out to be the result of many different actors, agents, processes and contexts that are not always competing, but collaborating. The ability to assess this diversity of interactions, conflicts or synergies, should be part of everyone's goals - not always to solve these issues, but to make them more understandable and intelligible, as contradictory parts of urban life. So we may define a Public Space System as a spatial mode of organization that serves citizen’s concerns and needs. Integration of space dimensions appeals to urban citizenship as the common place of “all of us”. This means (such as in Remesar, 2000), regarding Urban Design, that it doesn’t have to be made for people but with, or by them, if citizens actively participate in decisions. So public authorities and professionals must regard benefits coming from Public Space’s service and become better facilitators of the “publicness” that they serve, through Public Space Service Systems.

“If the public authorities think and act like private firms, it means their basis for decision making would also be similar to that of the private sector firms, which is primarily to seek exchange value. This would enable them to meet the demands of the economy, but would reduce their ability to meet some needs of the society, especially that which cannot be met through market mechanisms, which need public support. The remit of the public authority, therefore, is to provide use value, and to strike a balance with exchange value, rather than be primarily driven by it.” (Madanipour, 2006)

6 CONCLUSION: PUBLIC SPACE EVALUATION IS AN INTERDICIPLINARY TASK?

As said, Public Space production still lacks an assessment practice focused on the services provided to common spatial needs: what is the kind of organization designed to provide them, with what costs and benefits being at stake. Specific goals should be defined to promote some kind of 'liability' of urban design shared values regarding public expectations (all actors and all users, comprised in a "citizenship" concept of stakeholder) and also public administration who funds, programs and delivers most of space products.

How are values and services assured and how do they relate to stakeholders' will? PSSS at the least shall upraise and clarify assessment questions, based on needs and resources provision, scale organization, integration, continuity… between other systemic concepts, while regarding public space values.

Figure 8 – Afurada, Vila Nova de Gaia. Urban systems shared space: Infrastructure+Landscape+Public Space. (Source. Adam Jones, Wikimedia commons)

What shall be our aim, regarding Public Space systems' interdisciplinary evaluation process?

As an interdisciplinary practice subject, Public Space and its multidimensional approach may express its potential (and limits) as a spatial services' provider – that is its central character and attribute to be assessed. Other relations express service values in time, such as continuity, adaptability, scale… A system that connects, relates and often coincides in space, with other systems – landscape, infrastructure, communication and other, organized around a set of institutional relations between different kinds of needs' understanding, disciplinary knowledge convictions, legal constraints, economic resources, design practice.

Decision making process involved in Public Space production must be interdisciplinary and democratic. Its assessment is a spatial integration production practice, by recognition of space's public values within an interdisciplinary rational, concepts and tools. To understand social, economic, environmental and cultural values of urban systems, a multidimensional assessment of overall value of Public Space is necessary. But such assessment must also be based on common claims of rights – sharing participation and legitimacy of public value, have to be defined, characterized and organized, as part of space production practices.

"There are pressing needs that public space can help to satisfy, significant human rights that can be shaped to define and protect and special cultural meanings that it can best convey. These themes (…) reveal the value of public space" (Carr et.al., 1992)

Democratic participation in Public Space governance is something of a different nature than a "performance", separated in various disciplinary fields and several service indicators – from street life to transportation mobility, from ecology to social cohesion, from public art to economics, from cultural activities to infrastructure, from communication to landscape and more… Most likely, we can't evaluate all actors and partners' satisfaction, trying to define public value as a measurable or a design quality proof, where all social groups could recognize themselves as the central stakeholder, in decisions, resources and

so on. A Public Space system is mainly a structuring network (as in “The grid is the generator” Martin L., 1972), an organization of services provided as a hole, to all users, and it must be assessed in that quality.

In practical terms, creating public value relies upon taking an approach to the delivery of public services, through the principles of equity, accessibility and participation. Specific PSSS intents to develop references of public space service assessment, shall be useful for:

- diagnose of public space systemic services real and/or potential benefits in different contexts;
- support for strategic public space decisions in planning management and investment program;
- improve governance integrating stakeholders shared visions regarding what are the public values;
- public space rational reference of production, ex-post assessment on goals, expectations and results;
- support a “road map” for urban policies focusing on public space service value, advocacy and voice.

We have defined Public Space service value, not as a mechanism but as an operative instrumental concept. To conclude we need the understanding that Public Space best characters should arise from its systemic and multidimensional approach with a users’ centred rational, arising from service provided and not from a set of undefinable qualities, nor from a ‘value’ transaction of ‘public space commodities’.

As such, a new meaning arises: that Public Space has a diversity of contradictory stakeholders (all those who have a part in it) with conflicting interests. So, when we use the singular form – “value” – we could be referring or be understood as meaning just one of the values (eventually the one arising from “economic transaction value”) but it could also represent another level of Value, meaning citizenship. For that, the commons need procedural and deliberative methods with governance platforms agreed upon.

“To think about the city is to hold and maintain its conflictual aspects: constraints and possibilities, peacefulness and violence, meetings and solitude, gatherings and separations, the trivial and the poetic, brutal functionalism and surprising improvisation. The dialectic of the urban cannot be limited to the opposition centre-periphery, although it implies and contains it. (…) In thinking about these perspectives, let us leave a place for events, initiatives, decisions. (…) All the hands have not been played” (Lefebvre, 1985).

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ID 1426 | THE ROLE OF PUBLIC SPACE SYSTEMS ON URBAN TRANSFORMATION: A REVIEW ON LISBON SOUTH BANK REGENERATION PROCESS

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1 INTRODUCTION

Many urban regeneration processes, today, use public space as the main ground to implement urban transformation policies – economic, social, cultural, etc. – and deliver valued benefits. Recent discussions about public space relevance in contemporary urban dynamics – privatization, gentrification, etc. – are also a reflection of its role, not just as political or institutional terms, but acknowledging itself as an “urban value” (P. Brandão, 2005; Portas, 1999). These initiatives include from central and historic cores to former industrial areas, from large waterfronts to small scale projects for local communities, which encompass several urban dimensions, dynamics and stakeholders.

As urban areas grow, other typologies of public space arise – as transport interchange, shopping centres, waterfronts, theme parks, etc. (P. Brandão & Remesar, 2004) where categories of public-private-collective are mixed together, in a wide range of activities and urban settings. Public space’s traditional purpose (meeting and making social connections) is often colonized by trends of leisure, consumption, movement or marketing. As urban areas spread, public space may lose its central role of structuring and anchoring urban activities. Does this mean a possible crises or disbelief on public space role in the urban process? Or a need for a new approach?

Regardless of this strategic importance, it is not uncommon that public space projects still focus on isolated units or sectoral actions related to mobility, environment, energy, social cohesion, risk management... This may be related to a funding source, management structure, stakeholders’ action, or a trend favouring appealing urban areas. Frequently they lack integration with other urban systems to provide sustainable social, cultural and economic returns. So despite the growing diversity of places and urban contexts, dominant views of planning, designing and researching public space still focus on traditional typologies - the square, the park, the market – and still target local scale - the neighbourhood or

close proximity – even though urban structures are extending greatly. Finally, the assessment of public space role in urban change is commonly based on the consideration of a sum of units, not considering wider and interaction capacities.

New approaches are needed to address public space, as it is faced with these issues of discontinuity, lack of interaction and outgrowth of its traditional scale. The aim of this paper is to present a systemic perspective on public spaces and their role in urban change. This growing interest on the systemic approach to urban features is now developed concerning public space and its interaction capacities in urban systems .

This discussion is supported by presenting the study case of Lisbon South Bank regeneration process. This part of Lisbon Metropolitan Area grew and developed mainly due to its strong industrial background but today is has a larger diversity of urban contexts and mixed patterns of growth and decay. In the last decades major efforts for urban regeneration were made, and many actions included public space transformations. We register the emergence of an approach on public space not only focused on neighbourhood insertion and local focus, but as a part of larger networks of relations and services.

The paper will first address the relevance of a systemic perspective on public space, through a literature review and example discussion, developing a contextual and conceptual framework. Further we will analyse Tagus South Bank by a survey and empirical work , creating a time-line of public spaces and urban regeneration process (projects, policies, planning documents, etc.). Finally we examine the growth of a systemic approach on public space understanding, production and use, discussing its suitability for urban research and urban design practice (Pinto & Brandão, 2015).

2 SYSTEMIC PUBLIC SPACE REFERENCES

The diversity of urban fabrics and related problems is translated to the production of public spaces: “What is clear is that contemporary trends in public space design and management are resulting (over time) in an increasingly complex range of public space types” (Carmona, 2010, p. 172). These new multidimensional facts present several dilemmas: growth of scale and distance (dispersion), growth of complexity and diversity (indeterminacy), and growth of non-systemic actions (disruption) that call for new ways to address public space role within urban transformation. Can a systemic view of public space address this gap?

Most definitions of system emphasize a 'complex whole', a 'set of connected things or parts', an 'organised body of material of immaterial things' and as a 'group of objects related or interacting so as to form a unity' (McLoughlin, 1969). In this set of interconnected parts, each part can be seen individually, and also can be considered within another wider system. Interaction between different parts and the systems complexity guarantees its functioning as “The whole is other than the sum of the parts”.

There is a growing interest on the systemic approach to urban features – especially in relation to ecological and infrastructural aspects. But the parallel between systems and cities and urban development can be easily found throughout urbanism: city as a developing organism or ‘evolving’ in relation to its environment (Geddes, 1915); network-oriented thinking in urban planning (Dupuy, 1998 refering Cerdà, Arturo Soria y Mata and others); a view of the city as a system that evolves (McLoughlin, 1969); urban complexity appreciation (Alexander, 1965; Jacobs, 1961; Lynch, 1960); the rise of the network society (Castells, 1989) or the study of functional and spatial structures of cities and the relation between them (Hillier & Hanson, 1984).

In this systemic view, the different sets of components have to establish connections in order to form a system. They share structural elements – links, networks of relationships - understood in a dynamic way, since they respond to ever-changing conditions (Dupuy, 1998). So if the city can be perceived essentially as a system, thus the essential structure that guarantees relations and dynamics has to be public space.

Therefore public space should be considered, not as a sum of isolated space types, but as a network of places (Pinto, 2015), with shared set of properties, interdependences and interaction. A complex system “a system of systems, where layers of functional networks – infrastructural, cultural, economic, and environmental – intersect and complement each other in a mutually reinforcing and beneficial way.” (UN-Habitat, 2015, p. 42). From this starting point further development can be made.

By extending the notion of public space to a systemic idea we are enhancing its interaction potential: the infrastructural system, the landscape system and the public space system, build a city, integrating hardware and software. Such features are also the more lasting elements of urban fabric, supporting transformation over time (and enabling the systems survival). Some clear examples illustrate easily this: a street is still a public space even if it extends for miles (as in Manhattan, Paris or Barcelona), if it integrates intermodal transports, includes sewage networks or if it is a tree-lined street housing different bird species. Nor do we discard a public space perspective on many transport systems, or on parks systems.

So ecological views of public space refer to natural features and natural life supporting systems in the city - as wildlife, water courses, green structures, etc. – continuous structures that can be fostered and integrated in urban environment, so they can provide us with more and better goods and services. Infrastructural views of public space include, by definition, many sectoral system and utilities that frame and support urban life (such as road, transport, sewage, drainage, energy, etc.)

Each of these different perspectives (A. L. Brandão & Brandão, 2017) – public space as interaction, sharing and identity capacities, infrastructure as a mobility facilitator, urban activity support and landscape as production potential, ecological sustain) – offer several functions and services that can be valued and assessed, either by tangible on intangible aspects.

In fact the public character (of public space) comes to a large extent from the integration (or combination) of services and values not only with regard to its morphology (physical structure) but also fostering functional (activities and users) and symbolic (meaning) sense. This character does not derive from size or scale (proximity) but from interaction (common space).Thus, in addition to the more obvious physical systems that can be identified in the city – as ecological systems or the various infrastructures - we should also frame systems of meaning and of communication, related to the software dimension of public space.

Can this perspective be fostered and implemented in policies, development planning and public-space driven strategies?

3 LISBON SOUTH BANK TRANSFORMATION PROCESS

Lisbon South Bank area urban growth was sustained by industrial development and later by suburban dynamics. Some of these processes have been anticipated or succeeded by planning instruments and structuring projects, while others have “bypassed” legal planned actions. As result of rapid and uncontrolled urban expansion, many spaces are characterised by disconnected parts or poorly designed public spaces, similarly to several south European urban change processes. Recent urban strategies have tackled some of these deficits, developing regeneration actions. What was the role of public space on this transformation process?

3.1 THE RISE AND DECAY OF THE INDUSTRIAL CITY

Within the South Bank area, urban nucleuses were traditionally located close to the estuary, with river accessibility to Lisbon, rooted in fishing, trading or productive activities. From the early twentieth century, investment on industry and port activities lead growth around these centres, "fed" by migration from rural areas to these "new urban areas”. These industrial areas also promoted over time, both the settling of other industries and social and cultural services to workers, strengthening the bond and identity relationship of the entire population.

During the "Estado Novo" dictatorship, several urban plans started to be developed for this area (in the 40's and 50's), to plan industrial development and provide housing and facilities to a growing population. Most plans were not implemented (due to financial and operational difficulties) yet urban centres continued to expand, many of them based on uncontrolled allotments process or linear sprawl with poor urban qualities.

Some exceptions in planning actions were undertaken: (1) some parts of Costa da Caparica and of Almada’s Civic Center urban plans and (2) some initiatives of working-class (or low income) housing neighbourhoods. The firsts were developed in a garden city urban scheme, as suburbs of Lisbon,

combining housing areas, with leisure and green space: Costa da Caparica as a touristic area, Almada as a peripheral nucleus. Almada's urban plan was further developed including a set of central public spaces – Renovação Square (today

Movimento das Forças Armadas Square), Civic Center Garden, D. Nuno Álvares Pereira and D. Afonso Henriques avenues has urban structuring elements. The seconds aimed to tackle the insufficient housing offer: in Barreiro workers quarters were built by industrial companies (CUF and Rail Company); in Barreiro and Almada public housing initiatives were developed. Social segregation was common, but some development included facilities and services, but in either cases new developments were an "island" within existing urban structures.

In these decades we can also find references to some gardens and central parks, designed by relevant landscape architects. In 1939 opened Oliveira Salazar Park (presently Catarina Eufémia Park) as part of new urbanization area of Barreiro, Coreto´s Garden in Alcochete was designed in 1953 and Montijo's Municipal Park was designed 1956 as part of the new Court building surrounding. These spaces are probably the result of a sum of wills and particular cases, rather than a policy or strategic action.

3.1.1 SUBURBAN GROWTH

In 50's to 70's public works policies focused on infrastructure and economic activities conducted the 2nd phase of industrialization3. In the 60's industrial development reached its peak with socio-economic and cultural implications. Although depending from large public investment (Planos de Fomento), this production model promoted other forms of private investments (mainly housing) furthering suburbanization – particularly boosted by a bridge connection to Lisbon in 1966. New accessibility, demographic growth and land availability spurred urbanization, mainly through illegal (or largely uncontrolled) allotment processes with a variety of housing typologies, but clearly with no adequate infrastructures, facilities, public spaces or urban amenities. Lack of autonomy and incapacity of local authorities to manage urban growth resulted in a complacency with these process. In some areas these deficits still endure despite major efforts in qualification.

In this scenario of urban planning inefficiency, public space projects are not common. Nevertheless in the 60's and 70's the ones that got built have more relevance within urban structure - Bento Gonçalves Avenue's Park in Barreiro (1961) – and definition of an urban green structure - Moita's Municipal Park (1971).

3.2 DEINDUSTRIALISATION AND DIVERSIFICATION

In the 70's, several changes (economic crises, political instability, etc.) drove deindustrialisation: many industries progressively and over two decades were decommissioned or abandoned, in a disordered process. In the first years of the democratic period, lack of tools and adequate funds made urban planning action rather difficult, consequence of strong social pressures for policies to focus on adequate housing, infrastructure, public amenities and transportation. Several municipalities begin their territorial planning process, whereas the priority action was on urgent specific problems and populations support: basic sanitation infrastructure, water supply, school facilities, housing support, converting illegal housing, accessibility, waste collection, etc.

Later developments (80's, 90's) consolidated the centre-periphery model, reliant in Lisbon, with accessibility infrastructures, land availability, but in addition the already present real-estate "suburb" dynamic, other processes begun anchored in service economy or increase in commerce and logistic investments. Recently created urban planning system (Plano Director Municipal) was the main product (and main goal) of municipal urban planning: plans were drawn up for the entire South Bank: Seixal in 1993, Barreiro in 1994, Almada, Montijo and Alcochete in 1997. Despite the effort, PDM somehow lacked management and predictive capacity as most territories were already urbanized in a deregulated manner and without adequate infrastructures. Public space, urban design or local actions were not a priority.

3.3 URBAN REGENERATION ACTIONS AND PUBLIC SPACE

Efforts had to be made to reverse the significant deficits inherited from several decades of deregulated growth. During the following decades, important investments (mainly thought EU's funding) start to change the disqualified and damaged image of the South Bank area. The driver of change was the success of Lisbon's World Exhibition in 1998, in which urban design and public space projects were held responsible for quality of built environment and set new standards for quality of life.

Important road and rail infrastructures improve internal connective as well as links to Lisbon; better accessibility rapidly attracts commercial sector; investment in cultural, leisure and sports facilities and finally urban regeneration actions, including public space projects. Municipal strategies set an emphasis on urban image requalification, public spaces production, identity and cultural aspects in physical interventions, environmental recovery and natural spaces, etc. In the next pages, we detail these different actions.

3.3.1 HISTORICAL CENTERS AND URBAN REHABILITATION

Expansion cycles disregarded South Bank's historic cores, so rehabilitation of these area was largely needed. Most actions include not only built environment interventions but also (some more than others) economic and job creation incentives and social, tourist, nature related initiatives.

The Nova Almada Velha Urban Rehabilitation Program (1996-2000) in Almada brought together economic and social promotion actions with physical requalification interventions (Figure 1). New public spaces were created or recovered – outdoor spaces of Old Almada, Jardim do Rio and Casa da Cerca's Botanical Garden - new connections were ensured – watefront connection from Cacilhas and Boca do Vento public elevator. Later on Almada Velha-Ginjal Urban Regeneration Partnerships (2008-2012) initiative, carried on central spaces requalification in Cacilhas' area, including cultural animation activities and boosting the area's economic promotion (tourism, leisure).

Other actions in urban cores are linked to traditional trade revitalization. Examples include interventions featured in Montijo's Downtown Project - redesign of Praça da República (2001), pedestrianisation of some commercial streets or placement of new street furniture. Or partnerships with private actors, as the requalification of the of Barreiro's central market and surrounding area, developed together with a nearby shopping centre.

Figure 1 – Nova Almada Velha, Almada | Figure 2 - José Afonso Park, Baixa da Banheira
(Source: Ana Brandão 2015)

3.3.2 WATERFRONTS

Since the 1980´s municipal action started to prioritize actions in waterfronts areas, strongly embodied in local identities linked to river activities, to foster recreation and leisure functions.

This intention is first put into action by Moita municipality through projects and planning instruments (e.g. land acquisition for green spaces, tidal mills recovery, riverfront urban studies, etc.). The result of this effort was José Afonso Park (1993), in Baixa da Banheira, a green public space that redesigns the entire urban connection with the riverfront, together with semi-natural spaces and important facilities make a unique

design in its surroundings (Figure 2). This attention for quality of riverfronts had continuity on other urban areas (Salinas Park in Alhos Vedros, Canoas Park in Gaio, Picnic Park of Rosário's river beach, etc.).

In 2001, this strategy led to the elaboration of Pró-Tejo - Riverfront Improvement Program, which set guidelines and projects for integrated municipal action. Public space projects were developed (2006) in central Moita: recovery of the Caldeira (Figure 3), redesign of Marginal Avenue, new waterfront promenade and sewage and drainage networks renovation. Recently, another waterfront link was assured, connectioning central Moita to Rosário's Beach with environmental recovery actions and foot and cycling paths creation.

During the 2000s other municipalities also developed actions or strategies related with waterfronts. In Seixal the strategy was to develop a connect waterfront promenade around its Bay - Seixal, Arrentela and Amora – but implemented in several parts over time. This public space had great impact on this area image, identity promotion and acts as meeting point for several neighbourhoods. The following Valorization Plan of Seixal Bay completed and consolidated this strategy with a set of integrated projects regarding environment, tourism, economic activities, urban regeneration, cultural and social promotion (Figure 4).

In Barreiro investments were made in the riverside areas of Verderena's and Santo André's parishes – known as Recreational City Park (2008). The project included the restoration of Caldeira do Alemão, riverfront connections, street redesign and connection to the City Park. Following these actions was developed a Waterfront Municipal Program (IMPAR), which has drawn a global and integrated vision Barreiro's riverfronts.

The north part was qualified through Repara - Alburrica's Regeneration Program, with actions of physical requalification, economic, social and cultural promotion and Alburrica's area qualification (pedestrian paths, beach recovery), requalification of avenues and public spaces associated with facilities.

In Montijo was developed in 2001, the Riverside Structuring Plan (PEZOR), a connected set of environmental and urban regeneration projects encompassing 267 ha. Only some of them were carried out including: the relocation of the ferry boat terminal, restoration of Carlos Loureiro Municipal Park, the Tide Mill recovery of and redesign of central Montijo's waterfront. Despite the relatively small dimension of the redesign waterfront (compared to other municipalities) it transformed the city's image and its tourism and leisure uses.

In Alcochete was developed an Urban Regeneration Operation encompassing the entire municipality riverfront. Some of the projects were implemented by the Regeneration Action Program: riverfront redesign, central public spaces and traditional areas redesign, connection to cultural and social facilities, environmental promotion centre.

Almada's waterfronts public spaces have a rather distinct character given the municipality's characteristics. While the seafront was subject to an extensive urban project (see 3.3.5), the riverfronts have been redesigned within historical cores regeneration actions.

Figure 3 – Moita's Caldeira, Moita Figure | 4 – Seixal's waterfront, Seixal
(Source: CM Moita's site)

3.3.3 PARKS AND GREEN STRUCTURES

Despite the construction of some parks and gardens during the industrialization years, urban growth far exceeded the catchment areas of these spaces. Thus, with a new focus on environmental, landscape and socialization concerns, parks and green structures have grown in number and dimension, in relevant locations and with important impacts on urban and ecological structures.

In Almada the design of Paz Park (1995) was made possible by a land acquisition process framed by a detail planning action (PP7/PP9 Partial Plan). The park plays an important role in social and leisure activities as a gathering element of various urban fabrics. The diversity of spaces and ecosystems also allows support of important wild fauna and flora habitats. Previously, the Comandante Júlio Ferraz Park (1987) made possible a green central space long planned for that part of the city. This policy of green spaces dissemination throughout the municipality also extends to other urban centres: Costa Caparica Park (2008, see 3.3.5), Sobreda's Multiuse Park (2009), Adventure Park of Charneca de Caparica (2009), Fróis' Park (2013).

In Seixal, Paivas Park (1990) was one of the first green spaces to be set in a very dense and uncharacterized urban fabric, bringing new uses and nature features; while Quinta dos Franceses Park (2001) was developed with activities and functions related to the riverfront and with new cultural facilities. Barreiro's City Park (2000) takes advantage of the grounds of an old cork industry complex, linking several urban areas with natural spaces and various sports, cultural and leisure areas.

At another level, the definition of the metropolitan ecological structure advocated by Regional Planning (2002) foresees its implementation at the municipal level, with the definition of green and natural infrastructures. These municipal ecological structures, can diversify green spaces and connect them in network system. An example is the Salgueiro's green infrastructure in Montijo that it is developed along a water course and is framed in different ways in the urban network.

3.3.4 MOBILITY SPACES

Regarding mobility there is diversification of actions, not only focused on road infrastructure and car movement, but seeking greater compatibility with other transport modes, including soft mobility and with public space.

The construction of light rail network – Metro Sul do Tejo (MST) is an example of this change, aiming to connect the municipalities of Almada, Seixal, Barreiro and Moita (at different phases) and strengthen cohesion (Figure 5). The first part was inaugurated in 2008, articulating centrality areas and transport interfaces within Almada's municipality (reaching to Seixal's municipality) throughout very different urban fabrics. Several restrictions (budget and operational) limited the completion of the network. The design of a dedicated lane and the insertion in consolidated urban fabrics led a specific public space projects design, but with mixed results: in some cases new joints and easier connections are promoted, in other incompatibilities still persist. Despite these weaknesses it has potential for connecting several urban units and promoting urban mix.

Several ferry terminals were relocated or expanded with a park & ride logic - Barreiro (1995), Seixal (1997), Montijo (2002) - benefiting from the construction of large parking lots. Despite ease of access and connection to cars, it disregarded other transport modes and proximity to other urban amenities.

Mobility is also integrated within other regeneration actions: car traffic mitigation is a subject especially in historical cores – e.g. creation or extension of pedestrian areas - cycle paths and footpaths are design in new public spaces – nature features, waterfronts, avenues. The majority of these features are often isolated and fragmented, nevertheless present potential for further linkage. An exception can be found in Trafaria-Costa da Caparica cycle path. In a tourist area it connects the ferry boat to Lisbon with a sequence of urban beaches and leisure areas. The path follows the existent urban structure, connecting a diversity or urban fabrics, public spaces and uses. As a result, the cycle path comprises different sections and designs, ensuring connectivity and space for recreational activities and social interaction.

Figure 5 – Light rail network Metro Sul do Tejo Figure | 6 – Costa da Caparica urban project
(Source: CMAlmada, Flickr)

3.3.5 URBAN PROJECTS

In addition to local government regeneration actions, larger projects were develop by central administration – as the POLIS program (for more information see MAOTDR, 2007) – based on urban and environmental requalification. In the South Bank it targeted Costa da Caparica – an urban and touristic hub of Lisbon Metropolitan Area, encompassing a large extension of the seafront and some related inner areas (a total area of 650 hectares). The urban project pursued various actions: urban design (beachfronts requalification, green structure and new public spaces), improvement of residents' quality of life (new social facilities, re-housing), touristic valorisation (dune recovery, new accesses and hotel units) and improvement of mobility and accessibility (traffic restriction, soft mobility and intermodality).

A strategic plan defined various action areas and structuring projects, corresponding to each one a Detail Plan . The first phase of the urban project was completed in 2008-2009, with the construction of the Costa da Caparica's Park, redesign of public spaces in the seafront and of urban beaches facilities (Figure 6). Further completion of planned actions extended over time and encountered several difficulties.

4 LISBON SOUTH BANK TRANSFORMATION PROCESS AND PUBLIC SPACE SYSTEM INTERACTIONS

Despite the South Bank's industrial growth built environment disqualification, some public spaces (mainly small parks) were built in central zones, with a strong socialization role, urban image and even urban growth structuring. The suburban expansion occurred in the 1960's, mainly after the bridge connection to Lisbon, along with new accesses. It started mainly in Almada's and Seixal's municipality, but in the 1970's, 1980's and 1990's, the suburbanization process extended throughout the South Bank, with legal and illegal processes, extensive in some areas and intensive in others, but invariably unstructured and feebly equipped.

Since the beginning of the democratic period, the redesign of existing public spaces and construction of new spaces ones became a priority, leveraged by different mechanisms (municipal initiatives, EU funding, central government programs). Public space action has been a part (often instrumental) of other public policies regarding economical dynamics, city marketing, social cohesion, tourism, environmental and sustainability issues. New procedural characteristics can be identified:

- increasing diversity of public space typologies and uses;
- larger territorial scale, beyond local dynamics;
- identity features related to new views on industrial background or new reference images;
- new infrastructures as qualifying elements;
- environmental and economic issues as part or urban design problems;
- new design and planning tools – urban projects, strategic actions, engagement of different stakeholders.

Some municipalities already seem to make this a strategic action for urban regeneration, either by building continuous structures – waterfronts, ecological structures – or by ensuring "adequate coverage" in different

urban centres (e.g. parks in Almada's municipality). So can we acknowledge that public space as a system is already part of urban design practice (see Table 1) with several systemic characteristics in place (Batty & Marshall, 2012; Marshall, 2012; McLoughlin, 1969; Morin, 1987).

These examples of the South Bank area multipurpose spaces illustrate the potential of sharing by public space systems to address some issues on how can population's basic needs and expectations be met. Together these public spaces already form a relevant system, linking different urban fabrics, activities and structures throughout different municipalities. Several urban areas are faced with fragmented or mono-functional structures: many incoherent and in-between spaces remain, but existent potential can be further developed.

This means there is a systemic potential that needs to be assessed and fostered, so as to enable spatial and functional interaction. A research based on a combined action "systems of collective spaces grounded in the interaction with landscape and infrastructural systems" (Portas, 2004) can frame methods and tools appropriate for specific contexts.

	Dynamic & synergy	Scale	Diversity of uses	Systems connectivity	Tools & strategies
Almada's Civic Centre	Structuring urban growth	City-wide attraction and urban link	Economic activities, commercial, nature, leisure	Infrastructure, ecologic, symbolic	Planning initiative
Oliveira Salazar Park			Nature, leisure, sports, commercial,	Ecologic	Local action (isolated)
Montijo's Municipal Park					
Moita's Municipal Park			Nature, leisure, sports		Structural action
Nova Almada Velha	Urban regeneration	Metropolitan attraction	Economic activities, leisure, commercial social	Infrastructure, communication	Integrated strategy
Montijo's Downtown		City-wide attraction	Commercial, leisure	Infrastructure, symbolic	
Barreiro's central market		City-wide attraction	Commercial, leisure	Ecologic, infrastructure	Private & public partnership
Moita's waterfront	Urban regeneration and natural environment	Municipal link	Commercial, leisure, sports, mobility, nature, heritage	Ecologic, infrastructure, symbolic, communication	Municipal strategy (long term)
Seixal's waterfront					
Barreiro's waterfront		City-connection			Integrated strategy but local action
Montijo's waterfront					
Alcochete's waterfront					
Almada's waterfronts					Municipal strategy
Almada's Park systems	Natural environment and ecological connections	City-wide attraction and urban link	Nature, leisure, sports, commercial,	Ecologic, infrastructure	Municipal strategy
Paivas Park				Ecologic	Structural action
Quinta dos Franceses Park				Ecologic	
Barreiro's City Park			Nature, leisure, sports, heritage, commercial,	Ecologic, symbolic	
Salgueiro's green infrastructure	Ecological connections	Urban link	Leisure, nature	Ecologic, infrastructure	
Light rail network	New transport connections	Metropolitan links	Mobility	Ecologic, infrastructure	Central & local government
cycle path *Trafaria-Costa da Caparica*		Inter-urban link	Mobility, tourism, sports, leisure, nature	Ecologic, infrastructures	Structural action
C. Caparica urban project	Urban regeneration	Metropolitan attraction	Touristic, Leisure	Ecologic, infrastructure	Central & local government

Table 1 – Public space projects and their systemic characteristics

5 CONCLUSION

Public space is produced by many reasons as a result of many urban policies, planning and design tools, frequently integrating different time-frame and multiple stakeholders. This immense diversity is a reason of its great importance within urban structures, but is also a matter of conflict and fragmentation. We can summarize some of these issues regarding public space production, that could benefit from a more interactive and systemic approach:

- Diversity of users: "(...) public is not a single entity, as it is composed of different social strata, each with a different set of characteristics, interests and powers"(Madanipour, 2010, p. 9). This heterogeneity adds complexity in reaching a common understanding regarding public space, dividing responsibilities or seeking accountability. Public interest management, or negotiation between different interests, is also not a given, but it is a continuous manifestation in the governance processes of the public space, be they political, social, economic or design related.
- Offer and production dynamics: mismatches between the provision of public spaces, the services they offer and existing needs are frequent, as space transformation and society changes may not have coincident rhythms. Achieving coherence is difficult, especially if it is not anyone concern. So to ensure that public space remains a durable and relevant element in cities, temporal and flexibility aspects have to take in account. These are matters of planning, programming and implementation, either in urban growth scenarios or shrinking dynamics.
- Regulation and disciplinary practices: despite interdisciplinary motivation, the existing body of knowledge regarding public space is still divided in "boxes" of professional or disciplinary knowledge, as a sum of elements that do not relate to each other. Codes and regulations focus on sectoral aspects (mobility, environment, signage, urban furniture) ignoring the complexity of the public space and its interactive character, not facilitating or encouraging innovation (Urban Design Alliance & The Institution of Civil Engineers, 2002).
- So to support and develop a systemic perspective of public space is not wishful thinking, but a real necessity that has to translate to urban planning, design and management practices, and tools to address the flourishing complexity of public space production and change. This is the work that PSSS, Public Space System Service research project is pursuing. Preliminary findings in this field can steer further work:
- Public space is by definition relational, so its primary role is to make contact, to ensure interactions, to allow and facilitates coexistence, diversity and overlap. An interactive urban element, it connects and coexists with other urban systems – infrastructural, ecological, communication – integrating hardware (physical) and software (social) features.
- Public space, seen as a system of spaces, to serve all common activities in urban environment and many interactions (social, economic, environmental, ...) is based on the assumption that urban phenomenon depends on relations of actors and agents, with increasing intensity, diversity and complexity. By mapping spatial service values, their potential integration becomes legible within systems structure.

So a systemic organization of public space can be a basis for evaluating urban values – from proximity to the larger scale, from meeting and interaction, to mobility and exchange, etc. – acting as a reference in transformation process, managing change and balancing changing needs, actor's roles and resources, integrating different urban ensembles and natural elements into a common frame of reference (physical, social and symbolic). Integration is promoter of value, boosted by the diversity and synergy between system elements.

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ID 1430 | BORDERS AND DOMAINS OF PUBLIC SPACE FOR OPERATIONAL SUSTAINABILITY IN CAMPOLIDE

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1 INTRODUCTION

The present research intends to study and understand the problematic of the requalification of the public spaces in territories of high level of urban fragmentation. This phenomenon affects contemporary cities and takes place, essentially, by the forms of urban growth confronted with topographic factors and strong infrastructural presence. In this sense, we understand that the great advances of knowledge and technology, over the last two centuries, have caused profound changes in the urban landscape of the contemporary western cities. These transformations in the territory caused by the effects of the Industrial Revolution, mainly in 19th century, development of the railway systems which are assumed as an important socio-economic factor for the region they serve. However, its rigidity and low permeability has contributed to the creation of disarticulate spaces, only a few points of interface and relationship with the land crossing. On the other hand, the fluidity and permeability of road networks allow the rapid rise of these in the urban space. In the second half of the 20th century, it emphasizes a greater variety of functions at street level, where it reveals new ranges and road hierarchies. Thus, the street gains new meaning, assuming as a public space of greater complexity where there is a greater ambiguity of its areas and forms of control. The urban design trends have pointed to a broad and inclusive accessibility, masking many of the forces that promote arrays. It is therefore important to understand how the public spaces contribute effectively to social and economic cohesion. And, in this way, it appears the need to explore the boundaries and rules of use of these spaces beyond the constraints of their public / private control. It is this duality that we confront registration property, infrastructural barriers, difficulties in managing, sharing and overlapping of their areas. Thus, there is a need to increase public space requalification policies that consider systems of evaluation and project orientation supported by an operational sustainability. Where promote intervention strategies with interdisciplinary compromises and recognition of public space as dialog space and mediation of interests. In this way, a methodological support for research development is outlined, with a systematization of the theoretical problems of framing the design processes, the impact of accessibility infrastructures and the public space in fragmented territories. In this, emphasis is placed on understanding and critical reading on the operational capability of sustainability policies. For this, we proceed to historical cartography analysis, legislation and urbanization processes as key study and evaluation tools. In this context, it is assumed Campolide in Lisbon, as a territory test for defining a set of strategies that articulate the issues of urban fragmentation, with new types of public space and contemplating guiding factors for a sustainable intervention. In this perspective, a greater sensitivity to a landscape supported in various infrastructure systems is intended, which aims to better use of green systems and agricultural productivity by integrating them in urban renewal processes.

2 INFRASTRUCTURES, URBAN FRAGMENTATION AND SPACES OF OPPORTUNITY

The lack of enough road infrastructures and the consequent impairment of terrestrial mobility systems were, until the 19th century, a considerable obstacle to the growth of urban areas (Salgueiro, 1992). Only with the Industrial Revolution, it is that the street and the road had great changes, both at ground level and underground, gaining a scale and a completely new functional dimension. Thus, the introduction of industrialization allowed the rapid technological advancement and the development of accessibility of infrastructure, leading to the appearance of mechanical transport for public use in cities (such as tramways, electric cars, elevators and funiculars). At the end of the 20th century, a new revolution confronts the inactivity of urban forms and the organization of territories with the development of a huge network of infrastructures, information flows, goods and people. This was, in a way, advanced the concept of Plug-in City (proposed in 1964 by the Archigram group) that combined the architecture, technology and

society. Plug-in City (FIGURE 1) is not intended to build a city but a mega structure in constant evolution, incorporating residences, transportation and other essential services. These projects and ideas, even though they were never built, motivated several debates, offering a new approach to urbanism, reversing traditional perceptions of the role of the city's infrastructure.

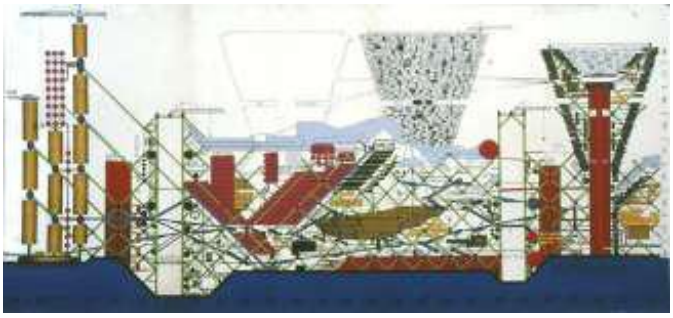


FIGURE 1 - Mega structure of the City Plug-in,designed by Peter Cook of the Archigram group, 1964
Source: www.archdaily.com/399329/ad-classics-theplug-in-city-peter-cook-archigr

This new form of conceptual approach highlighted several concepts related to the phenomenon of urban fragmentation, where Splintering Urbanism stood out (Graham e Marvim, 2001). This refers to how the accessibility infrastructures fragment the life and the urban fabric at the expense of certain interests. On the one hand, boost urban territorial expansion, but on the other, rise spaces without identity and with an absence of meaning. Therefore, it is important to thinking about the articulation of the fragmented, the divided and discontinuous (Jauregui 2004) through intervention strategies such as overlapping, hybridization and encompassing or concealment (Donini, 2008), camouflage, detachment, assimilation and fusion, pointing to the last one as the most promising and interesting strategy (Smets, 2010). These intervention processes allow greater cooperation between engineering, architecture and urban planning. Accessibility infrastructures play a key role in planning and urban design, as a determining element of urbanization (Solà-Morales, 1997) and essential process in conjunction with the surroundings (Allen, 1998). Thus, the relationship between these infrastructures unfold according to diversified logics, in which the mobility and circulation networks may now assume the role of infrastructure for urban growth and aggregation, and may represent a role of consolidation, reconfiguration or re-articulation urban fabrics (Allen, 1998). If on a large scale, these systems promote and connect privileged communication and connection spaces, with a number of urban capital gains (flexibility and speed, independence, transport of certain goods, etc.), on a more local scale, they create several disarticulate spaces between them and their surroundings. It is thus necessary to rethink urban design at different scales where it ensures a better dialogue between spaces, through better coordination and integration of the various systems of accessibility and infrastructure of urban public space. In this sense, we are presented, in La Ville Franchisée (Mangin, 2004), a vision on the conception of urban planning (FIGURE 2). Here we present the concept urbanisme du réel which is evident the predominance of the car as a means of promoting urban sprawl, plus the high level of zoning that make, in the author's opinion, the weaker and individualized city. It develops a virtuous and ecological urban model that aims to promote public transport and soft modes, and the linear urbanization as a base and preserving green corridors. But this model, l urbanisme du fantasme, as the name implies was seen as extremely utopian, since it promotes a city totally without cars. Thus, Mangin suggests a urbanisme du possible with a design that integrates and connects public spaces and accessibility infrastructure. Not only through the implementation of some restrictions on the movement of individual transport, as well as the promotion of public transport.

FIGURE 2 – Urban planning models proposed by David Mangin
Source: Mangin, David (2004). La Ville franchisée. Paris: Éditions de La Villette

Urban design should therefore be a process based on objective and well defined strategies, and its success depends on the consistency of the program, the degree of knowledge of the place, the methodology used, market analysis capabilities, as well as, the degree of involvement and community mobilization (Brandão, 2002). There are several authors who have been devoting himself to the study and design of public spaces, the main concern dialogue between the spaces and social life in cities. In Life Between Buildings: Using Public Space (Gehl, 1996) is presented to us the relationship between the usage patterns of spaces and spatial properties of physical environments, using the human dimension as the main analytical tool. And, later in Cities for People (Gehl, 2010), explains the methods and tools used in the conversion of certain urban public spaces, but always in a leisure and recreational perspective.

However, it is evident the need to improve the design and quality not only these spaces, as well as the introduction of components related to agriculture in an urban context (Lehmann, 2012). Thus, it is intended to introduce sustainability issues in cities. Rogers (1997) presents the fragility of the ecosystem in Cities for a Small Planet, highlighting the predominantly quantitative nature of the urban expansion process, to the detriment of the social quality aspect of the city's public spaces. Public spaces, according to the author, are the main urban elements from city reading, referring to public spaces where we felt like part of this, as is the case of Victorio Gallery Emmanuelle in Milan, the Ramblas of Barcelona, or the parks from London. Rogers also alludes to the importance of multifunctional spaces in intervention proposals in urban fabrics, since these are spaces that promote the coexistence of diverse activities and people. Also stresses the urgency of creating formal and informal venues, to ensure social interaction between people. And in this sense, become the fairest city, beautiful, creative and exposed to the open trial vision, as well as ecological and diverse.

3 SUSTAINABILITY AND URBAN PROJECT, CONTRIBUTIONS TO A PROJECTUAL OPERATIONAL

Over the past decades, the concepts associated with sustainability have revealed new approach places the issues of urban design and growth models and territorial development. The accelerated changes and speeds of communication and information about them have contributed to a greater awareness about their impacts and risks. This phenomenon leads to more critical reflection on the processes involved in the territory, especially for large infrastructure and forms of urban growth. The consumption of resources needed to support urban sprawl, especially after the energy crises of the seventies, has led to a greater sensitivity about the sustainability of our way of life (Rogers, 1997). Our cities represent some of the most extraordinary civilization achievements, but also weaknesses that demonstrate the risks of imbalances in relation to content and stakeholders that compose it. Not only the implementation capacity of buildings and infrastructure, but mainly to maintenance, monitoring use and even its transformation or demolition (Ferreira, 2016). Approaches to sustainability issues, although not new, gain new momentum in the 80's of the 20th century, the way they are currently framed. In this context, we intend to increase new insight into interventions in the territory, contemplating a more inclusive approach in the design process, reflected in lifestyle, considering the reference Leading the Inclusive City – Place-based Inovation for a Bounded Planet (Hambleton, 2015). Among the most basic pillars of sustainability are distinguished approaches on aspects of social, economic and environmental equity. However, despite the vast literature on the subject and even some reference legislation, there is a certain ambiguity and vagueness about the direction of change and the principles and policies operating of sustainability. In the perspective of the architect and urban planner matter consider, on the one hand, an integrated and generic view on the principles of sustainability. But on the other, establish a set of strategies and guidelines to report on the methodologies to consider the nature of a sustainable project. The concerns about some of the aspects of sustainability issues in the territory and the project are significant in historical references.

From the contents of the Vitruvius, considering the utopias of the sixteenth century, the social conceptions of the 19th century, where a community of Fourier, as Howard's Garden City, or even modernist avant¬gardes of the early twentieth century, with a radiant city of Corbusier or Broadacre City of Wrigth, among others. In the late 20th century, other theories attempt to find themselves by evoking specific spaces on sustainability, with particular emphasis on neoliberal ideas through utopias like Laissez-faire Town and On the City Celebration (Roseta, 1999). In addition to the various theories, sustainability discourses have been accompanied by the growing importance of urban resilience, eco-development, and the creation of various certification systems, such as Leadership in Energy and Environmental Design

(LEED). The latter are a space of opportunity to guide a more operational character about the sustainability applied to the architectural project and with some expectations about the possibilities of extension for the urban project. Among various contributions in this regard, it stands out even contents of report Try This Way. A series of articulated concepts to sustainability, point to the growing social awareness of the forms and processes to design and manage the territory and its resources. The resilience emerges as the need to assess the responsiveness of urban ecosystems to adverse situations and injury of urban dynamics, aimed at creating a stronger society, secure and confident, particularly when it is systematically confronted with critical scenarios, either by direct experience or by widespread access to information in almost real time. The eco-development issues focus on the need to ensure the basic needs of the population through adequate and appropriate technology to each environment, considering the different levels of complexity (Filho, 1993). The various concepts show the concern for well-being and solidarity with future generations, with great relevance to the environmental dimension. Among the various dimensions of sustainability into the design process, the environmental issue is one of the most relevant, polarizing the main attention. Considering its importance, we seek, however, an approach that integrates a greater range of factors. In this sense, we identify issues that highlight the importance of local intervention, the recognition of their network of relationships, showing on the one hand, the environmental context and energy (wind, sun, water) and on the other, human dynamics, where functions and mobility are particularly prominent. The emergence of a multifunctional and multidimensional city (Ferreira, 2016) or encourage diverse urban form is an idea reflected by authors such as Wheeler in Planning for Sustainability (2003). The question of analysis and design of scales, highlights the importance of local and global relations, but also the human comfort of consciousness, from its communal existence the areas of privacy, this is from the region, city, neighborhood, home. With the growth of cities, and more than half the world's population living in urban areas also puts up the challenge of ensuring the supply of the companies of the future, changing the traditional dialectic of rural versus urban and appealing to new paradigms that show that urban issues such as urban rurality? or rurbanization ?. In this context, it is recognized the importance of works such as Food and the City -Urban Agriculture and the New Food Revolution (King, 2012), or trends in edible landscaping policies, the challenges of sustainable urban agriculture, and a new food culture. These approaches and new urban-rural commitments are explored in Food City (Lim, 2014) and Future Cities (Ween, 2014) stressing the possibilities of green scaffolding or vertical gardens (Birkeland, 2008). In this context, it is important to rethink the ways of allotment and registration. Since the knowledge and historical recognition of its transformation can be an essential source for new change tests. Among the most relevant aspects of the need to bring rural and urban, there is the route that foods currently make from the place of production to the final consumer. This factor is a sensitive point to the models and processes of urban and metropolitan growth (Steel, 2013) evidencing the emergence of new relations and conceptions between city, agriculture and landscape. There is a need to risk processes and methodologies that contribute to develop design guidelines aware of new commitments on an operational sustainability. It is the context of each project one of the key aspects to start equating the guidelines, case studies are particularly relevant compared to generic positions or sustainability policies. Within the main challenges is the awareness of the relations between local actions and their global effects. Thus, the means of production relocation decisions for large distances from urban areas, which concentrates the largest population percentages, is one of the key factors of territorial and human sustainability. The primary factor, directly related to environmental issues and climate change, mainly by energy costs representing the transport of goods, shows a large increase in ecological footprint. In addition to this, home ¬work travel and alternative means of mobility are also representative of environmental impacts, including the reduction of comfort and human well -being. In this context, the quality of public spaces, the relationship between the various transport systems and the quality of the forms of urban production are other factors to consider in territorial planning and design processes. Sustainability has a strong cultural component, which also highlights the issue of its relations with heritage, questioning both the sense of preservation and innovation. Thus, inheritances should be an opportunity to integrate heritage with new constructions, where the old and the new constitute a challenge and an opportunity to balance the times and their forms, with a view to improving public spaces and good Social welfare (Rodwell, 2007). The various places and their contexts are the result of interpretations and summaries made with looks that have not integrated the fullness of its construction and designed to meet requirements that are likely to be quickly overcome and it is in this context that should emerge a positive view of the value of sustainability ¬humility in relation to past and solidarity with the future. Starting from the construction of an interpretive basis of the surrounding territory to intervene and production of summaries of the most important elements highlighting the existing content in strategic and plan documents, it is essential to produce guiding elements for a sustainable intervention that emerges from a critical reading of the context of each place and the meaning of your

project. We propose a compromise between the existing elements and recognition of its book value, environmental constraints, the infrastructure systems, among others, such as mobility, transport systems and public spaces network in the context of the framework of climate zones and factors social and economic conditions. A set of several factors should contribute to increase the knowledge of the territory and report on the development of a sustainable design options.

4 THE CAMPOLIDE PLACE, OPPORTUNITIES AND INTERVENTION STRATEGIES FOR A SUSTAINABLE TERRITORY

The unique features and biophysical conditions of Lisbon, as the valleys, the hills, the presence of the river and the irregular topography of the city, has always marked its urban expansion, particularly for the northern area. Marked by the potential of its location and defensive and commercial offered by topography and by sea, Lisbon was conquering surrounding rural territory, to its urban expansion, transforming the old neighborhoods in new urban areas (Salgueiro, 1992). Among the various areas of the city, Campolide is an opportunity territory, highlighting features that reflect the constraints of the traditional models of urban sprawl. This area of the city is currently an urban area still keeping some traces of rurality, which testify to its importance in the supply of goods and water to Lisbon. Between the Parque Florestal de Monsanto (forest park) and the consolidated city, its morphological structure includes a significant diversity of urban fabric and some gaps still to be defined. Among the various forms of urban occupation, are distinguished neighborhoods of single-family houses -small isolated areas with identity and own urban design, in contrast, the great bourgeois avenues and highways crossing, crossing old to the center connecting paths of city and separating some urbanization polygons. However, it is necessary to go back a little in time to understand its morphogenesis and the opportunities that this territory offers. In the middle of the 19th century, this territory consisted of two more concentrated settlements -one near the Quinta de Estevão Pinto (Campolide de Baixo) and another on the Cruz das Almas (Campolide de Cima) -and another more dispersed settlement along the Rua de Campolide (FIGURE 3), as well as the remarkable presence of the Vale de Alcântara (JFC, 2017). This valley, characterized as the most important physio-hydrographic element of the present city of Lisbon (Magalhães, 2007), has always been a strong barrier to the continuity of its urban morphology.

Legend:
1 Rua de Campolide
2 Cruz das Almas
3 Quinta de Estevão

FIGURE 3 - Topographical map of Lisbon and its suburbs, Duarte José Fava, 1807
Source: CML, LxLAB Adaptation

The first infrastructure that allowed the crossing of the accentuated slope of the valley dates back to the 18th century, with the construction of the Aqueduto das Águas Livres (FIGURE 4) still today the main reference element of Campolide (JFC, 2017), and even the city of Lisbon. The boundary of this territory was created by the administrative reform in the early 60's, and covers an area of 2.77 km2 where currently live 4,460 inhabitants. In 1960, Campolide had about 33,000 inhabitants, losing 50% of its population in 50 years (Censos, 2011).

FIGURA 4 - View over the agricultural fields of Campolide and the Aqueduto das Águas Livres Watercolor print on paper, of English origin, from the 18th century - Source: JFC

This phenomenon relates essentially to the decay of the main income of the activity of the population ¬agriculture -in part by the great economic and industrial momentum in the middle of 19th century. This technological advance allows, therefore, the implementation of accessibility infrastructures, both rail and road, in most European cities. Portugal, after a period of political unrest that marked the beginning of this century, tried to catch up with other European countries by modernizing the country's administration and economic development. It called, therefore, the period of Regeneration, being created a new ministry, of Public Works, which Melo de Fontes Pereira took charge. This new government gives the main impulse in the transformation of the territory from its infrastructural dimension. The implementation of a specific ministry for public works provided an administrative reform based on the definition of municipalities where the municipal authorities now have greater autonomy and responsibility, in addition to increasing the number of roads. Throughout this process, it starts the construction of the first Estrada de Circunvalação (ring road) of Lisbon, associating two functions: fiscal and military. This would consolidate a new territorial scope that had long exceeded the boundaries of Fernandina walls, past physical expressions of an administrative and space limit. The creation of this road establishes a location criterion associated with areas of adjacency and transition, accommodating new spaces of industrial development and equipment, which were excluded from the old center of the city (França, 1997). A part of Campolide was within the city limits and another out of doors (JFC, 2017). The relationship between being inside or be outside the administrative area of the city was reorganized in terms of a progressive specialization and functional segregation, but also of hierarchy and social differentiation. The need to make the most of property, therefore, leading the 19th century, Bourgeois to open urbanization fronts that would respond to the needs of urban growth and value the peripheral lands. With the first attempt to legislate urban planning in Lisbon, there is a need to draw up a Plano Geral de Melhoramentos de Lisboa (general improvement plan). This, despite not having immediate consequences, made it possible for the town interventions were seen as a set and influenced the urbanization of the late 19th century. Ressano Garcia, a Paris trained architect, thus defines a clear strategy for upgrading and expanding the city, defining the most comprehensive first plan for Lisbon (França, 2000). However, it is with industrialization and the great influx of people to the cities becomes an important business object. Land becomes a source of income and status (Salgueiro, 1992), and increases the value discrepancy between rural and urban land. The value of the latter results, essentially, from the relative location of the land and the type of activity (density and use) it may contain. However, it is the transformation of a rural land into urban land that generates substantial value added. Thus, the spaces along the Vale de Alcântara, until there intended to agriculture, are quickly transformed to supporting the implementation of a circular rail infrastructure in Lisbon, the Linha de Cintura. This converged on the valley territory (like Alcântara), not only because of the low value of land expropriation but also by topographical and hydrological facilities. This solution is recurrent in several European cities, where urban valleys and watercourses host major works of accessibility infrastructures (Rasmussen, 1967). In this context, relatively rigid design solutions are developed in the face of the slope and radius curvature limitations of the railway technology. The Linha de Cintura is, therefore, a disarticulate element of the surrounding and without specific preoccupations with architecture and urbanism. In the years of its construction, this element crosses lands outside the city still uncompromising urbanization and, with this, with a low social and economic dynamics. However, with the urban sprawl of Lisbon, this infrastructure has become an integral part of various planning areas and urbanization projects. Although there was a certain indifference to the presence of this new infrastructure in a space that would be crossed by the expansion of Avenidas Novas, functioning as a kind of dorsal, and not as a dorsal column, of the various

urbanizations at the time of development. A more integrated view of the various structural elements of the city is achieved with the architect and urbanist plan Étienne de Gröer which defined the major city development lines, with great emphasis on the area of Campolide. The landfill for the Avenida de Ceuta (where the Ribeira de Alcântara was developed, which was therefore converted into a caneiro), the Duarte Pacheco viaduct and the creation of a forest park in Monsanto with 900ha. These objectives defined much of what is now the city of Lisbon, although many have not been fully implemented, inducing new intentions and ideas for territorial planning. The works for the construction of the Avenida Gulbenkian, between 1960 and 1970, set out in Groër Plan, taking to population decline in Campolide, since they were evicted 540 families of the districts of Ribeira de Alcântara, part of the Calçada dos Mestres and Quinta do Tarujo. The intensity of urban expansion from Lisbon to the North is increasingly visible, but the projects for this are no more than utopias, some of them already since the time of the Marquês de Pombal, but have never materialized. Among the various proposals boldest reflected in this area, there is the extension of Avenida da Liberdade, understood as a process of building an identity for the new century Lisbon (Silva, 1931). The acceleration of urban transformation and social change, in large cities and towns, came to question deeply, methods and planning processes used in the 60s and 70s saw Lisbon thus its urban planning develop in witnessing proposals specific areas for the city with particular dynamics in the 1990s. These established the spatial organization model and the development strategy, as well as the classification of the soil and the rules and parameters applicable to the occupation, use and transformation of the soil (CML,1995). The infrastructural corridor present at the bottom and along the Vale de Alcântara, with emphasis on the North-South roadway and the railway infrastructure Linha de Cintura, on the one hand, has impacts on the population density of the parish; on the other, contribute to the modernization of a network accessibility that extends outside the city limits, allowing metropolitan and regional connections. Development of infrastructure, besides causing profound changes in the urban landscape and cause disruptions with older structural axis of the city is reflected in the identity transformation from places like Campolide, particularly fragmentation effects along the Rua de Campolide. In the late 20th century, began to develop in programs and cross-cutting urban projects that promote connection and mobility through redevelopment of public space and pedestrian accessibility programs, the introduction of energy efficiency programs in both public space as in municipal buildings and With urban projects, including green corridors (CML, 2012). One of the first references of a green corridor crossing Campolide, is a proposal elaborated by the Architect Gonçalo Ribeiro Telles (in 1976) denominated Green Corridor of Monsanto and, more recently, a complementary project that aims at the connection between the zone of Campolide and Alcântara. However, it is important to note the lack of cohesion in the design of such projects, as for its long intervention area can create spaces dispersed and fragmented among themselves (Pereira, 2016). Campolide became thus a transition area with a high level of urban fragmentation and planning models scattered and disconnected, as are the plan of the layout of the cases of Avenidas Novas and development of the urban environment from Avenida José Malhoa, ending abruptly in the Twin Towers. In this territory, the diversity of planning processes and forms of urbanization that gave support to the urban expansion were also evidenced, considering the specificity of the geomorphologic context and the technological developments (FIGURE 5).

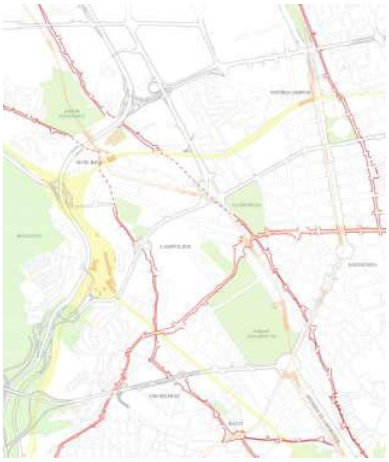


FIGURE 5 - Campolide framework in the city of Lisbon, with emphasis on the relation of accessibility infrastructures and public spaces - Source: CML, LxLAB Adaptation

In this sense, Campolide is assumed as an object of study and reflection for the definition of a set of strategies aimed at solving the problems mentioned above. Within the design and development of an approach strategy to project a sustainable aspect, we chose the environmental component in conjunction with accessibility issues, transportation and public space as the main guiding elements. These, however, are not associable from issues related to land use, heritage and urban regeneration, as well as the social component. The approaches to sustainable urban project necessarily include different content in functions of the scales of analysis. There is also the difficulty of transposing the policies and the principles of sustainability for the territory. In this way, the need emerges of a metolodological construction adjusted to the specificities of each place. The place of Campolide, of great rural and agricultural tradition, shows the importance of its ecological structure due to the low level of edification in some areas of this territory, and

assuming as a strategic space for new models of urban-agricultural occupation. The proximity of the green lung of the city, the Parque Florestal de Monsanto in Campolide reveals the need to understand the meaning of these hinge green patches and its impact on the design of the territory, having regard to its peripheral nature (FIGURE 6). This has resulted in a network of green corridors that are based on the interconnection of various areas of the city, such as the Monsanto Green Corridor and the Alcântara Valley Corridor. This network, however, is subject to constraints of inherited urban forms and achievement possibilities of permeable areas, as well as, a vision on the relationship between ecology and landscape. The ecological system of the city (FIGURE 7), being a complex system, should look for new commitments between the natural environmental aspects and human activities. In this sense, the protection of environmental values and resources should point to the need for an integrated vision between green systems, humid systems and built urban structure, considering the natural and anthrop risks, namely, areas with vulnerability to floods, susceptibility to direct effect of tide, susceptibility of occurrences of mass movements in slopes and soil seismic vulnerability.

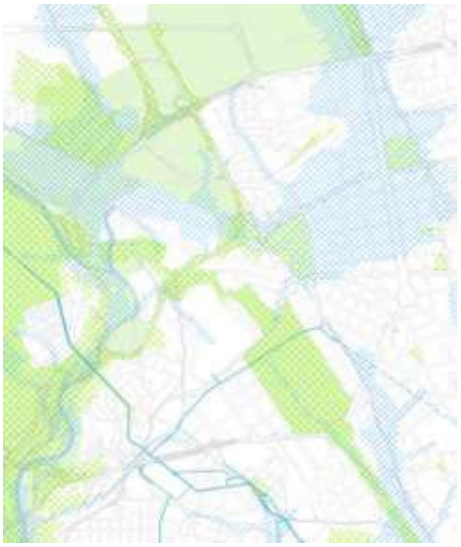


FIGURE 6 – Planning Plan - Municipal Ecological Structure, Municipal Master Plan of Lisbon, 2014
Source: CML, LxLAB Adaptation |

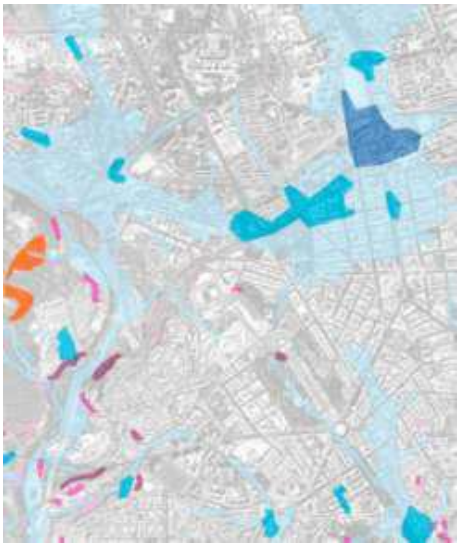


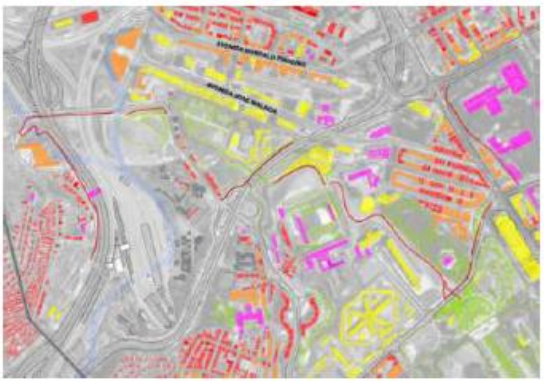
FIGURE 7 – Detail of the Planning Plan - Natural and Antropical Risks, Municipal Master Plan of Lisbon, 2014
Source: CML

The geomorphology that synthesized one of the main orientations of the forms of human occupation constituted, on the one hand, a condition of urban expansion and, on the other hand, induced the technological development for its overcoming through new infrastructural systems. Thus, the use of soil (FIGURE 8) evidences successive achievements on geomorphology reflected in the different models and forms of structuring the territory. These processes are visible from the compact historical city to the expansion of the bourgeois city or to the diversity of the urbanization polygons of the peripheral areas. In the process of urban expansion there is also the proliferation of public recreation areas and landscape framing, without an integrated strategy of the ecological aspect. Among the values to be taken in the areas of sustainability, heritage is assumed as one of the very important factors for identity construction of communities. The heritage (FIGURE 9) is a key factor to be considered in urban regeneration strategies, considering the recognition criteria and the articulation between pre-existences and new intervention proposals.

FIGURE 8 - Detail of the Planning Plan - Urban Space Qualification, Lisbon Municipal Master Plan, 2014
Source: CML

FIGURE 9 - Classified and envisaged patrimony, in the Town Planning Plan - Qualification of the Urban Area, Municipal Master Plan of Lisbon, 2014
Source: CML, LxLAB Adaptation

The models of urban growth and definition of urban structure has implications for mobility and accessibility systems and impact on energy consumption and CO2 emissions. Thus, it is essential to an evaluation of the effectiveness of the integrated form of transport systems and the importance of it in the quality of urban life. So Campolide presents itself as an area of opportunity to promote a critical view of the relationship between urban form, mobility systems and human appropriation of spaces. This territory was established as a border area between various forms of urban consolidation showing significant levels of fragmentation. These are particularly relevant in the project of public spaces and their forms of connection and mobility systems, mainly due to the discontinuities of the human scale. In this context, we propose some urban project intervention strategies, with more specific implications for the accessibility infrastructure and the public space where the introduction of sustainable operational measures is foreseen. In this way, it is intended to increase the functional diversity at the street level, considering its crossing character or smaller flows, as well as the valuation of exceptional elements at the level of the building. In the specific case of Campolide, it is intended to introduce public space strategies that include greater coordination between various factors. Comparing the avenues Bordalo Pinheiro and José Malhoa there is, despite the similarities of their profile, highly diversified urban environments (FIGURE 10). This last has a lower functional diversity, as well as a lower permeability to the level of deployment. Another factor is related to the large scale of the building, which also dominates, in this last avenue, buildings of services and hotels.



Thus, it is necessary to promote the inclusion of various activities at the level of ground floors, achieved through financial incentives and qualification of public space in an integrated manner. The design process of these territories emerge in a way still very segregated and linked to a very narrow interpretation of zoning, and they lack some sensitivity on the borders of the various land use. Thus, the design of the green corridor takes refuge in reducing ecological argument, ignoring the complexity and diversity of

contexts that involve, particularly the relationship with the public parks south of Avenida José Malhoa with Jardim da Administia International. The very idea of continuity underlying a corridor is not recognized at the level of the environments it should provide, yet assumes itself as a forced connection of fragments of green spaces.

FIGURE 10 - Comparing Avenida José Malhoa and Avenida Bordalo Pinheiro
Source: LxLAB Adaptation

The vision of public spaces in the ecological character or landscaping in the city has raised new questions related to its productive potential. In this context, Campolide presents itself as a territory of opportunity to dilute the effects of urban fragmentation, through the use of accessibility infrastructures such as agricultural production corridors -green scaffolding. There are also possibilities for defining new forms of appropriation of the less compact spaces of transition, which are quite significant in Campolide, where the fragility of articulation in the mobility issues is greater. Here, too, there are some uncertainties in terms of transport interfaces, and there is a huge untapped potential for creating or optimizing distribution networks for products, services and people.

5 CONCLUSIONS

The issues of urban fragmentation highlighting the infrastructural support have been the subject of increasing attention. These, however, are faced with constraints arising from urban conditions underlying its nature, showing a certain segregation of uses, which include security issues. These areas are revealing, often as a corridor spaces, this feature has been made more as a constraint than an opportunity to establish relationships and intermediate connections in the various urban scales. The idea of territorial infra-structuring also often appears detached from the environmental issue, or even an integrated approach within the general and operating principles of sustainability. Many of the interstitial spaces of infrastructure corridors, assume a generic urban voids, urbanization of polygons, without a strategic vision that articulates the relationship of infrastructure corridors with areas of ecological value and agricultural, contributing to strengthening urban resilience and promotion an effective ecological development. Campolide, for their territorial nature, either as historic agricultural nature in the outskirts of the city or by the latest infrastructural crossing is a challenge to test intervention strategies and principles. The forms of urban growth in this area reflect the limitations of traditional models of territorial occupation when faced with topography difficulties, or with urban borders of a more dispersed nature or subject to the effects of infrastructural fragmentation, resulting from rail, road or even the establishment of large green spots as in the case of Parque Florestal de Monsanto – an urban park. In this sense, our central contribution, as well as critical reflection on the problems presented, focuses on a set of sustainable nature guidelines to consider in fragmented areas and imprecise uses, such as in Campolide, considering that these territories are an opportunity to rethink the urban design today.

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ID 1441 | BRINGING LIFE BACK TO STREETS THROUGH LANDSCAPE DESIGNS: A CASE STUDY IN SUZHOU INDUSTIAL PARK, CHINA

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ABSTRACT: Previous research shows that the quality of street space would determine the outdoor activities, public health conditions and people's perception of place identity. This paper explores how the existing street landscape can be re-designed to bring public life back to streets – a concern arising in city regeneration. Due to the rapid urbanization in the last three decades in China, streets in major cities were often designed and built to prioritize and facilitate vehicular circulation. Although the well-known design principle – streets should be designed towards pedestrian-friendly – has been incorporated into textbooks and street design guidance. Less attention has been paid to the pedestrian's needs in practice. As a result, existing streets are often lack social activities. Public space design has now become a major concern of the Chinese public. How can existing streets be redesigned to bring life back to the streets in residential areas, especially in a given urban context with gated communities? To answer this question, a wide range of literature has been reviewed. Key factors that would contribute to a vibrant street life have been summarized into a design framework. Then a design research has been conducted to verify the effectiveness of these key factors, based on a case study in Suzhou Industrial Park, China. It is expected that the research findings would inform the retrofits of existing streets in the city regeneration process.

1 INTRODUCTION

This design research aims to explore landscape design strategies that can bring life back to the streets in residential areas, especially in a given urban context with gated communities. It is expected that some findings would be used to inform the retrofits of existing streets during city regeneration.

1.1 THE IMPORTANCE OF STREET LIFE

In this paper, street is distinct from road. Street with a sense of life leads to a livable, safe, sustainable and healthy city. Gehl (2011) highlighted the importance of the street life from a social perspective. His research showed that pedestrian-oriented street with mixed use frontage was safer than street with few people and activities. Wu (2013) agreed with this statement, and further explained that more people showed up and gathered on the streets would prevent criminal behaviors. Ashihara (2006) stated abundant street activities could be a substitute of physical wall in communities. Frequent meeting and occasional discussions on the street would allow inhabitants to be more familiar with their neighbors (Zayed 2016). Additionally, once walking become as a part of people's daily life, health related benefits would be brought to the public. As mentioned by Nieuwenhuijsen and Khreis (2016), strengthening outdoor

activities can address the health problems caused by car comminuting such as obesity. Mentally, Harden (2014) and Wu (2003) summarized it up succinctly, vibrant street life can help inhabitants to get rid of the sense of loneliness. Besides, streets with place function always encourage people to choose travel on foot (Alexander and Tomalty 2002). Fewer cars on the roads will result in energy saving and fewer traffic problems (Wu 2013). Thus, sustainable and environmental friendly community would be achieved once more people are back on the streets.

1.2 BRING LIFE BACK TO THE STREETS

The loss of living atmosphere in urban streets now becomes the major concern of many local authorities worldwide. A UN-Habitat (2013) report showed that cities that failing to integrate the multi-function streets tended to have less infrastructure development, lower productivity and a poorer quality of life. In China during the past three decades of massive urban construction, human-related subjects have often been overlooked (Wang et.al, 2015). New urban areas in Chinese cities are characterized by systematic street networks, separated land use zones, big scale blocks, high-rise commercial flats, and huge open spaces between buildings (Wu and Huang 2013). The historical role of the street as a social communication place is vanishing. This urban form overlooks people's social needs because it puts a low priority on the role of the street as a meeting place. Jacobs (1993) and Gehl (2010) commented that great distance between people, events and functions promotes automobile dependence. To solve this problem, some pilot studies have been conducted to bring social life back to the streets. The municipal government of Shanghai issued the 'Shanghai Street Design Guidelines' in 2016, which showed an initial concern for pedestrian-oriented street design. However some questions remain unclear. For instance, how can the existing landscape be redesigned to bring life back to the streets in residential areas, especially in an urban context of gated communities? This paper aims to explore the key design factors that can bring life back to the streets. To achieve this objective, this paper will redefine the concept of 'vibrant street' based on literature review. A case study will be conducted in the Suzhou Industry Park (SIP), China. It is expected the research findings would inform the retrofits of existing streets in other comparable cities.

This paper includes three parts as shown in figure 1. Firstly, to answer the question 'what are the issues contributing to vibrant street life?' Literature on urban streets has been reviewed. As the outcome, key factors contributing to a vibrant street were summarized into a design framework. The second part identifies the main problems of the street in residential areas located in Suzhou Industrial Park. In this process, on-site observation, questionnaires and interviews were conducted. Direct observation is essential to study public life, and it is simple and efficient (Byman 2012, Gehl, and Svarre 2013). Through on-site observation, existing and non-existing activities were identified. Questionnaires and interviews were conducted to develop a deeper understanding of people's behavior. The third part provides re-design strategies for existing residential streets that can revive street life, incorporating the findings of the literature review and field research.

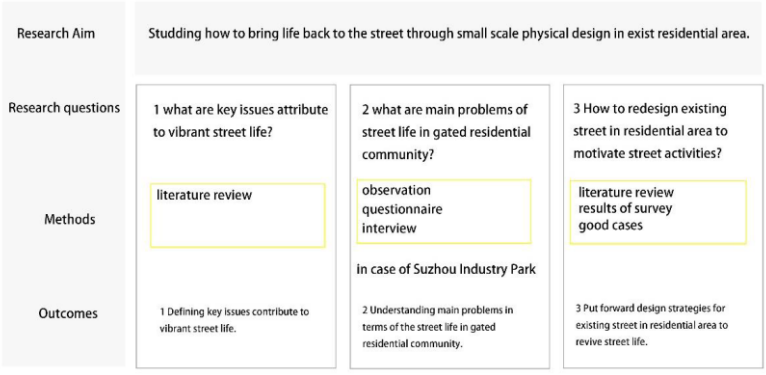

Figure 1. Research Framework

2 LITERATURE REVIEW

2.1 CLASSIFICATION OF STREET ACTIVITIES

Rebuilding street life is aimed at shaping a shared and integrated street environment rather than merely for circulation. Gehl (2011) divided street activities into necessary activities, optional activities and social activities according to the extent of the external environment requirement. Necessary activities happen with a kind of compulsion such as commuting, waiting for cars and buses. Optional activities are strongly associated with the condition of the external environment. For instance, sitting on the roadside or standing under trees only appear under certain desired situations. Social activities refer to activities dependent on the presence of others in public like children at play or greeting with acquaintances. Mehta (2013) further analyzed the behaviors occurring on the street from the perspective of social communication and sorted out the street sociability into passive, fleeting and enduring. Usually, passive sociability refers to individuals appearing in public space without any direct verbal contact with others. They appear street alone and focus on themselves, such as eating, reading, playing mobile phone or watching passersby (Mehta 2013). Subsequently, Mehta (2013) stated that fleeting sociability often happens in the neighborhood street with commercial functions. Greeting with an acquaintance, a short stop for a chat with neighbors, even a simple eye contact, a nod or a smile is the sign of fleeting sociability. Enduring sociability depends on more frequent and repeated contact among people. It is composed of weekly gatherings of intimate friends in cafés, or a family dining in the outdoors, as well as acquaintances standing outside to chat

2.2 RELATIONSHIP BETWEEN STREET ACTIVITIES AND DESIGN ISSUES

Necessary activities: As for the width of sidewalk, Whyte (2001), Mehta (2013), Marcus and Francis (1998) all agree that enough room for pedestrians is significant to support walking. Elevation treatment is another key issue. As Gehl (2010) pointed out people generally tend to avoid areas where level changes are large. It is noteworthy that frequent level changes in sidewalks produce problems for pedestrians, particularly for disabled people. Additionally, considering the situation of wheelchair users and people pushing prams, it is necessary to minimize obstructions on the footway. Meanwhile, planting (trees and shrubs) should not obstruct the sightlines of pedestrian. Pedestrian traffic is also quite sensitive to pavement. Jacobs (1993) and Gehl (2010) highlighted that the uneven ground surface is unsuitable for those with walking difficulty. Whyte (2001) also indicated that different pavement materials would be linked with various functions.

Passive sociability: As mentioned by Mehta (2013) and Whyte (1980), individuals seek relaxation in public spaces, and in the meantime, they do not want to be separated from city life. Even if they are temporarily alone, they still tend to pay attention to the streets where people hurry by since there is a feeling of liveliness and engagement. Just as indicated by Mehta (2013), businesses like bars, restaurants and stores are conducive to passive sociability. Admittedly, people are often engaged in some parts of the street where there are small businesses. Mehta (2003) argued people have more preference for small stores than large businesses in a community commercial street. Meanwhile, to ensure the environmental comfort, it is critical to provide comfortable microclimatic conditions, including temperature, sunlight and shade, and wind, for supporting outdoor activities. It also vital to set up enough seat places for both primary seats (chairs, bench) and secondary seats (stage, ledge) (Gehl, 2010; Whyte 2001 and Mehta 2003). Visual complexity is desireable for well-liked and well-used open space. An empty space without any interesting detailed design is hard to attract people for staying. It is vital to avoid a dull street view, which usually presents a clutter of elements of the same type (Whyte, 2001; Lynch, 1980; Marcus and Francis 1998). Animated edges of streets can catch the eyes of pedestrians and stop them.

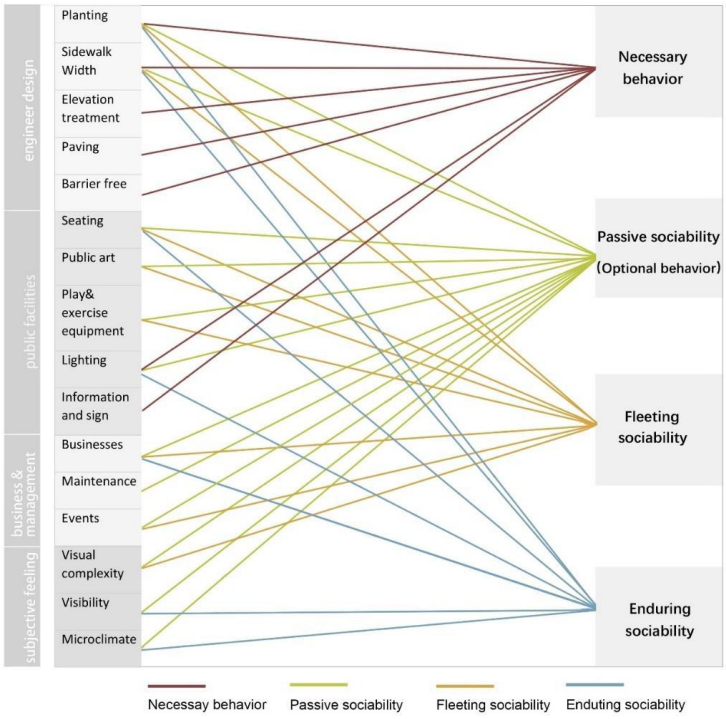

Figure 2. Relationship between design issues and street activities (Author 2017)

Fleeting sociability: First, the width of sidewalks should consider enough room for strolling, walking pets and children playing. Then, it is worth mentioning that street fronts with semi-enclosed sheltered space away from the pedestrian flow allows people to talk in a comfortable shade. To satisfy people who are staying on the street, sitting space should be provided. According to Mehta (2013), the street furniture should be designed and managed well, which sometimes supports casual forms of play. Playing in the street also produces opportunities for fleeting sociability since it sometimes attracts people to watch. The importance of play and exercise equipment has been stressed by Marcus and Francis (1998). Additionally, artwork and street events are very important.They can encourage people to stop and exchange comments Whyte (2001). External stimulus produces communication among individuals in various ways. Artwork can motivate people to stop or stay to promote social interaction (Gehl 2011). Triangulation can also be created by special events such as street parades, outdoor sales, festivals, and street musician performances (Mehta, 2003).

Enduring sociability: Generally, streets place which support enduring sociability are associated with space-fronting stores. It is crucial to have a certain proportion of businesses on the ground floor. Just as suggested by Whyte (2001), more than a half of frontage space in residential areas ought to be used to locate commercial services. Not limited to stores and open-air catering, businesses also refer to small stalls and handcarts. Informal businesses should be encouraged as well, which can both increase the vitality of a place and provide convenience for residents, thus improving the visual complexity (Whyte, 2001; Jacobs, 1998 and Gehl, 2010). Then, when finishing dinners in a restaurant, people may continue their talking and strolling along the street. According to Mehta (2013), an ample sidewalk space is obviously of significant importance in accommodating fixed activities (Ashihara 2006 and Jacobs 1993). The adjacent space on the businesses and the sidewalks as well as street corners must be equipped with safety and comfort to create an atmosphere for gathering. It is vital to design wide sidewalks with sitting places and pleasant microclimate. It is better to maximize the sitting places and fully use the secondary sitting areas (Gehl 2010, Whyte 2001). It is feasible to apply movable chairs because of their flexibility and comfort. In addition, to not disturb people standing outside for a long time, sheltered spaces are necessary to isolate the unpleasant environment condition microclimate. Marcus and Francis (1998) explain that, in generally, shade and shelter from the sun and rain are prerequisites for almost all sociable spaces.

3 CASE STUDIES IN SUZHOU INDUSTRIAL PARK

3.1 TARGET STREET

This part explores the problems in existing residential streets through a case study in Suzhou Industrial Park (SIP). XingDu Street is a secondary road through a residential area connecting the main avenue, which is located next to the central business district of SIP. Figure 3 shows the location and current images of the studied street. The distance between the central park and the studied street is just less than 300 m. The street is near the metro station within 5 minutes' walk. XingDu Street is a typical four-lane residential street in SIP, and problems on this street are typical of problems throughout residential areas in SIP. There are four motor lanes and two cycling lanes on this street. The motor lanes and cycling lanes are separated by 1-meter-wide green buffers. A 0.18m height difference exists between sidewalks and cycling lanes. In the 3m cycling lane, more than half the width is occupied by one-side parking. The space of street and community are separated by a 1.5m wide planting space and a 2m high fence. The width of the sidewalk is less than 2m.

Figure 3. Location and current images of the studied street(Author 2017)

3.2 PROBLEM IDENTIFICATION BASED ON ONSITE SURVEY

To identify the main problems of street life in the studied residential street, on-site observation, questionnaires and interviews were conducted. Existing and non-existing activities in selected sites are identified through on-site observation. The studied streets were visited at different times, during the night, day, working days and weekends. The visits took place between 9:00 am and 9:00 pm twice a week for a month by the author for an hour each time from May to April in 2017. Questionnaires and interviews were conducted to identify the reasons for the absence of street activity.. Residents were asked to share their opinions on activities in the street.

Figure 4 shows the category of existing activities on XingDu Street. The majority of activities observed are necessary activities consisting of commuting and waiting, which occur compulsorily. The quality of optional individual activities in the studied street is poor. Almost all individuals walk through the studied sites hurriedly without staying in the public space. Sitting on the roadside or standing under trees for a rest did not occur. Pet walking and kid playing occurred, but the frequency was low. Fleeting sociability occasionally occurred including children playing, greeting with acquaintances and short consultation of the house sale. As for enduring social communications, ambling and chatting with peers happened only occasionally. It is interesting that the lack of street facilities cannot support current requirement for enduring sociability. For example, although residents sit near the entrance of the community, they brought chairs by themselves.

Figure 4. Category of existing activities in the XingDu Street (Author 2017)

In the questionnaire, “enjoy the street view” and “sit & relax” are perceived as activities with the poorest environment design followed by “play”, “physical exercise” and “have a conservation”. The main reason for the low marks in optional and social activities like “enjoy the view”, “sit and relax” and “have a conservation” is the dull visual feeling delivered by the place. Then, “poor street planting” was regarded as a problem for both optional and social activity, especially for “have a conservation” and “sit and relax”. Poor design of sidewalk width and paving plays a key role in low satisfaction of all necessary, optional and social activities. Especially for “ambling & jogging”, “waiting,” “play”, and “physical exercise”. Inadequate street furniture negatively impacts the optional activities “sit & relax” and social activity “have a conservation”. Lastly, it is found that low outdoor comfort of microclimate decreased the intention of duration of social activities “play”, “exercise” and “have a conservation”. As for the expected street activities and functions in the studied streets, “street furniture” and “play & exercise facilities” are very desirable in the studied street. People in XingDu street also have a preference for work, venders, street business and street performances. Almost all respondents believe the current street does not have a pleasant environment for staying a long time. 80% of them agree that the street view is dull and lacks visual attraction. They have a strong feeling about the boring walking experience. Then, 90% of residents agree that car parking next the sidewalk is a serious problem as it often cause traffic conflicts and leads to a high safety risk. In term of the fence, around one-third of residents strongly approval of the statement that the fence damages visibility and visual complexity on street. 60% of them believe the fence should be removed or be designed in some other from.

3.3 RESEARCH-BY-DESIGN

3.3.1 DESIGN STRATEGIES FOR NECESSARY ACTIVITIES

Existing Problem: Walking is the fundamental street activity, but current street design gives the priority to traffic flow and car parking while the pedestrian is not the main concern. Present pedestrian circumstance is unfriendly to the disable or people with baby carriage or luggage. Improper paving, and height difference without slope will damage their walkability. One-side parking is an issue that impacts the safety of basic walking behavior.

Design strategies: Widening pedestrian zone by designing multi-functional buffer zone, eliminating height difference and changing paving.

Best practices: In the Street Design Guidelines of New Delhi (2010), multi-functional zones on a street should be a minimum of 1.8m wide, and may locate multiple functions. In the Shanghai Street Design Guideline (2016) proposes the combination of green buffer and street facilities with 1.5~2m wide. Multi-functional zone is a useful tool to maximize the space of pedestrian by overlapping green buffer and street facilities. Learn for the street renewal practice in Gevelsberg, Germany, the space of pavement can be defined by paving. Mittelstraße is Gevelsberg’s main street, the pedestrian way is defined by striped

paving which gives structure in a simple clear pattern. This slows traffic and creates even more opportunity for public activities.

Design proposals in the XingDu street: Enough room for pedestrian is a significant supportive point for street activities. As Jacobs (1993) mentioned a minimum of 35 % of street width must be dedicated to non-motorized transport. To widen the pedestrian zone, learning from Street Design Guidelines of New Delhi and Shanghai Street Design Guideline (2016), multi-functional buffer zone can be implemented in the XingDu street. A fully use of the buffer area between carriageway and pavement is a wise way to accommodate various functions consisting of tree planting, parking, street facility and furniture. Learning for the case of Mittelstraße Street in Germany, the different function of space can be defined by the paving material. Then, a shared space can be achieved by eliminating height difference between the sidewalk and bike path. Figuire 5 shows the before and after section in the XingDu street. Figure 6 shows the before and after perpectives in the XingDu street.

Figuire 5. Section of XingDu street before (left) and after (right) (Author 2017)

Figure 6. Perpectives of XingDu street before (left) and after (right) (Author 2017)

3.3.2 DESIGN STRATEGIES FOR OPTIONAL ACTIVITIES

Existing Problem: Current street environment cannot support optional activities such as sitting on the roadside or standing under trees. Most people said the street view is boring and they do not want stay alone. The poor quality of optional activities in XingDu street is closely associated with monotonous landscape (poor maintenance and useless shrub) and absence of visual attraction (fenced edge of communities).

Design strategies: Creating attractive street landscape by transforming fences of community into active edge.

Best practices: The strategy of active edge can learn from the new road project in Brighton. A new street decoration – a finely crafted, long wooden bench is placed along the edge of the street. The new paving and seating have invited people into the space, made interaction possible, and changed the dynamic of the street. Local citizens have been quick to embrace the change, generating a new urban culture in what has become one of the most popular places to spend time in the city.

Design proposals in the XingDu street: Current landscape in the XingDu street is featured with barren façade, fence and poor maintained shrub. Learning from the literature and New Road project in Brighton, the edge of communities can integrate street furniture or creative planting. By this design, a sense of joy of walking can be achieved. Using this design people on the street might be slow down and have an observation. The edge of community can integrate with the long bench. This design decoration offers

passersby a place to sit and relax while watching life on the street which is much-needed from people's opinion. Figure 7 shows the reference images of the active edge strategy in the XinDu street.

Figure 7. Design proposal of active edge

3.3.3 DESIGN STRATEGIES FOR FLEETING ACTIVITIES

Existing Problem: Apart from providing opportunities to greet with acquaintances, livable street provides opportunity for fleeting sociability between strangers. In XingDu street, fleeting communication merely happened occasionally and limited to in greeting with neighbors. Absence of commercial and recreational function decreases fleeting sociability in XingDu street.

Design strategies: Encouraging street events and temporary activities on the street.

Design proposals in the XingDu street: From the questionnaire and interviews, street events and temporary activities are desirable in the XingDu street. To stimulate fleeting social interaction, weekend market, outdoor sales, street musicians performing, movable and temporary stall supposed to organized as showed in figure 8. Triangulation communications can be produced by these special street events. These activities can also foster a feeling of liveliness and engagement that contribute to the passive sociability.

Figure 8. Design proposal of various temporary street events

3.3.4 DESIGN STRATEGIES FOR ENDURING ACTIVITIES

Existing Problem: From the observation and interviews, people in the XingDu street intend to stay outside and communicate with peers. However, current street furniture and facilities are insufficient, especially the lack of places for sitting, no pavement café and no shelter for bad weather. To support enduring social communication, a place must provide suitable physical conditions for meeting and chatting.

Design strategies: Adding street furniture, play facilities and art installation on the street.

Best practices: Parklet project was created in San Francisco in 2005. Converting parking spaces to a tiny public park is an efficient measure to create space for street activities. The designers put grass, turf, bench and potted tree in a parking space. The design of a Parklet is a platform that extends the sidewalk and provides amenities like seats, tables, bike racks, and landscaping. The parklet offers passersby a place to sit and relax while watching life on the street.

Design proposals in the XingDu street: To allow people to stay longer in the street and stimulate enduring social communication. Art installation and playing equipment play a main role since they sometimes attract people's attention. Learning from the good practices, the form of street furniture and playing equipment and art installation can be integrated with each other as showed in figure 9. Additionally, learning form the case in San Francisco, sidewalk can be extended by converting parking spaces to a tiny public park.

Figure 9. Design proposal of adding street furniture, play facilities and art installation

4 DISSCUSSION AND CONCLUSION

To achieve a vibrant street life, a range of activities need to take place on the streets including optional individual activities and fleeting, enduring social communication and necessary activities. In SIP, the current condition of residential streets meets people's basic requirement for necessary activities, but does not easily accommodate optional individual activities and social activities. The quality of optional activities is negatively impacted by the monotonous landscape, the absence of visual attraction and the lack of street furniture.

There are no interesting or unusual activities get people to stop, look, listen and engage in fleeting sociability. Apart from greeting with acquaintances, few opportunities have been provided for fleeting sociability, especially occasional communication between unacquainted people. Ambling with peers is the only type of long time social communication. Although people have an expectation of meeting and chatting in the outdoors, the current street cannot provide suitable physical conditions.

To address the problems mentioned above, design proposals and strategies are generated for the studied residential streets. Firstly, ample space for pedestrians is the precondition of all street activities. To widen the pedestrian zone, sidewalks can be integrated with the cycling lanes. A shared street space can be achieved by eliminating height difference between sidewalks and lanes, together with a change of paving materials. In addition, multi-functional buffer zones (integrating green buffers and functional buffers) can be used. The second solution is to design the edge of communities in a creative way as a strategy to improve the quality of the street landscape. The edge could be integrated with street furniture or planting. Meanwhile, street furniture and facilities should be placed after widening the space of the pavement. Seats, play and exercise equipment, public art installations and shelter should be emphasized. The last design strategy is to encourage abundant temporary activities on the street. Diversity of temporary activities ought to be encouraged such as weekend markets, street performances, outdoor cafés and other events.

Current regulations of residential street design in SIP force a separation of pedestrian and vehicles by different height or by green buffers. To maximize the pedestrian zone and achieve a shared street space, this regulation should be altered. Furthermore, current regulations for street design in SIP require a separation of green buffers and functional buffers. To maximize the pedestrian zone, a multi-functional buffer zone ought to be encouraged. Meanwhile, in terms of functional buffers, the function of the cycling lane or pavement ought to be given priority instead of one-side parking. In addition, the rigid regulation of fence designs in residential areas should be altered. To create an attractive landscape, the edge of communities ought to change. The integration of a community's edge with street furniture or planting should be addressed. Lastly, commercial and retail activities are banned in the residential street. Regulation for temporary activities ought to loosen and encourage street commerce, outdoor cafés, temporary stalls and other street events.

Although the design strategies proposed here are based on extensive prior theoretical and empirical research in the case of SIP, the evaluation of design proposals have limitations. For example, even though users of public spaces were asked to share their opinions about current problems of street activities, the

choice of design strategies reflect certain values of the author. The public should judge the use of their own urban spaces. To verify the rationality of the design proposal, a second-round questionnaire and interviews should be conducted in the next step. By doing that, the design proposal could be further optimized with the help of the residents' feedback. In addition, although there is a feasibility analysis of the design proposal in terms of planning regulation and policy, the implementation of the design project must be considered through further research. Perhaps a public-private partnership can be used. For example, the cost of the project might be shared between the local government, the neighborhood committee, the property developer as well as other commercial sponsors.

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ID 1448 | PUBLIC SPACES AS A PLANNING DIMENSION: MILAN CASE STUDIES AND POTENTIALITIES

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1 INTRODUCTION

After a long apathy phase, a combination of increased real estate pressures and international initiatives like Expo or the latest Triennale revival, heavily activated in Milan the realization of new public spaces and revital¬ization of old ones. Which include, among others, starchitects new inner city neighborhoods and landmark build¬ings, new design and fashion urban network spaces, car limitation policies to extended urban pedestrian areas. However, Milan urban renewal path is concretizing through heterogeneous results as they were the proceedings which inspired these transformations. Indeed, each of these modified areas has been individually conceived, being absent any meaningful high scale planning indication outlining an overall transformative vision of the city. This is clearly reflected in the Milan increasingly fragmented geography (Secchi, 2013), where the collective urban dimen¬sion has been often degraded to the rank of a public spaces collection to be consumed, rather than an urban struc¬turing spatiality seeking connections. Such an attitude drives to the weakening of the heterogeneous but highly intertwined urban complex which has always characterized this city. The overlap of historical compact frames and contemporary fragmentations, as well as different densities, gave rise to the actual Milan spatial condition, where emerge considerable public spaces potentials that could lead to fertile experimentations. But if public spaces are trivialized, they end up becoming self-referential entities, missing the task to condense differences and relations of the city.

This paper will deepen some of these potentials from the consideration of public spaces as active de¬vices within which to develop connective systems responding to contemporary urban complexity inputs (Mada¬nipour, et al. 2014). Milan chosen case studies will be then investigated from a critical point of view, but also as an opportunity to activate vibrant and pervasive urban backgrounds able to react effectively to the incessant changes of the city. This required to go beyond mere voids furnishing design actions, which is the prevalent approach to the theme adopted in Milan since recent time. The proposed investigations, had adopted instead a structuralizing approach to intercept topics emerging from the many and different environments urban frameworks involved in the new or revitalized public spaces analysed and in some cases re-designed. The paper will thus draw on specific design and exploration experiences evolved at the Urban and Territorial Planning Lab and the Urban Studies Course of the Polytechnic of Milan which we’ve held, and in partnership with various stakeholders and scholars, to highlight interpretations, hypothesis and glances for a new approach to public spaces as a key theme within with to re-design Milan’s contemporaneity. ‘InFractures’ is a design research in which are systemized and reconnected sets of empty in-between spaces at various scales innervating, through different intensities, areas from the city core to the eastern suburbs. Through ‘TimeLapseCity’ are investigated and interpreted new or deeply changed inner city public spaces, analysing their unexpected urban characterization in the light of everyday life uses, behaviours, prac¬tices, effects on the surrounding context. ‘RipCity’ deals with a globalizing real estate insertion in a crucial envi¬ronment between compact core and urbanized Milan region, deepening public space design hypothesis with the task to reconnect clashing contexts. ‘AgorUP’ tests a public spaces network utilizing flat rooftop surfaces, so as to consider alternative urban landscape inputs in the collective dimension and fruition of the city. Selected key steps of these researches will try to advance new perspectives on the public space delicate role in the definition of the contemporary city, providing cues for its interpretation and design.

2 PUBLIC SPACES IN MILAN. SOME GROWING AUTARCHIES

The goals of the many and different actors involved in the development and renewal of urban envi¬ronments in the contemporary city show to be increasingly indifferent of any enhancement of public spaces inhe¬rent values, nor the evolution which could reveal their urban structuring potentialities. To the increase over the last decades of wide real estate developments disseminated in every medium and large European city, to which are added the innumerable urban rebirth and district reuses, corresponds a widespread and deep banalization of the collective dimension. The impoverishment of its social, formal and cultural values, so as the incapacity to preserve or trigger relations between parts and elements composing the city, is now the dominant character of most of the new and revived public spaces in the western city (Tzonis and Lefaivre, 2013). Eloquent signs of this are seen in the loss of the plurality which should articulate their configuration, so as the self-referentiality it is usually con¬veyed. In fact, the research of predictability in the actions taking place in a public space had brought to a spatial overdesign to guarantee it, but also to globalization of the design to implement it. It is not uncommon to expe¬rience public spaces producing endless déjà vu of styles, patterns, materials, forms, conformations, so as starchi¬tect's spread design brandings. This flattening primarily coincides with the dropping of the public space from the interrelation domain to that of the consumption. A shifting which emphasised its increasingly autistic nature, toge¬ther with the repetition as the preeminent identity device (Bauman, 2001). Indeed, the introverted character of many of the contemporary public spaces originates in an imbricated social, economic and cultural transformations weaving, of which the market rules are perhaps the most obvious inputs to be intercepted. Much more pervasive and subtle can be instead those linked to the people's behaviours, to the new social fears (Ellin, 1997), to the con¬stantly changeable intolerances forms, to the expressions of individualisms and exasperated privatizations, to the growing social inequalities, and which have drained the public space since long. If today, the capacity of public space to be a powerful urbanity making is recognized by everyone, it must be also said that it is often conceived in a highly destructive manner both from design and urban policy points of view.

The following Milan's cases aim to highlight crucial fractures occurring on public spaces, and which spa¬tial consequences reverberate at different scales in the whole city. One is the increasingly widespread prevailing of rigid borders on permeable ones, especially in recent public spaces designs. The growing design tendency to create enclosed collective environments, whether they are outdoor spaces like squares and other kind of urban surfaces, end up to frustrate the public space everyday negotiation aiming to inclusion and integration, rather than to the exclusion. This in Milan is achieved through barriers of various nature, ranging from the detachment of public soil from the city level ground (e.g. Piazza Gae Aulenti) to the dense buildings edges tendency with the purpose to hold the collective dimension, but with the effect of isolating it (e.g. Citylife recent urban project). In the same way, the compulsive filling of public space with shopping malls and globalized brands to economically support its exis¬tence, gives clear evidence of the deep deprivation of meaning to which is subjected, not to mention the retraction of the public financing which often lies behind that. The conceptual ground of this is also in a mix of real estate interests and convictions, which sees in the introverted public space a better housing market option to promote and develop. But also the just mentioned increasingly withdraw of Milan municipality from investing in public spa¬ces making, thus letting the costs – therefore, their ideation - to the private investor and its beliefs, that are rarely sponsor of spatial experimentations, nor of meaningful dialogs with the urban context. Another fracture comes from the rigidity within with who is actively involved in urban transformations and implementations interpret the society. Indeed, there is a persistence of outdated and traditional views subdividing the whole citizens into sort of monolithic and opposed groups, when not classes, e.g. the resident and the users, the young and the olds, the fami¬lies and the singles, the native and the foreigners, to name just a few of the categories to which a public space is usually referred to (Innerarity, 2006). This banalization often animates since the ideation and design phase, and in the dominant Milan urban policy debate, denoting the incapability to include the vast collection of pluralities char¬acterizing any contemporary society and to go beyond rooted ideas (Breen, 2004). An attitude that in most cases produces disconnections between spaces and utilizers, revealing inadequacy to hold the social fluidity and its dis¬placements, and ending up to bridle the innate unpredictability of public space, which is one of the necessary con¬dition to trigger an authentic spatial vitality.

3 RESEARCH METHODOLOGIES

The following considerations emerging from Milan's case studies are the results of analytical and design kinds of academic research. But in both cases, a project glance has been used to interpret the urban areas in which the researches have taken place. In fact, from a methodological point of view, the teaching team, the students, and all the other subjects involved in the different case studies, have shared the belief that the interpretation of the city can be particularly fertile when is contaminated with design ideas, regardless of whether it is the final aim of the research. As a design idea here is meant not a specific solution for a given space, nor any hypothesis of an articula¬tion of soils and volumes. Rather, it means a sensibility to perceive the potentialities of a place, its role if seen it from an extended urban prospective, its transformative capacities. The intersection between a design feeling and the analytical deepening of an urban reality doesn't mean to be trapped in a hypothetical and personal vision in¬fluencing urban investigations. It allows instead to narrow the research field, to relate the work to a background of possible transformations as a creative selection for analytical choices avoiding to get lost in observations covering every aspect, dynamic and phenomena.

In addition to this, the research has followed common traces in the modalities through which investigate the different areas and urban themes, though leaving wide margins of variation to better consider the many het¬erogeneities characterizing them. A first framework of morphological reference consists of spatial types imagery to describe the relationship connotations at different scale between an object or an area and the context, e.g. clus¬ters, bubbles, islands, threads, etc. But other morphological considerations emerged by the analysis and classifica¬tion of the edges and described also their interchange status, e.g. the degree of porosity, permeability, continuity, fragmentation, spread. These morphological considerations were all related to different scales of observation, to highlight any variation when expanding or detailing the scale reference.

Finally, all the data collection, economic and social studies, including interviews and data variations over time, functions and uses detecting, other urban cases comparisons, have always been related to the aforementioned morphology considerations to validate or to question them.

3.1 INFRACTURES. URBAN RE-COMPOSITIONS

"InFractures" is a project investigation working on different scale urban void sequences identified in the north area of Milan tissues. This is an area of the city developed along three railway tracks and the city central sta¬tion [Stazione Centrale], today still representing a very perceptible partition of the city. Even if it can not be consi¬dered a physical barrier, it generated recognizable spatial consequences. Indeed, the railroad embankment, however widely permeable by cars and pedestrians, acted as a strong three-dimensionality which had decisively influenced the urban morphology and framework definition, like urban snips, abandoned plots, rears and internal corridors, infrastructures remnants. Since the twentieth century and the post-war rebuilding period, the contact between the new city quarters and the sinuous shape of the railway had resulted in a series of in-between spaces characterized by rough geometries, and of which isn't easy to imagine re-uses. To a larger scale, the railway had instead provoked the succession of many residential introverted neighborhoods, added to the presence of high-speed infrastructure axis which historically led to the major urban factories on the northern edge of the city. This has determined the

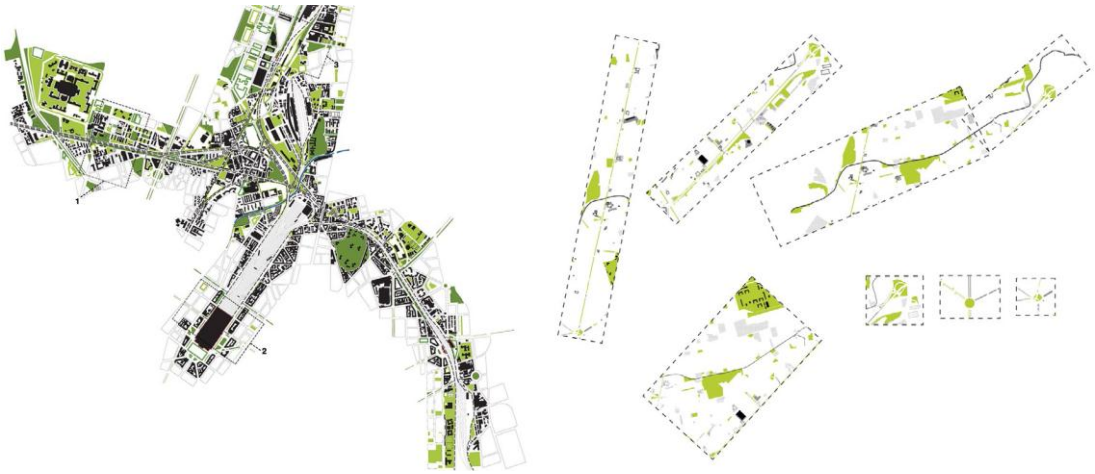

Figure 1 - InFractures. Images by Stefano Manzoni and Mattia Santambrogio

tendency to divide the expansions of this part of the city following a large urban mesh partition, and giving rise to plots composed of extensive dense urban blocks. In many of these fragments are located the social housings, defi¬ned by mono functional articulations, as well as the absence of significant reciprocal relationships (Fig.1). Among them, in an ideal continuity with the nearby railroad, there are unused lots and large in-between spaces with a tre¬mendous potential to insinuate a mixité able to trigger urbanity in areas that are to be considered Milan's almost central areas. But also to create urban dialogs to call into play new continuities, which are not those of unused voids sequences.

The teaching team and students have therefore investigated these open spaces sequences, considered together with the widespread structured and functionalized ones, trying to recognize in them sets of configura¬tions that at the different scales could establish a fertile background for design experimentations. They have been identified different typologies depending on the dimension, spatial position, relationships with buildings or streets, visibility, potential connectivity, accessibility, and referring to spatial configurations like island, plug, linearity, dot. The abacus derived from it, highlighted above all a precious plurality to gather in urban systems apt to condense heterogeneity as an urban lymph (Fig.1). The interpretative and design work had the goal to transform urban dis¬ruption into new reconnection systems introducing through those large urban blocks new frameworks to activate positive tensions between fronts and rears, solids and voids. The innervation of alternative mobility through the enhancement of cycling and pedestrian paths also played a main role, well as generating a widespread public space system to counterbalance the introverted urban blocks and high-speed road combinations.

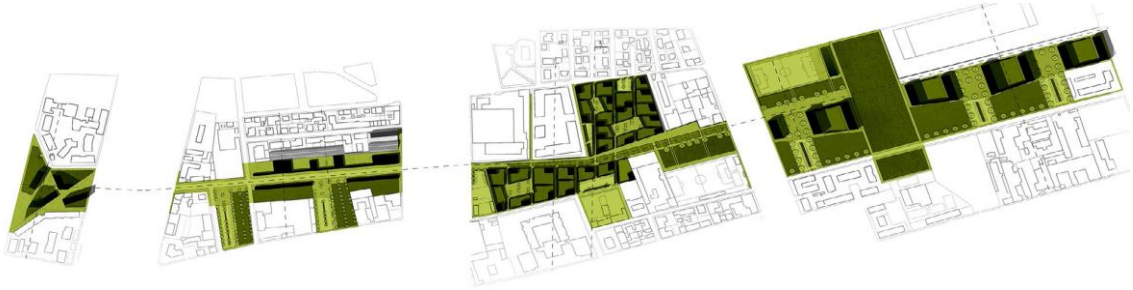

Figure 2 - InFractures. Images by Stefano Manzoni and Mattia Santambrogio

The projects have in particular worked on the continuity of bearing areas connecting well-established parts of the city and large green areas to the city's edges, thus acting both at district and town scale. In the design shown here (Fig.2) is perceptible this double spatiality, where different building typologies are kept together by a continuous public surface that as a linear plug relates one of the great urban axes leading to the north Milan's me¬tropolitan area with an important urban park located on the east edge of the compact city tissues. The extensive permeability and porosity of this new urban configuration nullify the little significant rears sequence on the frag¬mented unused and empty spaces, so to sew the existing large urban blocks through specific typological and densi¬ty choices.

3.2 TIMELAPSECITY. URBAN RELATIONSHIPS FRAMING

As mentioned in the introductive paragraph, since 2014 Milan begins to be considered a city again under the spotlight. Its preparation for the EXPO captures the world attention, although not only for the Universal Ex¬hibition which is going to take place. Indeed, it is in the expansion of the city from the fashion and design field to the one of the so called “urban renaissance” that has been perceived a Milan’s rebound . This is evident when scrolling through the press review since 2014 of the most important newspaper in the world. If compared with the one of the previous twenty years, where fashion and furnishing designers city was celebrated, Milan suddenly reveals as a destination to experience great urban transformations. Which combined with a series of some histori¬cal districts gentrifications occurred since the end of the 80’s, giving raise to a new common perception of Milan as a city of vibrant and collective spatiality. The Boeri’s Vertical Forest, Hadid’s residential blocks, the Liebeskind’s and Isozaki’s skyscrapers, Koolhaas’s Prada Foundation Museum, Chipperflied’s Museum MUDEC, Sanaa’s Boc¬coni University Campus, the multi projected Porta Nuova District, the Foster’s new district Santa Giulia, undoubt¬edly testify of an urban rewrite of the city. However, far from the usual urban renaissance rhetorical within which such transformations are often described, it is equally undeniable that these projects acts as individualities in the urban tissues, constituting at most a sort of virtual architectural tourist itinerary. A prestigious assemblage but whose implications in terms of collective spatiality must be rationally examined. Many and articulate are in fact the forms of collective space individualism linked to these new urban appearances, as well as the public dimension forms of privatization they bring to light.

“TimeLapseCity” is an urban investigation experience characterized by an in-depth path about different collective spaces uses of some very thematised areas in Milan. Among these, three reveal to be particular useful to underline meaningful issues and dynamics of spatial exclusion. The re-composition of city maps returning implied, hidden, overlapped, excluded, mimetic, conflictual and contradictory aspects has had the purpose to provide new grains and glances to be juxtapose to more conventional images and representations. Holding this perspective, it has been experimented the overlay between different description, analysis and interpretation techniques ranging from interviews to data collections, detachment and re-design of constituent layers, behaviours studies, to re-de¬termine some spatial interrelations and meanings.

3.2.1 GAE AULENTI SQUARE: BEAUTIFICATION AND EXCLUSION

The first case is piazza Gae Aulenti, a recently realized square in a new luxury settlement of 290,000 square meters of offices and residential buildings now fully owned by Qatar Investment Authority. It’s a square soon came to the collective imagination as a new centrality of the city, but which conformation represents one of the most contradictory and exclusive urban spaces that Milan has ever seen realized.

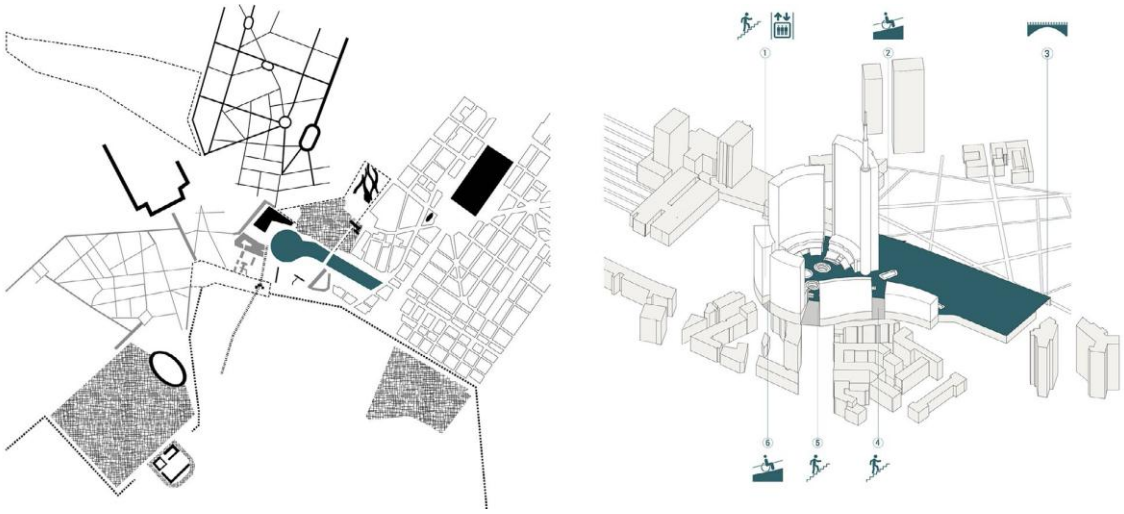

Figure 3 - Gae Aulenti Square. Images by Martina Orsini (left), Arianna Manzinali, Lorenzo Merigo, Matteo Pigni, Silvia Cassader and Stefano Iacolina (right)

The whole square is detached to any spatial dialog with the context. Indeed, the surrounding connections take place through gangways or stairs that are linked to what are considered to be strategic points, like the fashion and design district of Corso Como and the historic district of Isola, which in recent years has undergone a massive gentrification process. The beauti¬fication and overdesign to which the square was subjected, with intricate floorings, fountains and water games, so as shelters of every shape and style – but not a tree - can not mitigate the total sense of urban alienation and isola¬tion that characterizes it. This segregating modality lies in real estate considerations, which saw in the choose to rise from the city the attempt to create a protected environment in the middle of the city centre. As a kind of ga¬ted community with a very selected permeability, it constitutes one of the broader examples of Milan's public spa-ce individualization, where the denying of the very essence of a square become the distinctive trait, as investiga¬tions and drawings of "TimeLapseCity" researches reported and analysed (Fig.3). They particularly focused on the lack of positive domino effects of this act of urban revitalization on the surroundings, and on the lost occasion that an intervention on such a delicate point of the Milan fabric it could have represented. In fact, this process of revitalisation in the dense city should not be limited to restricted zones but could spread to the whole area, bon¬ding various parts of the city developed separately, due to the presence of the abandoned area on which this new district has been built. The new district could play a vital role in the creation of new active margins, and where some opportunities of urban re-signification could take place. Indeed, the need of public spaces capable of rela¬ting to other city areas, subjects and objects, and, as much as possible, being open to cross influences, clearly emer¬ges from the opposite effect produced by the self-referential public space that have been finally realized. The dia¬grams produced by the research experience show instead the attempt to control through the design the realized public soil, depriving it of urban fertile opportunities. The whole new settlement and the square in it isolate them¬selves from the context through physical barrier of the elevation from the city soil, condemning the unwanted parts to isolation. Among them, a regional railway station, which instead of being considered an important con¬nection with the extended urbanized territory, has been considered a point of possible social degradation from which to separate. To emphasized Gae Aulenti Square self-referential character, despite its being the core of a whole new district, it is a folding building like a snail that surround it, offering to the outside world a flat and im¬penetrable mirroring surface.

3.2.2 TORTONA DISTRICT: SPORADIC POROSITY

The second cases have focused on Tortona design district, a former industrial area originally located in what was the south margin of the historical city tissues beyond the railway belt toward the agricultural lands. Since the 1980's, advertising producers, fashion designers, photographers and artist's ateliers began to reuse abandoned factories spaces giving rise to one of the first gentrifications in Milan. It's characterized by of an urban plot origi¬nally mixing important manufacturing realities like steel, large scale porcelains furnishings, energy production, and with a consolidated network of supporting small manufactures. The urban grain is thus very discontinuous, with many scale shifting given by the interweaving of giant buildings with extremely wide outdoor storage surfaces and smaller buildings, often also mixed with residential, and with their smallest and intimate courtyards. To this was added an urban fabric made also of after-work spaces and union-workers headquarters innervating of sociality the large manufacturing urban blocks. In concrete terms, this size blend had made possible the many replacements while maintaining a strong space and uses differentiation. In fact, it wasn't necessary to subdivide the space, since larger spaces have settled major functions like MUDEC museum, the Scala's theatrical scenery laboratories, world-famous brand showrooms (Fig.4). The factory gates which for a long time had enclosed a feverish Milan's humani¬ty, today are open to the world through the recurring 'something-weeks'. At the known in the world Design-Week and Fashion-Week, are now in fact to be added the Food-Week, the Music-Week, the StreetFoodParade-Week, the SkateFilmFestival-Week, the Spring-Week, etc.

Figure 4 - Tortona district. Images by Marco Attucci, Thays Colli, Goffredo Duranti, Matteo Paronuzzi, Pedro Petry Franceschini and Andrea Pirinoli (left), Matteo Baggiarini, Eleonora Catozzi, Giuseppe Rizza, Sara Barone, Heran Yang, Anqi Zhan (right)

A first crucial aspect emerged through the urban investigation is the massive gentrification to which the area has been subjected. Although it has not been promoted by real estate organizations, and the urban market has leaned on an already consolidated urban transformation, the self-definition and the pervasiveness through which the replacements have occurred haven't mitigated the effects of social selection and expulsions. In fact, this self-managed transformation promoted by some pioneers of the gentrification, had been so deeply influencing the collective imagination to became a kind of powerful social filter deciding between admitted and not admitted, and going well beyond the economic discriminant. This has had its concrete evidence in the management of revitalized space. In fact, in the early stages of this transformation process, large industrial enclosures were purchased and split by professional communities, and the introduction of new subjects was decided on a case-by-case basis based on social, cultural and identity affinities. Since the beginning, the large industrial courtyards became sort of gated communities, with locked gates and surveillance services. With this, the connective social fabric linked to work¬manship disappears, being replaced by a plethora of restaurants supporting the 'something-weeks' visitors. It has therefore lost the enlarged meeting dimension of a social community, being substituted by very restricted ones (Fig.5).

The research has highlighted and schematized through diagrams these public and collective intermitten¬cy modalities. Despite the dominant spatial and uses typologies involved, the flexuosity inherent industrial spaces themselves, their malleability and declinations opportunities, the district can't be considered permeable and porous. The many parcelling and mixed activities are accessible and connected by the large but extremely gated industrial courtyards. These surfaces are thus permeable for collective and public transit when they become a percolated ex¬hibition space. In the everyday life of the city, apart great museums and art galleries, and some small injections of co-working spaces promoted by the municipality, they remain as secluded bubbles sequence. With the second wave of reuses, this stiffness has further accentuated. The establishment of luxury design and fashion brands headquar¬ters occupying whole industrial blocks – e.g. Armani, Moncler, Fendi, to name a few – are ordinarily open to insid¬ers only.

Figure 5 - Tortona district. Image by Alessandro Arosio, Jessica Emma Manzoni, Mattia Meregalli, Pietro Nobili Vitelleschi

3.2.3 CORSO BUENOS AIRES: URBAN SCALE NON-LIEU

The third case proposes an investigation of Corso Buenos Aires, one of the longest shopping road in Europe (1.6 Km) and historically coinciding with a suburban axis connecting the inner city with the metropolitan-scale territories. Specifically, it was linking the Milan city core with Monza, home of the summer Royal Palace, as well as one of the most important industrialised region in Italy. When at the end of the nineteenth century, Milan planning extended to outside the city walls, involving pre-existing urban elements, this axis had been re-designed in a definitive way just close to Universal Exposure of 1906, thus localizing a dense sequence of new urban blocks. In what was a planning attempt at a cautious mixing, the road was split into two parts: on one side it was decided to locate the social housing, on the other the bourgeois one. It's a division today still alive, deeply marking the urban bands referring to this road despite its actual complete homogenization. In fact, since it has become a globalized shopping street, it no longer appears as a boundary/connection between two social spheres, but rather as a com¬pletely autonomous element inserted within two very different urban districts. If originally it was a mixed commer¬cial space where elegant shops were coexisting with neighborhood stores, its progressive logo branding transfor¬mation made of it an urban scale non-lieu, a sort of alienating strip totally unrelated to its context. In the recent decades, the two urban bands developed along the commercial road have turned into two of very representative Milan contemporary urban environment. The one originating form social housing actually accommodates an ex¬tremely vital and mixed neighborhood, where different ethnicities, especially from North Africa, India and China, coexist with young professionals and retired employees. A very complex and stratified urban environment, where several generations and backgrounds identify one of the most intense area of urbanity in Milan. On the other side of the road, the large blocks of the bourgeois city are innervated with tree-lined boulevards and linear green squa¬res, and in the recent times subjected to virtuous and experimental participatory urban actions involving residents and workers of the area. Here the social mixing is less varied, although in the years it has lost his prevalent residen¬tial connotation and has mixed with specialized professional offices and shops, well as users of its public outdoor collective spaces also coming from other urban areas. The investigation had focused both on the strangeness and contradiction emerged by the dematerialization of the road typical of urban scale non-lieux and its effects in rela¬tion to different contexts and urban scale. Three are in fact the dimension references at which it has been analysed. The first, deepens the road as a single urban component, taking into consideration its materiality, uses and users perceptions, the spatial organization, the transformation over time. From the spatial point of view, the original division has shifted in height. In fact, the incessant sequence of shops creates a sort of almost immaterial base on which lay the late nineteenth century architectures, like a fluctuating parallel city. The sense of detachment between the two sections is further sharpened by the fact that the base is the expression of a globalized repetition, while the city that overwhelms is a very local architectural mixing of Liberty Style and typical Milan's residential courtyard typologies. At this same scale, the relationship between the users and the space is exclusively based on the con¬sumption, putting in the background its essence of being a public place (Fig.6). The road here is just a device lea¬ding from one inside (shop) to another (shop), to end in an under (subway), translating with great realism the Viri¬lio's Ville Panique twilight of certain urban places. The second dimension of investigation, gives evidence of how variable in the contemporary city can be the concept of in-between space, which commonly is referred to unclassi¬fied and uncharacterized spaces of the city. Indeed, although apparently extremely vital, this long shopping road is like a in-between element, separating the late revolutionized bourgeois and working cities. But as other research diagrams emphasised, at the large scale Corso Buenos Aires also marks other boundaries, like the ones between the city core and the northern urban expansions and the other between the compactness of the ancient urban tissues and the increasing fragmentation of the suburbs. It is not then its boundary identity that has been questioned over time. Rather, the forms and the meanings through which it occurred. If in its first demarcation, this place was con¬ceived as a margin in the sense of a place of mutual contaminations, today it represents a suspension, or also a cut, which interrupts the city.

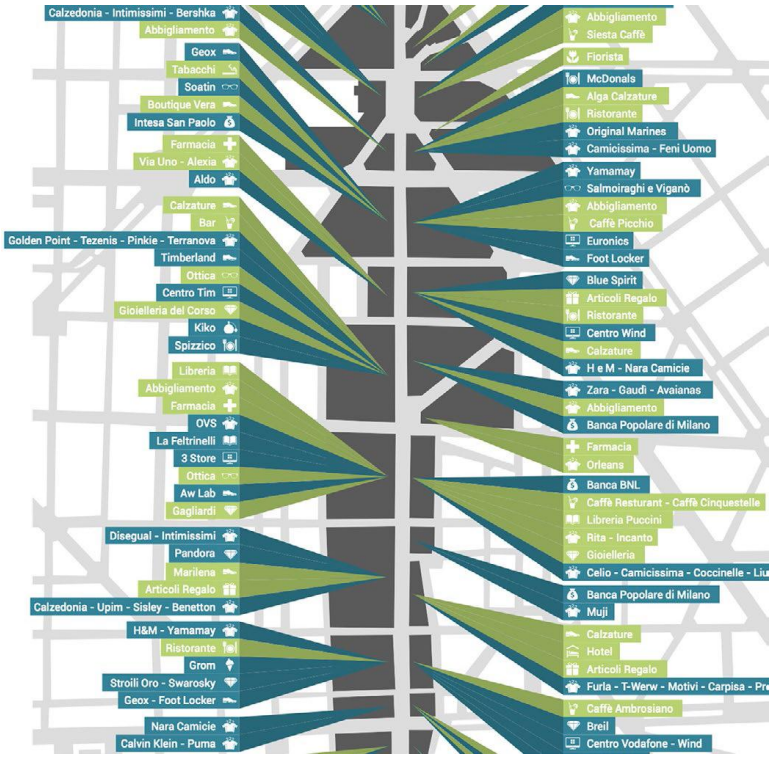

Figure 6 - Corso Buenos Aires. Image by Matteo Crippa, Jacopo Tassoni, Andrea Angiolini

3.3 RIPCITY. AROUND URBAN THINGS

Santa Giulia District is the redevelopment project of a former industrial area and for which deepening we have involved, in a very fertile dialogue, Risanamento Srl (the expressly established estate company), Foster + Partners Office Design, and a number of consultants, stakeholders, and public and private institutions. It is one of the biggest reconversion areas in Italy (land area 963,000 sqm; GFA 614,000 sqm) located between the consolida¬ted Milan tissues and the margin of the sprawled city, overlooking a vast agricultural park toward the south limit (Parco Sud). The project site is currently under a slow realization due to the never ending economic crisis effects and related housings devaluation. The new district is part of a consolidated urban area consisting of public hou¬sings, disused industrial fabrics, agricultural residual areas, historic villages remains. The whole area is surrounded by an infrastructure system with high speed roads and railways connecting this place to the vast territory scale. However, such accessibility system produces a physical barrier at the everyday scale, making this place cut out of the corporal context perception and fruition. The prevailing characters of settlement is a spatial organization for enclave clearly distinguished by functions, but also by social belongings and cultural backgrounds, to which must be added disseminated empty plots waiting to be built. In such a context, the new Foster designed district fits un¬critically this city area, sharpening the existing and poor urban relations due to its introverted and self-referential physiognomy.

The theme of the enclave as both specific typology and critical element of this area, has been explored and concretized in thematic maps with the aim to make evident the physical outcomes of immaterial dynamics, social and economic settings, spaces uses, but also potentialities emerging from these urban criticalities. Foster's project has in fact contributed to bring to the fore the properties of introversion common to the whole context. It had clarified the introversion as a settlement principle, but also as an individualism reaction to a generalized spatial identity lack, due also to the rarity of public and collective spaces. When we then explored and simulated through design scenarios and proposals to introduce some degree of porosity in such rigid morphologically situations, it soon became reasonable to figure that any massive intervention on the enclave - either old or new - not only was probably unrealistic, but seemed less effective than intervening from the outside inwards. Indeed, the space in-be¬tween enclaves has been ignored by both Foster Project when conceiving its edges, so as in the Municipality nego¬tiations with the real estates developer. But if considered in a structural manner, it may constitute a new connective network within which restart a relationship-setting between fragments, to open to new orders and

combinations between them, to gather fluidity and plurality between the existing monolithic elements. And through this ap¬proach, it could be also overcome the common belief which supposes that to make trigger any urban vitality would be enough to scatter a plethora of collective functions and activities around. A tendency, this one, increas¬ingly widespread not only among the great architecture offices, but also in the demands of the municipality when negotiating. The avoidance of useful dynamic dialectic with pre-existing small-scale urban milieu systems and with social, economic and spatial inequalities proliferation, is instead at the base of many agonizing urban contexts where new settlements are dropped, and with the bitter surprise of not being then able to trigger the imagined vitality so well represented in 3D images and simulations.

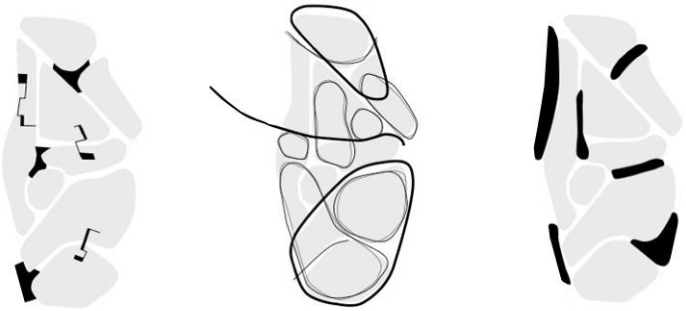

Figure 7 - Hinges, Circuits and Margins. Image by Martina Orsini

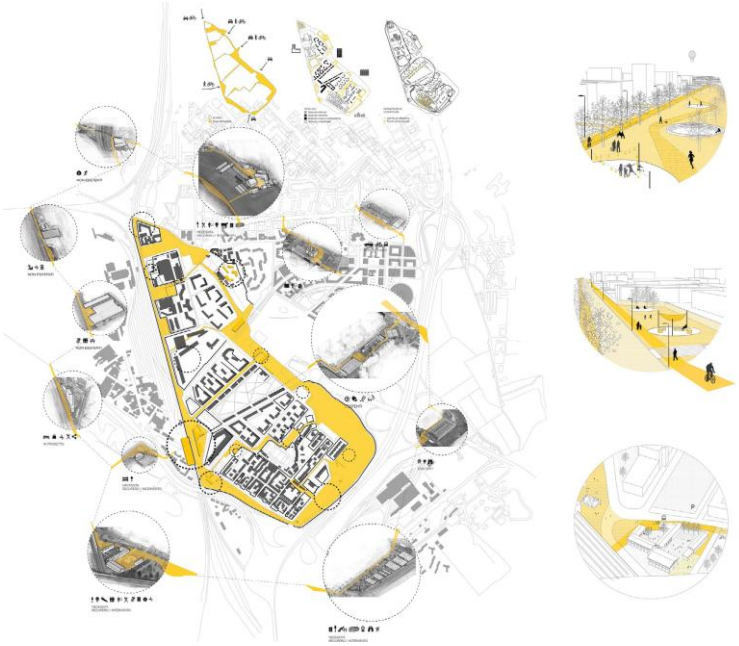

Figure 8 – RipCity Circuits. Image by Francesca Gervasutti

The re-design of soils and surfaces between settlements has been first of all a margins rewriting to in¬clude and to engage the constituent urban materials of this Milan's area in new configurations by which to define edges not anymore based exclusively on traditional antinomies. Therefore, the academic contribute to the enlarged dialogue has been the deepening of chosen design devices overcoming the enclaves separation, so to set up a spa¬tial relation systems through which reorganize new and existing public or collective spaces and surfaces in a struc¬tural way. Circuits, margins and hinges (Fig.7) have been the references figures to diffuse and reorganize connec¬tions between enclaves, and to trigger a constructive and fertile glance.

The 'Circuits' have investigated the potential of continuous and organized systems of variable section of the soils considering enclaves as protected parts of a fluid and open system. The identification of potential continuous spatial loops composed of areas, filaments, empties of varying size and nature, has allowed to

experi¬ment combinations of collective and public spaces in new urban geographies of support and connection between different fragments of this introverted part of the city (Fig.8). The 'Margins' have been instead tried to address and process the areas as complex places with a double value, where one can experience overlapping dynamics of be¬longing, but also conditions of strong autonomy. To organize them, they have been defined grids or linear devices based on the concept of parallel sliding, with the aim to shape the public space as a dynamic and autonomous enti¬ty, and as a support for cross-contamination between the new soil and the enclaves. Finally, the recourse to 'Hinges' spatial systems are to be intended as the juxtaposition between rigidities through flexible but solid connec¬tions, and around which the enclaves can rotate and ideally acquire the ability to recombine while maintaining a certain grade of individuality.

3.4 AGORUP. PUBLIC SPACES AS NEW URBAN VIEWS

"AgorUP" is a design investigation inquiring the potentialities of public space as a device to tran¬sform the underutilised supermarkets flat rooftops placed in compact urban tissues. Such a quite provocative issue has sprung in response to the observation of several recent public space arrangements in Milan that have been unsuccessfully designed –or overdesigned (Sennet, 2010)– as flat and smooth spaces, unable to permeate private spaces and to trigger connections between volumes and soils, dumping the dialogue with other urban materials to rhetorical diaphragms and transparencies. Contrary to Piazza Gae Aulenti's urban exclusion processes, AgorUP raised public spaces try to link roof surfaces to their context, establishing both physical and visual relationships between new public spaces and the urban landscape. Starting from these pre¬mises, the research fosters the design of public space urban systems located in areas already popular as supermar- kets are, without producing any soil waste.

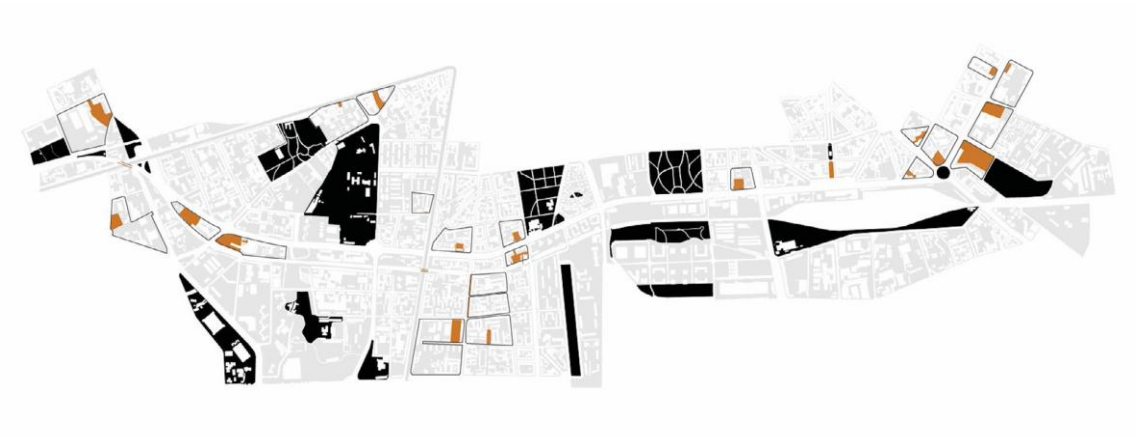

Figure 9 - AgorUp. Image by Beatrice Galimberti

A sheer number of supermarkets with highly underused flat rooftops is spread throughout Milan's urban tissues. Notably AgorUP focuses on Milan southern area, as it hosts a remarkable concentration of these rooftops typologies. Indeed the research site is a linear system oriented towards two parallel infrastructures (urban ring road and railroad) that crosses heterogeneous spatial conditions as compact residential tissues waved by a se¬quence of small green spaces, mixed-use fabrics without a predominant geometry, industrial sites under transfor¬mation, abandoned small scale craftwork platforms, Milan's Agricultural Park fringes, a scattered sequences of great urban voids as abandoned rail yards and high-scale building sites as Bocconi University Campus (Fig.9). In this composite area an almost isotropic carpet of flat roof supermarket is inlayed. Most of the time, these roofs are desolated non-lieux that people cross fast and unpleasantly, feeling an annoying discomfort in passing over. Although united by such a negative connotation, these rooftops presents different features. Indeed some supermarkets roof are big multistorey surfaces, while some others are settled in small areas; some are partially covered while others aren't; some are directly connected with commercial uses below (e.g. being mall parkings) while others are utterly detached; some are on the top of highly visible free-standing buildings while others are hidden in the heart of an urban block (Fig.10).

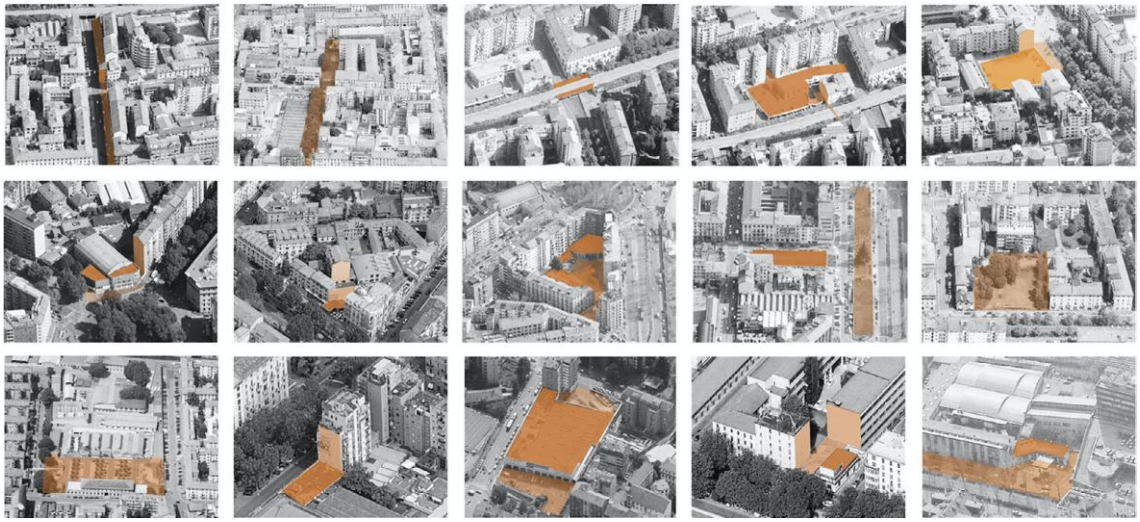

Figure 10 - AgorUp. Image by Beatrice Galimberti

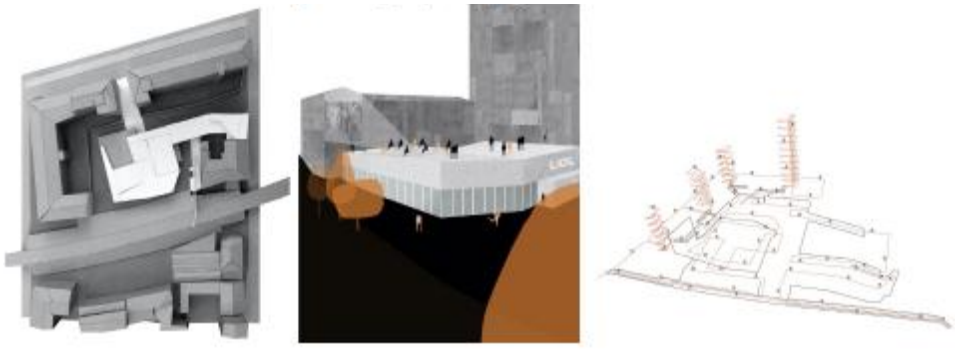

Figure 11 - AgorUp. Images by Monica Bramanti, Beatrice Galimberti and Anna Rossi (left),

Starting from these variegated a context, students' strategies developed different public spaces typo¬logies hosting various temporary or fixed uses (as neighborhood libraries, gathering spaces for associations and communities, recreational areas for elderly, playgrounds, and so forth) (Fig.11). The design outcomes deepened the issue of public use of space related to inhabitants' private and collective spheres (Sloterdijk, 2004). Furthermore, the investigation always deals with the challenge of defining public spaces that, even if raised from the street level, would be welded to their context by setting a continuity with ground level public spaces and building access, so to establish an urban loop of contemporary public uses.

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ID 1451 | CITY UNSILENCED: PUBLIC SPACE AND URBAN DEMOCRACY ON TRIAL SABINE KNIERBEIN

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1 NEW PLACES OF URBAN SOLIDARITY AND RESISTANCE

Around the world, the shrinking capacity of (formal) democratic process has left protesters and ordinary citizens with no other resort than to take to the streets, the emblematic space of the publics, for reinstating democracy. Shrinking democracy, coupled with economic restructuring, constitutes an underlying challenge facing cities and communities around the world. Public space, as a building block and medium of political engagement and social interactions, may represent an alternative space and a vehicle of resistance against systems of shrinking democracy. In its capacity as a vehicle for active democracy, public space in contemporary society deserves greater care, attention, and critical reflection. As movements evolve to confront new challenges, explore new opportunities, negotiate with new actors and circumstances, and utilizing new technologies and platforms, our understanding of the role and agency of public space as lived and political space must also advance.

This is precisely the objective of exploring the linkages between urban resistance and public space in the age of shrinking democracy. With this work and others to follow, we continue to explore public space as sites of renewed hope and possibilities in the quest for a more just, enduring, and democratic urban(ized) society.

2 EXPLORING URBAN RESISTANCE TACTICS AND THEIR SPATIALITY 2.1 SHRINKING DEMOCRACY

It was not too long ago that (liberal) democracy as a political system and preferred form of governance seemed to be an unstoppable force around the world. In what he calls democracy's third wave, Hungtington (1993, p. 3) estimated that at least 30 countries made transition to democracy between 1974 and 1990, "just about doubling the number of democratic governments in the world." Prior to that, 36 countries were governed democratically in 1962 (ibid.). By the mid-1990s, the triumph of democracy, and human rights around the world were celebrated by liberal political leaders, scholars and activists (Alagappa, 2004). With the collapse of Berlin Wall, Fukuyama (1989) famously declared the "end of history" suggesting that the advent of Western liberal democracy had marked the endpoint of the sociocultural evolution in human history.

Today, such a hopeful and partly romantic view of political emancipation and democratic governance seems dampened by the influence of technocrat governance regimes and multinationals without clear oversight and direct accountability (Wilson and Swyngedouw, 2015). Under processes of economic globalization, democratic states have succumbed to increasing global competition, transnational flows of capital and labour, and policies that steadily dismantled regulations and institutions that once provided necessary social support and stability for societies, as well as opportunities for democratic participation and political accountability (Peck and Tickell, 2003). At the supranational scale, global entities such as the IMF, World Banks, WTO, and myriad other such organizations have "uploaded various state functions from the national scale" (Smith, 2009, p. 6), thus weakening democratic control at the state. Under processes of globalization, Low (1997, p. 242) argues, "a politics of place no longer seems possible at the scale of the national state."

In the beginning of the twenty-first century, instead of traditional state institutions, cities and regions are now governed by what Swyngedouw (2010, p. 5) describes as "a proliferating maze of opaque networks, fuzzy institutional arrangements, with ill-defined responsibilities and ambiguous political objectives and priorities." Decisions affecting local communities are being made from an unknown distance, behind closed doors, by networks of actors and entities, under laws, practices, and loopholes beyond the comprehension of ordinary citizens. Local democratic processes are only as effective as electing politicians who have limited power under a system that operates above the local institutions.

Participatory democracy and oversight, to the extent that it has existed, is replaced or hollowed out by new alliances of political and commercial interests. Healey (2010, p. 69) calls this "a kind of network governance, in which linkages are developed between some key government arenas," which makes it much more difficult to identify where decisions are located, resulting in a loss of spatial transparency. Likewise, Swyngedouw (2010, p. 2-3) argues that urban governance has shifted so profoundly in the beginning of the 21st century that a new form of governmentality has risen, "one that is predicated upon new form and informal institutional configurations – forms of governance that are characterized by a broadening of the sphere of governing, while narrowing, if not suspending, the space of the properly political." Or, as Merrifield (2014, p. viii) has put it: "One of the defining features of democracy in modern times is its lack of democracy."

2.2 ARMAMENT OF PUBLIC SPACE

Cities have indeed become an important site in which processes and outcomes of de-politicisation can be witnessed, including shrinking democracy and evidences of restrictions for public life. Mayer outlines four dimensions of this new urban formation: (1) a process of urban upgrading driven by global developers and international investors; (2) gentrification-led restructuring of urban centres; (3) marketization of cities through branding, festivalization, mega events, and attraction of creative industries; and (4) the concurrent outsourcing of manufacturing to the Global South, coupled with the post-industrial cities of the North becoming "the playgrounds for the upper classes, serviced by armies of downgraded and increasingly precarious workers" (ibid. 2013, p. 9).

In the context of accelerating competition between city-regions and in effort to attract investment and capital, regulations have been relaxed and subsidies have been doled out to developers and investors. "Geobribes," Smith (2003, p. 80-81) argues, have been paid by the city to global corporations to attract

their investment. Healey (2010) notes that instead of responsible representatives of citizen's concerns, politicians are being "buttressed by self-interested officials and lobby groups, distanced from people's everyday lives." In some East Asian cities, including Taipei and Hong Kong, for example, city governments or redevelopment authorities have become complicit in expropriating properties for developers and bulldozing entire neighbourhoods under the banner of urban renewal.

In the decades since 9/11, the policing of city, cityscapes, and citizens has been further heightened by hyper-security measures including surveillance and control of both physical public spaces and cyberspaces that are meant to prevent and counter terrorist attacks (Low and Smith, 2006). In the United States, Europe and some Latin American countries, municipal police now increasingly resemble paramilitary forces with high-grade gears and equipment. In addition, zero-tolerance techniques have in turn been deployed by police forces around the world (Smith, 2003), and have been widely criticized by urban scholars for their ethno- racist bias and discriminative impact (Cahill et al., 2017). British police, for instance, has employed the use of drones to track down what they identify as "socially deviant behaviour", thus equivocally rendering any type of public encounter an eventual meeting of 'potential suspects' and perverting the original meaning of public space as a crossroads where an encounter in difference may take place every day. In times of shrinking democracy, security measures are increasingly used against not only potential terrorist threats but also political dissent as protests and occupation are quickly dispersed, or prevented in the first place. For example, anti- terrorist laws have been used against housing and anti-gentrification activists in post-Katrina New Orleans, environmental opponents of London Heathrow Airport expansion, and even Critical Mass gatherings (Smith, 2009). In Istanbul, many of the Gezi park activists face court trials, bearing firsthand the effects of the criminalization of active democratic practice.

So, are we not living in democratic societies anymore? Yes, and no. Democracy may still exist, and its formalities are perhaps no less than before, as evident in elections, council assemblies, public meetings, ballot measures, and other remaining institutional arrangements. The challenge before us is that such exercises, the actually existing democracy, appear to be empty, ineffective, and no longer sufficient or adequate in holding the hegemonic economic and political dynamics accountable at either the local, urban or state level. The clash between everyday needs and political systems which have lost a spatial connection to lived space or that manufacture new patterns of how everyday life should be enacted have become part of the problems facing urban societies around the world.

2.3 URBAN RESISTANCE AND PUBLIC SPACE

With communities displaced, jobs lost, pensions evaporated, cost of living rising, citizens harassed and killed by the police, and with no effective or available democratic process to hold back and reverse these trends, it is not surprising that communities in cities around the world are taking to the streets, squares, plazas, and other types of lived space to voice their grievances and to demand specific local policy changes in concert with global attempts to rearticulate general political mores. From mass assemblies in Brazilian cities, to occupation of the state capital building in Madison, Wisconsin, and protests in cities across Europe ordinary citizens have been engaged in a new wave of passionate protests and embodied resistance. Cities, it seems, have become again a catalyst for struggles to maintain, renew, and establish the democratic project, as it is here where the material impacts of abstract policies so viscerally materialize.

Public space, indeed, has been central to recent movements. But public spaces are also important in the recent struggles in a different sense as the public realm has been not only the site but also the subject of contestation and struggles against neoliberal development and policies. As Mitchell and Staeheli (2006, p. 144) note, "as cities redeveloped, public space has become a key battleground (...) over the homeless and the poor and over the rights of developers, corporations, and those who seek to make over the city in an image attractive to tourists, middle- and upper-class residents and suburbanites." Public spaces increasingly redeveloped to maximize values of surrounding properties. They are often privatized or managed through so- called public-private partnerships to offload cost of operations from municipalities strapped by austerity measures. As such, public spaces today face not only increasing control for order and security but also threats from financial interests from both municipalities and corporations.

As public spaces come under pressure, they also serve as a vestige of active democracy—a space of expression, mobilization, and contestation. However, the altering role of public space in the changing

urban resistance remains under-theorized and poorly understood. Specifically, for many movement scholars, space remains primarily as a backdrop to discussion of movement strategies, tactics and larger structural factors facing resistance movements. For planning and design professionals responsible for the making of contemporary public space, protests and resistance are far from their project focus. In the worst scenarios, their work is often intended to facilitate surveillance and control, if not to deter mass assemblies in the first place. For planning and design scholars focusing on public space, there remains much more work to be done in unpacking the role of public space in supporting and engendering active democracy, e.g. through understanding the connections between urban movements and planning, or between urban resistance and planning. Frank and Fuentes (1990, p. 142), for instance, argue, "[a]lthough social movements are more defensive than offensive and tend to be temporary, they are perhaps the most important agents of social transformation..." It is this capacity for social transformation that, we argue, suggest the direction for a new, emancipatory politics of public space, and a scrutiny of the role that planners and designers could contribute to support the spatial emergence of roots for emancipatory politics.

It was precisely with this in mind that this research has brought together a diverse group of scholars (marked in the reference list with *) from different backgrounds doing research on diverse cases of urban resistance and solidarity in South America, Asia, Europe and North America. The paper draws on empirical findings from 16 cities, analysed through the prisms of diverse disciplines related to planning theory and urban studies. We look for resistance movements that share a common struggle against neoliberal policies and shrinking democracy but with different linkages to the notion and material manifestation of lived space.

3 SPATIAL GROUNDS OF RE-DEMOCRATISATION

In this section, we specifically examine four aspects in which public space serves as nodes of critical actions and reflections: (3.1.) public space as sites of mobilization and negotiation, (3.2.) public space as spaces of contestation and learning, (3.3) public space as space of rescaling and re-politicizing, and (3.4) public space as grounds of alter-politics.

Although scholars tend to situate the ascension of global resistance to patterns of neoliberal urbanism in 2011, "the year of dreaming dangerously" (Žižek, 2012), urban contestations against modes of neoliberal urban restructuring have been unfolding well before then. In Athens, civic uprisings against the upgrading, commercialization and privatization of public space against the backdrop of beautifying the city for the Olympic Games 2004 were already visible during the 1990s. On the other side of the globe, Santos examines the resistance by citizens of Cochabamba, Bolivia's third largest city where citizens successfully rallied against the privatization of water and the consequent increase in water consumption costs between December 1999 and April 2000. The five-month resistance involved tens of thousands of protestors who ultimately succeeded in the de-privatization of a World Bank concession that was issued with the municipality in 1997 (Santos, 2007 (2000)). In 2001, Argentina was heavily shaken by an economic crisis in which the Piqueteros movement of unemployed factory workers (now unemployed due to flexibilization of labour patterns, e.g. in the global car industry) gained momentum, leading to massive acts of urban resistance and to the first signs of horizontal and collective organization against a neoliberal regime put in place under the Military Junta in the 1970s and 1980s (Rosa and Vidosa, 2017, Lorey, 2014). In South Africa, the Western- Cape Anti-Eviction Campaign, initiated in 2001 served "as an umbrella body for a number of community organizations, crisis committees, and resident groups that emerge in Cape Town's poor townships to resist [...] evictions and service cut-offs and demand their rights to shelter and basic services" (Miraftab, 2009, p. 36). These earlier sparks of resistance against discriminatory, exclusive, and often racialized practices under neoliberal policy regimes have been globally recognized. This scholastic blind spot regards large tracts has disregarded broad ranges of urban scholarship, empirical evidence, and theoretical framing for understanding grassroots insurgency against neoliberal governance and has (un)intentionally reified of such protest being ephemeral and episodic where challenges to neoliberal cultural or economic exports are diminished as growing pains to be overcome as a country or city undergoes neoliberalization, i.e. the introduction and implementation of neoliberal policy agendas. This two-pronged problem normalizes resistance in the context of a naturalized neoliberalism and significantly undercuts our ability to be critical practitioners and citizens.

In the light of these examples, 2011 can be conceived rather as a culminating point when resistance in the Global South spilled over to the North, reflecting the enhanced material inequalities related to the neoliberal policies. In particular, the global economic crisis in 2008 had further exacerbated the decline of employment, continued the decay of welfare states, and posed serious challenges to the dismantling of speculative housing investments all around the world. However, the impact of the neoliberal model cannot be framed in only economic or material terms, as its social, cultural and political dimensions have reached far beyond what is calculable and palpable. Contemporary interpretations of neoliberalism argue it has actively produced a political crisis where its capacity for economic predation has hindered civic control and responsiveness (Monbiot, 2016). Such mitigations can be seen in the reduced ability of voting to change political course, the conflation of civic advancement with capitalistic advancement, and growing acceptance of neoliberalism across the political spectrum, which further enhances voter disenfranchisement and the exploration of viable alternatives (ibid.).

As a result of fundamental social, economic and political changes, basic urban routines have become unsettled. Increasing urban inequalities in cities around the world is furthered by the de-politicization of politics through consensus-based liberal democracy; this has shut out citizens and left decisions to government managers, politicians, and specialists operating in a multilevel governance where actors who have not been democratically legitimated can increasingly assume power (Wilson and Swyngedouw, 2015). Meanwhile, as economic stability plummeted, discontent directed at the commodified nature of public life and public space has increased, as more and more educated, formerly middle-class individuals and groups joined the so-called urban subaltern (Bayat, 2010; Roy and Ong, 2011). But, is this the primary narrative to understand why we currently witness a new continuity of public space-based resistance? Hasn't public space always been a frontier between class interests, and a field for struggle against all sorts of inequality?

Public space has come into focus during recent struggles where the restructuring of multiple interrelationships between civil society, state, and markets unfolds. As part of this restructuring, we see increased attention to the roles that cities play, as the (conception of) modern nation-state faces a crisis (Appadurai, 1996). With focus on the crisis facing the modern nation-state, the political formation of many Western liberal democracies is receiving more criticism. As Mouffe (2000) has stated, liberal democracy has always been based on a democratic paradox between the liberal and the democratic strands of political thought: "On one side we have the liberal tradition constituted by the rule of law, the defence of human rights and the respect of individual liberty; on the other the democratic tradition whose main ideas are those of equality, identity between governing and governed and popular sovereignty. There is no necessary relation between those two distinct traditions but only a contingent historical articulation." (ibid., p. 2-3)

The paradoxical dynamic between freedom (liberal tradition) and equality (democratic tradition), which the Keynesian welfare state was still able to generally maintain, contributed to the fact that sporadic civil unrest would not gain global momentum or permanence during more recent welfare-state provisions, as the social material well-being was still secured in the Western world (Purcell 2009). This sustained paradox has been accompanied by another dilemma (cf. ibid., p. 144f), i.e., liberal democracies have long been adept at managing and legitimating social inequality. Their characteristic separation of the public and private spheres allows them to claim the existence of a formal political equality even when manifest social inequality is present. Under Keynesian policies, that equality deficit was mitigated by significant material redistribution and the meaningful inclusion of organized labour in public decision-making. Yet those accommodations were central targets of the neoliberal agenda and were significantly eroded. As a result, neoliberalism has increasingly exacerbated this democratic deficit that has long troubled liberal democracy (ibid).

With the rise of neoliberal policies, an imbalance between liberty and equality has been created with a strong focus on liberty, while issues of equality have been increasingly neglected (Mouffe, 2000). In order to maintain its form of governance, the neoliberal political economy needs to actively modulate the political and social instability and crises it generates: That is why neoliberal policy agendas and their makers increasingly seek to link their goals and projects with democracy (Purcell, 2009). To solve this frustration, community development with a focus on public space—the 'soft spaces of neoliberalism' (Haughton et al., 2013; Lebuhn, 2017)—has in many cases operated as an essential enabling moment for neoliberal projects. In the field of planning and designing for public spaces in particular, formal participatory modes of communicative and collaborative planning have been applied that often tend to use consensus-building

and majority-decisions, while bearing the risk to (in)advertently flatten the contradicting voices (often of minority or marginalized groups) calling for a more radical and egalitarian democratic project and reality (Purcell, 2009).

As more economic and political pressure is put on public space, accompanied by social and ethnic polarizations, it comes as no surprise that the realm of public life is the territory where one can witness intensified class reconfigurations, discrimination, and societal struggles (Tyler, 2015). Tensions in public space, in this sense, need to be understood as seismographs of an over-accelerated and fragile neoliberal political economic model. This model has undermined the long history of urban commoning and has rendered public space a highly competitive field. In this field, political parties dominate representational space and access to voters; companies strive for higher revenues or civic legitimization; and civil society seeks reorientation in a landscape of power in which 'the political' tends to become absent. It is in this context that acts of public space based resistance need to be examined, as they not only disrupt the neoliberal taming of public life but also reinvigorate deep relationships between public space and lived democracy.

3.1 PUBLIC SPACE AS SITES OF MOBILIZATION AND NEGOTIATION

The use of public space as a site of mobilization and negotiation is one of the main processes that occurred in cases throughout our research. Cities are where the material impacts of neoliberal governance on the social lives of many dwellers becomes noticeable, as a critical mass of people not only take actions but also engage in a deeper understanding of the changes occurring in their society and ways to mobilize and find voice. Recent acts of urban resistance have brought a new generation of protestors to light, people who have never before been active in street (or other types of) politics, including groups that usually would have moral values and positions quite opposite from one another, e.g. LGBT representatives and conservative Muslims (Yiğit Turan, 2017) or left- and right-wing activists forming political coalitions (Kaika and Karaliotas, 2017).

These recent instances of urban resistance combine a place-based and context-specific approach to resistance with new ways of political identity formation through horizontal and worlded networks (Knierbein and Gabauer, 2017) and more global claims for egalitarian democracy (Kaika and Karaliotas, 2017). Meanwhile, a belief in the power of open dissent, civil disobedience, and active resistance against (quasi)authoritarian forms of governing is gaining force. Consensual solutions have found a smaller impact on changing the political landscapes as a new power balance between mainstream society and increasing minority power in diverse cities challenges consensual deliberation as hegemonic tool of majorities to govern minorities and marginalized groups. Within diverse groups consensus is practiced along with dissent as a valuable form of decision-making. In some cases, power structures inherent in the group (formation) are explicitly reflected and reworked, indicating the active presence of negotiation (Lorey, 2014).

Horizontality as a mode of mobilization, observed in the Latin American movements in 2001, has become a prevalent and effective strategy to self-organize and to develop new forms of resistance (ibid). It involves reflexive social regulations, new forms of organizing, and new modes of subjectivation, which might ideally lead to a collective and affective form of relations among protestors, while being used as an instrument for creating a social space in which participants feel empowered to speak and take part in common challenges. This is a space in which privileges and inequalities can be consciously addressed, and heterogeneity in the manner of speaking and in the opinions expressed has to be endured: Horizontal self-organization opens up a process in which conflicts and differences are not negated, but must be first recognized (ibid). It is important to note, though, that structural discrepancies are still enmeshed in these forms of horizontal mobilization. Specifically, there is a danger that horizontality and urban resistance mobilization might run risk of nurturing types of mimicry-resistance that are not progressive or striving for radical democratization at all, but try to interrupt communities and collectivization through pursuing a politics of fear (Knierbein and Gabauer, 2017). In these cases, urban resistance is instrumentalized by anti-democratic groups by fortifying boundaries between populations of different religions, cultures, ethnicities, classes, or gender (Chen and Szeto, 2017; Owens and Antiporda, 2017).

3.2 PUBLIC SPACE AS SPACE OF CONTESTATION AND LEARNING

The heartbeat of neoliberal governance is crisis produced through austerity mechanisms and processes of de- and re-institutionalization (governance). This model constantly (re)produces social, political and cultural divides, thus nurturing repetitive eruptions of urban resistance against increasing inequality, injustice and imbalances. Crisis is the seemingly inherent necessity through which neoliberal measures are legitimized and produced politically, thus rendering it a self-fulfilling prophecy. As crises and impacts of neoliberal governance unfold and threaten the public life and public spaces of cities, these sites are where the fissures and cracks of neoliberalism become visible and its continued evolution becomes contested.

The empirical case studies exemplify the power of public space scholarship that utilizes hybrid combinations of micro, meso, and macro analytical techniques to carefully analyse changing patterns of urban life at a local level within the context of macro neoliberal politics and economies, between formal policies and informal action. In the cases of Berlin, Tokyo, Warsaw and Poznań (Dimmer, 2017; Domaradzka, 2017; Lebuhn, 2017), for instance, activists have used formal means of participation and/or formal rights and law to claim a citywide or neighbourhood referendum, or to claim full information about legal and public authority-related legal procedures. Regardless of their results, the authors state that these processes have helped to facilitate learning in newly established political communities where the political claims had become more inclusive and focused, thus (a) trying to attract the wider city publics to engage with and support the activists' claim; and (b) to make a clear message possible during the referendum campaign.

Meanwhile, other resistance groups have not allowed parties or formal procedures to (entirely) co- opt and conquer their mobilization dynamics as shown in the cases of Athens, Istanbul, Hong Kong and Taipei, whereas in Vienna (Knierbein and Gabauer 2017), the emergence of a wider critique -and thus, of counter-publics- and more actively resisting groups was heavily supported by the more socially oriented political parties. The cases of Taipei (Chen 2017), Hong Kong (Chen and Szeto 2017), Madrid (Kränzle 2017) and Barcelona (Garcia-Lamarca 2017) show that activists have made their way straight into the political system during times of elections, thus renewing the governing bodies and challenging long-established political identities. In Barcelona and Berlin (Lebuhn 2017), activist groups have stated their goal to perform as an incubator for democratic control of the governance regimes in place, and have actively organized policy and legal recommendations to revert the legal and economic hegemony of existing governance networks.

3.3 PUBLIC SPACE AS SPACE FOR RESCALING AND RE-POLITICIZING

Chapters in this volume indicate that we are currently witnessing a moment in which the spatial scales of crisis require more complex ways to consider and engage the political through modes of urban resistance. Resistance tactics, goals, and claims need to connect and reorganize fragmented geographies of crisis, that is, resistance groups need to combine the quest for local human needs, urban equity struggles, regional justice mechanisms, national political contestations, supranational governance critique, and a struggle against the locally destructive impacts of global and virtual market forces, thus overcoming the "jumping scales of capital" (Swyngedouw, 2003, referring to Smith, 1984).

Urban public spaces are places where social densities and political identities meet, and where fragmented scales of resistance need to be reunited, from local solidarity with peers within one's comfort zone towards a much more global solidarity for egalitarian democracy. Contributors to our research have indicated that movements have occasionally shifted their focus from central public spaces to the neighbourhood scale (and narrow comfort zone), consequently risking to insufficient address central political questions, and thus reducing the perseverance and impact of the movement (Kränzle, 2017). Certain local neighbourhood interventions can even serve as a pretext for cultural regeneration and symbolic capital accumulation, and thus gentrification. Others, however, have stressed that there are certain central and politically symbolic places in cities where the quest for more genuine political reform or revolution has been repeatedly posed over centuries. These squares and streets have witnessed a new spark of radically democratizing the urban, and inspired people to issue more fundamental political claims rather than narrow inquiries or local, interest-based issues.

Apart from this multi-scalar notion of resistance, and the potential of resistance groups to reconnect and re-politicize the "jumping scales of capital", we also find resistance as counteraction, response, and contestation against all types of unsettling: economic, cultural, ecological, social and political. Some of the

contributions emphasize attempts to re-politicize the many obvious and less visible relations between different scales and dimensions of crisis and resistance through radical dialectics (e.g. between housing and public space research in Barcelona). Several chapters highlight the vulnerability of younger generations to evictions and displacement from their everyday places either as a result of commodified public spaces (Maharawal, 2017) or through racialized broken-windows policing against communities of colour (Cahill et al. 2017; Owens and Antiporda, 2017). Such conditions provided in turn opportunities for engaged scholarship, participatory action research, and empowerment of disenfranchised actors to investigate and mobilize against such conditions and processes. Insights from Hong Kong, Taipei, and Vienna also leave us more hopeful, as the protests were mainly student-led, with an active and politicized student generation trying to push through social and political reform and change, while in the case of Vienna, a group of youngsters issued state critique through humanitarian aid for refugees, thus calling for global human rights and solidarity through local action in train stations. In times of a decreasing consensus about the prevalence of human rights, urban resistance struggles may become rooted in quite material and basic claims to guarantee the everyday survival of those who have been dispossessed, disenfranchised and disempowered (Knierbein and Gabauer, 2017).

3.4 PUBLIC SPACE AS GROUNDS OF ALTER-POLITICS

Cities have been historically understood as a collective actor, where different parts of urban societies constantly perform collaboratively, producing and using public space as urban commons. The neoliberal project, however, seeks to replace this collective and collaborative urban history with an economic narrative: the city as a competitive space. As a result, competition has been rendered as a key aspect of current democracies, as it is linked to appearance of transparency, efficiency, and so forth, even though the actual linkages are weak and superficially constructed. Furthermore, in the construction of an exclusive politics and a moral climate, the narrative of competition renders those that are not able to or do not want to participate in such competition as outcasts (Tyler, 2015). The various resistance movements presented in this book represent efforts to expose and intervene in the apparent cracks of this narrative and practice, not only to claim, but also to radically renew the democratic project.

As space is at the heart of the organization of changing political economies, it is worth reflecting on the spatial features of the acts of urban resistance. This work draws upon earlier thinkers who have articulated the collective production of spaces as truly democratic where constituents that previously had no part become now the key agents for renewing democracy (Rancière, 2010). Through the case studies from different cities and continents, we have gathered results that enable us to: (1) further differentiate those disempowered and disenfranchised and (2) to track how they relate (a) to public space and (b) through public space to make use of other spaces.

For differently-motivated resistance groups, public space serves as the initial sites where many try to make their claim or state their dissent within their field, and to expand their political identifications to others. That way, they enable the embodied realm of lived space to become the key catalyst for the emergence of wider political dissent and the generation of new and alternative democratic projects. Lived space is thus where the picture of multiple fragmentations, failures, and fractures of the current global capitalism become traceable, connected, and where the potential cracks and spaces that escape neoliberalism's spatial conquista can be analysed, and explored. It is here where different types of publics and counter-publics meet and collide in the accessible urban spaces in cities worldwide in order to achieve adequate living conditions, where they intermingle and develop solidarity across different(ly) affected groups. Public space, thus, represents both an opportunity and a threat, as on the one hand it makes their struggle become (globally) visibly to gain supporters; on the other hand, public space is where their vulnerability is exposed, with a high (bodily) risk of being further stigmatized, marginalized, dispossessed, criminalized, or menaced (de la Llata Gonzales, 2017). At times, this includes the risk of losing one's life.

Urban resistance tactics have connected public space assemblies with direct actions into the private, public, or hybrid territories of capital accumulation to disrupt, offset, or interfere with the productive space of the current neoliberal economy. The unemployed, for instance, have re-appropriated vacant factories, container terminals, and office space to set up self-organized labour markets or collective industrial cooperatives. The unsheltered have de-privatized and re-housed empty buildings or have de-commodified private property through land action and adverse possession. The indignant have blocked banks and reclaimed bank assets into public and collective property. The un(der)represented have blocked

parliament buildings and emblematic public squares and streets to go beyond mere discursive claims. The unattended have used train stations as local hubs to stand together in global solidarity and to self-organize humanitarian support. The colonized have occupied former prisons emblematic of long histories of colonialism, thus symbolically unchaining themselves from a colonizing genealogy of oppression and inferiority. The non- consumers have developed new alternative modes of being in common and sharing common resources, while using both private and public properties. These resistance tactics link public space with the workplace and labour markets; public space with housing and homes; public space with the places of resource transfer and (missing) material redistribution; public space with the places where democracy ideally should be made (e.g. parliament; fora, agora); public space with mobility hubs and transport infrastructures; public space with places of oppression, terror and imprisonment; public space with sites of non-consumption or commoning.

Urban research on these dialectical relations between the aforementioned fields can help to identify a shift from anti-politics (demonstrations against certain issues) towards alter-politics (Hage, 2012), the affective strive for a politics of change. Alter-politics aims at practicing a radical hope for a democratic project that is stronger than the weak post-democratic model we witness today. It shows affective action for a collective and passionate capacity to long for alter-modernity (Hardt and Negri, 2009; da Silva Andrade and Huguenin, 2017), to collectively produce the commons through an affective political project dwelling in present realities. Alter-Politics takes “us outside of ourselves to see how we can be radically other to ourselves.” It “aims at finding a possibility of a different life outside a given order of things,” “generating new alter-modern spaces lying outside existing governmentalities” (Hage, 2015, p. 294, 296).

4 UNSILENT AND SILENT FORMS OF RESISTANCE AND SOLIDARITY

Bayat has depicted public space in Western democracies as part of the institutions of the modern nation-state, to which many of the urban subaltern in the cities around the world have no access. “Because modernity is a costly existence, not everyone can afford to be modern. It requires the capacity to conform to the types of behaviour and modes of life [...] that most vulnerable people simply cannot afford” (ibid. 2010, p. 59). As a highly-institutionalized realm, public space is one of these institutions of the modern urban world. This is why many of the urban subaltern tend to avoid public expression wherever possible. That way, they seek to escape the modern legal structure, which does not offer any resources or opportunities but confines their realm of everyday action (ibid.). As we take a worlded, critical perspective in examining different forms of resistance, it is also important to consider that silent, individual resistance can contribute to an understanding of the city as self-organized political project.

This paper has been concerned with ways through which such silence has been dispelled, by seeing and using the city and public space as a site of resistance and a catalyst for political change, where people bang their pots and pans, use goggles, umbrellas, and flowers to disrupt political silence and renew —a democracy in which “the spaces of democracy (spaces for the practice of democracy) and the democracy of space (democratic relations in the production of space)” are inherently related (García-Lamarca, 2017, referring to Hoskyns, 2014, p. 4). As Ober has put it, the original term of democracy was meant to capture ‘power’ as the ‘capacity to do things:’ “Demokratia is not just “the power of the demos” in the sense of “the superior or monopolistic power of the demos relative to other potential power-holders in the state.” Rather it means, more capaciously, “the empowered demos” - the regime in which the demos gains a collective capacity to effect change in the public realm, “the collective strength and ability to act within that realm and, indeed, to reconstitute the public realm through action” (Ober, 2008, p. 7).

By better understanding the processes, actions, and implications of recent urban resistances, our research aspires to contribute to the renewed attention concerning the role and significance of public space in the practice of lived democracy and lived space. Specifically, we have argued that in the face of diminishing democratic institutions in cities around the world, spaces of political resistance have a greater role to play not only in holding the state and political establishments accountable to society’s interest but in renewing and reinvigorating democratic culture and pursuit for equity, difference, and justice. Without resistance and public space agencies, mobilization of the masses, and continued public debates and social movements, democracy is at risk of becoming stagnant, narrow, and obsolete. The continued presence, contestation, and discourse of lived space are fundamental to a renewed and lived democracy, a democracy that is fundamental to protecting and enhancing welfare of citizens and communities against the encroachment of neoliberal interests and all forms of increases in spatial patterns of social inequality.

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ID 1454 | PERCEIVED QUALITY OF URBAN OPEN SPACE: A STOCKHOLM CASE STUDY

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1 INTRODUCTION

In investigating the quality of urban open space, it is important to investigate how the visual and auditory components contribute to the total quality. The majority of studies investigating audio-visual interaction in environmental perception have concerned how visual stimuli affect auditory perception, such as how vegetation affects the perception of the sound of road traffic from a motorway (e.g., Anderson, Mulligan, Goodman, Regen, 1983). In general, these studies indicate that how people perceive sound depends on the visual context. That is, some sounds are more appropriate in one context than in another, which seems to depend on the participants' expectations. For example, a city center is expected to sound like a city center, and not like a forest, and vice versa. Typically, a mismatch resulted in discomfort.

A handful of laboratory studies investigated how perception of auditory and visual aspects related to the perception of the composite of audio-visual information (e.g., Gifford & Ng, 1982; Kuwano, Namba, Komatsu, Kato, & Hayashi, 2001; Morinaga, Aono, Kuwano, & Kato, 2003). Chiefly, these studies showed that visual aspects of environments were more important than auditory aspects. However, how important the visual aspects were, was highly variable across different environments. This indicates that auditory information might dominate over visual information at some point (see also Gan, Luo, Breitung, Kang, & Zhang, 2014; Preis, Kociński, Hafke-Dys, & Wrzosek, 2015).

The present paper concerns a case study conducted in collaboration with the City of Stockholm, Sweden, in the summer of 2016. The purpose was to characterize and to investigate the potential for improving the quality of the environment in a centrally located park area in the city. Walks were conducted in situ together with 61 residents. In the walks the participants assessed five preselected sites in and near the park area, with regards to their perceived total, auditory and visual qualities.

2 METHOD

2.1 CASE STUDY AREA

The case study area consisted of 5 preselected assessment sites in and near a large urban park area in Stockholm, Sweden, located by a busy road. They were selected based on a planned intervention that might be implemented in 2017. Two of the assessment sites were selected as references where the planned intervention was not expected to have any impact. The other three were selected based on where the planed intervention was expected to have the greatest impact. Because there are plans to follow up the intervention, if implemented, the exact location of the case study area, or the nature of the planned intervention, cannot be revealed in this paper.

2.2 PARTICIPANTS

The participants in the study were 61 residents living close to the case study area (38 female, 22 male, 1 missing value), aged 15 to 77 yrs. (Mage = 54.6 yrs., SDage = 15.2). All households in the block of houses closest to the case study area, in which the oldest member was between 18 and 70 years old, received an invitation by post to take part in the study. In total, 1,583 invitations were sent out. For 17 of these the recipient was unknown, and the letter returned. Among those who received the invitation, 73 persons responded and expressed an interest to take part. The participants were informed that the purpose of the study was to investigate how residents in their area experience the outdoor environment, and to develop methods on how to assess the urban outdoor environment in general. The participants were reimbursed with gift certificates with a total value of 300 SEK per person.

2.3 DATA COLLECTION INSTRUMENT

The data collection instrument consisted of a pencil and paper questionnaire. It included three pages for every assessment site. The first of the three pages concerned the overall impression of the site, the second concerned the sound environment, and the third concerned the visual environment, in this order for all sites. For each of the three aspects of the environment there were three broad questions. The first of these three questions concerned what objects the participants perceived as dominant (artefacts, nature or people), the second concerned the perceived overall quality of the site, and the third concerned the perceived affective quality of the environment. To make it possible to compare the responses for the three aspects of the environment, these three broad questions were formulated to be as similar as possible for each condition.

2.3.1 DOMINATING OBJECTS

The first question for each of the three conditions was:

- “Overall, to what extent do you perceive that the following 3 factors (both auditory and visual impressions) dominate this site right now?”
- “Listen – to what extent do you hear the following 4 types of sounds right now?”
- “Look around – to what extent do you see the following 3 types of components right now?”

In the first case the three overall factors were artefacts, nature and people. In the second case the four sound sources were road traffic, other noise, sounds of people, and natural sounds. In the third case the three visual components were manmade structures, nature and people. The participants assessed how dominant these factors were on a 5-point ordinal category-scale with the verbal descriptors: “not at all,” “a little,” “moderately,” “a lot,” and “dominates completely.”

2.3.2 PERCEIVED QUALITY

The second question for each of the three conditions was:

- “Overall, how would you describe this site as you experience it right now?”
- “How would you describe the surrounding sound environment right now?”
- “How would you describe the surrounding environment visually right now?”

For each of these questions, the participants provided an answer on a 5-point ordinal category-scale with verbal descriptors. The five verbal descriptors were “very good,” “good,” “neither good, nor bad,” “bad,” “very bad.”

2.3.3 PERCEIVED AFFECTIVE QUALITY

The third question for each of the three conditions was:

1. “Overall, how do you experience this site right now?”
2. “How do you experience the surrounding sound environment right now?”
3. “How do you perceive the surrounding environment visually right now?”

The participants responded on an 8-point semantic differential scale with the endpoints defined by:

“pleasant – unpleasant” (pl), “soothing – stressing” (so), “interesting – uninteresting” (in), “eventful – uneventful” (ev), “agreeable – annoying” (ag), “exciting – humdrum” (ex), “dynamic – static” (dy), “peaceful – restless” (pe), “living – lifeless” (li), “appealing – repulsive” (ap), “active – inactive” (ac), and “calm – chaotic” (ca), (abbreviations are used in equations below). These attributes were inspired by Axelsson, Nilsson and Berglund (2010).

2.3.4 OTHER QUESTIONS

On the first of the three pages for a site, the participants were also asked to respond on how they perceived maintenance as well as security/safety at the site. They responded on a 5-point ordinal category- scale of the same format as for perceived overall quality (i.e., good to bad). On the second of the three pages for a site, the participants were also asked to assess to what extent the surrounding sound environment was perceived as appropriate to the site. They responded on a 5-point ordinal category-scale with the verbal descriptors: “not at all,” “a little,” “moderately,” “a lot,” and “perfectly.” On the third of the three pages for a site, the participants were also asked how often they visit or pass by the site. They responded on an ordinal scale with seven response alternatives: “Every day,” “At least once a week,” “At least once a month,” “More seldom than every month, but at least ten times every year,” “At least once a year, but less than ten times,” “More seldom than every year,” and “This is the first time.”

At the end of the questionnaire, the participants were asked about their year of birth, their sex, their highest degree of education, and type of main occupation. Finally the participants were provided an opportunity to express other opinions on the five assessment sites, the study or the questionnaire, in an open- ended format.

2.4 PROCEDURE AND DESIGN

Walks were organized in August and September 2016, in which the 61 participants assessed the 5 sites with the aid of the questionnaire. The walks were conducted in groups, based on the participants’ availability. There were 14 groups with between 2 and 6 participants in each (M = 4.4 participants, SD = 1.4). All groups visited the 5 assessment sites in an irregular but sensible order, arranged in such a way that no group visited the 5 sites in the same order as any other group. In addition, the aim was to begin the walks from each of the 5 sites an equal number of times (in this case 3 times). Because there were 14 groups, walks begun at the last of the 5 sites twice. Chiefly, the walks were organized in the evening on working days — after working hours and before sunset (11 walks) — and during the day in the weekends (3 walks). The main criteria were that the walks were conducted in daylight, and during hours when the residents normally were at home. A walk took approximately 1.5 hours.

3 RESULTS

The results are reported for each of the five assessment sites separately. First, the site is described based on what objects the participants perceived as dominant at the site; totally, auditory and visually.

Arithmetic mean values are reported as the measure of central tendency among the participants, based on the individual responses, where 1 is the lowest and 5 the highest response. Second, the results of a set of hierarchical linear regression analyses (SPSS 22 for Windows) are reported, related to the perceived overall as well as the perceived affective quality of the site. Eq. 1 is used as statistical model.

$Totalx = a + b1 \times Auditoryx + b2 \times Visualx$ (1)

The subscript x in the equation represents the type of quality measure used in the analysis. The statistical model is used to analyze to what extent the auditory and the visual quality contributed to the overall quality of a site.

For perceived affective quality, the scores of the two underlying components Pleasantness (Pl) and Eventfulness (Ev) were calculated by Eq. 2 and 3, using the induvial responses for each site.

$Pl=(pl+ag+ap)+ \sqrt{1/2}(in+ex+dy)+ \sqrt{1/2}(so+pe+ca)$ (2)

$Ev=(ev+li+ac)+ \sqrt{1/2}(in+ex+dy)- \sqrt{1/2}(so+pe+ca)$ (3)

The square root out of a half in the equations is used as a weighting function to adjust the scores of the relevant variables, because they are assumed to be located at a 45o angle to the two main components (Axelsson, Nilsson & Berglund, 2010).

3.1 SITE A

Table 1 presents arithmetic mean values for how the 61 participants perceived Site A totally, auditory and visually. It shows that artifacts dominated the site, and that nature was not perceived at all. The participants perceived people at a moderate rate, but they could only be heard a little. Totally and auditory the site was perceived as bad. Visually it was perceived as neither good nor bad. On average, the participants visited or passed by this site every day.

Site A	Artefacts	Nature	People	Quality
Total	4.72	1.35	3.25	2.48
Auditory	4.62	1.07	1.87	1.85
Visual	4.75	1.39	3.31	2.69

Table 1 – Arithmetic mean values for how 61 participants perceived Site A totally, auditory and visually

Perceived auditory quality (= 0.416, t = 3.56, p = 0.001) influenced perceived total quality stronger than perceived visual quality (= 0.321, t = 2.75, p = 0.008), (F2,58 = 20.46, p < 0.001, R2 = 0.41). On its own, perceived auditory quality explained 34% of the variance in perceived total quality. Visual quality added another 8%.

Auditory pleasantness (= 0.497, t = 5.21, p < 0.001) influenced total pleasantness stronger than visual pleasantness (= 0.423, t = 4.44, p < 0.001), (F2,58 = 69.05, p < 0.001, R2 = 0.70). On its own, auditory pleasantness explained 60% of the variance in total pleasantness. Visual pleasantness added another 10%.

Auditory eventfulness (= 0.190, t = 1.19, p = 0.238) did not influence total eventfulness over and above visual eventfulness (= 0.559, t = 3.52, p = 0.001), (F2,58 = 31.68, p < 0.001, R2 = 0.52). Auditory eventfulness (= 0.714, t = 7.84, p < 0.001) explained 51% in total eventfulness, alone (F1,59 = 61.50, p < 0.001).

3.2 SITE B

Table 2 presents arithmetic mean values for how the 61 participants perceived Site B totally, auditory and visually. It shows that the participants perceived artifacts a lot, in total and visual terms. In auditory terms, artifacts (i.e., road traffic sound) dominated the site. The participants perceived nature a little in total and visual terms, and not at all in auditory terms. The same observation was true for the presence of people. Totally and auditory the site was perceived as bad. Visually it was perceived as neither good nor bad. On average, the participants visited or passed by this site at least once every week.

Site B	Artefacts	Nature	People	Quality
Total	4.25	2.15	2.51	2.23
Auditory	4.48	1.03	1.41	1.89
Visual	4.10	2.46	2.34	2.93

Table 2 - Arithmetic mean values for how 61 participants perceived Site B totally, auditory and visually

Perceived auditory stronger than perceived visual quality (= 0.243, t = 2.30, p = 0.025), (F2,57 = 31.91, p < 0.001, R2 = 0.53). On its own, perceived auditory quality explained 48% of the variance in perceived total quality. Visual quality added another 4%.

Auditory pleasantness (= 0.607, t = 6.78, p < 0.001) influenced total pleasantness stronger than visual pleasantness (= 0.314, t = 3.51, p = 0.001), (F2,58 = 63.00, p < 0.001, R2 = 0.69). On its own, auditory pleasantness explained 62% of the variance in total pleasantness. Visual pleasantness added another 7%.

Visual eventfulness (= 0.147, t = 1.49, p = 0.142) did not influence total eventfulness over and above auditory eventfulness (= 0.722, t = 7.29, p < 0.001), (F2,58 = 62.69, p < 0.001, R2 = 0.68). Auditory eventfulness (= 0.820, t = 10.99, p < 0.001) explained 67% in total eventfulness, alone (F1,59 = 120.66, p < 0.001).

3.3 SITE C

Table 3 presents arithmetic mean values for how the 61 participants perceived Site C totally, auditory and visually. It shows that the participants perceived the presence of artefacts as moderate. The participants could see a lot of nature, but could not hear it. The participants perceived the presence of people as moderate. Totally and visually the quality was good. Auditory it was neither good nor bad. On average, the participants visited or passed by this site at least once every week.

Site C	Artefacts	Nature	People	Quality
Total	3.00	3.66	3.11	3.57
Auditory	3.21	1.36	2.79	3.11
Visual	3.11	3.70	3.02	3.83

Table 3 - Arithmetic mean values for how 61 participants perceived Site C totally, auditory and visually

Perceived visual quality (= 0.487, t = 4.88, p < 0.001) influenced perceived total quality stronger than perceived auditory quality (= 0.373, t = 3.74, p < 0.001), (F2,57 = 26.13, p < 0.001, R2 = 0.48). On its own, perceived visual quality explained 35% of the variance in perceived total quality. Visual quality added another 13%.

Visual pleasantness (= 0.541, t = 7.43, p < 0.001) influenced total pleasantness stronger than auditory pleasantness (= 0.465, t = 6.39, p < 0.001), (F2,58 = 105.26, p < 0.001, R2 = 0.78). On its own, visual pleasantness explained 63% of the variance in total pleasantness. Auditory pleasantness added another 15%.

Visual eventfulness (= 0.765, t = 10.13, p < 0.001) influenced total eventfulness stronger than auditory eventfulness (= 0.189, t = 2.50, p = 0.015), (F2,58 = 119.38, p < 0.001, R2 = 0.81). On its own, visual eventfulness explained 78% of the variance in total eventfulness. Auditory eventfulness added another 2%.

3.4 SITE D

Table 4 presents arithmetic mean values for how the 61 participants perceived Site D totally, auditory and visually. It shows that the participants perceived artefacts a little. They saw a lot of nature but only heard it a little. They perceived the presence of people as moderate, and the environment as good. On average, the participants visited or passed by this site at least once every week.

Site D	Artefacts	Nature	People	Quality
Total	2.16	4.10	3.33	4.18
Auditory	2.56	2.25	2.89	3.80
Visual	2.12	4.18	3.20	4.18

Table 4 - Arithmetic mean values for how 61 participants perceived Site D totally, auditory and visually

Perceived visual quality (= 0.574, t = 6.00, p < 0.001) influenced perceived total quality stronger than perceived auditory quality (= 0.296, t = 3.09, p = 0.003), (F2,58 = 34.21, p < 0.001, R2 = 0.54). On its own, perceived visual quality explained 47% of the variance in perceived total quality. Visual quality added another 8%.

Visual pleasantness (= 0.700, t = 8.32, p < 0.001) influenced total pleasantness stronger than auditory pleasantness (= 0.235, t = 2.79, p = 0.007), (F2,58 = 88.20, p < 0.001, R2 = 0.75). On its own, visual pleasantness explained 72% of the variance in total pleasantness. Auditory pleasantness added another 3%.

Visual eventfulness (= 0.389, t = 2.76, p = 0.008) and auditory eventfulness (= 0.397, t = 2.81, p = 0.007) influenced total eventfulness almost equally (F2,58 = 35.59, p < 0.001, R2 = 0.55). On its own, visual eventfulness explained 49% of the variance in total eventfulness. Auditory eventfulness added another 6%. The same was true in the reversed order.

3.5 SITE E

Table 5 presents arithmetic mean values for how the 61 participants perceived Site E totally, auditory and visually. It shows that the participants perceived the presence of artefacts as moderate. They saw a lot of nature but only heard it a little. They perceived the presence of people as moderate, and the environment as good. On average, the participants visited or passed by this site at least once every week.

Site E	Artefacts	Nature	People	Quality
Total	3.30	3.59	2.87	4.31
Auditory	3.11	2.56	2.49	3.52
Visual	3.44	3.49	2.70	4.08

Table 5 - Arithmetic mean values for how 61 participants perceived Site E totally, auditory and visually

Perceived visual quality (= 0.433, t = 4.09, p < 0.001) influenced perceived total quality somewhat stronger than perceived auditory quality (= 0.402, t = 3.80, p < 0.001), (F2,57 = 31.23, p < 0.001, R2 = 0.52). On its own, perceived visual quality explained 40% of the variance in perceived total quality. Visual quality added another 12%.

Visual pleasantness (= 0.546, t = 4.78, p < 0.001) influenced total pleasantness stronger than auditory pleasantness (= 0.305, t = 2.67, p = 0.010), (F2,58 = 49.30, p < 0.001, R2 = 0.63). On its own, visual pleasantness explained 58% of the variance in total pleasantness. Auditory pleasantness added another 5%.

Visual eventfulness (= 0.526, t = 5.51, p < 0.001) influenced total eventfulness stronger than auditory eventfulness (= 0.410, t = 4.29, p < 0.001), (F2,58 = 94.93, p < 0.001, R2 = 0.77). On its own, visual eventfulness explained 69% of the variance in total eventfulness. Auditory eventfulness added another 7%.

3.6 AGGREGATED DATA

To explore the data further, it was aggregated by calculating the arithmetic mean value for each variable and each site. This resulted in a 5×53 data matrix, where the 5 rows represented the 5 sites, and the 53 columns represented the 53 variables. Pleasantness and Eventfulness were calculated for the total, auditory and visual aspects of the 5 sites, using Eqs. 2 and 3. To investigate under what circumstance the perceived auditory quality of a site influenced its perceived total quality more than the perceived visual quality, an index of Auditory Dominance was created by Eq. 4.

$$Auditory\ Dominance = r2\ Auditory - r2\ Visual \quad (4)$$

represent the squared Pearson's coefficient of correlations of perceived auditory quality on perceived total quality, as well as of perceived visual quality on perceived total quality, respectively. Thus, the index of Auditory Dominance is positive when perceived auditory quality explains a larger proportion of variance in perceived total quality than perceived visual quality, else it is negative. This new variable was used as dependent variable in a stepwise linear regression analysis with the other variables as predictors, except the three quality measures used for calculating Auditory Dominance. In addition, Pleasantness and Eventfulness were used instead of the 12 attributes of perceived affective quality. Consequently there were 23 predictors. The only predictor of Auditory Dominance was the perceived dominance of the sound of people, for which there was a negative relationship (β = –0.959, t = –5.87, p = 0.010), (F1,3 = 34.46, p = 0.010, R2 = 0.92). Thus, perceived auditory quality influenced the perceived total quality stronger than perceived visual quality at sites where the sound of people could not be heard. Rerunning the analysis with this variable removed from the set of data revealed a more complex relationship.

Table 6 presents the regression statistics for the second regression model of Auditory Dominance. It shows that perceived auditory quality influenced the perceived total quality more than perceived visual quality when the sound of road traffic dominated a site. When controlling for this variable, the total perceived

The two terms $r2$ and $r2\ Auditory\ Visual$ presence of people contributed negatively in the model. In conclusion, the sound environment contributed more to the overall impression of a site when it was poor, and where people appeared absent.

Predictor	β	t	p	$F_{2,2}$	p	R^2
Sound of road traffic	0.671	12.77	.006	217.72	.005	0.995
Total perceived presence of people	–.511	–9.72	.010			

Table 6 – Second regression model of Auditory Dominance

Using the perceived total quality as dependent variable and the other variables as predictors showed that the main predictor was total pleasantness (= 0.999, t = 31.72, p < 0.001), (F1,3 = 1006.43, p < 0.001, R2 = 0.997). Table 7 presents the Pearson's coefficients of correlations between perceived total quality and all other variables with which it had a statistically significant relationship. The table is organized in order of the size of the correlations coefficients from the strongest to the weakest relationship. Pleasantness topped the table, followed by perceived quality. Thereafter the perceived dominance of the sound sources emerged as important predictors.

Variable	Total quality
Total pleasantness	.999**
Visual pleasantness	.988**
Auditory pleasantness	.986**
Auditory quality	.981**
Visual quality	.966**
Road traffic sound	–.948*
Natural sounds	.927*
Nature (total)	.899*
Sound of people	.887*

* $p < 0.05$ (2-tailed test of statistical significance)

** $p < 0.01$ (2-tailed test of statistical significance)

Table 7 – Variables with a statistically significant association with perceived total quality in terms of Pearson's coefficient of correlations

As evident from Table 7 above, on aggregated level, perceived auditory quality of the 5 sites influenced perceived total quality stronger than perceived visual quality. Together the perceived auditory quality (β = 1.282, t = 1.34, p = 0.313) and perceived visual quality (β = -.304, t = -0.37, p = 0.781) performed poorly as predictors of perceived total quality ($F_{1,59}$ = 26.96, p = 0.036, R^2 = 0.96). They canceled each other out. Perceived auditory quality explained 96% of the variance in perceived total quality among the 5 sites, alone.

Using the perceived security/safety as dependent variable and the other variables as predictors showed that the main predictor was to what extent the surrounding sound environment was perceived as appropriate to the site (= 0.982, t = 8.91, p = 0.003), ($F_{1,3}$ = 79.37, p = 0.003, R^2 = 0.982). Table 8 presents the Pearson's coefficients of correlations between perceived security/safety and all other variables with which it had a statistically significant relationship. The table is organized in order of the size of the correlations coefficients from the strongest to the weakest relationship. Besides to what extent the surrounding sound environment was perceived as appropriate to the site, natural sounds or auditory pleasantness had positive relationships with perceived security/safety.

Variable	Perceived security/safety
Appropriate sound environment	.982**
Natural sounds	.929*
Auditory pleasantness	.893*

* $p < 0.05$ (2-tailed test of statistical significance)

** $p < 0.01$ (2-tailed test of statistical significance)

Table 8 – Variables with a statistically significant association with perceived security/safety in terms of Pearson's coefficient of correlations

The present study investigated the relationship between perceived total, auditory and visual quality of 5 sites in and near a large urban park area in Stockholm, Sweden, located by a busy road. Previous studies of audio-visual interaction in environmental perception has suggested that the visual aspects of a place dominate over the auditory (e.g., Gifford & Ng, 1982; Kuwano, Namba, Komatsu, Kato, & Hayashi, 2001; Morinaga, Aono, Kuwano, & Kato, 2003). However, there was a large variation in this respect, suggesting that the auditory aspects might dominate over the visual at some point. The present results suggest that the auditory aspects dominate over the visual when the sound environment is poor. This occurred when the sound of road traffic dominated the impression of a site, and other sounds could not be heard. The results also suggest that perceived auditory quality is just as important as perceived visual quality, at least under the present circumstances. It is particularly interesting to note how important the quality of the sound environment was to perceived security/safety. In summary, it seems as if previous studies of audio-visual interaction in environmental perception have used a rather restricted range of stimuli.

Potential limitations in the present study include the low number of sites in the study. The study was conducted in situ, and is based on observational data with low scientific control, as opposed to experimental data. Taken together, this means that the results cannot be generalized, and can only be taken as indicative.

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ID 1455 | ASSESSING THE PUBLICNESS OF 'PLANNED' PUBLIC OPEN SPACES PROGRESSIVELY: THE AU MODEL OF PUBLICNESS

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ABSTRACT: Over the last three decades, public open space literature has been critical of the increasing involvement of private sector in contemporary practices of public open space planning and development. Critiques on private actors' involvement in public open space development are largely based on the notion of a 'highly public' public domain, argued to have existed in the public open spaces such as parks and squares in pre-WW II cities of Western Europe due to strong state presence in their development. However, as counter-critiques argue, the involvement of private actors in contemporary practices of public open space development is inevitable and could also be beneficial, particularly in emerging Asian economies whose cities are majorly built by private initiatives. And, as such counter-critiques argue, a reconceptualization of publicness as a phenomenon independent of sole state participation, and policies for public open space development based on novel combinations of state, civil society, and private sector participation are strongly warranted. Along these lines, this paper presents a model and method for assessing publicness of 'planned' public open spaces empirically – termed as AU model. The proposed

AU model is progressive, as a public open space is assessed in various stages of its development beginning from its planning - as part of an urban space - to its design, development, and management. Here, publicness is conceptualized based on two attributes – access and use, considered to be its core ideals and that the freedom of which makes a space public, and thereby the name AU. To assess the attributes of access and use, AU model is broadly conceived to constitute of two sub-models: quantitative publicness and qualitative publicness. While sub-model of quantitative publicness is conceptualized to measure the degree to which 'planned' public open spaces are developed into publicly accessible spaces, sub-model of qualitative publicness is conceptualized to measure the degree to which publicly accessible spaces - based on three dimensions viz., physical configuration, control, and civility - encourage use by the larger public of the city. Besides, sub-model of qualitative publicness is explicated furthermore into an operational model in which the above-mentioned three dimensions are measured and graphically represented through 14 indicators. Compared to existing pragmatic publicness assessment models, the proposed AU model is significant in providing a progressive, systematic, and comprehensive assessment of public open spaces and related policies. Primarily, it can be used to comparatively assess publicness of public open spaces that emerged under different planning policies, forms of provision, and management regimes. The paper is in five parts. The first part discusses the contemporary practices of public open space development and the associated debates on private sector participation. The second part discusses and then conceptualizes the nature of 'planned' public open spaces and their process of development. Third part conceptualizes publicness and explains the proposed AU model of publicness. Fourth part shows an application of the model to the case of parks in the city of Chennai, India. The final part discusses the model's applications in urban design research and practice and future research directions.

KEYWORDS: Publicness, Public Open Space, Assessment Tool, Emerging Asian Cities, Indian Cities

1 INTRODUCTION

Public open spaces such as parks, plazas and squares are widely accepted as important for creating a safe, liveable, and sustainable urban environment (Thompson, 2002; Villanueva et al., 2015; Woolley, 2003). Conventionally, public open space development is the subject matter of the state. Recently, this scenario is changing in several cities around the world which are undergoing neoliberal economic transition with associated changes in spatial development and governance (Carmona & Wunderlich, 2013). In these cities, the state is slowly reclining due to shrinking municipal funds and capacity, and private sector is playing an increasingly greater role in public open space development (Madanipour, 2014). Such forms of public space development with private sector involvement have come under the scrutiny of several researchers over the last three to four decades, evolving into 'the end of public space' debate (Langstraat & Van Melik, 2013; Madden, 2010; Paddison & Sharp, 2007; Sennett, 1992; Sorkin, 1992; Tyndall, 2010).

While substantial efforts have been taken to understand the nature and implications of private sector participation in public open space development in the American, European, East, and South East Asian contexts (Dimmer, 2013), little effort has been taken with respect to the South Asian context. Such context sensitive studies are crucial for the future of public spaces as they can aid in elucidating how local histories, planning cultures, actor networks and spatial conditions have shaped the developmental process of public open spaces, and how such process have influenced the quality of such spaces under local geographical and socio-economic contexts (Dimmer, 2013). Along these lines, the present research aims to examine the developmental process of public open spaces in the context of Indian cities, to understand the nature of private sector participation, and develop a model to assess the extent to which private sector participation in local development processes have produced successful public open spaces in Indian cities.

The paper is organized in five parts. Following this introduction, the next section discusses the developmental process of public open spaces in Indian cities along with the 'nature of' and 'debates on' the emerging private sector participation. In the third section, a pragmatic model called the AU model is conceptualized and proposed to assess the publicness of public open spaces in the various stages of their development to understand the implications of private sector participation in the context of Indian cities. The following part shows an operationalization of the AU model with respect to public open space development in Chennai, India. And the final part elucidates contextual specificities in the nature of private sector participation in public open space development in Indian cities, and discusses the applications of AU model in urban design research and practice.

2 PUBLIC OPEN SPACES IN INDIAN CITIES – DEVELOPMENTAL PROCESS AND NATURE OF PRIVATE SECTOR PARTICIPATION

Public open spaces that are planned in Indian cities usually take the form of parks or playgrounds which occupy an important place in the public culture of these cities. In these megacities, which are fragmented by vehicle crowded streets and burgeoning shopping malls, parks offer a unique opportunity to socialize in a non-commercial public setting (Merchant, 2013) in addition to the facilitation of physical activity and engagement with nature (Choudhury, 2012). Parks also serve as a venue for several citizen-driven communal activities such as public speaking and visual arts (Hindu, 2016; TNN, 2016), which can hardly thrive in these cities otherwise. Park, as a spatial typology, was introduced in Indian cities, by the British colonial powers (Kaviraj, 1997). They established few parks in all major cities, many of which exist till date as important city level public spaces (Kalpana, Muthiah, & Schiffer, 2003). Apart from these, most other neighbourhood parks seen today have been developed in the postcolonial era (since 1947) due to the modernist town planning principles adopted from the West.

Typically, land for the development of parks is generated as part of the planning process through two approaches. In the first approach, land parcels are reserved in different parts of the city during the preparation of master plan for the purpose of public open space development. For example, the 1991 development plan of Mumbai has reserved around 2000 open spaces under the different categories of Gardens, Parks, Playgrounds and Recreational Grounds (Das, 2011). In the second approach, in the case of large planned spatial developments, a portion of the land in the development is reserved as public open space. For example, in the city of Chennai, India, any planned residential development with a land extent greater than 10,000 square metres, must reserve 10% of the land extent for the development of public open space. The land parcels reserved through both these approaches are subsequently designed, developed, maintained, and regulated by the respective local municipal authorities. Overall the development of these ‘public’ open spaces is the responsibility of the state, except for the designation of land parcel which involves the private sector who owns the reserved land or who is responsible for the large planned spatial development.

However, over the last few decades, especially after the adoption of neoliberal economic policies in India since 1990, this process of public open space development is changing. The private sector is increasingly playing a decisive role in shaping these open spaces, broadly due to two reasons. Firstly, due to budget deficits, the local municipal authorities are encouraging the participation of private sector in the development and management of public open spaces in most major cities such as Delhi, Mumbai, Bengaluru and Chennai through ‘park adoption’ or ‘care taker’ policies (Sripad, 2014; TNN, 2014).

Secondly, the broader pattern of urban development is changing to one driven by the private sector resulting in super block office complexes, gated communities and shopping malls (Banerjee-Guha, 2009). In these emerging fortified developments, the private sector plays a dominant role in the provision of basic services and security either formally or informally, which also extends to the public open spaces designated as part of these developments. In both these cases, the private sector in involved in the developmental process of public open spaces in varying degrees extending from design and development to undertaking management also. What is happening is a kind of gradual ‘privatization of public open space’ as coined by Loukaitou-Sideris (1993) who describes ‘privatization of public open space’ as the passing over of its production, management, and control to the private sector.

Review of media articles and research reports suggests diverse implications of such forms of increasing private sector participation in the development of public open spaces. On a positive note, private sector participation has led to the complete development and management of notable public open spaces in Mumbai which would have remained vacant lands otherwise, but are now freely accessible and usable open

spaces for the benefit of the larger public of the city (Deshpande, 2016). Likewise, private sector participation has contributed to the upliftment of the quality of public open spaces in the city of Bengaluru by providing financial support for the installation of special armature for play and physical activity (Hindu, 2012).

On the contrary, private sector participation is also seen to challenge the ‘publicness’ of public open spaces in Indian cities. For instance, in the case of public open spaces under ‘care taker policy’ in Mumbai,

several of them have been found to be restrictive due to limited opening hours, ticketed entry, and several other constraints which limit the use of open spaces (Rishi Aggarwal, 2015). Also, in Mumbai, several open spaces that fall under 'care taker policy' have been developed into clubs for exclusive private use with no public access (Manasi Phadke 2014). Likewise, several public open spaces developed as part of fortified developments in the cities of Bengaluru and Chennai are under the exclusive use of residents within the fortified developments with no access to larger public of the city (Patel, 2016; Raqshan, 2016).

The above-mentioned evidences of the diverse implications of private sector participation over the 'publicness' of public open spaces in the context of Indian cities, portray a scenario quite different from the popular 'end of public space' notion developed in the West. Review of Indian scenario shows both potentials and challenges of private sector participation in public open space development. Besides, it is also important to acknowledge the fact that much of the Indian cities or broadly the emerging Asian cities are built by the private sector either formally or informally (Hogan, Bunnell, Pow, Permanasari, & Morshidi, 2012) and therefore their participation in public open space development which is largely a derivative of the larger urban development dynamics is inevitable.

Therefore, the present research aims to approach the phenomenon of private sector participation in public open space development in the context of Indian cities from a unprejudiced position; so as to systematically understand the degree of its diverse implications and to identify opportunities to augment the positive implications; along the lines of De Magalhães (2010) who points out that "regardless of how one might position oneself in the debate, there is certainly an urgent need to better explore conceptually and empirically the risks and also the opportunities associated with these new public space governance practices". As a first step in doing so, a publicness assessment model is developed which is based on the process of public open space development and the nature of private sector participation in the context of Indian cities, and is discussed in detail in the following section.

3 ANALYSING PUBLICNESS OF PUBLIC OPEN SPACES IN INDIAN CITIES – CONCEPTUALIZING THE AU MODEL

Recent advancement in public space research has been the development of pragmatic or empirical tools to analyse the effects of privatization on publicness of public spaces. At least three models have been conceptualized so far: the 'tri-axial' model (Németh & Schmidt, 2011); the 'star' model (George Varna & Tiesdell, 2010); and the 'OMAI' model (Langstraat & Van Melik, 2013). All are based on a multi-dimensional interpretation of what 'publicness' necessitates in a public space; and provide a graphical representation of the same (Langstraat & Van Melik, 2013). But, all three models lack in the following ways to aid in assessing the effects of private sector participation in the context of Indian cities: publicness is conceptualized as the quality of publicly accessible space with a lack of focus on the availability of access which is severely challenged in the Indian scenario; and public open space development is conceptualized as a product of ownership and management and not as an ongoing process in which different actors are involved in the different phases of its development as in the case of Indian cities. This necessitates a broader conceptualization of publicness that moves beyond the notion of publicness: as merely a quality of publicly accessible space; and as an 'end-product' of specific forms of ownership or management of public space.

Overall, publicness is conceptualized moving beyond the common political and civic conceptions "as a state of thrown togetherness which consists of multiple actors, groups, and identities" as defined by Qian (2014). Such a conceptualization is based on the ideas of (a) 'public' referring to the larger public of the city (Iveson, 1998); (b) 'liberal model of public sphere' put-forth by Habermas (1989) referring to the political conception of 'openness and access to everyone'; and (c) 'public realm' suggested by (Sennett, 1992) as "not only a region of social life located apart from the realm of family and close friends, but also . . . [the] realm of acquaintances and strangers". Besides, the ideals of 'accessibility, inclusion and tolerance of difference' posited by Young (1986) in the 'unoppressive city' and the conception of public space as 'one which is not only accessible, but also usable by all' put forth by Arendt (1958) in The Human Condition – also shape the conceptualization of publicness in the present research.

Based on these notions of 'public', 'public sphere' and 'public realm', 'public open space' is understood as a space which is open and accessible to all and in which there is room for interaction and casual

acquaintances between strangers. And the publicness of a public space is conceptualized as put forth by De Magalhães and Trigo (2016) in terms of 'the access' it offers to the larger public and 'freedom' it offers with respect to their 'use of' and 'behaviour within' the space. Or quite simply, publicness of a public open space is understood as the freedom available to the larger public of the city to 'access' and 'use' the space. However, among the two attributes, 'access' and 'use' - as posited by Madanipour (2014), 'right of access' is considered fundamental.

A common criticism on public space research is that "often questions of spatiality are underemphasised by public sphere theorists while questions of publicity are underemphasized by public space scholars (Madden, 2010)". Moreover as Carmona and Wunderlich (2013) caution, "both approaches are equally troubling: the first advancing a space-less perspective and the second a place-less vision for a phenomena that will always be rooted in both place and space". To address this issue, a layered approach is adopted here wherein the fundamental ideals of publicness of public space is derived based on the theoretical concepts of public sphere and public realm, which is then translated to a spatial vision comprising of desired physical and organization qualities of public space.

To translate the proposed attributes of publicness, i.e., the freedom to 'access' and 'use' spatially and to overcome the limitations of the existing pragmatic assessment models, a progressive model is proposed here in which a public open space is assessed in various stages of its development beginning from its planning – as part of an urban space – to its design, development, and management. The proposed model is termed AU, denoting the fundamental attributes of publicness, i.e., 'access' and 'use', and to assess the implications of the developmental process of public open spaces over the same, the 'spatial' idea of publicness is differentiated into two viz., quantitative and qualitative publicness. Quantitative publicness refers to the degree to which 'planned' public open spaces are developed into publicly accessible spaces, and qualitative publicness refers to the degree to which publicly accessible spaces encourage use by the larger public of the city through their physical and regulatory qualities.

The proposed AU model is thus conceptualized as two sub-models: quantitative publicness and qualitative publicness elucidated in detail in the subsequent sections. Differentiating publicness in such a manner, not only offers the advantage of assessing the extent to which the basic right of access has been forbidden in public spaces, but also provides a deeper understanding of how publicness is affected in the various stages of the developmental process of public open spaces. It should also be noted here that this model conceptualizes publicness as constructed in the different stages of the developmental and operational phases of the public open spaces through the different actions of the multiple stakeholders and does not encapsulate the publicness as constructed by the perceptions of the users of the space.

3.1. CONCEPTUALIZING QUANTITATIVE PUBLICNESS

The quantitative model is developed to assess all spaces that are designated to be public open spaces in an urban area based on local planning regulations. Quantitative publicness is understood here as the degree to which all public open spaces planned in an urban area are developed into publicly accessible open spaces that are usable by the larger public of the city. Figure 1 shows the graphical model of quantitative publicness which is developed as a multilevel donut pie chart with concentric rings showing the different phases of public open space provision and management, i.e., designation, design and development, and use.

Centre of the graphical model represents the total extent of public open space that is planned in an urban area according to local planning regulations. In the case of Chennai city in India, 10% of large planned developments (plot extent exceeding 10,000 square metres) need to be designated as public open space as mentioned earlier. In the case of corporate buildings in the American cities like New York, San Francisco, and Los Angeles, provision of different types of public space entails additional floor space (Loukaitou-Sideris & Banerjee, 1993; Németh & Schmidt, 2011). Similar planning regulations aimed at provision of public open space is also evident in other cities like Hong Kong (Cuthbert & McKinnell, 1997). It is the total extent of these public open spaces that are to be provided as per the local planning regulations in an urban area – a district or planning region - that forms the centre of the graphical model of quantitative publicness.

Subsequent concentric rings in the graphical model of quantitative publicness represent the degree to which the planned public open spaces are public in terms of designation, development and use. The first concentric ring outside the centre of the graphical model represents the extent of the planned public open spaces that are designated in reality for the same purpose. For example, in the case of Indian cities, there are incidences in which the public open spaces are proposed in the planning schemes that are not designated.

The second concentric ring outside the centre of the graphical model represents the extent of the total planned public space that is both designated and developed as public open space. Here the development of the designated space into a public space is considered as publicness. This conception is quite similar to the notion of viewing the development of 130 new or refurbished public spaces in London as an expansion of public domain by Carmona and Wunderlich (2013). The possibilities for the designated public spaces to remain undeveloped is quite high in Indian cities due to the lack of municipal funds for the same. Such issues could also be expected in similar cities of emerging economies elsewhere. Hence, the development of the designated space into public space is also an important milestone in achieving publicness.

The third concentric ring outside the centre of the graphical model represents the extent of the total planned public space that is designated, developed and usable as public space, i.e., open to the access and use of the larger public of the city. Here, the designation and development of the planned public open space into a publicly accessible and usable open space is considered as publicness or precisely quantitative publicness. Empirically it is the extent of planned public open space that falls under the category 'Designated, Developed, and Usable by Public', which signifies the quantitative publicness of planned public open spaces in an urban area. All the remaining categories represented in the third concentric ring connote the challenges faced in the realization of 'public' public open spaces even though they are planned so, such as unavailability of funds for public space development, 'closing off' of public space due to exclusive private use and so on. To summarize, the proposed quantitative model of publicness captures graphically and assesses the degree to which public open spaces that are planned as per the applicable planning regulations are developed into 'publicly accessible and usable' public spaces in an urban area besides showing the different ways in which quantitative loss of publicness has occurred.

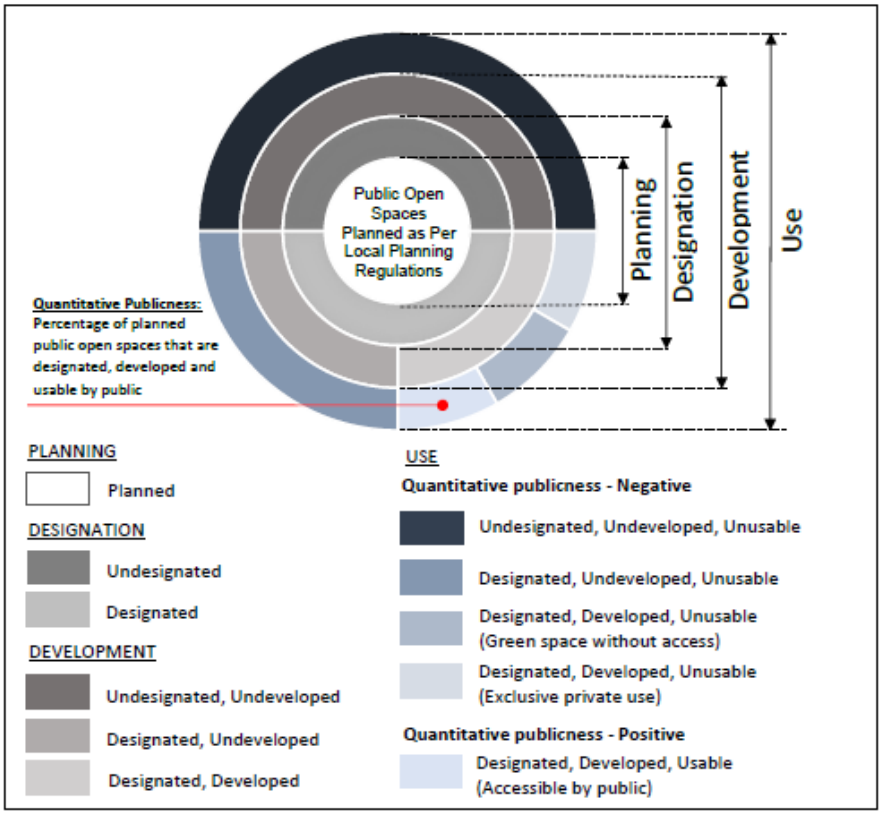


Figure 1: AU Model – Sub-model of Quantitative Publicness

3.2 CONCEPTUALIZING QUALITATIVE PUBLICNESS

The qualitative model of publicness is developed to conceptualize the quality of a 'publicly accessible and usable' open space, i.e., what is denoted as 'quantitatively public' in the sub-model of quantitative publicness. Even though public open spaces that are planned in an urban area are developed into 'publicly accessible and usable open spaces', they cannot be considered to be ideally public, as quite often a number of design and management techniques are employed in such spaces to discourage certain types of users, users and forms of behaviour in the name of sanitizing or securitizing such spaces thereby reducing their publicness (Németh & Schmidt, 2011). In such 'publicly accessible' open spaces, although access, i.e., the fundamental attribute of publicness is available, the other important attribute, i.e., freedom of use is challenged. Thus, 'freedom of use' or more particularly, the freedom the space offers with respect to their 'use of' and 'behaviour within' (De Magalhães & Trigo, 2016) that forms the focus of the sub-model of qualitative publicness. Specifically, the concern here is on how the developmental process of public open space has affected the qualitative publicness.

Qualitative publicness is thus conceptualized through three dimensions viz., physical configuration, control, and civility, which are further detailed out into 14 indicators, graphically represented as a pie diagram as shown in Figure 2. While the dimension of physical configuration and its set of indicators denote the design and physical qualities of the public open space, the other two dimensions and their set of indicators, i.e., control and civility denote the managerial aspects of the space. Conceptualization of the three dimensions is greatly inspired by the conceptualization of the Star Model by Georgiana Varna (2014). Together all three dimensions and their set of indicators assess the extent to which the design and managerial aspects of public open space encourage and do not discourage the larger public of the city to use the space.

Regarding the graphical model, each segment represents one indicator of qualitative publicness, which is assessed on a scale from one to five, represented through the five divisions of the segment. The colour of the segment denotes the dimension to which the indicator belongs to. The innermost division of the segment represents the value one which represents 'low publicness' and gradually increases to five in the outermost division which represents 'high publicness'. The higher the number of divisions is filled in each segment, the higher the qualitative publicness of a publicly accessible space. Representation of the model shown in Figure 2 represents an ideal public open space whose quality of design and management encourages the larger public of the city to access and use the space freely; and therefore, all the divisions in the segments are filled in the model.

As described above, the three dimensions are part of five dimensions of publicness conceptualized in the Star Model of public space by (Georgiana Varna, 2014). However, principles of the three dimensions as envisioned by (Georgiana Varna, 2014) are adapted in the proposed model based on the purpose, i.e., to assess the implications of the developmental process as manifested in the design and managerial aspects of the space, and local context, i.e., the socio-spatial context of planned public open spaces in Indian cities. Thus, based on a detailed review of international literature on contemporary practices of securitizing public spaces, relevant literature (including newspaper articles) on public spaces in Indian cities and a series of field observations on public open spaces in Chennai, India, a set of 14 indicators were developed in the present research.

Physical configuration: Physical configuration is conceptualized as both the quality of macro- and micro-design. Macro-design means the relationship of the space with its surroundings and measuring its quality is to assess whether "the public can reach and enter the place, and how much effort it takes (George Varna & Tiesdell, 2010)". The first indicator, i.e., centrality, connectedness and accessibility is concerned with the macro-design and assesses the degree to which the public open space is integrated in the surrounding public realm so that the space caters to a large section of people in the surrounding areas as noted by Hillier (1996). Micro-design denotes the quality of design within the space, and is measured as the "degree to which the design of the place supports and meets human needs in public space (George Varna & Tiesdell, 2010)". The other six indicators under the dimension of physical configuration viz., armature for basic use; opportunities for engagement, discovery, and display; favourable microclimate; lighting facilities; provision of restrooms and dustbins - assess the different aspects of the micro-design that encourage the use of public open space by multiple publics of the city. These sets of indicators regarding the micro-design are developed based on the highly important recommendations of key public space researchers such as Carr (1992), Gehl (2011), Gehl and Gemzoe (1996), Whyte (2012), and Tibbalds (2012) and are explained in further detail in the Table 1.

Control and civility: The other two dimensions of the proposed qualitative model of publicness, - control and civility - which are the managerial dimensions of public open spaces are conceptualized as a set of five and two indicators under each respectively. Control corresponds to all aspects of the management regime, which are aimed at restricting the 'use of' and 'behaviour within' the public space. Common control mechanisms in a public open space may include controlling through: presence - the physical presence of police personnel or

private security guards; ordinance – enforcing rules through security personal or other dominant persons; technology - surveillance through CCTV cameras; signage - imposing restrictions on the use of space through signage and timing – restricting use through limiting opening times of the space (Langstraat & Van Melik, 2013; Németh & Schmidt, 2007; Georgiana Varna, 2014) which form the five indicators of this dimension. Civility connotes "how a public place is managed and maintained and involves the cultivation of a positive and welcoming ambiance" (George Varna & Tiesdell, 2010). Civility includes both cleaning routine - the quality of everyday cleaning routines and physical maintenance - the attention to periodic maintenance and repairs and is emphasised by several public space researchers as one of the fundamental requisites that influence the use of public spaces (Tibbalds, 2012; George Varna & Tiesdell, 2010).

Thus, the three dimensions of qualitative publicness and the set of 14 indicators under the three dimensions cover some major fundamental and universal qualities of public open space design and management that can encourage the larger public to visit and use the space. The set of 14 indicators are further operationalized into several variables with an elaborate scoring criteria to aid in the empirical assessment as presented in Table 1 below and is explained in greater detail in the following section. Compared to the existing pragmatic publicness assessment models mentioned above, dimensions pertaining to the type of ownership and management are avoided in the present research as it argues against the normative notions that a certain type of ownership or management leads to more 'public' public space (generally believed as 'state' ownership or management), while certain other types may negatively affect the publicness of a space (generally believed as 'private sector').

Also, it is important to mention here that, in the context of emerging Asian cities, as observed in Indian cities, several times, public and private sector work in combination towards urban development and in turn public space development. Thus, reducing such complex partnerships of actors in public space development into few types and assigning them a value of publicness would be fundamentally flawed. Hence, in such conditions where the public sector and private sector work in combination towards urban development and in turn public space development, it is important to understand the implications of the different complex partnerships taken for public space development. In order to do so, the present research suggests a qualitative analysis that has to be carried out and correlated with the qualitative model of publicness proposed here. In doing so, conceptualizing 'type of ownership and management' as a normative is avoided, but a systematic understanding of the implications of the involvement of different actors is gained.

Overall, the AU model of publicness with the two sub-models viz., quantitative and qualitative publicness, conceptualizes the publicness of public open spaces as a progressive quality gained and augmented in the different phases of the developmental process of the space in which multiple actors are involved in each phase. The main significance of the model lies in discerning how publicness is affected in the different phases of the developmental process of public open spaces, which when combined with a detailed analysis of actor participation in the different phases of the developmental process can aid in systematically understanding the implications of complex partnership forms of public open space provision and management as evident in the case of Indian cities.

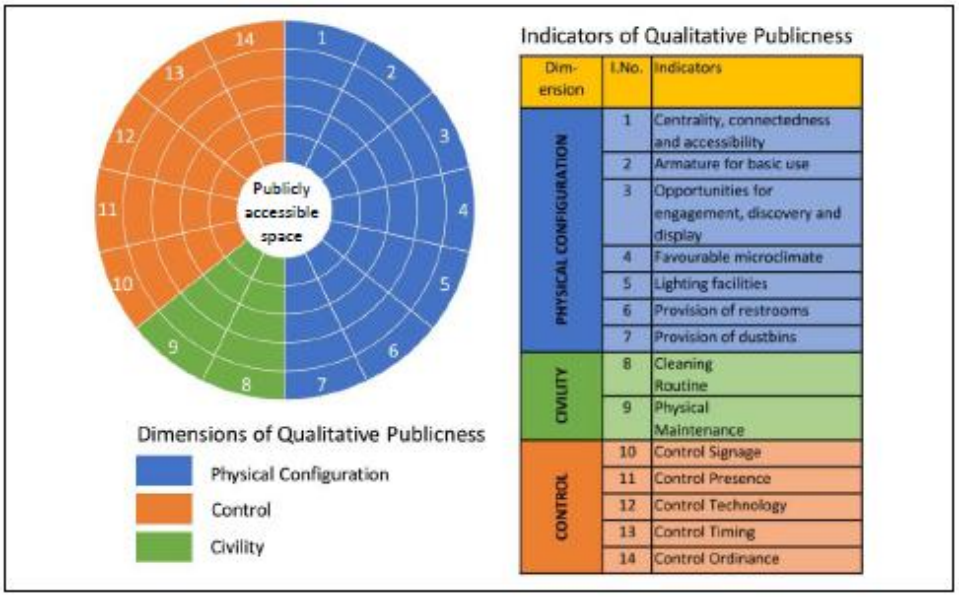


Figure 2: AU Model – Sub-model of Qualitative Publicness

4 OPERATIONALIZING THE AU MODEL: ASSESSING THE PUBLICNESS OF PUBLIC OPEN SPACES IN INDIAN CITIES

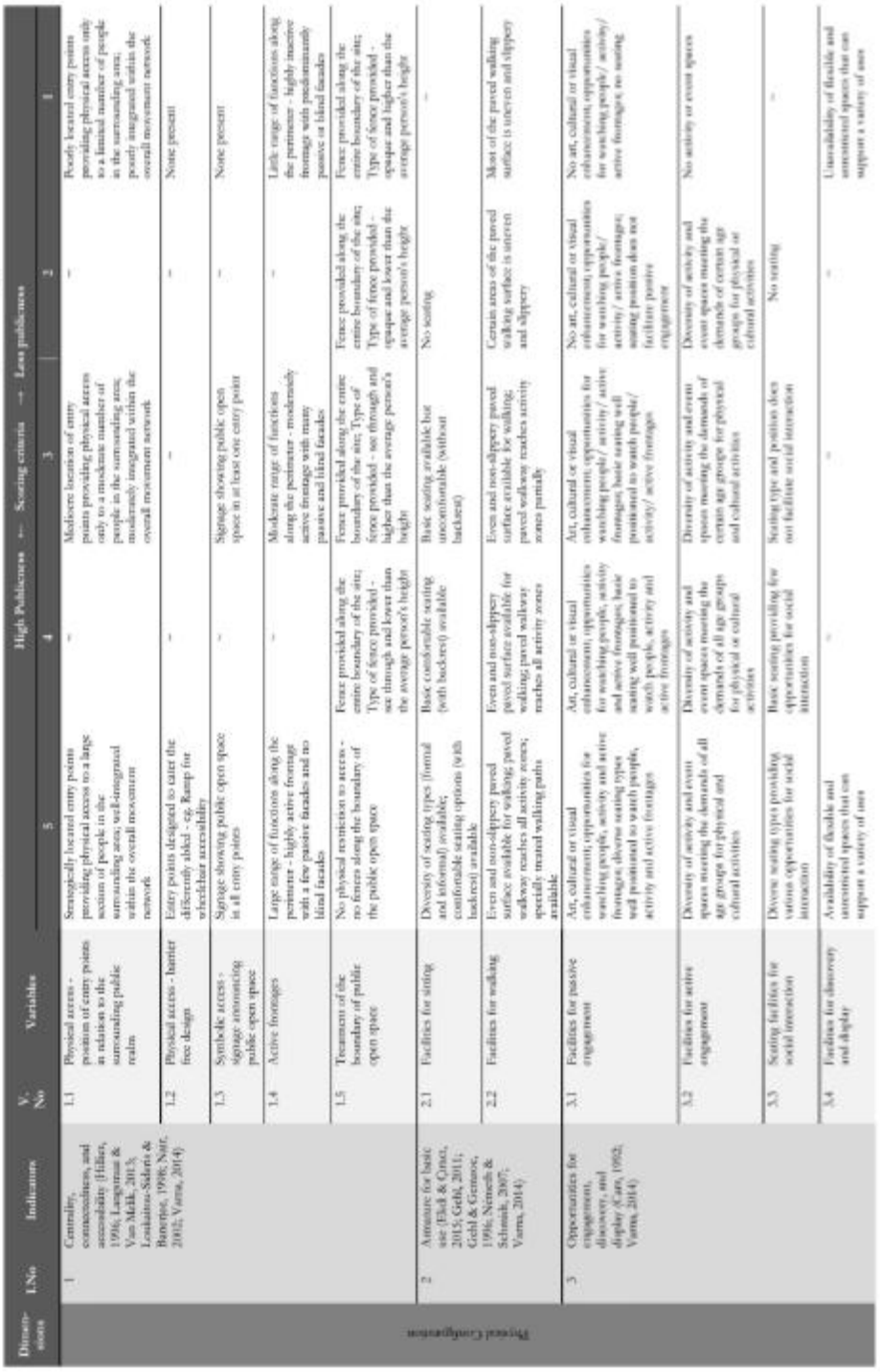
In the proposed AU model of publicness, the sub-model of quantitative publicness assesses the degree to which public open spaces that are planned in an urban area are designated and developed into publicly accessible spaces. Such an assessment is quite straight-forward and would mainly involve an audit of the present status of public open spaces that have been proposed in the planning schemes in an urban area and/or within a certain time-period, which can be conducted through several means such as field observation or through analysis of official data, if available.

However, the sub-model of qualitative publicness analyses the quality of design and managerial aspects of publicly accessible open spaces to assess the degree to which freedom is offered to the larger public with respect to the 'use of' and 'behaviour' within the space. Such an assessment, on the contrary, would require a complex understanding of the multiple qualities of the design and management of 'publicly accessible space', which contribute to its qualitative publicness both positively and negatively. Thus, as Kohn (2004) asserts, "publicness as a term has multiple and often contradictory definitions and the best way to approach it is to enlist a range of possible meanings or criteria which could then be grouped to form subsets that would then qualify a space as 'public'". The present research adopts such an approach and has developed an assessment framework that operationalizes the 14 indicators of qualitative publicness further to a set of variables each with a defined scoring criteria and is presented in Table 1.

The variables proposed in the framework are discernible or measurable qualities of public open spaces than can represent the 14 indicators. And the scoring criteria proposes the score of publicness to such discernible or measurable qualities and higher the score, higher the publicness of the space. The average score of variables under each indicator would form the value for the indicator and the total measure of qualitative publicness would be the percentage of the total scores under each indicator. The variables and the scoring criteria have been developed through literature review and field observations in Chennai, India, based on two premises: there are certain universal traits of public open spaces that make them highly public; and there are different shades of publicness that can be assessed on scale from low to high (Georgiana Varna, 2014).

Particularly the scoring criteria of each variable encompasses both qualities that encourage use and discourage use as suggested by (Németh & Schmidt, 2007). Qualities that encourage use are given the score of high publicness while the qualities that discourage use are given the score of low publicness. Besides, the scoring criteria includes qualities that represent both hard and soft methods of control, i.e., discouraging use, as posited by Loukaitou-Sideris and Banerjee (1998). Another key criterion that formed

the basis while developing variables and scoring criteria is the socio-spatial context of public open spaces in Indian cities. For example, under the indicator control presence, maintenance staff is included as a variable and the degree to which they exercise informal control is graded in the scoring criteria. Such a phenomenon has not been mentioned much in the international literature but is a common phenomenon in Indian cities. Overall, the operationalization of the sub-model of qualitative publicness can offer a more fine-grained understanding of the ways in which publicness is affected by the design and managerial aspects of public open spaces.



Dimensions	I.No	Indicators	V. No	Variables	Scoring criteria ← High Publicness → Less publicness				
					5	4	3	2	1
Physical Configuration	1	Centrality, connectedness, and accessibility (Hillier, 1996; Langenhan & Van Melik, 2013; Loukaitou-Sideris & Banerjee, 1998; Natr, 2002; Varna, 2014)	1.1	Physical access - position of entry points in relation to the surrounding public realm	Strategically located entry points providing physical access to a large section of people in the surrounding area; well-integrated within the overall movement network	-	Moderate location of entry points providing physical access only to a moderate number of people in the surrounding area; moderately integrated within the overall movement network	-	Poorly located entry points providing physical access only to a limited number of people in the surrounding area; poorly integrated within the overall movement network
			1.2	Physical access - barrier free design	Entry points designed so cater the differently abled - eg. Ramp for wheelchair accessibility	-	-	-	None present
			1.3	Symbolic access - signage announcing public open space	Signage showing public open space in at least one entry point	-	Signage showing public open space in at least one entry point	-	None present
			1.4	Active frontages	Large range of functions along the perimeter - highly active frontage with a few passive facades and no blind facades	-	Moderate range of functions along the perimeter - moderately active frontage with many passive and blind facades	-	Little range of functions along the perimeter - highly inactive frontage with predominantly passive or blind facades
			1.5	Treatment of the boundary of public open space	No physical restriction to access - no fences along the boundary of the public open space	Fence provided along the entire boundary of the site; Type of fence provided - see through and lower than the average person's height	Fence provided along the entire boundary of the site; Type of fence provided - see through and lower than the average person's height	Fence provided along the entire boundary of the site; Type of fence provided - opaque and higher than the average person's height	Fence provided along the entire boundary of the site; Type of fence provided - opaque and higher than the average person's height
	2	Amenity for basic use (Ekal & Qmar, 2015; Gehl, 2011; Gehl & Gemzoe, 1996; Nemeth & Schmidt, 2007; Varna, 2014)	2.1	Facilities for sitting	Diversity of seating types (formal and informal) available; comfortable seating options (with backrest) available	Basic considerable seating (with backrest) available	Basic seating available but uncomfortable (without backrest)	No seating	-
			2.2	Facilities for walking	Even and non-slippery paved surface available for walking; paved walkway specially treated walking paths available	Even and non-slippery paved surface available for walking; paved walkway reaches all activity zones	Even and non-slippery paved surface available for walking; paved walkway reaches activity zones partially	Certain areas of the paved walking surface is uneven	Most of the paved walking surface is uneven and slippery
	3	Opportunities for engagement, discovery, and display (Carr, 1992; Varna, 2014)	3.1	Facilities for passive engagement	Art, cultural or visual enhancement, opportunities for watching people, activity and active frontage; diverse seating types well positioned to watch people, activity and active frontages	Art, cultural or visual enhancement, opportunities for watching people, activity and active frontage; basic seating well positioned to watch people, activity and active frontages	Art, cultural or visual enhancement, opportunities for watching people/ activity/ active frontages; basic seating well positioned to watch people/ activity/ active frontages	No art, cultural or visual enhancement, opportunities for watching people/ activity/ active frontages; seating position does not facilitate passive engagement	No art, cultural or visual enhancement, opportunities for watching people/ activity/ active frontages; no seating
			3.2	Facilities for active engagement	Diversity of activity and event spaces meeting the demands of all age groups for physical and cultural activities	Diversity of activity and event spaces meeting the demands of all age groups for physical and cultural activities	Diversity of activity and event spaces meeting the demands of certain age groups for physical and cultural activities	Diversity of activity and event spaces meeting the demands of certain age groups for physical or cultural activities	No activity or event spaces
			3.3	Seating facilities for social interaction	Diverse seating types providing various opportunities for social interaction	Basic seating providing few opportunities for social interaction	Seating type and position does not facilitate social interaction	No seating	-
			3.4	Facilities for discovery and display	Availability of flexible and unrestricted spaces that can support a variety of uses	-	-	-	Unavailability of flexible and unrestricted spaces that can support a variety of uses

Table 1 – Variables and scoring criteria for each indicator under the three dimensions of qualitative publicness

5 CONCLUSION

This paper has made two key contributions with respect to the issue of privatization of public open spaces in South Asian cities that formed the focus of this research. Firstly, this paper has brought out the characteristics of private sector participation in the developmental process of public open spaces in Indian cities along with the associated debates with respect to their influence on the publicness of such spaces. The nature of private sector participation in the case of public open space development in Indian cities is quite different from the Western context, as here private sector is involved in different degrees either formally or informally in the different phases of the development in a 'complex partnership form' of public open space development. Also, private sector participation has affected the publicness of respective open spaces both positively and negatively and therefore, more detailed research is needed to discern the specific reasons for the positive and negative influences.

Secondly, this paper proposes the AU model of publicness to assess the degree to which public open spaces planned in Indian cities according to local planning regulations are 'public'. The significance of the AU model of publicness lies in the progressive assessment, i.e., in the assessment of public open spaces in the different phases of their development, which can give a more nuanced understanding of how the developmental process of public open spaces affects publicness. Furthermore, the differentiation of the model into two sub-models aid in assessing both the fundamental attributes of publicness, i.e., 'the availability of access' and 'the quality of access and use'. However, the model does have its own limitations. Most important is that it relies on a qualitative analysis of actor participation to precisely understand how different actors' participation in different phases affect publicness. Future research could mitigate this by developing this model further to represent the nature of actor participation in the developmental process of public open spaces also graphically.

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ID 1463 | THE URBAN DESIGN REVIEW IN THE PROCESS OF URBAN RENEWAL: A CASE STUDY OF ZHONGSHAN ROAD HISTORIC BLOCK

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1 INTRODUCTION

Historical districts are important components of urban image and urban quality carrying the core content and significant material of urban history and culture. As the policy Chinese Economic Reform: Reform and Opening-up is implemented for more than 30 years, accompanying with the blossom of national economy, the national government are attaching more attention to revitalising the urban cultural heritage, as evidenced by the continuous policy and fund support devoted to the protection and regeneration of historic blocks. However, in the process of concrete implementation, there are emerging some negative phenomena damaging urban image and cultural heritage such as excessive similarity in urban form and construction of fake relics, due to the deviations in the understanding of historical and cultural heritage protection, extreme market-oriented thinking and mechanised mode of operation and many other factors, resulting in the frustrating reconstruction of the historic railway stations in Qingdao and Jinan, which rebuilt the sites imitating the original architecture after the reasonless demolition. As a consequence, during the period of urban renewal, the historical characteristics of the neighbourhood should be taken into consideration, the precise analysis on the historical background and development pattern of the blocks is worth deliberating, and accurate orientation of historic districts are of vital importance as well, so that the

development of the traditional historic districts will be in better integration with the development path of modern city, for the sake of promoting the sustainable development of the city.

After the Opium War, Qingdao was transformed from the original uninhabited fishing village to the important coastal fortification of Qing government. Although Qingdao does not enjoy an immemorial history as long as it in other historic cities like Beijing, Xi'an, and Luoyang, but when looking through the sophisticated modern history of China, it is obvious to find that Qingdao, as a coastal city that has suffered from domination by many colonial rules for years, is tied up with many other major historical events like “The May Fourth Movement” (1919, an anti-imperialist, anti-feudal, political and cultural movement influenced by the October Revolution and led by intellectuals having the rudiments of Communist ideology). Consequently, Qingdao, as a key point in the collision and communication between China and the western world, has an irreplaceable special status in China's modern history. In different historical stages, there are a lot of planning practices for urban development and protection in Qingdao, and the relative planning researches for the protection of historical and cultural district are also in an endless stream, but there also exists some unsuccessful cases that failed to achieve the goals of reviving the state as before, the representative of which is the failing regeneration practice of Zhongshan Road Historic District experiencing four times transformation. Based on the characteristics of Qingdao, the institution of historic conservation planning in Qingdao should be combined with urban form planning, guides the urban design with the premise of protection, and on this basis, extends the concept of preservation from the protection of individual objects to related surrounding environment, anticipating making the protection planning more operational and implementable.

2 THE DEVELOPMENT OF HISTORIC BLOCKS IN QINGDAO

2.1 BACKGROUND OF URBAN DEVELOPMENT BEFORE LIBERATION

After systematic learning of the urban development history of Qingdao before liberation, we can divide it into four stages: German occupation period (1897 ~ 1914), the first Japanese occupation period (1914 ~ 1922), the Kuomintang reign period (1922 ~ 1937) and the second Japanese occupation period (1937 ~ 1945). In the early 20th century, the Germans formulated the earliest planning; the embryonic formation of the linear urban form was basically established during the first Japanese occupation period; The Kuomintang restarted the planning during its reign and determined to build Qingdao as The Portal of Yellow Sea in China's Five Major Economic Zones; during the Japanese occupation of Qingdao for the second time, the single-core urban structure in the German period was converted to multi-core layout pattern. Most of the urban heritage built before liberation remaining well now was German buildings, forming an urban fabric with red tiles, yellow walls, green mountains and trees, exploiting the advantages of altitude difference and combining the features of mountain landscape and ocean scenery. The well-preserved historic areas constitute a beautiful urban landscape of Qingdao.

2.2 CONSERVATION PLAN OF NATIONAL FAMOUS HISTORICAL AND CULTURAL CITIES, QINGDAO

2.2.1 PLANNING BACKGROUND

Qingdao was approved as the third batch of National Famous Historical and Cultural Cities authorised by the State Council in 1994. Witnessing the transition of Chinese society from feudal society to semi-colonial semi-feudal society and then, to the socialist society, Qingdao enjoys a valuable history deserving to be delved into. The protection of cultural heritage in Qingdao is always highly valued by decision-makers from government and the public. Accordingly, the Municipal People’ s Congress approved the execution of Qingdao Historical & Cultural Preservation Planning (2011 ~ 2020) in 2015, aiming at establishing the urban preservation system through overall consideration of historical & cultural heritage preservation with urban renewal, and forming a protection framework including natural environment, historic urban areas, historic blocks, cultural relics, industrial heritage, historical villages and towns, and intangible cultural heritage.

2.2.2 PRESERVATION REGULATIONS OF HISTORIC URBAN AREAS (28KM2)

- Preserve the current harmonious urban structure “mountain - sea - island - city” generally and protect the unique road network and urban fabric, so as to reflect the original living content, business atmosphere and cultural characteristics.
- Protect the landscape corridor, the scenic spots and landscape contours of historic urban areas and inherit the overall colour system of “red tiles, green trees, blue sea and blue sky”.
- Protect the intangible cultural heritage including folk customs and cultural characteristics, for instance, traditional crafts, traditional operas, traditional music and folk activities.

2.2.3 PRESERVATION REGULATIONS OF HISTORIC BLOCKS (13 DISTRICTS, 982 HECTARES)

1. Adhere to integrated conservation principles and maintain the authenticity and integrity of historic districts.
2. The construction of high-rise buildings is prohibited in protected areas, the height of new buildings ought not to exceed the height of the original historic buildings and the width of visual corridor should be controlled to sustain the original urban space contours.
3. Maintain the original road pattern and road scale in protected areas, control the authorisation of building large-scale centralised public parking, dissolving the parking problems through separating the distribution of vehicles.
4. Protect the traditional style elements like retaining walls, enclosing wall, steps, gates, corridors, road pavements, all the destroyed should be restored to their original appearance.
5. The construction and improvement of municipal infrastructure facilities should target at facilitating the living conditions of the residents, improving the environmental quality, and fulfilling the requirements of protected areas.

3 THE RENEWAL PLANNING OF ZHONGSHAN ROAD HISTORIC BLOCK

3.1 THE OVERVIEW OF ZHONGSHAN ROAD HISTORIC BLOCK

3.1.1 DEVELOPMENT HISTORY

In 1898, the Germans opened a commercial street named Frendrich Street with a typical German style north to the Zhan Qiao Pier (the official symbol of Qingdao initially built as the first man-made military wharf in 1892), establishing the embryonic form of the present Zhongshan Road.

On the fundamental construction of Germans, Zhongshan Road became the commercial center of Qingdao gradually during the first Japanese occupation period. Meanwhile, in order to strengthen the cultural invasion and mind control, the south part of Zhongshan Road was renamed Shizuoka Street, and the north part was renamed Shandong Street or Shin Ze Street by Japanese.

In 1922, the sovereignty of Qingdao was taken back and the Qingdao authorities abolished all Japanese road names and renamed the whole Zhongshan Road into Shandong Road. Then on May 22, 1929, to commemorate Dr. Sun Yat-sen, the Qingdao authorities renamed Shandong Road into Zhongshan Road.

Before the full-scale war of World War Two, Zhongshan Road witnessed its last prosperity as a commercial centre with the financial blossom of many famous banks.

From the 1950s to the early stage of reform and opening-up, Qingdao government drew up development plans in 1950, 1957, 1960 and 1978, where Zhongshan Road Historic Block occupies a pivotal position in the commercial development of Qingdao.

After the mid-1980s, the commercial development of Zhongshan Road still maintained a relatively rapid pace.

In the early stage of 1990s, Qingdao government formulated a significant amendment to the urban development structure, resulting in the eastward removal of central city.

Since the 1990s, the traffic function of the block has been strengthened accompanying with the process of depression. The old block was calling for renaissance. (Figure 1)

Figure 1 - Current Aerial Photo (Source: Google Map)
Figure 2 - The Core Area of Zhongshan Road Renovation (Source: Tsinghua University)

3.1.2 THE PLANNING BACKGROUND OF URBAN RENOVATION

Zhongshan Road Historic Block is the birthplace of modern Qingdao enjoying a history of over one hundred years. From the beginning of the German occupation period in 1897, the area was becoming the irreplaceable urban centre and symbol of Qingdao. However, with the development and construction of the new town in the east of the old district starting up in the late 80s, the vitality and status of old district has been reduced ever since; then in 1994, the municipal government relocated eastward along with the transfer of financial centre leading to accelerating the further decline of Zhongshan Road Historic Block. In recent years, the Qingdao municipal government has put a premium on the fading trend of Zhongshan Road, taken positive measures to inject the vigour of the area. Unfortunately, there has not reached a comprehensive consensus on the primary problems and solutions of the renovation planning of Zhongshan Road Historic Block, which means the relative researches and program designs are still in urgent need. (Figure 2)

3.2 THE FIRST RENOVATION IN 1996

On May 3, 1992, The Decision on Speeding up the Development and Construction of Eastern Qingdao was launched, meaning that the municipal committee and government decided to take the lead to move eastward, affected by which the popularity of Zhongshan Road began to fall off a cliff. This is an irreversible historical tide. At the same time, the rapid rise of Taidong Commercial Pedestrian and Hong Kong Road CBD symbolising the low-end and high-end consumption respectively demonstrated that there left narrow path for old Zhongshan Road to develop forward, bringing about the gradual transformation from the past “City Centre” to the “Urban Fringe” today.

This version of renovation planning was to remould the Zhongshan Road according to the East Nanjing Road, Shanghai, the representative of commercial pedestrian street. For the purpose, the 129 oriental plane trees used to grow on both sides of pedestrian were moved away, and trolleybus route had to be bypassed and run along Henan Road. Nevertheless, the plan ignored the crucial role of Zhongshan Road as a traffic artery, the adjustment of trolleybus route paralysed the entire traffic. In conclusion, the idea of pedestrian street ended up with a complete failure.

3.3 THE SECOND RENOVATION IN 2003

In October 2002, Institute of Architectural and Urban Studies, Tsinghua University was entrusted by Qingdao Municipal Government and Qingdao Zhongshan Real Estate Co., Ltd. to assume the site planning and space design of Zhongshan Road Business District. The project started to carry out in 2003.

3.3.1 FUNCTIONS

Establish a liveable business and tourism complex with strong finance and social vitality, embodying local characteristics, and cultural landscape and integrating financial business, professional services, tourism, culture, and living.

3.3.2 TARGETS

- Excavate the historical and cultural connotation of Zhongshan Road area.
- Improve the urban landscape and infrastructure, and optimise the development environment.
- Redistribute urban residents appropriately, and conserve the historical features.
- Revitalise the economic and social development.

3.3.3 MEASURES

1. Measures to promote industrial development: coordinated development of business, tourism, cultural industry, modern service industry.
2. Measures to promote social development: population redistribution, community renewal, and justice security.

3.3.4 MEASURES

In line with the guidelines of the project, some old buildings such as Qingdao Hotel, Red Star Cinema and ancient bookstore were removed and new buildings with modern style arose, the purpose of which was to make Zhongshan Road advance with the times. (Figure 3~5)

Figure 3 - Aerial Photo before Renovation (Source: Tsinghua University)

Figure 4 - Simulative Aerial Photo (Source: Tsinghua University)

Figure 5 - Planning Range (Source: Tsinghua University)

After the implementation of this program, over 100 families who used to live around St. Michael's Cathedral had to bid farewell to where they stayed for many years. In the meantime, the demolition of many old buildings in Zhongshan Road Historic Block were wearing down the original sense of history, arousing extensive controversy, in addition, people did not catch sight of any essential improvement on the original chaotic phenomena such as massive gathering of transient population, poor quality of living conditions and stagnant business environment. Tsinghua University was the first outside planners involved in the renovation process of Zhongshan Road, although their planning professionalism and logical clarity excelled the works done in the previous projects, the lack of recognition for local characteristics like local history, culture and lifestyle declared the regretful failure of the urban regeneration emphasised by the public.

3.4 THE THIRD RENOVATION IN 2005

In 2005, the next round of Zhongshan Road renovation was put on the agenda once again. In January 2005, Zhongshan Road block was determined to transform to pedestrian street in accordance with The Commercial Development Planning, Shinan District (2005~2010). In August 2005, Shinan District government took back the command of Zhongshan Road renovation project from Qingdao Zhongshan Real Estate Co., Ltd. The Zhongshan Road Renovation Headquarter reset the project target to creating a leisure street with historical and cultural characteristics, besides proposed a slogan of "Restore the historic features, improve the living conditions and revitalize the commercial economy". On the basis of the targets, the headquarter confirmed a new renovation proposal with the concept of "Restore the antique as before" after summarising the experience of previous construction and came up with three principles of keeping the original street space, architecture texture and historic features unchanged. The operation of the policy measures taken in the renewal process was relatively conservative, laying the policy foundation for the following fourth renovation.

3.5 THE FOURTH RENOVATION IN 2009

On April 12, 2009, Pichaiyuan Area (literally: Axe Firewood Courtyard), the famous authentic cuisine street and the local cultural representative on Zhongshan Road, was solemnly opened after 15-months' complete reconstruction, gathering popularity once again. During the protracted period of reconstruction, there emerged an enormous number of social problems. The discourse from all sectors of society including the citizens, experts, scholars and officials exerted much influence on the decision-making, in the interim, the continuous emergence of old buildings with quality problems caused by out of repair for long years during the process of renovation also elevated budget of the project. Moreover, due to the misunderstanding of a small number of merchants, uneven technical level of workers made it difficult to interpret the design concept adequately, leaving a regret though it had already upgraded a lot compared to the past three renovation projects.

After experiencing four times of reconstruction, the disorder of shops and stores on both sides of Zhongshan Road was completely changed and the shopping environment improved significantly. But except Pichaiyuan Area reviving because of reconstruction, the operating conditions of the other shops were not all optimistic: many stores over-depended on tourism consumption and did not improve their service level and the supervision on commercial industry from authorities was not strict enough. At the same time, the population structure in the neighbourhood was imbalanced, the residents were almost composed of the native elder and migrant workers, most native young people had moved out to seek for opportunities. Without the inner development drivers, we could not see the possibility of ultimate renaissance of Zhongshan Road.

4 REFLECTION ON THE FOUR RENOVATION: DISCOVER THE URBAN DEVELOPMENT DRIVERS

Looking through the previous four renovation process, we could easily see that although there were a lot of magnificent objective ideas and strong policy measures proposed, the planning guidance on spatial level

and the government intervention on policy level could not fundamentally revive Zhongshan Road, we must dig out the primary reasons restricting the development of Zhongshan Road from social level to find out the urban development drivers to enhance the vitality.

4.1 EXCELLENT EDUCATIONAL AND MEDICAL FACILITIES HINDER THE BLOCK TRANSFORMATION

As the former centre of Qingdao, although the general development of business cannot be as prosperous as before, the educational and medical equipment in Zhongshan Road area is still much more outstanding than other districts. The Affiliated Hospital of Qingdao University and Qingdao Municipal located in the area are the few 3AAA hospitals (the most specialized hospitals in China according to Classification of Chinese Hospitals) in Qingdao, enjoying a wide recognition by the public. Even if these two hospitals have already opened new branches in eastern Qingdao with advanced hardware facilities and convenient transportation, but the abundant medical resources that the old hospitals have accumulated for years are still incomparable, as a result, the influence of the old branches of these hospitals should not be underestimated. The large influx of patients and their families into the surrounding areas are raising stringent requirements on traffic conditions, in addition, driven by the profits, the surrounding rental prices remain high though the quality of the apartments is in poor situation.

Apart from the best hospitals in Qingdao, the best primary schools in Qingdao are also concentrated in Zhongshan Road block: Qingdao Experimental Primary School, formerly known as the German Government Primary School founded in 1901, represents the pinnacle of fundamental education in Qingdao, in addition, Daxue Road Primary School founded in 1933, Jiayuguan Primary School founded in 1953 and Taiping Road Primary School founded in1933 also have a high reputation in education field. In order to acquire the admission tickets of “elite schools” for their children, parents would not be held back before “school-choosing fee” of over 100000 RMB (equal to 13000 EUR). But in recent years, with the cancellation of “school-choosing fee”, ownership of housing in school district is the only way to have access to related primary schools. Therefore, the housing prices in the school district of former city centre are becoming an astronomical figure, the price of an old flat no larger than 20 m2 is close to one million RMB, comparable to the luxurious flat with seascape in core urban areas. There leaves a tough challenge for investment in lands and compensation for demolition during block transformation.

4.2 EXTRAVAGANT PROFITS OF SCENIC AREAS UNDER THE PROSPEROUS BACKGROUND OF CLASSICAL ARCHITECTURE TOURISM

An important truth that cannot be neglected is that there are a tremendous number of landmarks located in Zhongshan Road Historic Block, the past core of the old Qingdao: Zhan Qiao Pier, the emblem of Qingdao first built in Guangxu 18, Qing Dynasty (1892); Pichaiyuan Area, the birthplace of Qingdao folk culture; the former site of Seemannshaus (literally: German Navy Soldier Club) with Renaissance Revival style; St. Michael’s Cathedral, the largest Gothic architecture in Qingdao and also the only inaugurated cathedral in China; Jiaozhou Governor's Hall, the former German colonial government building and the largest and most expensive houses among all buildings in Qingdao ..... The numerous classical buildings centred in Zhongshan Road constitute a stimulus to tourism development in Qingdao. Furthermore, in company with coast on the south and the old railway station on the west, Zhongshan Road attracts tourists from all around the world to gather here, but the grade of tourism still remains fast-food-style sightseeing, touring form stays in the one-stop visiting, dining and shopping. After satisfied by consumption of souvenirs, tourists would not have interests in visiting Qingdao for next time because there were not many worthwhile places for another tour. What matters most is that we cannot see the feasibility of launching in-depth travel tourism for the moment. The purpose of Zhongshan Road Renovation is to enhance the overall quality of the district, improve the quality of tourism, and spread the city culture, but as for the main tourism industry practitioners mostly composed of non-native merchants, Zhongshan Road block is an important security for their income source, which means thorough transformation of Zhongshan Road will seriously affect the income of these merchants relying extremely on tourist flows, though the overall tourism industry in Qingdao will only be slightly influenced in short term.

4.3 FLOATING POPULATION GATHERING AROUND THE OUTSKIRTS OF OLD RAILWAY STATION INCREASES THE PRESSURE TO TRANSFORM

On the west side of Zhongshan Road Historic Block lies old Qingdao Railway Station initially opened in 1901, although the surrounding Qingdao Liuting International Airport and Qingdao North Railway Station on the north of the old train built in recent years evacuate a lot of people, but passenger stream in Qingdao North Railway Station is mainly made up by citizens who prefer high-speed transports and live in other districts of Qingdao, besides, the commercial facilities and infrastructure construction around Qingdao North Railway Station are not complete. For this reason, most migrant workers taking the “green train” are flooding into the old railway station and taking root in the surrounding areas with low-quality housing, and they gradually control the business and market in this traditional business district. How to properly resolve the employment and housing problems of these non-native people and ensure social harmony and resident integration raise an intractable problem for the entire renovation of Zhongshan Road Historic Block.

5 CONCLUSION

5.1 DISCUSSION ON THE FIFTH RENOVATION LAUNCHED IN 2012

After four times of unsuccessful transformation four, the Qingdao Municipal Government set up the new Zhongshan Road Renovation Headquarter with highest specifications of all time, including 29 academicians and experts from China, Singapore, Germany and other countries to discuss the future regeneration of the site, proposing the following targets: promote the commercial environment, and improve the living conditions; preserve the traditional districts with historic characters and excellent historic buildings; revitalize the business vitality, and create a better tourist attraction with rich local culture characteristics and other elements like commerce, culture, tourism, leisure and living. The project is intended to transform the Zhongshan Road into a European Street, and the new turn of reconstruction is still on the march. Until now, we have not concluded a positive prediction about the project because we could not confirm whether the previous problems like blind westernization and misunderstanding of historical protection are solved or not.

5.2 EXPECTATIONS

The preservation of historic blocks should not only stay in the material level for the building, but also sustain the city memory and urban culture from the spiritual level. In the process of block renovation, we must make efforts to maintain an equilibrium of powers among government intervention, market regulation and social participation, taking full account of the implementation of various transformation measures, the long-term economic development and the vital interests of the residents. The planning projects taking into account of all aspects must be inefficient, but concerning too much for the interests of few is doomed to failure; at the same time, the transformation process must be combined with the analysis of the relationship between land and the city to explore the core drivers of urban development. We hope that the conservation planning of Zhongshan Road Historic Block could balance the interests of all respects, sweep away the obstacles limiting development of historic districts and revitalise the former central business district, directing to sustainable development of Qingdao.

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ID 1466 | THE CONSTRUCTION OF PUBLIC SPACE IN HIGH INTENSITY GATED COMMUNITY: A CASE STUDY OF ZHONGYUAN TWO-BENDS COMMUNITY IN SHANGHAI

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1 INTRODUCTION

1.1 REAL ESTATE DEVELOPMENT WITH CHINESE CHARACTERISITICS

China started housing reform in 1992, abolished the welfare housing sharing in 1998, and ushered in real estate boom since then. China started housing reform in 1992, abolished the welfare housing sharing in 1998, and ushered in real estate boom since then. China's newly started residence area is 166.37 million square meters in 1998, 244.01 million square meters with residence complete achieving 2,139,702 in 2000, and 551.85 million square meters with residence complete achieving 3,682,523 in 2005. Under the state- owned urban land system and the land leasing system, large-scale demolition and construction became a common phenomenon. Taking Shanghai as an example, the quantity of residence expropriation is 386,430 with the area of 14.68 million square meters between 1995 and 1999, 359,545 with the area of 18.68 million square meters between 2000 and 2004, 317,176 with the area of 37.56 million square meters between 2005 and 2009, 138,708 with the area of 9.19 million square meters between 2010 and 2014.

This large-scale space production model caused spatial differentiation, which is one of the most important reason for gated community. From 1999 to 2004, 83% communities in Shanghai became gated communities (SONG Mi, 2015). Gated communities ensure the management and operation, while become isolations separated from the urban context. Meanwhile, with the development of technology, and the increase of land prices and housing prices, the residence development intensity showed an increasing trend.

Compared with the previous multi-storeys residence district, which floor area ratio is usually not more than 1.7, the floor area ratio of high-rise and high intensity communities, which is the mainstream now, is always more than 2.5, or even reach 4.0(LI Jiangyun & WANG Hongjie, 2015). But in fact, the floor area ratio of the residential area should not be more than 2.5 according to code for planning and design on urban residential areas(GB50180-93). In 2003, the fifth Shanghai planning meeting also suggested that the floor area ratio of residential area should be under 2.5 in central city. Newly built high-intensity communities meet people housing demand, but bring challenge to urban infrastructure and public service facilities. Higher intensity communities do not mean more liveable community life.

High intensity gated community as the main form of community now will exist for a long time in the city. It shows great significance to find the better way of public space construction to create better public life. The State Council pointed out in Comments on Strengthening Urban Planning and Development Control that urban blocks system will be promoted among newly built communities and gated communities will not be

constructed further in principle. The Quito Paper also appeal for transformation from gated community to open city. It's important to promote in at least two levels —— urban and community - to create better public life.

1.2 DEFINITION

1.2.1 PUBLIC SPACE AND PUBLIC LIFE

Public space in community is generally understood as what between the residential buildings, such as squares, green space, public buildings and every other thing considered as part of the built environment. In a board sense, public life is everything that take place between buildings (Gehl J, Svarre B., 2013, p.11). Tonnize suggested that there are four conditions for community formation: social network, relatively independent area, complete public services and the sense of value identity.

1.2.2 HIGH INTENSITY COMMUNITY

Floor area ratio is an important indicator of the development intensity of commercial residential area. The higher the floor area ratio is, the higher the intensity of land development. According to the Urban Residential Area Planning and Design Specifications (GB50180-93) in the high-rise residential area floor area ratio of not less than 2.0. In general, the higher the floor area ratio is, the higher the residential buildings are, and the lower the building density is. According to the Residential Design Specification(GB50096-2011), the height of residential buildings is always no more than 100 meters, or the design and construction standards will be stricter, because the building over 100 meters are defined as the ultra high-rise building.

1.2.3 GATED COMMUNITY

Gated community is 'walled or fenced housing developments, to which public access is restricted, characterized by legal agreements which tie the residents to a common code of conduct and (usually) collective responsibility for management' (Atkinson & Blandy, 2005, P.197). It's an important type of communities in a number of cities all over the world.

1.3 AN OVERVIEW OF ZHONGYUAN TWO-BENDS COMMUNITY

Zhongyuan two-bends community located along the Suzhou River in Shanghai, where used to be one of the largest shantytown. Shanghai started large scale transformation of old urban residential districts in 1992, aiming to finish 3.65 million square metres replacement before 2000 (Figure 1). Zhongyuan two-bend community was built in 1999, and was completed in 2005. The community covers an area of 49.5 hectares with a total construction area of 1.6 million square meters (1.4 million square meters' buildings are residential buildings) and a population of 35,800.

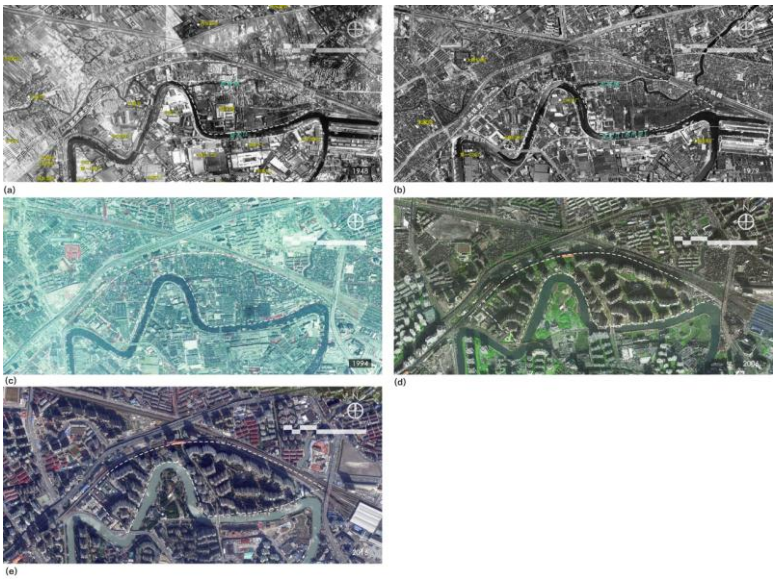


Figure 1 - Historical Map of Zhongyuan Two-bends Community Site
(a)in 1948 (b) in 1979 (c) in 1994 (d) in 2006 (e) in 2016 Source: Tiandi Map Shanghai and Google Earth

2 PUBLIC SPACE SHAPING IN COMMUNITIES

2.1 THE OVERALL LAYOUT OF PUBLIC SPACE IN THE COMMUNITY

2.1.1 SPATIAL FEATURE

As a high intensity community, Zhongyuan Two-bends Community faces the contradictions between living quality and high floor area ratio, public services and the population, design specifications such as the sunshine requirement and sum of buildings and so on. From the perspective of spatial arrangement, there three main feature: mix of building types, clear layout of open space and human scale space created by skirt buildings (Figure 2 and Figure 3).

Figure 2 - The Sketch Map of Zhongyuan Two-bends Community

Figure 3 - Photos of Zhongyuan Two-bends Community

It adopts the way of mixed arrangement, that is, instead of row-layout of board buildings, it combines board high-rise buildings with the point-type high-rise buildings to make the overall space well- arranged. The cluster of board high-rise buildings confines the important public space. It's a kind of transform of figure and ground, which is good for balance the building and the space outside. As for the layout of open space, there are three key open space: entrance square, waterfront space and green open space of residential group. From the perspective of spatial experience, the differences between urban space, community open space and more privacy residential group are significant. It ensures the quantity of public space and helps the residence to build the sense of identity. As for the quality of public space, both the green space and the construction of skirt buildings are helpful to assuage the stress from the board high-rise buildings. What's more, the design of skirt buildings, sky bridge, spatial corridors and so on enriches the spatial experience of pedestrians.

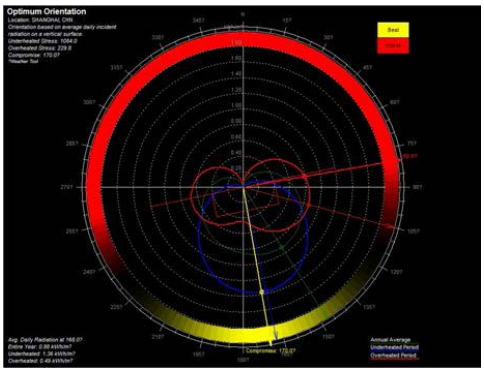
Overall, at least for physical space itself, there are public space design methods worth learning about. But the community itself cannot be separated from the whole city. Traffic problems and lack of public service caused by the high intensity still remains unsolved.

2.1.2 PHYSICAL ENVIRONMENT

Sunshine condition, nature ventilation and noise control are important factors that affect the physical and physiological living quality. Through modelling and analysing by Ecotect and Windperfect, this paper tried to find the physical environmental feature of high intensity community, wondering whether the high intensity will decrease the quality of physical environment.

Zhongyuan two-bends community is located in 121 degrees 20 minutes east longitude and 31 degrees 15 minutes north latitude. Shanghai belongs to hot summer and cold winter climatic region, whose summer is muggy, while winter is raw and wet. Favourable orientation helps residential lighting and natural ventilation. The optimal orientation of residential buildings in Shanghai is 10 degrees south by east, while the most unfavourable orientation is 80 degrees north by east (Figure 4). Thus there are lots of east-and-west facing residence in the community. And it's a common design method that turning the buildings at a slight angle on the plans will get richer open space. The residential in Shanghai need to follow strict requirements of sunshine, building interval and so on to ensure the physical environment of every apartment. As for the physical environment of the open space (figure 5), the total solar radiation is higher around point-type high rise buildings than around board high-rise buildings clusters. And the major open

space of the community has an appropriate amount of solar radiation. And trees and structures are used to provide shade for the residents.



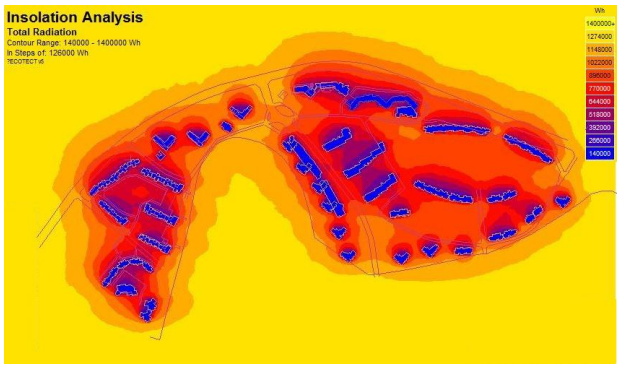


Figure 4 - Optimum Orientation of Shanghai | Figure 5 - Total Solar Radiation of Zhongyuan Two-bends Community
Source: Provided by Yuhui LIN

As for the wind environment, Shanghai prevails southeast winds in summer, while northwest wind in winter. This paper calculated the air flow rate at 1.5 meters high of Zhongyuan two-bends community (Figure 6). The majority of the roads run northwest-southeast, which will force the wind through the community to lower the temperature in summer. And the board high-rise buildings in the north of the community will keep the northwest wind out of the community in winter. And the skirt buildings reduce wind speed at 1.5 meters high to make the public space of the residential group more comfortable. The overall layout of the community can have a great influence the microclimates According to the interview with the residents, most of they are satisfied with the wind environment.

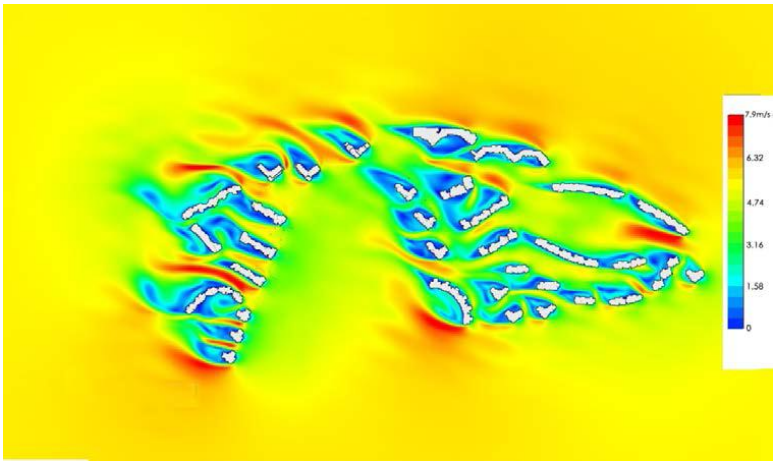


Figure 6 - Air Flow Rate of Zhongyuan Two-bends Community

As for noise control, it's north neighbourhood is the inner ring line and metro line 4, which can be an important noise source. The overall layout of the community intended to arrange board high-rise buildings in the north of community, acting as an acoustic barrier. This approach effectively guaranteed the acoustic environment quality of most area, but the residents living in the north of the community are living in a high level of noisy environment.

Overall, thanks to the design specifications, the physical environment in the communities can always be protected. What's more, it's possible to improve the physical environment by design methods such as ingenious skirt building design, reasonable green space layout system and so on.

2.2 PUBLIC SPACE DESIGN OF A RESIDENTIAL GROUP

As a super block community, there are several housing residential groups, which make it possible that it can make a compromise between super block mode and small-and-open block mode. Taking one of the

residential groups as an example (Figure 7), the methods used to create public space are worth learning. Five board high-rise buildings and their skirt buildings confine two main courtyard. The large courtyard, where the activities are concentrated, has plenty of gym equipment, benches and other interesting structures. Thus the interaction between green space and surroundings is positive. Although the buildings around the courtyard are almost 100 meters high, it does not make pedestrian stressful for the trees and other structures provide them with a better visual context. There is also negative space in the residential group. But the case of this residential group at least proves that it's possible to create high quality public space in a smaller block, while meeting the requirements of intensity at the same time.

Figure 7 - A Typical Residential Group of Zhongyuan Two-bends Community

3 PUBLIC LIFE CREATION IN COMMUNITIES 3.1 NEIGHBORHOOD COMMUNICATION IN PUBLIC SPACE

The boundary of gated community cut off from the urban fabric. In the gated community often causes the fragmentation of social space, while the space privatization often leads to the segregation of residents. What's more, the block scale can influence the interpersonal interaction. This paper tried to analyse neighbourhood communication in public space through behavioural observation, chat and analysis of social media topic.

What they care about on social network, is emotional expression of daily life, feeling of environmental transition of the block and time-efficient city event, such as dragon-boat racing on the Suzhou river around their apartment block and news events happened in the community. It has been more than 10 years since the community was completed, thus the residents have already created the feeling of identification and belongingness. As for the daily life of most residents, their activities are centred inside the community, and the entrance square, waterfront space and green open space of residential group are the most frequently used place. From 2 pm until 4 pm, there will be a majority of residents gathering around gym equipment or in the shade of trees and many public activities taking place in the public space (Figure 8). The residents who often stay in public space are primarily old people and children. And the interaction is limited among them for the limited form of activities. This meant that the design methods used to create public space in Zhongyuan two-bends community is effective. The comfortable open space indeed leads to spontaneous activities and social activities.

Figure 8 - Activities Happened in Zhongyuan Two-bends Community

During the last ten years, Zhongyuan two-bends community was well known for group-renting dwelling phenomenon. At that time, an apartment was divided into several parts and was leased to 8-30 tenants. And there were about 2000 tenements in the worst time. The reason is that investment-driven clients tried to shelter from risk in house pricing regulation and earn huge profits through group-renting dwelling. Group-renting dwelling phenomenon is not only a challenge to community security, but also harmful to the community identity and the community public life itself. Nowadays, after problem-addressing action took by resident volunteer, property management company and the police, group-renting dwelling phenomenon is almost disappeared from the scene. In such a context, entrance guard seems good for community governance. The community need a compromise to balance between community governance, security and urban vitality and publicity, which need a combine public space construction with building community.

3.2 DIFFERENT MODES OF PUBLIC LIFE IN LILONG HOUSING, WORKER HOUSING AND HIGH INTENSITY GATED COMMUNITY

There are three main types of residential area in central Shanghai, Lilong housing, Worker housing and what this paper mainly discussed——high intensity gated community, according to the time sequence. Different types of public life show in different types of community, for the differences existing in spatial organization and social organization.

After Shanghai opened as the treaty port, Lilong housing, which absorbed the advantage of row house in Europe and adapted to local lifestyle, became the mainstream type of residential buildings in order to intensively utilize land sources to deal with population explosion. Lilong housing is a kind of small and open block mode, which makes the residential area more harmony with the urban fabric. The spatial organization of Lilong housing is characteristic —— the density of buildings is high, the quantity of public space is low, the total number of piles of it is often 2-3, the passage between buildings is always narrow. Thus, the lines between private space and public space always blur. Because the area private space is not enough, the sharing of “kitchen” and “laundry” is a common phenomenon. This mode of spatial organization leads to frequent contacts among neighbourhood and the formation of “street eyes”. Put another way, the contacts are so close that sometimes cause neighbour conflict. What’s more, the quality of built environment in Lilong housing is indeed not good enough, lacking of enough open space, especially green space. The mode of public life in Lilong housing is worth learning, while Lilong housing is not the first choice to settle life now.

Worker housing played a vital role in residential areas in 1950s, based on special urban construction and institutional improvement background. Working housing was an important part of institutional improvement. It gave workers a strong sense of community identity and greatly improved the quality of living conditions at that time. Compared with Lilong housing, worker housing has a lager scale, with higher multi-storeys buildings, lower building density and higher intensity. And a considerable amount of worker housing is gated. Its contacts with the surrounding environment benefited from the special social organization, cause the residents is kind of homogeneous groups. However, compared with high intensity gated community, which was gradually becoming mainstream in 1990s, worker housing has a smaller scale and lower

intensity. As a whole, the street, square and green space in working housing are important and vigorous place for public life. And actions like tiny-regeneration in communities are improving the environmental quality, the interactions between people and the environment and space utilization.

In a certain sense, high intensity gated communities nowadays won larger private space and per capita open space area at the price of losing truly community life. It's not mean high intensity gated communities is the history of regression, which is a preferred choice for many people, but it can be better.

4 DISCUSSION

4.1 FROM GATED COMMUNITIES TO OPEN CITY

The Athens Charter suggest that High-rise apartments placed at wide distances apart liberate ground for large open spaces, which is just the scene showed in most high-intensity communities. With the growth of gated communities and car-centric streets, people earned more space at the price of the lose of community life and street vitality. The New Urban Agenda suggested to support the provision of well-designed networks of safe, inclusive for all inhabitants, accessible, green, and quality public spaces and streets. Chinese government also encourages small- and-open block mode recently. Compared with the super block mode, the small-and-open block mode integrates the communities and the urban environment around it. Instead of cutting off the traffic connection, the road system of the community in small-and-open block mode will be connected with the urban road network, which may ease the problem of congestion. What's more, it will be help for the sharing of public service between the communities and the whole city. And the resources will not be privatization, but belong to the whole city. For example, the riverside of Suzhou River is occupied by lots of real estate projects, one of which is Zhongyuan two-bends community. It's a pity that the resources of waterfront is privatization. Although there will be lots of barriers before breaking down the bounding wall of the gated communities, and it's not a "one size fits all" way that is suitable for every community, once the communities become part of the open city, the situation will change so much.

4.2 FROM COMMUNITIES TO "OUR HOMELAND"

What residents want from the communities is not only material space one satisfied one's physiological needs, but also community identity to satisfied one's spiritual needs. On the one hand, the residents living in gated communities also need the interaction space to perceive others emotions and built community identity. During the process, different social roles are involved. On the other hand, the drivers of the cities are complex, including economic momentum, social dynamics and so on. The transformation from our community to "our homeland" need the integration of dynamics.

In 2015, Measures for the implementation of urban regeneration in Shanghai presented the concept "urban organized renovation", of which the core is people-oriented space reconstruction and activation of the communities. And the Shanghai Spatial art Season promoted the idea of tiny-regeneration, which combined the top-down and bottom-up mode of planning and involved governments, developers, planners and residents. It's an attempt to move up from public space construction toward building communities.

5 CONCLUSION

The production of space is one of the most important driver of urban regeneration, with it improving the quality of traditional urban space, enlarging the quantity of public space and promoting residential condition. But it's unavoidable that the super block created by the process of urban regeneration made the "community" too large for residents to feel and decreased the richness of public life to some degree. Taking Zhongyuan two-bends community as an example, the design methods it used did create the high quality public space, but it does not equal to high quality public life for it missing the social aspects.

When the designer or the developer focus on the comfortableness and beauty of the space, it's worth to take the people in public space into account. On the one hand, it's not enough to just focus on the

community itself, ignoring the urban fabric around. Small-block mode maybe improve the situation that the community itself is always separated from the city. It will help the community sharing the public service with the whole city, and strengthen communication among the people at the same time. What's more, from the perspective of urban planning system, adding directive criterions and leading design principles at the stage of regulatory plan will be helpful. On the other hand, the self-organization of the community is also important. Favourable operation organization will improve the public participation of community making and the richness of public life it self. Once the residents are the maker of the public space instead of passive participants, the public space will own the most powerful endogenous dynamic.

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ID 1477 | URBAN CODES INDUCING STREET LIFE, A POSSIBLE APPROACH FOR THE BRAZILIAN CASE

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1 INTRODUCTION

Brazilian cities have experienced several cycles of transformation, which ultimately altered these places from colonial fabric to modern agglomerations and metropolitan regions. Population figures are still rising and the urbanisation ratio as well. There is nothing particular about those processes; it is a general trend observed in most countries of the world. What typifies the Brazilian case is that the country has an enormous income disparity that results in different ways to deal with urbanisation and expanding cities network. Perhaps the most striking feature of the major Brazilian cities, in general, is the social and spatial segregation and its impact on street life.

This paper is based on research developed for a master thesis (Carvalho Filho, 2014) in 2014 , that currently is further explored in a PhD study. The research aims to explain the effect of the relation between private and public spaces on urban dynamics. In particular, it will assess to what extent the spatial configuration of this boundary contributes to street life and urban vitality. This study addresses the current set of formal and informal planning institutions to discuss the way plots, buildings and blocks incrementally shape urban spaces and on the other hand how space impacts on human behaviour. So far, the case studies will be in Brazilian cities.

The historical context in the use of public spaces of Brazilian cities and the ongoing debate about the extent of street life and urban dynamics currently observed are inherited characteristics of a colonial past (Leitão, 2009), add specific questions to the discussion about public spaces and public domain. Is it a process that goes beyond the reach of urbanism?

The first differential proposed here is that the research brings to light the processes behind the definition of city spaces, especially the border between public and private domains. The study follows a dual approach, integrating formal and informal institutions related to the development of the city. In that aspect, the study observes the relevance and reach of proper planning regulations and at the same time the role of the informal arrangements and non-regulated procedures that respond to the construction of large extent of Brazilian cities. Formality and informality in this research are considered as particular forms of practice and not necessarily types of territorial formation. There is a "need for further exploration of the ways in which different regimes of informal and formal practices take shape and impact on urbanism" (McFarlane, 2012).

Therefore the study sums to the debate about the role and reach of planning in the context of developing countries, namely Brazil, where economic growth and expansion of the cities are, in general, reinforcing existing divides and disrupting the conditions for street life.

'The growth and development of several Brazilian cities during the past two decades was not just random or disorganised. It produced, predominantly, architectural typologies, spaces and transportation systems that favour a few ways of life over all others. This disurbanism has feedback loops that create physical structures that hinder other ways of life while resulting in cumulative advantages for the favoured ways, a spiral that continually produces new disurban trends' (Figueiredo, 2012).

The research acknowledges both the relevance of urban dynamics as a way to counteract segregation in cities and on the other hand, that the patterns of urban dynamics in cities are not yet fully understood and therefore out of the reach of the planning institutions.

The approach of this research by combining spatial analyses to studies about planning instruments will cover a gap in current investigations that frequently focuses on one aspect only. The context of Brazilian cities and the comparative study of formal and informal settlements will reinforce the original character of this research. The research tools that will be used and developed in this study will provide urban planners and designers with instruments to evaluate and assess plans and existing spaces and to have a more accurate perception of the impact of individual spatial and institutional arrangements.

This article represents the initial stages of the research, and it is divided into two parts. The first section of the article reveals the history of planning instruments in Recife, a city in the Northeast of Brazil that is the first case study in the research, and the spatial parameters commonly regulated in these tools. That is demonstrated through a retrospective of the planning codes of the last decades, analysing and relating planning regulations to specific spatial parameters.

In the second part, a series of examples of implementation strategies used by real estate market in Recife will be examined. Connecting planning tools and the built configuration that results when these parameters are applied. The objective here is to identify elements embodied in these rules and somehow assess their impact on the use of public space. The method used is the analysis of development procedures, looking for elements sound enough to determine the role and reach of urban rules in the enabling of the vitality of city spaces. We expect, by identifying these strategies, not only to reveal the actual scope of urban rules when it comes to forging conditions for urban dynamics but moreover to understand what are the current restraints. The paper concludes with an attempt to point out possible contributions to urban rules in the context of Recife.

2 PLANNING INSTRUMENTS IN RECIFE

The review of the planning tools in Recife in the last decades that will follow intends to identify the mechanisms related to design control, whether it is explicit or not in the laws texts. It is an attempt to determine "the process of state-sanctioned intervention in the means and processes of designing the built environment in order to shape both processes and outcomes in a defined public interest" (Carmona, 2016).

Recife has to some degree experienced pioneer interventions in planning such as the partially implemented plan for the expansion of the city. It was commissioned in 1637 by Nassau during the Dutch domination of the region (1630-1654) and is regarded as one of the first urban propositions based on physical interventions in the Americas (Medina, 1997).

In general, planning in Recife can be organised into three main periods that somehow correspond to three main planning doctrines as pointed by Sarah Feldman when studying the evolution of planning practices in Brazil (Feldman, 2001).

In the period preceding the first two decades of the 20th century, there was a dominant European tradition in the formulation of laws and postures that governed construction in the city. These regulations were mainly focused on hygienist and aesthetics aspects.

The decades of 1920 – 1930 are a period of transition where there was a shift from the European tradition to the adoption of certain postures that referred more to American planning practices, such as zoning plans and parkways for example.

The last period proposed by Feldman, post 30´s is the one under the influence of Modernism. The first shift was towards a higher level of flexibility in the planning instruments, greater involvement of architects and planners in the decision process and a following change in the urban fabric by the transformation of the parcels and land use.

2.1 THE PERIOD BEFORE 1920

As stated before, the regulations of that period are mainly addressing hygienist and aesthetics aspects of the construction of the city. That is evident in the importance given to the control of street alignments, in the location of different activities in the city and the regulation of built environment regarding open space.

From that period are the Municipal Law 4 from 1893 and the Law 1051 from 1919. The first one is a Municipal Code of Postures, instrument established in the country by federal law where planning tools were still part of the main body of the city regulations. The language and scope of the legislation from that period do not address specifically those involved in the design and construction of the city. It was a broader instrument to assess how the city should perform in general, addressing many aspects, not only those related to land use or typomorphology.

The second one, law 1051, shows already some degree of specialisation regarding the first, there was an overall conception of the city based on an underlying zoning plan that determined four perimeters in the city, main, urban, suburban and rural. In this first division of the city into zones, there was, as observed by Alves (Alves, 2009) a prejudiced organisation of the city by income and social level by defining what type of construction was permitted in each zone. For example, not allowing in the main centre of the city the building of the kind of dwellings inhabited by low-income population.

Regarding urban form, there was a clear connection and hierarchy between the building form and public space responding to the zoning. The spatial result of this instrument was a radioconcentric configuration where the density of occupation was higher in the centre and incrementally lower towards the limits of the urban area following the indications of the previous law.

The maximum height of the buildings was different in the zones and proportional to the width of the streets, ranging from 2 times the street width in the central zone, 1 ½ and 1 in the urban and suburban zones respectively. The minimum setback from the buildings also varied, from 0 in the centre to 3 to 5 in the successive zones. In the central zone, all constructions should be built observing the general alignment of the streets; there was also a minimum height limit and some artifices to allow taller buildings such as the introduction of arcades along the streets.

2.2 1930 – 1960

In Recife, that period is initially characterised by a revision of the law of 1919 in 1936 that introduces new subzones into the existing zoning plan. Functional subzones are created inside each of the first zones, defining different parameters for buildings according to their function. Another point introduced by this review was the introduction of the figure of coverage or percentage of the plot that could be occupied.

In the last years of this transition period, two new laws or decrees adjusted some of the parameters imposed by the law of 1936, the Decree 27 of 1946 and the Law 2590 of 1953. The first one changed the height limit in the city centre, aligned to the image of the modern city. The 1953 law changed the borders of the urban area, expanding it to the south following the expansion of the city observed along the beach front. It also increased the building coverage in that zone, maximising the construction potential.

In 1961, the law 7247 reviews the development regulation of the city that dated from 1936. This revision represents an expansion of the urban area towards the west and the creation of distinct zones regarding the port, commerce, industry, universities and nature reserves. Segregation of low-income residents of the urban area is still part of the law as it states specific conditions for the location of new developments targeted to that part of society. Those housing complexes could not be located close to public spaces or main streets.

2.3 1980 - 1990´S

The law 14511 from 1983 represents a significant shift in planning regulations in Recife. Such change is represented by the disconnection introduced in this act between public and private spaces in the formulation of the parameters to regulate construction. As pointed by Medina (Medina, 1997) the introduction of accurate and detailed parameters to control the use of plots, in a system of zones, represents the total inversion in the symbolic value of public – private domains, transferring to the individual plot and housing units the central role in the city regulations.

That shift in importance to the housing sector and plot scale is perceived in the zoning as higher allowed densities are now found in the city expansion in the south, no longer at the city centre. The detailed and specific parameters introduced in this law are not only related, like in previous instruments, to different zones but now they are dependent on the building function. That relation between parameters and function promoted an occupation of the city in a generic way; buildings are planned detached from the specific local conditions. Such aspect resulted in a reaction from inhabitants from certain historic districts that led to the establishment of more restrictive parameters, reducing maximum building height, in some of these zones.

In 1996, the law 16176 replaces the previous instruments and promotes a drastic revision in the zoning patterns and the construction parameters. It almost eliminated the relation between parameters and land use, and there is a simplification of the city structure.

The major differences between construction parameters in the zoning are related to coverage, initial setbacks and green ratio. In the areas where construction was expected to be less intense, the green rate reached 50% of the plot, and maximum coverage was of three times the plot area. Repeating a pattern described previously, the regulations in this law had unexpected results that generated a strong public reaction and had to be altered in a set of new rules.

The law 16719 from 2001 addressed the excessive construction density, and verticalization observed in some districts of Recife, mainly following the river. Maximum height for buildings was introduced in this area per a classification of streets. Height was restricted from eight to twenty floors and typically followed the location of the roads, proximity to the river or traditional areas.

2.4 CURRENT PLANNING INSTRUMENTS

In 1988, the Brazilian Constitution established the Plano Diretor as the core tool for development and city planning. Every city with more than 20 thousand inhabitants is obliged since then to have a Plano Diretor and to review it every ten years. After the implementation of the federal law ‘Estatuto das Cidades’ (2000), this obligation has been extended to cities that are part of metropolitan regions, conurbations and inserted in special zones such as environmental or historical. In the same federal law, it was also stated that Plano Diretor should be participative.

Recife latest planning rules are represented in the Plano Diretor of 2008. This instrument introduces a more detailed zoning system than the existing in the previous tools but remains connected to the urban plot as the core unit for planning. The figures regarding the potential for construction and maximum

densities are reduced overall in the city. However, there is a change in the way the area of development is calculated that minimises the impact of the lower constructive parameters permitted.

In previous regulations when it was stated the allowed maximum building intensity (floor area ratio) it meant that the permitted construction in a plot included both private and common areas. In the current instrument, parameters apply only to private areas. That fact, combined with the increase in the number of mandatory parking units demanded by the law contributes to the creation of massive street plinths, occupying ground floors of buildings mainly to house cars.

Another change regarding this instrument is the regulation of the frontage of buildings; it is stated now that 70% of the front of a plot must be transparent, not allowing anymore the long blind walls that characterise large parts of the city. It is also defined that the requested green area of a plot should also be in the front setback. That represents a change in the visual aspect of the border between private and public spaces, distancing the plinth from the street. However, this law hardly advances in providing the means to have a more active frontage.

2.5 HOW PLANNING INSTRUMENTS SET THE SPATIAL FRAMEWORK FOR URBAN TRANSFORMATION

The planning rules discussed here cover a relatively short time span regarding the history of the city. However, these rules have been responsible for controlling most of the formal urbanised area of the city. These instruments vary in complexity and scope. Still, some conclusions are possible, always trying to relate these plans or laws to their effect on the spatial configuration and restricting the findings to the most important aspects observed.

There can be identified a cycle of policies and legislation that go from a more generalist to a more comprehensive approach. That can be the result of the fact that more detailed and elaborated laws like the one of 1961, that had a very fixed setting of typologies and parameters somehow constrained the action of real estate market. That constraint was reduced in the successive plans by a more general zoning of the city and in a higher dependency on spatial parameters to regulate the construction in the city.

What can be understood primarily from the analysis of law 16176 of 1996 and the instruments that followed it is that these tools are generalising the different spatial features of the city and relying exclusively on parameters that are usually insufficient to deal with the city complexity. Even the more complex zoning plans like the new Plano Diretor of 2008 still lacks some instruments to allow a better negotiation between public and private sector.

In that sense, prior tools like the 1919 law were more efficient as they provided clear elements to the negotiation to mitigate the impact of constructions exceeding the limits stated in the law. Spatial solutions to deal with higher construction levels were embedded in the law; one example was the creation of public arcades to allow taller buildings. It is evident that the contemporary city and its scale of constructions involve much more questions than in the past, but modern instruments hand to private negotiations, and normally monetary compensations, the mitigation of projects with higher use than the parameters established in the law.

That is a clear result of what happened in a given moment when a dissociation was introduced between the instruments that regulate zoning and land use from those that deal with typomorphology. In short, more recent laws have set rules to be applied to the plot, restricting building capacities in an almost detached relation with the territory. Moreover, it is the result of the move from plans that envisioned a spatial configuration for the city, or at least to certain zones, to those that deal with the city based on the control of constructions in almost exclusively in a plot scale.

What has been described so far is that, in general terms, planning in Recife is reactive. The reading of planning instruments presented here shows that, in most cases, the tools could not cope with the pace that market operates and that the time necessary to adjust urban regulations leaves space for problems to persist even after their impact has been realised.

Most of the tools reviewed here deal with the allocation of different densities and functions in the city territory. However, the zoning of land uses was and still is to some degree more focused in the restriction of certain land uses than concerned in providing diversity in the city matrix of land uses.

2.6 PLANNING INSTRUMENTS AND THE DESIGN OF AN INTERFACE

“Urbanites experience their cities in what we call the ‘public realm’. It has a broader meaning than just ‘public space’; it includes façades of buildings and everything that can be seen at eye level” (Karssenberg, Laven, Glaser, & Hoof, 2016). In this section, planning instruments will be codified using this notion of the public realm as a framework. The elements that compose this realm will be identified and observed in the different instruments that were employed in Recife in time.

Urban rules are in general associated with a design strategy. It is an attempt to codify concepts and delivery parameters that are sufficiently structured to guide the construction of a desired spatial configuration. “They represent creative acts that solve definite urban problems – and sometimes even create them” (Lehnerer, 2009). In the instruments analysed in the previous section, it was possible to identify the most common parameters used, how they have changed, have been simplified or made more complex, as laws were updated. In the table bellow, a synthesis of the parameters is presented.

Law	051	7427	14511	16176	16719	17511
year	1919	1961	1983	1996	2001	2008
Minimum setback (front)	null	null	3 to 7 m	3 to 7 m	5 to 7 m	5 to 7 m
Maximum height (total)	Related to street width	Related to street width	Defined per zone	Defined per zone	12 to 25 floors	Defined per zone
Maximum height (plinth)	Not informed	Not informed	6.0 m	7.5 m	7.5 m	7.5 m
Floor area ratio (FAR)	Not informed	Not informed	Not informed	1 to 5	1 to 5	1 to 3
Building coverage ratio (BCR)	Not informed	30 to 50%	30 to 50%	Not informed	Not informed	Not informed
Green coverage	Not informed	Not informed	25 to 50%	25 to 50%	25 to 50%	25 to 50%
Parking demand	Not Informed	Not Informed	01 parking at every 80m²	01 parking at every 40m²	01 parking at every 40m²	01 parking at every 40m²
Frontage	Commercial use in certain areas	Commercial use in certain areas	Not Informed	Not Informed	Not Informed	70% must be transparent

Table 1 Main spatial parameters identified in the laws. Source Author´s own

The application of the parameters has resulted in a series of different configurations regarding the building interface that is partially represented in Figure 2. As one can see in Table 1, the change in the parameters is apparently subtle in most cases, but the spatial result can be extremely various. It is therefore expected that each of these spatial profiles or different interfaces has a different impact on urban vitality. That reinforces the role of rules in the shaping of the urban setting and corroborates what Bernardo Secchi (Secchi, 2015) says about the role of urbanism and planning devices. “What changes down the history of the city is much more the regulatory sense and role of each device rather than the catalogue of devices, and it is through this regulating action that the city becomes a machine for social integration or exclusion as the case may be” (Boano & Astolfo, 2015).

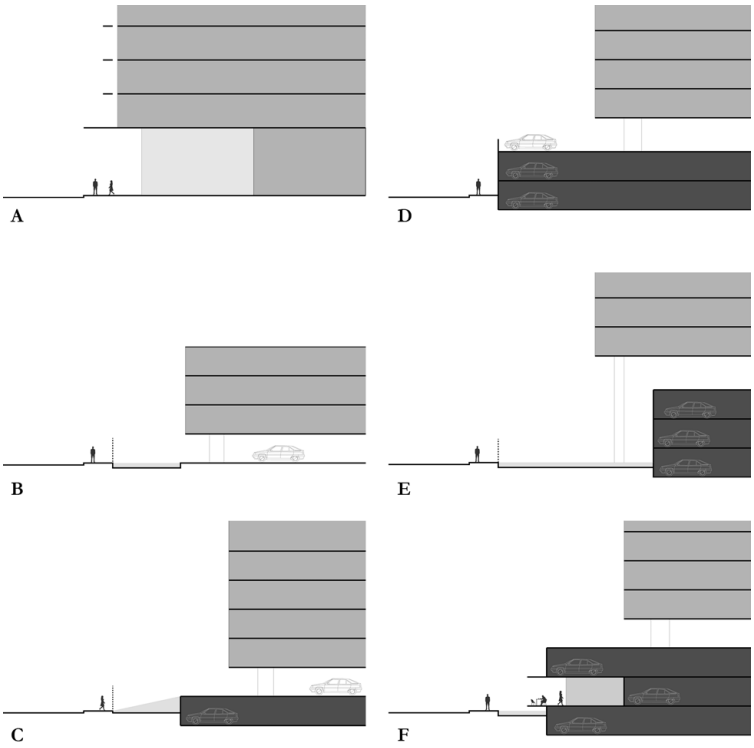

Figure 1 Examples of the street interface, the ones on the left are frequently found in buildings built until the 1970´s. The ones on the right are examples of the application of the current planning instruments. Source Author´s own

3 URBAN CODES APPLIED AND STREET LIFE

The action of the construction market in Recife in the last decades has been so intense and at the same time mechanic and repetitive that particular operational modes can be easily identified and explained. The observation that construction market tends to follow few variables regarding building typologies can also be extended to methods used to make developments feasible.

One can see that in Recife, most of the new developments follow certain rules or steps that deal mainly with three aspects: to gain access to land, to achieve economic feasibility and to overcome restrictions or regulations given by the city planning instruments. Here to follow an exercise to confront the processes described in the analysis of planning tools and the role of the construction market. A critique on how Recife has been built that explains how insufficient regulations and aggressive action of construction sector currently undermines street life in Recife.

That critique resounds the process highlighted by Figueiredo (Figueiredo, 2012) as the causes for the denial of city life in Brazil. The author mention five processes that are, according to him, responsible for the destruction of urbanity in Brazilian cities: growing use of cars, lack of quality in public transportation, high walls and gated communities, loss of diversity and adaptability of buildings and segregation of people and ideas.

Here some of these processes will be further explained in the context of Recife, by describing in step by step way, how the construction market works within the gaps of planning instruments. The rules exposed here represent a critique of the modus operandi present in most of the recent production of new developments in Recife. The focus is to show how parcels and buildings are steadily transformed, what are the impacts for street life and moreover how planning instruments deal with that.

3.1 RULE 01 - UPSCALE PLOTS

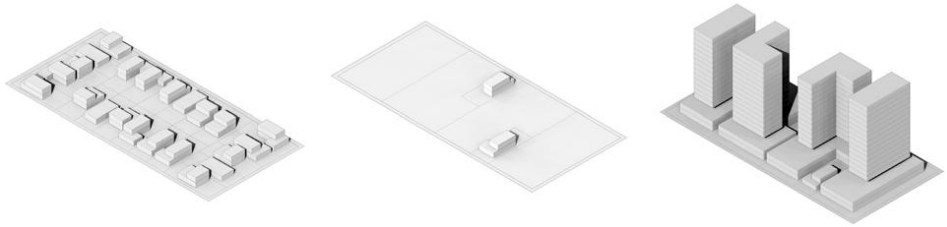

Figure 2 - Upscale plots. Source Author´s own

How does it work?

Recife´s urban fabric is still mainly composed of small plots and built with detached houses. In the last decades, there has been sharp growth in the replacement of single homes by larger buildings. The rule here is straightforward; small plots are merged to allow the construction of taller buildings. Previously, construction companies would buy small plots and implement their development. Recently a more sophisticated method replaced this mere financial operation.

Currently what happens is that house owners are invited to be part of new developments instead of getting only money for their properties. What makes this change so appealing to homeowners, is the fact that they can receive from 15 to 50% of the number of dwellings of the new development, depending on the district where the house is located. Suddenly owners of a single house can have 5, 10, 15 apartments.

How does it affect street life?

One might expect that higher density in construction and population would be beneficial for lively streets; however, that is not the case in Recife. The result for urban dynamics is evident in the way it occurs here, upscaling properties contributes to reducing the interaction at ground level, as one gate replaces several front doors, and generally, no public function is provided at the base of these new buildings.

What is at stake here is the loss regarding adaptability and in the potential for street life that resides in a more fine-grained urban fabric (Jacobs, 1961). It is not that small plots built with houses has already a diversity of functions, but they are far more adaptable than a single building where the plinth is usually occupied with parking space.

How do planning instruments deal with that?

Planning instruments frequently, with very few exceptions in specific zones related to nature reserves or historic areas, do not pose any restriction to the merging of smaller plots. In fact merging and upscaling of plots is indirectly stimulated by regulations that make difficult to build on smaller plots. In the construction regulations, initial setbacks and demands for parking are rather constant regardless the dimensions of the plot, what restricts new developments in small parcels.

3.2 RULE 02 - SPEED UP OBSOLESCENCE

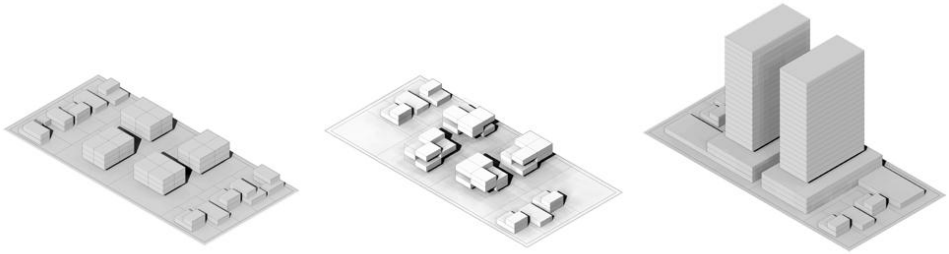

Figure 3 – Speed up obsolescence. Source Author´s own

How does it work?

The previous rule is easily implemented, but what happens when it comes to medium size plots and buildings with multiple owners? And what if some of these owners are not seduced by the possibility of multiplying their assets? The procedure in these cases is more elaborated; it sometimes consists of buying units in buildings without necessarily revealing the intentions of replacing them with new developments. Gradually construction companies will gain control of the properties and start the replacement. The process is long and involves persuasion strategies that are at the limits of legality. Typically it is forged a process of fast decay in the buildings by the negligence of construction companies in the maintenance of their units, forcing the remaining owners to sell their properties finally or join the proposed development.

A more subtle but extremely efficient version of this rule is to force obsolescence by defining a model (Amorim & Loureiro, 2003) or standard for living that does not fit in constructions of a given period. Marketing of new developments and their standards of living are so well designed that fully functional buildings will lose their value in the market for failing to provide the same number of leisure activities present in the new developments for example.

How does it affect street life?

Again it is a question of replacing smaller units by individual developments, what frequently reduces the possibilities of interaction and mixed use at street level. The impacts of higher population densities are minimised by the loss of diversity in building age and construction types.

Several of these existing medium size buildings house different functions on the ground floor what is not observed in the developments that replace them.

How do planning instruments deal with that?

In a market economy, hardly anything can be done to prevent construction companies from buying units in buildings. What has been done in the last laws was to classify particular medium size buildings, that were not protected as heritage or national monument, with a certain degree of protection. It was an attempt to avoid their replacement by new constructions. But this instrument is limited as the number of buildings that can justify some level of protection is reduced when compared to the number of buildings aimed at by the construction market.

3.3 RULE 03 – HIDE THE IMPACT

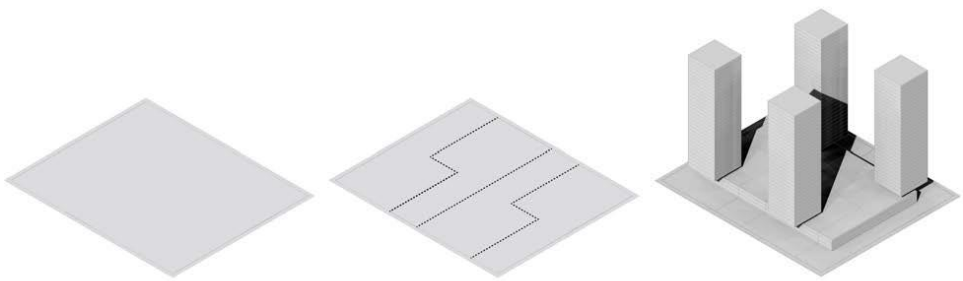

Figure 4 – Hide the impact. Source Author´s own

How does it work?

In the law 16.176 from 1996, it was established that any new construction starting from a particular built surface or plot size (20,000m² of construction and 3ha of plot area) should be considered as an ‘impact development’. That classification demands, that to have a building permit, projects should be analysed in a broader way, assessing their impacts on traffic, environment and in the immediate neighbourhood.

That involves consultation to the local population and several studies resulting in extra time and cost before having clearance to start development; it also means typically that the developer should cover the

cost of the mitigation of these impacts. To avoid that, what happens, in most of these cases, is that a project that would be classified as impact is fragmented in smaller projects. After the completion of the construction, the limits between each project are erased, and the development assumes its initial characteristics of a single unit.

How does it affect street life?

Constructions that result from this rule are inserted in large plots that are not so permeable and constitute barriers in the city. This characteristic of being a barrier will remain even if the project has been fragmented into smaller plots.

They are also commonly represented by vast complexes of residential buildings provided with extensive leisure facilities; therefore, even if they will contain scores of people, the contribution to life in the streets will be very limited. In general terms, the impact of this rule is more related to loss of potential for street life then replacing an existing situation where there was a higher level of activities.

How do planning instruments deal with that?

Although it can be evident to those at public institutions involved in the analysis and approval of new developments that a series of projects in adjacent plots are in fact a single project, there are several limitations in the laws to prevent it to go further. Most of the planning parameters are based on the plot; there is hardly any instrument that relates construction parameters to the scale of the block or district.

3.4 RULE 04 – SAFEGUARD POTENTIAL

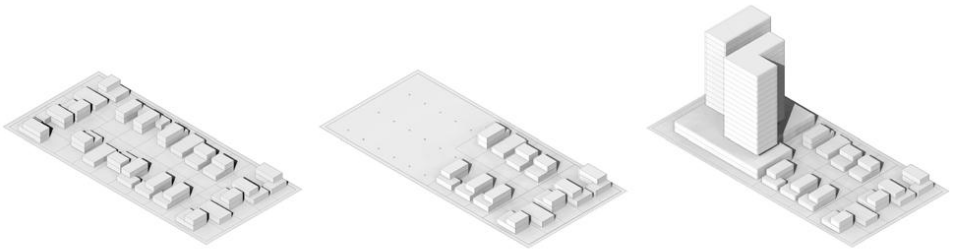

Figure 5 Safeguard potential. Source Author´s own

How does it work?

It is determined in Brazil, by federal law, that local planning instruments should be reviewed periodically, every ten years for zoning for example. That fact frequently raises expectations that in these review processes new construction parameters will be more restrictive than the current ones. To deal with that, projects are approved and licensed even if there is not an intention to implement them soon. Construction sector builds in this way a stock of projects with more favourable parameters and can decide when to start development without the restraints of the current planning instruments.

According to the laws of Recife, once a project is approved, construction should begin in no more than two years, what has not been stated in these rules is how long a development should take to be completed. That rule is basically to safeguard more favourable construction parameters by approving projects before changes in the instruments and sometimes by realising just the foundations of the buildings.

How does it affect street life?

The impact of this rule has two sides, in one hand, plots will be left unoccupied for some time, depriving parts of the district or neighbourhood of life. On the other hand, there is the adverse effect on planning instruments, once this rule allows constructions with former legal parameters to be built in a time where they should no longer be permitted. The role and efficacy of planning instruments are questioned by this example, as the city image addressed in these tools is not necessarily accurate.

How do planning instruments deal with that?

This rule is the classic example of the opportunity given to the action of construction market by the limitations and inaccuracy of the planning tools in Recife. In a recent review of planning instruments, it was dettermined a period that precedes changes in regulations, where no new project could be approved, but this strategy only pushed back the deadlines for the production of new projects.

3.5 RULE 05 – INFLATE PRIVATE DOMAIN

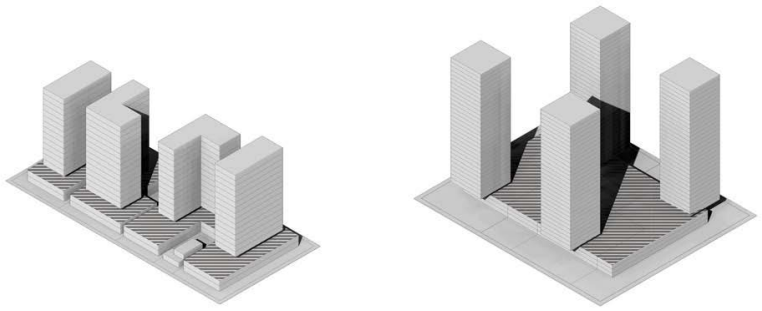

Figure 6 – Inflate private domain Source Author´s own

How does it work?

That is a general rule or procedure of the market that is mostly used regardless of the scale of constructions. It consists in bringing to the private domain the larger possible number of functions that are typically related to public spaces. This type of action takes advantage of particular characteristics of the society in Recife like the fear of violence, the search for personal status coming from exclusiveness (Amorim & Loureiro, 2005) and car dependency culture.

Buyers seem to be willing to pay more or to have their private areas reduced as long as they can count on the full program of leisure that their neighbours have. The question is much more related to the number of entertainment items one can have in their boundaries than the actual quality of spaces.

How does it affect street life?

The question for street life, in this case, is that this type of approach, bringing the focus to the private domain, reinforces the secondary character of public spaces in Recife and indirectly undermines their use. Currently, this phenomenon that is prevalent in high-income buildings has been reproduced, with the necessary adjustments on the scale, in developments targeted to medium class and even low-income buyers.

How do planning instruments deal with that?

Planning instruments in Recife do not regulate, at a higher level of detail, the uses one can house inside their buildings. As explained before, most of the instruments are designed to control certain parameters such as building intensity or green ratio, but they do not address the distribution of functions on the block or plot level.

4 CONCLUSION

During this initial process of study, especially when comparing the action from construction market with the mechanisms to steer the evolution of the city provided by planning instruments, the limitations of the planning codes to provide conditions, where street life can thrive, was reinforced.

To what extent planning tools can deal with the issues discussed here? Moreover, are planning tools relevant to the current development of the city that so far can be described as a city designed by the market?

From what has been observed here, the development of the city do not occur completely outside the domain of planning instruments, what happens, in fact, is that the city is built using the gaps in the instruments. These shortcomings are mainly the result of the detachment observed in the planning codes between the instruments that regulate zoning and land use from those that deal with typomorphology. As stated before, it is the result of the move from plans that envisioned a spatial configuration of the city, or, at least, to certain zones, to those that deal with the town based on the control of constructions almost exclusively in the plot scale.

The conclusion is that planning instruments are still relevant, although they may not be sufficiently elaborated to deal with the dimensions of street life. Moreover, planning tools are not able to deal with the formal - informal institutional action of the agents involved in the city development. In the next phases of this research, the connections between rules and street life will be further investigated to identify and locate spatial patterns and asses the levels of urban dynamics in this fragments.

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ID 1484 | CITY VERSUS SUBURB: THE EFFECTS OF NEIGHBOURHOOD LOCATION ON PLACE ATTACHMENT AND RESIDENTIAL SATISFACTION

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1 INTRODUCTION

Emotional connections of people with their environment have been investigated in various disciplines and certain crucial constructs have come out such as place attachment and place satisfaction obtaining attention in environmental psychology. Place attachment was defined as an essential element of personal identity and it was associated with certain constructs which can be analysed in both personal and community context (Anton & Lawrence, 2014; Brown & Raymond, 2007; Jorgersen & Stedman, 2001; Proshansky, Fabian, & Kaminoff, 1983). Place satisfaction was defined as "multidimensional summary judgement of the perceived quality of a setting" which means it is a concept generated by assessing physical and social attributes of an environment in terms of fulfilling a person's needs(Stedman, 2002, p. 564).

There have been multiple attempts to define place (Altman & Low, 1992; Easthope, 2004; Soja, 1998; Tuan, 1979). Place embraces the physical space through experiences and perspectives of the people (Relph, 1976; Sack, 1997; Stedman, 2003; Tuan, 1977). Spaces transform into places by use of meanings which are given to a setting (Tuan, 1977). Furthermore, Altman and Low (1992) define place as "the environmental setting to which people are emotionally and culturally attached" (p. 5). The construct of place indicates a space which is given meaning by way of individual, group or cultural approaches (Altman & Low, 1992). Moreover, Jorgersen & Stedman (2001) also proposed a framework of sense of place containing three constructs which are place attachment, place dependence and place identity.

Altman and Low (1992) define place attachment as "symbolic bonding which gives a sense to places culturally and emotionally" necessitates symbolic and affective connections with a number of environments (p. 6). It is also defined as an emotional tie between people and certain places (Brown & Raymond, 2007; Hidalgo & Hernández, 2001). Apart from these, Scannell & Gifford (2010) present a conceptual framework including three components to provide a definition of place attachment. This framework defines place attachment by analysing it in three dimensions which are person, process and place.

Place identity is defined as the cognitive significance of a place in terms of conserving experiences, emotions and relationships of people which gives a sense and purpose to life (Williams & Vaske, 2003). It is also defined as an element of self-identity which improves self-esteem and evokes a sense of belonging to a community (Williams & Vaske, 2003). The places which make people feel special, self-controlled and steady tend to be identified with the concept of identity (Anton & Lawrence, 2014). Proshansky et al. (1983) also claims that place identity is a cognitive base of self-identity including various cognitions associated with past, present and physical environments which describes the presence of individuals.

Place dependence originates from functional evaluation of a place in terms of satisfying a person's needs by allowing them to reach their goals (Shumaker & Taylor, 1983). Place dependence is associated with the physical opportunities and characteristics of the place and it presents required conditions in order to fulfil and promote certain purposes (Mandal, 2016). It refers to how settings offer certain opportunities in terms of accomplishing the aims of individuals (Jorgersen & Stedman, 2001). Additionally, rootedness is another element which is defined as mental situation of being, a mood or a feeling in a certain place (Tuan, 1980). It can be stated that place rootedness is associated with certain feelings and behaviours which improve attachment to specific places. The concept of rootedness brings along increased satisfaction with a person's present conditions where he or she lives in (McAndrew, 1998).

Place attachment can be investigated in environments of various scales such as homes, neighbourhoods and cities. The scale of place takes a considerable role in terms of influencing affective ties of individuals with their environments and the way they perceive (Casakin, Hernández, & Ruiz, 2015; Hidalgo & Hernández, 2001; Lewicka, 2010). Neighbourhood is one of the places affecting emotional bonds by creating sense of attachment especially in social context. Shumaker & Taylor (1983) define neighbourhood

attachment as “positive affective bond or association between individuals and their residential environment” (p. 233). It is a socio-psychological process creating individuals’ emotional bonding to their social and physical environment (Comstock et al., 2010) . In other words, neighbourhood attachment demonstrates a feeling of pleasure with the residential environment. In addition, the construct of satisfaction depends on physical and social features of environments which meet needs of individuals (Galster, 1987). Attitudes, meanings and knowledge related with cognitive evaluation of an environment take a considerable role in terms of determining place satisfaction (Stedman, 2002). Mesch & Manor (1998) define place satisfaction as an assessment of physical and social characteristics of a place. Place satisfaction in neighbourhood is related to residents’ evaluation of their neighbourhood environment (Hur, Nasar, & Chun, 2010). The factors affecting neighbourhood satisfaction can be analysed in three sections which are individual, social and environmental (Ibem & Aduwo, 2013). Individual factors are associated with personal or family attributes such as age, gender, income level and family size (Fornara, Bonaiuto, & Bonnes, 2010; Hay, 1998; Zhang & Lu, 2016). Moreover, social atmosphere of a neighbourhood is stated as determining. Social environment is perceived to be significant in terms of creating sense of place and place attachment. Social relations with neighbours, sense of community and sense of privacy, safety and local involvement can be presented as leading elements in order to provide satisfaction for residents in social way (Fornara et al., 2010; Sirgy & Cornwell, 2002; Zhang & Lu, 2016). The elements related with built environment are also considered to have an impact on neighbourhood satisfaction. Green open spaces, recreational areas, architectural style, building quality and size can be given as effective components (Sirgy & Cornwell, 2002; Zhang & Lu, 2016).

The current study aimed to investigate how neighbourhood location affects place attachment and residential satisfaction. We hypothesised that the residents living in the areas away from the city centre have higher level of place attachment compared to those living in city centre. It was explored by comparing two neighbourhoods; one in the city centre, the other away from the city centre. Moreover we expected that the residents living in the areas in city centre have higher level of residential satisfaction compared to those living away from the city centre. The relationship between neighbourhood location and residential satisfaction was analysed by assessing physical and social aspects of the neighbourhood which influence neighbourhood satisfaction. Apart from these, we examined if there is an association between residential satisfaction and place attachment or not as it was stated in the literature.

2 METHOD

2.1 RESPONDENTS

The respondents of this study were 135 residents from Ayrancı and Çayyolu neighbourhoods in Ankara. The sample group included 75 female and 60 male respondents aged between 19 to 85 years. Mean age was 47. Sixty-one respondents from Ayrancı and 74 respondents from Çayyolu took part in this study.

2.2 SETTING

The study was carried out in Ayrancı and Çayyolu which are two different neighbourhoods under the jurisdiction of Çankaya Municipality of Ankara. Ayrancı located in the centre of the city, surrounded by Dikmen to the south and Kavaklıdere to the northeast. Moreover, Turkish Grand National Assembly is located at the northern part of Ayrancı. This neighbourhood is divided as Aşağı Ayrancı and Yukarı Ayrancı. The socio-economic status of this neighbourhood is between upper middle and lower high classes; age distribution of the residents generally is between 30-34 years and 65 years above (“Ayrancı Bölge Raporu” (Ayrancı Region Report), 2017).

Çayyolu is in the southwest part of the Ankara. It located 17 kilometres distant from the city centre. It was settled down as a village then it was transformed to neighbourhood after 2004. The socio-economic status of Çayyolu is above upper middle class and age distribution of the residents generally is between 30-34 years and 50-54 years (“Çayyolu Bölge Raporu” (Çayyolu Region Report), 2017).

2.3 INSTRUMENTS

This study was assessed with two questionnaires which are Place Attachment Scale (Lewicka, 2010) and Perceived Residential Environment Quality and Neighbourhood Attachment Scale (Fornara et al., 2010). These scales distributed in Ayrancı and Çayyolu included 85 questions which were 7-point Likert scale (1=strongly disagree, 7=strongly agree). The first part of the questionnaire included questions related with respondents' demographic information such as age and gender, education level, length of residence and their neighbourhood. Place Attachment Scale (Lewicka, 2010) consisted of 12 items related with place identity and place bonding/rootedness. Perceived Residential Environment Quality and Neighbourhood Attachment Scale (Fornara et al., 2010) asked 66 statements related with physical and social features of the neighbourhood.

2.4 PROCEDURE

Two different neighbourhoods of Ankara; one in the city centre, the other away from the city centre were compared. Primarily, questionnaires were distributed to obtain data by using snowball sampling method. Respondents answered the questionnaires in their homes or workplaces. Then they were collected and analysed to reveal the influence of neighbourhood location on level of place attachment and residential satisfaction. Primarily, factor analysis was conducted for two scales to investigate which elements are the most effective on place attachment and residential satisfaction. Then, multivariate analysis of variance (MANOVA) was used to explore differences between locations and socio-demographic features such as gender on the level of place attachment and residential satisfaction. Apart from these, correlations were carried out to examine the relationship between the factors shaping place attachment and residential satisfaction. The statistical analyses were conducted by using Statistical Package for the Social Sciences (SPSS 21.0).

3 FINDINGS

Factor analysis on place attachment revealed the factors by investigating the most influential components on the level of attachment. It generated two factors and they were named as place identity and place bonding/rootedness. The first factor place identity emerged with an eigenvalue of 5.01 which accounted for 41,721% of the variance; the second factor place bonding/rootedness with an eigenvalue of 1.24 and 10,316% of the variance. The first factor consisted of three items about cognitive significance of a place associated with the construct of place identity. The internal consistency of this factor was 0,823. The second factor included five items which measure dependence of respondents by marking their positive and negative feelings about the place (see Table 1). The internal consistency for this factor was 0,813.

Statements	Factor 1 Place Identity	Factor 2 Place Bonding/Rootedness
I am proud of this place.	0,885	
It is a part of me.	0,826	
I feel secure here.	0,694	
I know this place very well.		0,762
I don't like this place.		0,752
I miss it when I am not here.		0,721
I defend it when somebody criticizes it.		0,706
I leave this place with pleasure.		0,582

Table 1 - Items of Place Identity and Place Bonding/Rootedness and its loadings

For residential satisfaction fourteen factors were determined in first stage. In order to decrease the load generated by many components second analysis was performed and four factors were created by ranking in high order. The first factor was created with an eigenvalue of 3.73 which accounted for 26,670% of the variance, the second with an eigenvalue of 2.17 and 15,498%, the third with an eigenvalue of 1.3 and 9,523%, the fourth with an eigenvalue of 1 and 7,173% of the variance.

Items forming the Factor 1 were related with general evaluation of a neighbourhood in terms of external connection and transportation, educational services, neighbourhood attachment, upkeep and sociability (see Table 2). The internal consistency for this factor was found to be 0,818. Questions related with

external connection and transportation asked about the connection of neighbourhood with other parts of the city, frequency and quality of public transportation. Questions about educational services analysed the schools in terms of quality, availability and access. Neighbourhood attachment was examined by measuring place identity, bonding and dependence to neighbourhood. Questions measuring upkeep asked about maintenance of neighbourhood in terms of streets, roads and signs. Sociability was understood by questions asking about how easy to make friendship and social relations with others.

Elements creating Factor 2 consisted of five themes which are parks and green areas, social care, commercial services, social life and activities, parking and accessibility (see Table 2). The alpha level for this factor was 0,754. Relaxation spaces such as parks and green areas in neighbourhood were the first component creating Factor 2. Social care services such as health opportunities, nursing services and care for elders were also significant. Commercial services of neighbourhood were evaluated by diversity and arrangements of shops and stores. Social atmosphere of neighbourhood, relaxation and entertainment activities offered for residents were influential on Factor 2. Availability of parking areas for cars and comfort in accessibility was found significant in terms of satisfying residents' needs.

The third factor represented environmental health and aesthetics in neighbourhood (see Table 2). General environmental condition of neighbourhood was analysed in terms of environmental cleanliness, air purity and noise level. Moreover, appearance of buildings was evaluated by looking their colour and design. The internal consistency for this factor was 0,772. Apart from these, building volume defined the fourth factor in itself. Dimensions and volumes of buildings were found as effective in creating this factor. The alpha level for this factor was 0,815.

Statements	Factor 1	Factor 2	Factor 3	Factor 4
	General evaluation	Relaxation/care services and accessibility	Environmental health and aesthetics	Building volume
External connection and transportation	0,719			
Educational services	0,638			
Neighbourhood attachment	0,635			
Upkeep	0,607			
Sociability	0,603			
Parks and green areas		0,699		
Social care		0,690		
Commercial services		0,674		
Social life and activities		0,672		
Parking and accessibility		0,576		
Environmental health			0,826	
Building aesthetics			0,629	
Building volume				0,856

Table 2 - Items of Factor 1, Factor 2, Factor 3, Factor 4 and its loadings

One way multivariate analysis of variance (MANOVA) test was applied if there is a difference in the level of place attachment in Ayrancı and Çayyolu or not. Results indicated that there is no significant difference in terms of neighbourhood location between the residents' level of place attachment. (λ=0,997; $F(2, 132) = 1.539$, $p>.05$).

For residential satisfaction, one way multivariate analysis of variance (MANOVA) showed that there is a significant difference between two neighbourhoods in terms of level of residential satisfaction. The residents living in the city centre had higher level of residential satisfaction compared to those living away from the city centre. (λ=0,449; $F(4, 130) = 39.842$, $p<.001$).

Moreover, according to correlation results there is an association between place attachment and residential satisfaction (see Table 3). It showed that there is a statistically significant correlation between the all factors influencing residential satisfaction and place bonding/rootedness. (Pearson's r: 0,539, Sig. (2-tailed): 0,000), (Pearson's r: 0,228, Sig. (2-tailed): 0,008), (Pearson's r: 0,332, Sig. (2-tailed): 0,000), (Pearson's r: -0,255, Sig. (2-tailed): 0,003). Furthermore place identity was statistically significant correlated with general evaluation of neighbourhood, environmental health and aesthetics. (Pearson's r: 0,544, Sig. (2-tailed): 0,000), (Pearson's r: 0,381, Sig. (2-tailed): 0,000).

		Place Bonding/ Rootedness	Place identity	General evaluation	Relaxation/ care services and accessibility	E. health and aesthetics	Building volume
Place Bonding/ Rootedness	Pearson Correlation	1	,588	,539	,228	,332	-,255
	Sig. (2-tailed)		,000	,000	,008	,000	,003
Place Identity	Pearson Correlation	,588	1	,544	,103	,381	-,169
	Sig. (2-tailed)	,000		,000	,233	,000	,051
General evaluation	Pearson Correlation	,539	,544	1	,242	,325	-,280
	Sig. (2-tailed)	,000	,000		,005	,000	,001
Relaxation/care services and accessibility	Pearson Correlation	,228	,103	,242	1	,395	,044
	Sig. (2-tailed)	,008	,233	,005		,000	,615
Environmental health and aesthetics	Pearson Correlation	,332	,381	,325	,395	1	-,090
	Sig. (2-tailed)	,000	,000	,000	,000		,297
Building volume	Pearson Correlation	-,255	-,169	-,280	,044	-,090	1
	Sig. (2-tailed)	,003	,051	,001	,615	,297	

Table 3 - Correlations between place attachment and residential satisfaction

4 DISCUSSION AND CONCLUSION

In the current study, we examined the relationship between level of place attachment and residential satisfaction according to neighbourhood location. We hypothesised that there is a difference in the level of place attachment of two neighbourhoods; the residents living in the areas away from the city centre have higher level of place attachment compared to those living in city centre. However the results of analysis demonstrated that there was no significant difference in the level of place attachment in terms of neighbourhood location. Feldman (1990) conducted a survey in two different areas of city and found that the residents identified themselves with a type of settlement. Her other study also indicated that small part of the sample group did not feel attachment to any settlement type; the experiences, values and manners were significant in terms of creating attachment (Feldman, 1996). In this study living in the city centre or living from away the city centre was not found as influential on level of place attachment. It can be inferred that emotional ties, past experiences, memories and personal ideas are influential on creating attachment to places.

Contrary to place attachment, there was a significant difference in the level of residential satisfaction of the respondents in two neighbourhoods. As it was expected the residents living in the areas in city centre have higher level of satisfaction compared to those living away from the city centre. In line with previous studies the elements related with built environment such as building aesthetics, upkeep, external connection and transportation were effective on neighbourhood satisfaction (Sirgy & Cornwell, 2002; Zhang & Lu, 2016). Former studies also found that parks, green areas and social activities were also other significant factors on residents' in terms of satisfying their needs (Bonaiuto, Fornara, Ariccio, Ganucci, & Rahimi, 2015; Fornara et al., 2010; Sirgy & Cornwell, 2002). Apart from these, Bonaiuto et al. (2015), Hur and Morrow-Jones (2008), Hidalgo and Hernández (2001) stated that there is a significant relationship between place attachment and place satisfaction. Pearson's correlation results indicated that there was an association between place attachment and residential satisfaction as it was expressed in literature. Place bonding/rootedness factor creating place attachment was statistically significant correlated with the all factors influencing residential satisfaction. Place identity factor was also statistically significant correlated with general evaluation of neighbourhood, environmental health and aesthetics. In accordance with previous research satisfaction in physical and social opportunities of environment were found significant in influencing affective bonds of individuals in terms of creating sense of attachment (Fornara et al., 2010; McAndrew, 1998; Shumaker & Taylor, 1983; Stedman, 2002).

In this study housing type was not taken into consideration in terms of determining its influence on place attachment and residential satisfaction. However level of place attachment and residential satisfaction can be related to type of housing. There may be a difference between living in apartments and living in detached houses. For future studies influence of housing type can also be investigated. Apart from this, socio-economic status can make difference for level of place attachment and residential satisfaction. This study was conducted with the residents having similar income levels. Future research can examine if socio-economic status of residents affect level of place attachment and residential satisfaction or not.

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ID 1497 | SHAPING PROCESS AND IMPACT MECHANISM OF THE THIRD SPACE UNDER BLOCK RENEWAL: AN CASE BASED ON KNOWLEDGE & INNOVATION COMMUNITY RENEWAL PROJECT

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1 INTRODUCTION

In the rapid process of urbanization and modernization in China, many cities have made great changes in function, structure, space capacity, infrastructure and other aspects. (Tong Ming, 2014). However, as a public space for daily life, alienation has not brought into full play its social value. For example, privatization is serious, attractive and dynamic, loose in relation to the region. Compared with those of traditional city life is full of modern city, the trial in a rational level, but the life experience and cultural characteristics, is almost completely failure (Camino Sitte, 1990). As China's economic development has

entered the new normal, some cities have gradually expanded from denotative expansion to connotative upgrading, and entered the stage of urban renewal. But the social significance of public space has not been returned (Liu Jiayan, 2010). Urban renewal should be the unification of four dimensions, namely, the promotion of regional functions, the inclusion of vulnerable groups, the protection of historical threads, and the construction of site features (Tang Zilai, 2016). In the actual game of multiple interests, it often becomes a tool for market profit seeking. Many of the public and the diversity of the old neighborhood and Historic District, a closed area aristocratic commercial space or standardized in the renovation of the developers, single function, social exclusion, context and the lack of characteristic, exacerbated by the modern city life is dull and boring. At the same time, along with the development of industrial city some period after entering, become the new city of creative city development concept (Tong Ming, 2010). The relationship between innovation activities and urban space has attracted more and more attention. It is an important challenge for urban planning and urban design to create a new space to stimulate urban innovation in the new round of block renewal.

In 1982, American sociologist Ray Oldenburg put forward the concept of "third space" for the first time. He believes that the third space is informal public places except the family and work, is a kind of mixed function, enhance the vitality of the city to promote the spatial form of social interaction (Oldenburg R, Brissett D, 1982). Compared with the traditional public space, the third space emphasizes sociality (Oldenburg, R, 1989), which is beneficial to stimulate group activities and social interaction, and then to promote knowledge spillover and innovation. However, the related research has just started. Most scholars have made a qualitative description based on sociological perspective, and paid no attention to the spatial attributes (Feng Jing, Zhen Feng, Jing Wong, 2015). Specific empirical research, there is still room for further improvement.

Shanghai has taken the lead in the development of stock planning and even reduction planning, and the restoration and reconstruction of public space is the core issue. A new round of "Shanghai 2040 master plan" clearly puts forward the development goal of "more dynamic and innovative city". Creative activities and creative classes are calling the city's third space (Wang Lan, Wu Zhiqiang, Qiu Song, 2016). In this context, it is of great practical significance to rethink the material characteristics and social significance of public space in urban renewal. (1) is the process of shaping the third space happening in the neighborhood renewal around us? (2) what is the mechanism of influence on regional development and revitalization? In order to answer these questions, this paper uses and improves the theoretical framework of the third space. Then to Shanghai Yangpu District University City Central Community - KIC as a typical case. Combined with field research and interviews, this paper provides a theoretical and empirical basis for the third space research in block renewal.

2 FRAMEWORK OF THE THIRD SPACES

In 1970s, the traditional public spaces such as parks and parks in the western developed countries were declining day by day. Many shopping centers have become a new place for public life. This kind of consumerism and the public space produced by experience economy have some characteristics of privatization. In this context, Ray Oldenburg proposed the "third space"". He called home and living space "the first space", the place where a lot of time worked was called "second space", while "third space" was an informal public place outside the place of residence and work place. Such as streets, community centers, beer gardens, cafes and so on.

2.1 ACCESSIBILITY OF THE THIRD SPACE

Third space is a public space with high accessibility, which is convenient for people to walk easily and become a regular guest in this public space (Li Qing, 2014). Accessibility has both spatial dimension and social dimension. The accessibility of physical space is directly related to the accessibility of people on foot. Through the integration of material space, the network of communication between people can be constructed (Tong Ming, 2014). Among them, the material space access needs to be realized by the road system, including cohesion,

cohesion and trunk area fast traffic and slow traffic convergence, bus station and walk line connection, subway and Commercial Street, and so on.

2.2 COMFOTABILITY OF THE THIRD SPACE

Third space gives comfort and ease of space, feelings and atmosphere. It encourages people to take the initiative to enter, and to produce social interaction, exchange of information and knowledge spillovers in a good spatial mood (Feng Jing, Zhen Feng, Jing Wong, 2015). Comfort has spatial dimension and social dimension. Whether the spatial scale is suitable or not is directly related to the personal experience of the people. Through the construction of spatial scale, it can affect people's behavior and psychology in the environment. Among them, the suitable spatial scale includes the walking distance, the friendly Street section and the traditional small block model.

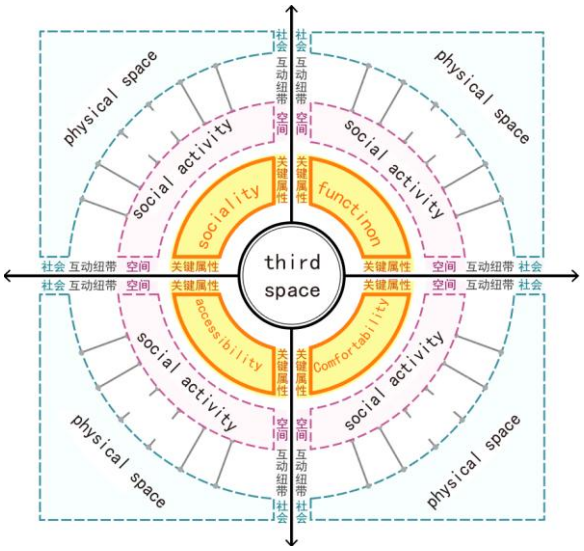

Figure 1 - Framework of the third place

2.3 FUNCTION OF THE THIRD SPACE

Third space has a variety of functions, including mixed use of land and multifunctional buildings (Zhou Jian, 2015). These functions are not simply superposed, but interrelated and complementary. They meet the needs of people's daily activities and trigger a chain reaction in social activities". Therefore, the function has the same spatial dimension and social dimension, and whether the function is mixed is directly related to whether people's daily activities are rich or interesting. By linking different activities with different functions, the crowd produces a hybrid, dynamic, functional, sometimes changing public space (Tong Ming, 2014). As Jan Gehl describes it, some chain of activities mostly by the other two kinds of activities extend to people in the same space, "or are close by, or just now at a glance..... "People wander about in the same space and they start social activities" (Gehl, Jan, 2002).

2.4 SOCIALITY OF THE THIRD SPACE

Third space is more social than any traditional public space (Li Qing, 2011). It regards public space as the stage for people to realize their social communication needs. Just as the theory of "city man" (Liang Henian, 2012), rational city people pursue the opportunity of space contact so as to create freedom, choice and communication. Sociability also has spatial dimensions and social dimensions. Whether the communication space is recurring is directly related to whether people's social intercourse is aggregated or not. Through the reasonable spatial organization way, can realize the perfect construction of the city social network (Tong Ming, 2014). This means that in the overall level of city function and public space will continue to reproduce in the local level, creating space contacts at different levels and scales for the people, the formation of large and small, each linkage social stage. This kind of self similarity plays an important stabilizing role in organizing people's social activities.

3 OVERVIEW OF KIC BLOCK RENEWAL

3.1 SPATIAL LOCATION

KIC renewal project started in 2002, is located in Shanghai city of Yangpu District Wujiaochang City sub center, but also a key position in the University City of Yangpu District. Yangpu District was the Shanghai traditional industrial base in the early new century is put forward from the "University City" to "Knowledge Innovation Zone" strategy (Chen Bingzhao, Yang Fan, Wu Zhiqiang, 2005; van Junyong, Yang Fan, 2008), the use of university resources outstanding, actively carry out the adjustment of industrial structure and layout, implementation campus, community park, the "Three Zone interaction" (Zhang Shangwu, Chen Ye, Song Wei, et al, 2016). KIC is a demonstration project update the block. Its goal is to integrate the three district resources and create a knowledge innovation community which integrates learning, working and living together.

3.2 RENEWAL PROCESS

Since the KIC project started since the development of city space has been greatly changed. We can divide the update process KIC blocks into 4 stages. That is, the stage of industrial mixed living, the preliminary carding stage of space, the shaping stage of core space and the whole northward promotion stage. Specifically, (1) industrial residential hybrid stage (2000-2005) for industrial, warehousing, residential and a small number of commercial land mixed, interwoven, poor spatial quality. (2) space preliminary carding stage (2005-2008) in accordance with the planning and design of the demolition of most of the plant in Shanghai, on both sides of the road for new commercial office building. (3) the core space shaping stage (2008-2011) removal of the entire plant Songhu Road West of the National Road and to the west direction of new building, University Road, the basic form of the prototype. (4) the overall northward stage (2011-2016) to the University for reference, along the way to promote the construction of Shanghai north, the formation of today's kic.

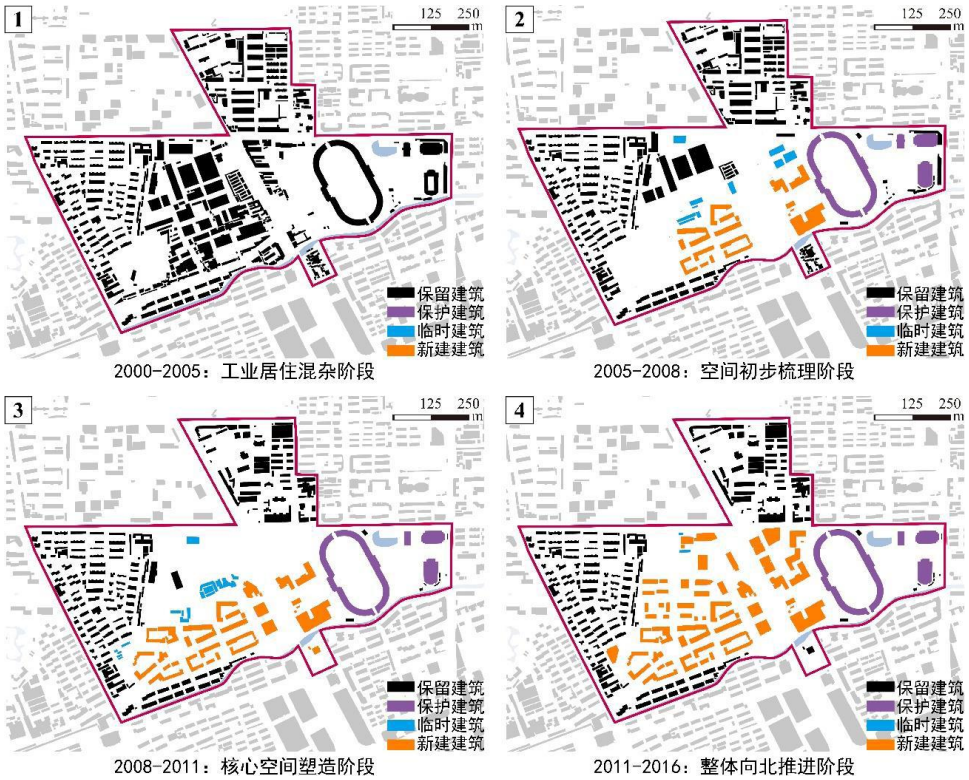

Figure 2 - Four stages of the renewal in KIC

4 SHAPING PROCESS OF THIRD SPACE IN BLOCK RENEWAL

4.1 SHAPING PROCESS OF ACCESSIBILITY

4.1.1 PHYSICAL SPACE: FROM CLOSURE TO FRAGMENTATION AND OPENING TO ACCESS

The accessible physical space can provide a material basis for people's walking and social activities. The connectivity of the road system, the connectivity of the road system and the bus station are selected, and the spatial accessibility changes before and after the block renewal are taken into account. Compared with 2000 and 2017, the overall road connectivity of the blocks did not change significantly. This is due to the formation of the urban primary and secondary trunk roads in the region. More than ten years, only a small number of branches and community roads have been added. By contrast, road connections within the block have changed considerably. In 2000, Shanghai Road West is a large building, only the main channel for the vehicles, cargo transportation, roadway is not continuous, the internal block relatively closed and broken. In 2017, with the Shanghai road to the west of Powerise square, KIC square, Jiangwan Hanlin commercial and residential real estate projects have been completed, and the community branch road density increase.

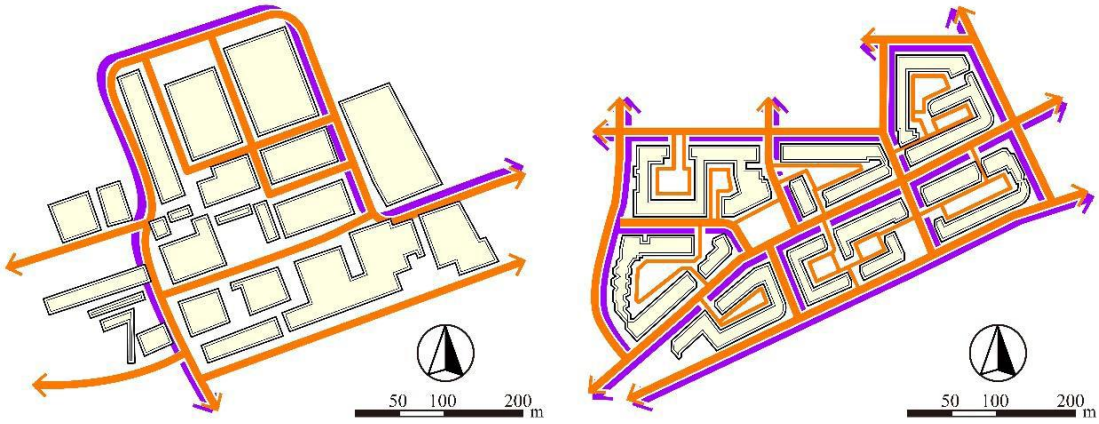

Figure 3 - Comparison in walking system of KIC between 2000 and 2017

KIC block is embedded in the region, residents not only to serve nearby and workers, and should pay more attention on the road system and bus station connection. From 2000 to 2017, with the overall improvement of public transport services in Shanghai, blocks and their surrounding areas showed a high degree of overlap between the bus station and the walking system.

The connectivity of the road system, the road system and the connectivity of the bus station were updated before and after. The car system has been improved by encrypting urban branches and community roads within blocks. Around the urban road, the construction courtyard, constructs two levels of walking streamline, has formed has the continuity and the hierarchical walking system. Roads and bus stations, especially rail sites, reinforce the overlapping relationship and generate more close spatial linkages with the surrounding areas. Therefore, before and after the KIC district renewal, physical space from the implementation of the transition to open closed fracture.

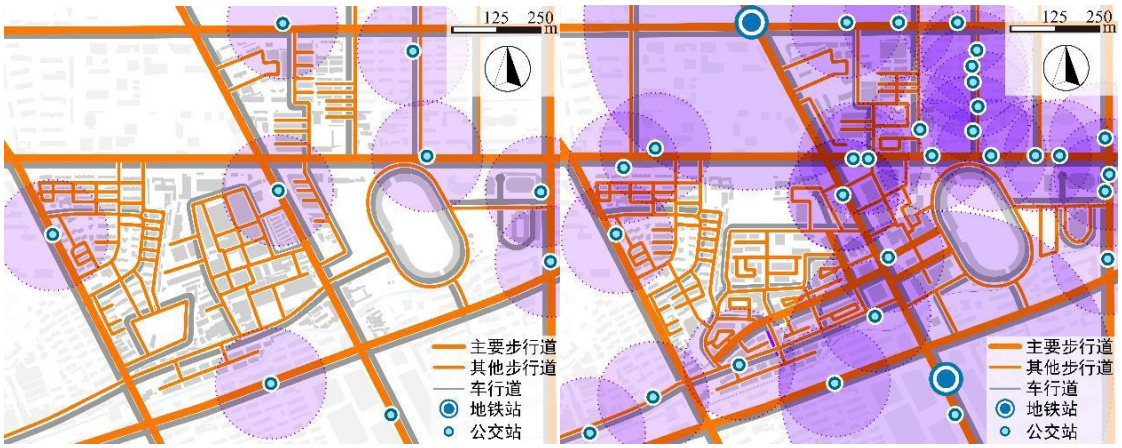

Figure 4 - Comparison of coincidence of road system and bus station in 2000 and 2017

4.1.2 ARRIVE ON FOOT: FROM NO ONE TO AN ENDLESS STREAM

The carding of the material space provides the basic condition for the shaping of accessibility. What is the actual walk of people in the block? In contrast to historical photos and photos directly reflects the status of KIC blocks changed from to pedestrians in a continuous line No one shows any interest in the. Originally closed inner blocks began to open their hearts and embrace "pedestrians", and the popularity of neighborhoods grew.

Figure 5 - Comparison of pedestrian walking environment in 2000 and 2017

During the working day (Thursday) to random street interviews, selected in the KIC blocks to work or business workers, ask the working day in walking street, and assist in drawing location and walking path. Local workers can be divided into two groups, namely, working here and living here, working here, and living in his land. It can be found that the walking line of people's working day has network characteristics, and most streets have considerable popularity. The pedestrian network mainly revolves around the University Road organization, and it is easy to arouse more communication and collision. The combination of the above material space reconstruction and the actual walking survey in two aspects, that KIC block before and after the update, the material from the closed space to achieve the transition to broken open, people's actual walk to become convenient and frequent, as in a continuous line blocks by No one shows any interest in. Whether spatial or social dimensions, the accessibility of neighborhoods is truly shaped.

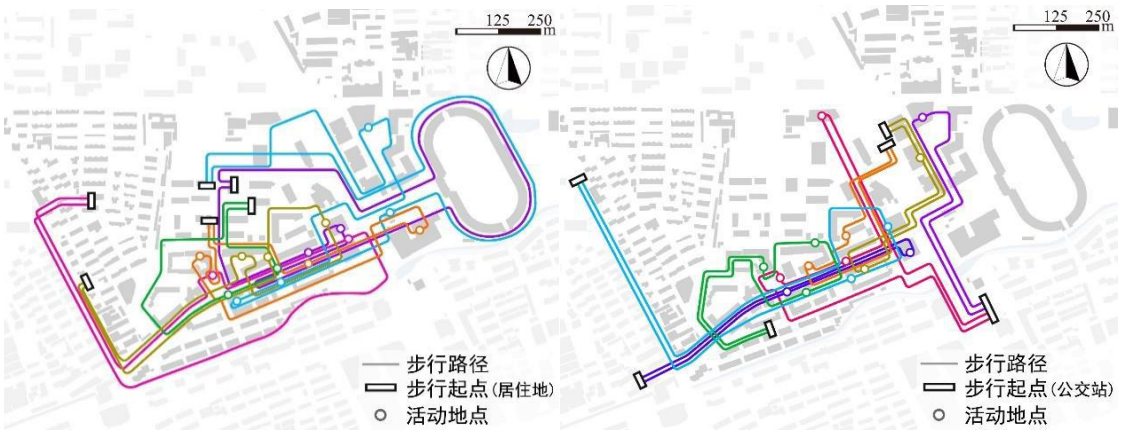

Figure 6 - Investigation on the walking route of workers in working days

4.2 SHAPING PROCESS OF COMFOTABLITY

4.2.1 SPACE SCALE: FROM BLOCK PARK TO SMALL NEIGHBORHOOD

The comfortable spatial scale can give people a pleasant experience and pleasant mood, and it is a necessary condition to attract people to walk, stay and communicate with each other in space. From 2000 to 2017, the neighborhood scale change Songhu Road East of the small, although there is a certain area renewal project is completed, but did not form a new City Road West of the road; Shanghai neighborhood scale is greatly changed, the city opened a new branch and community based road formed with a plurality of rectangular and trapezoidal blocks, the length and width of the the 40m to 120m range, and the city center area, San Francisco, New York and London neighborhood is a small scale similar to typical urban residents.

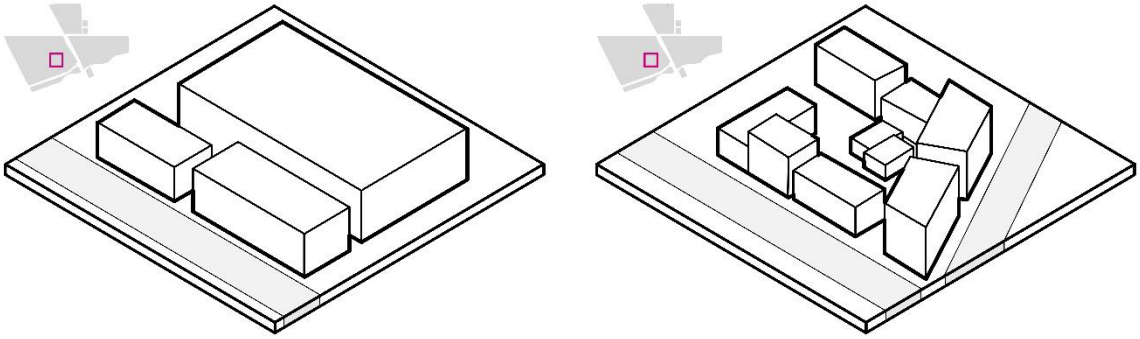

Figure 7 - Comparison of the interior courtyard space in same scale between 2000 and 2017

Deep into the neighborhood; consider the spatial structure of the compound. In 2000, the interior of the block was dominated by a large block of industrial buildings and storage buildings. These buildings form a narrow gap space and lack the inner courtyard space. In 2017, after the renewal of the neighborhood, the use of high and low, scattered, different sizes of building block combination, to eliminate the volume of construction. Enclosed in the interior to form a standard pleasant and pleasant courtyard space. In combination with the shape of the road network and neighborhood, the interior courtyard space is rectangular and trapezoidal, interesting and varied, and can accommodate a variety of outdoor activities.

4.2.2 PERSONAL EXPERIENCE: FROM MONOTONOUS TO FUN

Does the comfortable spatial scale really bring good experience and emotion to people? Choose between the road and the road of Wei a neighborhood in-depth investigation. Some university road, Wade road of social activities by local street building opening, from the street was introduced into the courtyard inside

the neighborhood, has formed a certain private public space, greatly enrich the experience of space, increase the interest through the. Ask in the neighborhood inside in the courtyard of several open their true feelings, some people think that drinking coffee here is relatively quiet outside, you can chat with friends better, but also to enjoy the outdoor sunshine ", some people think that drinking coffee in the yard can see the two floor of the gym and dance, this is very interesting, there are people that" if the day I love to sit in the evening more words may sit out, then the University Road, but one day the breath of life ".

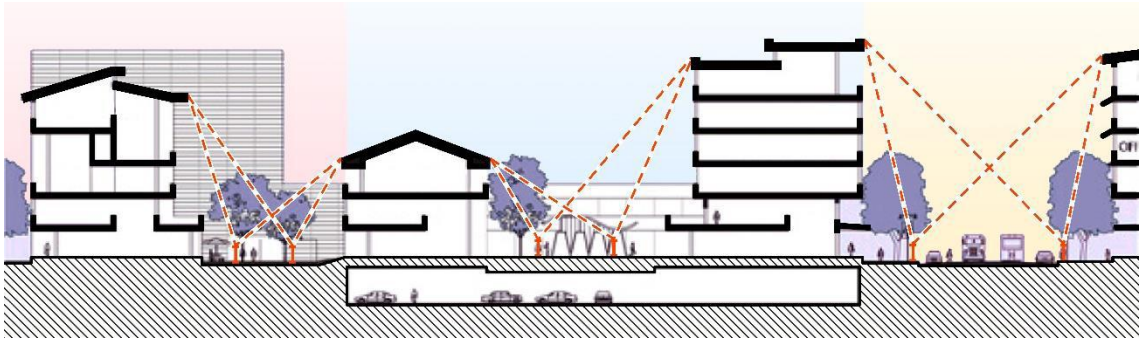

Figure 8 - University Road and Weide Road between neighborhood inside courtyard building section

The combination of the above two aspects of spatial scale and neighborhood people's personal experience, that the KIC blocks have pleasant neighborhood scale and rich inner courtyard space, replacing the original huge volume, monotonous space. In terms of spatial dimensions and social dimensions, neighborhoods attract more comfort and interest.

4.3 SHAPING PROCESS OF FUNCTION

4.3.1 URBAN FUNCTIONS: FROM LOW-END INDUSTRIES TO MULTIPLE INTEGRATION

Only a variety of functions can stimulate diverse activities. The function is embodied in different dimensions. Based on the characteristics of the block itself, the changes of urban functions are analyzed from the aspects of land use, the combination of the functions within the land, and the combination of functions within the building. Land use situation comparison between 2000 and 2017, 2000, the block was mainly new Newworkshop factory, warehouse, the poor quality of the Old Homestead and 70s and 80s occupied two of industrial land, residential land, land for storage and a small amount of commercial land mixed arrangement. In 2017, the low-end industries were replaced by commercial, office and residential projects.

Figure 10 - Comparison of land use between 2000 and 2017

Further consider the functional organization within a single building. Among them, the function combination of the vertical buildings along the university road is the most typical. The first floor is mainly for people with greater traffic demand, higher rental capacity of commercial shops, including coffee shops, milk tea shops,

clothing stores, snack shops, convenience stores, bookstores and other formats. 2 - 4 layers for commercial office mixed use, including fitness clubs, education, training, study abroad consulting, law, accounting, dental clinics and other formats. 5 - 6 floors are mainly residential, office, mixed use, mostly using the typical form of LOFT residential units. A residential unit occupies two floors, partly single space, partly double deck space, which provides the floor height required for work activities. This semi work and semi residential space is used for small start-up companies, offices, couples, companies and even artists.

Figure 11 - Vertical function combination model of University Road building

4.3.2 DAILY ACTIVITIES: FROM INDUSTRIAL PRODUCTION TO COMMUNITY LIFE

A variety of hybrid city function enriches the KIC elaborate design of physical space, but this really inspired lasting vibrant community daily activities? With Baidu maps and API interfaces, thermal charts at different time periods on weekdays and Saturday (Thursday) are obtained to reflect the continuous change in population size and activity intensity. During the working day (Thursday), the activities of people from 8 began to gather, mainly around the Songhu road and College Road, when workers, entrepreneurs are hard to start a busy working day. From the point of the beginning of 18 has dissipated, then part of workers after work directly out of blocks, but there are still people in the night Everfount University Road shopping, consumption and leisure, added popularity and maintain night busy life. At the same time, LOFT residential, Jiangwan Hanlin area with residential function plots also hold a considerable part of the residents, together they support 24 hours a vibrant community life. In the rest of the day (Saturday), the crowd began gathering from 10 points, than working days later, the same is around the Songhu road and College Road expansion. In the stage of the young people in the hard pioneer weekend will enter in the office space, the surrounding area students, teachers, ordinary residents and tourists also have to take advantage of a short weekend leisure time to participate in social activities. They discuss topics in a coffee shop, shop on the streets, chat, or exercise in a fitness club, or attend training and salons in a workshop. These rich and interesting community activities did not dissipate until after 21, even in the early morning.

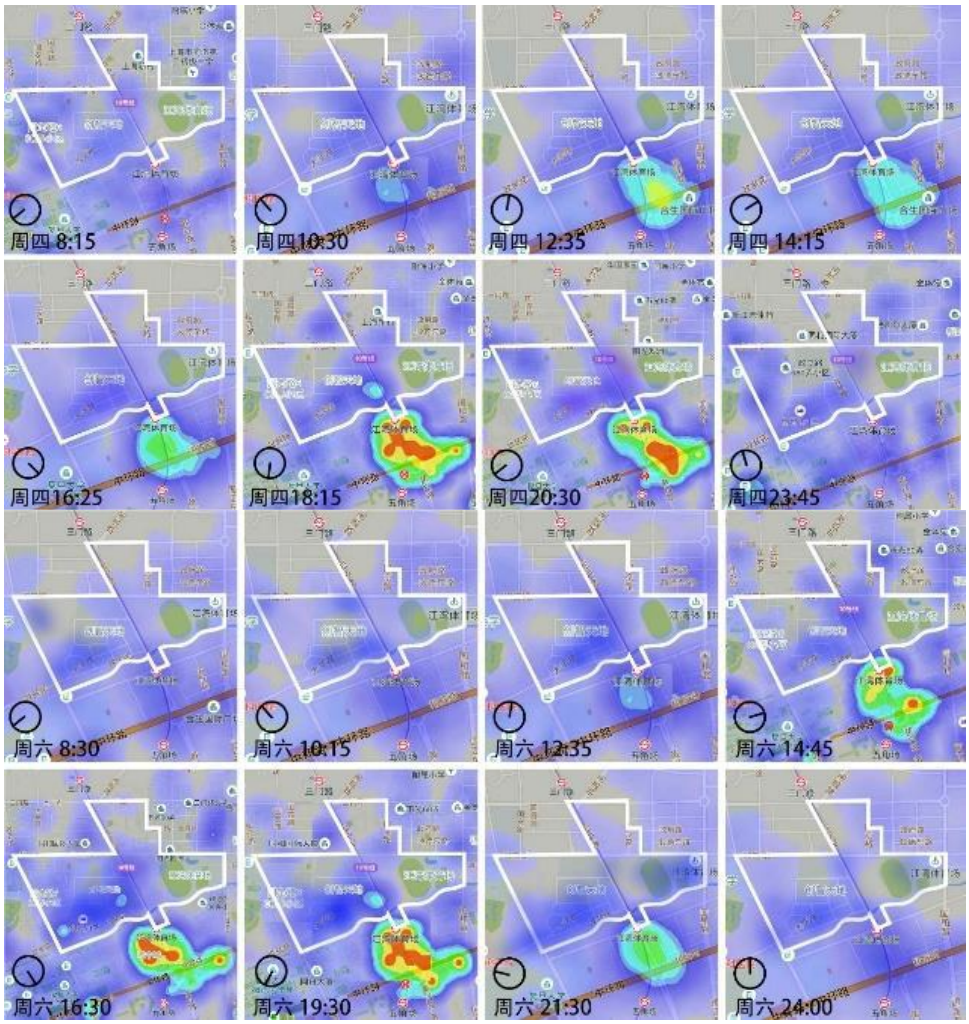

Figure 12 - Continuous change of Baidu thermodynamic diagram on working days and rest days

The combination of the above two aspects of city function and people's daily activities, that KIC block to achieve the fusion function, get rid of the low-end industrial area development to form. Relying on the function, people's social activities are also active, resulting in 24 hours of continuous vitality of community life. The functional dimension is well explained in both the spatial dimension and the social dimension.

4.4 SHAPING PROCESS OF SOCIALITY

4.4.1 COMMUNICATION SPACE: FROM NOWHERE TO REPEAT

Whether the communication space is recurring has a direct impact on people's social activities. Focus on the fractal characteristics of neighborhoods, to compare the changes in the communication space before and after the update. The so-called fractal characteristics, namely global and local existence of self similar characteristic, can be understood as some single building module, these modules constitute the module, and module group can progress the whole regional module group, the fractal characteristics have the stability effect on people's behavior (Tong Ming. 2014).

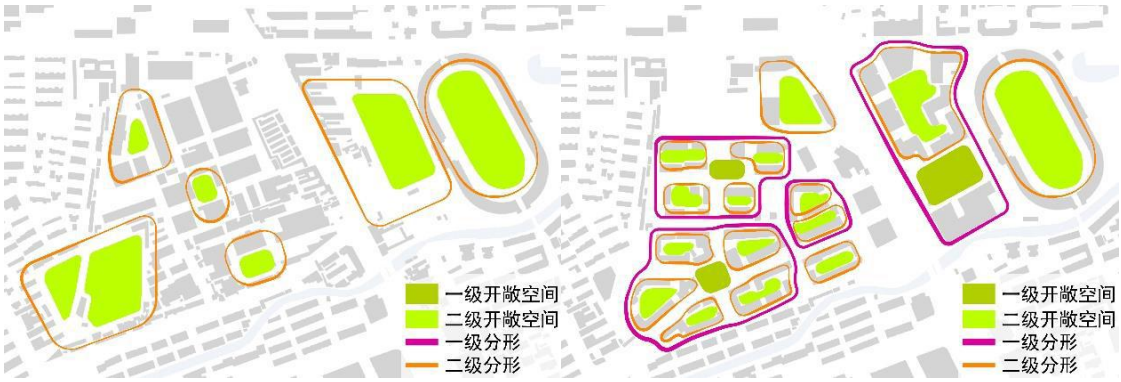

Figure 12 - Comparison of fractal characteristics between 2000 and 2017

Contrast the fractal features of public space in 2000 and 2017 blocks. In 2000 the district although there is open space, but the space is mainly used for loading, temporary storage, property does not have a public space, and combination of buildings are lack of coordination, lack of order, does not have the fractal characteristics of the scale of the communication space is nowhere. The 2017 block is the formation of fractal characteristics of closed, neighborhood buildings within the enclosed courtyard level of public space, the adjacent neighborhood is further formed larger around the square, combination of such lots in the updated constantly reproduce, constitute the different levels of the public, slightly outside the spatial difference between the system, people of different space shuttle, gain experience, prefer for the place to carry out social activities.

4.4.2 SOCIAL INTERACTION: FROM LACK OF DIALOGUE TO SOCIAL ADVANCEMENT

Has the rich and recurring communication space become the space catalyst to stimulate people's social interaction? On a Thursday afternoon in December 2016, a field survey was conducted between 5 and 7 p.m. to record the type and spatial distribution of people outdoors. All kinds of social activities in the block include chatting, walking, walking dogs, shopping, open-air coffee, square dancing and so on. Some of these activities are carried out outdoors in the open space, some in the gray space inside and outside the transition, forming a flow in the block, the sound of the landscape. Among them, the university road as the core to both sides of the infiltration of the formation of the central social vitality belt, is the most dynamic neighborhoods, social activities most intensive public space. In the late afternoon, commuting, commuting and passing crowds move together in different directions on the University Road, gathering together at different nodes and carrying out their own activities. The young man dispersed from the doorway of the SOHO building. Part of them left the block directly, and part of them poured into restaurants and bars on the University road. After a hard day's work, entrepreneurs leave the LOFT house and walk into the elegant coffee shop. Soon, the coffee chairs along the street were filled with guests.

5 INFLUENCE MECHANISM OF THIRD SPACE

5.1 REPLACEMENT OF LOW-END FORMS TO ENHANCE SPACE QUALITY AND ACHIEVE REGIONAL VALUES

According to the principle of neo classical economics, for a land mass, the timing of updating depends on the mutual change between the value of the building and the value of the land. When the value of the building is less than the value of the plot, the land will be updated. Because of the existence of the building hinders the realization of the value of land, the potential value must be reconstructed in order to realize plots (Feng Li, Tang Lai, 2013). The value reductions of different types of buildings vary with time, resulting in differences in the timing of land renewal. In the past the "industrial Yangpu" period, KIC of the block is a common space form section. Industry, warehousing, living and business are intertwined. With the construction of Wujiaochang City sub center, the block in 2000 has become an important section of the central city, and the regional conditions have changed. At the same time, in Yangpu District to create "Knowledge Innovation Zone" under the development goals, neighborhoods near the advantages of university resources are also increasingly prominent, potentially significant increase in value. The original industrial form obviously can not meet the new requirements of regional development and rejuvenation. In

time, the Yangpu District government and real estate developers, the KIC this renovation project, replacing the original plots of the low-end industrial form. They re comb the external space and optimize the quality of the environment, the university resources, new industries and community life organically combine to create convergence of popularity and creativity of the third space. In the process of district renewal, the construction of third space has a profound and positive impact on the regional space environment and economic benefits.

5.2 ATTRACT CREATIVE CLASSES, BUILD INNOVATIVE NETWORKS, AND LEAD CREATIVE CITIES

Creative classes seek vibrant urban life, especially those that can participate, experience, and interact in public space, not just a job. The updated KIC blocks Integrated University Road, street, neighborhood square courtyard, open-air coffee and other public spaces, they become common area characteristic and the symbolic significance of the third space. Entrepreneurs, engineers, designers, scientists, university students and other emerging creative groups from around the University and enterprises clustered around the blocks, matching the attributes of space with the needs of the community. They were able to facilitate social interaction in the third space. At the same time, the third space provides an interesting place for daily recreation for local residents, and also provides more job opportunities for service personnel. The creative class, local residents and service personnel to become the third space users, in the frequent face-to-face contact in the form of local integration of close and extensive social network (Wang Lan, Wu Zhiqiang, Qiu Song, 2016). Can produce production services, product development cooperation, outsourcing and other formal contact network in this process, also can produce knowledge sharing, chat leisure, emotional communication informal network (Zhou Suhong, Pei Yaxin, 2016). Social networks also need the support of government, venture capitalists and developers to produce synergistic effects of innovation.

6 CONCLUSION

Taking into account the spatial and social dimensions, from the accessibility, comfort, functionality and sociability of the third spaces, the development changes of the neighborhood from 2000 to 2017 are compared. Research shows that in KIC as a typical representative of the block shape update process happening in the third space, public space has third spatial attributes, encourage more people to walk, enjoy the fun of walking, experience the continued vitality of community life, development to stimulate innovation and social interaction. People arrive in the third space to find companions and social contacts, and social communication is also the essential feature and the basic purpose of the third space.

From the perspective of urban renewal, KIC updated to adapt to the changing relationship between city land value and the value of the building, to replace the low-end industrial form, the university resources, new industry, community living together, creating together popularity and originality of the third space, manifest the potential value of land, to meet the the new requirements of the development and revitalization of the area. In this process, the construction of "third space" has a far-reaching positive impact on the regional space environment and economic benefits.

From the perspective of the construction of Creative City, KIC through the integration of public space, the formation of distinctive and symbolic significance of the third space, not only to provide social places near the creative class, but also provide employment opportunities for service personnel for local residents to provide daily leisure places. Different social groups form a close and extensive social network in frequent face-to-face contact. Social networks, supported by related subjects, produce synergistic effects of stimulating innovation. The continuous synergy promotes regional innovation and innovation spillover, and finally leads to the construction of creative cities. In this process, the third space is both a catalyst and a carrier.

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ID 1501 | A CONTRASTIVE STUDY ON STRATEGIC VALUE OF PUBLIC SPACE PLAN IN URBAN DEVELOPMENT FROM THE PERSPECTIVE OF SPACE PRODUCTION

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1 INTRODUCTION

1.1 THE TENDENCY OF PUBLIC SPACE PLAN AS A CATALYST

Public space is one of the most important elements to realize the concept of resilient city. Not only could it provide emergency shelters when disasters, it also could provide a flexible and sustainable development for industries as a macroscopic spatial strategy.

The value of public space has been rising gradually with calls for human-centered environment, after its concession for economic development in decades. Because it could beautify environment and promote social communication. What's more, it has a tendency from its own ecological, social and aesthetic value to strategic one as a catalyst in urban development.

Urban catalyst, means that a particular element has a positive influence on the external or internal conditions of the existing ones and causes a "chain reaction", promoting continuous urban development as arrangement(Atton W.& Logan D., 1994). There is no doubts that public space has a great potential to be a catalyst in urban development.

1.2 SPACE PRODUCTION VALUE OF PUBLIC SPACE

To realize the strategic value of public space as a catalyst, there is a main contradiction between high investment and low output of capital. Because the strategic value of public space is significant but abstract beyond capital, while the space production value of that is very low in fact, both of which disjoint to some extent. Therefore, it'll be a breakthrough to improve public value from the perspective of space production.

Space production, means the transformation from production of goods to that of space in a certain place, in other words, from usage value to commercial value of land measured in term of capital. So, what's the space production value of public space? Currently, it has presented mainly as the environmental improvement and a following increase of its surrounding land value. However, one-off land deal is not enough to support the long-term development of public space. So this paper take two cases to analyze their sustainable development and interaction with the surroundings from the perspective of space production.

2 CASE STUDY ON SKYLINE PARK IN DENVER, USA

2.1 BACKGROUND

2.1.1 URBAN DEVELOPMENT: URBAN SPRAWL & DOWNTOWN DECLINE

In 1890s, the downtown of Denver was the main commercial center in the Rocky Mountain Region. However, after 1960s, the urban sprawl started continuously with many shopping malls in the suburbs. Lots of citizens, especially the wealthy, and commercial activities moved to the suburbs, which made the downtown uninhabited and lifeless. The direct reason is private cars which reduced the distance between the downtown and suburbs, while the internal one is the decline of life quality in the downtown, causing the loss of economic vitality and social communication.

2.1.2 URBAN PLANNING: ACTION, INVENTORY & INTEGRATED PLAN

American system of urban planning consists of 2 sub-systems of Urban Planning and Urban Design, with 2 hierarchies of Strategic Plan and Implementary Plan respectively(Table 1). Because of the nearly finished urbanization in early 20th century, American urban planning has presented mainly as inventory and integrated plan.

	Urban Planning	Urban Design
Strategic Plan	Master Plan	Strategic Urban Design
Examples	• American Comprehensive Plan; • British Structure Plan; • Japanese Area Division.	• American Urban Guide Plan; • British Urban Design Strategy; • Japanese Urban Institution.
Implementary Plan	Implementary urban development planning	Implementary Urban Design
Examples	• American Zoning Regulation, Land Subdivision and Site Planning; • British Local Plan; • Japanese Land Use District Plan.	• American Special Urban Design Guidelines; • British Development Brief and Design Guide; • Japanese Planning Permission.

Table 1 - American system of urban planning and design

2.1.3 URBAN MANAGEMENT: PUBLIC-PRIVATE PARTNERSHIP

In the range of downtown, the Board of Directors of Downtown Denver, Inc(DDI), which has developed as Downtown Denver Partnership(DDP) nowadays, was established in 1955. As a leader, place-maker, convener, idea generator, facilitator, recruiter, team-builder and policy advocate, it guides some special projects to manage and develop the downtown as a unique, diverse, vibrant and economically healthy urban core of the Rocky Mountain Region (DDP, 2014). It also balances the benefits of partners and provides more opportunities for bottom-up projects.

In the range of city, the Denver Urban Renewal Authority (DURA) was established by the government in 1958 to assist in the redevelopment of blighted property in Denver, working with the residents, businesses, civic leaders, area developers together(DURA, 2016). Most of all, DURA has managed a portfolio of $340 million in Tax Increment Financing (TIF) bonds and over $166 million in outstanding TIF reimbursement obligations(Komara A., 2004). When these projects are fully built out, its investments will have leveraged an estimated $8 billion of private capital in previously blighted and underutilized areas of our city(DURA, 2008).

2.2 DESCRIPTION

2.2.1 SKYLINE URBAN RENEWAL PROJECT & SKYLINE PARK

As a part of the renewal movement counteracting widespread suburban sprawl and autofocus retail, Skyline Urban Renewal Project was centrally approved within Denver's downtown in 1967 (Figure 1). Typical of urban renewal efforts, DURA's first jobs was to raze deteriorated structures so that the land could be made available to those interested in redevelopment. Ironically, historic resources were lost and it's the reason of the name "Skyline".

Skyline Park, a now-demolished park, was constructed in three blocks in the earliest stage of this program as a focal point. In 1968, Marvin Hatami was consulted by DURA to develop an original design scheme but it served as only a transitional space that would have given visitors little reason to linger. In 1970, DURA initiated a request-for-proposals bidding and finally selected Lawrence Halprin & Associatest to refine and implement another scheme. The new concept introduced a formation inspired by the local natural environment into the downtown, because they noticed that rapid development was forcing Denver to lose touch with its vast and dramatic mountain landscapes. The Halprin firm requested they be granted design rights over the first storey of park-facing buildings in order to control their appearance, while there were also some other guidelines including height restriction etc. established in the reports based on Hatami's scheme. However, all restrictive guidelines were negated eventually, because it would deter developers(Hirsch P., 2006).

In 1973, Skyline Park was completed and opened to the public. However, Skyline Park Master Plan released in 1997 recommended its complete demolition. After the struggles in the later 5 years, DDP made the decision to demolition in 2002 and finished it in 2003.

Figure 1 - Map of downtown Denver illustrating Skyline Park's context. From Urban Strategies/Greenberg Consultants, Skyline ParkRevitalization Initiative, April 2001, p. 17.

2.2.2 THE 16TH STREET MALL AND DOWNTOWN REVIVAL

In 1971, DDP proposed a plan of pedestrian-scaled development along the 16th Street but it was put off owing to the lack of capital. In 1980s, to meet the requirement of the commercial developers, the 16th Street Mall Plan was proposed again, then finished and opened to the public soon. It was not only a pedestrian-friendly plan but also an integrated plan including commerce and various transportations. It forbade cars and provided free buses as well as light rail connecting the two stations along the street, which was very effective to reduce 50% traffic jam. Most of all, the open street was expanding and forming a pedestrian system which was a new catalyst to promote prosperous commercial activities beyond expectation(Figure 2).

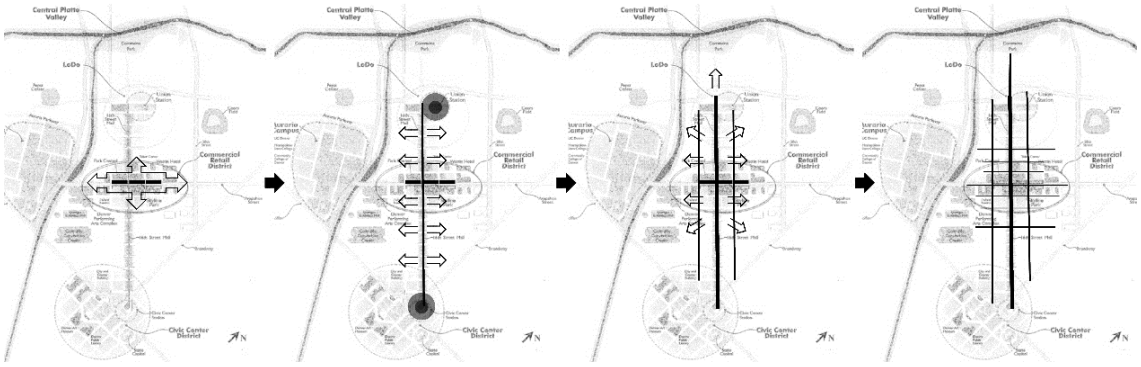


Figure 2 – The expanding process of 16th Street, From Urban Strategies/Greenberg Consultants, Skyline ParkRevitalization Initiative, April 2001, p. 17, illustration by the author.

2.3 RELATIONSHIP BETWEEN STRATEGIES AND BACKGROUND

2.3.1 COINCIDENCE: REASONS OF ITS SUCCESS IN REVIVAL

From the perspective of urban development, it's a coincidence in content. The pedestrian-scaled block could promote social communication and commercial activities. Facing various problems in the city, pedestrian strategy has a positive and multilevel value. Its point in success is human-centered. As the only public space in the 16th Street, Skyline Park have induced the revival of the 16th Street Mall, although it didn't reach the arrangement. But it could be imagined that Skyline Park would play a much more powerful role in the public space system, if the government insisted the implement of those original guidelines. Anyway, the following expansion and infiltration of public space system was far more significant. Compared with the vertical space production of residences or commercial buildings, it's a kind of horizontal space production of public space. The primary value brought was the increase in the value of surrounding land, what's more, the continuous value was its support to the sustainable development of commercial area. Although it still couldn't be measured by money, it has already linked to the survival of commerce directly.

From the perspective of urban planning, it's a coincidence in method. American urban planning is more efficient and adaptive in process. Its Strategic Plan and Implementary Plan have a close connection and both of them have a dynamic interaction according to the situations and trends.

From the perspective of urban management, it's a coincidence in mechanism. Not only could Public-Private Partnership build an open platform, it also could regulate and control the market with some preferential policies. For example, TIF assistance is a policy to encourage the crowdfunding investment. To some extent, it's the key to the success of this project as the first Public-Private Partnership under the management of DURA.

2.3.2 CONTRADICTION: REASONS OF ITS FAILURE AND FINAL DEMISE

From the perspective of urban development, Skyline Park didn't solve the social interpersonal problems radically. On one hand, it rooted from the Hatami's design intention as the transitional space for more pass and less stay. He thought the accessibility of open space could promote the development of commerce, but he ignored the importance of communication. On the other hand, it's too hard to relieve race conflict. When the park became an insecure shelter for the poverty, it has been abandoned to some extent.

From the perspective of urban planning, the original purpose of Skyline Park is to entice private investors to buy the lands near this unique public amenity. So it's a balance between short-term capital absorption and long-term sustainable development. Finally, the inertial thinking of capitalist contributed to the choice of short-term capital absorption. It's a pity that DURA had to compromise under financial pressure and reduced the restrictive guidelines, making the walking system scattered and eventually depressed.

From the perspective of urban management, the primary cause of its demise is that both the government and developers emphasis on commercialism. In the letter Halprin sent to Cultural Landscape Foundation, he expressed his disappointment and helpless. It can be seen that the blindness of capitalism cannot be coordinated with the mind of planners as well as harmonious development of society.

3 CONTRASTIVE CASE STUDY ON RAILWAY PARK IN TIANJIN, CHINA

3.1 SIMILARITIES AND DIFFERENCES BETWEEN BACKGROUNDS

3.1.1 URBAN DEVELOPMENT: URBAN EXPANSION AND SPRAWL

The first similarity of Denver, America and Tianjin, China was the law of urban sprawl without the consideration of time dimension. However, during the implementation of the projects, Denver was at the late stage while Tianjin was at middle. As one of megacities in China, there was a great and continuous increase of populations and industries in its center in the past decades. Also, there was the following urban sprawl in the suburbs.

The second one is their intelligent and connotative development. But they were still at different stages of development. Tianjin was accelerating the transformation process from the secondary industry to service, from low value-added one to high. As a result, with the demise or removal of factories, industrial railways has been the useless and dusty city assets, blocking the traffic and leaving a negative image in the city.

The third one is the imbalance between demand and supply of social communication. In the both cities, urban expansion and sprawl has superficially resulted from the decline in quality of life, further internally caused the lack of social communication. Compared with America, the society in China is simple relatively without such ticklish problems.

3.1.2 URBAN PLANNING: BLUEPRINT, INCREMENTAL & SPECIALIZED

In fact, Chinese urban planning took American as a reference, so it is a derivative of American with some Chinese local characters. However, there are 3 differences between them. The first one is American action plan and Chinese blueprint plan. In America, the Strategic Plan is parallel with Master Plan as well as

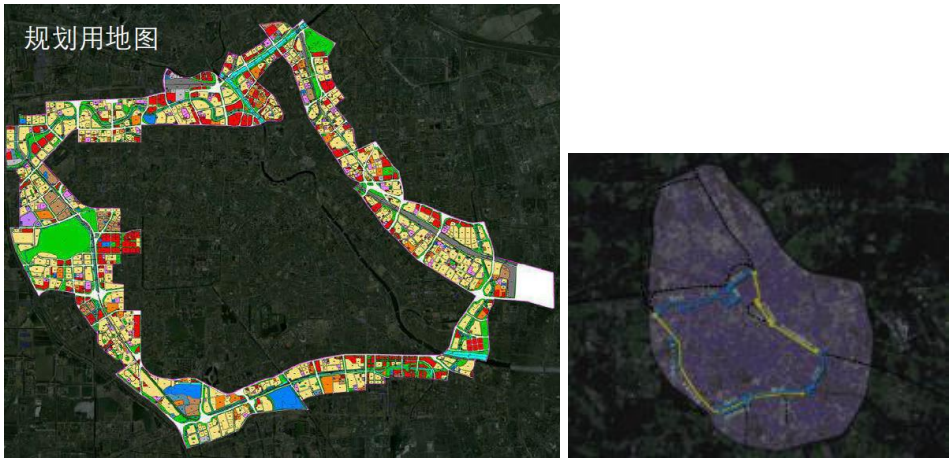
corresponding Strategic Urban Design, both of which guide and control their parts in Implementary Plan. In China, on one hand, the Strategic Plan is much higher than Master Plan. It seems a blueprint to guide the national or regional development through some macroscopical and conceptual strategies and principles. On the other hand, Chinese system is lack of Strategic Urban Design. In other words, the urban design in China is just equal to Implementary Design in America, just submitting to the rules in Regulatory Detailed Plan and focusing on spatial forms, traffic organization and landscape, etc. without its own strategic value. As a result, there is always a long distance between Strategic Plan and specific urban projects. The second is the difference between American inventory plan and Chinese incremental plan. The main reason is their different stages in the process of urbanization. Because of the nearly finished urbanization in early 20th century in America, it has laid the emphasis on urban renewal of limited lands. Although the urbanization and urban sprawl has been still underway in China, there must be a tendency from quantitative plan to qualitative plan and from space capitalization to information capitalization. The third is the difference between integrated plan and specialized plan. Although the Chinese Master Plan seems cover all parts, they're not integrated as a whole and separate from each other in the next specialized plan.

3.1.3 URBAN MANAGEMENT: PUBLIC-PUBLIC PARTNERSHIP

Taking the full-developed Public-Private Partnership in America as a reference, China has been encouraging the cooperation between the government and private enterprises recently, though there is still a room to improve. In fact, the current practice is "Public-Public Partnership" to some extent, because most of the cooperation is between the government and state-owned enterprises which doesn't play a great role in leveraging private capital.

3.2 DESCRIPTION

Railway Park in Tianjin, China is a recent renewal project along the inner ring and the abandoned industrial railways in the center of city(Figure 3). It was just approved in 2003 and completed in 2016. It took full advantages of the cultural resources of railways and their surrounding industrial heritage. As a result, it has been a greenway with the length of 45 km, average width of 100 m and increase of green area about 123.5 hm2. Its spatial structure has an integrated consideration of road networks, slow traffic system, public space system, river system and public service facilities, etc. It contains various functions, such as ecological conservation, industrial cultural education, entertainment and sports, etc. Not only could it provide citizens a low-carbon lifestyle, it also open up an industrial corridor in the city, both of which may be new name cards of Tianjin.



(a) Land use (b) Location in the center

Figure 3 - Map of Railway Park in Tianjin. From Tianjin Railway Park Plan, 2016.

3.3 RELATIONSHIP BETWEEN STRATEGIES AND BACKGROUND

3.3.1 COINCIDENCE: REASONS OF ITS SUCCESS IN REVIVAL

From the perspective of urban development, it's a coincidence in context. With the concept of sustainable and human-centered development, public space could improve the quality of urban life, and further promote social communication. On one hand, it's a turning point to solve the previous urban problem by unblocking roads and reuse industrial heritage. On the other hand, it's a meaningful catalyst to induce industrial innovation and transformation through micro regeneration. As a result, it has been a spatial carrier of new culture and industries. The value of public space production here is not only increase the land value and expand public space system but also, what's more, get feedback from sustainable development of industries and life.

From the perspective of urban planning, it's an optimization in method, catering to the tendency of action plan, inventory plan and integrated plan. First, it provides a strategic action plan as an innovative connection between Master Plan and Regulatory Detailed Plan in China. Second, micro regeneration is a worthy exploration to take the advantage of inventory land and refresh disused but valuable heritage. Third, integrated plan, including open space, transportation, commercial and industrial development, etc. is the reason why it could play an effective role as a catalyst.

From the perspective of urban management, it's a breakthrough in mechanism. With the limited capital, the government would have too large pressure to pursue those expensive environmental projects. Bottom-up mechanism must be a key to relieve this difficulty. In this project, the planners shows their initiative and voluntary to pay more attention to urban development, although there may be some sacrifice. It realizes the real practice of Public-Private Partnership in China as well as the forth distribution – spatial distribution with the principle of space justice, which is a sublimation of public space production without any doubts.

3.3.2 RESOLUTION OF CONTRADICTION

Demise is not bad absolutely. Instead, the standards of judgement should be about their necessity of existence even if they have disappeared. Skyline Park in Denver is a typical case that ever had a positive influence on the urban development but went to demise, while Railway Park in Tianjin has been a sustainable spatial carrier to support the continuous urban evolution. Both of them are our references to think about the plans in the future.

4 CONCLUSION

In summary, there are 2 ways which can improve the value of public space from the perspective of space production. One is forming and spreading public space system, the other one is promoting the sustainable development of industries to feed back. So public space plan and design should not only shape space and beautify environment but also, what's more, plan in a large scale and play a significant role in cities or even regions. It must take local conditions into consideration and adhere to the human-centered concept absolutely. Meanwhile, our public space plan and management should run more Public-Private Partnership projects and go for more action plan, inventory plan as well as integrated plan.

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ID 1516 | FROM INFORMAL TO FORMAL PUBLIC SPACE: THE ORGANIZATION AND INSTITUTIONAL TRANSFORMATION OF TACTICAL URBANISM MOVEMENT IN SAN

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1 INTRODUCTION

Tactical Urbanism (TU) has become a force in urban design which cannot be ignored. Its representative is a new approach in requesting new types of public space which have changed the traditionally top-down, long-term planning process to bottom-up, action-oriented experiments to improve the public realm. TU is implemented by different sectors with different motives, but the ultimate goal of TU is the same: trying to improve the built environment with some low cost, fast, flexible installations to test the outcomes of the intervention.

There are growing attention on the social media and the internet about the transformation of the unutilized streets or spaces, such as the too wide sidewalks or vacuum parking lot. Through the simple intervention such as putting some tables and chairs for the public to rest, landscaping the parking lot to be an attractive site of the neighbourhood, etc. The collective name of these activities called “Tactical Urbanism.” These small activities can enhance the people’s quality of life and well-being. Its impact on urban design is increasing, and thus more and more people pay attention to this movement. Although the outcome of the TU is obvious (e.g. better public realm), few people know the mechanism of it and its background. TU is not a sudden occurrence but an outcome of some movements in the U.S. (e.g. Play Street, Open Street, Guerilla Gardening, Pop-up Retail, Pop-up Cafe). It has many different forms in different cities, but the spirit of it remains the same.

In this paper, we make a comparison between San Francisco’s “Pavement to Park (P2P)” and Taipei’s “One Day Street Life Experiment Activity (ODSLEA)”. San Francisco's P2P program is regarded as the earliest and most successful development of TU that seeks to convert parking space into spaces for cyclists, pedestrians, residents, neighbourhood interactions, and local businesses. On the other hand, ODSLEA was a one-day activity held on September 15, 2013, in Taipei, which was highly similar with P2P on the surface. Here comes my question: What are the similarity and difference between these two tactical urbanism movements in essence?

Using a case study approach, this paper relies on first-hand interviews with key stakeholders and second-hand data such as papers, websites, reports, manuals, and promotional campaigns to study the history, organization, institutional arrangement, and the management dimension of P2P and ODSLEA with particular attention on the motivation of the initiators. This paper is expected to understand the motivations of the initiators of TU through the interview and second-hand data; it is important to know the motivation because it would lead to different results. Through the comparison between the P2P and the ODSLEA programs, this research aims to contribute to making a suggestion to all the TU initiators and participants to examine their TU programs that if they contain the TU spirits or not. If not, they are supposed to modify their programs to achieve their goals: to improve the built environment.

2 LITERATURE REVIEW

TU has become a global phenomenon in the last decade; its influence has reached the North America and the other countries around the world. It becomes a new approach to change the urban design decision-making process with some simple, adroit intervention. It's unique because it has broken the rules that the urban design decisions should be made by the planner, architects, designers, government officials instead of the citizens who live in there. The inefficient top-down approach has been gradually challenged by the bottom-up, citizen-led TU. TU not only represents the true needs of the citizens (physically, socially, economically), more importantly, it represents the true spirit of democracy. This movement is studied from different perspectives including both qualified method and quantified method.

Lydon et al. (2012) are the key writers to build the integral theory and the practices of TU movement. They elaborate the TU in their book "Tactical Urbanism- short-term action for long-term change". Lydon et al. (2012) list the following five key characteristics of tactical urbanism in their guidebooks: A deliberate, phased approach to instigating change; an offering of local ideas for local planning challenges; short-term commitment and realistic expectations; low risks, with a possibly high reward; and finally, the development of social capital between citizens and the building of organisational capacity between public/private institutions, non-profit/non-governmental organisations (NGOs), and their constituents.

Many papers about the TU movements would inevitably mention Lydon et al. (2012), such as Mould (2014) describes the importance between TU and Lydon that

The TU movement is attributed to urbanist and planner, Mike Lydon, who heads up an institution called the Streets Plan Collective, an urban planning-cum-activism group based in New York City. The growing popularity of TU, as promoted by Lydon and a growing cohort of devotees, has fuelled an interest in small-scale activities undertaken by local citizens that redesign their urban area to be more 'liveable'. (P. 529)

While the current model of what is generally known as tactical urbanism sprouted from the first Park(ing) Day in San Francisco in 1995, the movement can trace its roots as far back as 16th-century Paris with the pop-up book vendors along the River Seine and later the Play Streets of New York and London from the first half of the 20th century (Lydon et al. 2012). The key concept behind tactical urbanism is the idea that temporary interventions can help garner an understanding of what interventions might work in a particular context and lay the foundation for more permanent ones (Marshall et al., 2015). This ability for a city to learn can be linked to one of the most maligned names in city planning: Le Corbusier (McFarlane 2011). While many of LeCorbusier's designs have not stood the test of time, his theory that urbanism can and must be relearned fits with the creed of tactical urbanists (Marshall et al., 2015).

In recent years, there have been many academic papers to explore the phenomenon of TU, including: "how TU evolves from a short-term to long-term", "TU's history, prospects, impact and criticism" (Greco, 2012), "the relationship between TU and creative city" (Mould, 2014), "TU as instruments in urban design education" (Sargın& Savaş, 2012), "TU and the right to the city" (Alisdairi, 2014) and so on. The main focuses on these researches of TU are basically of its impact, prospects, critiques, and the relationship with other issues. However, there is no research currently trying to compare the similarities and the differences between Asia or Taiwan and the U.S. TU movements and the motivations of the initiators. This paper seeks to compare the similarity and the difference between the P2P program in San Francisco and the ODSLEA program in Taipei from different perspectives.

3 TACTICAL URBANISM 3.1.1 THE BACKGROUND OF THE RISE OF TU

There are several different versions of the context of the rise of the TU. Andres Duany (2015) argues that this is because the rise of the two most desirable urbanism in the 21st century: Tactical and XL (Extra Large), which represents the Rem Koolhaas' concept: S, M, L and XL is not complete, it lacks XS (Extra Small), and XS category is represented by TU. Gehl Studio San Francisco (2016) contends that TU is related to strategic planning projects and large infrastructure projects from the 1950s to 1980s. When the highway was expanded in almost all US cities and built skyscrapers, the top-down approach was gradually challenged and eventually replaced by community involvement from the 1980s to early 2000. It has been giving priority to human experience, and this change indirectly contributed to the new planning approach: TU.

It is also possible to analyse the causes of the rise of the TU from other perspectives, which are related to the economic recession, population transfer and the rise of Internet tools (Lydon, 2012). The North American recession has led citizens, municipalities and developers to take creative projects and focus on smaller scales and funding; the baby boomers have retired, and young people have entered the government to mark the transfer of population; web-based tools, blogs, Twitter and Facebook can share some of the content, in a few minutes the problem will appear in dozens of cities on the Facebook. It is clear that the emergence of TU in the United States is not a coincidence, but with a series of ideological changes, social change, population transfer and scientific and technological progress. Lydon (2012) also organised a series of activities that contribute to TU: from the NYC's Play Street program in 1916, NYC's Guerilla Gardening efforts in 1973, San Francisco Park (ing) Day in 2005, and then P2P began to expand within the United States and even worldwide as well.

3.1.2 INTRODUCTIONTOTU

Merriam-Webster's defines tactical as "of or relating to small-scale actions serving a larger purpose" or "adroit in planning or manoeuvring to accomplish a purpose." (Lydon, 2012, P.2) TU's ultimate goal is to enable these interventions to influence government's decisions and ultimately make these short-term activities part of a long-term policy. P2P is a case in point, from the park(ing) day one-day event to currently a long- term activity. As the result, most of these materials are affordable and low cost. "TU presents a palette of materials — a toolbox that can be used for rapidly deploying projects and testing ideas in your city's streets. They are grouped materials by their function, providing ideas for barrier elements, surface treatments, street furniture, landscaping elements, signs, programming, etc." (The Street Plans Collaborative, 2016, P.21). Most of the sites of TU occur in the unutilized public spaces, but not always. The famous Time Square in NYC is an example of situated on the lively street. Here are the common sites of the TU movement: open space, empty storefront, too wide streets, highway underground passage, highway underground passage, ground parking lot, etc.

Most of the TU movements are initiated by citizens rather than the municipal government. The citizens hope that through the informal expression of their views on the built environment, they would affect the government's decision-making, hoping that to become legalised and formalised. Just like the P2P from the beginning of the informal (two people rented a parking space and put some turf and a seat on it), to now become a formal, legitimate activity. The programs of TU vary according to its location and needs. "In most communities, Tactical Urbanism projects rarely fit the typical mould for permitting or installation. They are expected to have to troubleshoot and be creative in this aspect of your project planning." (The Street Plans Collaborative, 2016, P.18) Lydon (2012, P.3) also recommends that TU projects should be flexible and dynamic. "Because the places people inhabit are never static, TU doesn't propose one-size-fits-all solutions but intentional and flexible responses. The former remains the fixation of numerous and overlapping disciplines in the urban development fields, which assume that most variables affecting cities can be controlled now and into the distant future. The latter rejects this notion and embraces the dynamism of cities."

Despite its popularity, tactical urbanism has been mixed with other similar approaches to urban design, including DIY urbanism and action-oriented planning, which strategies and short-term actions are the essence of their philosophy. DIY urbanism contains the following terms: pop-up urbanism, user-generated urbanism, insurgent urbanism, guerrilla urbanism, urban hacking. It blends a spirit of entrepreneurial activism with public art, design, architecture, engineering, technology, and notions of progressive urbanism. Not all DIY urbanism efforts are tactical, and not all Tactical Urbanism initiatives are DIY (Lydon, 2012). The most significant difference between these two is that TU is intended to instigate long-term change, such as revising an outdated policy or responding to a deficiency of infrastructure and DIY Urbanism isn't. In other words, TU is highly related to the permanent improvement and DIY Urbanism mainly focuses on the temporary beautification or offering amenities. In addition, Action-Oriented Planning is distinguished from "Tactical Urbanism" by an increased emphasis on measurement and evaluation as the guiding star of strategy (see Fig.1). Pilot projects can be worthless without strategic vision or when support for iteration is missing. Measuring impacts is one way to stay true to a strategic vision and to engage many perspectives by telling stories through objective measures (Gehl Studio San Francisco., 2016).

Figure 1 - The process of Action-Oriented Planning (Source: Planning by Doing)

There are a range of forms of TU in the U.S. and worldwide as well and initiated by different stakeholders. Most of these programs are similar in essence but appear in different forms. The following are some programs of TU in different places: Open Streets (Bogotá, Colombia), Play Streets (NYC, London), Build a Better Block (Dallas), Park(ing) Day (San Francisco), Guerilla Gardening (NYC), Pop-Up Retail (Oakland, Melbourne), Pavement to Plazas (NYC, San Francisco), Pavement to Parks (San Francisco), Pop- up Cafes (NYC), Depave (Portland), Chair Bombing (Worldwide), Food Carts/ Trucks (Worldwide), etc. TU could be implemented by a series of actors with different intentions (e.g., governments, businesses, non-profits, civic groups, individuals). The following are the three typical types of actors of TU: "Initiated by citizens to bypass the conventional project delivery process and cut through municipal bureaucracy by protesting, prototyping, or visually demonstrating the possibility of change. This activity represents citizens exercising their "right to the city." As a tool for city government, developers or nonprofits to more broadly engage the public during project planning, delivery, and development processes. As a "phase 0" early implementation tool used by cities or developers to test projects before a long-term investment is made." (Lydon, 2012)

4 METHODOLOGY

This study is mainly based on the case studies and interviews to compare the similarities and differences between the P2P and the ODSLEA projects. On the one hand, due to the difficulty to get the first-hand materials from the P2P, all the materials of the P2P are based on second-hand materials. On the other hand, as part of case study examination, we conducted three different sets of interviews (see Table 1) to explore the ODSLEA. The interviews were held on April 14, 2017, the interviewees including several core actors in the ODSLEA such as Mr Tseng as the city staff representative (the official of the Public Works Department, Taipei City), Mr Liu as the site designer representative (Director of the Classic Design and Planning), and Mrs Kuo as the expert representative (Director of the Taiwan Institute of Landscape Architects).

Interviewee	Key Questions
City Staff	- Describe the history of the program including initial idea. - What departments are involved in regulation and development? - What is the intention of the city to hold this event? - Does the city have any plans to develop subsequent parklet or any other similar projects? - What are the successes, challenges and lessons learned for the program?
Site Designer	- Describe the history of the program including initial idea. - What is your role in this event? - What is the relationship between the P2P and the ODSLEA programs. - Is there any public participation involved? - How much time and resources did you invest in? - Are there similar events have been held in Taiwan? - What is the government's attitude from your perspective?
Expert	- What is your role in this event? - How do you wiegh the values of this event? - How do you think the relationship between the P2P and the ODSLEA programs? - What is the government's attitude from your perspective? - Do you have any suggestions to the city government and the designers?

Table 1 – Type of Interview and Questions

5 SAN FRANCISCO: PAVEMENT TO PARK (P2P)

P2P contains three major parts: Parklets, Plazas and Prototyping. Parklets aim to transform all sidewalk-scale open spaces that repurpose the curbside lane. Plazas intend to use neighbourhood gathering places created by reclaiming underutilised street spaces. Prototyping is short-term tests of urban design ideas that are often portable, flexible, and relate to playing and performance. (Pavement to Parks website: http://pavementtoparks.org/) “Parklets and Plazas are a part of an emerging practice in Urban Planning and Design that goes by many names, and is characterised by inexpensive, temporary, adaptive, and grassroots strategies.” (Stroman, 2016, P.8)

SF Planning Department (2014) elaborates the basic mechanism of the P2P project. “Through the program, parking spaces and street intersections have become the testing ground for new and easily reversible public spaces such as parklets and plazas. These temporary spaces are typically outfitted with amenities that enhance the quality of public life, such as tables, seating, landscaping, bicycle parking, and public art.” Nowadays, there are more than 50 parklets and six plazas in the P2P program (see Fig.2).

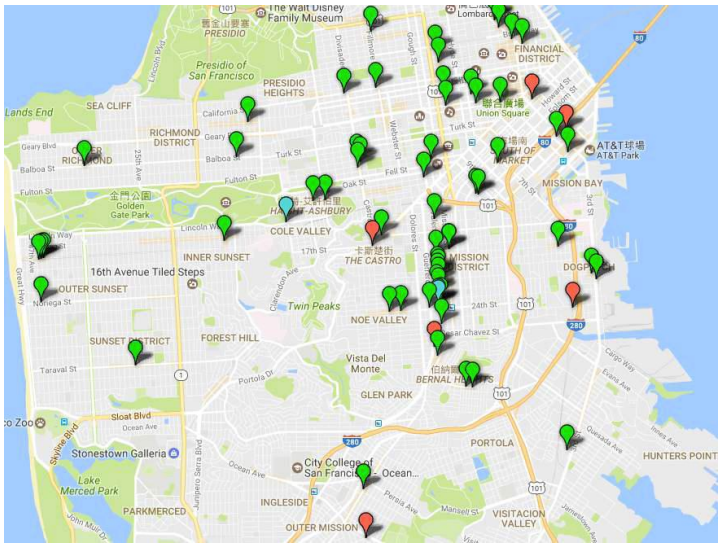

Figure 2 - Map of all parklets and plazas sites (Source: http://pavementtoparks.org/)

The term ‘parklet’ has heretofore been used informally to refer to a small urban park, ‘mini park’ or ‘pocket park’ (Gillool, 2010; Martin, 1998; The Washington Post, 1967; Z Waugh, 1947; Zion, 1962). This thesis recognises the Parklet as distinct urban design typology with specific spatial characteristics prototyped in San Francisco: the Parklet occupies a curbside parking lane, often reclaiming contiguous spaces, functionally expanding the pedestrian realm of the sidewalk. Ocubillo (2012) explained how parklets work: "Parklet installations are essentially temporary. Projects are granted permits on a renewable annual basis, which implies a limit to their lifetimes and their potential to effect – as individual sites or cumulatively – more permanent interventions and policies.

The creation of parklets and similar small-scale public open spaces has become a widespread effort across some cities in the United States. Since San Francisco's five pilot parklets in 2010, the local effort to expand on the successes of parklets is also growing. Currently, over sixty parklets have been installed across twenty different neighbourhoods, and more are being implemented as high public and business interest have resulted in an increase in parklet applications. The parklet program has evolved for more than a decade (see Fig. 3). It was initiated by two workers of the Rebar group. They rented a parking space and put some turf, bench and a tree on it in 2005. San Francisco government thought it was interesting and held Park(ing) Day in 2006. The parklet pilots started in 2009 and formalised by San Francisco government in 2015.

Figure 3 - The Evolution of the Parklet Program (Source: Planning by Doing)

The P2P program seeks to test the possibilities of these underused areas of land by quickly and inexpensively converting them into new pedestrian spaces. In other words, it tries to reclaim underutilised asphalt as public space without large capital expenditure. These spaces can become permanent public open space after an evaluation period. There are five principal goals of P2P: 1. Foster neighbourhood interaction 2. Reimagine the potential of city streets 3. Enhance pedestrian safety and activities 4. Encourage non- motorized transportation 5. Encourage non-motorized transportation 6. Support local businesses.

There are a number of sectors involved in the P2P program: San Francisco Planning Department, San Francisco Public Works Department, San Francisco Municipal Transportation Agency, Mayor's Office (the public sectors); Local Restaurants and Stores (the private sectors); Tunnel Top Park Steering Committee, Union Square Business Improvement District, San Francisco Beautiful, etc. (the third sectors)Each Pavement to Parks project is intended to be a public laboratory for the city to work with local communities to temporarily test new ideas in the public realm. Materials and design interventions are meant to be temporary and easily reversible. Meanwhile, the trial run demonstrates the need for design changes. After testing their performance, some spaces are reclaimed permanently as public open spaces. Seating, landscaping and paving treatments are common features of all projects (see Fig.4~Fig.6).

Figure 4 - Museum of craft and design parklet, Luna Rienne art gallery parklet
(Source: http://pavementtoparks.org/)

Figure 5 - Ocean avenue parklet, Simple pleasures parklet
(Source: http://pavementtoparks.org/)

Figure 6 - Reveille coffee parklet, Divisadero street parklet
(Source: http://pavementtoparks.org/)

There are many evaluation studies on the impact of the parklets. The positive impacts to the neighbourhood and the local businesses have been proved. The SF Great Street Project (2010) analysed the public use and the entire block as well as how business owners think it has impacted their sales. Their research reveals that the trial parklet has already increased pedestrian activity in the study area, the satisfaction of pedestrians in the area and people's sense of community character. Some businesses on the block have welcomed the increased foot traffic. For example, the greatest increase in activity was seen on weekday evenings when pedestrian traffic rose 37% from an average of 363 to 497 people per hour. The average number of pedestrians during all observation periods increased 13%. (SF Great Street Project, 2010)

5.1 TAIPEI: ODSLEA

ODSLEA was a part of the program of Taipei's apply for the 2016 World Design Capital City. To test the Boulevard pedestrian environment improvement program, the project is sponsored by the Taipei Public Works Department and hosted by Classic Design and Planning. It was an activity held on September 15, 2013, 05: 00-21: 00. The Taipei City government closed the Xinsheng South Road (86 Lane to 98 Lane) to utilise the parking spaces into a range of activities (see Fig.7). The use of the west side of the road about 165 meters long, 5 meters wide; east about 150 meters long, 3 meters wide. This period of the street is unique because it is close to National Taiwan University and surrounded by dozens of distinctive bookstores, cafes, restaurants and Japanese monuments. There is a strong local cultural organisation called "Wen-Luo-Ding" which is an alliance constituted by the local bookstores participated in the ODSLEA.

Figure 7 – The Map of Activities in ODSLEA (Source: Results report from the Classic Design and Planning)

There were a series of public participation and propaganda involved in ODSLEA. Classic Design and Planning had held numerous public hearings to listen to the local residents', communities' and businesses' opinions on the impacts of this program. The propaganda was made up of a design competition of the parklets, a microfilm competition, website (http://tgbdesign.4pt.tw/), social media, advertisement, etc. The purpose of the ODSLEA concept is to use a more flexible and creative community participatory approach to invite students of the surrounding schools, communities and citizens to participate in the ODSLEA. Through the activities of the streets, so that the public experience and see the pedestrian environment widened, the street space use and activities of the more creative possibility. (Results report from the Classic Design and Planning, 2013) The real intentions of ODSLEA are 1. Taipei City government to test the impact of the widened road. 2. As the part of the propaganda of 2016 World Design Capital City.

The core sectors of ODSLEA are: Taipei Public Works Department, Taipei Transportation Department, Taipei Planning Department (public sectors); Classic Design and Planning, local stores and bookstores (private sectors); community college, Wen-Lou-Ding (a region surrounded by Wenzhou Street, Roosevelt Road, Dingzhou Road, an area about one square kilometer, there are thirty to forty bookstores distributed within this region) (the third sectors). ODSLEA used a variety of 1:1 models (bike lane, picnic area, wooden pallets area, street library, etc.) to enable participants to experience these street facilities with human scale (see Fig.8~Fig.10). Besides that, the project even included the experiencing Military Kindred Village culture, disaster prevention, hand-made crafts teaching, orchestral performances, etc., which were beyond the scope of P2P. The streets were not just becoming the social places but the places of education, performance and propaganda of the event. ODSLEA is a one-day activity which is not long enough to measure its impact. There was no official evaluation of ODSLEA. But through the informal interview with the participants conducted by the Classic Design and Planning, most of them held a positive attitude towards this event.

Figure 8 - Bike Lane Experience Area, Second-hand Book Exchanging Area (Source: https://www.facebook.com/pg/TGBdesign/photos/)

Figure 9 - Paiting Parking Space, Picnic Area (Source: https://www.facebook.com/pg/TGBdesign/photos/)

Figure 10 – Rest Area, Main Stage (Source: https://www.facebook.com/pg/TGBdesign/photos/)

5.2 THE COMPARISON BETWEEN P2P AND ODSLEA

Although these two programs are highly similar on the surface, for example, both of them utilise the curbside parking spaces into different purposes and hold a range of public participation. Both of them have a series of local businesses and NGOs involved and aim to enhance the public lives. But as for the core essences, they are kind of different (see Table 2). First of all, formality. P2P was initiated by the individuals and gradually transformed into the government-oriented program. It applies to one of the feature of TU: From informal to formal. On the other hand, ODSLEA was launched by the government, and it lacked the civil spirit. Second, duration. P2P was a one-day event (Park(ing) day) in 2006 and has become a permanent program now. In contrast, ODSLEA was intended to be a one-day activity in 2013, and the Taipei government had no aspiration to make it a long-term program. Third, the attitudes between these two government. SF government supports the development of P2P, it even publishes manuals to the public and formulates policy framework. On the contrary, ODSLEA was just a part of the activities of World Design Capital Taipei 2016. In other words, it's propaganda to show the progressiveness and the openness of Taipei City. The government official said Taipei City government has no plan currently to formalise it or promote this program. Lastly, the spirit of TU. P2P truly embodies the true spirit of TU based on the reasons above. Unfortunately, ODSLEA had only little things to do with TU even if this program was so similar to P2P on the surface. It lacked the long-term support from the government and the comprehensive understanding of the meaning of TU.

	Initiating organization	Formality	Duration
P2P	From individual-led to government-led	From informal to formal	Short-term to permanent
ODSLEA	Government cooperated with private sectors and third sectors	Formal	One day
	Involving municipal departments	Involving private sectors	Involving NGOs
P2P	1. San Francisco Planning Department 2. San Francisco Public Works Department 3. San Francisco Municipal Transportation Agency 4. Mayor's Office	Local Restaurants and Stores	1. Tunnel Top Park Steering Committee 2. Union Square 3. Business Improvement District 4. San Francisco Beautiful etc.
ODSLEA	1. Taipei Planning Department 2. Taipei Public Works Department 3. Taipei Transportation Department	1. Classic Design and Planning 2. Local Stores and Bookstores	1. Community College 2. Wen-Lou-Ding etc.
	Public Participation	Government's attitude	TU spirit
P2P	Yes	Positive	Yes
ODSLEA	Yes	Positive on the surface, negative in essence	No

Table 2 - The Comparison Between P2P and ODSLEA

If we visualise the transformation of the P2P program in the scope compass, the Park(ing) program in 2005 and the Park(ing) Day program are short-term and instigated by the users but gradually converted into long-term and managed officially (see Fig. 11). On the other hand, the ODSLEA was a one-day activity and initiated by the government and held by the private sectors and thus no motion of the cross (see Fig. 12).

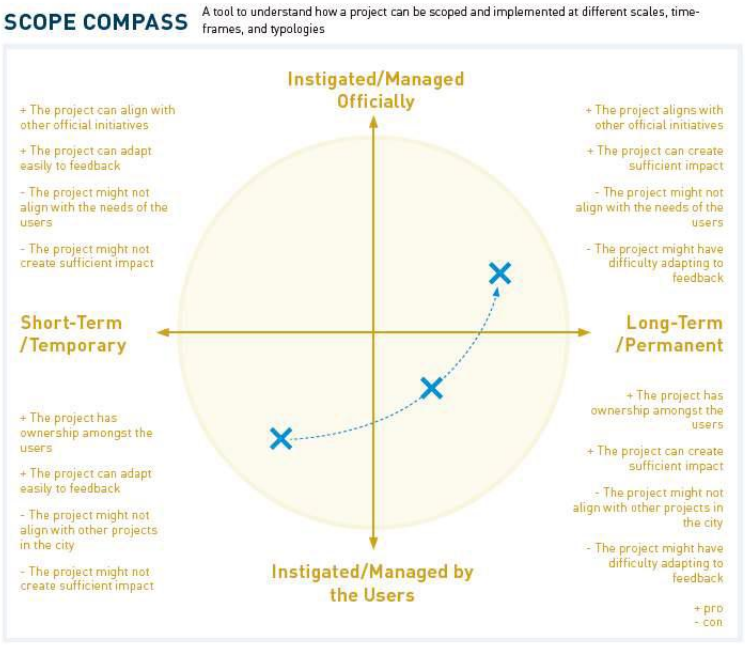

Figure 11 – The scope compass of P2P (Source: Planning By Doing)

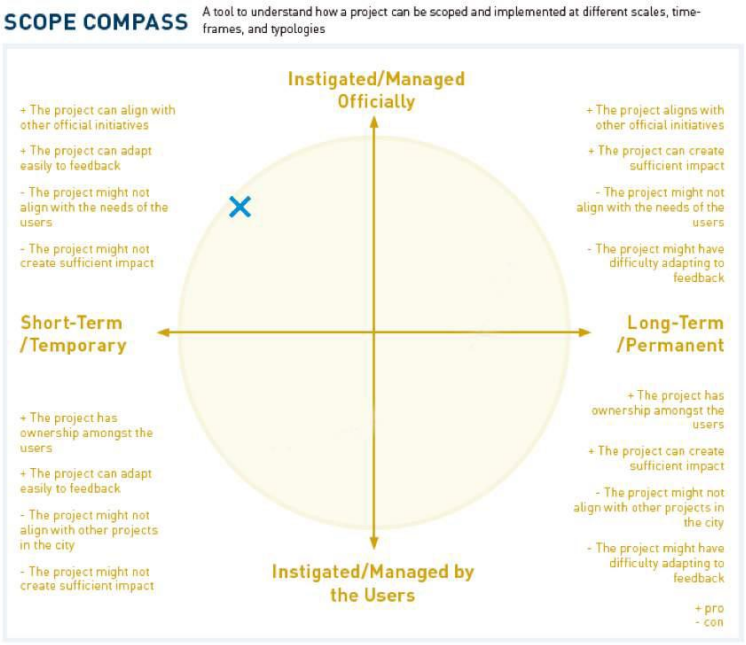

Figure 12 – The scope compass of ODSLEA (Source: Modified by the authors)

6 CONCLUSION

San Francisco's P2P movement from the citizen-led, informal, short-term evolves to the government-led, formal, long-term, which truly embodies the features of TU: low-cost, fast, low-tech actions to influence the government's decision-making process. Its influence is not only across the North America but also in the Central and South America, Europe and Asia. The P2P project has become an international city movements and attract more and more cities to engage in.

In Europe, there are also few projects of parklets, mainly concentrated in the UK, one in Sweden, one in France, one in Spain, so there is still much room for growth in the future. The European municipal goverments, civic-groups, non-profits and individuals are supposed to make use of the unutilized public spaces into more appealing public realm to improve the life of the city.

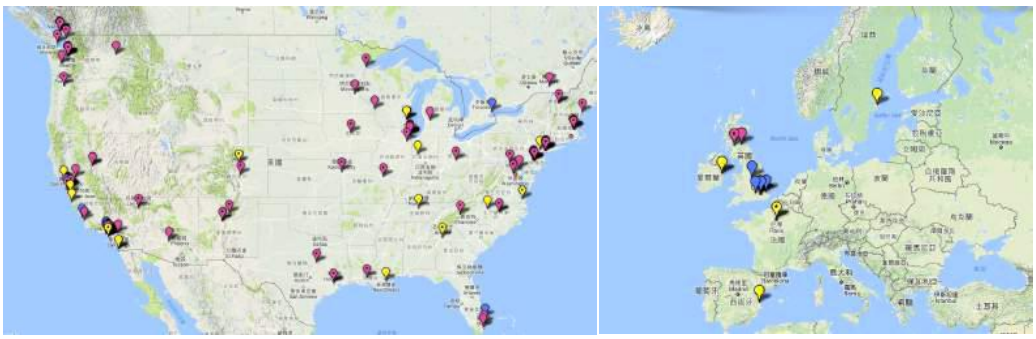

Figure 13 - The comparison between the parklet distribution in the U.S. and Europe
(Source: http://pavementtoparks.org/)

Although the P2P and the ODSLEA look so similar on the surface, they lead to entirely different results and influences. The P2P has been formalised and become a city feature and pride of San Francisco. This movement is still prosperous and improves every year. On the other hand, the ODSLEA was only a one-day event, and there are no subsequent plans to legalise and formalise it. The city government's attitude is crucial. The SF Municipal government is determined to offer the public more high-quality open spaces to enhance the public interest. It truly understands the meaning of TU and the benefit it brings. In contrast, the Taipei City government copied the form of the P2P in the ODSLEA but didn't understand the meaning and goals of the P2P and TU. The ODSLEA didn't have much influence on the government decision-making process and induced Taipei City government to offer more public space. To conclude, two similar TU movements with different intentions will result in totally different outcomes. Instead of imitating successful TU programs, the initiators should examine themselves if their programs meet the TU spirit and the local needs. That's the point.

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ID 1528 | RESEARCH ON THE HUMAN SETTLEMENTS CONSTRUCTION WISDOM OF ZHASHUI PHOENIX ANCIENT TOWN IN CHINA BASED ON NATURAL LANDSCAPE

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1 INTRODUCTION

China has a vast territory in which the settlement areas, after more than 5,000 years of civilization development, have gradually evolved into the living environments with different characteristics, rich traditional oriental cultures and unique constructing methods and wisdom, showing their own styles in the history of city construction in the world. However, the rapid development of urbanization in China has posed a certain impact on the local traditional space, and the historical context and spatial features of many traditional settlement areas has been submerged in the tide of rapid urbanization. Under this background, it is somewhat unusual for Phoenix Ancient Town of Zhashui County located in the hinterland of Southern Shaanxi Qinling Mountains to retain the whole living environment of the traditional characteristics. Here the traditional street space is integrated with the surrounding landscape, which is a precious historical and cultural heritage, and implies the Chinese wisdom in the construction of the traditional living environment.

2 CHARACTERISTICS OF THE LANDSCAPE SPACE OF PHOENIX ANCIENT TOWN

Phoenix Ancient Town was originally built in the Tang Dynasty and flourished in the Ming and Qing Dynasties. Since the Tang Dynasty, it had experienced ten dynasties, including the Five Dynasties, Song, Liao, Jin, Yuan, Ming, Qing Dynasties and Republican Period, being more than 1,400 years old now. The Town started its development from Tang Wude 8th Year (A.D. 625) when the first batch of immigrants of 53 households from Wu and Chu states settled in the Town which was called "Sanchahekou" at that time. During the Ming and Qing Dynasties, the mule post road and shipping waterway were developed gradually, and the business began to boom here. Even in the Republican Period, the Town was an important commercial town. After that, the Ancient Town lost its former position and function due to the exhaustion of water transport and the improvement of highway transport, but its style and features, street spaces and ancient residential buildings have been preserved so far.

China has the cultural origin of advocating the natural environment from ancient times. And Confucius said: "The wise enjoy the waters, the benevolent enjoy the mountains." As affected by this thought, the construction concept of the traditional Chinese town advocates the integration with the natural

environment, and together with the limited ability to transform the nature, the construction of many towns shows a great dependence on the natural environment and is gradually integrated into the natural landscape along with the development and succession of the space. Phoenix Ancient Town is exactly an example which is constructed with dependence on the landscape.

Today, Phoenix Ancient Town of Zhashui County is located north of Daliang Mountain and south of Duchuan River. The Town is surrounded by mountains on three sides, forming a semi-closed plain. Duchuan River flows from west to east, the plain surrounded by the landscape features fertile soil and abundant water sources, Zhaohe River comes to a T-shaped intersection with Duchuan River on the north, which gives a picture of the gurgling streams, the green mountains and rivers silhouetted against each other, and the green gardens extending to the sidehill. In the view of Chinese traditional geomantic omen, the Town is a place where the mountains and rivers gather together to constitute a good geomantic omen, and also is a good place to live and work in peace and contentment.

3 WISDOM OF THE ECOLOGICAL CHOICE OF PHOENIX ANCIENT TOWN

As early as the Spring and Autumn period, the legalist school Guan Zhong made a wonderful exposition of the town location. As written in his works "Guanzi - Chengma", "A national capital must be built on the highland rather than under the mountains, and the plenty of water is available when living a highland away from mountains and there is no worry about the embankment work when living in a lowland away from rivers." In addition, "Guanzi - Dudi" also talked about, "The capital that is selected by a sage must be a unassailable place where there are fertile lands, mountains, rivers and lakes nearby." The location of Phoenix Town gives a full presentation of the concept mentioned above. The Town stays in front of Daliang Mountains, faces towards Duchuan River, and is connected with Phoenix Mountains across the river.

3.1 EVALUATION OF THE ECOLOGICAL SUITABILITY OF THE SITE

In order to explore the ancient's wisdom in selection of the site, ArcGIS system is used in this paper to analyze the topographical features of the Town site. And the terrain elevation, terrain slope and flood inundation line are selected as the factors to evaluate the ecological suitability (Figure 1).

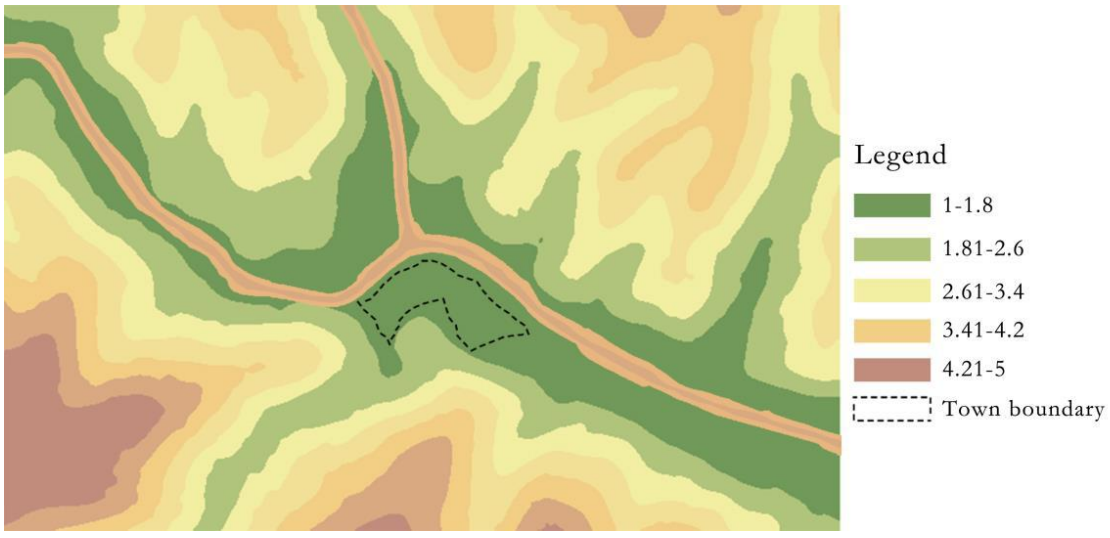


Figure 1 - Ecological suitability evaluation chart
(Source: Author self painting)

Ecological suitability level	The most suitable area	More suitable area	Not suitable area	Prohibited area
Indicator range	1~1.8	1.81~2.6	2.61~3.4	3.41~5

Table 1 - Ecological suitability evaluation results

As indicated by the evaluation results (Table 1), the Town is surrounded by mountains and rivers, and the area suitable for construction is limited; within the range of 2.5 km around, the current site of the Town is the preferred area suitable for construction and can provide the spatial carrier required for further development. It is proved that ancient Chinese can, without the support of advanced technology conditions, select the construction site of a town by virtue of their unique historical construction experience, and the scientific and rationality in the site selection is not second to the judgment based on modern engineering technology.

3.2 SUMMARY ON WISDOM OF THE SITE SELECTION OF THE TOWN

The social productivity is very low in ancient times, the human survival condition is limited to local landscape and material conditions, and the people "live from what the land can provide" and fully benefit from the natural environment. As a result, the selection of the construction site always embodies the idea of advocating the nature, making a clever use of the natural landscape pattern.

The mountains surrounding the Town can, to a certain extent, reduce the monsoon and guarantee a good climate. The rivers nearby provide the necessary conditions for agricultural production, and the

convenient shipping waterway lays a foundation for the development and prosperity of business. At the same time, a certain distance is kept between the Town and the rivers to prevent flooding, and the higher terrain in the south than the north is conducive to drain water to the rivers in the north. The town site is exactly located at the "convex bank"(Figure 2), which refers to the inner ring zone of the river turn. Due to the physical inertia and centripetal force of water flow at the convex bank, the river water will flow slowly, the water level will drop, and the sediment in the river water is prone to settle here and causes the increase of the convex area and the land available, which proves the ancient's wisdom in the selection of the construction site.

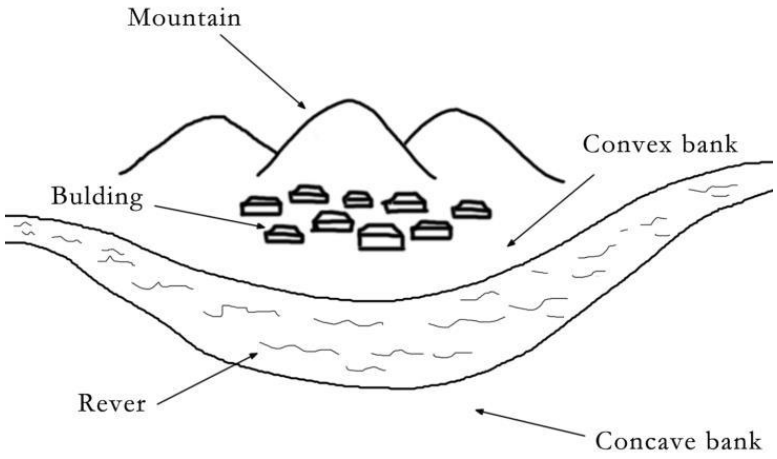


Figure 2 - Location diagram
(Source: Author self painting)

As reflected in the site selection experience on the living environment of Phoenix Ancient Town, the ancient Chinese made a careful investigation of the surrounding landscape pattern at the beginning of construction of a town, exploring the link between the town and the natural environment. For example, Phoenix Ancient Town stays in front of Daliang Mountain and faces towards Duchuan River, the residential houses are constructed on the beach at the convex side of the river, and the surrounding mountains reduce the monsoon power in winter and summer and improves the microclimate here. At the same time, the rivers create good conditions for agricultural irrigation and water transport, and the fertile land on the bank side creates the basic conditions for agricultural farming. The site selection of ancients of great wisdom creates favorable conditions for the subsequent development of the Town. Except the influence of human factors such as war, the Town has never suffered any large-scale flood or other disasters, and to this day, the people still lives and breeds here.

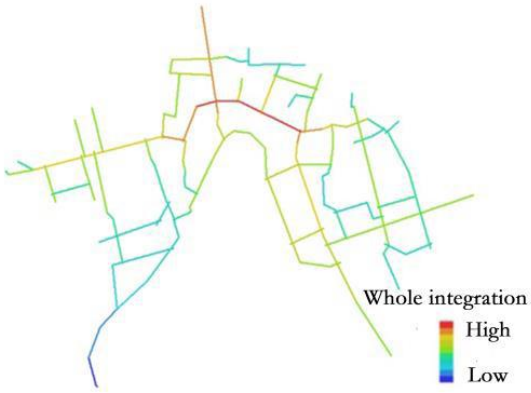
4 WISDOM OF THE SPATIAL LAYOUT OF PHOENIX ANCIENT TOWN

The overall layout of the Town is a strip shape, the main axis of space is the historical street running from east to west, and the residential houses are winding on both sides. The traditional residential houses are characterized by front shop and rear house, in which the room facing towards the main street serves as the business facade, and the inside of the courtyard serves as the living space. On both sides of the main street, there are several north-south alleys leading to the house inside, and main streets and alleys constitute the transportation network of the Town.

4.1 ANALYSIS OF SPATIAL SYNTAX OF THE TOWN

Spatial syntax is a kind of theory and method used for quantitative analysis of the space, and the integration analysis can give a good expression of the relative accessibility of some nodes and areas. In order to probe into the spatial structure characteristics of the Town, UCL Depthmap software is used in this paper to analyze the whole integration of the space of Phoenix Ancient Town, and the result is shown below (Figure 3).

As indicated by the analysis results of the whole integration, the Town obviously features the single center structure. Main streets extends from east to west and runs through the whole town, and several south-north alleys go deep into the houses inside. The center area is of the best accessibility, and also is the area which witnesses the commercial prosperity with a number of shops in the history of the Town. Historically speaking, the Town just starts its history here and then grows into the scale today. The town center and the southern Dalian Mountain and the northern Phoenix Mountain stay in the same axis from south to north, and the concentrated construction area is located in the central position of the two mountain peaks, which reflects the “moderate thinking” (Figure 4) in the Chinese traditional culture. The east-west street serves as the main internal axis, and the residential courtyards are arranged on both sides in neat order. The layout of the ancient street is preserved today, and then the residential houses are built around, achieving ancient and modern compatibility. The ancient street, as the main development axis of the Town, is coupled with the surrounding mountains and rivers (Figure 5), and the rationally curved street in line with the trend of the surrounding landscape guarantees the accessibility, and also is full of fun thanks to its appropriate change.



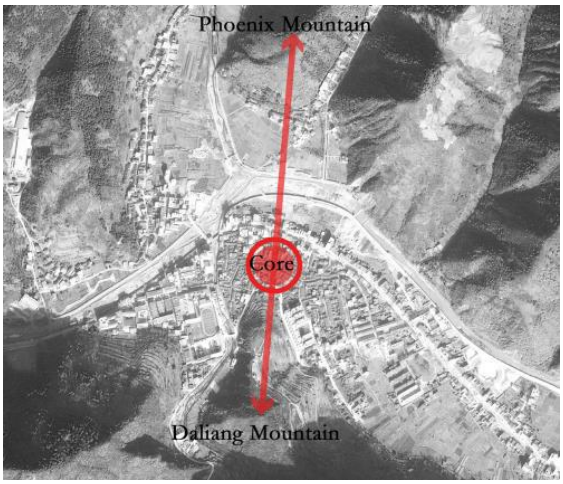
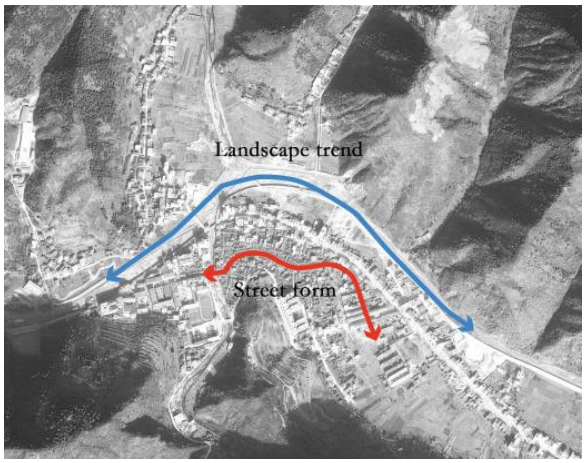


Figure 3 - Whole integration analysis | Figure 4 - Landscape axis relationship diagram
(Source: Author self painting)



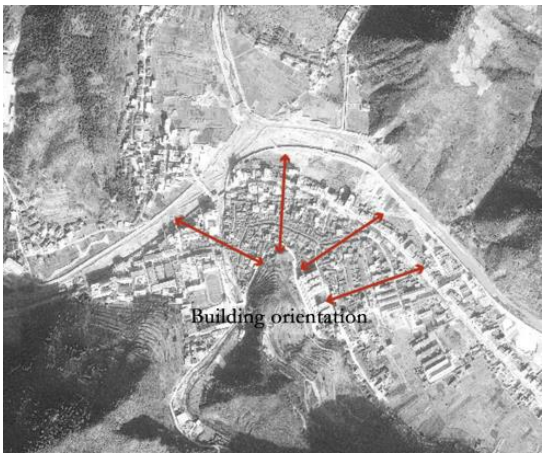


Figure 5 - Analysis of street trends | Figure 6 - Building orientation analysis
(Source: Author self painting)

4.2 SUMMARY ON WISDOM OF THE SPATIAL LAYOUT OF THE TOWN

Influenced by the neo-confucianism thought, the space of Chinese ancient towns has a strong sense of order. Whether it is a large palace, a city, a small temple or a street, there is a definite axis relationship everywhere. At the same time, the mountains and rivers are linked organically with the axes of heaven and earth, and the mountain peaks are taken as the key factor in the construction of an urban space. "Axis of heaven and earth" and "centering and preserving" are the two basic cultural characteristics of Chinese ancient settlements, which gives rise to the axis relationship of ancient settlement spaces. In addition, the Chinese traditional thought attaches great importance to the ingenious arrangement of artificial construction in the natural order in line with the laws of nature, achieving the ideological realm of "harmony between man and nature".

The center of Phoenix Ancient Town is located in the center zone between southern Phoenix Mountain and northern Duchuan River, and forms an "imaginary axis" from south to north, which fully embodies the ancient traditional thought of order and centering thoughts. The east-west axis of the Town is coupled with the surrounding landscape layout, which complies with the trend of the mountains and rivers, and the residential building orientation is of the centripetal layout perpendicular to main street (Figure 3), which, on one hand, renders the leading position of the central ancient street, and on the other hand, creates the orderly plane form and integrates the space of the Town with the natural landscape, reflecting the Chinese traditional idea of "harmony between man and nature".

5 INSPIRATION AND INHERITANCE OF THE RESIDENTIAL WISDOM OF PHOENIX ANCIENT TOWN

The construction of the today urban living environment should draw lessons from the ancient living wisdom, keep harmony with the modern construction, carry on the historical and cultural context while guaranteeing the economic development, and avoid the elimination of the historical and cultural characteristics due to the neglect of the historical construction experience. The development of Phoenix Ancient Town can stand the test of time only by way of maintaining the historical characteristics of human settlements and inheriting the historical context.

5.1 INHERITANCE OF THE LANDSCAPE PATTERN

The main purpose of inheriting the landscape pattern of the historical towns is to keep harmony between the nature and manpower, emphasizing the integration with the natural landscape pattern. It is the primary living wisdom to be inherited by the construction of the today towns to integrate the construction of the ancient towns with the natural environment. The ancients make a reasonable selection of the urban construction site based on the overall landscape space environment, and the site selection is not only

consistent with the Chinese traditional concept of geomantic omen, but also is consistent with the actual urban construction requirements, which should be affirmed and inherited. With reference to the experience and wisdom of the ancient site selection, the construction and development of ancient towns should fully take into account the order relationship with the surrounding environment of the order, maintain the Chinese traditional "centering" thought, and pay attention to the overall pattern in which the urban construction keeps harmony with the surrounding landscape environment.

5.2 COMPLIANCE WITH THE NATURE PATTERN

Compliance with the natural pattern is an important principle for the spatial development of Phoenix Ancient Town. The street trend and building layout of the ancient towns should be integrated with the pattern characteristics of the natural environment, so that the artificial construction can keep harmony with the natural environment. For the construction of the ancient towns, the selection of the street space scale should refer to the scale characteristics of the historical ancient houses and streets, because the historical space is full of the ancient residential environment construction wisdom, is the precious wealth left in the history, and is in line with the space characteristics of the daily life. Furthermore, under the premise of ensuring the inheritance of the overall landscape pattern, attention should be paid to maintaining the relationship between the building and the streets and the nature, as well as the visual connection between main buildings within the town, the reasonable combination pattern of the architectural scale and space should be adopted so as to comply with the growth and development of the natural pattern. Under the background of the new times, the volume and height of new buildings around should also be harmonized with the style of the town, so as to avoid the destruction of the characteristics of the town space.

5.3 HIGHLIGHT OF REGIONAL CULTURE

The "location with mountains and rivers" is the spatial characteristic of Phoenix Ancient Town. The construction and development of the town should make full use of its own natural characteristics and historical and cultural relics, and continue and highlight its regional cultural characteristics. On one hand, it is necessary to improve and beautify the surrounding landscape environment and recondition the waterfront shoreline. On the other hand, it is necessary to meet the needs of the times, make a rational use of the historical and cultural heritage resources to develop the tourism industry, and embed the appropriate new tourism space, such as waterfront leisure business streets, ecological recuperation center, etc. The tourism industry can drive the protection and the development of Phoenix Ancient Town, and also can provide a broader cultural display platform to let more people understand the Town and experience the spatial characteristics of the Chinese traditional residential environment.

6 CONCLUSION

Phoenix Ancient Town that is constructed according to the natural landscape gives a full play to the Chinese traditional residential environment wisdom "living with mountains and rivers", and the historical spatial pattern pays attention to the integrity and order and inherits the historical context, which is an important carrier of the Chinese traditional culture. In this paper, the qualitative and quantitative method is used to analyze and summarize the residential environment construction wisdom of Phoenix Ancient Town, and the development strategy and suggestions are proposed for the inheritance of the landscape pattern, the compliance with the natural pattern, the highlight of the regional culture of the town, which can provide reference for the development and construction of the ancient towns in other regions. As a matter of fact, the general villages and small towns should also learn from the experience and wisdom of the construction of the Chinese traditional human settlements, and extract and highlight the regional characteristic culture, so as to avoid the situation of "the similarity of 1,000 villages and towns".

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ID 1529 | THE SCHOOL TRAVEL BEHAVIOR CHARACTERISTICS AND ITS CONSTRAINT OF THE PRIMARY SCHOOLS IN XI'AN CITY

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1 INTRODUCTION

The urban primary school travel in China is the necessary life behavior in the family daily life. For the adjustment of the urban population structure and the diversification of the transport means, as well as the unbalance public education resources and the school choice behavior, there are large spatial-temporal differences among the families school travel modes, all of the factora above cause the unsuitable of the urban primary school layout method which is only dependent on the service radius and the thousand people index. Combining the travel behavior with the layout of the urban primary school is one of the leading directions to improvement the urban primary school planning(Zhang,2014). Xi'an is the dominant city in the northwest area in China. The types of the urban primary school in Xi'an is multiple, and the city also concentrates more excellent educational resources and students enrollment. The paradox between the pupil number and the land area, and the spatial-temporal accessibility of the school travel issues become more fierce. This paper takes Xi'an as the example and analyzes the school travel constraint mechanism based on the summarization of the urban primary school travel characteristics, as well as doing the basic job for the future study which is to optimize the urban primary school layout from the perspective of the urban land and transportation integration.

2 RESEARCH METHOD AND DATA SOURCE

2.1 RESEARCH BOUNDARY AND THE SUBJECT SELECTION

School travel means school commuting of the the pupil. The primary school travel includes 2 layers: the first layer is the school travel mode (which include the go to school alone and and picked up by others); the second layer is the school travel characteristics (which includes the travel subject, mode, time and distance). By comprehensively considering the conditions of the urban primary schools (establishment time, school scale, education quality etc.) in Xi'an and the city build environment, and this paper choose 2 primary schools respectively from the 6 main administration districts between different areas within the Third Ring road in Xi'an. 6 in total, as the sample, which are Houzaimen primary school（A）, Primary school attached to Xi'an Normal university（B）, Primary school attached to the Xi'an Architectural & Science university（C）, Cuihua Road primary school（D）, Qujiang No.1 primary school（E）, and South lake primary school（F）(table 1).

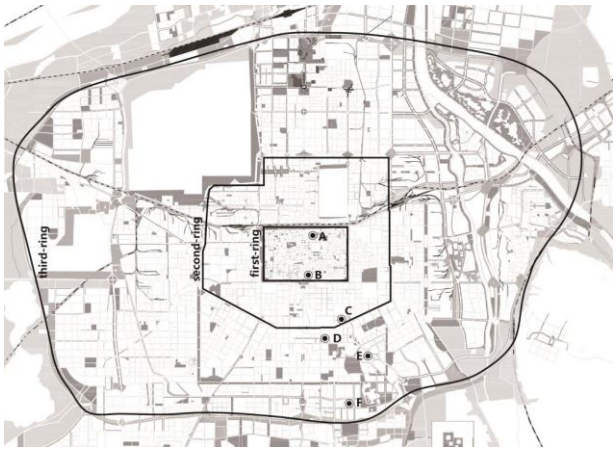

Figure 1- Location map of the sample primary schools

Category \ Primary school		A	B	C	D	E	F
Establishment time		1956	1908	1986	1960	2011	2014
School construction	Total area of used land（㎡）	10496	10160	4860	12074	17020	10779
	Total gross building area（㎡）	6000	3650	2687	9615	11700	17000
	The number of the primary school in the big scool district	5	4	5	5	——	——
Number of students	Number of students	2600	1410	1360	2500	1370	676
	Actual class/（Planned class）	46	42	21	58	54/(56)	14/(56)
	class mixximun student number	60	45	64	55	66	45
build environment overview	site location	Within first-ring road	Within first-ring road	Within Second-ring road	along the second ring	Within third-ring road	Within third-ring road
	Community characteistic and relation with the urban road	beside the danwei community of the old city, beside a T-cross side of urban branch	In the community of the old city, beside a Pedestrian street	In the unit community, beside community road	Beside urban sub-artery and a T-cross side of urban branch	Beside urban artery and cross side of express way	Beside urban artery and cross side of urban main road
	School district scale（h ㎡）	25.4	26.4	92.2	162.4	522.2	1321.1
	distance to the nearest bus stop（m）	500	100/135	520	60/150	60/600	460
	distance to the most usually used bus stop（m）	760	100/135	460/750	710	60/600	600
Time management	time in the school	8：00-16：50	8：00-16：50	8：00-16：50	8：00-16：50	8：00-16：50	8：00-16：50
	Extracurricular and long-hourclass	have	have	have	have	have	no

Table 1 - Basic characteristics of the sample primary schools

2.2 RESEARCH METHOD AND DATA

This paper takes the time geography as the theoretical base, the activity dairy surveys of the school travel behavior and the families in-depth interview as the data base, and summarizes the family daily activity path; this research explains the constraint factors that affect the school travel behavior and proposes initial thought of the planning layout. The research group did surveys about the 6 sample primary schools within Oct. to Dec. 2013 and Mar. to Apr. 2016. The researchers observed and recorded the data of the 6 primary school commuting travel modes at the reasonable layout points of the school gates, as well as distributing the survey questionnaire about the family activity journal at each school based on the ratio of the 5-10% of the students numbers, the questionnaire content involves the family attribute, the travel mode of the pick-up subject, the travel satisfaction and the daily life record. 504 copies of questionnaires were recovered. Based on the questionnaire, this research did in-depth interview with 5-10 families for each school, and asked about the various activities within the daily life, behavioral habit and the family satisfaction in details.

3 SPATIAL-TEMPORAL CHARACTERISTICS OF THE URBAN PRIMARY SCHOOL TRAVEL IN XI'AN

The spatial-temporal characteristics of the urban primary school commuting travel include the travel subject, distance, time, mode and frequency.

3.1 TRAVEL SUBJECT: THE PARENTS AND GRANDPARENT'S PICK-UP SCHOOL COMMUTING, THE RADIO OF WORKING PARENTS OCCUPY LESS THAN 50%.

The urban primary school commuting travel subject is composed of the primary students and the pick-up parents. The proportion of the primary students travel alone is low, mostly are based on the parents pick-up. In term of the nature property of the pick-up parents, the mother occupy the leading position, meanwhile, nearly half of them are full time mother (or freelancer); secondary is the grandparents, then the father, others are the baby sitter or relatives. From the perspective of working nature, the pick- up subject is based on the non-working parents; the working parents only occupy a proportion of less than 40%. Among the working parents, the proportion of the female working parent is higher than the working male parent. The spatial-temporal characteristics of the primary school pick-up travel mode has large constraints to the working parents, especially to the working female parent (table 2).

Category \ Primary school		A	B	C	D	E	F	Total and totall proportion
Pick-up parents	Full time mother(freelancer)	7/15%	2/2%	17/17.9%	12/11.4%	37/20.5%	5/9%	80/15.6%
	Working mother	10/18%	21/25%	50/51.6%	27/25.7%	51/17.0%	7/12%	126/21.4%
	Working father	12/21%	6/6%	19/20%	17/16.2%	27/14.8%	12/21%	93/15.8%
	Full time father(freelancer)	0/0%	5/5%	2/2.1%	4/3.8%	6/3.3%	0/0%	15/2.6%
	Grandfather	9/16%	37/40%	19/20%	20/19.1%	36/19.8%	16/28%	137/23.2%
	Grandmother	18/32%	25/26%	8/10%	26/25.8%	38/20.9%	15/26%	127/21.6%
	Baby sitter, friend or relatives	0/0%	1/1%	0/0%	0/0%	7/3.8%	3/6%	11/2%
	Sum	56	95	95	105	182	58	609/100%
Travel distance	Less than 0.8 km	9/16%	15/14%	14/14.8%	18/25.1%	67/36.8%	19/40%	159/27.6%
	0.81km-1.5km	10/20%	28/30%	32/33.6%	25/29.6%	37/20.5%	12/25%	152/26.2%
	1.51km-2.5km	6/12%	15/16%	29/30.6%	17/21.8%	25/12.7%	11/25%	96/18.8%
	2.51 km -3.5km	6/12%	13/14%	7/7.4%	9/11.4%	19/10.4%	5/11%	63/10.6%
	More than 3.5km	20/40%	24/26%	13/13.7%	11/14.0%	36/19.8%	1/5%	86/16.9%
Travel mode	Private car	512/15.0%	102/11.2%	270/24.8%	290/10.9%	292/16.6%	171/29.7%	1437/16.1%
	Taxi	5/0.2%	25/2.7%	7/0.6%	——	9/0.5%	——	46/0.6%
	Bus	175/7.5%	57/6.2%	44/4.0%	150/4.9%	17/0.9%	12/2.1%	456/4.6%

	Metro	143/6.2%	56/3.8%	——	——	——	——	185/1.9%
	School bus	312/13.0%	——	26/2.4%	57/1.4%	314/16.8%	——	689/7.2%
	Electro-mobile (motor-tricycle-taxis included)	297/12.4%	120/13.2%	175/16.9%	191/7.2%	60/3.2%	25/4.5%	866/9.1%
	Bicycle	51/1.5%	14/1.6%	61/4.7%	72/2.7%	50/1.6%	3/0.6%	201/2.1%
	Walk	1117/46.6%	666/61.4%	618/47.6%	1958/72.9%	1148/61.4%	366/65.4%	6662/69.4%
Bus travel willingness	A Yes	50/ 75%	23/84.8%	73 / 76%	9/25.1%	45/ 60.5%	29/82.9%	——
	B No	11/ 27%	5/16.2%	24 / 25%	50/76.9%	20 / 51.7%	6/17.1%	——
Noon pick-up	Pick-up	5/6%	6/8%	24/25%	25/29.6%	89/70%	58/79.2%	——
	Not pick-up	47/94%	67/92%	71/75%	49/62.8%	58/50%	10/20.8%	——

Table 2: The travel characteristics of the primary school families in Xi'an city

3.2 TRAVEL DISTANCE: THE DISTANCE IS ENLARGING, BUT STILL HAS THE CHARACTERISTIC OF THE SPACE AGGREGATION

1）the travel distance for 27.6% families is within 0.8 kilometer, which reflects the special service enlargement trends of the primary school in Xi'an city. 2）about 73% families are distributed within 2.5 kilometers travel distance from the school, which suggests the families' strong demand to near the primary school space proximity. 3）while the family numbers within 2.5-3.5 kilometers start to decrease obviously, the constraint of the special and time distance is increased for the family travel. 4）16.9% family travel distance is beyond 2.5 kilometers, which reflects the primary schools with fine teaching quality still have attraction for some families.

3.3 TRAVEL TIME: THE IDEAL UNIT TRAVEL TIME IS 15 TO 20 MINUTES, THERE IS CERTAIN SPACE AND TIME STABILITY

In terms of the family satisfaction survey results, no matter which travel mode is chosen, the ideal unit travel time for the family is 15 to 20 minutes, and the maximum tolerable travel time is 30 minutes.

There is a very large travel time difference among different means of transportation (table 3), the travel time for walk, electro-mobile(or bicycle) and private car is about 30 minutes; while, the average travel time for the bus is about 31 minutes, which is longest among all the travel modes. The travel mode of the electro-mobile (bicycle) is the point to point mode and the travel efficiency is relative high.

Primary school / Means of transport		A	B	C	D	E	F	The average cost
Travel time	Private car (Sample size/minute)	14/26	9/19	19/18	14/21	54/17	16/15	106/18
	Bus (Sample size/minute)	12/58	19/56	16/26	15/24	9/55	5/27	72/51.4
	Non-motor vehicle (Sample size/minute)	10/15	15/15	24/16	11/10	10/10	4/12	74/16
	Walk (Sample size/minute)	14/11	50/21	56/11	40/11	74/15	25/15	259/14

Table 3: Average Time for Different Ways of Travel

3.4 TRAVEL MODE: BASED ON WALK AND PRIVATE CAR, THE BUS TRAVEL RATIO IS LOW

Among all the travel mode (in table 2), 1) Walk is still the main ways of travel, following is the private car and the non-motor vehicle; 2) the proportion of the motor vehicle is one third, but the travel is based on the private car, the proportion of the bus is very low; 3)the coverage of the school bus is very low, and the cost is high and paid by the families, therefore, only a few families choose the school bus. 4) Among the non-motor vehicles, the proportion of the electro-mobile is high because of its speed, flexibility and less time cost, while the travel proportion of the bicycle is low, etc.

3.5 TRAVEL FREQUENCY: TENDS TO 2 TIMES PER DAY, THE NOON PICK-UP CONSTRICTS TO A LARGE EXTENT FOR THE WORKING PARENTS

Among the 6 surveyed schools, 4 of them have lunch and noon break at school. The parents who choose not to pick-up the child occupy a large proportion (table 2). Most of the travel frequency for the primary school students is 2 times per day, which is going out at early morning and coming back at dusk. Interview shows that there is strong noon boarding appeal from the parents.

4 THE ACTIVITY PATH ANALYSIS AND BEHAVIORAL MODE OF THE SCHOOL COMMUTING TRAVEL

This research summarizes the activity path of the family school travel and finds there is certain regularity.

This paper classifies the family samples from the aspects of the pick-up parents(people), house-school-job spatical-temporal diatance (space) and pick-up frequency(time), and gets 30 types of family school travel paths and 4 space-behavior patterns(figure 2).

The pick-up parents can be classified into 5 types, which are :full time parents （N-no job）, 2 working parents（F-full time job）, one of the 2 working parents has free working time（P-part time job）, 2 working parents +grandparents（G-grandparents）and 2 working parents +afterclass or education institutions（E-education）.

The space distance can be classfied into 5 types, which are: job-school-house proximity, school-house proximity, school-job proximity, job-house proximity and the job-school-house is separation. The time can be mainly classified into 2 types, which are the not pick-up at noon and pick-up at noon according to the travel frequency.

It is needed explaining that the space and time path reflection is the school commuting situation of the one child family. In addition, according to the survey results, most of the pupils attend the after school interest class within the weekdays and on the wekends. The travel situation of the primary school students' interest class within the weekdays is included in Figure 2.

According to the time and spatial-temporal constraint , the school travel path can be classified as the following 4 types.(fugure 2)

Mode 1—the time and space constraint extent are small, the ideal status

Mode2—there is time or space constraint, the most of the situation

Mode 3—there are both time and space constraint, extreme status

Mode 4—there are both large time and space constraint , no stable status

5 THE SPAITIAL AND TEMPORAL CONSTRAINTS ANALYSIS OF THE SCHOOL COMMUTING TRAVEL

The core method of the time geography is to explain the human activities by 3 constraints, which are capability constraints, coupling constraints and authority constraints(Hagerstrand,1970).

5.1 CAPABILITY CONSTRAINTS

As the primary school students of the travel subjects, the capability constraints mainly derive from the physiology constraints and safety constraints.

5.1.1 PHYSIOLOGY CONSTRAINTS—THE TRAVEL DISTANCE IS SHORT AND THE SPEED IS SLOW

The walk speed differs with age. For the young, the walk speed can reach to 60-70 meters per minute, and the fatigue interval is 30 minutes; the walk speed of the aged and the child is 40-50 meters per minutes, and the fatigue interval is 20 minutes. In terms of physiology characteristics, the walk speed of the primary school student is slow, the fatigue interval is short and the travel distance is also relatively short [4].

5.1.2 SAFETY CONSTRAINTS—HIGH SAFETY REQUIREMENT, ACCOMPANY IS NEEDED

The school travel behavior has high safety requirement. The self-safety behavior awareness of the primary students is weak, the walk process of the primary students is often accompanied by running, jumping and playing, and they lack the pre-determination ability about the potential dangerous accident within the space, and there is certain safety problem.in addition, there are also some hurt accidents with extreme bad nature in the society. Therefore, the primary students commute to and from the school is certain accompanied by the parents, this has become the popular social phenomenon(Wang,2015).

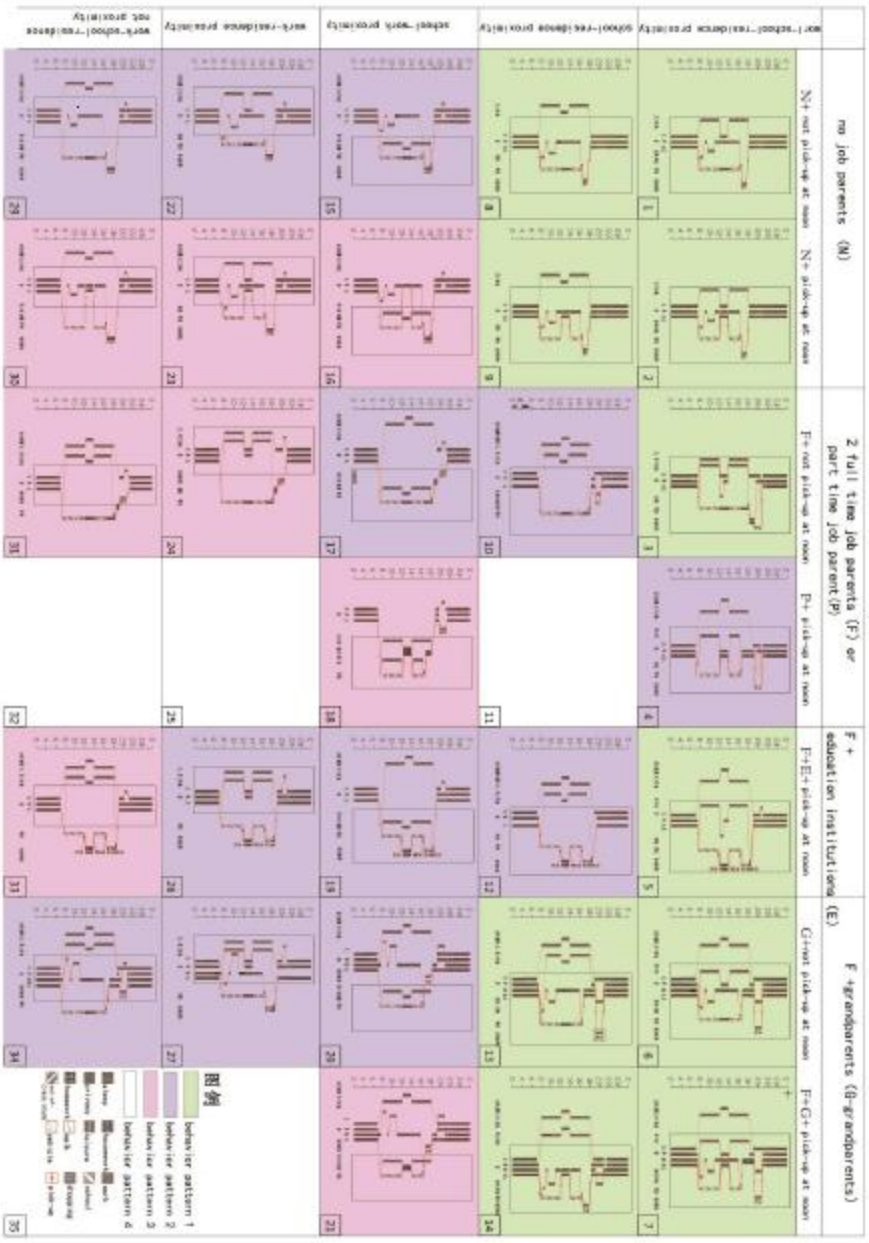

Figure 2 - 30 types of family school commuting travel paths and 4 space-behavior patterns

5.2 COUPLING CONSTRAINTS

Since the primary students commute to and from the school is accompanied by the parents, the parents naturally become the main decision makers about the school commuting travel. The pick-up time of the primary school and the distance between the school and home are the 2 most important influence factor of the school commuting travel.

5.2.1 THE PICK-UP TIME AND FREQUENCY HAVE OBVIOUS INFLUENCE ON THE CAREGIVER, ESPECIALLY FOR THE WORKING PARENTS

There are two factors that constraint the primary school family pick-up subject---time and space. The pick-up time of the urban primary school has the strongest time and space constraint for the working parents, and is the main factor for family to determine the pick-up subject.

If there is conflict between the primary school pick-up time and the working time of parents, it will constraint the pick-up behavior of the working parents; in this case, the pick-up subject is usually substituted, and the grandparents or the relatives will take the pick-up task. Besides, if the school provide the after school class or long-hour class, the pick-up demand of the working parents after work will be satisfied. The urban primary school teaching time management and space capacity support can ease the pick-up time constraint on the parents. For example long-hour class and the interest class after school in the primary school attached to the Xi'an Architectural & Science University make the working parent to pick-up possible, and the pick-up proportion of the working parents is high.

5.2.2 THE TRAVEL DISTANCE, CONSTRAINT WITH THE PICKER AND THE TRAVEL MODE , AND PRESENT CERTAIN TIME AND SPACE STABILITY

The family role, social and economic property of different pick-up parent will influence their pick-up travel modes. With the increasing of the travel distance, the constraint extent on the pick-up parents is also strengthened. The travel distance, pick-up subject and the travel mode also present certain regularity. The increased number of the aged have obvious negative influence on their travel time and space distance. The older the grandparents, the shorter the time and space distance. According to the survey date (table 6), the pick-up subject and the school commuting travel time and space distance present certain regularity: when the pick-up distance is within 800 meters, the proportion of the grandparents is highest; when the pick-up distance is 800--1500 meters, the grandfather and the mother are the pick-up subject; the pick-up distance exceeds 2500 meters, the pick-up proportions of the full time mother and working father increase obviously. The farer the travel time and space distance, the stronger constraint on the aged, and the pick-up proportion of the working father and full time mother increase greatly.

Space distance(m)	Pick-up subject proportion(the first 2)	Travel mode
≤800	grandfather<grandmother	Electro mobile(bicycle) <walk
80-150	Working mother<grandfather	Private car< Electro mobile(bicycle) <walk
1500-2500	grandfather<working mother	bus<private car<walk< Electro mobile
2500-3000	Working mother <working father	bus< Electro mobile <private
≥3500	Working father<full time mother	Electro mobile <bus<private car

Table 4: The Relation between Travel Distance, Caregivers and Travel Mode

5.2.3 THE HOUSE, SCHOOL AND WORK SPACE RELATIONS AFFECT THE SCHOOL TRAVEL MODES

The space constraint is embodied when the "house, school and job" distance is within the walk reachable range (as in figure 2 ○1~○7), the constraint on the parents is least; when the "residence, school and work" distance is separated, the constraint on the parents is strongest (as in figure 2 ○29~○35）. When the "residence, school and work" distance is in proximity, the pick-up behavior can be completed during the "family--work" travel process. As there is time constraint, the space link mode has great influence on the working parents, and the family travel cost will increased. According to the survey data, 39.2% of the families rent or borrow houses nearby the primary school, the "proximity enrollment" appeal is high.

5.3 AUTHORITY CONSTRAINTS

According to the regulation of the new Compulsory Education Law, the immediate school enrollment policy is implemented during the compulsory education period, the school is not allowed to choose the students beyond the school district, and the student is also forbidden to choose the school freely. In the actual practice the immediate school enrollment policy is implemented by the people (registered permanent residence)and the location(residence) related enrollment regime, the policy shall cover the immediate school enrollment according to the registered permanent residence as well as to the actual residence. The school district regime has been gradually implemented since 1996, which linked the education supplies with the "Hukou". The unbalance in excellent education resource and the school district regime increase the threshold of the families' school choice. There are differences in the space scales among districts in

Xi'an and the numbers of the primary school, the division of the school district range also has great differences and randomness(table 2), the family school travel which is within the school district range only occupies a small proportion.

6 CONCLUSION AND DISCUSSION

The family school travel mode is not only the subjective choice of the family, but also the result of the spatial constraint. It is found that the school travel still owns the characteristics of parents accompany, increased distance, space and time stability, motorization and multi-frequency by surveying the build-up area urban primary school space and time travel in Xi'an. The space and time can better reflect the reasonable space distribution of the urban primary school families. This paper summarizes more than 30 kinds of school travel paths by the constraint description method, 4 kinds of space behavioral modes can be classified based on the time and space constraint. Family school travel is the choice result under the individual, family, society and urban construction environment constraints. From the perspective of school travel, These aspects are necesary for the primary school layout to follow, and there are : the urban primary school extend needs the life care place; the formed community life unit taking the urban primary school as the core will facilitate the struction of the community; organize the urban primary school and the surrounding space layout from the perspective of satisfying the family travel demands. Based on the analysis of the school travel behavior, urban primary school layout from the perspective of integration of land use and transportation, can reduce the constraintans for family travel, improve the quality of life.

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ID 1538 | WHEN TRADITIONAL AND CREATIVE INDUSTRIES BLEND: A CASE-BASED DISCUSSION OF THE IMPLICATIONS FOR URBAN DESIGN

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1 INTRODUCTION

As economic interests in an urban society develop, functionally determined zones of production become zones of transition and pose challenges to urban design as an instrument for organizing competing or contradictive spatial interests. This contribution centres on such a zone of transition, an industrial site in the Belgian city of Hasselt which is progressively enveloped by urban development. Interestingly, this area is part of a larger industrial area along the quays of the Albert Canal. This canal was developed in the 1930s to connect the Campine coal basins , the maritime port of Antwerp and the steel basin in Liège to one another (Van Acker, 2014). The Hasselt Canal Zone thus exists on the interstice between two very distinct systems: the radial-concentric pattern of the (medieval) city, characterized by two concentric ring roads; and the linear development of the Albert Canal, a national backbone for industrial and commercial development. Due to their subsequent development and saturation, these distinct systems increasingly influence each other here. Hence, the Hasselt Canal Zone demonstrates a gradual transition which includes the introduction of new programmes, creating a public and urban élan on the south bank of the Canal. This process has started in 1997, when the Muziekodroom, a local non-profit organization for

musical education, band practice and concerts, settled in a partly abandoned slaughterhouse. In the ensuing 20 years, other new users have followed by appropriating obsoleted industrial infrastructure: two shared office buildings, a college of advanced education in pop and rock music, a dance club, a repair service for electronics, and catering businesses. In branding the core zone of transition with the name Quartier Canal, this new generation of occupants manifestly propagate a cooperative and synergetic agenda. New occupants also coexist with traditional Small to Medium-sized Enterprises (SMEs), mainly light industries, building merchants and traders, which have not left the site, some still depending on the Albert Canal for transportation of building materials and petroleum products. Their interests are advocated by several public entities involved in maintenance and exploitation of the Flemish waterways, and entrepreneurship along its shores. As a consequence, very diverse spatial claims and expectations come together.

In what follows, I analyse this fragile equilibrium cultivated by diverse actors mediating between maintenance of the hybrid character and transition towards a more urban condition. The gradual, incomplete transition resulting from bottom-up initiatives, and the claims laid on the area by representatives of both industrial and creative economies render this a suitable case to expand on existing literature about urban regeneration and the role of both old and new economic pillars herein. Hence, it responds to a challenge of urban redevelopment raised by Madanipour centred on determining the performance of innovative clusters, and their part in “the wider urban society and economy” (2014, p.125). Projecting this challenge to this specific case study, it aims to establish in how far Quartier Canal is “embedded as an integral part of the local economy, establishing mutual linkages rather than hierarchical and disconnected relations” (Madanipour, 2014, p.125). It questions in what manner urban design actually manifests itself with regard to this fragile balance, and faces socio-spatial resistance.

1.1 METHODOLOGY AND STRUCTURE

The settlement of the Muziekodroom is the starting point of what in this contribution is considered as the period of transition for the Hasselt Canal Zone. This departure opens up a history of 20 years of endeavours to guide and propel transition – or to obstruct this, depending on the perspective taken. The focus of this paper is the south bank. Here lies an estate defined spatially by the figures of the Albert Canal, with a sluice to the east of the area, a bridge to the west, and the outer ring road of the city of Hasselt (figure 1). It is historically known by the name Trichterheide. Planning and design processes dating back to the completion of the Albert Canal in 1940 are included, because they explain the genesis of the urban framework at the basis of later transitions. This paper is hence primarily based upon a discursive analysis of planning documents and design proposals. Data was retrieved from the city archive of Hasselt, archives of involved planning and design firms, and from online repositories.

In addition, involved stakeholders were invited (by means of snowball sampling) to shed light on the recent history of Quartier Canal and to express their perception of planning and performance of the area. Respondents include traditional and new users of the analysed zone of transformation, as well as involved architects, urban designers and planners. With regard to the occupants, the balance of this sample is tilting towards involved representatives of the more recent creative enterprises: it proved difficult to involve the more traditional users of the industrial estate. Users were asked to explain the history of their presence in the area, as well as to articulate their evaluation of the performance of the area in terms of density, mobility, and functionality. Furthermore, they were asked to phrase their evaluation of implemented planning concepts and processes. Involved built environment experts and civil servants equally phrased their insight in developmental processes past and present.

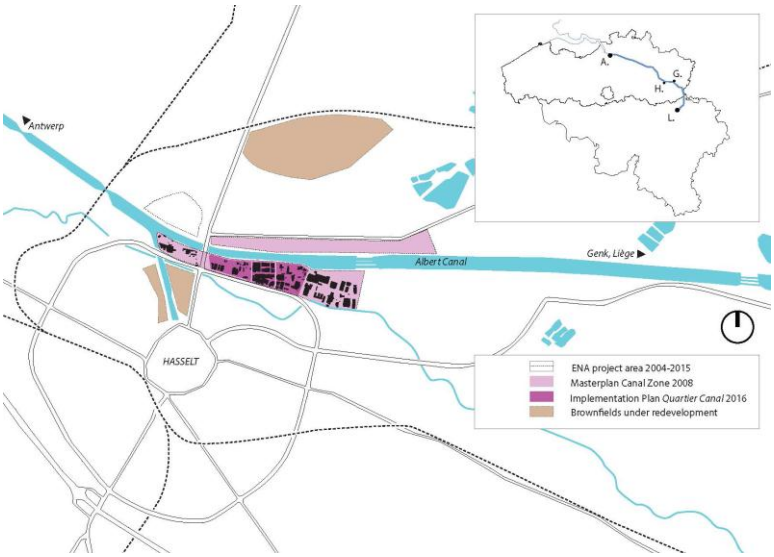

Figure 1 – The Canal Zone of Hasselt: linear and concentric figures intertwine

Hence, design arguments as well as economic and political decision making are interrelated. First, the main body of this paper synthesizes relevant economic circumstances and theoretical concepts to lay the foundation of this analysis. Secondly, the dynamics of using, planning and interpreting Quartier Canal, and by extension the urbanized area along the Albert Canal (figure 1) within the borders of the Hasselt-Genk conurbation, are discussed chronologically. The discussion extrapolates the local findings to the level of theory of urban design and redevelopment.

2 FROM TRADITIONAL TO CREATIVE INDUSTRY

This case study cannot be understood without framing the process of de- and reindustrialization of the province of Limburg, in which Hasselt is situated. Between 1966 and 1992, the seven coal mines, which had formed the provincial economic foundation in the 20th century, were gradually closed. Today, the province still has less economic resilience than the other Flemish provinces. Economic malaise has been battled by investing European subsidies in endeavours to increase labour participation, better education and economic diversification. two consecutive programmes for socio-economic restructuring were implemented, the first one between 1989-93 and the second one between 1994-98, partly funded from ESF and EFRD subsidies. Baeten et al. (1999) critically assessed the implementation of the second plan, which was characterized by fragmentation.

The Spatial Structure Plan Flanders (department RWO, 1997) selected the Albert Canal as an economic network (with the acronym ENA), which initiated a developmental trajectory to increase the economic significance of the Canal (figure 2). In 2004, the Flemish government effectively started to implement a 10-year plan for increasing industrial and transport activities along the Albert Canal (Flemish Government, 2004; Flemish Government, 2015; iris consulting et al., 2004). A “Limburg Plan” followed for the years 2006-09, which built on these ENA initiatives (Flemish Government, 2005). In addition, it emphasized strategic investments in other sectors to diversify the economic profile of the province of Limburg, stressing the opportunities of the creative economy. At that time, creative economies effectively sought and found a foothold in the Hasselt Canal Zone. Equally, prioritized investment in higher education directly affected this area. Responding to a new industrial crisis of the closure the ford Motor Company production plant in the neighbouring city of Genk, a strategic action plan for Limburg, known by the acronym SALK, was drafted for the province (Daems et al., 2013). SALK urges the traditional industry to distinguish itself based on local, sustainable and innovative production, and it highlights the significant potential the creative economy has for growth in the future.

Figure 2 – The Albert Canal between Hasselt (left) and Genk (right).

Hence, two pillars, of a creative and a more traditional industry, are drawn forward, which spatially come extremely close together in the Hasselt Canal Zone. Its developmental course testifies of influence from Richard Florida's (2002) notion of the Creative Class and of the notion of the Creative City (Landry, 2012), aiming for the stimulation of creativity as an economic driver. Evans warns that increasing examples of the implementation of growth models depending on the creative city thesis render this notion "a panacea for city and sub-regional economies" (2009, p.1005). Also, the vague definition of a creative class, which is exclusively assigned the power of creativity, has raised criticism (Markusen, 2006). Moreover, the contemporary production industry, with its innovation and smart city technology, is regaining its importance in contributing to a sustainable and circular urban model. According to the curators of the 2016 International Architecture Biennale Rotterdam (Brugmans et al., 2016), this is especially relevant for cities or regions dealing with an industrial transition.

Still, literature pertaining to the redevelopment of abandoned industrial sites demonstrates a hiatus with regard to productive urban estates where traditional users – industries, distributors and technical services – share a site with non-traditional users – creative industries and cultural institutions. Former industrial areas are exemplar of modernist dogma's and zoning practices, in response to which postmodern critiques formulate the importance of diversity as a "new orthodoxy of planning" (Fainstein, 2005). Most literature discusses former industrial sites as peri-urban transitional zones which have gradually been vacated, making room (after a certain period of vacancy) for urban programmes like service industries, arts and culture (Loures, 2015; Reicher et al., 2011; Stevens, 2015), often relating issues of heritage to urban planning and ambitious architecture (Oevermann and Mieg, 2015). Trip and Romein (2009, p.229) propose how "[e]xploiting its uniqueness could make a city's competitive advantage more sustainable, as it prevents quick imitation", and emphasize the importance of architecture and design in reinforcing local spatial characteristics. The blended use and interests proper to this case study define an arena of global interest and local intricacies (Larco, 2010), and the consequence for place-specific urban design proposals is investigated.

3 TWO INTERLACING PLANNING FIGURES

Plans for the Canal Zone dating back to 1938 already demonstrate diverse approaches to structuring urbanization between city and canal. The municipality sought to establish connection with the industrial area close to the city centre dating back to the 19th century, which became connected to the canal by an inner harbour. Its first plans for the Canal Zone also make a direct link to the centre via a boulevard, connecting to several educational institutes. Otherwise, the national Department of Bridges and Roads (Dienst Bruggen en Wegen) drew up grandiose urban development along the Canal in 1953, taking shape as a linear industrial city (Ryckewaert, 2011).

The final implementation of the ring road rather isolates the area from the city in the end. Ownership of the south banks by 1956 was divided between the Belgian state and the municipality, which is legible in the difference between urban patterns implemented. The Belgian state, represented by the department for shipping, centred on implementing a service road and rail infrastructure just east of the bridge, in support of provisioning and transhipment which would be developed there. The city architect designed an industrial estate consisting of six lots on the adjoining site. Some lots were joined during the development process (resulting in developable surfaces sized between 0,20 hectares and 1,05 hectares) and all became densely built over time. The municipality here built two generic warehouses targeting young companies. A flower mill, 20m tall, was also established along the canal in 1958. A second mill was established in the same year, more to the east. The building archive contains proof of many low-budget additions, like

offices, small garages, metal silos, and sheds, attached to the monumental industrial tower. Industrial and logistic SMEs developed the area clearly as a “backstage”. The organization into compactly built, small building blocks for which the city opted, would later form the prime foundation for its redevelopment. From 1964 onward, to the east of the municipal industrial estate, terrains were developed for industrial and commercial purposes, at lower densities and with bigger lots. On these lots, companies settled which were not dependent on the canal for transport. In 2000, the industrial zone was contracted, excluding the inner harbour which became an area for urban redevelopment. Simultaneously, to the west of Trichterheide, terrains were being developed for recreational and cultural purposes. These initiatives isolated the area from industrial networks and enveloped it with other programmes (BUUR et al., 2011b).

3.1 PIONEERING YEARS: NEW USERS ENTER THE FIELD

The 1997 Spatial Structure Plan for Flanders envisioned restructuring and intensifying existing business parks along the course of the Albert Canal, including the Hasselt Canal Zone. It had proposed to organize the spaces surrounding the Albert Canal as chambers, of which the conurbation Hasselt-Genk formed one, characterized by its urban character. At this point in time, the industrial estate Trichterheide was described in several planning documents as dilapidated because of its ageing road infrastructure, sewerage, non-existing green, and deficient parking system. It was at this time, in 1998, that the Muziekodroom started its gradual occupation of an obsoleted slaughterhouse, which for several years had only served to stock old sports cars. First there was an insertion of a small concert hall and spaces for music lessons in an oversized building. An immediate problem was the fact that this function conflicted with zoning regulations, which was resolved before further colonizing the building. A lengthy legal process followed which ended in 2007 when, after facing severe protests from neighbours, the Muziekodroom was in accordance with zoning laws. Hereafter, the building exercised more influence on the public domain, as a large concert hall was constructed on the first floor, which required the placement of a significant fire escape on the side of the building (figure 3). Its effect of introducing a novel group of concert visitors initially was perceived with fear for burglary and vandalism by industrial occupants, but the Muziekodroom implemented good stewardship to prevent nuisance from its visitors to the neighbourhood.

Other entrepreneurs atypical for the industrial park followed by enrolling settlement plans in the two vacated flour mills. The tallest one was shut down in 2006 only to be repurposed within months by the architectural firm a2o, and was baptised the Silo (figure 4). The architects of a2o teamed up with a non-profit youth centre for cultural education called Villa Basta to fill in the large void at the site. The first task set by the architect was to demolish all secondary constructions not deemed fit for repurposing, opting for one clear and pronounced volume and diminishing the ‘backstage’ character of the site. What followed was organising representative openings and accesses in the former silo building, directing the “face” of the building toward the canal and to the heart of Quartier Canal. Retrofitting plans finally allow the current usage by a total of 13 companies. The terrains which were vacated were purchased by an entrepreneur in repair of electronics, who reused and expanded his warehouse on this terrain.

The smaller mill had already been repurposed in 2001 for a producer of jeans clothing, but was transformed in that period into a coworking space, under the name KAAI.16, housing about 15 companies in 2009. This building also was brought in connection with the canal by incising the brick structure with large glass planes. In 2008, a novel pop and rock academy, part of the provincial university of applied sciences, entered the stage. Its programmes were initially organized in the Muziekodroom, and after its first batch of professional bachelors graduated, the school started to occupy its own spaces within the same building.

Figure 3 – The retrofitted slaughterhouse, now a concert hall and rock academy (Hippo architecten)

Figure 4 – The retrofitted flour mill (a2o architecten)

All these “organizations and companies from the cultural, creative and innovative field” (a2o & KAAI.16, undated, p.1) settled here in vacated interiors, from which they started to exert influence on the use of public space by means of their architectural organization and because of the new audiences they attracted. There was no urban plan made for these novel activities, nor were these functions in accordance with the actual zoning regulations. As to the question why they opted to relocate to an operational industrial estate, respondents described how the process of gradual transition opened up opportunities of ample space and centrality in a dynamic location. Cultural organizations had been settled in the dispersed, isotropic urban landscape typical of Flanders, and took the chance to relocate to Hasselt where ambitious administrations sought to offer space for youth culture and innovative businesses in order to profile the provincial capital. Muziekodroom first benefitted from this central location, and ensuing organizations indicate that increasing presence of like minds and companies has been beneficial to their performance (e.g., students of the rock academy do internships at the close by cultural institutions). Architects working from Quartier Canal explained that this place outside of normality and top-down regulation, formed an attractive alternative working site compared to typical office parks which were sprouting along the outer ring road of the city. Municipal permit evaluations testify of the interest of the city to facilitate this “creative economy” in the Canal Zone (also see Arcadis, 2012), and respondents concur that the vision of the administration of the day proved essential to these dynamics.

3.2 CONSOLIDATING BOTTOM-UP EVENTS: PLANNING AND DESIGN

In response to changing functionality, the municipality took up the task to draw up a masterplan in 2008, which set as a goal to rethink the functionality of this area and its relation to the city. The implicit goal was also to negotiate a durable coexistence between traditional and new users. The Flemish urban design firm BUUR conducted research and design. They proposed three options for development of the Canal Zone: an “economic approach”, consolidating the original industrial and commercial purpose of the area; an “urban approach”, emphasizing the opportunities of its location to make an urban waterfront development; and an “integrated vision”, like option 1 stressing economic functionality, but going one step further in stimulating higher density, diversity and high-quality architecture. (BUUR et al., 2011a; 2011b).

Instead of continuing the discussion initiated in these design studies for the entire Canal Zone, the city opted to scale down to the acute issues of the south bank only. It initially sought to offer a legal basis for the cultural and creative economy and developed an implementation plan for those zones where these new users had settled. In a later stage the scope expanded to include the issues emerging due to presence both of a Seveso treshold 1 establishment , and public event locations. The complexity of expectations of roads and waterways, and the fragmented planning approach, led to the exclusion of the public domain from the planning process and product. The final plan provides guidelines for the kind of architecture which could be developed in the area, using terms as “front architecture” and “beacon” to define a level of ambition exceeding anonymous big-box architecture.

Before this plan in its final version was approved by 2016, the city was confronted with diverging interests (Arcadis and BUUR, 2015a; 2015b). On the one hand, the creative entrepreneurs and cultural organizations started to manifest their presence in the neighbourhood by branding it with the French name Quartier Canal. In a joint memorandum, entrepreneurs urge the city to acknowledge the Canal Zone as a "hybrid landscape where very diverse layers of usage are present simultaneously" and as "an area of expansion for the city of Hasselt" (a2o and KAAI.16, undated, p.1). In a strategic vision for the twin cities Hasselt and Genk, urban design firm BUUR (2013; also see Ruimte Vlaanderen, 2014) draws forward the opportunity to develop the Hasselt Canal Zone as a hinge between the city and the economic network of the Albert Canal. In this perspective, both cities posess structural elements linking them to the canal and which could make the Albert Canal one of the backbones for urbanization, and potentially include residential, economical and recreational programmes.

On the other hand, the municipality was led by advice not to hinder industrial occupation as present on the site. Government bodies such as the executive of the Flemish Waterways and Flanders Innovation & Entrepreneurship formulated such advice form their perspective on the Albert Canal as an Economic Network (Arcadis and BUUR, 2015a). In the ENA planning process, initiated in 2004, intensification of existing industrial estates along the canal is given priority, and is fitted into a vision stating that "[t]he diversity in working environments also needs to be translated into new industrial landscapes" (iris consulting et al., 2004a). The Hasselt Canal Zone is indicated as a key area for the ENA which is encapsulated by surrounding urbanization.

Furthermore, the agenda of ENA stakeholders manifests notably in their concern ower what these proposals would imply for the petroleum company, and for the industrial sector as a whole (Arcadis and BUUR, 2015a). Urbanization, especially the introduction of residential purposes, would limit perspectives for this company, and this precedent was deemed by Flanders Innovation and Entrepreneurship to reflect negatively on all industrial SMEs present in the area. The executive of the Flemish Waterways in addition questioned the planning guides for new construction, wondering how industrial companies could keep up to the expectations of front architecture and (architectural) beacons. It protested against the designation of official cylcling routes along the quays and towpaths, and against the idea to upgrade these quays as part of the public domain.

The result of the planning procedure was an implementation plan (RUP) which mediated between regulating the settlement of the creative companies, cultural organizations and the rock academy, and the continuation of the industrial activities which had been going on already for years without threatening their survival under the contemporary conditions. Outside these two groups, the process was occasionally interrupted by parties seeking to inscribe additional programmes into the area (for example, housing and wholesale business), in confrontation with the ambitions of the Cartier Canal Group, which frustrated the planning process. The plan did not make directive statements about the quality or character of the public domain.

3.3 EQUILIBRIUM OR STASIS? PERCEPTIONS OF USERS

While the implementation plan has facilitated the continuation of the equilibrium between new and traditional users of the Hasselt Canal Zone, concrete problems remain unresolved. The area still is indeterminate, which is also due to the priorities the city is setting for planning endeavours in other locations.

The indeterminacy coincides with lessened dynamics, in terms of the process of transition of the area. Overall, respondents share a sense of uncertainty about the direction in which the area will develop. Industrial occupants over time were concerned by the settlement of non-SMEs, and were surprised, stated the responding petroleum trader, about the support cultural institutions received from the city. He indicated how he has grown accustomed to the nature of coexistence, and learned to deal with the advantages as well as the disadvantages. From another standpoint, respondents pertaining to the creative sector lament the decreased dynamism driven by redesign of the public domain and attraction of additional players to strengthen the hybrid profile of the area. Actors in the cultural and educational sector perceived this negatively, as they have chosen wholeheartedly for a cultivated vision of an urban future of the area as a "creative site", with which they interrelate the future ambitions of their organization. As one respondent from a cultural non-profit organization stated: "Underground is a thing that typically as a short-term effect.

After everybody knows it, the thing isn't underground anymore. Then, a comfort problem rises." The organization of the public domain, the perceived distance to the city core and the lack of parking spaces are seen as such comfort problems, which result in a limited attractiveness to cultural consumers. By organising (to some extent jointly) public events like theatre plays, concerts, bycicle drag races and temporary design & build actions, presence of the new users was felt stronger in the public domain, and the possibility of a fitting public urban space was probed (figure 5). With regard to the hybridity, respondents propose diverging arguments. The main characteristic of the area is one of "indefiniteness, [operating] under the radar, [working] bottom-up", thus formulated by the architect operating from the retrofitted flour mill. Actively engaged in the branding of Quartier Canal, he stated with regard to proposals for housing projects and a supermarket on the edges of the area: "people opportunistically interpret this [process of drawing up new plans for the area] and project programmes, to which we respond, that it has never been our ambition to do such a thing (...) The hybrid condition should remain." The director of the Muziekodroom, as the earliest pioneer of the area, acknowledges the aptitude of working self-sufficiently, as something which the site demands. He goes as far as to connect the "Rock 'n' Roll" identity of his organization to this condition. He refers to Berlin as an exemplary city where an innovative music culture thrives in retrofitted neighbourhoods (Bader & Scharenberg, 2010) and which offers an inspiring environment.

Respondents share a concern over safety of the area, because the public domain is not designed for the very diverse users passing through. Students face trucks crossing their path, and the roads attract cut-through traffic avoiding the main arteries. Concert visitors might wander off to the canal and fall in. On the other hand, industrial occupants seeking to keep the quays in use, plea for a clear separation of traffic flows. The consequence is that directors of the creative houses settled in Quartier Canal steal a glance at other developments in the wider urban environment, where actors in the cultural, technological and knowledge sectors are settled, or to the city centre. This poses a risk to the continuation of this urban experiment, as representatives in the cultural sector acknowledge the ongoing synergy as the main benefit of their presence in the area. Moving out parties is perceived as a negative game changer by those who would remain.

Figure 5 – An informal and temporary construction as a means to (re)appropriate the public domain

4 DISCUSSION AND CONCLUSION

Between the planning figures of the urban ring and the industrial Albert Canal, an experiment is being conducted of blending diverging economic and cultural interests. Early initiatives to inject the banks of the Albert Canal with a dose of creative economy were supported by local politicians and facilitated by the planning apparatus. The predominant perception among new users is that development of the area along this creative red line has come to a halt. It did so at a point where many issues related to urban design (the accessibility, the traffic safety, the quality of the public domain, the presence of a Seveso establishment close by semi-public facilities) remain unresolved and problematic to the functioning of cultural institutions and creative entrepreneurs. One of the instigators of the concept behind Quartier Canal has sold his company in a retrofitted flour mill after plans for expanding his business lost support at city hall. The faltering dynamic raises the question whether the concept of the creative city really is a panacea (Evans, 2009), one that neither fitted the persistent industrial interests materialized in this site, nor the ambitions of

a new group of users which colonized the area and faced its continued industrial usage. Based on the analysis presented in this contribution, I conclude by bringing both affirmative and negative arguments to the fore.

In a positive sense, the undefined nature allows the area to continue its manifestation as a zone of exception to the common rule, a counterweight to the very formal city centre of Hasselt – although it is questionable for how long still, given the concern over the perceived stasis among creative entrepreneurs. Its informal status invites bottom-up and temporary initiatives by its occupants to claim the streets of this hybrid industrial park. Many of the arguments in support of the settlement of new companies and organizations thrive on a shared notion of creativity which brings to mind Florida's "creative class" discourse. The notion of creativity cultivated here is however of a higher inclusivity: creative enterprises coexist with more traditional industrial and logistic SMEs and service companies which are not typically acknowledged as "creative entrepreneurs". Many of the occupants, across business sectors, identify with the informally organised network of Quartier Canal. There are signs of resistance against speculation and gentrification embedded in this cooperation. Moreover, in a region like Flanders, where urbanization has spread across the larger part of the territory and is best characterized as sprawl, shared usage of space is of increasing interest. The condition of living-apart-together proves a valuable demonstration of opportunities and pitfalls for a more intensive use of industrial estates.

But its resistance to continuing processes of urban development comes with very concrete problems of which traffic safety is the most pressing. The solution of connecting the university campus south of the outer ring road via a tunnel or bridge to cross the ring road to Quartier Canal is urgently needed. Alternative links between Quartier Canal and the city centre, via the towing paths and quays, have been proposed in planning and design documents as well as by local actors, but remain subordinate to the linkages in support of the Economic Network of the Albert Canal. Linkages between similar zones in the urban matrix consequentially remain too limited. It is on the level of infrastructure, that diverging interest come into collision most clearly. Diverging disciplinary frameworks and interests prevent discussion of potential interventions in the (semi-)public domain, if even on paper. Interestingly, in defending their cause, both traditional and creative industries support their viewpoint arguing for the sustainability of it: the industrial use of the waterway, for example, ensures a sustainable economic armature in relation to a transport sector offering alternatives for lorry trafic on the overburdened Belgian road network. From another perspective, creative entrepreneurs argue that new economic directions are needed in face of post-industrial developments. This condition curtails the role of a directive party (the city) to implement design concepts in response to acknowledged spatial problems.

This problem is centred on an indeterminacy between cultivating the state of exception of the area, and the resistance against developing its status and organization, thus sacrificing the origin and pole of attraction which led to the second colonisation of the site in the first place. There is a friction between the flexibility and consolidation allowed for in urban design: this affects both the interest of creative entrepreneurs in a perceived state of flux, and the freedom for traditional industries to develop their business unhindered by urban norms and standards. A spirit of DIY, Do-It-Yourself, remains present and is made tangible in the public domain, but requires a booster. While the municipality has defined its role mainly by consolidating the contemporary situation, most respondents are seeking for a clearer perspective on continued development, in order to determine their long-term ambitions on this site. Apparently, this legal consolidation is not enough to ensure sustainable coexistence of industrial, cultural and creative parties. This raises a new challenge with regard to urban design, namely to detect the common denominator for productive interaction in the public domain between involved actors, in order to start from here to bridge the gaps, and to maintain the continuity and communication lines in relation to the developmental process.

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ID 1549 | SUPERBLOCK VS. TRADITIONAL GRID IN URBAN DESIGN IN BARCELONA: INTEGRATING SUPERBLOCKS WITH EACH OTHER THROUGH WALKABLE PUBLIC GREEN AXIS

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1 INTRODUCTION

One of the most effectively working urban patterns is grid layout which has been worldwide accepted since the ancient settlements in history. Barcelona represents one of the most spectecular strict grid pattern since 1850s as a result of new demands in urban development in the city. This research will handle the grid pattern from a different perspective focusing on a transition from grid to Superblock and a simultaneous transformation in urban transport memory. Therefore, research question is to reveal what Superblock proposes in Barcelona as a change in urban transport memory. In this context, firstly, grid urban layout will be defined with its advantages and drawbacks in general. Afterwards, the historical being of Barcelona's grid structure and Superblock idea will be presented. Here the significant point will be touching upon basically the change in grid pattern and its prospective contributions on new urban transport memory. Finally, transition from grid to Superblock will be critically discussed by considering the aspect of expected transport memory reformation.

2 GRID PATTERN AND HISTORY OF GRID URBAN LAYOUT IN BARCELONA

In grid urban layout, roads create a rectangular network which creates identical building blocks having the opportunity to extend in any direction. This structure has been criticized due to its prodigality in terms of having all the streets with the same standard, excessive use of land, aesthetical monotony and lack of focus. However, creating hierarchical grid by diagonal arterials and minor grid streets seems to be solution for this critique (Lynch, 1985). This urban form does not have any definite edges or does not need to have nodes regarding its phyical structure.

Grid pattern can be defined as a net of roads or diagonals without having a major spine in urban design of a city and without a certain boundary. The focal attraction points can be anywhere in the layout, which means the pattern does not imply the nodes or intersections. In this pattern, urban growth can occur towards antwhere inside or by extension to outside. The main advantage of grid is having high adaptability to growth and change, that makes the pattern flexible. Main disadvantages of grid also are lack of focus -in non-hierarchical grids-, waste of land and confusion of road network (Ceylan, 2003).

In Barcelona, Catalan civil engineer, Illdefons Cerda, prepared the first plan for the urban extension, which was considered as a revolution regarding its emphasis on hygiene, easy mobility and transportation on a modern grid-iron urban pattern. Living standards were optimized by creating 6m2 volume of air per person within the structure of orthogonal city blocks with 113.3 m by 113 m (Figure 1). The pattern was supported with 35m large streets and big avenues. Cerda plan also proposed to increase green spaces and gardens in each block (Wynn, 1979).

Figure 1. The Cerda Plan, 1859 (Source: Barcelona Municipality History Archieve)

The Cerda grid plan basically depends on continuity of infrastructures and productive and residential forms. The main goal of this idea was taken as a new modern concept of the combination of multitude of movements between inhabitants and the elements of the contemporary city, which was thought to strengthen the relationship between human, economic growth and public space. In addition, within this grid layout local streets constitute the orthogonal grid layout and diagonal avenues create territories. The streets also create built and unbuilt spaces. Big building blocks between streets were assigned as industrial or non-residential, and other square small ones were as residential functions (Busquets et al, 2009). In Figure 2, the residential uses in plan can obviously be seen as mostly square blocks. Besides, main arterial diagonals and minor cross roads create variety in urban layout in Barcelona by the formation of different-size building blocks for today's current situation. However, some serious problems have started to emerge within this strict grid Cerda plan making policy makers take new precautions on urban transport design.

Figure 2. Solid-Void Relationship between Built and Unbuilt Spaces of Cerda Grid in Barcelona (Source: http://tr.depositphotos.com/12853525/stock-photo-barcelona-plan.html)

3 BARCELONA GRID WITH ITS PROBLEMS AND SEEKING A SOLUTION

Cerda grid plan emphasized mainly the fact that Barcelona city needed to breathe ideologically and physically, and to distribute the population in the area evenly together with enabling green areas within each building block. However, almost all the grid lines were dominated by cars which also triggered pollution and increase in noise levels. In short, the reasoning that made policy makers think about the solutions against the problems of greening and health in 1850s has emerged again as a tough problem in contemporary grid of Barcelona (Bausells, 2016).

According to a research carried out by Environmental Epidemiology Agency in 2015, if Barcelona performed the air quality standards of EU, it was seen that almost 1200 deaths could have been prevented in the city. The study also notes how the number of hospital cases increased in recent years in Barcelona due to air quality problems. Moreover, noise levels in the city become 61% higher because of city traffic and congestion levels (Trentini, 2016). In addition, air pollution in Barcelona itself has resulted in 3500 premature deaths in a year and also in detrimental effects on agriculture and ecosystems. Furthermore, some of the main reasons to generate a new Superblock grid pattern idea are excessive road accidents -9,095 occurred in 2015-, sedentary lifestyles mostly effecting the future of kids who have not been got used to walking and sport, and scarcity of green areas in the city –particularly open public parks and green spaces-. According to World Health Organization cities need to own at least 9m2 per inhabitant; however, the whole Barcelona city only has 6.6 m2 green-spaces per capita -moreover, the pioneer implementation territory of Superblock project namely Eixample Neighborhood has only 1.85 m2 per inhabitants (Bausells, 2016). As a result of environmental and health problems among inhabitants, policy makers of local government in Barcelona has decided to implement a new Superblock idea to decrease the occupancy of cars on urban space, increase the percentage of green areas and green streets and eliminate air pollution in the city. The specific project area in Eixample Neighborhood within one of the newly created Superblock basically focusses on formation of a continuous public interior connecting three Superblocks on one single green spine.

4 SOLUTION: ‘SUPERBLOCK’ RATHER THAN TRADITIONAL GRID

According to ‘Agencia de Ecología Urbana de Barcelona’ (2015), Superblock definition designed for Barcelona city as a new urban layout reforming the existing grid is mentioned as:

“The superblock (in physical terms) is composed of a set of basic roads forming a polygon or inner area (called intervía) that contains within it several blocks of the current urban fabric. This new urban cell has both an interior and exterior component. The interior (intervía) is closed to through vehicles and open to residents, primarily. The exterior forms the basic road network on the periphery, and is approximately 400 metres wide for use by motorized vehicles”.

Superblock consists of several building blocks in which traffic flow is reorganized around the outside of main roads. The priority inside part of a superblock belongs to pedestrians and bicycle users (Figure 3). Exceptionally, inhabitants in Superblock can drive inner streets with a low speed of 10km/h. those inner streets are also projected to fill with parks and recreational gardens. In addition, the new inner grid streets, left by cars, will become spaces of citizens for them to have new rights and functions such as commercial, culture and knowledge, participation and leisure time activity spaces in addition to use of inner streets as passageways (Peters, 2016).

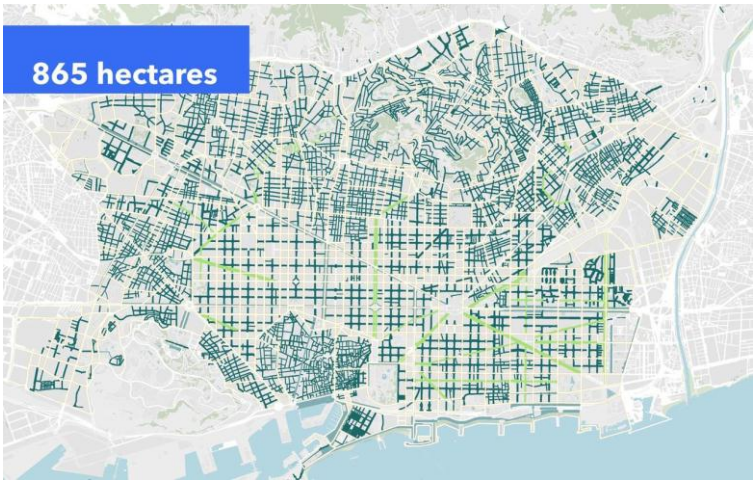

Figure 3. Entire Superblock Design Layout for Barcelona (http://www.barcelona.cat/ca/)

The new Superblock renovation on Barcelona's grid will regain almost 60% of road space from car occupancy to citizens for different functions. Existing building blocks of the neighborhoods will be turned to Superblock which means joining almost nine building blocks into one continuing the orthogonality (Figure 4). The Eixample Neighborhood will be the first area selected for implementation. Main principles of Superblock design are humanizing public space, livability, sustainable mobility, green areas, biodiversity and local participation (Barcelona Architecture Walks, 2016).

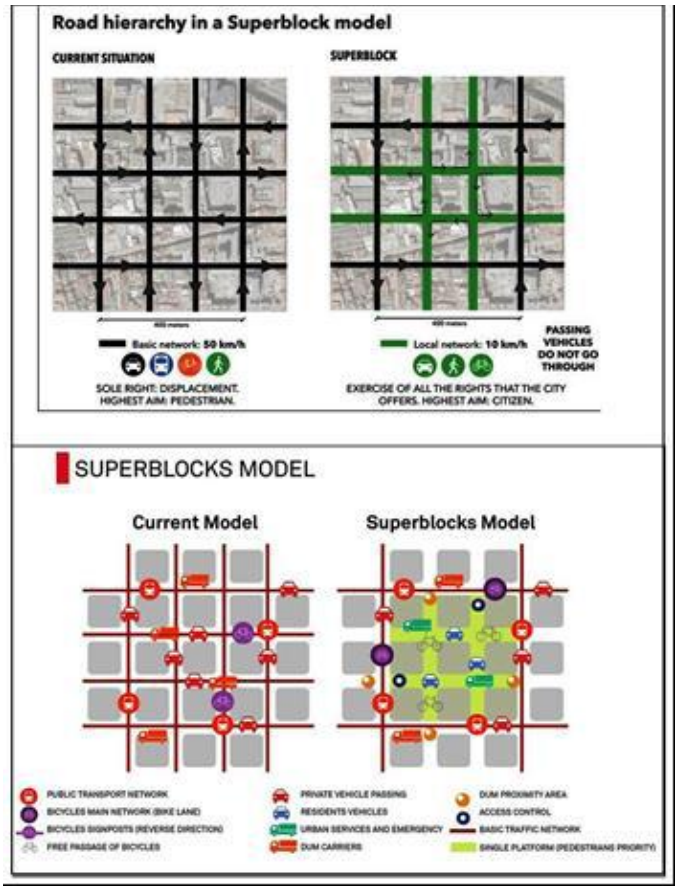

Figure 4. Functioning of Superblock Idea in Comparison with Current and New Situations (http://www.barcelona.cat/ca/)

5 WALKABLE PUBLIC GREEN AXIS TO INTEGRATE SUPERBLOCKS THROUGH DIAGONALS

The significant point in this research is to investigate ways to integrate these newly proposed Superblocks.the reason why there exists such a concern is that when new superblock structure is generated and applied to Barcelona streets and Avenues, there might be a concern also for disconnectedness between Superblocks in terms of social and accessibility aspects. Therefore, it is obvious that diagonals would be effective ties between Superblocks since they passes through the city as creating accessible central axes. ın this research, an example diagonal green corridor will be investigated between “Parc De La Ciutadella” and the coast of Barcelona. The research interest of the research is formulated as: “How an old diagonal can behave in new Superblock structure of Barcelona as an integrative green spine of three different Superblocks” (Figure 5).

Figure 5. The Idea of Public Interior within Superblock Structure in Eixample (Source: Personal Drawing)

6 PROJECT AREA SELECTION, PRINCIPLES AND RESEARCH QUESTION

The Eixample Neighborhood is selected as the pioneer implementation of Superblock idea. The main research interest for the project area is derived from the issue of how an old diagonal can behave in new Superblock structure of Barcelona as an integrative green spine of three different Superblocks. The specific project area is called as a public interior (positioned in one of the Superblock) between two welcoming entries (positioned in two separate Superblocks) on an old historical canal, namely Av. De Bogatell Street today. Consequently, problems and potentials in the area, aim, vision, and finally design principles are noted as follows:

Problems

- The diagonal (old canal) has been used just as a passage and fragmented pedestrian way interrupted by many streets
- Entries into today's area are not clearly defined
- Problems in the organization of unbuilt spaces existing within the area to attract citizens into it

Potentials

- The area has a strategic position within Cerda Grid located as a diagonal
- It has the potential to integrate three different newly proposed Superblocks on a single green line
- The diagonal is an old canal which can be revealed as an historical attraction point
- Existing public programs in the area create potentials to enrich newly projected public interior (library, schools, and sport areas).
- Proposed Superblock urban layout perfectly fits into the strategy of creating public interior and its two welcoming entries

Aim

- Designing the area as an integrative green spine destination itself; not just a passageway together with the aims which are creating a public interior within Superblock structure and integration of public programs with public interior. In Figure 6, it is seen that existing situation contains fragmented grid streets on diagonal and strict property boundaries shown with red line. In design case, existing public program potential is used to create a linear pedestrian public interior inserting more public programs and open spaces. In prospective design aim, urban functions are flourished by the uses of residential, commercial, urban parks, school and library.

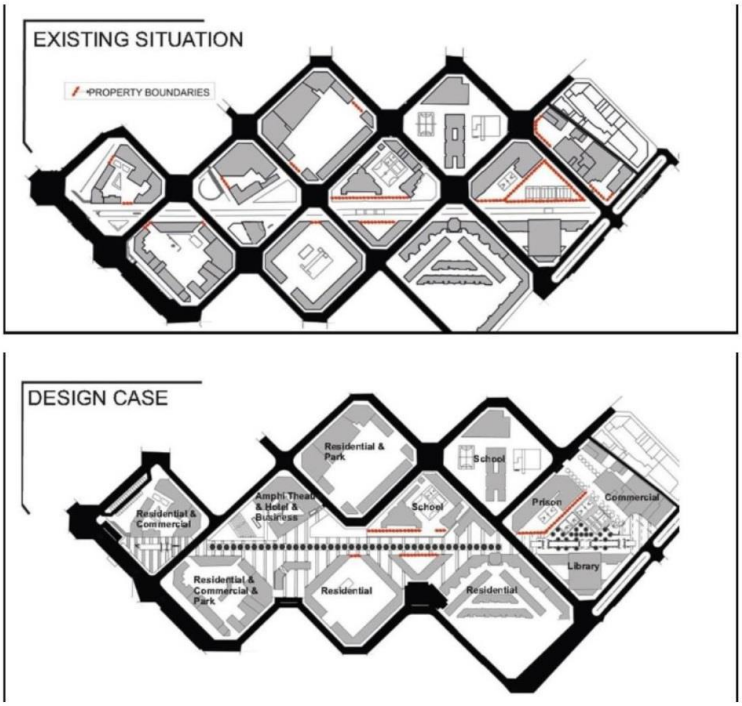

Figure 5. Design Aims for Public Interior Formation within Proposed Superblock Structure (Source: Personal Drawing)

Vision

- Design of a public interior together with two welcoming entries to make the diagonal a destination itself

The specific questioning which was asked to the project before design process is;

- What to keep, what to change?
- What kind of a public interior?
- How to use unbuilt spaces? How to organize them?
- How can it become a destination?
- What kind of activities will bring special qualities to urban space?

Design principles

Diagonal is planned as a destination itself; so the principles are;

- Creating a public interior and two welcoming entries
- Revealing old historical canal on the diagonal as a value
- Accessibility: parking (park-and-ride & kiss-and-ride), cycling, public transport stops
- New public private space hierarchy
- Social inclusiveness
- More public programs
- More commercial activities

Research question: 'How can a public interior be created on a historical canal in relation with new Superblock structure?'

7 FINDINGS AND DESIGN SOLUTIONS

The line was old canal carrying water to old city. In 1861, a new plan was prepared for Barcelona applying a new grid pattern. This plan kept the line as an underground canal. In 1958, the line lost its canal activity; it owned being a vehicular road diagonal. Today, the line is used as not a canal or vehicular road; but as a

pedestrian line. The diagonal does not even work as an efficient, continuous pedestrian line. It is fragmented by streets of Cerda Plan and only small public spaces remained. Today, despite the existing public programs in the area, the diagonal cannot be counted as a destination itself; it is used just as a passage from one place to another. In the new design, east and west blocks of the project are kept as welcoming entries on different Superblocks, and in the middle, a public interior is created with new commercial activities, cultural uses, sport areas and green spaces to create a linear continuous spine on an historical old canal (Figure 6).

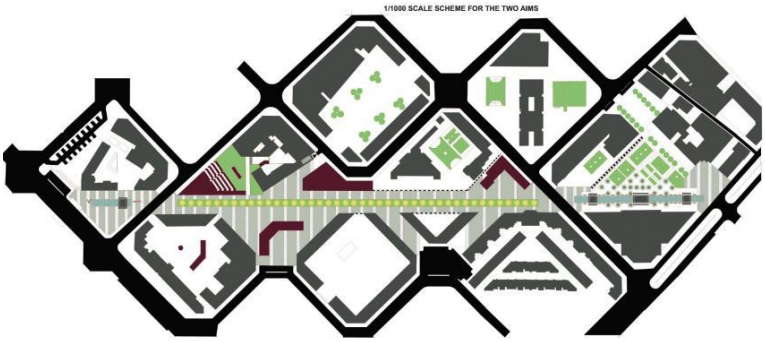

Figure 6. Proposed Design for Public Interior and Welcoming Entries as Conceptual Scheme
(Source: Personal Drawing)

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ID 1554 | STUDY ON THE OPTIMIZATION OF RESIDENTIAL SPACE IN RESOURCE-BASED CITIES - A CASE STUDY OF YULIN

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1 INTRODUCTION

Resource-based city refers to the city, which is based on the formation and development of natural resources such as minerals and forests, and takes resource exploitation and processing as leading industry. According to the types of resources, resource-based city can be divided into coal city, forest city, nonferrous metallurgical city and oil city . According to development process, resource-based cities are divided into two types, one is "mine first then the city", the other is " city first then the mine". This paper addresses the latter one. City originated before the development of resources, and the exploitation and processing of resources which is situated in surrounding areas has accelerated the development of the city, and caused the rapid expansion of urban construction land, the rapid change of spatial structure. The urban residential space plays an important role in the spatial change of urban function, and its spatial optimization has become an important content of urban spatial structure adjustment. The paper, taking Yulin City as an example, studies the evolution of urban residential space by analyzing residential space of Yulin main built-up areas, and exploring the current situation of urban residential space and the factors that influence the spatial distribution of urban residential space.

2 RESEARCH OBJECT AND RESEARCH METHOD

2.1 OVERVIEW OF THE STUDY AREA

Yulin City is located in Northern Shaanxi province, and it sits at the border area of Shaanxi, Gansu, Ningxia, Inner Mongolia and Shanxi provinces (regions). It is a prefecture-level city of Northern Shaanxi province (Figure 1). Yulin City has two districts and ten counties within its administrative boundary. Its northern area is sandy beach area, accounting for 42% of the total administrative area, and the southern landform is the loess hilly and gully region, accounting for 58% of the total area. Yulin is a mineral resource enrichment area in China, especially for coal, oil, natural gas, rock salt and other energy and mineral resources. The study area is Yulin main built-up areas in the southern part of Yuyang District (Figure 2).

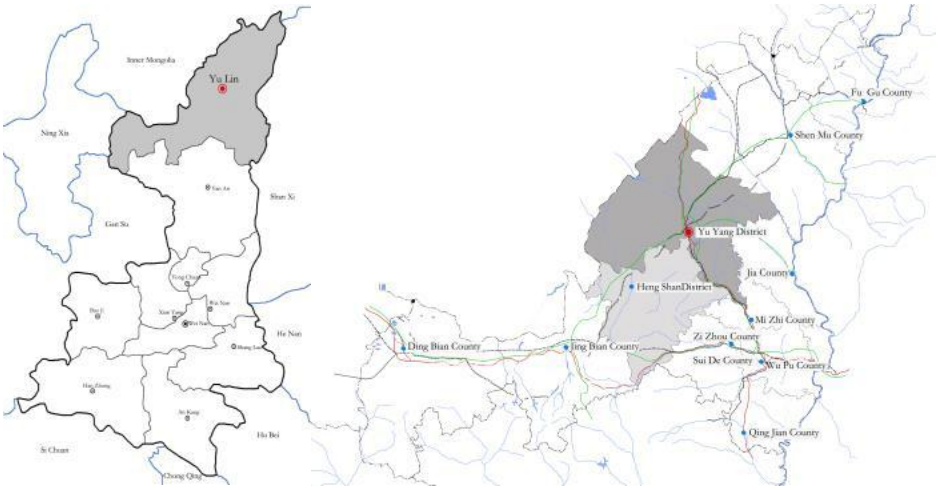


Figure 1 - Location Map of Yulin City | Figure 2 - Location Map of Yuyang District and Hengshan District
Data Source: The graph is drawn by the author himself

2.2 DATA SOURCES AND RESEARCH METHODS

First of all, in this paper, the authors analyze the evolution of the population structure of main built-up areas based on statistics of the population data over the years, and the fifth, sixth census data in Yuyang District and population data in the different sub-district offices. Furthermore, the authors calculate the residential land of the main built-up areas and analyze its expansion characters according to the corresponding years of land use status chart in Yulin city master plan. Secondly, the authors explore the current situation of the population distribution according to the data of the sub-district offices, and analyze the residential space characteristics of the main built-up areas (Figure 3) according to the residential land data in master planning, bus line website data (http: // bus. mapbar. com/), house price data (http://fang. com/default. htm) and so on. Thirdly, the paper studies the influencing factors of the difference of residential space on the basis of the analysis above and the actual investigation. Finally, the paper puts forward the strategy of optimizing the residential space of Yulin main built-up areas.

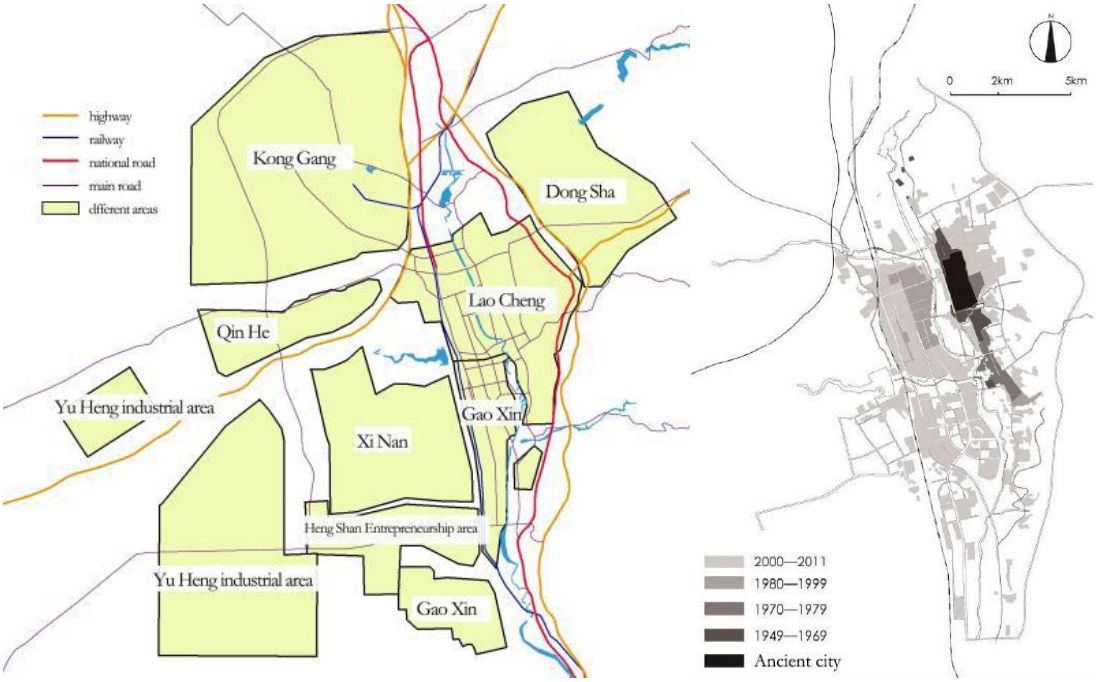


Figure 3 - Different Areas in Yulin City Central Area | Figure 4 - Different Stages of Construction Land in the Central Area - Data Source: The graph is drawn by the author himself

3 CHARACTERISTICS OF URBAN RESIDENTIAL SPACE EVOLUTION

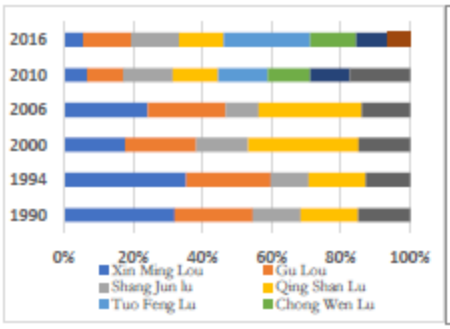
The urban spatial structure of Yulin city has gone through four stages since the second half of 20 century, and they are single center agglomeration stage (1949-1969), single center axial stage (1970-1979), single center crossing development stage (1980-1999) and multi-centers cluster Stage [2] (Figure 4). Different stages take on different characters. In this paper, the authors focus on the evolution of urban residential spatial structure during the period of rapid development in Yulin City, and choose the development stage between 1990-2016 to conduct the research according to the characteristics and data acquisition of Yulin city.

3.1 THE SPATIAL EVOLUTION OF THE POPULATION

The authors study the spatial evolution of urban population since 1990 in the main built-up areas, according to population data in 1990, 1994, 2000, 2006, 2010 and 2016 .

The population has grown in the main built-up areas since 1990 in Yulin City. In terms of total population growth, the population increased slightly from 1990 to 1994, and the population increased significantly from 1994 to 2006. In 2006-2010, the main built-up areas population growth rate increased greatly. Population growth rate dropped sharply due to the impact of urban economic downturn in 2010-2016. In

terms of total population of different sub-district, the change of the population is different at different stages. The sub-district of Xin Ming Lou has greater population density distribution from 1990 to 2010. In 2010-2016, the sub-district of Chong wen lu has a higher population density.



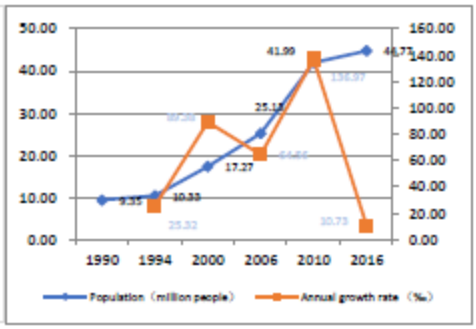


Figure 5 - The proportion of the population changes in different sub-district over the years (above left)
Figure 6 - The population change of central area over the years in Yulin (above right)
Data Source: The graph is drawn by the author himself

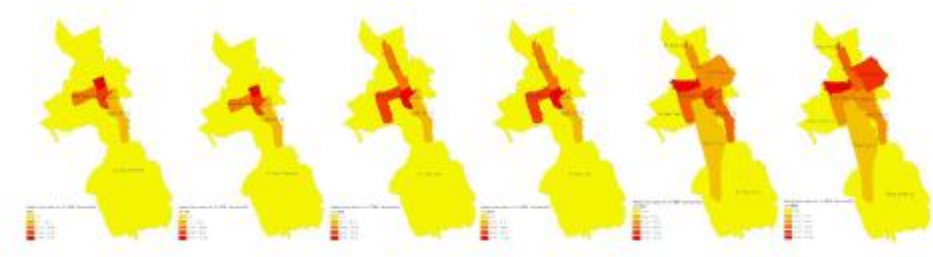


Figure 7 - Population density maps of 1990, 1994, 2000, 2006, 2010 and 2016 in built-up areas
Data Source: The graph is drawn by the author himself

3.2 THE EVOLUTION OF URBAN RESIDENTIAL SPACE

According to the relevant literature, urban construction is within the boundary of Lao Cheng, and the residential space layout along the axle from north to south before 1969; In the late 1970s, urban residential space expanded eastward with the increase of population and the construction of the industrial areas in southern suburbs. Industry and commerce development accelerated the increase of population growth, and urban residential space began to expand westward in the 1980s and 1990s. Urban residential land area reached 4.79 km2 in 1988, and most of the urban residential space was still mainly distributed in Lao Cheng area. Urban economic development has accelerated and living standards has heightened since urban housing reform system in 1998. Meanwhile, residents pay more attention to living environment and housing location. The development intensity of Lao Cheng was controlled due to the protection of historical and cultural city, and urban residential land area reached 9.32 km2 in 2003. In 2003-2006, urban residential land expanded southward rapidly because of the containment of the westward and eastward in urban planning, considering the ecological fragile and natural condition. While the western region develops westward further to XiNan new Area. Urban residential land area increased by 20.4 km2 in 2006, and the Yuheng industrial zone, Qinhe new zone and Konggang ecological zone are constructed. The suburbanization of urban residential space was obvious. Urban residential land area reached 23 km2.

From the perspective of the overall center of gravity change, the center of gravity of the residential space moved from north to south from 1988 to 2006, and moved from south to north from 2006 to 2016 in the central area of the east bank. The residential space center of gravity moved from north to south from 1988 to 2016 in the central area of the West Bank. The main built-up areas of the overall center of gravity presents from north to south movement from 1988 to 2006, and moved from south to north from 2006 to 2016.

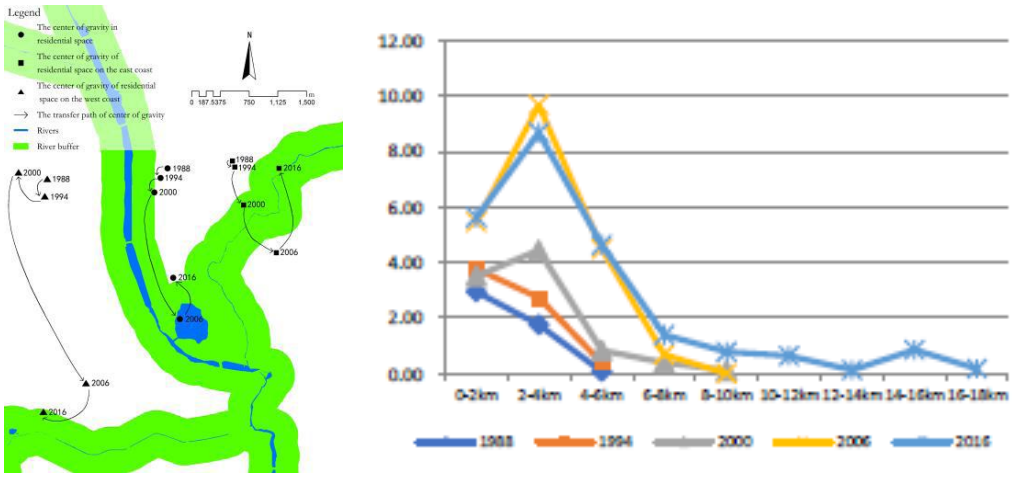


Figure 8 - Residential land center of gravity changes in the central area | Figure 9 - Residential area changes in each circle Data Source: The graph is drawn by the author himself

From the perspective of the change of the circle structure of the central area, the most of residential land is in 0-2 KM around the center, and the farer away from the core area, the smaller the residential areas from 1988 to 1994. The residential area reached a peak at the distance of 2-4 KM from 2000 to 2016. The form is similar to the shape of the parábola.

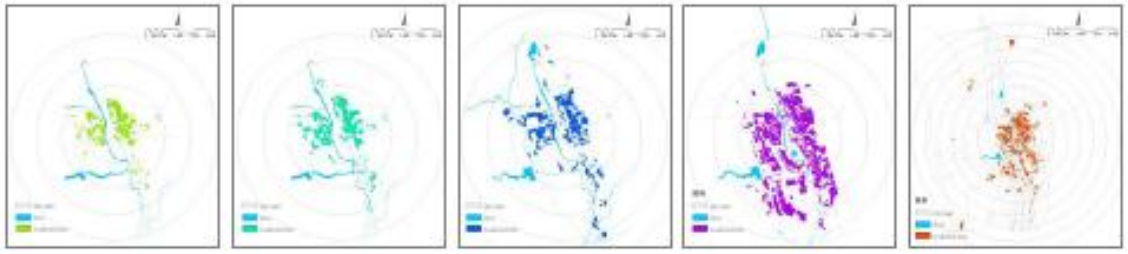


Figure 10 – The changes of the circle structure of the living space
Data Sources: The graph is drawn by the author himself

3.3 THE RELATIONSHIP BETWEEN URBAN RESIDENTIAL SPACE AND RESOURCE MINING

Fig. 11 and Fig. 12 show that the industrial output of Yulin increase rapidly with the increase of coal production, and they show a strong linear relationship. In recent years, the built-up areas have increased rapidly, with the increase of industrial output value, and they also show a strong linear relationship. Residential land area also increased rapidly with the rapid expansion of built-up area.

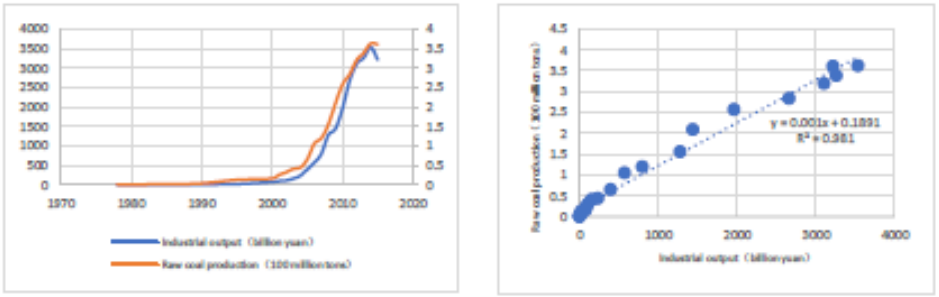


Figure 11 – The Relationship between Industrial Output Value and Raw Coal Production in Yulin City
Data Source: Statistical yearbook of Yulin in 2015

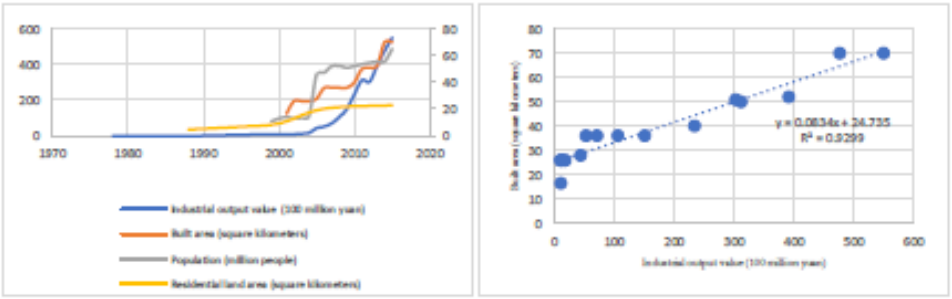


Figure 12 – The relation between industrial output value and built-up area is in Yuyang District
Data Sources: Statistical yearbook of Yulin in 2015

From the historical evolution of residential space, the original urban construction land is mainly in the Lao Cheng area, and the surrounding areas are mainly agricultural and forestry land and village land. With the construction of the surrounding mining sites, temporary residential areas have gradually been built around the mining sites and gradually transformed into a fixed community. The construction land expanded rapidly in the central area, and industrial areas formed gradually, and new areas built. With some mining plots immediate central areas exhausted, the mining points are gradually abandoned, and the temporary residential areas around the mining sites shrink, and the residents gradually migrate to other mining points or to the central area. From the point of view of the relationship between work and residence, the establishment of mining sites has brought a large number of migrant workers. They originally lived near the mining site. With income increase, more and more residents buy houses in the central city. They usually work in the mining area and live during the holidays in the main built-up areas.

3.4 THE CHARACTERISTICS OF RESIDENTIAL SPACE EVOLUTION

3.4.1 NEW RESIDENTIAL SPACE LAYOUT TOWARDS THE OUTSKIRT AREA

The main built-up areas are an ideal place for living with convenient transportation and better service facilities, so it is the earliest and most concentrated area for housing development [3]. Urban population increases rapidly with the development of economy after 2000, and the urban residential space couldn't meet the living demand only by renewing Lao Cheng area. From the point of view of urban residential land development over the years, urban residential land gradually expands to the surrounding area. The city periphery land resources are abundant, and land price is relatively low and has the good ecology condition. Therefore, the city housing expands gradually from the main built-up areas to the outskirt area.

3.4.2 LAYOUT ALONG THE TRAFFIC ROUTE

The distribution of traffic and urban residential space has the relationship of mutual restraint and interrelations. The distribution pattern of urban residential space affects the direction and flow of traffic lines [4]. The layout of traffic routes also affects the reorganization of urban residential space structure and the relocation of residential area. Especially for resource-based cities, transportation plays a very important role for the people travelling from mining areas to residential areas and verse. Taking the urban residential space in 2016 as an example, the 0.5 KM radius buffer zone analysis is carried out on the main road of the city, and the proportion and the results show that distribution density of the residential land in the statistical buffer area are accounted for 88.45% of the total residential land in the buffer area.

3.4.3 LAYOUT COMBINED WITH URBAN NEW AREA

With the exploitation of mineral resources, resource-based cities often form new zones or development zones in areas immediate mineral resources or cities to develop deep processing industries of mineral resources, and extend industries that do not rely on mineral resources further. New urban areas and development zones have certain infrastructure and industrial support, and new residential areas are closely related to the layout of new urban areas. Yulin has a state-level high-tech Development Zone, Xi

Nan Area, Yuheng Industrial area, Qin He Area, Kong Gang Area and Dong Sha Area. The development of new industry promotes the rapid expansion of residential space.

3.4.4 THE UTILIZATION RATE OF RESIDENTIAL SPACE IN OLD CITY IS HIGHER THAN THAT IN LAO CHENG AREA

Early residential construction is mainly based on low and multi-stories residential buildings, and the new ones in recent years are mainly based on multi-stories and high-rise buildings. From the point of view of the number of layers, the location of the residential area and the types of land use, the lower level residential areas are mostly located in Lao Cheng area, and are the three types of residential land. The quality of residential buildings is low and the environment is poor. The New Area mostly consists of one kind and two kinds of residence types, and the whole living environment is better.

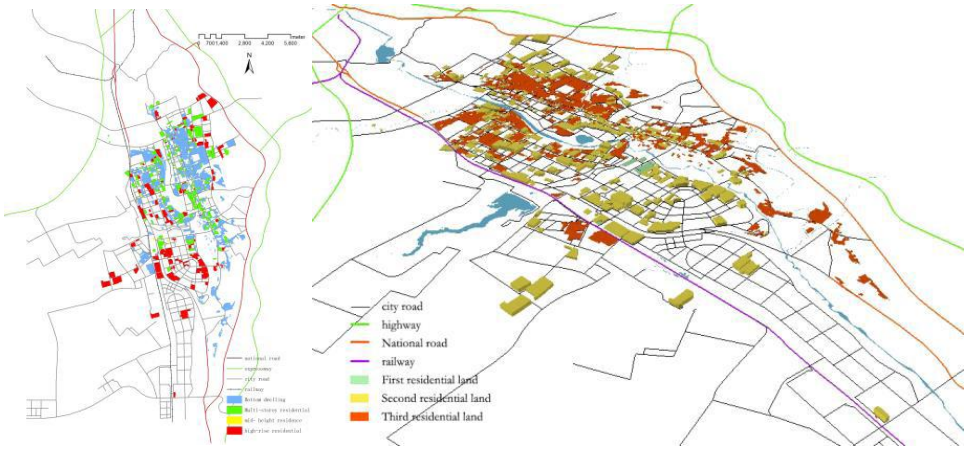


Figure 13 – Urban residential height map Figure 14 – Urban residential classification and living height map
Data Source: The graph is drawn by the author himself

4 THE PRESENT SITUATION OF URBAN RESIDENTIAL SPACE

4.1 THE SPATIAL DISTRIBUTION CHARACTERISTICS OF POPULATION

From the characteristics of the population space, the population density is higher in the sub-district of Chong Wen and Tuo Feng; The population in Xue Yuan community, Ba Shi community, Wan Fo Lou community is relatively higher than other places, and the population density reaches 265 - 437 people / ha. As a whole, the density of the Lao Cheng Area is higher, while the density of the new district is low.

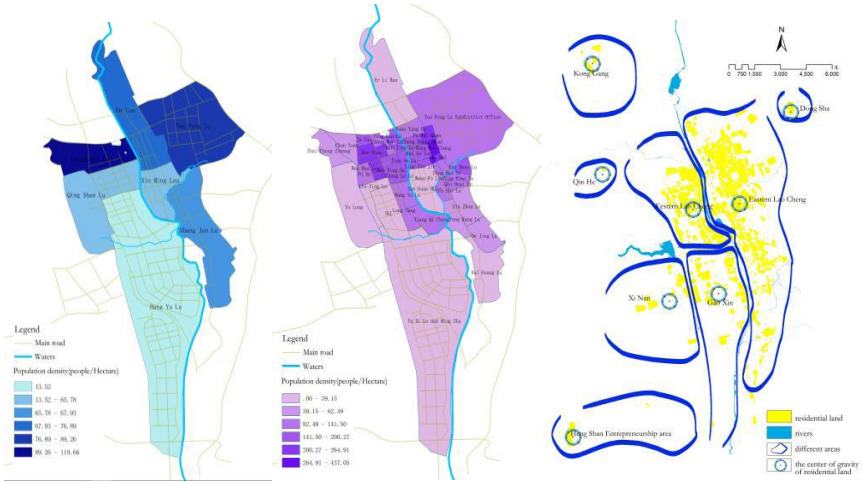


Figure 15 – Current population density distribution map Figure 16 – Residential land area
Data Source: The graph is drawn by the author himself

4.2 THE RESIDENTIAL SPACE DISTRIBUTION CHARACTERISTICS

In general, the residential land is mainly distributed in the Lao Cheng Area. In the east part of Lao Cheng Area, the number of stories in the house is low, and its living area accounts for 65.68% of the total living space of the area. In the west part of Lao Cheng Area, the urban area is still dominated by low rise residential land, accounting for 60.05% of the total residential space. Multi-stories and high-rise residential land has a similar proportion: multi-layer accounts for 21.57% of the total residential area and high-level accounts for 17.90% of the total residential area. As a new district is being developed in recent years, the distribution of residential land in Gao Xin Area is relatively scattered, among which the highest proportion of high-rise land use is 71.42%. In the Xi Nan Area, the existing houses are mostly low-rise houses, accounting for 41.58%. The newly built houses are mainly high-rise, accounting for 58.42%, and the living height difference in the whole area is relatively large.

From the classification of residential land, the proportion of the third types of residential land in Lao Cheng Area is relatively high. There are a small number of residential lands in Gao Xin Area, accounting for 8.39% of the total residential area. The residential land of the Gao Xin Area and the Xi Nan Area are mainly two types of residential land, accounting for 87.33% and 60.17% respectively of the corresponding residential areas. From the public facilities in the area of the layout, the layout of public service facilities of Gao Xin Area is the best. The administration and public services has a land area of 0.60 compared to the residential land area, and the commercial and business facilities has a land area of 0.63 compared to the residential area. The allocation of public facilities in Xi Nan Area is the worst, and the ratio of commercial and business facilities land and residential land is only 0.004. In terms of the traffic conditions of each area, the traffic condition of Gao Xin Area is optimal, and the density of road network reaches 3.65 km/km2. The eastern Lao Cheng area is as good as Lao Cheng traffic condition in the west, and the road network density is 2.99 km/km2 and 3.57 km/km2 respectively. The construction of Xi Nan Area road network is not perfect yet, and the density of road network is 1.06 km/km2. According to the housing world website statistics, function area prices ranging from high to low are Gao Xin Area, western Lao Cheng Area, eastern Lao Cheng Area, Xi Nan Area. From the distribution of present situation and residential land, the residential land is mostly distributed in the buffer zone of bus lines. The bus routes are mainly distributed in Lao Cheng and the northern part of Xi Nan Area.

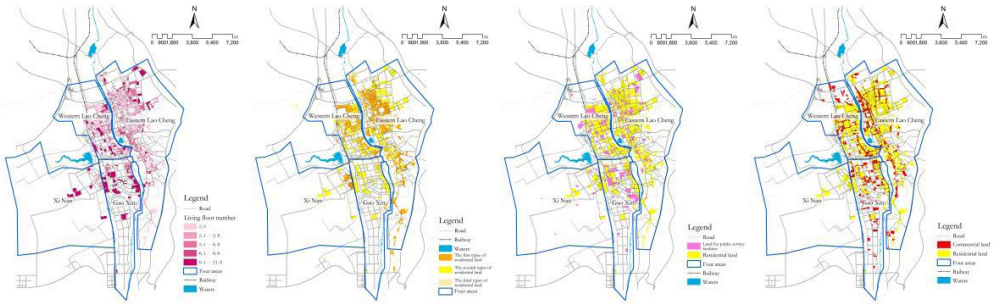


Figure 17 – Distributing map of Living Floors Figure 18 – Residential land classification map
Figure 19 – administration and public services, commercial and business facilities land and residential land distribution
Data Source: The graph is drawn by the author himself

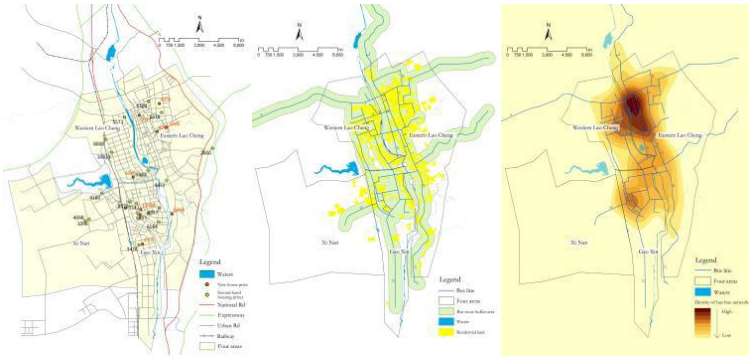
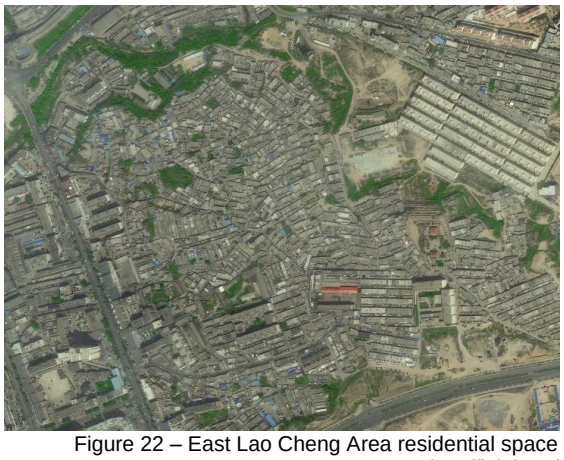


Figure 20 – Housing price distribution in each area
Figure 21 – Additive diagram of buffer between residential land and bus line Figure 22 – Density distribution of bus lines
Data Source: The graph is drawn by the author himself

4.3 THE PRESENT SITUATION OF THE RESIDENTIAL SPACE OF EACH AREA

4.3.1 THE LIVING ENVIRONMENT OF THE EAST LAO CHENG AREA IS POOR, AND THE LAND USE EFFICIENCY IS LOW

At present, the residential land in east Lao Cheng Area is characterized by high density and low volume, which hinders the improvement of the function of Lao Cheng. Taking residential space in Ling Xiao tower as an example, the whole area has a large number of residential buildings with high density and low floor space. Because of historical factors, the distribution of buildings is relatively messy and the quality of the environment is poor. However, the area is a famous tourist attraction in Yulin, and the disordered space hinders the development of tourism service function.



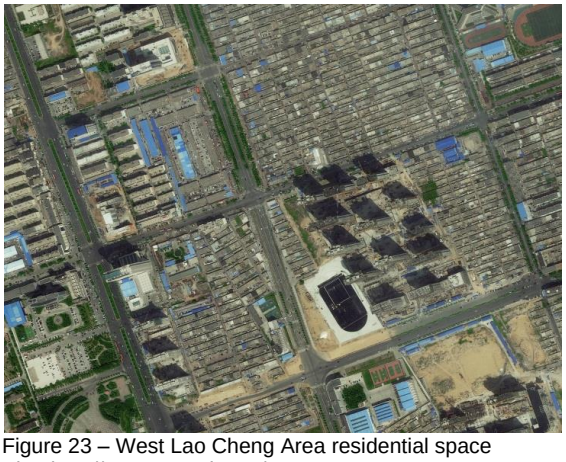


Figure 22 – East Lao Cheng Area residential space Figure 23 – West Lao Cheng Area residential space
Data Source: Google Official Website: http://www. google. cn/maps

4.3.2 THE FACILITIES ARE RELATIVELY PERFECT AND THE ARCHITECTURAL FEATURES ARE OBVIOUSLY DIFFERENT IN WEST LAO CHENG AREA

The residential space of the west Lao Cheng Area is relatively tidy, and the overall public service facilities are relatively perfect with convenient transportation. The quality of the low rise residential buildings is relatively high, and some residential sites are under construction immediate Yuyang district government and the Yulin Railway Station. The new residential buildings are in harmony with the surrounding architectural environment, and the residential buildings are obviously different in style.

Figure 24 – Gao Xin Area residential space Figure 25 – Xi Nan Area residential space
Data Source: Google Official Website: http://www.google.cn/

4.3.3 THE OVERALL QUALITY OF LIVING IS HIGH, AND COMMUTING FACILITIES ARE RELATIVELY PERFECT AND THE ARCHITECTURAL FEATURES ARE OBVIOUSLY DIFFERENT IN WEST LAO CHENG AREA IN GAO XIN AREA

The overall residential space building quality is good, and the traffic system is perfect in Gao Xin area. Residential buildings are mainly high-rise. Because the construction space scale is big, and some residents still work in the Lao Cheng Area, it is inconvenient for the residents to go to the work place. At present, part of the land mass construction is still imperfect, and the supporting facilities are still under construction, which results inconvenience to the residents.

4.3.4 THE LIVING SPACE HAS DIFFERENT FEATURES AND LACKS NECESSARY PUBLIC SERVICE FACILITIES IN XI NAN AREA

The residential space in Xi Nan Area was developed early on the basis of industry, and the scale was relatively small. However, the scale of new residential areas is relatively large, and the overall features are inconsistent; New residential areas often lack public spaces and have poor quality of life. New residential areas often lack public spaces and have poor quality of life. Although the southwest New District has been included in the main built-up area of the city, most areas have not been built. The whole urban road traffic and facilities are lack, and the separation of job and house is obvious.

5 SPATIAL DISTRIBUTION OF RESIDENTIAL SPACE AND ITS INFLUENCING FACTORS

Urban residential space distribution is affected by many factors. The resource-based city has its particularity. The urban residential space development not only has its own factors different from other cities, but also has the common factors same as other cities.

5.1 THE NATURAL ENVIRONMENT AND HISTORICAL FACTORS ARE THE BASIS OF THE LAYOUT OF RESIDENTIAL SPACE

Yulin is located in the ecotone between the Loess Plateau and Mu Us Desert, and belongs to the ecologically fragile and arid areas. The unique natural environment influences the development of urban residential space. The river passing through the city and the surrounding mountains become the basic elements that limit the layout of the residential space.

Yulin is a famous historical and cultural city with profound cultural background. The old residential buildings in the old city were built on the basis of the historical pattern. In East Lao Cheng, the number of residential floors is mostly low, and the living conditions are relatively poor, so that some residential buildings are in poor quality.

5.2 THE DEVELOPMENT OF MINERAL RESOURCES HAS A POSITIVE EFFECT ON RESIDENTIAL SPACE

From the evolution of the whole residential space, the exploitation of the mineral resources around the center of the city has greatly promoted its economic development, and further promoted the expansion of the residential space in the central city. The exploitation of mineral resources promotes a large number of population migrate into the central city. With the increase of the income level of the migrated people, most of them will buy houses in the central city, and even move the household registration to the central city, which will promote the development of the real estate industry in the central city. Because of the development of mineral resources, the ecological immigrants and mining immigrants will promote the development of residential space to a certain extent.

5.3 URBAN PLANNING HAS A LEADING ROLE IN THE LAYOUT OF LIVING SPACE

At present, four master planning has been compiled in Yulin. In the first edition of the master plan (1989-2000 years), the residential space was arranged and optimized, which laid the basic pattern of the urban residential space in Yulin. In the second edition of the urban master plan (1994-2010 years), the living space expanded to Gao Xin Area, and the living space scale was relatively large. In the subsequent third edition of the master plan (2000-2020 years), the urban space layout is "two axis, double cores, five clusters" pattern. The distribution of urban residential space shows a diffusion situation, and commercial housing housing rises in southwest New District and high-tech zone. In the fourth edition of the master plan (2006-2020 years), the residential space expands to Xi Nan Area, while the residential space in the east Lao Cheng Area expands further to the eastern region. The residential space in Lao Cheng Area has been gradually integrated, and the living environment has been improved.

5.4 THE MARKET HAS A CATALYTIC ROLE IN THE LAYOUT OF RESIDENTIAL SPACE

The development of the real estate industry promotes the distribution of the residential space in Yulin, and has a certain influence on the difference of the living space of each function area. Under the regulation of the market, it virtually causes the differentiation of different types of residential space. Commercial housing distributes in places with good conditions, public service facilities, and better living environment or urban road along the main road. However, most of the economically affordable housing is distributed in the outer suburbs of cities where the public service facilities and environmental quality are poor. [5]

6 OPTIMIZATION STRATEGY OF URBAN RESIDENTIAL SPACE

The differentiation of urban residential space is an inevitable phenomenon in the process of urbanization [6]. In the process of spatial optimization, on the one hand, the optimization of residential physical space is promoted; on the other hand, the living standard and living satisfaction of the occupants are improved.

6.1 IDENTIFY THE DEVELOPMENT ORDER OF EACH AREA AND PRIORITIZE PUBLIC SERVICE FACILITIES

Currently, the construction of the different function is under way, forming a multi group living space pattern. The construction of Gao Xin Area is relatively perfect, followed by the Southwest New Area, while the other new function and the main urban areas are far apart from each other and lack of infrastructure facilities. In the planning, high-tech zones and southwest New zones should be selected as the key areas for development. Other new districts will gradually develop according to the actual situation, and choose the advantage areas to develop, and improve the living space of the residents.

6.2 REASONABLE CONTROL OF THE SPATIAL INDICATORS OF EACH AREA, AND IMPROVE THE QUALITY OF THE LIVING SPACE ENVIRONMENT

In the process of renewal, the old city texture should be fully protected, and the space index of the area should be rationally determined from the point of view of historical protection; Different protection measures are taken for different building quality. It is necessary for us to fully improve the infrastructure, and create the old city landscape to enhance the environmental quality. In the newly developed residential areas, the development scale of residential areas should be appropriately reduced, and the residential areas with different levels should be set up in the same area. This kind of mixed arrangement can guarantee the safety and comfort of the living space of different stratums, and can also realize the diversity of people in a large scale and narrow the differentiation of living space. It should avoid a single distribution in the suburbs for affordable housing, immigration, relocation, residential layout. They should gradually integrate into the city context and reduce the isolation of the living space of low-income groups.

6.3 THE FORMULATION OF PLANNING POLICY TAKES INTO ACCOUNT THE WISHES OF RESIDENTS AND COMPLIES WITH THE PRINCIPLE OF PUBLIC PARTICIPATION

In the process of planning urban residential space, it should listen to the public opinions through questionnaires, interviews and other forms. The Lao Cheng Area has a long history, and planning policy should be developed from two aspects, there are resident's satisfaction and historical protection. In the process of renewal of the Lao Cheng Area, the residents can make local arrangements as far as possible and settle the employment nearby.

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ID 1555 | A METHOD FOR MAPPING THE PUBLICITY-PRIVACY SPECTRUM IN A HISTORICAL BAZAAR IN IRAN: ILLUSTRATING THE SOCIO-SPATIAL FABRIC OF THE TABRIZ BAZAAR AS A PUBLIC PLACE

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1 INTRODUCTION

The bazaar is a social and spatial network, shaped through centuries of relations between the bazaar community, the states, the regular public, and other actors, such as the vaqf endowment organisation and the religious clergy. As a commercial centre, urban heritage, and public place, the bazaar is profoundly influenced by the quality and quantity of the presence of regular public members.

By reviewing literature presenting empirical studies on the bazaars in Iranian commercial cities such as Tehran, Esfahan and Tabriz, this research has categorised the general types in the spatial, functional, legal, and social aspects of these bazaars (Yadollahi, 2017). Based on these categories and according to the literature on the methods of studying public places , this research has developed a method to study an Iranian bazaar as a public place. After documenting the aspects mentioned above in the Tabriz Bazaar, located in the north-west of Iran, this method is modified specifically for and applied towards this case. The present paper discusses the results of implementing the mapping method on the Tabriz Bazaar. The adaptation of the mentioned method towards the Tabriz Bazaar is based on the data collected through regular ethnographic research in the bazaar between March 2013 and September 2015.

Through mapping the functional, physical, legal, and cultural aspects of the involvement of public and private actors in the bazaar, this research addresses the following questions: How can we map the socio-spatial fabric of a bazaar as a public place? How can we discover the patterns of spatial distribution of public and private power in a bazaar, considering the four aspects mentioned above? Does crowdedness of a bazaar represent social diversity and equality of all public members in its use and control?

2 THE RATIONALE OF THE APPLIED METHOD

This method is designed based on the four factors that play a significant role in defining the public or private character of a place. Researchers such as Canter and Habraken have analytically studied the physical, functional, and social forces that shape the character of the built environment. Putting the categories introduced by these researchers and the corresponding attributes of Iranian bazaars together, factors of use, physical accessibility, ownership and local culture of territory-defining are suggested for studying the publicness of bazaars (Yadollahi & Weidner, 2017). Using these factors, it is investigated how different variations of the composition of these factors can influence the openness and accessibility of the spaces in a bazaar. The basic logic of the method is that if we can categorise the levels of publicity and privacy regarding each of these four factors in areas of a bazaar, we can explain how and why some spaces are (formally or informally) more public or more private. Accordingly, by means of these categories, we can illustrate the fabric of a bazaar in terms of the publicity-privacy of areas in it. It should be mentioned that this fabric is subject to change because, the physical, functional, legal, and cultural conditions of a bazaar is in continuous change.

To relate the mentioned four fundamental factors with the typologies of spaces found in a bazaar a matrix is used (Table 1). The openness-accessibility factors form the rows of the matrix and the columns indicate the degrees of publicity–privacy that can be identified in an area of a bazaar. These levels or types of publicity-privacy have a qualitative nature because they are defined mainly based on qualitative ethnographic fieldwork. So, this method does not have a deductive approach, which dictates or pre-defines categories and typologies. On the contrary, it follows a flexible, empirical and inductive way of studying the built space. The number of columns depends on the precision of the surveys and the numbers of identifiable categories of physical accessibility, use , ownership and the diversity of user groups in a bazaar.

After mapping the four factors in the bazaar and juxtaposing them with the help of the described matrix, the final map shows the publicity–privacy spectrum of the bazaar. The next section presents the results of applying this method towards the case of Tabriz Bazaar.

Level of Public /Private Control Factors Defining Openness and Accessibility	The Spectrum of the Public - Private Control in the Studied Spaces	
	Public	Private
Physical Accessibility	Spaces providing the highest level public accessibility	Spaces designed to ensure maximum private control on accessibility
Current Use	Uses attracting the largest volume of users with the greatest social diversity	Functions that mainly involve owners or limited (filtered) users
Legal Status of Land Ownership and Control	Public – State ownership	Private and vaqf ownership
Culture of Territory Defining	Places in which the highest level of diversity of groups, engaging in optional activities is observed	Places that are culturally considered as territories of certain groups or individuals

Table 1 - The publicity–privacy spectrum matrix for Iranian bazaars (Yadollahi, 2017).

3 RESULTS OF APPLYING THE METHOD TOWARDS THE TABRIZ BAZAAR CASE

Tabriz, located in Eastern Azerbaijan province in North West of Iran is one of the cities that have a long history of commerce. Tabriz is one of the largest commercial and industrial cities of Iran (Azerbaijan Governorship, 2013). The bazaar of Tabriz is located at the core of the historic centre of Tabriz. The historic city includes the area inside the former 18th-century city walls (Iranian Cultural Heritage, Handicrafts, and Tourism Organization, 2009) (Figure 1).

The Tabriz historical area, with the bazaar at its centre, is densely occupied with commercial areas. As the Detailed Plan of Tabriz Historic Area suggest, 50 percent of the trade in Tabriz took place in the city centre in 1995 (Aban consultant engineers, 1995). We should consider that this information is valid for 1995. But, the recent Master Plan of the city shows that the commercial character of the city centre has not changed dramatically (The Municipality of Tabriz, 2011).

The bazaar of Tabriz is located in the commercial centre of the city, it has several retail and wholesales units that offer various services. Architecturally speaking, there are numerous open spaces in the bazaar"s spatial network that are accessible to the public. We should remind that the Tabriz bazaar is a crowded place, especially in its southern areas. However, our studies show that the public life in the Tabriz bazaar lacks social diversity.

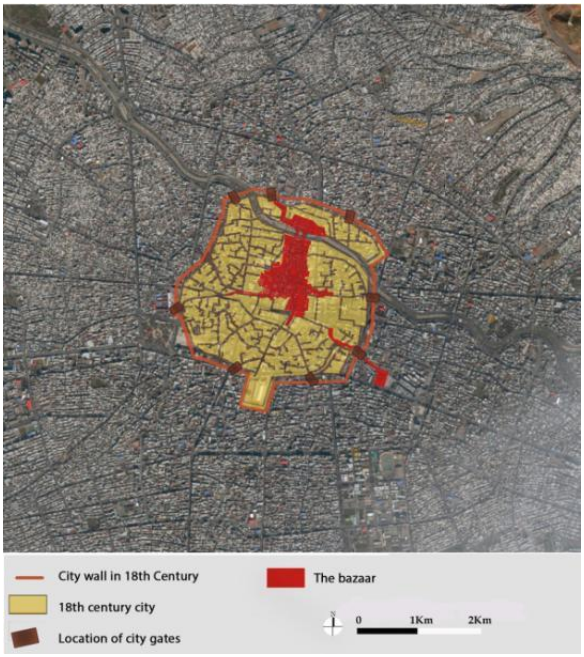

Figure 1 - The location of the bazaar in the historical city of Tabriz. (Yadollahi, 2017).

The national statistics show that the population of Tabriz in terms of gender, educational level and social class is diverse (Yadollahi, 2017). However, the results of the ethnographic research and quantitative observations in Tabriz bazaar between March 2013 and September 2015 do not show the similar diversity. The findings of this research show that most of the users of Tabriz Bazaar are from a traditional social background (Yadollahi, 2017). Furthermore, the quantitative surveys in the Tabriz Bazaar by Yadollahi (2017) show that the percentage of male users in the Tabriz Bazaar was observed to be between around 72.7% and 93.3% of the total users, including women and children. It is noteworthy that the number of children using the bazaar in relation to the adults did not go higher than 2.67% in the Tabriz Bazaar .

The lack of social diversity in the public spaces of the Tabriz Bazaar was a motivation to study the forces that influence and shape the public life in this bazaar. As the first step of studying the public life in the Tabriz Bazaar, the four factors of use, physical accessibility, ownership and local culture of territory-defining, mentioned earlier have been investigated and mapped (Figures 2-5).

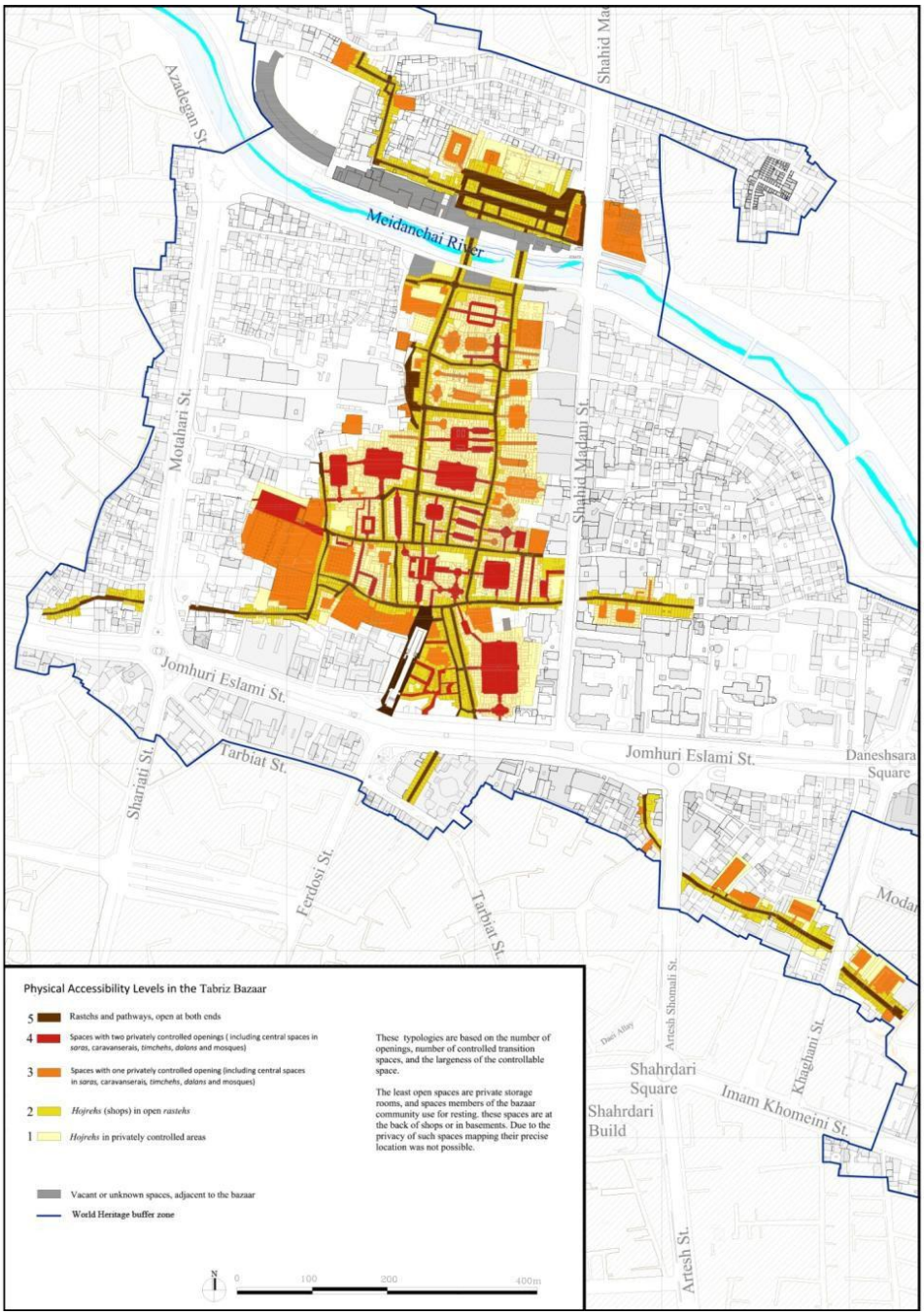

Figure 2 - Identified categories of physical accessibility in the Tabriz Bazaar (Yadollahi, 2017).

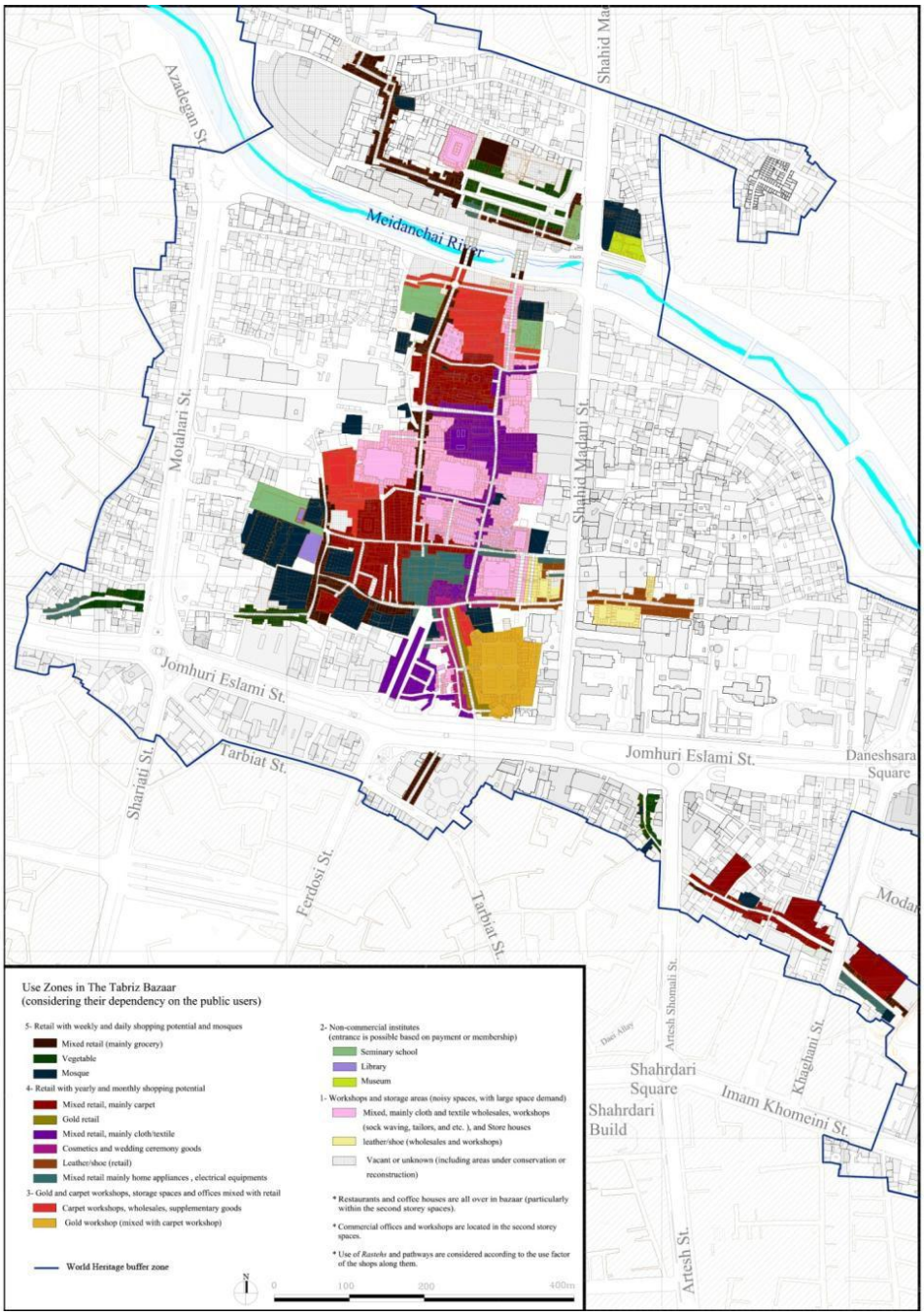

Figure 3 - Identified categories of use in the Tabriz Bazaar (Yadollahi, 2017).

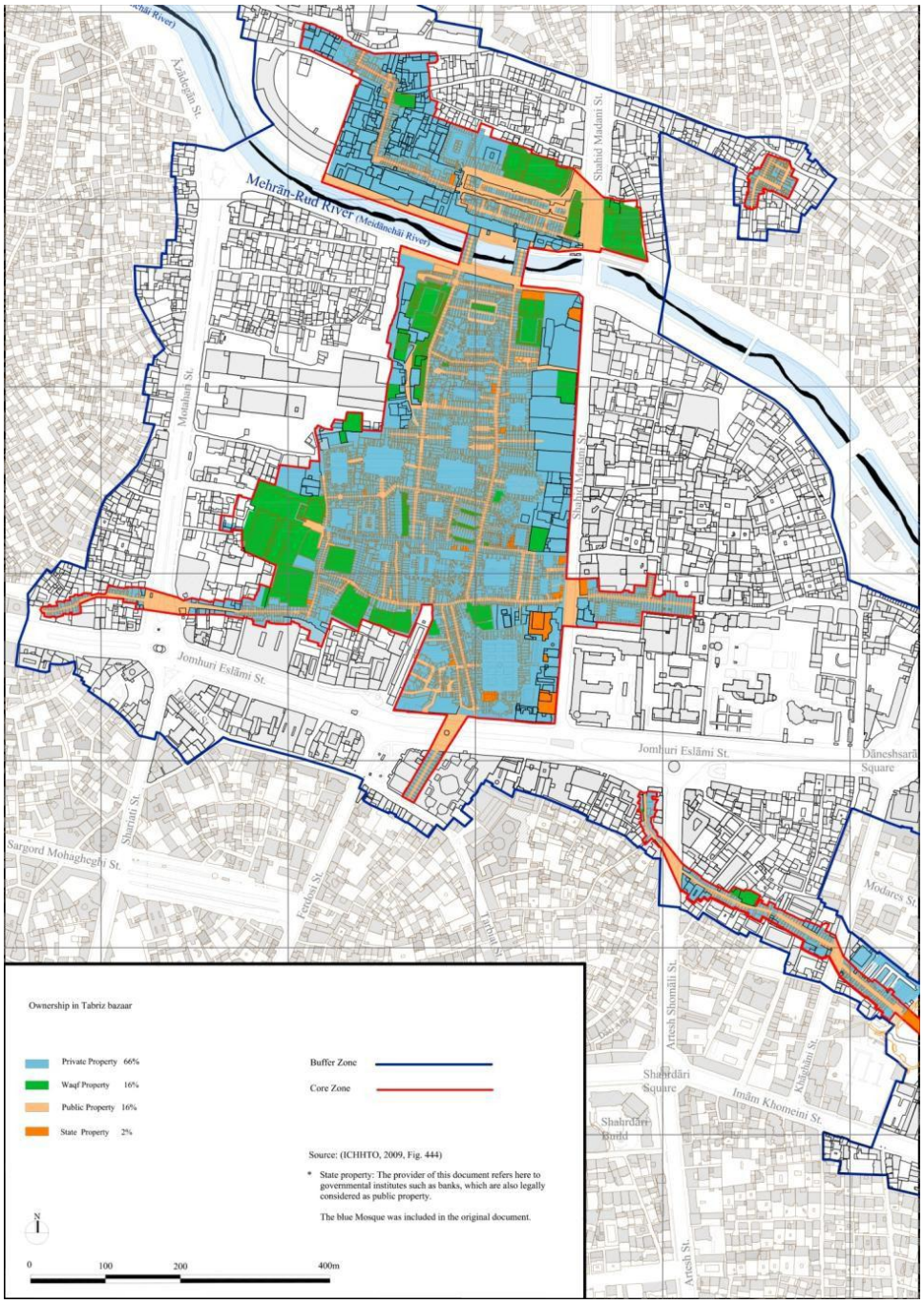

Figure 4 - Identified categories of ownership in the Tabriz Bazaar (ICHHTO, 2009, p. 496).

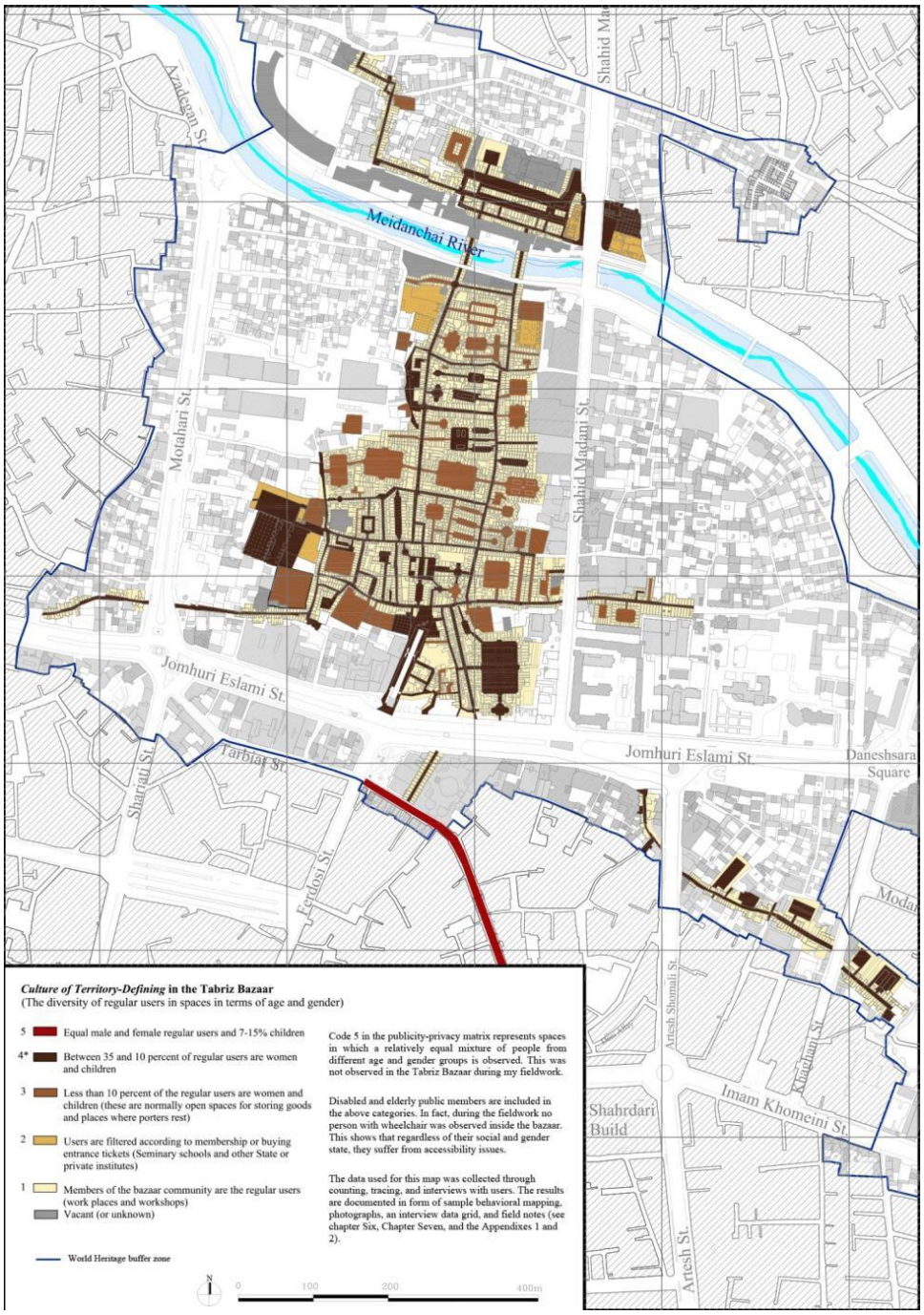

Figure 5 - Identified categories of the local culture of territory-defining in the Tabriz Bazaar (Yadollahi, 2017).

The categories found in the Tabriz Bazaar, regarding each of the factors mentioned above are briefly explained as follows:

- Physical Accessibility: The typologies of physical accessibility in the Tabriz Bazaar are defined based on the number of openings, their size, and the largeness of the area of privately controllable space. The privately controllable buildings in the bazaar are not accessible to the public before and after the working hours.
- Use: The capacities of each use zone to attract diverse user groups on daily, monthly, and yearly basis were categorised in the case of commercial areas. For defining use categories in non-commercial areas, the factor of membership or institutional control was considered.
- Ownership: Two types of public and private control were identified in the Tabriz Bazaar. The categories of properties that have a legal public or private ownership status are clear. In the Tabriz Bazaar, there are several buildings owned by the Owqaf and Endowment Affairs

Organization (OEAO). Regarding these properties, the extent and possibility of public control in them was considered in categorising them. Firstly, the head of the OEAO is not elected by the Parliament. Secondly, a Vaqf property is not legally considered a private or public property. Therefore, the regular public members are not legally involved in decision-making about the physical or functional changes in these buildings (Yadollahi, 2017). So, in terms of legal public and private control level, the status of Vaqf properties are considered closer to private properties in the bazaar.

- The Local Territory-Defining Culture: For categorising the local territory-defining culture in the bazaar, the regularity and quality of optional and necessary behaviours of the user groups were observed and recorded . The consistency of optional activities performed by a particular group indicates that they consider the public space their comfort zone or their cultural (although not legal) territory. Some parts of the Tabriz Bazaar (especially in the southern areas) can become overcrowded during the peak hours (Yadollahi 2017) . Nevertheless, the patterns of optional and necessary activities of different users were observed to be remarkably different. Therefore, the factors of gender, age, and social class were highlighted in the ethnographic investigations.

As mentioned in the earlier pages, the number of male users in the bazaar is significantly higher than those of female and child users. The conducted research also shows that women usually use the public spaces only for the necessary activities. Those women who choose the bazaar for shopping are mostly from the traditional and religious social groups (Yadollahi, 2017). In addition to quantitative and qualitative observations, 35 users of the bazaar and a nearby shopping street were interviewed. Some female interviewees who had the traditional Islamic hijab stated that they felt welcomed and comfortable in the bazaar because they have a proper hijab. Most of the female respondents who had dress choices other than the preferable Islamic hijab complained about the dominant masculine and traditional ambience of the bazaar. The observation of both female groups shows that although most of them do not involve in optional activities in public spaces of the bazaar, the non-traditional group shows more interest and desire for having the possibility to enjoy such activities.

After categorising the areas of the bazaar in regards to the described four factors, the map of the publicity-privacy spectrum of the Tabriz Bazaar was prepared based on the presented maps. To be able to put together the mapping results of the four factors in the Tabriz Bazaar, the identified codes of categories were added to each other in each space. The final row in the matrix (Table 2) shows the possible results of coding.

Level of Public Control / Factors Defining Openness and Accessibility	5 (Public)	4	3	2	1 (Private)
Physical Accessibility (identified by the architectural typology of spaces, photography, and field sketches)	rastah	central spaces in sarraj, caravanserais, timches, dalans, mosques with two and more controllable openings	central spaces in sarraj, caravanserais, timches, dalans and mosques with one controllable opening	hujeits (small rooms used for various purposes) in open rastahs	hujeits in privately controlled buildings
Current Use (identified by field notes)	retail with weekly and daily shopping potential and mosques	retail with yearly and monthly shopping potential	gold and carpet workshops, storage spaces and offices mixed with retail	non-commercial institutions (accepting individuals based on payment or membership	workshops and storage spaces (noisy, requiring plenty of space)
Ownership (legal status of land ownership)	public (State)	-	-	-	private and vaqf ownership
Culture of Territory-Defining (identified by interviews, tracing and counting)	relatively equal mixture of people from different age and gender groups is observed	10–15% of regular users are women and children	less than 10% of regular users are women and children (these are normally spaces for storing goods and places where porters rest)	seminary schools and other institutes (used mainly by certain users)	used primarily by staff (workplaces and workshops)
Result: The level of publicity-privacy in each zone	17-23	15-14	13-11	10-8	7-4

Table 2 - The publicity–privacy categories observed in the Tabriz Bazaar (Yadollahi & Weidner, 2017)

Although the method of adding the codes is used here as a solution for juxtaposing the four maps, the outcome will be more than a sum of these four factors. As explained in the previous section, the codes represent categories or levels that are defined based on qualitative contextual investigations in the Tabriz Bazaar. For instance, code 1 is considered to represent the functional category, which attracts minimum public users in the Tabriz Bazaar. As can be seen in Table 2, in other factors, these codes are defined

based on ethnographic fieldwork targeted on the four factors that affect openness and accessibility of spaces. In the case of the local culture of territory-defining factor, results of quantitative observations were triangulated with the results of qualitative observation and interviews to assure the accuracy of the judgments. In general, the results of the mapping method show the extent to which each of the four physical, functional, legal, and cultural factors influence the public or private character of spaces in the bazaar. Figure 6 shows the publicity-privacy spectrum map, resulted from the explained mapping process.

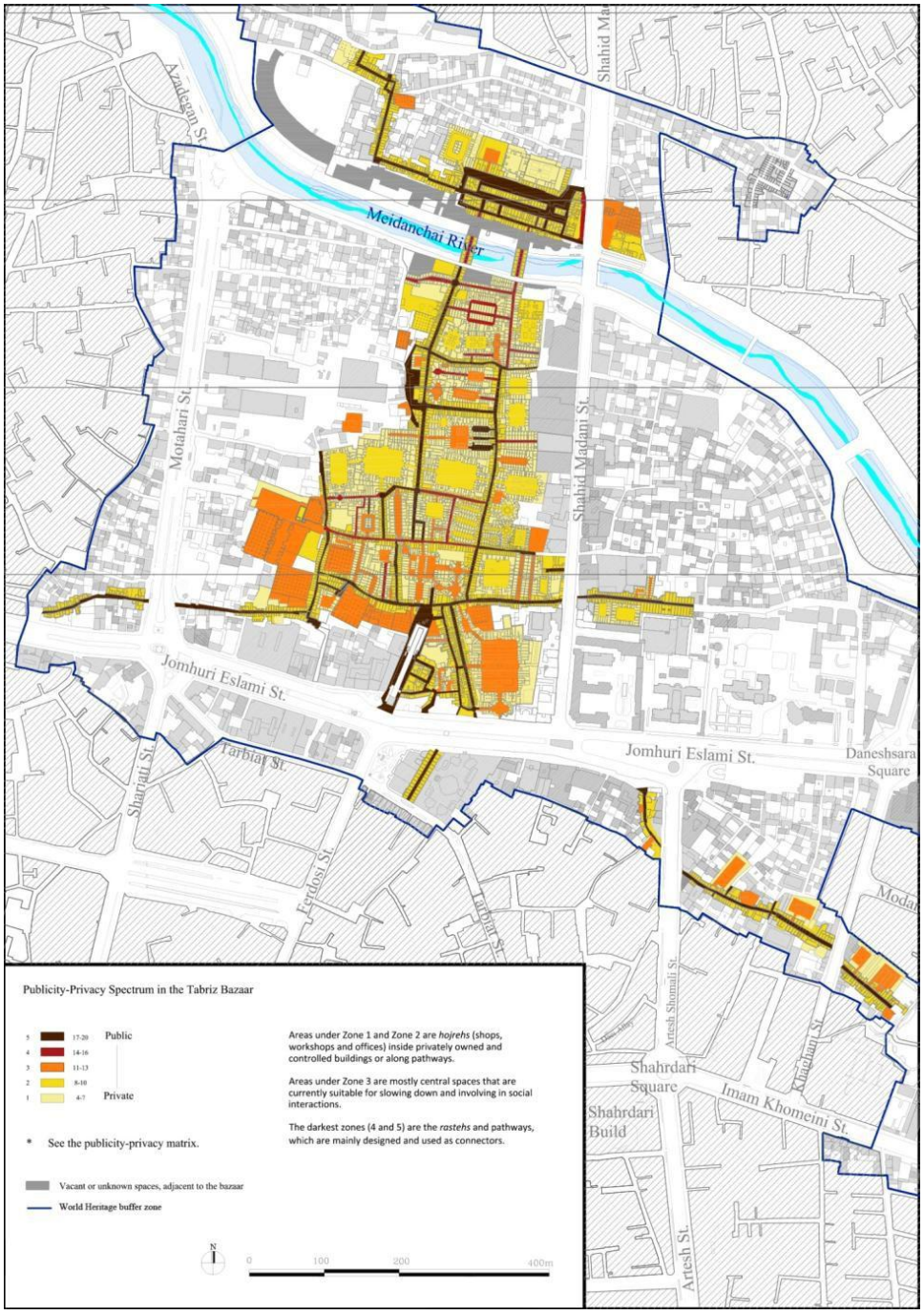

Figure 6 - The publicity-privacy spectrum in the Tabriz Bazaar (Yadollahi, 2017)

3.1 THE PATTERNS OF THE SPATIAL DISTRIBUTION OF THE PUBLIC AND PRIVATE POWER IN THE TABRIZ BAZAAR

The previous pages presented the method which was designed through the course of this research to map the socio-spatial fabric of an Iranian bazaar as a public place. This section discusses the patterns of the

spatial distribution of public and private power in the Tabriz Bazaar, considering the four factors of use, physical accessibility, ownership and the local culture of territory-defining. These patterns are revealed as a result of comparing the maps of the bazaar regarding each of the four factors and its publicity-privacy spectrum map. As the results showed, spaces in the Tabriz bazaar show three general characters. They are connectors, centres of public life, or private areas. The patterns of public life, observed in each of these areas can be summarised as follows;

- Connectors: As can be seen in the publicity-privacy spectrum map (Figure 6), the darkest areas (zones 5 and 4) form a spine, which keeps the public and private spaces of the bazaar together. So, spatially and functionally speaking, these connectors, which are mainly used by the regular public define the integrity of the structure of the bazaar. However, if we compare the publicity-privacy map with the maps prepared for each of the four factors, it becomes apparent that the strongest factor that defines the character of zone 5 as public spaces and main connectors is the use of their adjacent spaces. The high physical accessibility and public ownership in them are also effective but not determinative in shaping the public life in them.

Areas within the zones identified with code 4 can be described as secondary connectors. The factor which is mostly influential in differentiating them from 5 and zone 3 is their level of physical accessibility and the use of their adjacent spaces.

- Centres of public life: The Orange Zones (areas in Zone 3) are currently the middle zones regarding public and private control. Typically, these zones are the interior open spaces of the privately owned building in which an active public life was regularly observed. Comparing the presented maps with each other, we can observe that what makes Zone 3 different from Zone 4 and Zone 5 is the factor of use in it, which is less dependent on public users. Actually, the lower levels of the physical accessibility and the Territory-defining culture factors result from the more private uses in it. The architectural design in spaces within the Orange Zone allows free entrance on the one hand and makes private control of the openings possible on the other hand. However, because the uses of them do not demand high privacy, the private or vaqf ownership does not limit the public access to them, the Orange Zones have become the centres of public life in the Tabriz bazaar. Accordingly, the social diversity of the regular users who engage in optional activities in such spaces is higher than the other areas of the bazaar.

Areas in these Orange zones represent the centres of public life in the Tabriz Bazaar. Regarding the question of the relationship between crowdedness and social diversity in different parts of the bazaar, we should note two points. First; although the Brown and Red zones (zones 5 and 4) show a higher level of public presence comparing to the Orange Zone, they do not have the same level of publicness because they are mainly used for necessary activities such as passing by and shopping. Second; the stronger public character of the Orange Zones, comparing to other zones in the Tabriz Bazaar does not mean that they are equally open, accessible, and attractive to all people in Tabriz. As mentioned earlier in this paper, the results of the ethnographic research in the Tabriz Bazaar do not show a similar diversity, compared with the official population statistic in the Tabriz city. Therefore, the highest level for the factor of the Local Territory-Defining Culture in the Tabriz Bazaar is Four.

As we have briefly explained in Yadollahi and Weidner (2017), the Orange Zones offer an opportunity to the planners and managers of the bazaar for enhancing the involvement of women and children, because they have potential characteristics of successful public places such as safety, moderate crowdedness and good physical accessibility. Therefore, it can be said that if these zones start to attract a wider diversity of public users, they will influence their adjacent open spaces that are today classified under Zone 2. This will Consequently generate a growth in the density of the Orange Zones or the centres of public life in the bazaar.

- Private spaces: As we approach areas in zones 2 and 1, the character of spaces gets more private. These zones are mostly hojrehs (small spaces in the bazaar) used as shops, workshops, and offices, located inside the privately owned and controlled buildings or along pathways. When viewing the presented maps, a meaningful shift from public to a private character can be observed in the interconnected factors of physical accessibility, ownership, and Territory-defining culture as we move from Zone 3 to in Zone 2. In Zone 1, the factors of physical accessibility, use, and Territory-defining culture have stronger private character, comparing to Zone 2. However,

due to the mixed use of some areas in it, even Zone 1 is relatively depended on the presence of the public user.

4 CONCLUSION

The presented results show how the level of public or private power and influence regarding accessibility, use, ownership, and culture of territory-defining of an area defines the quality of public life in it. Furthermore, the patterns of the interconnectivity of the mentioned factors with each other can be concluded from the findings. Understanding the revealed patterns of the distribution of public and private power in a bazaar helps us to explain the reasons why it is the kind of public place that we know today.

The first clear outcome of the described mapping process is that even in the highly private zones, the factor of use significantly depends on the presence of the public users. Nevertheless, the culture of territory-defining in these areas (Zone 1 and Zone 2) is clearly in favour of private control.

Maybe the most significant finding is that no space with a level of 5 for the factor of territory-defining culture was observed in the Tabriz Bazaar. Therefore, it can be said that despite the high level of their functional dependency on the public users, even the public zones in the bazaar are not welcoming to a broad range of public members. In other words, the power of public members in shaping territories in the bazaar is limited. Among the public users, women and children are the most marginalised groups. The State, the private owners, and the supervisors of the vaqf properties are the actors who mainly define the norms of public life in the bazaar. Considering the high dependency of the bazaar on the involvement of the regular public on the one hand, and the level of the social diversity observed in it, on the other hand, it can be said that as a commercial institution, the bazaar is making a strategic mistake regarding its approach towards the public users.

The idea of the „public man" and „private woman" is something that we have inherited from the past. So, one can argue that the way in which bazaars are used by the public members is also a heritage. But, the question is, do we have to apply all aspects of our heritage to our present life? This research argues that we have not only the option but the responsibility to understand and revise our heritage and contribute our creative solutions for integrating it into our present life. As Lowenthal (2000) suggests, heritage protection has to be a publically inclusive and creative stewardship, which encourages a prudent confidence for making careful alterations in the heritage. This research has provided empirical evidence, showing that there is a need for revising the Iranian bazaar as heritage and as a public place.

In fact, the aim of mapping the Tabriz Bazaar as a public place was to point our this problem based on empirically collected evidence. The ultimate goal of this mapping process is contributing to the enhancement of the diversity of the gender, age, and social class of the groups involved in the bazaar. These groups, which can be involved in the bazaar in the role of customers, investors, social activists or users of the bazaar"s public spaces and institutions can enrich the bazaar with social capital. Once activated and generated, this social capital can reproduce itself and be passed from generation to generation. Through building strong connections with diverse groups of potential users, investors and custodians, the historical bazaar will have a greater chance to survive the consequences of rapid commercial and cultural globalisation.

Considering the current urban management system in Iran, the bazaar community and the State are the actors who should take the first steps to provide these connections. By highlighting the public and private levels of control and power in the Tabriz Bazaar, this research aims to offer a tool that can facilitate taking this first step. Although the results obtained for the Tabriz Bazaar do not represent the state of public life in other bazaars in the Iranian commercial cities, the presented method and its corresponding results in the Tabriz Bazaar can inspire our approach in studying and adopting conservation planning policies regarding the Iranian Bazaar.

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ID 1589 | E-CAMPUS SPACE REVISITING THE LIFE AND DEATH OF THE CAMPUS URBAN LIFE

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ABSTRACT: How has Wi-Fi and smartphones changed the excitement of the Campus urban space? To what extent has it de-engaged students from themselves and their surrounding? How has the culture of smart phones affected the on-campus communication style in public spaces among the younger generation? The study is a continuation of the dialogue generated by Keith Hampton, Lee Humphreys and others on the impact of mobile phones in public spaces. However, it chooses to focus on ME Gulf City Campus Life. Campus life has traditionally been one of the most memorable and engaging experiences of student life. The common age-group, shared major of study, interest and common agenda has branded

the university life to become so memorable in the development and growth of a student, perhaps so much more than any other urban space in the city. Ever since the introduction of virtual space, that aspect seems to have changed. This study aims to investigate the effects of smart phones on how people interact, connect and perceive campus urban spaces. It investigates some aspects of the culture of smart phones on the design of urban spaces. These aspects of how people connect and perceive urban spaces, their cognitive abilities, communication skills, behaviour and face to face interactions are just few effects of smart phones in shaping the identity of people and places. The study finally investigates whether the design of the space affects how people use their phones or are there other factors that play a role in that. For this research, the students of the American University of Sharjah (AUS) are surveyed for the case study. The findings include insights about what motivates people to use their phones in public spaces and how physical elements of a space such as the provision of various seating options, soft-scape, good views, etc. would affect the likelihood of using smart phones.

KEYWORDS: mobile phones, social isolation, campus space, observation

1 INTRODUCTION

For a decade or more, the use of smart phones has been one of the popular acts throughout different societies attracting people of all age groups. The use of smart phones in public space social life became an undeniable phenomenon since about 2012 (Reisinger, 2013). Smart phones miraculously got people close to each other, they can now call, text, Skype and check Facebook posts from all over the world. Smart phones have changed from a simple communication tool, to a technological extension to our body (Lanier, 2010). Everyweher in the city, social life in public spaces is changing. Interaction and engagment seem no longer related to the confines of physical space and design. On campus too life is changing. We cannot leave a place without our phones. Walking around campus, students no longer talk to each other anymore while walking to classes. Even when sitting together on the same table, a short phrase when something pops-up, then each one goes back to their own digital world. Smart phones replaced face to face interactions. The use of mobile phones has turned public urban spaces into private ones where each person is in their own world with someone who is not in their same location. People move around with their own private bubbles, their own private public space. Therefore, as urban planning scholars, the question is posed: how does this behaviour affects how people perceive campus urban spaces? How do students interact with their campus environment within the dominance of non-physical engagement? Is there a new task for the campus planner/designer? The scope of this study is bound by the behaviour of users of the American University of Sharjah (UAE).

The time a person spends on smart phones is a lot more than what we spend on other life activities. Recent studies show that the average time an individual spends on a cell phone was about 4 hours every day (Emarketer, 2017, Flurry Analytics, 2017). Smart phones therefore affected the way people communicate and behave in outdoor as well as indoor public spaces. Many studies about the effects of smart phones -and their predecessors the mobile phones and PDAs -on social interaction and face-to-face communication in public spaces have been conducted. Lee Humphreys (2005) for example, performed a year-long observational study on how people's interaction changes in public spaces and how mobile phones became an anchor for societal relations. The behavior of people was examined when they were alone or with someone and how they used their phones as "defense mechanisms" to escape from "social vulnerabilities" (Humphreys, 2005). Keith Hampton's et al. (2010) looked at how social life took place in "wireless urban spaces". They observed seven public parks in four different cities in the US. The findings indicated three things: that people are attracted to public spaces that offer internet connection that they would not otherwise visit; that the location of seating that people choose depends on their usage of smart phones; and that users can be less aware of what is happening in their surroundings and are less likely to be engaged in in-person conversations. Ira Hyman (2014) compared the acceptance of cell phone usage among social groups. She found that young generation found texting and using smart phones among social groups to be more acceptable than older generations. Ling (2002) goes on to suggest that smart phones restrict the social interaction and nonverbal communication especially among the younger generation. While Irfan, Aqeel and others (2014) find the opposite -that owning a cell phone actually increases social capital and sense of belonging among university students.

Therefore, the issue of whether or not smart phones positively or negatively affect the campus life experience is still largely undetermined. This study uses different methodologies and in a different context and cultural setting.

2 LOCATION OF THE STUDY

For this study, participants are selected from one university, American University of Sharjah, in the United Arab Emirates (UAE). The United Arab Emirates is an Arab country located in the southeast of the Arabian Peninsula. The UAE is made up of seven emirates, Abu Dhabi, Dubai, Sharjah, Ajman, Ras Al Khaimah, Umm Al Quwain, and Fujairah. It is known to be one of the top countries hosting a wide diversity of cultures and nationalities which makes it an interesting field for social and studies. The city of Sharjah is the third largest emirate in the UAE. The American University of Sharjah was founded in in 1997 and is now a prominent all-inclusive coeducational university in the Gulf region. .

AUS is a huge 150 hectares campus with its acadeic core spreading across 18 hectares (550x360m). Academic buildings are symmetrically alligned along both sides of a north-south axis with the Main Building and Library (4) at its vista. The main gathering places are mostly indoors. The Student Center (2) has lounges, a food court, and Break Point restaurant. The Libaray building and its annex has the reading hall (4), the Sheraa Enterpeneurship Center and its infamous Belnds and Brew Cafe (3). Wifi servise covers the whole campus spaces both indoor and outdor (figure 1).

Figure 1-American University of Sharjah Campus

3 RESEARCH METHODOLOGY

This exploratory study was conducted on three stages; online survey, recorded video observations and face-to-face interviews. In the first stage ; 35 students currently enrolled in AUS in different majors took the online survey. In this survey, campus spaces where student gather, use their smart phones and interact were identified. Students were asked 10 questions about their smart phone habits, technology dependency, reactions to their surroundings, their life before and after they own a smart phone and finally to rank the public spaces in the university where they use their phones the most to where they use it the least.3

Based on the survey findings, the second stage used unstructured observation technique (Gillham 2008) at those key locations around AUS during lunch breaks and campus peak hours. The main focus was on how students behave with each other and with their surroundings. The other motive was to understand the role of the space design on students' decisions to use or pay no attention to their smart phones and explore what other factors can play a role in that.

The third stage used in depth interviews with 16 students to find out about the motives of their behaviour and actions.

Figure 2 - Interview Analysis

The research took place during finals weeks. This caused the sample of our interviews to be smaller than what was intended. Not only this, but this might have also impacted the answers of the interviewees regarding their behaviour in the two spaces especially in the library cafe because all what they were thinking about is their studies. In addition, the findings might be limited to college students who are within a specific age group and not in public spaces in general. Therefore, the reasearch is considered more exploratory in nature.

After the data collection, the analysis started with identifying trends and behaviour patterns. First, the scripts of the interviews were written, coded by their reparation and categorized into groups with different labels. From there they were prioritized according to their relevance to the study. The final step was to expand the understanding and explore the relationship between every answer and the other (figure 2).

4 FINDINGS

For the survey, results showed where students used their smart phones most and where they used them the least. Food Courts and Lounges ranked top in usage whereas Blends and Brews Cafe at the Sheraa Enterpneurship Center has the least usage (figure 3).

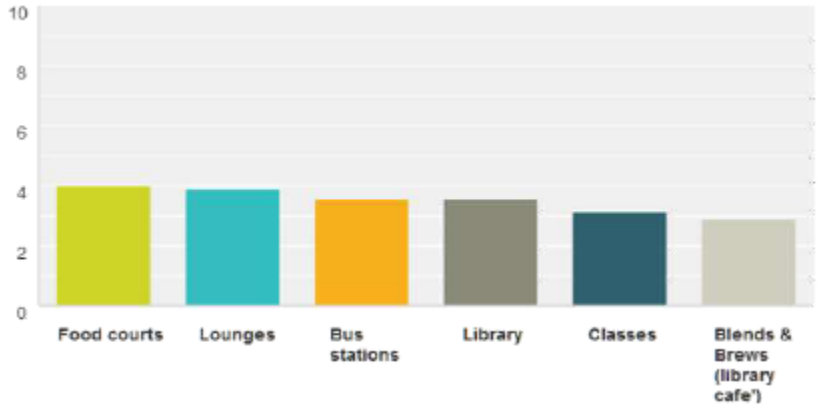

Figure 3– Smart Phone Usage Ranking on Campus

During the observation, it was noted how students would react differently when they were alone or when they were in a group. When eating alone, they would be on their phones the whole time, while when they were with friends they would finish eating and check their phones immediately. Studying with friends or enjoying a coffee seem to drive students to abandon their smart phones for a long time.

Finally student interviewed results show that almost all the students agreed that food courts are the spaces on campus where students use their phones the most and that the library café is where they used it the least. When asked about their relationship with their phones, some people used the words “intimate”, “cannot live without it” and even “it’s like my wife” to describe this relationship. (see Appendix B for sample survey).

5 ANALYSIS

Upon review of the findings, it became apparent that certain factors contribute more than others to an attachment to smart phones. The following are some of these observations:

5.1 LONELINESS AND THE SURROUNDING ENVIRONMENT

Students seem more inclined to use smart phones when they are alone. Their frequency of use can be up to 10 times in an hour. Whereas when with friends, they tend to check them for a maximum of 5 times. This seems to indicate that the usage of a cell phone decreases when a person is accompanied by someone however, when alone and not concentrating in something such as studies, students tend to spend more time on their phones. This is compounded by another factor, the attractivenss of the surrounding environment. Students felt distracted and less connected to their surroundings when they use their phones. All participants stated that if they were not busy with their phones they will most probably enjoy the space and recognize its beauty and their surrounding environment generally.

The relatively low smart phone engagement rates at both the Sheraa Blends and Brews (Library café) compared to those in Break Point and lounges seem to further substantiate this fact. Sheraa – ‘Sail’ in Arabic (Sharjah Entrepreneurship Center) was launched in January 2016 to provide a launch pad for aspiring young entrepreneurs in the UAE. It is headquartered in AUS library and was designed to create an innovative, relaxing and comfortable environment that would aid in the flow of ideas. It has a refreshing mood with unconventional indoor stepped seating, swings, lighting fixtures that really seem to attract students to look around and engage. On the other hand Break Point is a classical restaurant with tables and chairs arranged in a conventional template manner. This goes to indicate that the physical elements and assigned activities of the space do have an effect on how people behave and interact. When asked about what would they do in this space we found out that people actually had clear ideas of things to do in the library café more than they could think of in break point. It supports the assumption that people were more engaged and paid attention to the space and thought well about enhancing their experience within the space than the restaurant area.

5.2 LIFE WITHOUT A CONNECTION

When asked what they would prefer to do in the space if they have no internet connection, students at Break point mentioned they would stare at the walls, have a meal then immediately leave after they finish or start a conversation with people sharing the space. While those at the library café students went for a wider variety of activities such as, listen to music, read, eat, grab a coffee or just approach others and start a casual conversation.

Figure 5 – Various views at the Blends and Brews Sheraa Center vs tthat of Break Point (lower right)

Noticeably, students would actually find something to do without having internet connection to kill their desire to interact with friends and with their surroundings. Also the common factor between the two spaces from the answers is starting a conversation with the person they are accompanied with. Therefore, an important question was asked, “How long would you stay in this space without checking your phone?”

Figure 6- Feeling without internet connection

For Break point students they said as long as it takes to finish eating, others stated they can’t tolerate to spend more than 5 minutes. While this was an interview question, this is one of the behaviors documented while taking the observation videos.

While students answered positively that they would find different activities to do when there is no internet connection, this was contradicted by the survey responses. The question in the survey was to use a word to describe your feeling without an internet connection. Mostly used words were bored, normal, disconnected, lost and uncomfortable (figure 6). However, back to the previous point, people were can expressed their willingness to invest their time in other life activities. That means, the belief that we cannot live without our mobile phones is taking our minds off the things we can actually do and enjoy.

5.3 ENJOY THE VIEW

After observing and analysing the behaviour of people in these two spaces, the space design and physical character was investigated to study their effects on the behaviour of people. Physical elements in this

study include seating arrangements and options, lighting, landscaping as well as outdoor views. The analysis started by asking people in the survey about their first reaction when they stand in front of a very beautiful view. The answers revealed the participants' willingness to enjoy the view without their smart phones (48%) but almost the same percentage of people responded they will use their smart phones to capture the view (49%). Very few thought asking someone to share the moment would make them enjoy and appreciate the view (see figure 7). This might prove smart phones to be one of the factors that steal priceless moments and limit the joy of exploring life and adventures.

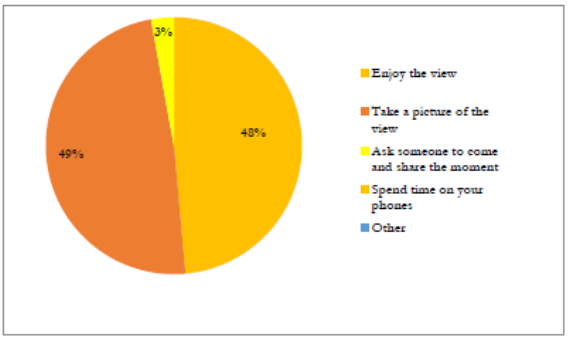

Figure 7 - Response to a beautiful view

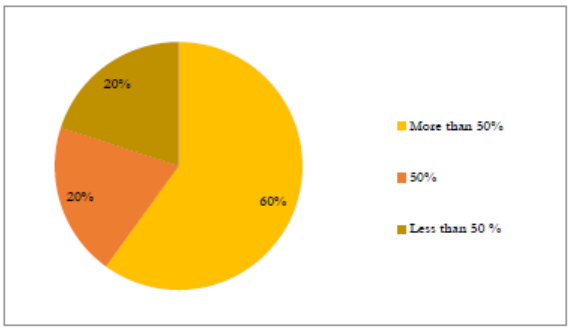

Figure 8 - Willingness to spend time on phone

Not only this, but when asked during the interview about elements to add or remove to distract people from using their phones, most of the respondents answered that an outdoor view or wider windows to the outside would actually reduce the amount of time people spend on their phones. However, these answers were contradicted by a question that the students answered in the survey. The question was: how much of your time would you spend using your phone if you are in front of a beautiful view?

The responses show that while people claim that a beautiful view would distract them from using their phones and that they would just enjoy the beautiful view they are watching, they would spend more than 50% of the time on their phones.

Students in both places stated that their phones are the only source of entertainment especially if they are alone. Therefore they suggested some elements to make the spaces more lively and entertaining to take their eyes off their phones. Adding a source of entertainment such as TVs or activities was common in both places. Students thought of break point as merely a place to eat, they were not really keen about making it look better of change anything about it to distract them other than the three elements mentioned above. As for the library students were more open to suggestions and additions to the space as they can spend more time their studying or with their friends. They wanted to add elements of nature to the space and relaxing music in order to make them feel comfortable. A really good suggestion was choosing what types of tables are available to use in this space by making them higher for example to encourage studying rather than feeling like sitting in a lounge. This takes us to another important question that we asked during the interview. The question was "Why did you choose this particular place to sit while you have a variety of seating options?" Break point as apace does not really offer a variety of seating options; you either sit on the couch (figure 9) or on chairs, on a gigantic table for four (figure 10) or more or on a small table for two. Students' preferences were not varied according to specific factor, as mentioned earlier they just see it as a space that they will just eat their meal in and leave. Students chose the places they

want to sit in based on their needs at that moment. For example, needing a socket for the laptop, joining a friend or alone so a table for two is enough. Others were more concerned about their comfort and therefore they chose to sit in a more quite place or on the couches.

Figure 9 - Table for four people Figure 10 – Couches

For the Library Café interviewees mentioned that the seating selection depends on their planned activity. For example, students on the swings said it is fun to study there, some chose to set on the stepped floor to have the open view to the entire space, while others preferred to enjoy the view of the landscape so they set close to the large windows. Some student thought the excluded seating options are more private and cosy to study a way from other distractions.

On the other hand, the library café offered different seating options that are suitable for people who use the space for different purposes. These options make the space more attractive for students and more enjoyable for them when studying. Seating can be used by students who are just there to socialize, eat or drink (figure 11). They are also used by students who prefer to have tables in front of them while studying especially if the course requires solving (figure 12). The other seating options are different and more fun while studying such as the swings (figure 13) or the wooden steps shown in the pictures below (figure 14). However one disadvantage mentioned by students as to why they do not use the wooden steps is that it hurts the back. Moreover, seating options are also encouraging for groups to sit and study or do anything else together. As noticed in the observation, people sitting on seating designed for groups are less likely to use their phones than those sitting in seating designed for individuals or perceived to be used for people sitting alone or with one other person (figure 16).

Figure 11- Seating for socializing

Figure 12 - Seating for studying

Figure 13 - Swings as seating Figure 14 - Wooden steps as seating

Figure 15 - Seating for two people Figure 16 - Seating for one person

6 LIFE BEFORE SMART PHONES

With all this being said, the authors wanted to know what people think about their lives now and before having mobile phones and we found out that peoples answers can be categorized in to three main categories (refer to table below). Some people felt that their lives were better before mobile phones in terms of their relationships and communication with people as well as enjoying the outdoors. Others did not feel there is a difference between that time and now in their lives and the third category of people thought that mobile phones were actually an advantage to their lives. They think that mobile phones enhanced and strengthened communication and relationships with family and friends. However, the majority of the surveyed students were more affected negatively by mobile phones.

NEGATIVE	NEUTRAL	POSITIVE
Wasting more time (1) Life was meaningful, relationships were stronger, there was a dedicated time for hobbies and socializing physically Everything is different (2) Became harder to reach people unless you use a cell phone (1) I used to stay outdoors and not rely on it (2) I don't even remember how I was living (2) I used to communicate face to face (3) My relationships weakened (2)	Not different (9)	More and better relationships (3) Intimate communication (1) More connected (3) Had my phone since 7 or 8, so regarding my relationships with my family and friends I can state it increased and became better as I had more time with them through social media.

Table 1 – People's view of their lives before and after mobile phones

7 CONCLUSION

To sum up, enjoying campus life has changed from a dependency on pure physcal space design into a hybrid of factors that include both cyber and urban space. Design elements of a space still do matter and have an effect on how people use and behave in a particular space. What people remember about a space is affected by how long they spend on their phones but it is our duty to design spaces that leave a mark within each person no matter how long their use the smart phone in the space. The loss of connection is not because of one person but it is because all of those in a group. If you are with a group of friends who are busy doing something else or start using their phones, you are more likely to start using it to as a source of distraction or entertainment until you are given the attention once more from those sitting

with you. Student's face to face conversations are fading due to the presence of texting and when they talk to each other, they are often distracted by their phones. Moreover, we can conclude that people are aware of their actions and behaviour in public spaces and they know that they can live without their phones. However, people choose to live in it as they might convince themselves that it is the only source of entertainment. As future urban planners, our duty is not to force people to abandon their phones because clearly as they said in the interviews and as captured in the field observations this will not happen. So we should do our best to distract them as much as we can in order to strengthen the bonds they have with each other and with their surroundings.

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APPENDIX A

PAGE 1

Q1: What is the first thing you will do when you see a very beautiful view?

Take a picture of the view

Q2: If you are in-front of a very beautiful view how much time will you spend on your phone?

40

Q3: When you need to locate a place which one of the following do you use? (please select all that apply)

Ask someone

Your phone

Q4: When you use your phone for navigation,how likely are you going to use it to go to the same place again?

Very likely (will use my phone again)

Q5: What word would you use to describe yourself when you don't have an internet connection on you cell phone?

Uncomfortable

Q6: How is it different between now and the time before you own your cell phone?(e.g. relationships with your friends, practicing your hobbies, etc.)

I used to communicate face to face more

Q7: Imagine if you do not have a cell phone, how would you spend your time?

I would go out more

Q8: Please rank in which part of AUS campus do you use your phone the most? (1 Most - 6 least)

Food courts	2
Library	5
Bus stations	3
Lounges	1
Blends & Brews (library cafe')	6
Classes	4

Q9: What is your gender?

Female

Q10: How old are you?

21 – 25

APPENDIX B

Interviewee 01 (Break Point):

Q1:

Answer: I think they use it everywhere, to take photos of their pictures and upload it on instagram but I do not think the space has an effect on how much people check their phones

Q2:

Answer: Alone- long time

With people- Rarely

Q3:

Answer: Does not get caught up when using the phone

Q4:

Answer: intimate

Q5:

Answer: half an hour

Q6:

Answer: stare at the walls

Q7:

Answer: fun activities, presentations but it is difficult to make people stop using their phones

Q8:

Answer: because there is a socket here and I need to use my laptop

ID 1592 | THE CITY FROM BELOW

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1 CHILDREN, TEEN-AGERS, AND THE URBAN SPACE

According to Ansell and Smith (2008, p.1), children's position within a nation or culture holds an "immense symbolic significance". This is to say that how a society conceptualises and provides for its children represents a strategic domain in which complex social, political and moral agendas are mobilised (Freeman, 1997). Some childhood theorists go further and suggest that focusing on concepts of children and childhood is essential to understand a society or social context as a whole (Jenks, 1982; 1996; James & Prout, 1997; Corsaro, 2005). Nevertheless, however, even though children and kids are citizens to all intents and purposes (and with their own needs and rights), on the one hand, their mobility across the city – as non-drivers – is strongly reduced (Miere, 2008), so that their "right to the city" (Lefebvre, 1968) is denied in practice (see: Bozzo, 1998; Dolto, 2000; Moro, 1991); on the other hand, they usually are substantially excluded from decisions concerning the urban spaces of their daily life since they are considered as non-adults, 'still-in-progress entities' having no voice (Scoppetta, 2014a; see also: Alldred, 2000 as well as Spivak, 1994). But it is worth remembering that, after all, the well-known definition of sustainable development explicitly refers to "future generations" (WCED, 1987). Therefore, the exclusion of children and teen-agers from decision-making reveals the vagueness of such definition – "starting from how needs are to be defined and anticipated, and by whom" (Pellizzoni, 2012) – as well as the problematic character of sustainability itself.

Paradoxically, at a time of rapid demographic change, while in Western countries their proportion of the population is reducing more and more (Harper & Levin, 2005), children and teen-agers are experiencing "unprecedented" (id.) levels of intervention into their lives, for instance in the form of academic expectations, surveillance and restrictions on their already limited mobility. In this sense, it has been argued that this is an "era marked by both a sustained assault on children and a concern for children" (James et al., 1998). Many studies (see e.g.: Valentine & McKendrick, 1997), in fact, show that the presence of children and teen-agers in public space has become less evident due to an increase in parents' fears based on the perceived risks in public space from both strangers and heavy traffic (Gill, 2007; Lee, 2001) – where the former have a different and more relevant social meaning, but they often tend to remain hidden behind the latter. At the same time (and ironically), (especially male) children and teen-agers from about 9 to 13 years old daily walk across an immense virtual but extremely realistic Los Angeles – a landscape of advertising for actually existing products – by killing (or being killed) in all imaginable and unimaginable ways, by making robberies and illegally accumulating money in order to buy weapons, cars, apartments, drugs (to be sold) and various luxury objects (with well visible brand names) as well as female bodies (prostitutes) and by becoming familiar with thieves, fraudsters, (usually Mexican) prostitutes, drug addicts or dealers. This is the case of the widespread GTA V (5th edition of Rockstar's video-game "Great Theft Auto"), which cost about 256 million $, has earned 815,7 million $ in the first 24 hours after the listing, and has exceeded one billion in the first three days of sale and over 15 million copies sold (11,210,000 only the first day), with 75 million copies sold worldwide (until 2013) .

However, despite their virtual but daily experience, the relationship between children and teen-agers and the city is defined problematically in terms of the need to protect them against the city's perils (see: Valentine & McKendrick, 1997): following a more general trend (I refer to: Beck, 2006), the urban neighbourhood appears predominantly as a threat to their development and an undesirable socialising context. As a result, keeping children and kids 'off the streets' is assumed to serve their individual development, safety and wellbeing. Such an attitude reveals that what Zinnecker (1995) defines as the ideology of the "bourgeois childhood" has become a generalised pattern, an important condition in acquiring the necessary cultural, social and personal competencies and skills to be able to get on in society. This means that children and teen-agers are constantly involved in a broad range of pre-organised pedagogical settings and that institutional socialisation is seen as essential to 'normal' socialisation (Kampmann, 2004). Children's and teen-agers' everyday activities and spaces are therefore structured in a pedagogical sense: they spend most of their time in institutionalised settings such as home, school and recreational institutions (Kampmann, 2004; Rasmussen, 2004) providing them with well-controlled

developmental opportunities and preparing them for their future role in society. As a result, children's and teen-agers' use of time and space is dominated by a busy (institutionalised) leisure agenda, sometimes accompanied by leisure stress, leaving very little room for informal interactions (and for informal public spaces). This, moreover, also leads to the fact that many (not only urbanised) children and teen-agers currently live a spatially segregated life and the public realm is kept out of their everyday life as public spaces fall outside adult control and are therefore seen as a problematic influence on children's and teen-agers' socialisation. Despite the shift occurred in general planning theories and practices from Modernist 'rational' approaches based on zoning and functional separation to a more complex view of cities and societies, what concerns children's and teen-agers' urban space still remains anchored to the old logic based on separation and aimed at control. Such separate spaces clearly mirror the ways in which contemporary cities are organised according to a generational order, i.e.: the pattern regulating the relationship between adults and children, where childhood is represented in a double Apollonian-Dionysiac perspective, the former to be protected into 'safe' fenced areas; the latter to be tamed as it pretends to occupy adults' urban spaces (see: Harden, 2000; Holloway & Valentine, 2000; Valentine, 2004; Zeiher 2003; see also: Alanen & Mayall, 2001). In this sense, children may be seen as social actors provided with a "pre-determined spatiality" (Satta, 2012b; see also: 2010; 2012a).

More generally, on the one hand, we find the progressive reduction of public open spaces, where a worrying example in this sense is given by a series of regulations regarding public spaces promulgated within the frame of Tony Blair's so-called 'urban renaissance' , all aimed at fighting youth crime, but actually including within the notion of 'crime' a wide range of behaviours (e.g.: skateboarding) (see: Charman & Savage, 2002; Flint, 2006; Flint & Nixon, 2006) thus revealing the (re)emerging of a sort of (neo-Victorian?) "moral panic" (Rogers & Coaffee, 2005) with a special focus on the young population. On the other hand, we find detailed designed age-based spaces devoted to children only, which are rhetorically promoted as giving them space, whereas, by contrast, such often fenced spaces – oases in the jungle of the city, safe heavens in dangerous public space – actually subtract them the city space as a whole.

2 THE MODERN DISCOURSE ON CHILDHOOD, AND PLANNING AS AN AUTONOMOUS 'TECHNICAL' DISCIPLINE

Following Hendrick (1997a), the children/adults divide can be interpreted as an inheritance of the radical economic/social changes due to the industrial revolution, when – although until then highly valued as unskilled low wage-earning labour force (see: Pollock, 1983) – children's and teen-agers' widespread employment started to be publicly opposed (mostly by the middle and upper classes) and working class children and kids became subject to a discourse that viewed them as worth protecting as future assets to society. A more skilled labour force, however, precisely was what industry needed. Aries (1962) underlines how, in the mid-19th century, European upper classes generated an age-based hierarchy which was institutionalised as a dichotomous power relationship between adults (rational, complete and superior by nature of being fully grown) and children (irrational, incomplete and inferior), which mirrored the existing divide between upper and lower classes. In addition, the notion that if left to itself the child would become feral and wayward was influenced by longstanding ideas about original sin that regarded the child as evil, base and corrupt (Cunningham, 2006). At the same time, however, the child was also described as innocent and pure. Such twofold notion of children's natural waywardness or goodness, representing negative or positive qualities lost by adults, still remains embedded in modern Western ideas of childhood (Lister, 2005).

Whereas, traditionally seen more like small adults, children and teen-agers of the lower classes had always worked amongst adults; with these shifting concerns, child labour suddenly started to become synonymous with exploitation: "children here are represented as the victims of super-exploitation who were rescued from the predations of capitalism by the combined influences of social reformers and moralists and by the certain economic transformations which shifted demand away from unskilled towards more skilled and educated labour". In this way, "children were relocated (displaced) in 'childhood' – an idealised and romanticised state" (James et al., 1998).

It is worth noting, however, that the modern discourse on childhood and adolescence has been developed precisely during the same historical period in which even urban planning emerged as an autonomous

'technical' discipline proposed as a "cure" for the "disease" (Calabi, 1979) of the "monstrous" (Munford, 1961) industrial metropolis and as bearer of progress and improvement of living conditions. According to Benevolo (1985), the new discipline, by self-representing itself as "a sort of St. George killing the dragon" (Secchi, 2002), was able to play a reformist role in-between revolutionary impulses and reactionary repression through the elaboration of a series of 'spatial devices' (such as social housing, schools, public open spaces) constituting the fundamental elements of a (public) "positive material welfare" (Lanzani & Pasqui, 2011, p.32) that, until then, had been entrusted to (private) charities. The emerging of both planning and the new understanding of childhood seem to be related to what Bernardo Secchi (2002) has defined as "one of the deepest anxiety of Modernity" concerning the worrying transformation of the 'common people' into a threatening 'crowd', within which it was no longer possible to clearly distinguish between "classes laborieuses" and "classes dangeures" (Chevalier, 1958; more generally, see: Scoppetta, 2014a). Such an anxiety is clearly expressed by the flourishing of the 'monstrous' literature of the period – think of Sir Arthur Conan Doyle's, Oscar Wilde's and Stevenson's literary works – as well as Charles Darwin's evolutionary theories that fuelled concerns about both 'civilisation' and questions of mental and physical handicap, evolution and solutions to poverty, with a special focus on the effects of the environment on the development of child's mind, leading to further evidence for the distinctiveness of (working people's) child's 'primitiveness' with respect to the 'civilised' (middle class) adult.

Therefore, social reformers, who also theorised an educational role of planning , sought to remove working class children from the adult worlds of work, to 'civilise' them through education: schools would transform the wild nature of the working class child (often even through physical punishment) into a deferential being, by replacing child's familial and social knowledge with another one, more appropriate and worthwhile (Hendrick 1997b).

The idea of the urban fenced play-gardens emerged as part of modern concerns about childhood. It was strictly linked to both public health and educational policies. Both in the USA and Europe (Frost & Wortham, 1988), however, play-gardens were intended as constantly supervised by adults, mostly local residents and parents, but later also by professional supervisors, who also organised activities there: given the general focus on children's health and motor development, playgrounds were designed to make children exercise and develop their motor skills, while also providing them with fresh air within the city (see: Hartle & Johnson, 1993). It was just many years later that advancement in psychology, psychoanalysis and psychiatry as well as concepts from the field of developmental psychology – and particularly Piaget's (1973; see also: 1951) notion of the "naturally developing" child, i.e.: the assumption that children are 'natural' phenomena that implies a "figurative" thought as well as a distinctive "operative" intelligence – led to the idea of children and teen-agers as a class of being with specific needs, desires, rights and an innate potential capacity for reasoning, and of adult society as responsible for supporting their growing up. Such approach informed post-War attitudes towards children as individuals and concepts of child-centred learning (see. e.g.: Montessori, 1972), as "children [...] constitute an investment in the future in terms of the reproduction of social order" (James et al., 1998).

On the planning side, instead, in her seminal work, Jacobs (1961) marked a shift away from the idea of fenced playgrounds, as she underlined how children learn the fundamentals of social urban life by being able to live and play in the streets, as facing the unpredictable events taking place in the world is an essential component of children's and teen-agers' development (Hart, 1986). In fact, the separation of children's playground from the adults' urban spaces as well as the rigid division among different ages not only prevents lively inter-generational relationships, but this also denies the idea of spontaneous, creative and self-organised games in the urban space, being fenced playgrounds the sole place in which the right to play (for adults too!) is allowed. Furthermore, too often mass-produced equipments in children's gardens and playgrounds not only tend to influence their design but they also imply a passive idea of children's and kids' games as a monotonous unchangeable and mechanical practice that prevents children from experiencing an imaginative self-construction of their own space (for instance: based on the inventive use of objects trouvés). In this way, such kind of fenced and controlled children's gardens, where only pre-determined actions are allowed, keep them from autonomously managing their space and time and seem to be designed in order to construct passive subjectivities.

3 DESIGN FOR WHOM?

At the beginning of both the so-called Italian 'economic boom' and the uncontrollable and often illegal sprawling growth of the city of Rome (among the many, see, e.g: Insolera, 1962;), Vittoria Calzolari and Mario Ghio (1961) published an unfortunately too easily forgotten research-work, which is largely acknowledged as the first Italian contribution to the minimum provision of green open spaces and leisure facilities. By showing a gap which appeared as really hard to bridge, this work was based on a detailed comparison of educational provisions (in terms of school buildings and related green and sport areas as well as of educational systems) between the Italian (and, particularly, Rome) and the highly welfarist Northern European cities, such as Copenhagen, Amsterdam, Zurich, Ulm. This is a work that should be considered as a possible new starting point for the integration of both place-based and people-based planning and design approaches as well as for a general spatial rethinking of the welfare system. Italian planning scholars usually use to connect this work to the concept of 'standard', which considers public services in quantitative terms, but this is a reductive misunderstanding. In fact, even if such word was not fashionable at that time, this is a book that is about what we today use to call 'urbanity', since it stresses the role of public schools (to be connected to both open spaces and public libraries) within urban neighbourhoods, by addressing their design in terms of both spaces to be devoted to young citizens and inter-relationships between these spaces and the neighbourhood as a whole. During the turbulent and unruly rent-guided growth of the city of Rome to highlight the existence of children and teen-agers and the need to better consider (in explicit terms of 'urban infrastructure') public spaces, structures and contexts within which young people operated meant linking together the issues of education and citizenship. In this sense, one could say that Calzolari's and Ghio's work expressed the zeitgeist of the period, as the research was published at the threshold of the so-called 'season of centre-left' , which was marked by a series of ambitious reforms aimed at modernising the country (including the education reform, which brought the threshold of compulsory education from 10 to 14 years old). In the following years, on the one hand, Vittoria Calzolari – an extraordinary figure of a politically and socially engaged planner, who became the assessor for the historic centre (1976-1981) with the leftist major Giulio Carlo Argan and who was also among the first Italian landscape scholars (see: Calzolari, 1999) – actively participated in the debate on social services (see: Cederna, 1965) carried out by the Italian Women Association (UDI) by framing the topic of urbanity within a gender perspective, in a country in which a rapid urbanisation process was occurring, with women' shifting role as emblematic of the consequent social changes in terms of life-style and values. On the other hand, Mario Ghio was involved as an external consultant in the Commission on Planning Stardards, which had been established at the Ministry of Public Works and finally led to the planning standards decree on minimum quantity of public services and facilities per inhabitant .

Since the 1980s, however, the concept of 'standard' started to be criticised as a merely quantitative approach, but this was due to a misunderstanding of Ghio's and Calzolari's seminal work, as its 'translation' in normative terms led to a trivialisation. In fact, while acknowledging the new emerging needs, the decree tended to reduce them to questions that are defined on the basis of the answer which are already provided by the institution, where the quantitative approach corresponds to the performance compatible with the self-reproduction of the administrative apparatus (Tosi, 1984). As a result, such a trivialisation have ended up to hide the most interesting aspects of Ghio's and Calzolari's work.

The first one consists of Calzolari's interest in a notion of 'perception' (deriving from gestalt psychology) aimed at privileging both processes of symbolic construction and a figurative language, in order to search for "the psychological and sensual effects of the physical form" (Lynch, 1960) as opposed to functional achievements, strictly linked to the traditional idea of 'satisfaction of needs'. Not surprisingly, Vittoria Calzolari – who participated at Lynch's research on the "Image of the city" as a Fullbright fellow at Massachussetts Institute of Technology (see: Calzolari, 1960; 1955a; 1955b; 1956) – was precisely the one who introduced Lynch's work in the Italian planning debate , which at that time was still dominated by a regulatory and quantitative approach. Even with respect to US urban studies tradition – which was still hegemonised by Durkheim's approach, aimed at linking together the construction of meanings of the physical forms with supra-individual and generalising symbolic representations – Lynch's work constituted a real innovative approach, as it was aimed at dealing not only "with form itself, but with form as it is seen and used by humans" (Lynch, 1960; see also 1984). In addition, the choice to assume a 'mobile' point of view, thus mimicking the physical experience of travelling, clearly expresses an interpretative orientation towards an understanding of the "other times of reciprocity and relationship, which are countless, smaller and, in some cases, even insignificant, but also present in people's life" and that differ from the

"continuous and durable reciprocity [...] objectified in unitary configurations" (Simmel, 1903) characterising what Alexander (1975) calls the "natural" historic city.

The second interesting aspect of Calzolari's and Ghio's work consists of an understanding of the proposed 'urban infrastructure' not only in terms of planning and design of physical spaces, but also in (immaterial) terms of highly inter-sectoral urban policies to be developed within a broader perspective that considers both the physical and social dimension as strictly inter-connected (in this sense, see: Ghio, 1964). But the most important aspect of their work consists of taking the point of view of the users of the spaces to be designed, i.e.: the future generation which the notion of sustainability (WCED, 1987) also refers to. Too often, in fact, the concept of 'urban quality' is emphasised, but it usually tends to be merely intended as 'quality of design', while it is rarely explicitly affirmed who such quality is for . Calzolari's and Ghio's child-based perspective has strongly influenced a still on-going action-research on the involvement of children and teen-agers in planning and design activities, whose findings are presented here .

4 MAPPING THE CITY FROM BELOW

Recent years have witnessed an increasing interest in planning processes based on the involvement of children in design activities (e.g.: within partecipatory workshops). Such involvement could be utilised as a sort of 'litmus test' to evaluate the sustainable perspective of the project, as it gives voice to weak actors. Children's technical contribution (see: Tonucci, 1996; Paba, 1997) to planning and design activities can be particularly fruitful as not only they "bear specific needs" (Paba, 2001b; see also: 2001a), but they are also provided with a 'different sight', which means a specific 'experienced knowledge' of urban spaces. Furthermore, they are also involved within the network of "weak ties" (Granowetter, 1983) of the neighbourhood level, where people are "within sights" (Mumford, 1968. p.35) and a "democracy of proximity" (Bracqué & Sintomer, 2002) may be possible. Finally, children's distinctive spatial behaviour tends to be subversive since it is able to resist the usual "production of urban space" (Lefebvre, 1974) of late capitalism, and this fits well with a different and more political claim for sustainability. Thus, children's sight 'from below' can help planners in anchoring sustainable alternative visions to the local dimension of daily practices (Mc Kendrick, 2009). Especially if framed within and sustained by a learning path (e.g.: through workshops strictly inter-related with school programs, with particular reference to subjects such as geography, drawing and natural science, but also literature and music), their skilled involvement in planning activities can fruitfully contribute in re-imagining the city as an inter-active cognitive potential (see, e.g.: Sandercock, 2003) that lies within the daily social practices structuring urban spaces (De Certeau, 1990). In this sense, not only children's participation can force planners towards a more responsible approach to the resources and commons to be preserved for the future generations: their different sight can effectively help planners in placing "diversity as the cornerstone of their prescription for urban reform" (Talen, 2006a; see also: 2006b), i.e.: enabling diversity through planning and design.

A real and effective involvement of children in participatory practices, however, requires an understanding of their own distinctive language. In fact, as Poli (2006) underlines, space is usually thought as a real, objective and external construction, as a mere container of objects that exists in everyone's mind. By contrast, space actually is the result of a slow cognitive development that derives from perceptions, experiences, culture, individual and collective history. In this sense, the geographical Euclidean space, where objects are placed following an exact metric relationship, does not exist: it is nothing but a whole of logic calculations which are elaborated by our mind in order to organise our perceptions about the territory, where objects independently exist (Dematteis, 1985). Therefore, the ontological security of a map as a map cannot be automatically presumed, as its 'truth' mirrors the ideological frame of its creator, so that a place has a different meaning that depends on its uses and users: a non-cultivated field, in fact, has a different meaning for a developer who want to build or for a group of kids who want to play football.

Spatial concepts such as 'distance' and 'proximity' clearly show the ways in which space is a highly subjective social construct, as the former is related to notions of foreignness and the latter rather concerns familiarity: the distance from a place which is known as enjoyable will therefore be perceived as shorter than that from a sad place (e.g.: a cemetery). In the same way, the physical experience plays a relevant role, as a distance will be differently perceived if the street slopes downwards or upwards. Furthermore, although time plays a relevant role in the perception of space (a distance, in fact, can be measured by the time needed to cover it), geometrical maps usually ignore it as well as they cannot capture the complexity of real space, as what is represented of an object is nothing but its measure.

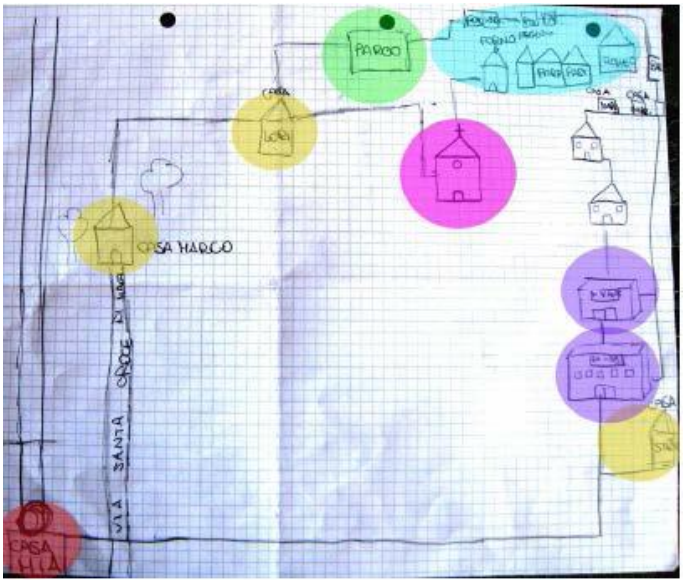

Figure 1 – Neighbourhood representation based on home-school daily route, with 'emotional landmarks' (school, friends' home ...) drawn in a different way

Historical maps were different: subjective perceptions, symbols and narrations were part of the representation of space. Ancient maps represented a "hodological space" deriving from the Greek hodòs ('path') (Janni, 1984), wherein the perception of spaces follows a line according to a 'route perspective', as in the case of the well-known Tabula Peutigeriana. Cadastrial maps required the physical experience of walking across the territory, so that a variety of local measurement systems derived from human pace and eyesight (Farinelli, 1981).

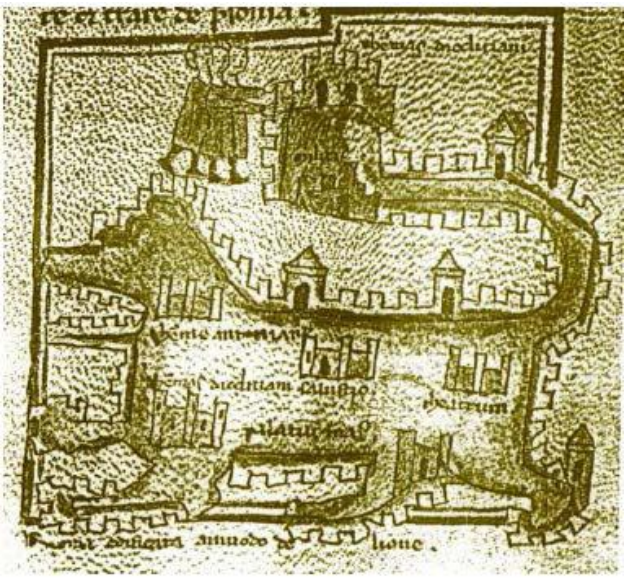

Figure 2 – 'Roma in forma de lione' ('Rome in form of a lion'): a medieval symbolic representation of the city of Rome.

A 'genealogical' inquire can clearly show how geometrical cartography has been progressively naturalised and institutionalised across space and time as a particular form of scientific knowledge and practice following the emerging of modern national states. Maps, as Harley (1989) suggests, are a tool for the exercise of external power, in which plans and intentions of powerful agents become realised. But maps are also provided with a power which is internal to cartography: it consists of the ability to categorise the world and normalise certain views of it, thereby influencing us at the level of meaning and experience. Many critical theorists from the Frankfurt School onward have echoed Weber's argument that the development of modern capitalism has been tied to that of an instrumental rationality in human relations and communication, with maps as one the most powerful and pervasive tool. Spatial sciences, in Lefebvre's (1974) view, are primary agents in the reproduction of capitalism: as they interfere, through a

sort of inner colonisation, with the possibilities in everyday life through the use of space, by pre-judging the subjective world according to rational/bureaucratic typifications. According to Corner (1999), in fact, territory does not precede a map, as space becomes territory through bounding practices that include mapping. Thus, given that places are planned and built on the basis of maps, space itself is nothing but a representation of the map: the "differentiation between the real and the representation is no longer meaningful", as maps and territories are co-constructed, being the former not a reflection of the world, but its re-creation (see also: Baudrillard, 1994).

Analogies exist between historical and children's representations, as the latter do not imply Lefebvre's (1974) "espace conçu" ('conceived space'), i.e.: space as a mental construct, the space of "savoir" ('knowledge', i.e.: expert knowledge), the (abstract, geometrical) "representation of space". Children's representations rather refer to both Lefebvre's "espace perçu" ('perceived space') and "espace vécu" ('lived space'), being the former (real) space as (materially practiceable) physical form and the latter the space of everyday life and social relations, which is produced and modified over time through its use and whose understanding refers to "connaissance", i.e.: informal or local forms of knowledge (involving symbolism and meaning) that is gained though personal experience. In this sense, as it is at the same time both real and imagined, such "space of representation" is both the medium and the outcome of human spatial relationships (see particularly: Iori, 1996). Children, in fact, do not draw what they 'know', but rather what they daily experience, without a clear distinction between reality and fantasy, as their representations (especially at the level of nursery and primary school) consist of a non-structured non-hierarchical dis-homogeneous whole of objects and events – also including a dream or a nightmare, a desire or a fear, a sketch from a television program or a landscape from a video game – to be organised through a cultural process into their own 'mental archives' by using a non-detailed typological and often two-dimension representation, where the aim is to classify rather than to describe the real object (see: Pierantoni, 2001). §

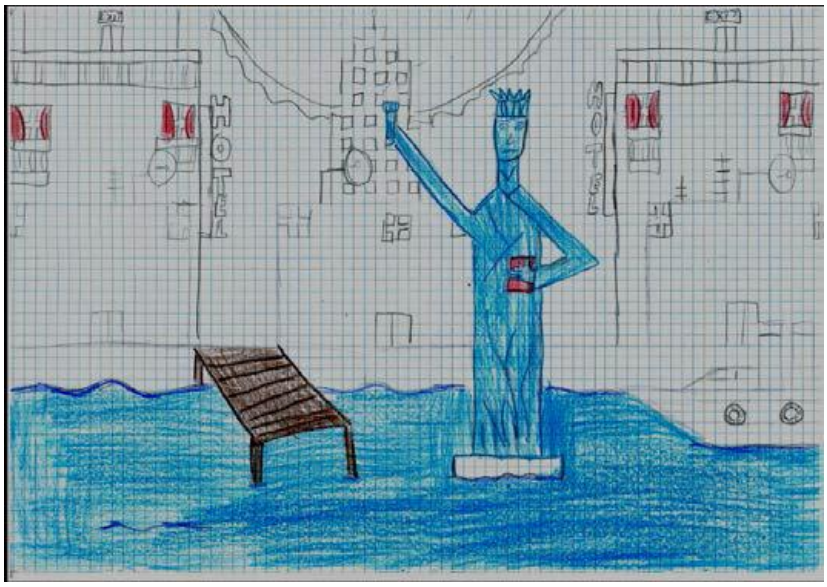

Figure 3 – The historical centre (of the city of Rome!) as seen by a teen-ager from the periphery.

In this sense, drawing is one of their own way for knowing the world by giving a name to each thing as ancient or primitive population did. In fact, as Chatwin (1988) tells us about Australian aboriginals,

> *"each totemic ancestor, while travelling through the country, was thought to have scattered a trail of words and musical notes along the line of his footprints […] these Dreaming-tracks lay over the land as 'ways' of communication between the most far-flung tribes. A song […] was both map and direction-finder. Providing you knew the song, you could always find your way across the country. […] In theory, at least, the whole of Australia could be read as a musical score. […] By singing the world into existence […] the Ancestors had been poets in the original sense of poiesis, meaning 'creation'. […] Aboriginals could not believe the country existed until they could see and*

sing it – just as, in the Dreamtime, the country had not existed until the Ancestors sang it".

Within such a framework, landmarks play a relevant role, as children's space is a sort of 'unknown archipelago' wherein some familiar 'islands', made by recognisable fragments, emerge.

As Lefebvre (1974) argues the more and more homogeneous and commodified space of our contemporary society is conceived before it is fully lived, and spatial practices, on which our knowledge of the world is based, emerge much more from representations and abstractions than from our daily experience, so that space itself becomes a representation – an overturning that Baudrillard (1994) calls "hyperreality" – by making us more easily manipulable by ideology. Differently, if space is constituted through mapping practices by weak actors, this means that constructing maps can positively 'activate' territory, by 'reconstructing' it over and over again. In this sense, understanding children's representational language through their involvement in planning activities could really help us to imagine smarter urban spaces that enable diversity and active citizenship.

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ID 1606 | THE MORE COMMERCIAL, THE LESS SAFE? –IMPACT OF COMMERCIALIZATION ON STREET SAFETY IN REVITALIZED DOWNTOWN AREA

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1 INTRODUCTION

Urban safety is one of the most important issues among sustainable development challenges. Over the past decade, the world has witnessed growing threats to the safety and security of cities and towns. These threatens, in terms of traffic accidents, traffic jam, environmental pollution, crime incidents, etc, have all brought severe challenges to place-making and management on urban space. Streets, the public space where people commute, walk, go shopping, stay, and live, has played a key role in making our cities safe and secure for generation to come. Topics of street security cover a series of urban safety issues, such as transportation safety, defense and security, psychological security, and so on, which are worthy of attention by city planners and urban designers.

Streets are important elements in downtown revitalization. Among the globe, infilled development of commercial and retail functions in old downtown cities has being contested as an effective revitalization approach to promote the vitality of neighborhood with various functions, but also as a growing threaten to local safety as well as an overburden to streets according to increasing tourist and traffic flows. There are abundant researches on gentrification trends as well as discussions on urban revitalization approaches. As the basic demand of local residents and immigrants, the security issues, however, are in lack of discussion. Although there is common sense that the entering of immigrants, commerce, and tourists have increased unsafety risks to local neighborhoods, very few scholars have investigated this topic and make scientific verification.

Shi-Cha-Hai Lake District, a typical historical conservation residential area in inner city of Beijing, is an exemplification of downtown revitalization in recent decades with its typical fabric of streets and public space. Nowadays this area is mixed with local residents and a large amount of boutiques, bars, retails, and restaurants. Taking Jin-Si-Tao area (JST as abbreviation in following paragraphs) as example, this

paper analyzes and maps the impact of commercialization on streets safety in local community through exploring the following questions:

1. Within the dense footprint of residential blocks in downtown area, what are the major spatial characteristics of streets that affect safety and security issues?
2. How do streets change after commercialization and revitalization in terms of public space, public activities, and management? What are the subsequently impact on street security?
3. What are the implications on urban planning and street design?

This article is organized as follows. After this introduction, the second section makes an analytical framework of street security based on literature review, and introduces the research methodology of this article. The third section introduces the evolution of JST area in Shi-Cha-Hai Lake District, as well as research findings on changes of streets before and after commercialization. The penultimate section explores transformation of users' psychological impression on street security issues and street attribute. This article concludes with the future direction that street design in revitalized downtown may take.

2 LITERATURE REVIEW AND RESEARCH METHODOLOGY

2.1 AN ANALYTICAL FRAMEWORK OF STREET SECURITY

Streets are the backbone of urban experiences for users. The changes in different modes of transport have shaped urban form in history, as the impact of the motor car on the modern urban form shows. The modernist agenda of reshaping cities to accommodate the motor car, however, has come under pressure for a generation. Urban design is part of the campaign for pedestrian friendly urban environments, taming the cars, and support for the development of public transport. The order that the streets impose on the urban society, and the manner of experiencing it from inside a car, have been challenged by the meandering and free movement of pedestrians, who will have an entirely different experience of the city. Rather than a track for the fast movement of vehicles, the street is acknowledged as a social space, in which functional performance and social connections are reconciled.

Modern urban planning has proposed road hierarchy system, which raised transportation into an important topic in research of street security issues. The modernist ideas of movement, technology and functionality came together in the Charter of Athens. As the Charter writers argued, 'The street systems found in most cities and their suburbs today are a heritage of past eras… designed for the use of pedestrians and horse-drawn vehicles', and could 'no longer fulfil the requirements of modern types of vehicles' (Sert,1944). Alongside the phenomenal growth in the number and use of motor cars, these ideas were turned into manuals and policy documents to change the shape of cities. The conflicts between vehicles and pedestrians, between parking space and cycling routs, and the inadequacy of small blocks when facing rapid traffic activities, have all emerged with mobility. As a result, during that period, street security was nothing but vehicle and traffic accidents.

The pendulum, however, swung back, and the paradigm shift of streets-to-roads was reversed. Once again the urban street became the paradigm, where the speed of traffic could be managed and limited and where pedestrians were conized as a legitimate basis for design of the streets. The official advice from the Department for Transport now favored pedestrians and cyclists. As the preface to an influential document Manual for Streets, outlines, 'For too long the focus has been on the movement function of residential streets. The result has often been places that are dominated by motor vehicles to the extent that they fail to make a positive contribution to the quality of life' (Department for Transport,2007). The new emphasis now was on showing 'the benefits that flow from good design and a higher priority for pedestrians and cyclists' (ibid). Many cities around the world have now embraced this second paradigm shift, producing master plans for pedestrians and cyclists and creating pedestrian and bicycle priority areas. Rather than the segregation of cars from pedestrians, the idea of sharing space between them, which has been practiced in countries such as the Netherlands, has been widely adopted.

In the street networks of the city, some streets have become the central axes, finding a special local character, or becoming the concentration of the prominent activities of the city. Especially in downtown, streets are the center of activities in local communities and even cities. The social aspects of streets have played important roles in impacting urban safety issues with regard to monitoring, crime prevention, and

evacuating places. Jacobs used the phase of “Eyes on the Streets” in her book “The Death and Life of Great American Cities” to coin about the crucial importance of a vibrant street life to neighborhood safety and community (Jacobs, 1961). She argues that if there are residents and retails locating along both sides of streets, they would play the role of monitors for activities on streets, which in hence largely improve the degree of safety. The criminologist, Ray Jeffery, has coined and formulated an approach of CPTED (Crime Prevention through Environmental Design), in which altering the physical design of the communities in which humans reside and congregate can help to deter criminal activity. A more limited approach, termed defensible space, was developed concurrently by architect Oscar Newman (1972). Newman's book, “Defensible Space: - Crime Prevention through Urban Design” came out in 1972. His principles were widely adopted but with mixed success. Later, Jan Gehl expanded the concept of “defensible space” into environmental field and practiced it in his urban design projects. Japanese scholar, Ito explored relationships between crime and urban environment and coined a series of specific strategies to promote urban safety (1988).

Since streets serve multiple functions involving transportation, location for social interaction, and public space for urban activities, this paper conducts an analytical framework of street security consisting of traffic safety, crime prevention, and psychological security. The conduction is based on the following assumptions: On one hand, users form their impression of street safety through physical environmental performance and spatial characteristics of streets. This impressions, such as whether they regard there is risk in crime, or whether they feel safe under monitoring, can lead to human-being activities. On the other hand, the physical road elements, such as cross-ways, pedestrian route design, and open space of corners, all affect traffic behaviors, which then lead to judgement of traffic security.

2.2 DATA AND RESEARCH METHOD

Our research case is located in Shi-Cha-Hai Lake District in Beijing. This district is a typical residential neighborhood in old downtown. Meanwhile, it is also a famous tourist attraction as well as concentration of commercial pubs and bars. One reason of why selecting it as the case study is that this district has well-preserved hutong-and- court-yard-fabric, and well-retained lifestyles for original residents. During the past decades, this district faces the same spatial challenges as well as other places in Beijing old city. Moreover, the gradually commercialization and infilled development process since thirty years ago have largely changed the phenomenon of streets. The case can serve as a great example in discussing impact of commercialization on old downtown.

In terms of impacts of revitalization on street security, this article develops a series of indexes on the changes of physical performance on streets before and after infilled development respectively. They include: spatial changes (such as number of retails, number of public space, etc), changes of lighting (elevation change, illumination, etc), changes of activities (local residents, tourists, shop owners, etc), and changes of management (on and off streets). The research data comes from following resources: ground survey on physical environment, questionnaire survey of residents and tourists, time-phased photographing, and traffic data.

3 CASE STUDY AND FINDINGS

3.1 SPATIAL EVOLUTION OF STREETS IN JINSITAO AREA, SHICHAHAI DISTRIC

The case, JST area, is located in Shi-Cha-Hai Lake District, which has the longest history during evolution of Beijing City. There is a saying that “Shi-Cha-Hai Lake comes first, Beijing City comes later”. In the historical planning of Jin and Yuan Dynasty, which is approximately 800 years ago, the water system in Shi-Cha-Hai Lake District is an important element in city layout. In Ming Dynasty (1368-1644), the area of water reduced, while courtyards, temples, and local dwellings are built around the lake. The commercial activities sprouted up at that time. As of Qing Dynasty (1644-1912), the local authority renovated and dredged the rivers. The JST area was formed as a peninsula surrounded by lake on three sides. More and more imperial palace were constructed during Shi-Cha-Hai Lake District. On the other hand, the emergence of Lotus Market, Yanday Xiejie Street in this area illustrated this area as a civic center in Beijing. During the period of republication of China, the lack of management has led to environmental

pollution of water resources, causing business decline till late 1980s, when Beijing Municipality set the entire area into Historical Cultural Preservation District. Since then, Shi-Cha-Hai Lake District became an important place of interest in old downtown of Beijing.

The street of bar in Shi-Cha-Hai Lake District is another leisure and recreational tourist area after Sanliton area in Beijing. The first bar emerged in 1997. After the year of 2003, the pubs and bars get a booming development. Many local residents changed their own houses into shops with frontage for rent or sale. Since then, the “street of bar” has become a well-known place. It is also one of the most welcomed tourist places in Beijing, as there are many important cultural heritages in this area, such as Prince Gong Mansion, Drum Tower, and Former Residence of Soong Ching-ling. Mixed people and traffic flows, rental cycling routs and pedicab have brought high traffic pressure on this area (Figure 1).

Figure 1 – Location of JST Aera in Shi-Cha-Hai Lake District

Jin-Si-Tao area, located in the middle of Shi-Cha-Hai Lake District, is a peninsula between Qianhai Lake and Houhai Lake. It occupied a 20-hectare area. There are 18 hutongs and 469 courtyards in this area, among which, Big Jin-Si Hutong, with its zigzag shape, has the most distinct character in terms of physical layout. The design of such distinct form is to guarantee each courtyard can have just north-south orientation. Along the periphery of JST area, three of four borders are streets of bars, with local dwellings located inside this area. Prince Gong Mansion is located to the west of this site, with only 200 meter distant, attracting a lot of tourists visiting this area.

3.2 CHANGES OF STREETS BEFORE AND AFTER COMMERCIALIZATION

For the sake of safety and comfort, traditional dwellings in China have relatively closed facades, such as folk houses in Huizhou, classic earth building in Fujian, and courtyard in Beijing. Usually, its facade facing the streets only has doors without windows or only small windows. The main living space in the courtyard inside. The lighting and ventilation needs of surrounding buildings are mainly solved through internal courtyards. The vertical and horizontal arrangement of the fish-bone-style of hutongs connect courtyards in series. The traditional hutongs have more trafficability characteristics than social interactions. The street safety relies mainly on relatively closed courtyards and walls for passive defense.

The transformation of lifestyles in modern society has increased both number and complexity of people in old city. Especially in JST area, the crowd and the influx of leisure tourists have brought large impact to original lives in this area. The original relatively independent space of the streets and alleys has also undergone great changes.

3.2.1 SPATIAL CHANGES OF STREETS

There are two types of commercial store transformation happening in JST area. First, some residents opened up the walls of their dwellings along the street and change some rooms into small retails. Most of the retails are owned and managed by local residents themselves. Second, the house owners rent their courtyards out to tenants, who are in charge of decoration and transformation. These courtyards are changed to restaurant, cultural and creative shops. The latter ones are always located close to the street of bars on the periphery of JST area (Table 1).

Subject	Security Factors	Changes after Commercialization
Some light	Light from lamps and houses	Increase lighting
Good view of street	Width, transparency of facades	More open facades
A lot of residents	Brightness	--
Buildings adjacent to streets	Emergency refuge	Retails as refuge area
Black area	Danger area	Reduce of black area
Width of streets	Awareness to dangers	--
Footstep of pedestrians	Pavement of streets	Increase of pedestrians
Unconnected alleys	Risky factors	--
Blind corners	Risky factors	Reduce of blind corners
Few open spaces	Potential risks	More open space for activities
View from home	Attention, monitoring	More windows for monitoring

Table 1 – Spatial Changes on Streets after Commercialization

According to the boom of bar streets, the hutongs adjacent to the streets also changed a lot. The traditional alleys used to be other hutongs deep inside the JST area, with quiet and tranquil atmosphere. The development of bar streets bring more commerce into this area, turning the adjacent hutongs into lively pedestrian streets. Correspondingly with the transformation of functions on street, the facade has become more open: most of the shop façade along the street are decorated with glasses and open shop doors. Compared to the traditional closed walls along the alley, open facade of street can promote the safety of the street.

3.2.2 CHANGES OF LIGHTING ON STREETS

Due to the business properties of bar street, the safety of the neighborhood night is more worth discussing. In the study of the Japanese streets, the consideration of defense safety is mainly evaluated by night lighting, sound, sight, and blind corners, among which the brightness and range of lighting has the greatest impact on nighttime safety.

Traditional alley lighting mainly rely on street lamps. Because the alley is narrow, the lamps are usually ranged in a single row. If there once is a breakdown of lamp, the street would in trouble of lacking light. Meanwhile, the shape of alley is complex, some part of the alley is very dark at night and lack effective lighting through public infrastructure.

The introduction of commercial shops has effectively improved the dilemma. The waterfront bar street, including many of the shops and restaurants, makes waterfront area brightly lit in the evening and thus largely improves the security in the neighborhood along the alley. Inside the blocks, the infilled small retails improve the alley night brightness through various lighting approaches and improve its safety accordingly. On the one hand, due to the placement of the store, its facade becomes open, the internal light can be revealed, which can enhance the brightness of the street. At the same time, shops always installed many kind of light boxes at the door for their own publicity effect, which serve as another source of night lighting (Figure 2).

Figure 2 – Change of Lighting Before and After Commercialization

Based on the investigation of current site, lots of shops are generally located at the corner of alleys. Fortunately, many hutongs in JST area have such zigzag shape. Thus there are several retails and shops at each corner. According to the research of Japan Lighting Association, the layout of light source has an impact on crime prevention and the improvement of the security of the neighborhood. The road intersection is the most important location for light source layout. Thus the light source density should be appropriately increased in the twisted streets, which can make the highest efficiently use of lighting. The lighting along zigzag hutong in JST area just meet this requirement, it can enhance the security of the neighborhood in terms of lighting.

3.2.3 CHANGES OF ACTIVITIES ON STREETS

The location nearby several famous historical heritage made hutongs in JST area also changed from the traditional residential community into a tourist attraction. In the daytime activities, there has been increased a lot of human tricycle for hutong and courtyard tourism. This caused a large security risk to pedestrians, as the tricycle driving may easily run into pedestrians in narrow alleys. Moreover, the investigation shows that the visit to private courtyard was welcome by local residents in the early days, but gradually turn to be refused by more and more house owners because of its disturbance to their daily lives and potential unsafe risks.

Research shows that the bar streets have transformed from semi-public alley space into a commercial and leisure space with completely public nature (Figure 3). Its citizenship increased, and nature of local community gradually weakened. Many local residents usually choose waterfront areas as a daily walking place. The study found that residents of different ages all like rambling along the waterfront alleys, together with the crowd here to form a very lively night scene.

Figure 3 – Cognition of Public Nature of Streets

As the bar street business hours are usually at night, the local residents living habits have also changed. The field research in the region founds that the active time in the block produced a significant extension due to the impact of the night bar. The increasing crow and accordingly large sound and noise disturbed nearby courtyards and local residents. The shops in the hutongs adjacent to bar streets all postponed their business hours to meet local demands. In this situation, the active hours of the neighborhoods are different from those in other regions. With the postponement of the business hours of business shops, the complexity of the activities of the people in the night area has been significantly improved, forming the result of the common improvement of potential dangers as well as monitoring control in the alley.

3.2.4 CHANGES OF MANAGEMENT ON STREETS

With the transformation of street nature, people's awareness of safety depends to a large extent on the situation of regional management. During field investigation, we found that there were many people in the street who carried out security work in the area to patrol the duty. They also provide tourists enquiry and information. Their presence has a relatively large protection on both local security and the psychological awareness of residents.

Local authorities take charge of street security management in terms of the following two aspects: one is the requirement that all bars should close before 12am, which to some extent guaranteed daily work and rest time for local residents, and also ease the contradiction between the residents and the merchants. Another approach is to add a number of security personnel to the streets. Through the survey, both local residents and tourists generally feel that security personnel in the region have had a great effect on regional security. Therefore, the existence of these groups has a positive effect on psychological safety for the regional residents.

4 DISCUSSION

In the process of gradually infilled development of JST area, the introduction of new commercial formats has increased the number and proportion of tourist groups in the alley, as well as led to the removal of many local residents, making a significant change of the local population structure. Its safety considerations are no longer only for the residents but also for tourists and consumers. Accordingly, real estate developers bring street traffic and security management into the scope of business management. The street property becomes an open public space instead of traditional community space.

Changes in the properties of the streets have also changed the psychological awareness of the residents. The waterfront area of JST area is no longer considered as a typical local neighborhood-belonged alley, but completely become a pedestrian street with commercial services. People's awareness of the open area of the bar streets is no longer confused with the internal alley system as well. The clustering of the typed commercial formats has a positive meaning for the zoning within this area and is more convenient for the uniform management and business practices.

The public space in the streets has become an important part of urban life and has an important role in ensuring the security of the neighborhood. Shops on the streets do not only bring convenience to local residents, but also serve as "eyes on streets" through providing places for different activities. Some retails owned by local residents can not only provide necessary life services for local residents and tourists, but also serve as "information center" for foreign visitors, which hence is a great advertisement for local community. The owners and merchants also admit that travelling behaviors have brought more crowd into this area, thus they always monitor the street security through the windows and doors. Strangers will be inquired by shop owners. This undoubtly has a positive effect on the safety of the entire neighborhood.

5 CONCLUSION

To sum up, the research finds that while the infilled development adds traffic pressure to inner city and increases complexity of users in this area, the retails and shops serve as monitors and guidance on streets for local communities by applying lighting, re-defining public space, well-organized management, and

remodeling users' cognition of this place. Besides the complexity of immigrant and its following crime risk, the commercialization of the JST area has had a positive impact on the safety of the neighborhood. The impact on the street security can be analyzed from two aspects in term of spatial transformation and psychological impression. From the perspective of spatial performance, commercial placement to some extent breaks down the closeness of original area and has increased a number of "eyes on streets". It also enhances the brightness of the street night and decrease crime risk in this area. From the perspective of crowd psychology, the introduction of commercial functions has changed the residents' cognition on local blocks. The most effective way to enhance people's psychological security is to strengthen the management of business behavior and to increase public security services.

Approaches of revitalization in inner cities has brought a series of changes to local communities with regard to activities along streets, daily lives in public spaces, social atmosphere in neighborhood, and transportation flows. The paper argues that these changes have transformed streets in local neighborhood from an original enclosed, reserved place toward an open, inclusive public place for both residents and tourists. A mix-use community environment that is both vital and livable is possible if planners and urban designers incorporate elaborated urban safety issues into street design guidelines and if local society can adopt new management approaches on commercial and public space.

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ID 1620 | VISIBILITY OF TURKISH IMMIGRANTS IN AMSTERDAM

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1 INTRODUCTION

Throughout history immigrants have always played a significant role in shaping the streetscape of Western European cities through their amenities, which are characteristic for the immigrant neighbourhoods. Some of the oldest examples of these are the Jewish and Chinese neighbourhoods located in many of the major cities like London, Paris, and Amsterdam. However, it was after the 1960s that the immigrants influenced

and changed the cultural landscape of European cities the most. This was due to the arrival of labour migrants from Italy, Turkey, Greece, Morocco, Portugal, Tunisia and Yugoslavia to northern European countries as a result of trade recruitment. This happened to support the need of workers in labour-intensive sectors due to the developing post-war economies (Vermeulen and Penninx 2000). The arrival of guest workers along with the migration from the post-colonial countries, later on followed by migration from the cold war areas, made a significant change in the demographic and spatial organization of major cities (Vermeulen and Penninx 2000).

More the immigrants settled, stronger they became visible on the streetscape of European cities through their shops, restaurants, cafes and religious places. These amenities which have distinctive languages, signs, or ways of street uses that they generate, created characteristic immigrant neighbourhoods, recognized as, for example, African neighbourhoods, Turkish neighbourhoods, Surinamese neighbourhoods, and many others.

Amsterdam has changed along with the political and economic circumstances, and so have immigrant neighbourhoods. Since the 1990s, the trends in real estate market and urban renewal approaches have strongly influence the residential concentration of immigrant groups in central and suburban neighbourhoods. These trends also influence the observable features of immigrant amenities as they adapt to these changes.

The main aim of this paper is to identify and describe the immigrant amenities in Amsterdam. The study operationalizes the concept of visibility of immigrant amenities, which is understood as the physical features of the amenities observed through their distinctive signs, languages, products, as well as practices.

Visibility can provide a new perspective on the relations between immigrant amenities and the built environment, which is important to understand the processes in which immigrants settle in the city and shape the built environment. The study focuses on Turkish amenities in streets of Amsterdam. The leading question is: How does the location of Turkish amenities in Amsterdam influence their visibility in terms of physical features?

To answer this question, the paper is organized as follows. The next section introduces the concept of visibility of immigrant amenities and its significance. A section explaining research approach and methods follows this. The next section introduces Turkish neighbourhoods in Amsterdam and their demographic and locational characteristics. The following two sections identify and describe Turkish amenities and their location. The last section presents the findings and concludes by answering the main question and reflecting on the findings.

2 CITY, THE STREET AND VISIBILITY OF IMMIGRANT AMENITIES

The city has always been seen as a site of diversity of cultures, religious beliefs, economic status, professions, languages, practices and more. As Aristotle states “A city is composed of different kinds of men; similar people cannot bring a city into an existence” (Aristotle, cited in Sennett 1994:13).

Immigration plays a key role in promoting city diversity. People, driven by political, ecological, demographic pressures, move from their homeland and search for new opportunities (Sandercock 1998:14; Penninx and Vermeulen 2000:5-8). The city offers a plenty of opportunities for migrants, providing jobs, offering social networks, personal contacts or other associations for social and economic support (Blokland 2003). These opportunities help migrants settle in their new environment and establish their quarters.

Immigrant amenities are a manifestation of immigrant quarters. The shops with immigrant signs and products, culinary businesses from unfamiliar cuisines, religious places such as mosques, synagogues, and temples with special events characterize immigrant neighbourhoods through their physical features. These features are not only limited to the signs, languages, or products in these amenities, but also include their related practices. The distinctive time schedules of some of these amenities, such as praying time for religious places, religious events, or long working hours of shops in the weekends and evenings, enhance user diversity and influence user behaviour in the neighbourhood streets (Zukin et al. 2016; Hall 2015; Sezer and Fernández-Maldonado, forthcoming). These amenities’ observable features provide

visibility for the cultural characteristics of the immigrant groups on the public spaces, more precisely at street level. In other words, these amenities offer the general public the possibility to see, observe and experience immigrant cultural expressions.

The visibility of immigrant amenities closely relates with the diversity and vitality of the street. In terms of diversity it provides immigrants and other groups opportunities to interact with each other, or simply witness one another presence and activities. This is important to be able to appreciate distinctive group characteristics and cultures and helps for developing mutual respect and recognition among these groups (Young, 1990). The visibility of some types of amenities might be associated with fear and may raise unease towards certain groups. Public unease for communal amenities as mosques and tea-houses are examples of such situations in some European cities (Gole 2011, Wohl 2016), and might influence their visibility. This may be different for commercial amenities, more open for interaction with the general public. Nevertheless, in either cases, the encounters promoted by immigrant amenities might give opportunities to overcome prejudices and help to learn how to live in a diverse city (Sennett 1970).

The visibility of immigrant amenities also helps to stimulate vitality in street life, due to the variety of users, programmes, and functions (Jacobs 1961; Montgomery 1998; Gehl 2010). For example, the long working hours of restaurants makes the streets attractive to be used most of the day and binds people to the place (Jacobs, 1961; Young, 1990). It also increases the attractiveness of the street for visitors by giving the enjoyment and excitement of experiencing something new and unexpected; “a different atmosphere and a different crowd of people” (Young, 1990:239).

However, different streets have different abilities to accommodate diversity and vitality. Shopping streets, being the attraction areas of their neighbourhoods, are more likely to be open for diversity and able to have higher levels of vitality than backstreets (Zukin et al. 2016). There are also differences between shopping streets in the city centre and in the suburbs. The former are more cosmopolitan in character, because they are able to attract both residents and visitors, while in the suburbs shopping streets are more local by character. This implies that there is a connection between location and features, which is the matter of this study.

3 THE RESEARCH APPROACH AND METHODS

In this study, the visibility of immigrant amenities at street level is studied through their physical features in terms of signs and related practices. The amenities have been distinguished as communal and commercial. Since streets differ in their character according to their location, it was considered relevant to pay special attention to it.

The study focuses on the visibility of Turkish amenities in the streets of Amsterdam. For practical reasons, we call the study area Amsterdam, but it includes Amsterdam Metropolitan region. Amsterdam offers an interesting case study because almost half of the city population has a foreign origin. Turkish immigrants are one of the largest immigrant groups in the city, coming after Moroccan and Surinamese groups, with 53,948 people representing 5,5% of the almost 1 million inhabitants of the metropolis. Migrants from a Turkish background are considered to be poorly integrated to the Dutch society due to their low education profile and high dependency on the welfare benefits (Crul et al., 2008). Nevertheless, they are also known due to their entrepreneurship skills compared to the other immigrant groups (Rath and Kloosterman, 2000), which influence their visibility on the street.

The study collected data on the physical features of the amenities in terms of their visible signs and practices. The research is conducted in four steps:

1. Description of the context regarding the main changes in residential concentration of Turkish immigrants in Amsterdam in the 2000-2015.
2. Identification and description of the characteristics of Turkish amenities through data collection of the types, visible physical features and location of Turkish amenities in Amsterdam. The data was collected in April-June 2007. The observation during the fieldwork was carried out walking and cycling, and documented through field notes and photography.

3. Mapping of the location of Turkish amenities in central or suburban areas. For practical reasons, the clusters of Turkish amenities have been labelled as Street 1 (S1), Street 2 (S2), and so on.
4. Interpreting these findings regarding the cultural visibility of Turkish amenities by comparing the relations between their physical features and location.

Figure 1 shows analytical framework of this study and its relation with the research steps.

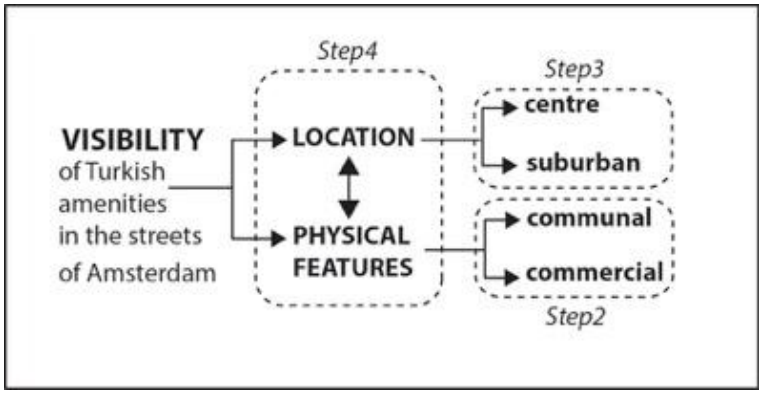

Figure 1 -Analytical framework and its relation with research steps.

4 THE CONTEXT: TURKISH NEIGHBOURHOODS IN AMSTERDAM

Turkish migrants arrived to Amsterdam as guest workers around the 1960s. After they received a permanent status and acquired the right to register for social housing areas at the beginning of the 1980s, the number of the Turkish migrants increased as a result of family reunification, marriage immigration or asylum. Recent demographic dynamics of Turkish immigrants show a steady increase until 2007 and stability from then on (see Table 1).

	Amsterdam Population	Amsterdam Population of Turkish origin	% of Amsterdam Population of Turkish origin
000	858,587	39,486	4.6%
007	884,472	49,007	5.5%
015	973,815	53,948	5.5%

Table 1. Turkish residents in Amsterdam 2000, 2007, 2015*
(Own elaboration with data from Gemeente Amsterdam, 2000, 2007, 2015; Zaanstad in cijfers, 2000, 2007, 2015).
*data valid for the municipalities of Amsterdam and Zaanstad

In their first arrival, Turkish immigrants settled in dormitory areas close to the harbour and industrial areas in Amsterdam North and Zaanstad. Figure 2 gives an impression of how these areas looked like. Otherwise, adult men settled in rooms in pensions or dwellings in poor quality located close to their working areas (Cortie and Van Engelsdorp Gastelaars, 1985). Figure 3 illustrates daily life in one of these pensions.

Later on, within the framework of the family re-unification, and the recruiting of brides and bridegrooms from home countries the demographic composition and the housing needs of Turkish changed to relatively larger households (Van Amersfoort and Cortie 1996). Almost in the same period there was an increasing suburbanisation process where lower middle class Dutch families were moving to the suburbs leaving houses in the lower end of the market available for immigrant groups.

During the 1980s, many Turkish households moved to the Western Garden towns, a large social housing suburb built in post-war period in Amsterdam West (Van Amersfoort and Cortie 1996). Figure 4 shows this area in its earlier phase. Other neighbourhood options for Turkish households were affordable social housing estates in inner city areas such as the Pijp in the Old South and the Indische Buurt in the East district.

Figure 2. Ataturk Turkish Village (Turkendorp) in Amsterdam North, NDSM Port area. Anonymus (NDSM Museum, n.d.)

Figure 3. Life in Ataturk Turkish Village (Turkendorp) in Amsterdam North, NDSM Port area. Anonymus (NDSM Museum, n.d.)

Figure 4. Social housing in Amsterdam West. Anonymus (Fotoleren, n.d.)

Turkish immigrants concentrated in two kinds of neighbourhoods: in those within inner city districts such as Amsterdam Old West, Old South and East; and in neighbourhoods located in suburban districts such as New West, Amsterdam North and the municipality of Zaanstad. Figure 5 shows the location of Turkish residential concentration in 2000, 2007 and 2015, illustrating the trends in these concentration areas: in the inner city neighbourhoods they diminished, while in the suburban areas they increased. Table 2 presents the differences in growth and decline of Turkish population in the two largest concentration areas in Amsterdam, Indische Buurt and Slotermeer in 2008 and 2015.

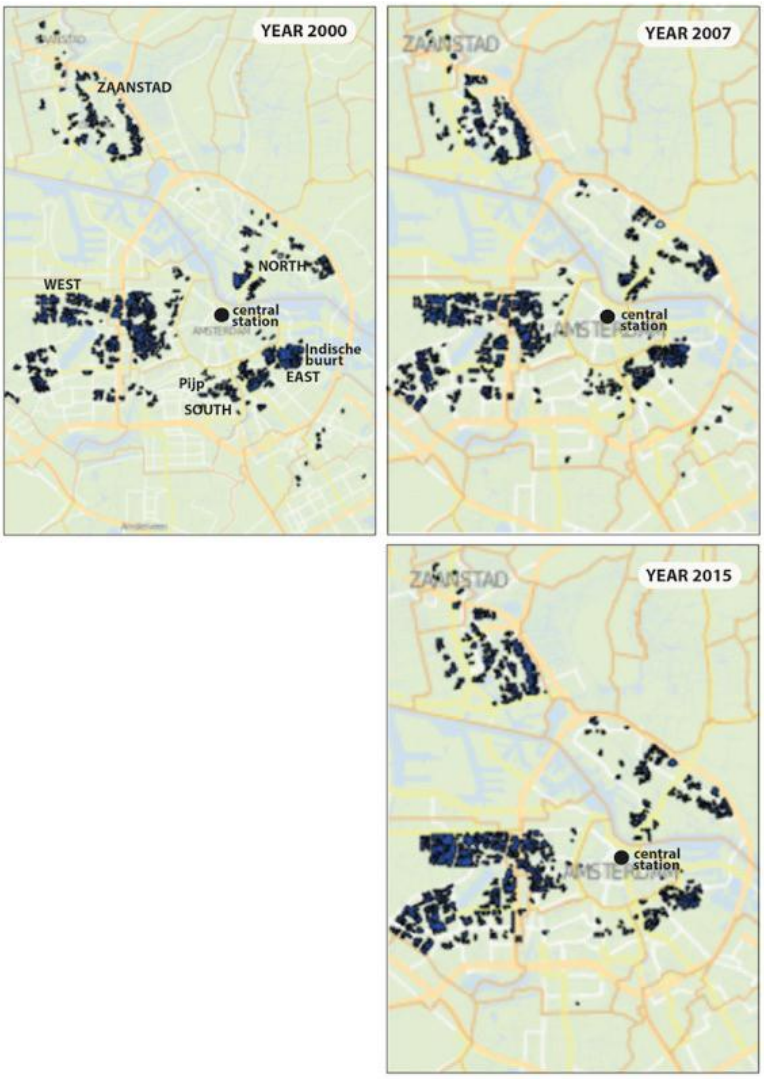

Figure 5. Residential concentration of Turkish immigrants in Amsterdam region in 2000, 2007 and 2015 (Own elaboration with data from Regiomonitor Groot Amsterdam, 2017)

	Turkish immigrants	Non-western foreigners	Total residents
Indische buurt			
2008	2770	13627	23243
2015	2145	11422	22824
Difference	-22,56%		
Slotermeer			
2008	3673	14218	25391
2015	4538	16570	26484
Difference	+23,55%		

Table 2. Turkish residents in the Indische Buurt and Slotermeer in 2008 and 2015 (Source: Gemeente A'dam, 2008; 2015).

The changes in residential concentration of Turkish immigrants should be seen within the context of the general urban development trends of Amsterdam. Two important factors are salient. The first factor influencing these changes has been the real estate tendencies in the housing market, by which house prices in Amsterdam inner city have vastly increased since the mid-1990s. The city has become highly attractive for tourists and young professionals, which has greatly increased the housing demand (Rath, 2007). Figure 6 shows the sharp increase in the price of houses sold in the period between 1995 and 2016 in Amsterdam (presented in red) in comparison to the national average.

Figure 6. Average price of homes sold in the Netherlands and the three largest cities, 1995-2016 (Source: Boterman, 2016).

Another important factor influencing the changes in residential concentration of Turkish immigrants has been the new policy approaches in urban renewal, aimed to promote socially mixed neighbourhoods. Since the 1990s urban renewal policies both at national (e.g. the Big Cities Policy) and Amsterdam level (Nota Stedelijke Vernieuwing) have aimed to avoid the residential concentration of low-income households in social housing areas (Beckhoven and Van Kempen, 2003). It was considered that the concentration areas create a negative neighbourhood image and limits the opportunities for daily contacts between different social groups. Urban renewal policies promoted social mixing to improve neighbourhood quality in these areas by creating differentiation in housing market through demolishing, selling and upgrading a part of social-rented stock and building expensive privately-owned dwellings (van Kempen and van Beckhoven, 2003; Kleinhans et. al. 2000). This provided new housing opportunities for young professionals, but also led to gentrification processes in inner city areas by displacing vulnerable households towards the suburban areas, where more affordable housing was available (SakizlioDlu 2014; Uitermark 2009).

5 TURKISH COMMUNAL AND COMMERCIAL AMENITIES IN AMSTERDAM

The purpose of this section is to describe and identify the types and visible characteristics of the Turkish amenities in Amsterdam. This study found 456 amenities in 2007, which are mapped according to their visible and functional characteristics under two types: communal and commercial amenities.

5.1 COMMUNAL TURKISH AMENITIES

Turkish communal amenities include mosques, teahouses, and Turkish oriented organizations.

5.1.1 MOSQUES

Turkish mosques are places for religious practices , but they also function as places of social contacts, which provide a basis for informal exchanges about personal and collective issues, such as finding a job, an apartment, or raising money for charity purposes (see Figure 7). In Amsterdam, besides a main hall for

praying, almost every mosque buildings consist of a teahouse, a grocery, a hair salon, and even -in some cases -a billiard room.

In Amsterdam, we found 10 mosques which have different visible qualities, which in many cases, are not only associated with images of Islamic symbols, or signs, but also through their communal activities (e.g. street festivals in religious days). While in inner city areas, they are less noticeable from their architecture, signs, and symbols. However, they are usually a part of a cluster of other amenities, such as Turkish shops, restaurants and cafes located in a close proximity, which provide them visibility. In suburban locations they are more noticeable, because they occupy larger areas, they extend their activities to the street, and use larger symbols, such as flags and name boards.

Figure 7. Wall board from a Turkish mosque with the announcements for job seekers, vacancies, houses for rent (Author,2009).

5.1.2 TEAHOUSES

A Turkish teahouse is a small café where men exclusively gather and drink non-alcohol drinks, mainly coffee and tea. Throughout history, Turkish teahouses have been places for social gathering where men chat, and exchange ideas, political views and practical knowledge (Wohl 2016). Teahouses in Amsterdam generally gather men from similar social status, political views, education, income, and even city of origin (Veraart 1987).

In 2007, there were 16 teahouses in Amsterdam, excluding those located within the mosques. It is difficult to notice teahouses at street level as they generally block the inside view with curtains, or frosted glass windows. Most of them are only recognizable by their names, generally referring to Turkish places. These characteristics make teahouses introverted places that do not welcome women or outsiders. In few cases, however, they extend the tables and chairs to the street, giving them a more open appearance.

5.1.3 ORGANIZATIONS

Turkish organizations in Amsterdam have many different interests, but most of them function as religious organisations, providing religious education for women and children and organising events to raise funding for the own organisation. These organisations are generally located in a close proximity to the mosques, but some of them are separate enterprises. Secular woman organisations occupy a small portion of all the organisations, which give language and health education programmes for women emancipation (e.g. Stichting ANDK). Another group of organisations function for secular educational purposes, for example, to teach Turkish language, musical instruments, or folkloric dances (e.g. Stiching Turks Onderwijs Centrum). Some organizations are also specialized in sport activities; giving training and organising sport competitions (e.g. Stichting Fenerbahce).

In 2007, 35 organizations with visible Turkish signs and marks could be counted in Amsterdam, almost one fifth of the officially registered number of organisations in the Amsterdam Chamber of Commerce. These organizations have a weak cultural visibility at street level, but a careful observer can notice them through their names. It is during the public events that they organize that they increase their visibility. Some of these events target large groups occupying parks, streets, and squares; while some others target

limited groups – such as wedding parties – holding these events in existing public buildings such as school halls.

5.2 COMMERCIAL AMENITIES

Turkish commercial amenities include daily food shops, eating and drinking places, service enterprises, and other type of shops.

5.2.1 DAILY FOOD SHOPS

Food shops are those, which sell daily food, such as bakeries, groceries stores, butchers, and supermarkets with distinctive visible signs of Turkish origin. Besides daily food, they generally sell Turkish products, which are not available in regular shops. They are mostly small-scale, labour-intensive and low-skilled enterprises, offering job opportunities for those who occupy the lower end of the social ladder. They mostly rely on informal economic activities to sustain their businesses, which depend on social networks among Turkish immigrants (Kloosterman et al., 1999:252). To survive in the city economy, they offer relatively cheap products, sometimes even cheaper than in the street markets, which may attract customers from beyond their own neighbourhood.

Turkish food shops have the highest number of visible Turkish amenities in Amsterdam, with 150 shops in 2007. They are visible through their names, colourful and rich display, and halal products. The long working hours of groceries stores and bakeries increase their visibility.

5.2.2 EATING AND DRINKING PLACES

Turkish immigrants enrich the food culture of Amsterdam with restaurants specialised in regional Turkish cuisine home-made products and street food (such as Turkish pizza). They generally offer economical options for lunch and dinner. The affordable prices of the Turkish food made these businesses attractive not only for Turkish, but also other Amsterdam residents. Drinking places, on the other hand are less specific with their specialities. They are mainly pubs, selling alcohol products open from late hours until midnights.

We found 128 Turkish eating and drinking places in Amsterdam, the second largest group of Turkish amenities. Many of them are highly visible due to their Turkish names and products. Remarkably, some restaurants have Greek-Turkish, or Italian-Turkish names, probably due to the similarity between Turkish and Greek and Italian cuisines, what has been used by the Turkish entrepreneurs to make their restaurants attractive for a wider clientele.

Drinking places are not very characteristic in their cultural visibility, except by their names and the advertisement boards of Turkish events in their front windows.

5.2.3 SERVICE ENTERPRISES

There are two types of service enterprises. The first includes tailors, clothing and shoe repair, automobile repair, and hair and beauty salons, and the second includes travel agencies, lawyers, architecture and engineering offices. The first type has the same features as food shops, being small-scale, labour-intensive and low-skilled enterprises, answering to the need to have a job in a very competitive job market. Many Turkish immigrants initiated their own businesses as repair workshops in Amsterdam. In such way, repair shops became an important part of the history of Turkish immigrants in Amsterdam (Rath and Kloosterman, 2000). Most clothing repair shops in Amsterdam are owned by Turkish immigrants, which make them very visible. Turkish hair and beauty salons are also popular in Amsterdam, especially among women customers. The second type of service enterprises is evidently more formal, with highly educated workers offering professional services.

In Amsterdam, we noted 46 service enterprises in 2007. Their visibility is characterized by their names, but also their long working hours and exceptional working days (e.g. Sundays). Turkish hair and beauty salons are visibly different from Dutch salons, also because they target exclusively male or female clientele.

5.2.4 OTHER KIND OF SHOPS

There are a large variety of shops with goods such as furniture, household products, clothing, souvenir, fabric, and music shops with Turkish visible signs in Amsterdam. Among these, furniture and household shops are the largest number. Some of them are branches of Turkish furniture brands. Household products shops are small-scale shops that sell a variety of products for domestic use, such as lighting, kitchen utensils and appliances. Turkish clothing shops are mainly specialised in Islamic clothing. There was one Turkish music shop in Amsterdam.

In our fieldwork, we found 76 of these amenities in Amsterdam in 2007. Without any exception, they have all Turkish names and products, which make them very visible.

6 LOCATION AND PHYSICAL FEATURES OF TURKISH AMENITIES

This section maps the location of culturally visible Turkish amenities and describes their observable physical features in relation to the locational characteristics of the streets in which they are situated. These characteristics are presented in relation to the residential concentration areas of Turkish immigrants in inner city and suburbs, and street types.

6.1 LOCATION

The location of commercial and communal Turkish amenities and the streets where they are clustered in Amsterdam in 2007 is presented in Figure 8. Most street clusters are located in inner city districts such as Amsterdam Old West, South and East. A third of them (approximately 35 per cent) is located in Turkish residential concentration areas outside of the city ring, suburban areas with an increasing Turkish population, such as Amsterdam North, New West and the city of Zaandam.

Turkish amenities are mostly located in Turkish neighbourhoods, but in few cases they are also located in areas with no significant Turkish population. Commercial amenities represent approximately 95 per cent of the total Turkish amenities, and are widely distributed across the city. They are generally clustered along the main or secondary shopping streets of their neighbourhoods (see S1, S2, S3, S4 in Figure 8). The rest is dispersed and located in busy shopping streets (see S11, S12) or in quiet neighbourhood backstreets (see S13, S14).

Communal amenities represent approximately 5 per cent of the total Turkish amenities. They generally cluster around mosques, teahouses and communal organizations, but the clusters may also include commercial amenities as grocery stores and eating places. Communal amenities are located in the inner city and suburban Turkish concentration areas, with the exception of the Fatih mosque, located in Amsterdam Old West. Within their neighbourhood, they locate at quiet streets, but in few cases they locate on main streets, as the Fatih mosque and the Sultan Ahmed mosque in Zaandam (see S6).

The different types of Turkish amenities according to their functions were mapped and are presented in Figure 9. Most commercial amenities located on main streets are daily food shops, eating and drinking places, and some service amenities such as travelling agencies, and clothing, souvenir, and furniture shops. Some food shops, such as groceries stores, and service amenities such as beauty salons, clothing or automobile repair shops, or shops with household articles are located on secondary shopping streets. Those dispersed amenities generally belong to the service sector such as clothing and car repair shops, but also some eating places such as snack bars.

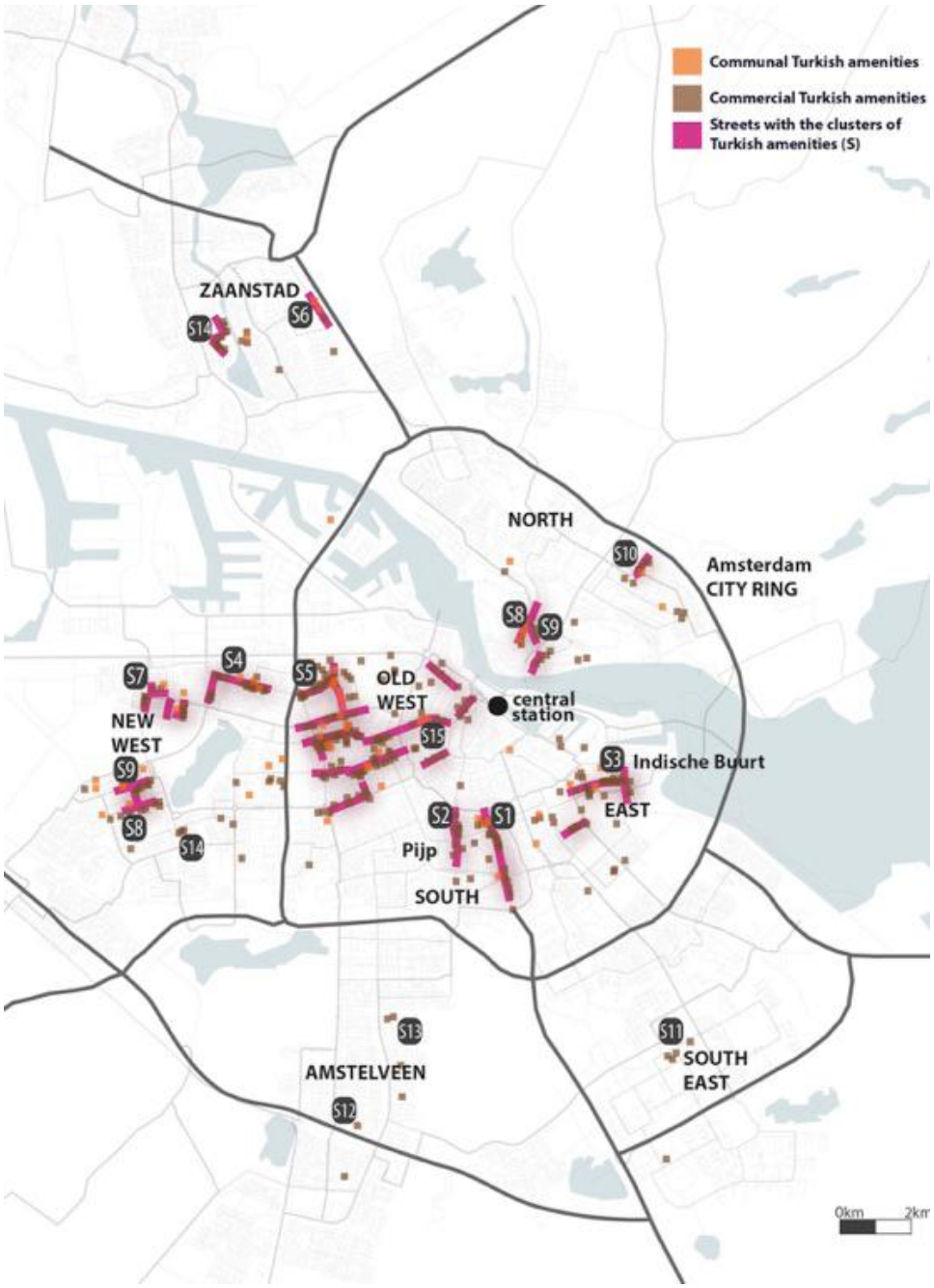

Figure 8. Streets clustering communal and commercial Turkish amenities in Amsterdam (Own elaboration with data collected by the author).

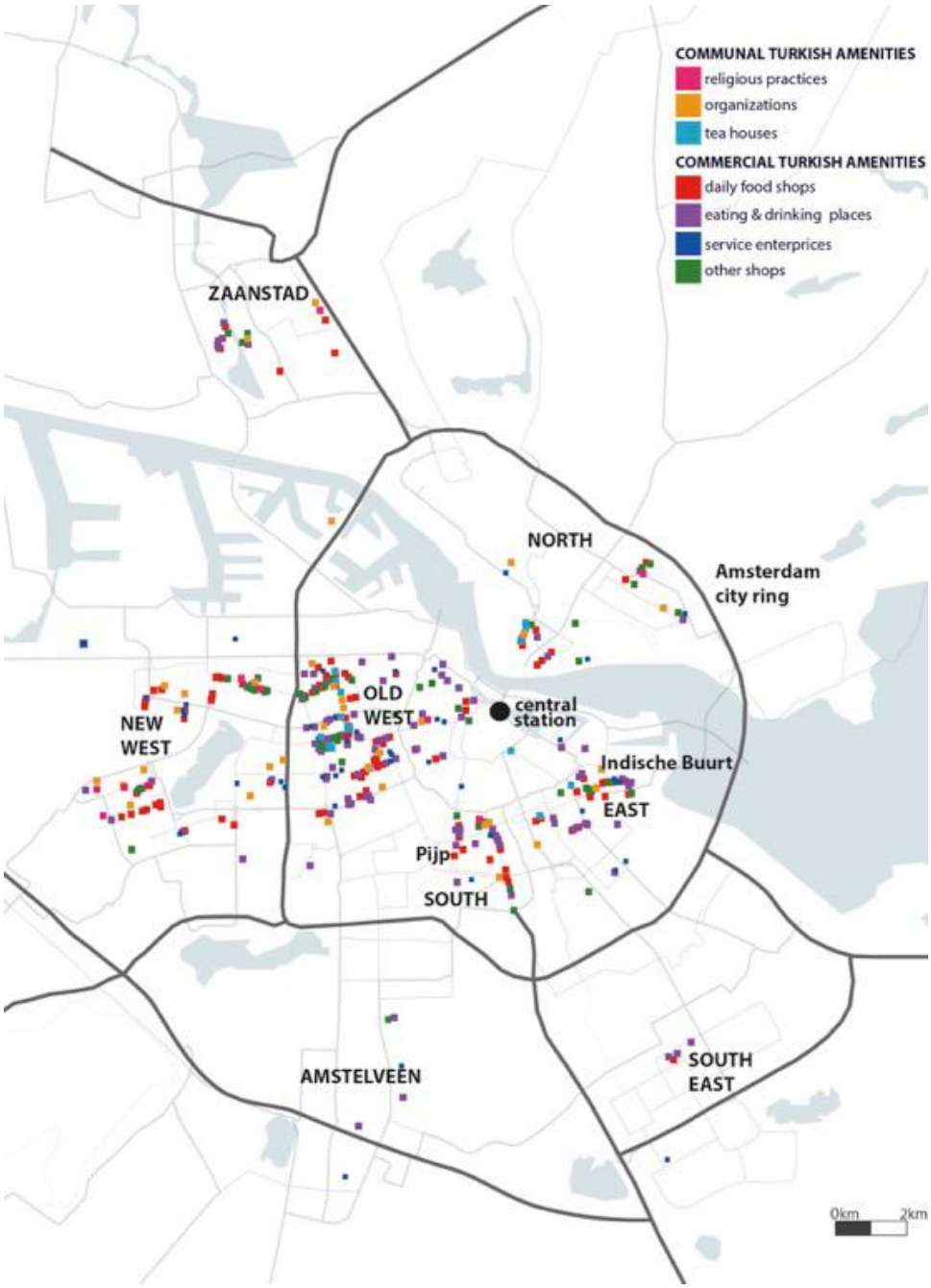

Figure 9. The types of Turkish amenities in Amsterdam according to their function
(Own elaboration with data collected by the author).

6.2 PHYSICAL FEATURES

Turkish amenities, noticeable at street level through their distinctive names, have different physical features (such as size, window presentation, advertisement boards) and related practices (such as street use, working hours) depending on their types and location in the city. The differences between communal and commercial amenities are especially clear.

Commercial amenities are very visible at street level due to their window display, large name boards, and advertisements of events on their windows. But their visibility goes beyond their physical appearance and is also related to the practices and activities that they generate. Such amenities generally have longer working hours than the traditional shops that close at 18:00 hours. This is especially happening during the weekend and evenings, increasing the vitality of the street where they are located.

Commercial amenities in the inner city have different features than those in suburban areas. In the former, amenities offer a wider variety of products aiming to attract groups beyond Turkish residents. For example, eating places in the inner city generally mix Turkish cuisine with Greek, Italian, or Moroccan cuisines. Many Italian and Greek restaurants in the inner city have a menu with Turkish dishes and are owned by Turkish immigrants. On the other hand, commercial amenities in the suburbs are more exclusively oriented to the residents of Turkish origin.

Communal amenities have almost no visibility at street level. Since they specifically target Turkish interest groups, their window display and entrances do not clearly suggest their function for other residents. In some cases, even their entrances are hardly noticeable. The case of mosques is useful to illustrate the differences between commercial and communal amenities. Mosques are scattered around the city, and established in individual buildings or in part of a building. Those located in inner city areas are hardly noticeable, even for a careful observer, as they do not have boards with their names, signs or religious symbols, a common feature of mosques.

Since mosques are clustered with other communal and commercial amenities, they bring vitality to the streets where they locate, increasing their visibility. This is more obvious in the communal clusters located in suburban areas, which often occupy a larger area with a garden, and extend the street use with tables and chairs, especially in the summer period. Figure 10 shows a cluster of Turkish amenities in Amsterdam New West which includes a mosque, a teahouse, a food shop, a sport centrum and a traveling agency.

Figure 10. A cluster of Turkish amenities in Amsterdam New West (Author, 2009).

The praying activities of mosques, dominantly by men, create a specific and rhythmic street use during the day, in the morning, afternoon and in the evening. In such way, the clusters surrounding mosques create a small niche for Turkish men and keep the neighbourhood active during day and night times in the week and weekdays.

7 DISCUSSION AND CONCLUSION

This study has been useful to verify a strong relationship between the location of the different types of amenities and their physical features, which in turn, shape their visibility. This is more obvious in commercial and communal amenities, particularly in those located within the Turkish concentration areas, which in the context of the general city trends in Amsterdam, tend to decrease in the inner city and increase in the suburbs.

How does the location of Turkish amenities influence their visibility in terms of physical features in Amsterdam? There are multiple indications of clear differences in the physical features of commercial amenities located in inner city and suburban areas, visible through their types, names, products sold and window displays. In the suburbs they are dominantly catering local residents. In the inner city, they target wider groups of people beyond the residents. This is particularly visible in the case of those neighbourhoods involved in a process of gentrification, which increasingly attract residents from the middle and higher income groups as well as visitors such as day-trippers and international tourists.

Studies on the gentrifying neighbourhoods of Amsterdam suggest that the residential gentrification goes hand-to-hand with the commercial gentrification (Zukin, 2012; Sezer and Fernández-Maldonado, forthcoming) and results in the displacement of long established specialized businesses or their transformation into other kinds of businesses. Commercial amenities in inner city areas are mostly adapting or transforming their businesses according to the demand of the new residents and visitors. However, not all the commercial amenities can modify their businesses following neighbourhood transformation processes. For example, those specialized on the needs of a specific target group (e.g. woman clothing shop for Muslim women) have difficulties to adapt to the changes and eventually may lose their businesses. This situation may have a negative effect on the visibility of distinctive immigrant amenities.

In regards to the physical features of the communal amenities, the findings suggest that communal amenities have a limited visibility, with some differences between suburban and inner city locations. In the suburbs, they are more noticeable since they use larger spaces and extend their street use depending on the availability of space. In the inner city, they are almost invisible because they mostly lack names, signs and in some cases clear entrances. However, the clustering of these amenities with some other businesses, for instance with shops and restaurants, provides them with an increased visibility. Additionally, the periodic use of some of the communal amenities (e.g. mosques) also increases their visibility.

The focus on visibility has been useful to give good insights into the practices performed by immigrants at street level. The concept of visibility appears as a valuable tool to get relevant neighbourhood data generally hidden from statistical and official data. The findings suggest that to study the visibility of immigrant amenities, not only their characteristic physical features matter, but also their location. They also imply that neighbourhood transformation programmes should be aware of the issues and assets related to the visibility of immigrant amenities to develop neighbourhood strategies that effectively improve the lives of local people. This would support the promotion of diversity and vitality of public life of the city.

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ID 1633 | REPRESENTATION OF TERRITORIAL HERITAGE & DEVELOPMENT: CONJECTURED MAPPING TO UPDATE PORTUGUESE POSTULATES OF CITY-MAKING IN SÃO MATEUS, ES, BRAZIL

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1 INTRODUCTION

This article is part of the state of the art regarding the methodology and technique of Representation of Territorial Heritage, capable of fostering reflections on heritage values through the elaboration of conjectured maps of four moments of the historical evolution of the urban heritage of São Mateus (1764, 1819, late nineteenth century, and early twenty-first century), in the state of Espírito Santo, Brazil.

Representation is one of the stages of planning, design and management for a self-sustaining local development, according to the Italian Territorialist Approach, whose research-intervention is directed to the overcoming of traditional analysis models, through: a theoretical revision, in which refers the enlargement of the concept of heritage, and an instrumental suggestion of geoprocessing and illustration production. The territorialist approach is a current of research-intervention thinking created and consolidated by the iconic figure of Alberto Magnaghi and the Society of the Territorialists.

This approach prioritizes the conservation and valorization of areas, figures and heritage elements in the territory, in the search for the widening of the concept of heritage, from the scale of the building to the scale of the city, the region and the territory. It questions the role of the territory, in the contemporary world, in the face of the problematic of political, economic, environmental and social unsustainability, and reveals technical and methodological paths for a local self-sustainable development.

The objective is the elaboration of conjectured mapping of Heritage Values of São Mateus, with support of geoinformation technology, as digital model synthesis in the iconographic ambit, identifying heritage elements, that can be point, lines and / or polygons materialized in the territory; and in the conceptual ambit, reflecting on the concept of territorial heritage and the relation with the local economy that provides a reproducibility of the Portuguese model of urban settlement.

In order to carry out the mapping, the method is based on the territorialist approach, concerning environmental, territorial and urban analyzes, and supported by georeferenced data; and of conjectural-cognitive analyzes, based on historical reports and iconography, to identify the main components of the place.

For the elaboration of the conjectural mapping elaboration, it is used a two-dimensional illustration program, which is constructed based on historical reports and iconography, in order to identify the main components of the site. And for the elaboration of the mapping of the graphic representation of heritage values, based on the Italian territorialist approach, concerning the analysis of weights of “values of use”, “values of existence” and “values of actuality”. The map of the representation of values is developed in the free and open source software QuantumGIS, whose graphic design constructed is georreferenciated on the Orthophotomosaic basis.

The results obtained, in the state of the art, cover a discussion of methodology and technique of representation of values in heritage sites, when carrying out conjectural mapping, with geoinformation technology in order to reconstruct the evolution of the urban heritage of São Mateus, and to reflect critically

about the original Portuguese postulates for the contemporary moment of industrialization and of facing the risk of loss of tangible and intangible heritage; Ie, one of the open discussion questions is related to if the original Portuguese urban settlement way of city-making in São Mateus has been reframed with the new socioeconomic dynamics and because of that a new way of thinking is still latent, or can it still be the answer to a self-sustainable local development?

2 CONTRIBUTIONS OF THE HISTORY OF URBANISM TO THE HERITAGE ANALYSIS OF SÃO MATEUS

The research of Simões Santos (2017) - São Mateus: from place to town - is within the scope of the History of Brazilian Colonial Urbanism, it is hypothesized that the settlement of the region of S. Mateus is of long duration, initiated in the 16th century, characterized by some (dis)settlements, and probably resulting from the need of proximity of larger urban complexes, such as Bahia's and Rio de Janeiro's. It begins with the recognition of the region - the place - between the captaincies of Porto Seguro and Espírito Santo, identified by Cricaré river or S. Mateus, which comprehend the territory adjacent to the river, with its own geomorphological characterization, which directly implied access to this region as a strategic settlement potential. It was concluded that there were difficulties of accessibility to the region, due to the proximity of the Abrolhos, significant shoals and sedimentation deposit at the mouth of the river, resulting from the joint action of the south-north sea currents and the strong seasonal winds that frequently changed the coast and river shores.

Historically this region was seen as a possibility of contacting the fertile lands of precious stones, abundant of the presence of the gentios, therefore, rich of woods and food from both forests and mangroves. However, it is not clear, based on primary sources, the exact origin of its settlement, nor the principles, strategies and actions, for how it would have started (Simões Santos, 2017). On the contrary, primary sources are presented which certify that in 1666 the river Cricaré was also identified by S. Mateus river; that in the first decade of the XVIII century sesmarias were given and that the settlement of S. Mateus had been (re)started in March 1716, by Domingos Antunes, captain of the eight men who accompanied him (Simões Santos, 2017, p. 150).

The Villa Nova de Sam Matheus is demarcated on September 27, 1764 (Amaral, 1927, p.278). From the Auto de Medição e Demarcação da Praça e Ruas da Villa Nova de Sam Matheus, it is elaborated a Conjectural Map of the probable urban area found by the Ombudsman Tomé Couceiro de Abreu, during his first visit to the town on June 16, 1764, by express order of the crown, in the person and authority of the Marquês de Pombal (Simões Santos, 2017, p.151-160).

Based on this information, it is evident the size of the village in the year 1764, which already has a main church and square, two streets that pass laterally to the church and which converge towards the west. The more extensive street has a curvilinear configuration, following the relief of the slope and receiving the largest number of buildings that lean over the river with the fronts facing the church square. This more extensive street is Rua Direita that starts perpendicularly to the Entrada da Vila, that comes from the port. At the same point it starts Rua da Aldeia, that follows the opposite direction of Rua Direita, and goes east, or towards the place of Pedra d'Agua.

The configuration of Rua Direita is curvilinear, to the north, tangential to the left side of the church, causes a strangulation of the west portion of the square, which never gets to be delimited or closed at that point, being able to enjoy the views to the river that is to the northwest, or more precisely to the sertão, and most likely with control of the church tower.

The measurement of the village began in the church square, which indicates that there were already houses on the street that intersect the right side of the church, followed by the measurement of the main street. From the north corner of the church, the Ombudsman determined the place and the marking of the rectangle of the Casa de Câmara e Cadeia, that will be built, onse side facing the square and the other side over the river. Next, the Pelourinho was erected and fixed of "Páo de Massaranduba, por ser páo tão forte que pode durar muitos annos" (Amaral, 1927, p.278), at the midpoint of the width of the Main Church Square. After that, it is determined the extension of the street that was already initiated by the right side of

the church, that is then called Rua Nova, containing information that from this street and the limit of the Barreira do Corgo, in a delimited quadrangular area, should be distribute the lands to whom wants to build.

It is known that the dock of the port is in the current port, for the information contained in the recognition of the S. Mateus river that the Ombudsman report of June 16, 1764, as “Porto da Povoação”. It is also known that the population consists of 98 couples, with 98 children; 12 men widows, with 17 children, and 7 women widows with 15 children. In a total of 345 inhabitants, in which considered about 5 to 6 people per housing, results in an estimated of 57 to 69 houses. Furthermore, it is assumed that there were some houses of merchants and slaves near the port, because of the services necessary for the storage and transportation of cargoes. (AHU-ACL-CU-005, CX.35, D.6508, 16 de junho de 1764).

Then, the second mapping is elaborated and analysed, which is the Conjectural Map of 1764. It is possible to verify that the implantation of the S. Mateus settlement is in consonance and correspondence relation to the characteristics of the first Portuguese colonization formations of the Brazilian territory (Simões Santos, 2017, p.156-160). As the Portuguese architect José Manuel Correia Fernandes says: a Portuguese urban model was already present:

> *[...] o centro de vocação residencial é altaneiro, associando-se à elevação que guarda a memória do local de defesa colectiva; o centro de negócios e das trocas portuárias preenche o espaço de transição para o rio ou mar, em baixa e rasa superfície de aterros e praias. [...] Estas características básicas da cidade portuguesa - o pendor litoral e comercial, o sentido marítimo e trópico e a bipolaridade - tal como surgem pelos sécs. XIV-XV são adaptativas e vão enriquecer-se, sem se perderem, pelos contactos com novos ambientes, adquirindo se se quiser diferentes qualidades como mutações dentro do seu sentido inicial.(Fernandes, 1991, p.101-102).*

With this study it is verified that the town of S. Mateus is developed next to the river, located in the highest quoted point of the region, rocky around wetlands, strategically protected with the control of guard both for the mouth of the river and to its sources, where the coming of the Gentio was frequent. A single access point to the village, in order to be easier to control the invader, with the very long Rua Direita that connects the Entrada to the place called Barreira do Corgo. In the middle of the extension of Rua Direita, tangentially, it’s the Praça da Igreja. The Church faces the Rua Direita, located at the east end of the central square, parallel to the slope line and facing the valley that develops behind the Barreira do Corgo, therefore in the village spotlight, strategically beautiful, orderly and vigilant.

This structure refers to one of the typologies that Jorge Gaspar presents when he analyzes the adaptation of the D. Dinis villages, XIII-XIVth centuries, to military and administrative requirements, whether civil or religious, and which Paulo Ormindo de Azevedo makes known in this way: "[...] existe somente uma porta, com uma rua central que a liga ao castelo, situado na outra extremidade. À margem desta rua está, geralmente, o largo, ponto de reunião social, mas sem as proporções das praças renascentistas. "(Azevedo, 1998, pp. 39-70). The Mother Church is the agglutinative element that defines the religious and urban center of the Vila, which will reinforce its role as a civic center, when surely in 1772, already has a Chamber House and Chain (AHU-ACL-CU- 005, Cx. 46, doc. 8553, de 1772).

From the notes made by the bishop of Rio de Janeiro, D. José Caetano Coutinho, who visited S. Mateus in 1819, it is known that he sent a letter to King João VI describing São Mateus in this way: "A freguesia de São Mateus já é considerável, porque já tem mais de três mil moradores, “[...] que exportam anualmente pela barra fora para cima de vinte mil alqueires de farinha em sumacas e lanchas próprias” (Coutinho, 2002, p. 123). Describes the village: "Esta vila está situada, elegante e alegremente, sobre uma cordilheira de montanhas que se levantam logo por trás do sítio da Pedra d’Água, e correm ao sul do rio para a parte do oeste" (Coutinho 2002, p. 63). He also describes the building and urban spaces: "[...] todas as casas de telha de duas ruas mui compridas, com outras atravessadas, duas praças, algumas dez ou doze casas de sobrado, bilhares, talvez lojas de bebidas, [.. .] "(Coutinho, 2002, p.63).

This description gives a notion of the economy aspects of the village, its population size and built area, which allows the elaboration the Second Conjectural Map, where it is observed that around the square is consolidating the construction of houses, reinforcing the priority vector along the slope, defense and connection to the east, in the prolongation of Rua Direita, which from the entrance of the village is called Rua da Aldeia. It is possible to observe in the analysis of the documents that the space next to the docks would already have a size and dynamism that was able to become a center of storage and commerce of a

considerable scale. Certainly it already had urban equipment to support the port, but there's not sufficient data to allow a precise representation on the map related to until 1819 (Simões Santos, 2017, p.161-165).

This statement is strengthened by the description of the geographer Hartt, who visits the city of St. Mateus in 1865: "é construída parte na borda das escarpas, parte no sopé da mesma, do lado do rio" and that "é uma localidade de certa importância, podendo ser avistada por vapores costeiros e pequenas escunas" (Hartt, 1941, p.149). Therefore, it is confirmed that in the mid-nineteenth century, there were already two urban centers in S. Mateus - the low and the high.

In order to confirm the consolidation of these two centers, especially in the port of the Vila, and if it allowed the evolution of the urban nucleus, we used the first photographs of S. Mateus, known from 1908, by Eutychio d'Oliver (Nardoto, 2016). It is a set of four photos: Two photos from the upper part of the city - Rua Direita and Rua de Baixo; Another photo of the Rua do Comércio and lastly the view of who arrives to the city by the river, visualizing the slope from the port to the high area.

In this map, there is a marked of buildings silhouette over the Praça do Porto and along Rua Direita / Rua da Aldeia; between the two squares of the Matriz and S. Benedito churches, resulting in the densification and emergence of a new parallel street to the south, called Rua de Baixo. It is also observed the consolidation of the block that develops immediately behind the Praça do Porto and along Rua do Comércio, revealing pomposity in relation to the Rua da Entrada da Vila, which traject is made by stairs whose paths intersect in the middle of the slope.

It is possible to verify in the photos the social and economic hierarchy of the streets by the significant number of houses, which predominates in Praça do Porto and Rua do Comércio; also in Rua Direita that has a house with three floors, another with two floors and the remaining majority with only one floor; in Rua de Baixo, all houses with one floor. The entire left-hand façade of the Praça do Porto is a unique one-storey building whose openings are all the same arched doors as if it were a storage place. (Simões Santos, 2017, p.166-171).

3 METHODOLOGY OF ELABORATION OF CONJECTURAL MAPPING

The central objective of Simões Santos (2017), whose research this article is based, is to identify moments of settlement of the region of São Mateus, between the XVI and XIX centuries, in order to arrive at an understanding of urban evolution of the town of S. Mateus, of which its consolidated urban center was raised to Vila in 1764, becoming urban nucleus, and for that reason, elevated the category of City, in 1848.

Based on the theoretical-methodological assumption proposed by Reis Filho (1968) on sociology, geography, economic and political-administrative aspects, with the aim to analyze the dynamic process of urbanization of the long duration, with mechanisms, actions and strategies, that allows the evolution of this smaller nucleus within the urban network that constitutes the history of colonial urbanism in the Portuguese America, aligned with the assumptions of researchers such as Cortesão (1965, 1971), Vasconcelos (1999, 2002), Araújo (2000), Abreu (2005) e Bueno (2011), regarding to historic cartography as an instrument capable of gathering information collected from primary sources, in order to understand the dynamics of the urbanization space in a remote period of scarce sources.

The methodology used is based on research of historical collections and archives, with a focus on colonial manuscripts, iconography and travel reports, as well as in the studies of geographers (Albino et al, 2001; 2006; Albino and Suguio, 1999), for the understanding of coastal geophysical morphology, and recognition of territorial changes.

Depending on the way in which these information relations are established, the results are obtained, which in this specific case allow determining the criteria for selecting the information; The criteria of the physical and temporal space to be represented; construct population and housing charts; calculate the percentage of probable spot built, etc., ensuring the reliability of the results that are the necessary elements for the elaboration of the conjecturais maps.

The data is archived by topic, using EXCEL as a tool, because it allows the insertion of the information in a continuous way, with great flexibility of visualization in frames, or chronological grids/timelines. Hence,

grids allows establishing transversal and longitudinal relationships, diverse, in a specific context, or more comprehensive, as the research may require. Based on the objective of this research, the results are obtained in order to allow determining (i) criteria for information selection and hierarchization; (ii) criteria of the representation of physical and temporal spaces; (iii) construct population and housing graphics; (iv) calculate the percentage of probable built area, ensuring the reliability of the results that are necessary for the elaboration of the conjectural mapping method.

The Conjectural Maps are elaborated from the capture and conversion of the images of Google Maps in PDF, being constituted in matrices of scaled and referenced elements towards the space to be represented. Then, this matrices are inserted into Corel Draw where new images, now vectors, are created by overlaying them, to build each map simultaneously and independently, in which overlapping ones allows to evaluate the continuities guidelines of urban evolution. Finally, the images are converted to JPEG, so they can be pasted in the textual documentation.

In the specific case of Simões Santos' research (2017), the results obtained allows to construct conjectural mapping that represents three moments of urban consolidation of Vila de S. Mateus, covering an interval of 98 years, aiming to understand its urban evolution. The overlapping synthesis of maps allows analyzing the urban evolution of a place, or even a territory, if it is a set of settlements or urban nucleus (s).

4 THE TERRITORIALIST THEORY AND THE REPRESENTATION OF HERITAGE VALUES

The territorialist approach is a current of research-intervention thinking, created and consolidated by the iconic figure of Alberto Magnaghi and the Italian Territorialist School. This approach prioritizes the conservation and valorization of ambits, figures and elements of lunga durata in the territory, and the search for the enlargement of the concept of heritage, from the scale of the building to the scale of the territory. It questions the role of the territory, at the present time, and its problematics of political, economic, environmental and social unsustainability, and proposes technical and methodological pathways for a local self-sustainable development (Magnaghi, 2010).

The core of the territorialists is the return of the place in the urban and regional project that, according to Magnaghi (2005, p. 7-8), is delineated by means of five movements: (i) definition, theoretically and methodologically, of the concept local self-sustainable development; (ii) methodology and technique of identity representation of the place, with focus on its testimonies, organized in an atlas of the territorial heritage; (iii) elaboration of the statute of the place, whose identity representation is the basis; (iv) elaboration of strategic scenarios based on the evaluation of the territorial heritage; and (v) evaluation of the concepts, the planning instruments and processes, from the knowledge gathered on the previous movements.

The goal of this article is to represent heritage values of São Mateus, in mapping format, with geo information technology software. The focus is on the use of the theory, method and technique of the territorialist approach towards the description, interpretation and visualization of the territorial heritage. Identity can not be described only objectively, detaching it from the processes of identification and appropriation, from the particular point of view of the architects of the territory, but also from the subjective elements, the original characters, the resistant historical and environmental references. It is possible to consciously use representation to describe the material history of an area, in whose challenge is how to use history to describe and draw the identity of the place (Magnaghi, 2001).

Relevantly, Vescina (2010) points towards a crisis in representation studies, as a problematic of the contemporary city design, in its physical and cultural structures, concerning how to observe and interpret the values that a society establishes in a given historical moment. It highlights the active role of representation, as a construction process, according to the point of view that maps represent and model reality.

Magnaghi (2005, p.10) argues that the motivation for the study of identity representation is of strengthening the hypothesis of wealth production by the sustainable valorization of the territorial heritage of each place. The author defines territorial heritage as a system of relations between physical environment, built environment and anthropic environment. To research the territorial heritage for the use

of values as resources requires the construction of an inventory in order to interpret in an integrated way the three environments that compose it.

In short, the method for representation encompasses transcalar and transdisciplinary characters, which are fundamental in the studies of the science of the territory, reasons for the incursions in other disciplines, besides architecture and urbanism, to describe a more complex image of the territory. Hence, in order to draw a territory, it is necessary to adopt a synthesis instrument, that reproduces the heritage narrative, evidencing long-standing structures, making it possible to reveal the personality of the place, its biography. (Magnaghi, 2005).

According to the territorialist approach, the territory is heritage, the essence of the temporal construction of men, the result of accumulation of stratified cultures, the act that plays a central role in planning, design and management for a sustainable development in the contemporary world (Magnaghi, 2001, p.3). Therefore, from representations of heritage values, in mapping format, it is possible to reveal the multidimensional character of the territory, and, thus, the enlargement of the concept of heritage.

5 ELABORATION OF HERITAGE VALUES MAPPING

The map of the representation of heritage values aims to provide bases for analysis of the physical and anthropic aspects of the territory, and its relation with the cycles of long term territorialization, as a basis for interpretation of the territory and landscape identity. Cartographic pre-analyzes of the physical components of the territory and of the landscape are developed, framing themes of geomorphological, hydrographic, climatic and vegetative character. The analyzes performed were made through the data construction of mapping use georeferenced data, historical documents, historical iconography, and, mainly, aerial photographs.

The heritage approach of the territory and the landscape discusses cultural and technical bases related to cartographic description and representation, considering the historical moments in which the territory is stratified as a palimpsest. It is proposed, therefore, a reading that sees the landscape in its complexity as a legacy element together with the ecological, structural and, mainly, perceptive dimensions. It is discussed issues of territorial scale related to the description of morphological, typological, and structural articulations of the built environment. The final product is a map that evidentiate the territorial heritage of the place, as a presupposition to understand the relationship developed historically between the environmental structure and the built structure, and therefore socioeconomic.

This understanding shows the logic of the nature of urban occupation, consolidated throughout history, and the (dis) equilibrium between the settled society and its living environment, which (does not) guarantee the durability and sustainability of the settlement. Thus, the nature of the urban space is characterized from such relations, to be then reinterpreted from the point of view of contemporary society.

With the methodology of representation with technology of the geoinformation proposed by Poli (2012 and 2013), which focuses on the two-dimensional mapping QuantumGIS, already applied for the case of Santa Leopoldina, in Espírito Santo by de Andrade (2015), and with the possession of the methodology proposed by Simões Santos (2017), with references to the Conjectural Maps of São Mateus, there's an effort to combine both methods in order to gather theoretical and practical elements necessary for the mapping of São Mateus heritage values (Figure 1).

The territorial area adopted for the mapping of the representation of values also refers to previous heritage protection regulations, such as the São Mateus Municipal Master Plan, concerning to the item Historical Heritage (Figure 2), whose preservation area validates the adopted to this study. The mapping of high, medium and low values makes reference to the three territorialisation cycles of the conjectured maps proposed by Simões Santos (2017), whose argumentation and methodology of elaboration is present in the aforementioned section of this article, which is in line with the concept of the territorialist theory.

The gradation of values should not be understood only as a socio-temporal-temporal hierarchy of the local heritage, relative to its value of existence, but rather it is articulated with other variables related to the current state of conservation, use and appropriation, that is, its value of use and value of actuality, in the face of contemporary socioeconomic dynamics. The analytical combination of the value of existence, use

and actuality, endow the set of gradation of low, medium or high heritage value. In this way, the value endowed with a patrimonial asset, will dictate the intervention addressed to it.

As an example of high value, the “First Cycle of Territorialization” from the first Conjectural Map reveals an important heritage production moment for the historic center of São Mateus, as it is given a higher gradation when compared to other elements due to its value of existence, containing aspects of memory, identity, and aesthetic-formal as a parameter of evaluation.

As an example of medium value, the “Third Cycle of Territorialization”, whose maintains its value of existence, lose weight in terms of use and actuality, by the transformation of the architecture in contrast with the previous cycles, and also facing a new urban socioeconomic dynamic, which could trigger a new program for a reflection and compatibility on the new demands of use and appropriation of the land. The intention of the gradation as a medium value is that the analysis favor projects of valorization and requalification of these area to increase its gradation to a higher value. There are no examples of low value, as there are no elements whose combination of values of use, existence and actuality makes it an urgent intervention needed. Although there are some punctual inferences related to the new architecture and the expansion of the city, in total contrast and low quality specially related to the three cycles of territorialization present before. Other than that, another inference is need concerning the actual value of the port, that is deactivated, and although the place remains memorial with this high value, it no longer has the same value force of the previous use and situation, therefore this opens up intervention opportunities towards the revitalization of the port, harboring the new dynamics of everyday life in São Mateus.

Figure 1 - Representation of Heritage Values of São Mateus

Figure 2 - Limits of the Heritage Protected area of São Mateus. Source: PDM São Mateus 2014.

6 RESULTS AND DISCUSSIONS

The representations narrate, evocatively, the character of the place, its configuration, and transmit a language that satisfies criteria of replicability and reproducibility of method and technique. The method proves to be able to be used to identify patrimonial values in the Brazilian context, provided that the adaptation of concepts to the local reality, such as long-standing heritage, citizen participation, space clippings (scope, figures and elements), Understanding of the territory as an organization that has layers (environmental, built, socioeconomic), and the geoinformation technology to be used.

The tool used for the construction of models, QuantumGIS software, has ample capacity for analysis and synthesis of the territory. It responds effectively to analyzes of heritage approach, as well as the work with existing georeferenced data created for territorial and urban analysis. It is a top two-dimensional representation tool, where it is possible to later explore three-dimensionality.

It proves to be a tool with potential in terms of information capacity to coalesce; Updated as one of the first tools of analysis, that is, a platform on which to make as considerations, together with the survey and recognition in place, and above all able to dialogue with several technicians of different specialties, But are complementary to the heritage approach, provided that a matrix of criteria for a gradation of value is safeguarded.

The effort to overcome the challenge of fine-tuning criteria between the conjecture map methodology and the methodology of value representation in which the very precision of the data and historical sources in articulation with on-the-spot data checks are essential. For the transposition of conjectural polygons to the map based on a georeferencing system, as to the agreement with respect to the gradation of values. Therefore, as a result of this study, it is proposed (i) in situ verification of spots from the conjectural maps; (ii) improvement and evidence of the value-gradation matrix, determining and justifying weights, in order to develop a qualitative-quantitative synthesis; And (iv) progress in the elaboration of a database of patrimonial values in São Mateus, with possibility of expansion to other localities, as is already the case of Santa Leopoldina (de Andrade, 2017).

Territory is heritage, but heritage may not always be the territory, unless a relationship of recognition of identity, local environmental, urban and economic values is established. The work of representing values has importance in building knowledge of the local culture, while proposing models that conform as project directives for the territory. In this sense, there is a contribution to the state of the art for the urban planning of patrimonial contexts, and indicative for research developments in the elaboration of digital models of the territory with a core in the identification of the Portuguese urban settlement model, whose system can be used to reflect on a Development.

In addition, the Municipal Master Plan of São Mateus opens a participatory process to contribute to the revision of the plan. With regard to the preservation of historical heritage, it is suggested as a provocation, in the universe of approach of this article, the elaboration of detailed studies about the representation of patrimonial values of São Mateus, whose syntheses can be used as guidelines for participatory pathways related to parameterization Based on the patrimonial approach of the territory. And, therefore, constitute theoretical, methodological and practical postulates for overcoming the conservation and development dichotomy.

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ID 1638 | EVERYDAY NATIONALISM AND URBAN CULTURE – NORMALIZING NATIONALIST REPRESENTATIONS, DISCOURSES AND PRACTICES IN PUBLIC SPACE

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1 INTRODUCTION

Public space research has engaged in depth with progressive social and political movements which have appropriated and reframed public space as a political sphere and a space for local, lived democracy. However, urban public spaces have not only been the place of these progressive movements' protests and occupations in the face of crisis and austerity policies. I want to briefly sketch some of the different phenomena that show that public space has also become the place of anti-pluralist, xenophobic and nationalist protests: The Brexit-vote, a result of anti-immigrant sentiments and Euro-skipticism, brought increased xenophobic violence to public space. When the unleashed violence of terrorists has disconcerted public space yet again, the French government has extended the state of emergency curbing citizen's rights such as the right to assembly and protest. Another example of urban space being used for rightist and nationalist strategies is Turkey. After the failed coup in Turkey, thousands followed the call of Erdogan for a "Democracy Watch" in Taksim square, re-appropriating the symbol of the 2013 Gezi Park Protests against the government with national symbolism. In 2015 the rightist movement Patriotic Europeans against the Islamisation of the Occident (PEGIDA) came to a head with 10.000 citizens protesting in Dresden (Zeit.de).

These observations point to the relevance of urban public spaces in the operation of rightist political organisation. They postulate a closer look at urban public space as a central arena of the right's anti-pluralist, xenophobic and nationalist agenda. Furthermore, they expose the city a contested space of both progressive and rightist appropriations. The aim of this paper is to pay attention not to the overt protests and demonstrations but to expose everyday and popular nationalism in public space. It seeks to address the representations, discourses and practices that normalize nationalism in public space. The research therefore challenges the notion of rightist spaces as rural phenomena as well as it challenges the notion of urbanity at the heart of inclusive and cosmopolitan societies. Based on Bulut's (2006) definition of popular nationalism as "the exacerbation of nationalist feelings and the increased attachment to the idea of the nation in everyday representations, discourses and practices" (p.125) this paper points out the return of nationalisms to public space, drawing on the democracy watch protests and the popular festivities of the Austrian National Day. It aims to present first explorations of rightist appropriations and nationalism in public space to develop future research propositions.

2 EVERYDAY COSMOPOLITANISM

In the prevalent discourse on life in multicultural global cities, the mingling and mixing of diverse and different urban dwellers is often described as a huge potential to establish a cosmopolitan attitude. Many urban studies authors have underlined how the complexity and lived difference of urban life transforms us into cosmopolitan citizens, as we are confronted with various cultures, religions, ethnicities and lifestyles in our urban everyday life (Amin and Thrift, 2002; Caglar, 2002; Sandercock, 1998). To live our life in global cities we need to deal with this difference, and thus national or religious, essentialist notions of the city and its spaces are upset. Instead of building community and citizenship based on national, religious, or ethnic identity, the city becomes a possible contact point of shared identification across dividing lines (Caglar, 2002). These assumptions on urban societies' capacity of inclusion though have rarely been grounded with empirical research. As Müller (2011) points out, "academic interest has mostly focused on postulating an abstract ethics for an as yet unrealised cosmopolitan society" (p.2) instead of analysing the ordinary citizens' extant cosmopolitanism.

Cosmopolitanism is mostly explained in a normative approach, delineating a philosophy of world citizenship on the one hand, and a set of certain skills, attitudes and lifestyles, that constitute cosmopolitan subjects (Binnie et al., 2006). Still, there is a lack of empirical and more grounded work on cosmopolitanism, to substantiate the assumptions of urban life's potentiality of creating cosmopolitan attitudes. Defining cosmopolitanism as a social practice rather than the philosophy of world citizenship or a set of certain skills, attitudes and lifestyles, Müller (2011) found that an urban identity can supersede exclusionary national, religious or ethnic identity (p. 15). Still, "cosmopolitanism cannot be envisaged as an unproblematic transcendence of the everyday workings of power and national, ethnic and religious identities" (ibid. 16) but has to be viewed as an ongoing negotiation between existing identities, contact points and class structures. While Müller emphasizes the need for empirical work on urban cosmopolitanism, this paper aims to underline the need to discuss the existing identities, contact points and class structures as given in national, religious or ethnic belonging that have become visible in essentialist notions that seem to be just as prevalent as cosmopolitan attitudes in urban society.

Accounts of "Everyday Cosmopolitanism" (Bayat, 2003), "Everyday Multiculturalism" (Wise and Velayutham, 2009), or "Street-level Cosmopolitanism" (Radice, 2009) deal with citizens everyday practice of living together in multi-ethnic societies. In "Life as Politics" (2013) Asef Bayat formulated a practiced concept of cosmopolitanism: Everyday cosmopolitanism. Instead of ascribing the cosmopolitan idea(l) only to the educated world-citizen, in his research on the Middle East he discovers cosmopolitanism in the everyday life of the citizens who across ethnic or religious differences share a life and certain practices, living in peace. These concepts have aimed to fill the gap of theoretical literature of multiculturalism that a top- down approach has produced and offer a perspective that "explores how cultural diversity is experienced and negotiated on the ground in everyday situations" (Wise and Velatyutham, 2009, p. 2).

3 THE COSMOPOLITAN CITY IN CRISIS

Essentialist identification, and with this, essentialist notions of place counter the discourse on cosmopolitanism. These notions are based on the idea that nations represent homogeneous cultures where newcomers, like refugees, are out of place (Brun, 2001, p.17). As Stuart Hall points out, the modern character of nation states is not just a defined territory or political entity but producing meaning as a "system of cultural representation", in which "people are not only legal citizens of a nation; they participate in the idea of the nation as represented in its national culture" (Hall, 1992, p.292). This discourse of national culture has always been imagined in relation and more so as opposed to an other. In recent years, with movements like PEGIDA or the political party Alternative für Deutschland (AfD) in Germany cultural definitions of race have found their way into discourses about nationality and have unveiled that big parts of society reject immigration, and pointing to "a racism which avoids being recognized as such because it is able to line up 'race' with nationhood, patriotism and nationalism. (...) It constructs and defends an image of national culture – homogeneous in its whiteness yet precarious and perpetually vulnerable to attack from enemies within and without. (...) This is a racism that answers the social and political turbulence of crisis and crisis management by the recovery of national greatness in the imagination." (Gilroy cited in Hall, 1992, p.292)

Rightist and nationalist political organisation is still rarely analysed in its relation to public space. As nationalism has generally been depicted negatively in academic accounts, how can we understand the appeal of this construct? John Agnew (2013) deconstructs the critique of nationalism, as 1) nationalism does not simply appeal to an "imagined community", but it has created real and material communities of interest and identity through tying them to a state-organized territory; 2) Nationalism has, as opposed to liberalism and socialism, the mobilizing power through identifying an enemy against which the nation's territory needs to be defended; nationalism developed "in popular appeal alongside industrial capitalism and "modernization" in Europe" and can thus be expected to go in decline in the face of accelerated globalisation and international migration (Agnew, 2013, p.133). Whereas civic nationalism is framed around institutions and political principles, the Ethnic nationalism involves the exclusive identity of the people with the nation whereas civic nationalism involves the inclusive identity of the nation with the people. Thus, if ethnic nationalism is characterized by shared cultural loyalties, civic nationalism is all about shared political principles and institutions (ibid.,p.136). In contrast to the ideal of cosmopolitanism, nationalism relates community and identity to territory and space and therefore serves essentialist notions of space. Though concepts of everyday cosmopolitanism have tried to overcome its normative and elitist

bias, they have not achieved to answer questions of meaning and identity, where nationalism offers handy attachments.

Ebru Bulut (2006) defines populist and popular nationalism as “the exacerbation of nationalist feelings and the increased attachment to the idea of the nation in every-day representations, discourses, and practices which could be observed during the 1990s” (p.102). Based on Turkey’s social and political development she describes how we can understand increased nationalism through the social grammar it develops. This social grammar of popular nationalism is firstly present in pervading national symbols like the national flag or portraits of national leaders at home or in shops. Secondly, this nationalism acts as a form of problematization through which we can understand the world and attach meaning to it, determining categories and rules of discourse through which to think and speak and act (Bulut, 2006, p.129).

The current populist and rightist political backlashes in national politics in Europe and around the world stand in discrepancy to globalised economies and migration and the multicultural realities of cities today. These political backlashes, exposed by the Brexit vote and Trump’s election as President, have unsettled not just the national political classes, but upset members of the liberal middle classes and the metropolitan left. Despite their diverging political aspirations both neoliberal and leftist groups share their support of cosmopolitanism, which is violently rejected by the right. This research aims to help understand what Jeremy Gilbert (2017) has called the “crisis of cosmopolitanism” and its roots in and consequences for the metropolis. The differentiation between civic and ethnic nationalism as described by Agnew, as well as the account of popular nationalism offer valuable perspectives to analyse the celebrations of the national holiday in Austria and its contribution to what I have called everyday nationalism.

4 NORMALIZING NATIONALIST REPRESENTATIONS, DISCOURSES AND PRACTICES IN PUBLIC SPACE

4.1 FROM GEZI PARK TO “DEMOCRACY WATCH”

With the “Genie in a Bottle” Örs (2014) describes how the process of the Gezi protests in Istanbul in 2013 realized a reconceptualization of democracy in Turkey, especially through its spatial occupation (p.491). The public was upset with Erdogan’s project of destroying one of the few green spaces in Istanbul’s centre to rebuild the historical military barracks on Taksim square, a project evaluated as building on “anti-secular, islamist, neo-Ottoman ideologies” (Örs, 2014, p.494).

From a sit-in to hinder the destruction of the park the Gezi park demonstrations grew into a tent city, where LGBQT and feminist groups gathered next to Kurdish, religious groups and environmental activists and developed a community life where their various opinions and political ideas, that were otherwise not represented in the political parties in Turkey, could be expressed (Benhabib, 2013). The extremely violent clearing of Gezi park using water guns and tear gas ended the “Gezi utopia”, displaying the AKP’s and Erdogan’s government’s stance as being the only democratic body of relevance. The alternative political process of a pluralist democracy sharing values of cosmopolitanism, solidarity and peace represented a threat to the representative democracy in crisis and was thus attacked with full force (Örs, 2014, 497). As a consequence, the government banned all forms of gatherings or protests from Taksim square, paralyzing the once busy square.

The Gezi camp brought about many hopes for Turkish democracy: “Since Taksim Gezi protests erupted in May 2013, a new phase of democracy is starting to be defined in Turkey.” (ibid. 489) The aftermath of the failed military coup in Turkey on 15 July 2016 showed a yet unpredicted phase of turning democracy into autocracy: “Although the identity of the coup plotters remains unclear, President Recep Tayyip Erdogan’s subsequent crackdown on a wide range of his perceived opponents – including the detention of nearly one-third of the high command of the Turkish Armed Forces – could portend a period of sustained turmoil that would seriously strain Turkey’s international relations, exacerbate its already widening democratic deficit and inflict lasting damage on its social fabric.” (Stevenson, 2016) A few months later the fears about the crackdown seem to have come true, with a purge of all critics, throughout political parties, independent media, educational institutions and NGO’s under the state of emergency.

Coming back to the spatial aspects of this political crisis, the revaluation of public squares has been a central strategy of the coup's aftermath. While Erdogan already called for the people to go to the streets to protect their elected government while the military coup was ongoing, thousands of citizens followed the president's call for so called "democracy watches" once the coup had been averted. Over the course of the following nights thousands gathered to show their solidarity with the elected government. These protests were in contrast to the "Gezi Utopia" characterized by their national symbolism, with a blaze of Turkish flags and Erdogan and religious banners (Akyol, 2016). Taksim square was one of the biggest gathering places night after night, where citizens stated their belonging to the state and their support of democracy across party lines and ethnic groups. If "the crisis of democracy strolls in public spaces of the world, seeking an effective redefinition, an update of the concept, a way to bring the public back into the concept of democracy" (Örs, 2014, p. 490-491), Erdogan and his supporters have been successful at bringing the public back into a different concept of democracy. Thus it represents an effective redefinition of not democracy but autocratic state power, seeking legitimation in the streets by calling the people to show their solidarity with the nation and not with pluralistic, bottom-up democracy, as it was lived in the Gezi camp. The democracy watch on Taksim square revaluated the place that once stood for the Gezi protests against the government's radical urban redevelopment and speculation strategy, and then for the disproportionate police violence through which the protest was ended. After the repeated night watches, and images of red flags plastering the square, Taksim stands now for the unity and national identification of the Turkish people (at least those present at the demonstrations) while the purge of all difference is ongoing.

4.2 THE CELEBRATION OF AUSTRIA'S NATIONAL HOLIDAY IN VIENNA

Since 1965 Austria's National Holiday is celebrated on the 26th of October to commemorates Austria's declaration of unceasing neutrality and independence to foster peace in the world:

"Eingedenk der Tatsache, daß Österreich am 26.Oktober 1955 mit dem Bundesverfassungsgesetz BGBI. Nr. 211/1955 über die Neutralität Österreichs seinen Willen erklärt hat, für alle Zukunft und unter allen Umständen seine Unabhängigkeit zu wahren und sie mit allen zu Gebote stehenden Mitteln zu verteidigen, und in eben demselben Bundesverfassungsgesetz seine immerwährende Neutralität festgelegt hat, und in der Einsicht des damit bekundeten Willens, als dauernd neutraler Staat einen wertvollen Beitrag zum Frieden in der Welt leisten zu können, hat der Nationalrat beschlossen:

1. Der 26. Oktober ist der österreichische Nationalfeiertag.
2. Der österreichische Nationalfeiertag wird im ganzen Bundesgebiet festlich begangen." (Rechtisformationssystem Bundeskanzleramt ris.bka.gv.at)

Both the independence contract and the declaration of neutrality have been denominated at the heart of a positive Austrian national conscience, detached from nostalgic ideas about the former super power or a Pan German empire (Spann, N.D.). Besides a speech by the president, the national holiday is celebrated with an open house day in Vienna where people are invited to visit the central democratic institutions such as the seat of the chancellor or the parliament building, where the different elected parties present themselves. In 2016 the celebrations took place along the Ringstraße boulevard and Heldenplatz, where important historical state buildings, and political and cultural institutions are located, such as the parliament, the City Hall of Vienna, the historic building complex of the Hofburg (the seat of the Federal President), the Chancellor's office, Burgtheater and State Opera, the Museums of Natural and Art History, and the University of Vienna. Two prominent organisations shape the festivities in public space: The Österreichische Bundesheer (BH, the Austrian Armed Forces) and the K-Kreis (Katastrophenschutzorganisation, civil protection organisations), an association of 39 professional and voluntary organisations and divisions of the municipal authorities catering for what they call "security", e.g. wastewater and sewage, electricity and gas, public transportation, police and military police, but also social services. In what they called a "Informations- und Leistungsschau" (informational and performance show) the BH, the institution most prominent in the public spaces of the fair, present military vehicles and innovations, such as tanks, helicopters and trucks, special weapons, gear and even military dogs and the different divisions of the armed forces. Besides displaying the military force of the BH, another stated aim of the show is to recruit new soldiers in the face of illegal migration and the threat of terrorism. The banners of the BH underpin the message of a threat to security and the important role of the Armed Forces to increasingly protect it:

Mit Sicherheit. Auf unser Heer kommt's an. Gerade jetzt. (See fig.1)

Figure 1 - Banners of the BH at the celebrations of the Austrian National Day, October 26, 2017 (© Author)

The square in front of the town hall was used as a fair ground for the "Wiener Sicherheitsfest" (Vienna Festival of Security). As part of the show of the various organizations of the K-Kreis also the police and the military police presented themselves and their special operations vehicles with tear cannons. Again, the security aspect informed the naming of the event and the display of (para-)military machinery and personnel were the main aspects occupying public space. The violent character of these high-tech weapons and soldiers as actual protagonists of war and defense and the paramilitary armament of police seem unfit to be presented in a popular fair. And yet, the people coming to the show apparently enjoyed the day atmosphere, had food and drinks, bought balloons for their kids and took photos together with soldiers in gear holding their pump guns and posing on tanks. The BH and the police presented themselves as approachable and popular while stressing their importance as strong defenders of the country's and its citizens' safety in times of crisis. (see fig.2)

In light of the declaration of neutrality and independence that is celebrated on Austria's national holiday, such a strong presence of the military and the police and their performance show during the festivities seem a bit odd. Opening up the democratic institutions to interested visitors on the other hand celebrate what Agnew (2013) has termed civic nationalism (p.136) as it is dedicated to the democratic institutions (but not yet principles) of Austria. Still, the BH show and the "security festival" in central public spaces in Vienna address principles of populist and popular nationalism. They bring up threats of terrorism and illegal migration as topical issues they tackle and thus affirm the protection of a state-organized territory. Exactly the tying of communities of interest and identity to territory and the protection of that territory against enemy figures are described as appealing to popular nationalism (Agnew, 2013; Bulut, 2006). They, if very subtly, play in the hands of conservative and right-wing discourses on refuge, migration and terrorism, where increased border control and urban securitization are pursued. As Bulut (2006) points out for the case of nationalism in Turkey in the 1990s: "In order to understand the extension of nationalism as the social grammar, one has to consider mobilization not as an ensemble of specific actions but as a continuum which includes actions, sentiments, even silences (non-protestation). It is less a mobilization for action than a mobilization for consensus." (p. 129)

As internationally military parades are common events during national celebrations, we have not come to question them. The presentation of BH and police armament as a popular fun fair should be recognized though as normalizing discourses of urban warfare and threats of national security as part of rightist federal law as well as urban securitization.

Figure 2 - Military and police “performance show” at the Austrian National Holiday, October 26, 2017 (© Author)

5 REFLECTION – FRAMING A RESEARCH AGENDA

First explorations of nationalist appropriations of public spaces in Istanbul and in Vienna have shown the return of overt and subtle nationalist discourses and practices in cities. They have pointed out that public space is a relevant arena to establish, further and maintain nationalist politics and establish first relationships between national discourses on migration and terrorism and their effects on urban spaces. The democracy watch protests have brought citizens to the streets in national unity and in “defence of democracy” against the enemy identified as the coup plotters. We have furthermore observed the normalizing and trivializing military and para-military presence during the festivities of the national holiday, that has been shaped by the theme of security. The discourses shaping the exhibitions in public space were themed as “security” shows, where a more abstract enemy has been identified with illegal migrants and terrorists.

The urban studies discourse has engaged intensively with progressive movements and their relation to public space, furthering accounts of the cosmopolitan and inclusionary potential of cities. Radically exclusionary movements though still offer research opportunities in their relation to public space and I claim that it is crucial to understand rightist appropriations of space to mobilize people and propagate their agenda as crucial arenas we need to tackle. Though cautious not to promote rightist ideas, urban research needs to analyse rightist movements to raise awareness of the critical factor of space and body politics in establishing, continuing, and furthering ideologies that might threaten the democratic project. This research can also inform urban and spatial planning and its engagement with nationalism, localism and identity of place.

To achieve a broader understanding of the spectrum of rightist appropriations of public space, I want to develop a research project that looks at conservative and right-wing parties, movements and everyday practices in relation to urban space. The aim of such a study then is not to analyse intellectual trends, ideologies and social contexts of those groups in depth but to study their use of and relation to public space in establishing, continuing, and furthering anti-pluralist, xenophobic and nationalist ideologies.

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ID 1644 | THE IMPACT OF INTERNATIONALY URBAN CULTURE IN REDESIGNING AND RECLAIMING LOCAL PUBLIC SPACES VIDEOGAMES AND STREET-ART MOVEMENTS AS DESIGNING PLATFORMS FOR PUBLIC SPACES

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ABSTRACT: Public spaces have been seen as common spaces for social gathering and for developing and presenting various art installations. Most of the time public spaces have been designed by city planners from their offices and from their own perspective. This has led to derelict, disconnected from its surroundings, and abandoned spaces. Emerging internet subcultures of video games and underground movements such as street art have progressed beyond entertainment and fun towards a more innovative world. These subcultures have encouraged a different way of thinking, seeing and doing things. The tools that these subcultures have developed can be wisely used to change landscapes and redesign and recreate attractive and usable public spaces. Using these internet platforms to do tactical urban interventions, in a sense of transforming these internet based platforms to useful and practical tools through creative practice, can respond and fill the gaps of cooperation between digital/video games communities and urban/street art, artists and the city planners to addressing the problems with abandoned and disconnected public spaces. This study provides, firstly, an overview of how subcultural theory could contribute to a study of the use of algorithms of video games and urban/street art movements in innovation and creation of public spaces and redesigning of existing ones. The first part will focus on widely used video games such as SimCity and more dynamic GTA to see how these two video games can be used to create innovative public spaces and also to redesign existing ones by engaging the community as well. The second part of the paper will look at the urban/street art global movement and the impact they have in our everyday life and in the public space we together share. Street art movement most of times have sought, through their guerrilla art actions, to reclaim the public space. Due to increased attention, cultural recognition and institutional support graffiti/street art have been gaining in recent times, it is important to analyse the significance that this subculture could have into the creation of the public space. This paper will analyse particular projects that have applied the approach of using video games and urban/street art to reclaim public space and turn it into a creative and attractive public space for all. Although, this approach has been used in different cities around the world in Prishtina this approach has only been used once by the UN Habitat in cooperation with the City of Prishtina to transform an abandoned site into an attractive playground for children and a public space for adults, by using the tools of Minecraft video game. The main objective of this study is to analyse how the combination of the tools we find in video games and street art could transform cities, improve lives and reclaim public space.

KEYWORDS: Public space, urban culture, urban design, videogames, street-art, subculture

1 INTRODUCTION

Public spaces, in its divers contexts, describes as a neutral or shared space of its own urban dynamics. Whether these public spaces are functional or abandoned, used or misused, “free or invaded” they are in close tie with the way how they have been designed. The traditional approach known as “planning from desk or office” led to non-usable space for its first purpose. This kind of “space abuse” or “spatial misuse” (Özkan, 2008) brings to the question of redesigning and reclaiming the value of the public spaces as an alternative. Urban culture as much as complex as it can be, can validate public spaces using subcultures as socially engagement of various communities within.

Videogames and Street-art are internationally renowned subculture movements have impacted our modern society. They also impacted pretty much isolated society’s such as City of Prishtina, capitol city of Republic of Kosovo, through the only platform looking at the world-internet. These two internationally movements that can puzzle-in in locally urban lifestyle as an “imitation game” of these globally urban

movements. It is important to explore other alternatives of approaching in creative and playfulness of planning public spaces. These “tools” gives to our post-conflict society an opportunity to conduct an independent alternative and develop constructive knowledge of modern dynamics of city’s landscapes evolution and its transitions towards more innovative and sustainable public space.

This paper is focused on these two subcultures of urban lifestyle as tool or platforms. First part of the paper (1) describes different aspects of videogames as an indoor activity or how different algorithms of videogame’s virtual space can be used to transform physical local public spaces into lively places for society and its naturally needs. Various perspectives will be discussed, example of Electronic Arts Inc. SimCity, developed more as axonometric, or traditionally known as planner’s perspective. Rockstar’s Grand Theft Auto-GTA conceptually 3D dynamic game, that is more developed from pedestrian perspective. Even conceptually abstract cityscape, put in through Arkham Asylum videogame that storyline comes from DC’s Bat-Man superheroes comic book as part of urban culture steps into reclaiming of public/good from misuse/abuse or evil forces of City of Gotham in a subconscious player’s/planner’s struggle to redesign space that citizens own for their city.

However, in this part (1) the focus of analysis takes an independent videogame as Minecraft by Mojang Ab company, that explores many possibilities to engage different communities in designing public spaces according to their needs. Case of UN Habitat initiative through the program Block by Block in Prishtina, republic of Kosovo can be a good analytical or study case. Starting from the story of game to platform or community tool to discuss community perspective for redesigning or reclaiming public spaces in step of their threshold, this study will give an example how this videogame can work as an alternative tool for redesign these common spaces.

Contrary to videogames “manipulative” aspect of or with virtual space, in second part (2) we analyze globally street art movement as a primary outdoor activity. Although, many definitions of street art, we will try to gather all non-institutional and independent art forms in public spaces that provoke or defines society within. Rather it is graffiti, post-graffiti or street art, guerrilla art or marketing, public art or public interventions, legally or illegally we refer these subgenres under one term of street art movement. Here, we address the impact of several local case studies that uses street art to revalidate and make attractive public spaces.

The notion of space traditionally refers to something anonymous (Sherry 1998; Tuan 1977) and universal, public space are more described as place of meaning of certain activities. Thus, cities are “both physical and imagined” spaces (Brown-Glaude 2008, 114), where “differences are constructed in, and them-selves construct, city life and space” (Bridge and Watson 2000, 507, quoted in Brown-Glaude 2008, 114, quoted in Visconti et al, 2010,). Attempts to change one dimension may prove worthless or even counterproductive in the absence of connectivity to the others. It is, in the end, the symbiosis between the three that matters (Harvey, 2005). So, this paper study refers to public spaces as physical common grounds as a fusion of diverse actions or where life’s drama takes places in its natural order. Referring to it as public space to streets, parks, squares, under or overpasses, etc.

However, the group activities are political, artistic or research group, etc. where virtual environment simulate real world places and activities (Witmer, 1996). In that context need for physical public spaces transgress into processes of socialization online as a virtual public space. This can reveal an important interplay in redesigning physical public space. Virtual space is non-physical spaces created by the development of technology. It could be a music record or Internet social network for example, Facebook and Twitter, where Internet is the first true virtual space (Shields, 1996, quoted Alrayyes, 2012).

Although, “despite seeming like public spaces, these services are really not public. Virtual public spaces try to seem like public spaces, but they are like shopping malls: commercial spaces that encourage only a subset of public behaviours. Virtual public spaces are not public spaces, but as we spend our public time in them, we drain the life from alternative public spaces.” (Smith, 2013). The term of virtual public space known also as cyberspace includes also internet platforms public domains as social media networks, community forums, online videogames, web database sharing content, etc.

Due to different urbanization movements, public spaces as complex structure faded into various impacts and planning methods in a dialectical context. As this topic “surfs” from internet our main method is analytical model of case study. Analytical model is based on qualitative as much as critical analysis of case studies. That includes site location and process analysis based through redesigning those public

spaces. Many of the ideas in this paper study were collected from reading various articles, journals and books or from internet that is main source of our inspiration as videogames and street art and their impact became internationally best known from it. Through the paper, the tendencies are to lean on Henry Lefebvre's "The Production of Space" (1991 (1974)) as theoretical framework of appropriated space or in our case into re-appropriated, redesigned and reclaimed public space, its production from videogames and street art movements.

Accordingly, the community these days are much more active and engage in redesigning their common ground our goal is to present them these new alternative platforms to express ideas in more simple but powerful way of urban design and planning of their/our common ground.

Finally, the aim of the paper is to explore how these platforms as tools can fill the gap of choosing an alternative way to redesign or reclaim public spaces into more attractive appropriating areas of engaging communities to shape and redesign.

2 VIRTUAL PLAYGROUNDS OR PLANNING WITH VIDEOGAMES

Interactions between physical and digital domains that used to be considered as largely different in our concept of perception of time, space and place, social relationships and identity, technologies made it faded or blended in our human imagination. Technologies can be conceptualized as an interface between the digital domain and the city (Ito et al, 2009). These media technologies tie digitally mediated communication and information to physical contexts, and at the same time enable the uploading of "real world" experiences to the digital realm. (de Lange M, 2009). Before trying to explore these tools, the focus is to overview the link between the videogames as urban culture and urb-architectonic aspect of city's landscape.

Shortly, to describe these aspects, Space Time Play: computer games, architecture and urbanism: the next level (Von Borries, et al. 2007: 12-13), is very useful analytical book that shows some 'levels' where games and urbanism meet. First, there is an 'architecture of computer and video games' that is a distinct spatiotemporal design where for architects is important spatial context and quality characteristics from the game. This kind of design is 'democratic' way that player is free to redesign its own game (e.g. Sim City). For videogames creators, on the other hand, it's about finding creative elements that constitute game space and which spatial attributes can give a specific type of interaction. This can lead to videogame players to experience physical space differently and thus use it differently. In this context, videogames in hands of player or communities engaged can provide many creative solutions to reshape public spaces.

Second level of "make believe urbanism" bring coherence of virtually generated spaces and how these 'virtual communities' present their identity between the representation of the city in games and the city as metaphor for the virtual specialization of social relations. Interplay between digital and physical spaces, gives us a city as playground where certain communities besides socio-cultural developments of present they build an imaginative future for public spaces.

Third, "ubiquitous gaming" is actual platform or tool practise that describes real space – public space in redesign process into a videogame virtual space using gaming technologies and creative game concepts or that may modify the social functioning of urban places (de Lange M, 2009). Potential and flexibility of videogaming can produce future redesigning of public spaces. At this level interaction between players and spaces is direct action of social and cultural behaviour of a virtual world as tool.

In the fourth level, "serious fun", or "serious tool" the specific game elements have serious uses in redesigning public spaces. There are some examples where videogames are used in architecture and city planning. UN Habitat settlement program Block by Block is one of them. This program takes place also in not so attractive neighbourhood Sunny Hill which we will discus later on this part.

In the concluding fifth level of understating virtual spaces through videogames architecture and concepts that defines it, playfulness of videogames critically reflects the future of public spaces. For instance, many maps and mapping apps and their potential whether it can be cultural, social or database of certain activities can be major shift on how we navigate in future. Overall, by understating and using flexibility of virtual space in videogames communities can designed but also reclaim any public space that is invaded

or abandoned into attractive and liveable spaces. These creative platforms can benefit from each other in designed and planning rather than excluding one. Merging virtual and real can be an opportunity and alternative in sustainable planning for cities in general and public spaces in particular.

While videogames are increasingly popular cultural product, it can be a reason that they do inspire our imagination. Even, Situationists said that 'elimination or disappearance of competition is in favour of collective concept of play' which is contrary of videogames concept, 'it's a ludic construction of time and space that must invade the whole life' (Débord, 1958). Later in utopian architectural projects such as "Fun Palace" (Price, 1959) where visions of the public spaces intended to be inventive and playful towards its users as is case in virtually space with videogames. Also, applying of different aspects of virtually playfulness is spotted at "Plug in City" (Cook, 1964), where Archigram's avant-garde ideas was there to provoke debates in which architecture, society and technology can create ludic spaces together. In this context architecture and space within had to be redefined by literally merging with technology.

2.1 GAMEFULLNES - TOOLS OF SIMULATION

"Cities are amazingly complex systems," says Will Wright creator of Sim City in his interview for Guardian…"Millions of autonomous agents – the people – making millions of decisions: where to live, where to work, where to eat lunch. Those millions of decisions are the city." Creators of SimCity acknowledges early foundations of computer simulation model for balancing population, housing and industry within urban space in 1969 "Urban Dynamics" book by Jay Forrester. Than they used his 'simulations proposed predictions to impact urban city and not to solve urban decay by intuition' (Forrester, 1969). Sim City's vividly strong colonial approach is based on abundance of land in early USA cities. However, 'abundance of open space' (Rybczynski, 1995) nowadays this is much more a responsibility than benefit to contemporary urban planners. Sim City, from early beginnings tend not to be just a game. Although, reflects an aspiration towards an "ideal city". Due to GIS rigidity that is based more geographically databased, Sim City is providing data on different socio-cultural issues that can impact city. SimCity demonstrates the fundamental appeal of observing and interacting with systems (Maxis et al, 1989). Therefore, with Sim City communities can play, plan, generate and simulate multiple design options that puts them into city planner's role to recreate public spaces of its own.

In contrary of 'space abundance' (Rybczynski, 1995) in Sim City, Tetris is a narrow but on top endless virtual space of constant falling blocks. While players see a limited space of play – original version is 10x20 square grid – they tend to manipulate blocks by rotating them and shifting them into a puzzle. This gives a player to anticipate in small amount of time and very little space solutions for liberating as much space as they can. Led by this contradiction of space to re-appropriation of space (Lefebvre, 1974) a collective of urban based artist by squatting an abandoned house in Prishtina and transform it to a public gallery or space where anybody can exhibit their works. They also called it Tetris-Manipulative Space (Pic 1.).

Pic 1. Public art gallery "Tetris", city of Prishtinas (https://web.facebook.com/groups/tetrisspace)

Many say that Rockstar's GTA – Grand Theft Auto takes place in an explicit urban background. Often this kind of influence can tackle our imaginative urban landscape. Here we have a presentation of experiencing a real city. However, it took many artists and designer to replicate scenery of real city. More than 250, 000

photographs and countless hours of video are distilled to put Los Santos, Rockstar's version of Los Angeles to work as their concept was developed. What we have here is vice versa impact of real world that defines the videogame space in virtually world. This pedestrian perspective game allows our imagination to refined other ways of navigation in streets and public spaces. Main character of game is metaphorically Space Fighter, it compares series of selected and possible projective simulations, results and outcomes of urbanistic chain reactions (Maas, 2007). That leads to 'spatial contradictions' (Lefebvre 1974) of powers of social production from its own dynamics

2.1.1 MINECRAFT – AN INTERNATIONAL TO LOCAL EXPERIENCE

For UN Habitat's public space program, urban life is essential for cities to prosper. Specially, cities that can reevaluate notion of 'public' and thereby provide green spaces, parks and other recreation facilities demonstrate a commitment to improved quality of life. Quality public spaces are excellent entry points to improve the standards of urban life for all citizens. The Municipality of Prishtina and UN Habitat-Kosovo office initiated a Minecraft pilot project – among first of its kind in the world – in Sunny Hill neighborhood in Prishtina. Intention was that through application of modern planning methods, enhanced a democratic and transparent way of planning, community participatory process, public spaces policy and strategy formulation that address space cohesion and socio-cultural inclusion.

Minecraft is a 'sandbox' videogame originally launched in 2009 as a beta version by Swedish independent gaming company Mojang AB and was published as a full relase version in 2011. To date, the game sold over 50 million copies worldwide, making it one of the world's best-selling computer videogame. Minecraft concept is perhaps best imagined as a complex of digital Lego blocks. Creative concept of Minecraft allows player to build structures out of textured cubes in 3D generating a virtually space. There is multiplayer mode that imitates real world construction site with a lot of workers, carrying out different construction roles simultaneously.

In 2012, UN Habitat and Mojang AB entered in a partnership, named Block by Block that uses Minecraft as a participatory and engagement tool for communities into design and implementing of public spaces projects in Kenya, Nepal, Haiti, Mexico and Kosovo. All the amenities deriving from the final Minecraft solution than where used to define the concept and detailed design to taken forward by the Municipality of Prishtina with UN Habitat's support.

Site selection was selected due to social and cultural interplay. Enhancing community cohesion among variety of social groups. Engaging and empowering youth was one of them. The farmers market place was selected by meeting criteria mentioned above. The broader area is mostly covered by social housing blocks build during 70's and 80's (pic 2.). The area includes some small businesses and facilities. There is a population of ca.4000 inhabitants. The population in neighborhood is divers in terms of income, gender and age (reflecting the national situation of 38% under 20 years old). In regard of connectivity the project site is located along main junction of B segment (Road B). Entire project area is ca. 1836 m² of land under municipal ownership.

Pic 2. Software visualization of the Block by block concept, city of Prishtina (http://www.unhabitat-kosovo.org).

Issues and problems in current situation with the lack of space treatment, uncleanness, stinking waste smells and is unsafe for passing by. Lack of accessibility leading to lack of frequentation within site,

undefined line between the road and inner spaces and informal trading activities are other problems of abandoned site. On the other hand, by implementing Block by block program, purpose of project is to recreate and reclaim a multifunctional public space that will entwine spaces for socializing, passive and active recreation and enriching small businesses with pedestrian friendly paths and urban furniture.

Considering, that this innovative approach is in pilot phase, expected outputs for this project are respect for public spaces, as well as awareness rising for their importance, maintenance and preservation. Motivation and engagement of all possible stakeholders into planning and implementing that redesign and reclaim their public space. Finally, although Minecraft serves as a solid framework, using Minecraft as tool for planning it refers to Lefebvre distinction of boundaries of re-appropriated common social public space as mode of production or planning. To date, project is under construction (Pic 3.).

Pic 3. Ongoing project implementation of the Block by block concept, city of Prishtina.

3 STREET ART AN ALTERNATIVE FOR PUBLIC SPACES

Street art began as an underground, self-expressed, sometimes anarchic, but more in-your-face appropriation of public visual surfaces. (Lefebvre, 1974). In 1990's street art has recognized itself in urban landscape, projecting its artistical anger potential into facades of cities, giving them an identity. Metropoles like New York, Los Angeles, San Francisco, Paris and London becomes known for its distinctive style of street art. Legends of street art artist started to rise and by late of 90's names like Shepard Fairy, Banksy Ron English and Swoon become well known for their style and works. During 2000's new generation of artists erupted and along the way leaved their mark in street art genealogy.

A street work can be an intervention, a collaboration, a commentary, a dialogic critique, an individual or collective manifesto, an assertion of existence, aesthetic therapy for the dysaesthetics of urban controlled, commercialized visibility. (Irvine, 2012). This paper study puts focus into logic of re-appropriating public spaces by local initiatives or local art collectives. A good example is the long concrete wall in Road B in Prishitna, where various businesses invaded the wall with very poorly aesthetically advertisements. This caused immense anger among youth generations that stared to "bomb" or puts their "throw ups" over them. Lately, a group of young artists have tried to change this situation that led to organized a 'Street art festival' with a help of many international street art artist and graffiti writers through a platform known as "Meeting of Styles".

This was very powerful example of how this subculture impacted the need of ordinary youngsters to change visibility of entire Road B, where these days is friendly pedestrian pavement along with cycling path and an extraordinary city scape or an imitation of bigger metropoles (Pic 4.).

Pic 4. Road B graffiti intervention, city of Prishtina.

Pic 5. District heating company's abandoned building transformed onto community space, city of Prishtina

Another, misused space (Ozkan, 2008) is abandon building of city's central heating system in Prishtina, that turned into a community space by collective of fine artists and musicians. They make it the venue space for local 'gigs' and tiny concerts that gathers a community of art lovers. This was achieved firstly by taking action or reclaiming it with street art in buildings facades and then by re-appreciating the space within.

A flagrant example in Prishtina is made by local government when they put an overpass into a very non-appropriating space that derives to unusable overpass even it was needed very much. This structure has been an annoying act for communities and citizens. Instantly, this annoying structure was object of debate among its (non)users whereas this can be torn down. Therefore, a non-formal group named "Free 4 Rent Movement" acted with tactical urban intervention. They put big signs of kind of – renting this overpass with an imaginary phone number. This intervention (dis)led a lot of people who was interested to rent this structure and open probably a café, due to its view to flags roundabout junction. Normally, they were very disappointed when they learned that was city's public property.

After that, a number of artists and other interested communities exhibit their works into overpass spaces. This re-appropriated space is caused by direct action or cities urban dynamics that Lefebvre advocates for many years ago.

Pic 5. Overpass tactical urban intervention, city of Prishtina.

4 CONCLUSION

In this open conclusion, this paper study shows that redesigned and reclaiming public spaces is a very complex process, especially in post-conflict countries like Kosovo. Awareness of respecting common spaces is very important as it is important acting for them. Videogames and street art can be useful tools as direct action of re-appropriating public spaces for common uses of communities. Leaning on Lefebvre framework for 'productive space', these 'tools' can produce very attractive public spaces as listed through examples in this paper study. Impact of various internationally not just artistic movements can be a guide for solutions in urban planning. Although, embracing or coping different global urban movements, postmodern society needs alternative ways as well as tools to exceed problems in urban public spaces.

Furthermore, our aim is to present these urban movement or tools within them in very profound manner to engaged communities into urban planning as the only way towards qualitative life in cities.

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ID 1652 | VILLAGE CHARACTER – TO THE ROOTS OF RURAL AESTHETICS

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ABSTRACT: Quality of public spaces is one of the crucial themes of contemporary architecture and urban design also because its significance is evident not only to the architects. Even in the era of strong individualism, public spaces pertain to the whole of a community and jointly form its identity. Therefore, it is reasonable to pay attention to their aesthetic nature on a general level. This paper aims to provide an intelligible ground for a creative grasping of the rural character of environment based on two criteria: 1) the relationship of figure and ground, 2) the level of urban character. These criteria apply both to remote territories as well as to fragments of former villages engulfed in metropolitan areas. It is based on the interpretation of selected features of rural environment which are generally considered valuable by architects.

1 INTRODUCTION: APPROACHING THE CHARACTER

An aspect of a village green or a village lane differs from that of an urban square and streets. Or does it? Viewed from distance, many differences between urban and rural environment seem rather obvious; however, the closer we focus on individual features the more difficult it is to determine where the threshold lies or even if there is any at all. Moreover, many features which used to be considered as intrinsic manifestation of ruralness seem to be fading or are being turned into projections of romantic sentiments. Today it is often emphasised that we are living in an urban age or that the concepts of landscape or countryside descend directly from urbanisation. No wonder one has plenty reasons to doubt whether it is legitimate to ponder upon any innate features of rural environment at all.

My argument is that such aim is not only possible but also an important one. In this paper, I shall focus on the space-in-between the houses of rural settlements, or in different words, on the physical facet of public space – the background on which the life of communities happens. My approach will be one of an architect-urbanist, of a profession especially trained in interpretation of material environment in various scales. The countryside will be viewed from a vantage point of central Europe; however the upshots could be applicable in other contexts as well.

2 LIMITS OF CONCEPTUALISATIONS

2.1 THE RURAL IN SOCIAL GEOGRAPHY

From an academic point of view, the topic of the rural is currently most covered by disciplines akin to sociology and geography; their interest in description and mapping of the rural environment dates back to the end of 19th century. Even if it was just because of the vast amount of research which they have introduced since, it is only appropriate that I should start this article by regarding them.

These fields are characteristic by their focus on the space-society relation. Their descriptive approach to it was significantly influenced by a post-structuralist way of thinking especially in the 1980s which replaced the originally more deterministic understanding of the relation. This shift is best apparent in the growth of interest in understanding the rural space as an individual locality or as a product of various social representations (Halfacree 1993).

Especially the later approach is popular as being very efficient for investigating the rural by its attention to situated specificity through (disembodied) cognitive structures. In comparison to investigation of space through descriptive optics, such research of rural representations enables us to better appreciate the dynamism of space and focus on patterns of rural discourses. However, conceptualisation of rural representation – or as Paul Cloke (2006) puts it – the detaching of sign and signification (the rural and its meanings) from their referent (rural geographical space) not only enabled to investigate the blurred boundaries between city and country (not as opposites anymore) but it also led to further split between society–space approaches to the topic. This is well apparent in the proposition of Michael Bell (2007) to distinguish two dominant epistemologies of rural: the first rural as a mater-real category and the second rural as an idea-real category.

To avoid a deepening alienation, in which the rural could be understood in two extreme positions – on one side as an arbitrary analytic distinction (Copp 1972) or as a discursive linguistic interpretation (Murdoch and Pratt 1993) – Keith Halfacree (2006) introduced a three-fold-architecture which bounds the locality and social representation in one model. Since it has been adopted both in English-speaking countries (Woods 2011, p. 9-11) and on the continent (Hruška 2014, p. 50), it seems to be acceptable as a universal framework fitted for the current era of (post-)productivism. The model inspired by Lefebvrian ‘conceptual triad’ of understanding of spatiality consists of three facets: rural localities, formal representation of rural and everyday lives of rural, all three of them comprise the rural space (Halfacree 2006), however, as its author admits, it “is less about establishing a new understanding than about realizing what we already have” (p. 51).

The concept of space as a product could be approached from a wide scope of different rural discourses. An interesting research which dealt with visual representation of Czech villages in the national competition Village of the Year (Pospěch 2015) was situated in political and expert discourse. Through complex comparison of pictures selected by the local authorities of individual villages, it investigated an image of a good village. A part of the outcome is however very interesting for our topic situated in discourse of urban design. It is the finding that representation of the social facet strikingly dominates the material one – especially when compared to analysis of rural iconography of 1970s – 1990s (p. 81-83).

This outcome is particularly interesting when compared with the outcomes of my own research, in which I closely interviewed over 40 mayors of villages of the year 2013-2015. My presumption was that for most of the representatives of communities that actually placed in the prestigious competition, the question of tangible rural character of a village would be an actual topic. Surprisingly, although my aim was primarily to uncover their views of the physical features, it became clear that it usually wasn’t perceived by mayors as a spatial facet but rather as a social one.

A preliminary conclusion which could be outlined from these two examples and some others is that the rural character of material environment is perceived vaguely, rather as a background from which social activities or selected physical representations of their discourses stand out. My task then would be to ascertain whether there is some common ruralness present in the background. The three-fold-architecture model unfortunately doesn’t provide much help in this manner. Firstly, it is hardly possible to use it when exploring meanings which possibly lie beyond the common awareness. Secondly, given the bottomless amount of rural discourses, the result wouldn’t lead to the rural, but rather to “many rurals” (Murdoch and

Pratt, 1993: 425). If this paper should provide a useful tool, it has to restrict itself to interpretation of one material environment through its relation to other material environments.

2.2 AGRICULTURE AND RURAL CHARACTER

The concepts of rural environment (or simply countryside) and agriculture are so intertwined that it is virtually impossible to regard one without the other. Although the concept of countryside represents a spatial category and agriculture a process category, they have been often and by many discourses understood almost as synonyms. It is no wonder that even today, such understanding is very popular: most of the environment as we see it today is a result of hundreds of years of husbandry, and the current medial image of the countryside still supports this image for its comprehensibility. Yet it's obvious that "traditional" understanding of the countryside (as agriculture) in opposition to the Cities (as markets) – in spite its popularity – doesn't seem to provide a useful guide for current rural character any more. The main reason is the shift in scale, technology and economy of agriculture which led to the situation when the bindings between agriculture and form of rural settlements become rather arbitrary or at least indifferent.

My intention not to ponder on the relation between agriculture and countryside is also given by the situation in Czechia, where the tradition of husbandry practically ended due to the forced centralisation in the 1950s–80s and since the 1990s; although there has been a small-scale revival of family farms, the agriculture employment dropped down to just about 10 % of rural working population, while over 80 % of the rural working population are commuters (Pělucha, 2012, p. 74). The decrease of direct agricultural influence on the life and environment of communities is also obvious from interviews with local mayors. That is why I again argue for an investigation of rural character independent on agriculture and the associated dynamic processes, and for focus on the environmental relations as such.

2.3 RURAL CHARACTER AS HERITAGE

The most efficient way of grasping rural character in planning practice is through the concept of cultural heritage. Such term directly connotes with the preservation of those features of (built) environment which were recognised as being valuable. A form of the protection then varies from common respect to an institutionally forced regime. But even without going deep into the theory of heritage preservation, it is obvious that the core of it lies in the judgement of values – axiology. To put it simply: the stronger a value is perceived, the stronger is the will to its preservation.

The premise behind my research and this paper is that the rural character of a settlement is a positively perceived value which might be worthy of preserving. The basic issue, however, is that we don't know where the substance of this value exactly lies. Therefore, in practice it is hard to decide what should be preserved and what could be left running its own course. (It is important to realise that everything cannot be preserved because preservation is also restriction). That's one reason why in mundane villages I argue for closer focus on public spaces – the pressure on their change is relatively low compared to the buildings.

The fashion in which it is useful to analyse rural environment is given by our objective – to improve design. The relation between heritage preservation and design, however, is a complex one. I dare to outline it in a very simplified diagram as a gradient which has one end labelled as traditional (as it accepts the heritage as a model for the future) and the other as avant-garde (as it doesn't). Most of the design practice lies somewhere in between these two, therefore, any valuable rural features, which might be useful to incorporate into a new development, will be accepted by more designers if it is be possible to apply them rather creatively as design principles than mechanically as reproductions.

Understanding the ordinary manifestations of rural environment as a valuable cultural heritage has a long tradition in Czech lands. The beginning of serious research of vernacular architecture and settlements could be dated back to the years 1891-1896 and first complaints on the loss of valuable visual features of its environment are present in journals already before the First World War. For most of the 20th century, the interest in such values on a theoretical level was promoted mainly by enthusiasts. As an academic topic, its form was differing in regard to the varying popularity of many discourses. From the beginning of the 1990s, the interest in rural heritage finally became a part of the governmental programme and since

then it has been mostly promoted on the level of local authorities. Tangible results of their effort are also apparent in the considerable amount of popularizing publications which often follow inspiration from Lower Austria and Bavaria – culturally close regions where similar effort began many years sooner.

The popularizations distributed on regional or national level have without any doubts key significance for planning and design practice by the promotion of good practice examples. Their congenital drawback, however, lies in argumentation why some examples should be considered to be better than others. Many of them openly admit that the reason lies in harmony with local tradition. Such honesty on one hand gives a designer a free hand in decision how such tradition might be creatively interpreted,

but at the same time it presents a weakness. As outlined above, for many people the argument of tradition alone doesn't represent a reason strong enough to establish restrictions on one' own creative freedom.

3 LANDSCAPE URBANISM

For a synthetic approach towards rural character, I would like to adopt three disciplines: landscape architecture, urbanism (which in the continental understanding still represents a synthesis of urban design and urban planning) and environmental aesthetics. In order to regard these kindred disciplines as one, I decided to adopt Charles Waldheim's term landscape urbanism, which is maybe the most illustrative.

To address the current issue of rural character from an urbanistic point of view, I would also like to refer to Thomas Sieverts' concept of Zwischenstadt which derives from blurred notion of space "in which the old contrast between city and country has dissolved into a city–country continuum" (Sieverts, 2003, p. x). Such understanding, which directly results from the ongoing suppression of the importance of physical distance, is very fitting for the densely populated central European countryside.

In Czechia, when viewed from the outside, many villages still resemble the pre-collectivisation state of mid-20th century. The gradual redevelopment and especially the new development, however, create a very different environment. A typical situation is represented by a "vernacular" core of an old village, to which new development with a "suburban" microenvironment is connected. The trend seems to lie either in extensive growth of this suburbia, or in progressive metamorphosis of the village core into it. The latter seems to be more probable, considering the growing emphasis on arable land preservation and often underuse of village core development.

The prognosis is somewhat brighter for settlements and territories which are listed and therefore subject of institutionalised heritage preservation regime , however, such approach is very demanding for institutional capacity, which is a notorious problem of the countryside.

For most of Czech countryside, such regime is unavailable. Thus the new development is (save for minor exceptions) regulated only by vague zoning plans in which detail is given by the scale 1:5000, and by general building codes (identical for big cities and for hamlets). Outcoming rather generic character of it is by many already understood as inevitable (often, the opinion of village mayors in my interviews was that it is how things are done now). A possibility of change is seen in a closer connection of urbanism (planning and design) with practices of landscape architecture. Among advocates of such approach are both Charles Waldheim (Waldheim 2016, p 2-29) and Thomas Sieverts (Sieverts 2003, p. 121).

18 I am aware of works which dispute that such distinction could be stated. For example, very interesting arguments in the field of biosemiotics were pointed out by the Swiss zoologist Adolf Portmann in his seminal book New Paths in Biology (1964). However, for the sake of general inteligibility of urban environment, this conceptualisation is good enough.

3.1 URBANISM AS A LANDSCAPE PHENOMENON

The basic dictum of the Zwischenstadt theory lies in the necessity of increasing the legibility and inteligibility of the environment. In the case of the countryside, it could be interpreted for example as a sensual ability to distinguish the character of an urban streetscape from that of a village. Such aim is also

stated in the third thesis of the famous manifesto Ten Thesis on Landscape Architecture by Dieter Kienast. But are there any such differences innate to either rural or urban environment?

At least one of them is obvious. Cities are places of cultural concentration. It doesn't mean that in the countryside, there is a lack of culture, but that the countryside as a whole stands in relation to other two benchmarks: the wilderness, where the culture is none, and cities, which currently represent the best examples of concentrated cultural effort. As shown by the book of John R. Short Imagined Country (Short 1991), such concept of narrative distinction is well comprehensible at least in European tradition. A more uneasy question is how an increased presence of culture is mirrored in the form of landscape.

A fruitful hint is though provided by the ancient polarity of natural and anthropogenic order.18 The application of such relation to the physical environment enables to distinguish different manifestations in urban and rural environment. Although this optic could seem self-evident (everybody knows that a quality of the rural is its closeness to nature), I would like to emphasise that the decisive factor isn't just the presence of nature, but in particular it is the way how it is present.

Countryside – also called by pleonasm cultural landscape – isn't the same as the so-called natural landscape. As it was outlined in the chapter dedicated to agriculture, such environment is to a great extent created by man – or in better words – it was won from the nature. Christophe Girot distinguishes two archetypes of such winning: the hortus conclusus and the forest clearing (Girot, 2016, p. 13-25).

Even though a particular situation is usually a combination of the two, it is possible to derive the general nature of two different countrysides; the southern, which is by its nature an artificial environment constructed on barren lands and kept alive by complex irrigation systems, and the northern, which is won by continuous cultivation of living wilderness. Not surprisingly, the development of geometry, chronometry and mathematics is closely connected to the landscape of the southern archetype – through the Mesopotamian irrigation system management (Hodgkin, 2005, p. 14-17). Analogously, the less the landscape of the northern archetype is an apparent embodiment of abstract thinking, the more the cities stands out of it – by being closer to the first archetype. Even though such concept taken literally may seem far-fetched, it is illustrative for comprehension of the "empty space" as architecture. But how does it perform?

A high level of human control formally imprinted upon an environment has a fitting expression in a term civilised which is a derivate of city (similarly to an urbane form). A process of civilisation (we may also say urbanisation) is in physical environment expressed through the structuring role of architecture (Veselý 2004, p. 106), shaped by abstract concepts, geometry and ideas (p. 92). Since the purpose of architectonic structures lies in communication, it is clear that the requirement of legibility and inteligibility has a strong impact on the form. Considering the character of contemporary communication, we can see the urban as a (relatively) unified aesthetics tending towards universal, or more precisely, global identity of environment. This inteligibility is characteristic by the growth of anthropogenic order expressed formally, both in the artificial and natural matter. This is what I mean by an urban form of landscape.

3.2 LANDSCAPE AS AN URBAN PHENOMENON

"Ultimately I claim that landscape has always been urban, it is fundamentally urban by definition" (Waldheim 2016b). This quotation from a lecture of Charles Waldheim is directly connected with one of two basic conceptions of landscape – landscape as a scene. Such concept derives from the tradition of landscape painting and is therefore connected with a view from outside (from the comfort of a city). The other concept of landscape is very close to the term environment. This is a view of an insider and it is adopted by the European Landscape Convention. Different understanding of the concept has significant impact on understanding of rural character. The issue is, however, well covered by the relatively young field of environmental aesthetics.

Environmental aesthetics presents a vast field of diverse approaches which relates to the environment in a broad sense of the word. In this paper, I adopt the narrow definition of aesthetics as a matter of how things appear to sense or mind (Sparshott 1972, p. 19). Being aware of the fact that the things are both of narrative and ambient nature , I will focus on the latter as it better suits the objective of this paper and in

that respect, I will also avoid the controversial decision on the ethical content of aesthetics as well as whether to accept the traditional precondition of disinterestedness.

If we look closely at both concepts of landscape from the point of aesthetical judgement on rural character, the limits of both are apparent at the first glance. The concept of scene, which is accepted by many in planning practice as well as in research, is problematic because as in the case of paintings, the assessed object is in fact the picture and not the environment and even if assessed on-site, the concept is still bounded just to selected vistas – which might be useful in special cases, but it could hardly replace the whole. The environmental concept is on the other hand too closely bounded to the narrative dimension, that it is often not clear whether one assesses what he truly senses or what he knows he should be sensing. As Cheryl Foster puts it: “Ambient dimension of aesthetic value emerges as an accompaniment to, rather than a replacement of, the narrative dimension.” (Foster 1998, p. 132).

I would like to adopt an alternative concept which derives from the view of landscape as a scene, but which is extended both in space (time) and scale. Most of the visual assessments I found tend to evaluate a specific setting as if it was an object – that is from an “optimal” direction and distance. An environment, however, must be evaluated in multiple scales (depths of detail) as well as from multiple views.26 Among environmental aesthetics, at least Allen Carlson took this into account when he proposed three such “concepts”: territory, terrain and place (Carlson 80-83). A human being most often experiences an environment on the level of a place. But a place’s character derives from a spatial coherence with higher-scale levels – there is a certain link between preformation across them. For example, if a relation derived from distant view inappropriately changes when coming closer, then the coherence was broken and the character of the place suffers accordingly.

For non-architects a question of scale (depth of details) may seem of little consequence. But it is essential – from the process of perception and conceptualisation to the process of creative projection. The importance of a scale is also decisive for the concept of wholeness which is also a key feature of the living structures’ theory which currently embodies a structural model as close to comprehensible reality of built environment as possible (Alexander 2002). The theory has been further elaborated by Nikos Salingaros, who derived precise scaling hierarchy and other mathematical principles (Salingaros 2008).

4 THESES ON RURAL CHARACTER

4.1 FIGURE-GROUND RELATION

The intensity of rural character of a public space is directly related to the ease with which it can be seen seamlessly as a natural background from which only figures of buildings stand out.

When we consider the already outlined relation of natural and urban as proportional , the most evident feature of the rural environment is the predominance of non-built-up landscape over the built-up. Adopting Alexander’s concept of wholeness, it is easy to identify a set of buildings and their clusters (settlements) as figures on a prevailingly natural background of the landscape.

Since forms of suburban building today hardly differ from the rural (typically a single-unit housing detached in the middle of a plot), the most available feature that creates the rural identity may be not the appearance of the house itself, but rather the semantic horizons of the background in which it is placed (Merlau-Ponty, 2013, p. 95). Thus a problem could emerge inside a dense village, where close contact with the external landscape is often broken. The settlement itself then becomes the background, which means that its rural character is given just by semantics of its vernacular identity. Therefore even a small change of the building type could completely alter the resulting character. That is why it is necessary to pay increased attention to the space in-between the houses.

Even small details could be significant: grass growing through the edge of a blacktop surface creates a much more obvious component of the natural background than the otherwise identical grass-plot with edges emphasised by the sharp edge of a curb framing. Unfortunately, the common practice rather emphasises the spatial division of the public space, which makes it difficult for our subconscious to perceive it as a fluent continuation of the natural background. For the background appears to continue beneath the figure (Merlau-Ponty, 2013, p. 52), it means that if we strip away the houses and gardens, the

resulting public space should give the impression that it is a natural continuation of the landscape surrounding the village settlement. Another hint on how to achieve such an impression is provided by the background's quality of seeming blurred in comparison to the figures (p. 98).

4.2 LEVEL OF URBAN CHARACTER

Urban and rural character aren't complementary terms, but the first contains the latter. Ruralness is a low level of landscape urbanness.

The figure–ground relation is a good tool. But it can only be useful if we understand the nature of the background – the rural landscape. In the space in-between the buildings as well as in open landscape, the growth of anthropogenic order is subconsciously connected to the rise of civilised or urban character. If a city centre is an example of urban character at its maximum level, and wilderness is its absence, then the countryside – a transition between the city and the wilderness – gains various degrees in the whole spectre of this transition.

It is important to realise that the rural environment is not culturally equalized. It contains a hierarchy of differentiated places and localities. The task of a planner or designer is to consider each of them in relation to its surroundings and to decide whether the particular level of urbanness should be kept, increased or decreased so that the result is be harmonious and coherent.

Rural landscape contains many places which create appropriate islands of high-level urban character. Those are e.g. small towns, palaces and villas, pilgrimage places, surroundings of outstanding buildings, surroundings of highways, resorts, campuses and other compounds, etc. Apart of them the environment consists mostly of open landscape and settlements (villages, hamlets, dispersed homesteads). It is my conviction that a harmonious whole could be achieved by maintaining a lower level of urbanness within the settlements and a higher level of it in the surrounding landscape.

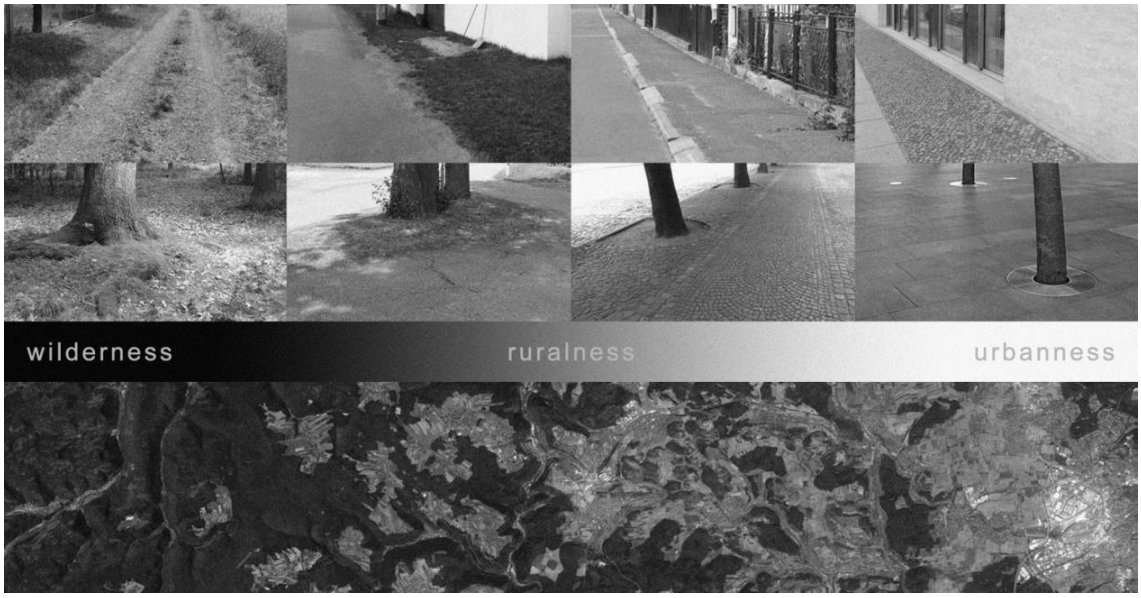

Figure 1 – Countryside as transition between the city and the wilderness
Photo author, satellite photo: Baden-Württemberg, https://www.google.com/maps

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ID 1669 | SOUNDS IN THE CITY WORKSHOPS: INTEGRATING THE SOUNDSCAPE APPROACH IN URBAN DESIGN AND PLANNING PRACTICES

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1 INTRODUCTION

1.1 SOUNDSCAPE AS A NEW APPROACH TO URBAN NOISE

This paper discusses urban sound and is based on the work of the Sounds in the City2 team, operating out of McGill University in Montreal, Canada. The team's focus is an approach called soundscape, which is a departure from a more traditional approach to urban sound. Urban planning education and practice have traditionally been focused on noise mitigation, concentrating almost exclusively on reducing urban noise levels. However, this method has its limitations because a quiet city is not necessarily an interesting or better one. The soundscape approach, on the other hand, encourages positive sounds in urban environments while mitigating only unwanted sounds and it also necessitates planning the environment far in advance rather than waiting for noise problems to occur. This approach is attracting the attention of many as an innovative and positive shift in the way we create, manage and control sound in our cities. It also presents the opportunity for more collaboration between planners, designers3 and sound experts to improve our urban spaces.

Soundscape has been defined by a diverse International Organization for Standards (ISO) working group of soundscape researchers and professionals as “the acoustic environment as perceived and experienced by people or society, in context” (ISO 12913-1, 2014). The soundscape approach captures the idea that

sounds ‘appropriate’ to the context can be used to positive effect, whereas the traditional urban noise mitigation approach aims to make the city less negative but not necessarily more positive. These positive sounds can be ones that we rely on to navigate, give us a sense of place and connect us with our activities. Certain sounds may be very welcome in a bustling pedestrian zone filled with outdoor cafés and restaurants, but these same sounds may be unwelcome in a park where people go to escape the busy streets, relax or read a book. Therefore, this component of context from the soundscape definition is key in how we define what is desired and undesired.

Indeed, not all sounds have negative effects on us, and some sounds even improve our lives and moods, help orient us, and shape our understanding of a space. The most obvious example of this positive type of sound is music, but several others are common, such as bird sounds in parks and neighbourhoods, water sounds from fountains in public environments, and the sounds of lively conversations at marketplaces and outdoor cafés and terraces. As a precursor to the Sounds in the City project, a McGill research team added music to the gazebo of a busy Montreal pocket park. Through interviews and questionnaires, the team discovered that park users found the space more pleasant and vibrant with the music. Furthermore, the presence of music did not have a detrimental effect on perceptions of the space's calmness and soundscape appropriateness (Steele et al, 2016). As stated in the soundscape definition, it's important to consider the context in which the sounds take place and how these sounds may be interpreted differently by individuals. For example, the bustling sounds of Times Square in New York City can represent, for some, a world of commerce and opportunity, but these same sounds would generally be less welcome by those trying to sleep in such an environment. The sound of an approaching metro train is welcome if someone is on the platform waiting for it, but the sound may be interpreted differently if a person is further away and running to make the train. Recognizing, understanding and mastering these various sound sources in the context of their appropriateness has immense implications for our cities. It is clear that good urban soundscapes require an understanding of the needs of residents and space users, and that the users should also somehow be involved in these emerging collaborations between soundscape experts and planners. This is in line with some major contemporary trends in urban planning advocating public participation (e.g. Healey, 1997).

Soundscape can be a framework that helps achieve global planning goals. By imagining a space through its sound, we can achieve many of the following: minimize wasted space by identifying incompatible urban activities in proposed programs; better match the visual environment with the auditory one; and improve quality of life. It's important to note that the soundscape approach does not totally do away with advances in acoustics. It's also important to have a fundamental knowledge of acoustic principles, such as an understanding of sound propagation, in order to understand what activities may be compatible within the same environment. This need for both some expertise in urban planning practice and traditional acoustics presents interesting challenges to those working in soundscapes, discussed in detail in Steele et al. (2012). These challenges can be the result of different expectations of knowledge and styles across disciplines, or the way people access and deal with new information, such as from research.

1.2 GAPS FROM RESEARCH TO PRACTICE

A number of factors have slowed the evident transition from a noise mitigation to a soundscape approach in urban planning. Recent research (Pijpers van Esch, 2015) has probed the information sources of urban planners to uncover that while planners consult subject-matter experts on a regular basis, they rarely visit the scientific literature on their own. While these subject-matter experts may themselves access scientific literature, planners may not necessarily encounter new trends arising from academia that challenge traditional notions cemented by their training. Another key factor is that the most pressing urban problems get solved first. Weber et al. (2011) demonstrate how catastrophic failures can quickly advance public policy, such as a factory explosion compelling new public safety laws. In the domain of noise, while there are problems, they have not been catastrophic, allowing the status quo to persist. While poor outcomes for noise are serious and can have deadly consequences for humans and animals, their effects on the public can take time to manifest themselves. According to a review by Passchier-Vermeer and Passchier (2000), it has been known since at least the 1960s that noise exposure poses a public health risk for its ability to cause hearing impairment, hypertension, heart disease, annoyance, sleep disturbance, and decreased school performance. To counter these negative effects, cities have responded largely with punitive bylaws for noise-makers, as opposed to adapting urban strategy and planning decisions.

In the realm of education for planners, sound (or “noise”) continues to receive limited attention. The American Planning Institute, which offers work certifications in the US and Canada, provides outlines on its website for the topics covered in its examinations. For the general planning examination, 64 topics are listed in the exam outline, none of which include noise or sound. Two specialized examinations are also offered: one for environmental planning where the topics list enumerates dozens of factors under examination - noise is mentioned only as a sub-topic of “public-health indicators”; and one for urban design where a list of hundreds of topics exist, yet noise or sound are not mentioned. Additionally, the second edition of Kevin Lynch’s seminal book Site Planning (1984), which is still widely used, has a chapter called “Light, Noise, and Air”. This chapter includes only two pages of information on decibels, attenuation, barriers, and sources.

Challenges also remain in determining tools for education. Raimbault and Dubois (2005), in an interview study, found that even experts in acoustics can fail to agree on basic technical vocabulary to describe sound events. This vocabulary is even less precise outside of acoustics, as they found when interviewing planners and other practitioners that intervene in the city. For example, there is no clear terminology to describe the sound made by a car door closing, whereas a wall pattern could easily be described visually as “polka dot” or “red and white”. We are often lacking consistent and easily understandable terminology to describe everyday sounds.

1.3 BRIDGING THE GAP TO SOUNDSCAPE

Soundscape, having partially emerged from the noise mitigation approach, continues to have issues with the research-practice gap. Soundscape calls for an interdisciplinary approach often using mixed-methods (i.e. integrating qualitative and quantitative approaches) with a focus on users that offers the potential to better bridge the gap between the planning community and sound experts. A transition has begun, but it is not fully realized. While there are established conferences in noise mitigation (e.g. InterNOISE, and ICBEN Congress on Noise as a Public Health Problem), soundscape only plays a small role with a handful of sessions during these larger conferences. A soundscape approach presents an opportunity for multiple disciplines to collaborate and take a more proactive approach to planning our urban sound environments.

Another aspect of soundscape, which is helping to reduce the research-practice gap is the focus on the user and their perceptions. However, in addition to a focus on the 'city user', there is a need to consider the role and contributions of the 'city makers.' The way planners deal with the information they have on sound has a profound impact on the way the city is shaped and used. The Sounds in the City project has been formed to respond to this need.

2 SOUNDS IN THE CITY – AN INTRODUCTION

A new collaboration between university researchers, acoustic consultants and the City of Montreal addresses this gap between soundscape research and urban planning and design practices. Through outreach and knowledge co-creation activities with practitioners of the built environment, city officials, and the general public, the Sounds in the City team is aiming to improve the quality of urban sound environments.

The team's research agenda aims to position Montreal as a leader in urban noise management and soundscape by connecting research and practice. With expertise in soundscape, urban planning, design, and noise regulation, and a collaborative track record, the research team is uniquely positioned to address this established research-practice gap, and be among the firsts to do so.

The project is supported by an Insight Development Grant with Canada’s SSHRC (Social Sciences and Humanities Research Council), a major funding agency. The Insight Development Grant was initiated to promote “knowledge and understanding from cross-sector perspectives”, to “support new approaches on complex topics that transcend the capacity of any one scholar, institution or discipline”, and to “mobilize research knowledge” .

3 PEDESTRIANIZATION WORKSHOP AND KNOWLEDGE CO-CREATION – "ANIMATING PEDESTRIAN ZONES IN THE SONIC DIMENSION"

As the project necessitates strategic outreach, knowledge co-creation, and collaboration, the Sounds in the City team chose to run a 2-day workshop at McGill University in November of 2016, which united members of the soundscape research community with practitioners of the built environment, students and professionals from a variety of disciplines, city officials, and members of the general public. The workshop included presentations but also focused on case studies and collaborative exercises for animating the soundscape. More specifically, the event was organized using three separate educational formats: instructional (with presentations by researchers and practitioners), co-design exercises (with a focus on three new pedestrian zones in Montreal, which are scheduled to open in 2017 and 2018), and audio demonstrations (with demos to recreate different soundscapes, explain the current noise regulations, and relay the experience of low-vision users who rely on sound to navigate through public spaces). The workshop was titled, Animating Pedestrian Zones in the Sonic Dimension.

Today, there is no established and authoritative world expertise on the problem of sound in pedestrianized areas (commercial or otherwise). With a focus on knowledge co-creation from different domains, the event included the participation of soundscape and design professionals from Montréal, Germany, the Netherlands, and the UK. Planners, designers and other participants were challenged to incorporate sound considerations while designing a pedestrian zone, and sound researchers were challenged to appreciate the complexity of planning real urban spaces, which have a host of practical considerations and challenges (e.g. transport, budget, emergency services, etc.)

3.1 MOTIVATION: WHY PEDESTRIANIZATION

The creation of pedestrianized zones is on the rise in cities around the world. Typically, streets or sections of streets are closed to automobile traffic and the entire space is given over to pedestrians. These spaces can become landmarks for a city when they work well - Think of NYC's Times Square since its renovation - or they can become heavily politicized scapegoats when they don't. For example, cars were reintroduced to Sacramento's K Street Pedestrian Mall in 2011 to "increase vibrancy and accessibility" after a long period of stagnation. One aspect of these places that is crucial yet rarely discussed is the role that sound plays in the function of these spaces and the impact that these sounds have on the public.

Each project begins when we remove the largest source of sound - the traffic. Reducing "noise" is beneficial for health and quality of life, but the traffic noise may also have been serving a purpose. If we imagine ourselves in a large city park, the traffic-free silence is potentially calming, but in a commercial environment, traffic noise can offer steady sound masking and, thus, a form of privacy among all of the users. Without this masking, we could be subject to "awkward silence" where there is nothing left "underneath" the traffic noise. Such a soundscape could contribute to a negative cycle that compromises the space's ability to function as a productive public space. But this then begs the question, what is the appropriate sonic ambiance?

A vibrant pedestrian zone needs sounds that reflect the culture and activities of the local area at all hours of the day. Furthermore, the visual environment and the sound environment need to work together. Is the sound of a water fountain or music appropriate to add to an environment? Could sonic artworks encourage lingering and commerce or affect the behaviours of the people and animals in the environment? Well-designed pedestrian zones necessitate the collaboration of planners, designers, city officials, sound experts, and citizens. Planners and designers need to articulate their goals and concepts for an environment and soundscape experts can then collaborate with the team to develop a site-specific soundscape strategy. It is also crucial that citizens be included in the entire process, as they will be the ones who are primarily using the environments.

Figure 1 – Left: Montreal site visits led by planner; Right: Presentations from soundscape experts

3.2 SITE VISITS

The November 2016 event began on the first day with site tours (see Figure 1) led by the city employees responsible for each of the selected pedestrianization projects. These site tours lasted approximately 2 hours and spanned the entirety of 2 of the 3 projects underway, and most the third project. There was ample time for discussion at the end of the walks, so participants had the opportunity to ask questions about specific details.

3.3 WORKSHOP ORGANIZATION AROUND THREE STYLES

Day 2 of the event was structured into three distinct types of activities: presentations; sound demos; and co-design exercises. Within this format, participants were first introduced to soundscape concepts and case studies, and then given the opportunity to practice their learnings during co-design exercises and discussions later in the day.

3.3.1 ACADEMIC PRESENTATIONS WITH "BUILDING BLOCKS"

The organizers began the morning session with presentations introducing the soundscape approach and the Sounds in the City project. Four invited speakers then gave 30-minute presentations on their sound research (see Figure 1). As many of the workshop participants were not from sound disciplines, soundscape presenters had been encouraged to clearly explain their core concepts, important key terms, and definitions. Many participants were not from research disciplines, so presenters were encouraged to focus on their findings and the implications of their research more than on their research methods.

Each organizer was asked to end their individual presentation with an extra 5- to 10-minute summary of their thoughts on a particular topic that would help participants make more informed decisions about the sounds of pedestrianized areas. These summaries were called "building blocks" as the intention was to use them again later in the following two sessions. These building blocks were made up of suggested best practices and potential pitfalls based on the presenters' years of research experience and were designed to be easier to understand than the academic portion of the presentation. The six building blocks are listed in Table 1.

	"Building Block" Title	Presenter
1	Soundscapes and activities	Daniel Steele
2	Visualizing soundscapes for planning	Martijn Lugten
3	Soundscape and public art	Lisa Lavia
4	Interactive sound installations (Using audio islands)	Andre Fiebig
5	Using water features	Jochen Steffens
6	Music for public space	Romain Dumoulin

Table 1 – "Building block" presentations from soundscape experts for sharing practical soundscape tools to be used later in the co-design workshop

3.3.2 LABORATORY DEMONSTRATIONS

In the next session, participants were split into small groups and rotated through two separate audio demos (see Figure 2) of about 15 minutes each.

One of the two audio demos, led by Romain Dumoulin, was an immersive interactive audio installation allowing the reproduction of existing and virtual soundscapes using ambisonic8 technology with both ambisonic recordings and a large multi-channel sound system. With custom software, virtual sound sources could be added anywhere at varying sound levels and at various positions of the listeners' surroundings. In the context of a training on noise regulations, a number of real-life noise complaint scenarios were demonstrated including a short example where an annoying, but legal (from a regulatory perspective) sound source was added; then a non-disturbing but technically illegal sound source was added. The installation aimed to educate participants on the complex relationship between regulatory noise levels and annoyance and raise awareness on inherent limitations of noise regulations. Finally, the potential of the installation as a soundscape design and planning tool was highlighted with several demonstrations where additional sound sources such as cars, crowds, fountains and AC-units were virtually added to existing sound environments. These demonstrations highlighted the idea that sound sources should be evaluated on a case-by-case basis such that they are appropriate for a particular context and highlighting the weakness of the approach that only aims to satisfy the regulatory conditions in both noise and urban planning by-laws.

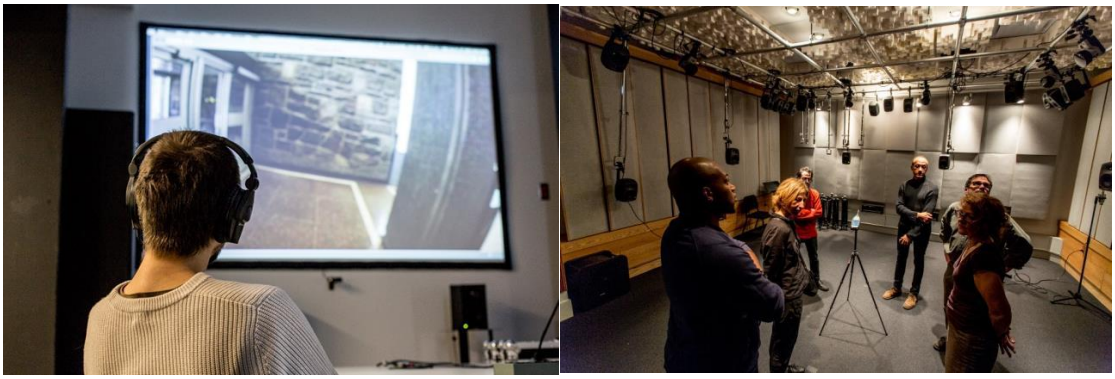

Figure 2 – Left: demo of blind city walk; Right: ambisonic virtual demo

The other audio demo was a self-narrated tour of the city of Montreal. A blind individual took a walk with researcher, Florian Grond, while wearing a helmet camera fitted with microphones. The individual then sat down with the researcher to re-listen to the walk while retrospectively narrating his experiences on the walk. Participants reported being surprised at the complexity of the cues the narrator relied on to navigate his environment. The purpose of this demonstration was not only to heighten participants' awareness and sensitivity to how a blind person or individuals with specific visual disabilities may use sound to navigate his or her environment, but also to demonstrate how sound plays a crucial role in how we interpret our sense of space and orientation.

3.3.3 CO-DESIGN WORKSHOP

The third and final session was a co-design session where all participants, presenters, and organizers collaborated in smaller teams to complete a structured exercise based on the three Montreal pedestrian zones and the six soundscape building blocks.

All of these co-design sessions took place in the same large window-filled room on the 8th floor of the CIRMMT tower, and took place within a three-and-a-half-hour period from 14h-17h30. We'd intentionally set up half of the room to resemble a sort of "working design studio space." Tables were grouped together to represent each of the three pedestrian zones and red street signs, depicting each of the three pedestrian zones, sat atop the three working spaces (see Figure 3). Each working space had several different style street maps in colour and black and white, in addition to lots of coloured pens, pencils, post-its and blank paper. Audio recordings were also taken with participants' permission, so the Sounds in the City team would be able to refer to the workshops for later analysis.

Knowledgeable city planners and architects responsible for each of the pedestrian zones kicked off the session by providing brief overviews of each of their projects. Participants were then instructed to physically move into the design studio space and choose the pedestrian zone that interested them most. Each team was then tasked with applying their learnings and insights from earlier in the conference in order to plan the soundscape for their designated pedestrian zone. We had divided the exercise into three phases: Strategy/Planning, Design and Production and had given “suggested times” for each group to spend on each section. In each team, a sound expert played the role of team leader and guided the group through the exercises. Participants had roughly an hour to work through the exercise and then each team presented their proposed ideas to the larger group.

In the Strategy/Planning section, we wanted participants to consider and discuss the usage of the space throughout different times of the day, week and year. In order to facilitate fruitful discussions, we had provided a series of prompter questions. In the design section, we challenged the participants to create a soundscape that supports the envisaged activities, maximizes pleasant features and minimizes unpleasant ones, and matches the visual environment. Like the previous section, we provided prompter questions to generate ideas and discussion and also made suggestions on the types of sound interventions which could be considered such as water features, sound art, music, or natural or human-generated interventions, derived directly from the earlier “building blocks” presented by the soundscape researchers. Lastly, for the production section, the participants were challenged to consider how they would put their soundscape plan into action. Again, prompter questions were provided.

Figure 3 – Left and Right: Small groups discussing soundscapes of pedestrianized areas in a co-design workshop

Production prompter questions: How could you prototype and test your ideas before moving into a production phase? Would you need any infrastructure changes to implement your plan? Who would maintain the sound features you propose? Do any of your proposed interventions require curation (e.g. updating content, selecting performers, etc.)? Which aspects of this intervention are high and low priority? Are there any laws or regulations that may pose challenges for implementing your proposed ideas?

Groups next presented their ideas and designs to the whole room. We had originally created guidelines for the structure of these presentations, but then spontaneously decided to leave the style and structure up to the discretion of each group. All groups worked very diligently on their task at hand, and we had a very lively and fruitful discussion following the presentations. However, it was very noticeable that the group dynamics and outcomes varied quite dramatically from one table to the next. We will elaborate on this more in detail when we discuss some of the key take-aways related to the structure of the workshop and the group dynamics.

Before taking a 15-minute coffee break, participants were asked to take a few minutes to write down something on an index card that came up for them related to soundscapes during the exercises (e.g. a burning question, a clarification needed, a challenge they face, something that they’ve learned during the conference that they’re excited to share and implement, etc.). Based on the proximity of the tables and the active participation of many participants in the previous discussion, we decided to conduct the discussion as a larger group as opposed to breaking out again into smaller groups.

4 WORKSHOP SUMMARY AND QUESTIONNAIRES

The workshop officially had 64 registered participants; however, between no-shows and participants who could not stay for the whole day, there were generally between 30 and 40 people at all times. Based on the survey responses, it appears there was a good balance between the sectors (of 20 respondents who answered a prompt about their sector, 7 identified as public sector, 7 identified as private sector, and 6 identified as academic sector).

4.1 BREAKOUT SUMMARY AND ANALYSIS

Each of the three group facilitators detailed their impressions and observations of their team's experience in collaborating on the exercise. At each table, three very different working styles and types of discussions were observed, based on many factors: the specifics of the actual pedestrian zone (stage of completion of the project, goals, time-frame, challenges, etc.); the expertise and backgrounds of the people at the table and the group dynamics; the openness of the Montreal city employee to discuss new ideas; the ability of the facilitator to keep the participants focused on the task at hand; and the team's receptiveness to exploring new concepts.

The organizers felt that, in general, the projects that were the most developed were the least receptive to new soundscape ideas. In other words, the more planning, design and production that had been done on a project, the less receptive planners were to considering integrating soundscape interventions into their process. Also, some projects elicited more general sound intervention strategies where soundscape was used to enhance project goals whereas some other project teams had focused on specific acoustics problems. For example, on the Promenade Fleuve-Montagne, a multi-kilometre walking path connecting Montreal's river to its mountain, the discussion centred on whether or not there should be a musical venue and where it might go. However, on the St. Catherine project, located in Montreal's most central shopping corridor, the discussion was centred on whether specific features of a proposed inflatable installation, which the City will be installing, would serve any acoustic advantage on the site.

Practical solutions were also raised. In an effort to make a comfortable acoustic environment on the aforementioned Promenade Fleuve-Montagne, the site planners were very receptive to an idea involving traffic. On a particularly steep part of the promenade, adjacent traffic was traveling in two directions, but at the suggestion of the soundscape experts, the possibility was raised that the traffic traveling uphill be relocated to a different street, rendering the street a one-way, to help remove the sound of the accelerating motors from the site. This idea was deemed feasible and may be incorporated into the actual plan.

4.2 FOLLOW-UP QUESTIONNAIRES

24 of the 64 registered participants completed an online exit survey about their experience at the soundscape workshop. In general, responses indicated strong levels of interest for all aspects of the workshop. Participants were invited to take the questionnaire and give their feedback in French or English. They were asked questions about their own practice and whether they found each aspect of the workshop to be both useful and interesting.

Unless otherwise reported, all questions are on a 5-point Likert scale. The scores for interesting were always slightly higher than the scores for useful. The lowest mean (3.92) was a question on whether participants considered sound in their work practice. Given the relatively low mean for this response, we believe that, to some extent, we had reached our target audience. All other means exceeded 4.0 and are presented in Table 2.

There was a notable enthusiasm for the audio demonstrations. The mean for "useful" was 0.57 points above the next highest score for the other sessions and "interesting" was 0.47 points above the next highest score. That these scores were roughly a half-point higher than already positive scores for other sessions is telling of the potential for audio demos as educational tools. The success of this component also suggests a need to further develop this type of format for future events.

4.2.1 WRITTEN COMMENTS

The questionnaire also left room for participants to write free format responses about what they liked and what they thought could be improved.

Regarding the morning session, participants commented on the “diverse” and “interesting” presentations from “competent experts”. Two people mentioned appreciating the distinct building blocks with their useful lessons. They suggested the following improvements and comments: researchers tended to speak too long and didn't have enough time for questions; brochures summarizing the topics would help; and that presentations could contain even fewer academic diagrams.

Session	Prompt	Mean	Sample Size
General questions	I am sensitive to sound in my daily environment	4.25	N = 24
	I consider sound in my work practice	3.92	
	This event influenced the way I consider sound in public spaces	4.29	
Morning session Presentations and Building Blocks	I found the session: **useful**	4.18	N = 17
	I found the session: **interesting**	4.41	
Afternoon session Co-design workshop	I found the session: **useful**	4.00	N = 13
	I found the session: **interesting**	4.08	
Laboratory demonstrations	I found the session: **useful**	4.75	N = 16
	I found the session: **interesting**	4.88	

Table 2 – Results of follow-up questionnaire on different parts of the Animating Pedestrian Zones in the Sonic Dimension workshop

For the afternoon session, participants enjoyed “the ability to apply [their] new knowledge to a concrete situation” and having an “exchange with experts about their perception of urban noise” ; however, a participant thought the presentations and activity were too detached in time. Other appreciated aspects of the afternoon breakout session were: noting how it was “great that the City of Montreal participated”; coming up with “creative solutions”; interacting on a “live” project with a “hot discussion”. Suggestions for improvement included: the desire for even smaller groups, fewer questions on the worksheet, and the need to make sure that there were enough experts outside of sound at each table.

For the laboratory demonstrations, participants liked the “passionate” experts and the “striking” demos, getting to “hear someone’s actual research”, and living an experience that is normally abstract. They were impressed by the “technical expertise and professionalism” and thought that the demo was a good way to help them understand decibels more in depth. They hoped that the city would be “able to use these types of demos for serious projects.” Suggestions included: a guide for elected councillors and urbanists related to the revision of noise regulations; an awareness campaign among noise makers; and a method for testing out soundscape designs in advance of an intervention. Suggestions for improvement included: wanting more time with the demos, particularly the immersive virtual demo (this was suggested by most of those who responded to the prompt); and having participants suggest modifications, especially to test their ideas for the pedestrianization interventions.

Participants were asked separately about their ideas for improving the collaborative experience of the workshops. They indicated wanting even more information about the intervention site, making sure every participant understands the exercise brief, more time for the worksheet activity, and even smaller groups.

Lastly, participants were asked how they would like to learn more about soundscapes. The following examples were given with the question: presentations, workshops, soundwalks, and online content. Of the 13 participants who responded to this question, 6 want access to more presentations, 8 want workshops, 8

want soundwalks, and 3 want online content. Other respondents suggested: “a survey of interesting examples of places that use sound creatively”, sound installations, “urban interventions constructed with noise and sound in mind” , artistic approaches, “simulations”, presentations about soundscape from non-soundscape experts, and a “toolkit for designers”. One participant said that the workshop was “good enough…to start concerning myself with soundscape in my daily life”.

5 DISCUSSION AND CONCLUSION

5.1 SUMMARY OF WORKSHOP AND FINDINGS

Sound is surely not the only factor that can “make or break” a project; however, sound can be used as a lens for diagnosing and imagining urban spaces. Thinking about sound may help us to understand why a space is not being used as intended, whether certain envisioned activities are compatible with the existing environment, and how creative solutions can reinforce the qualities of a space. While spaces can certainly be designed in the absence of sound considerations, soundscape planning can help improve outcomes by: reducing wasted resources; helping avoid conflicts that may arise at the latter stages of a project; promoting a more collaborative approach between various professionals of the built environment, the City and citizens; invigorating spaces; and highlighting the importance of the participation of the users of a space in the process for designing it. Sometimes, when no other options remain, the appropriate soundscape intervention can still be to mitigate problematic noise. The traditional noise mitigation approach can thus be considered an option within the broader soundscape approach.

The workshop benefited most fundamentally from first-time interactions between professionals and academics in sound and planning disciplines. Discussing soundscape gave participants novel opportunities to interact with one another and iterate on their ideas. As previously mentioned in the workshop summary, the further along a project is in its planning phase, the more difficult it is to meaningfully intervene with soundscape ideas. This is exactly why those who advocate the soundscape approach over the noise mitigation approach believe that sound should be considered as far in advance as possible in the planning process.

What will remain a challenge is the ideal group size for soundscape discussions. To small, and the risk is that not enough of the expertise will be present to represent all of the project aspects; too large and each person will not be able to speak their share.

The pronounced success of the demos and the comments that accompanied the scores indicate that the demos struck a balance between having accessible, compelling content as well as a perceived “scientific authority” of the hi-tech laboratory with equipment and technically-oriented presenters in their “natural habitat”.

5.2 THEORETICAL CONTRIBUTIONS

Facilitating collaborations between researchers and practitioners as equal contributors has the potential to dramatically improve the quality of our urban environments. Furthermore, studying the barriers and facilitators that prevent or encourage practitioners to seek out research information on environmental topics is important to address the research-to-practice pathway. We were encouraged by the enthusiasm for the laboratory demos. Our research findings on these barriers and facilitators could also benefit other domains where established research expertise can be used to help practitioners make more informed decisions (e.g. controlling wind and reducing urban heat islands).

After hearing from some of our collaborators from the City during out 2-day event, it became clear that their timelines for projects are often extremely tight and sometimes unrealistic. Politicians often influence or set their timelines and this often doesn’t take into account a realistic process for all phases of the projects. It’s difficult to explore innovative options and considerations when you’re under tight and unrealistic deadlines to bring a project from concept to reality. This is where academia could potentially add significant value to the city and vice versa. More collaboration between the city and universities could not only lead to more information sharing about relevant topics, but also to potential avenues for collaborations

on project. Universities may provide a nice platform for the cities to test and prototype ideas that they wouldn't have time to do otherwise. It would also give students and researchers an opportunity to work on real world projects, learn by doing and develop professional networks.

5.3 PRACTICAL CONTRIBUTIONS

The workshop format provided a collaborative environment where we were able to test the appropriate content, media, and tools for communicating with urban planners, designers, city officials, a variety of students and professional, and the general public about soundscape concepts. In doing so, we worked toward bridging the gap between soundscape research and planning and design practices, which allowed both sides to contribute equally to the discussion, build on each other's ideas, and focus on content that was simultaneously useful, usable, and interesting. This approach offers great potential for shaping the future of urban noise management, because it encourages planners, designers, and city employees to incorporate sound considerations into the conceptual phases of their projects. It also sensitizes all parties involved to the necessity of incorporating the public in the process, as they are the users of the environments and often hold key insights and aspirations for the spaces.

5.3.1 POTENTIAL IMPACT ON MONTREAL'S SOUNDSCAPES

What kind of impact has the November event had on the Montreal design and planning community? Local Montreal practitioners of the built environments who attended the event should have a better understanding of the soundscape approach and some of the soundscape-related resources that are available to them. Furthermore, we hope that the soundscape approach will provide professionals, city officials, and citizens with a heightened awareness about the impactful role that sounds plays in their urban environments. This may lead to some very real changes in Montreal, even in the short-term, whether it is the creation of a one-way street to reduce uphill-bound traffic noise, collaborations on new pedestrianization projects, or through other changes to come under the purview of the Sounds in the City project.

5.4 FUTURE WORK

What kind of future projects do we see on the horizon for the Sounds in the City team? For starters, the team is focusing on creating a best practice review of urban noise management in Montreal and exploring ways of integrating insights from soundscape research into Montreal's current noise regulations and procedures.

Given the positive feedback and enthusiasm from participants following the November event, we aim to develop workshops on more themes that are relevant to planners, designers, city officials and residents. We also aim to demonstrate the importance of integrating the public's input and ideas into the conceptual process. Given the enthusiasm for the laboratory sound demos, we aim to develop these into more structured and beneficial programs for participants.

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ID 1680 | THE (IN)CONSISTENT COMMUNITY BOUNDARIES: TEMPORALITY IN MULTIPLE SOCIAL-SPATIAL INTERACTIONS

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ABSTRACT: Boundaries are temporal. The perception of a boundary is an interactive process in relation to specific social contexts. This article investigates the temporality of community boundaries, focusing on their social-spatial interactions through performatives, which contribute to both the inconsistency and consistency of the perceived boundaries, and analyzes the dynamic community boundaries in time with empirical evidences from two typical Beijing neighborhoods. Building on an analogy with theater performances, the article brings forward a conceptual framework for the understanding and analysis of community boundaries in urban space, with a focus on the stimulators of spatial-temporal transformations. The temporality of boundaries can be understood in two perspectives, situational and representational. While the former promotes inconsistency of boundaries with ruptures and shifts, the latter brings consistency to boundaries through bring diachronic, repeating perceptions to the contemporary spaces. The temporality of community boundaries implies a connection of the neighborhood and surrounding urban areas. The more a community is integrated, the more changes and shifts take place to the boundaries, which hence become flexible, tolerant, and porous with publicness.

KEYWORDS: boundary, temporality, social-spatial interactions, urban Beijing

1 INTRODUCTION

A community boundary indicates a transition from private or communal territories to open and anonymous city spaces. The demarcation of a community, as well as the distinction of self from otherness, is expressed in the definition of community boundaries. In mornings, people travelling from home to a city street, transitions of territories are marked by joints of streets, changes of openness and noises. During the day, senior citizens move through different places in a neighborhood, social thresholds are delineated by individual definition of identities, according to the relation between herself and other people. In summer, spaces are lively and crowded, the experience of boundaries become various and ambiguous, and more tolerance are given to strangers and foreign behaviors. In winter, there is little activity. Physical environment is more influential in the perception of boundaries. The variation in the perception of boundaries suggests that physical materials are not the only indicator of boundaries. Boundaries are perceived socially, individually and in interactions. Boundaries are in dynamic. This article investigates the dynamic boundaries in temporality, through which a facet of the social-spatial connections in urban neighborhoods can be revealed.

This article answers the question "what is the community boundary at this moment?" investigates how boundaries occur and change in time, and highlights the importance of understanding community boundaries dynamically in urban design and research. We analyzes the seasonal, daily and temporary changes of community boundaries in two typical neighborhoods in Beijing, point out the two perspectives of understanding the temporality of boundaries, and bring forward a conceptual framework for the understanding and analysis of community boundaries in urban space, based on theater theories on performatives. The research draws on a long term qualitative field research during 2013-2016 at the neighborhood Xinyuanli and the Ocean Express in Beijing (Figure 1). Each neighborhood is examined through original methods as well as notes, photos, participatory observations, in-depth interviews, mental maps, etc. Building on an analogy with theater performances, the article brings forward a conceptual framework for the understanding and analysis of community boundaries in urban space, with a focus on the stimulators of spatial-temporal transformations.

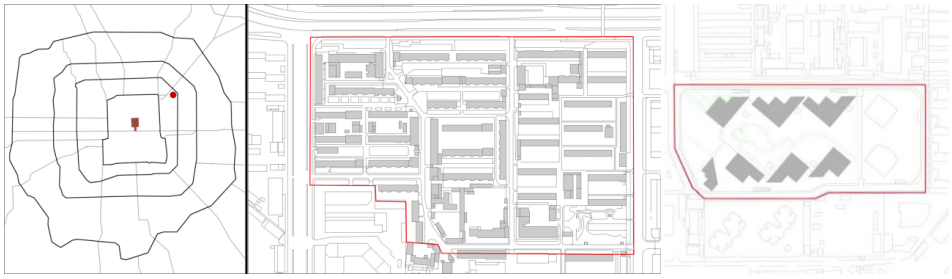

Figure 1 – Location and masterplans of the two neighborhoods, left, location; middle, Xinyuanli; right, the Ocean Express

Xinyuanli is a typical "neighborhood unit" in urban Beijing, which was built between about 1965 and the late 1970s. After it was completed the units were distributed to different danweis . After the economic reform of 1978 , Xinyuanli went into the free immobile market, and slowly changed its social structure and close social relations due to the occupational connection from the danwei period. The Ocean Express is a typical commercial neighborhood and gated community which were built in 2004. The apartments were directly sold on the market and some are rented afterwards. The two neighborhoods locate near to each other, near the Sanyuanqiao Business District, which raises the average rents in both neighborhoods. While the Xinyuanli still accommodates some original residents from the Danwei time (senior citizens), as well as low-income workers in its basement and informal extensions, the Ocean Express with a higher price for management, is attractive to foreigners. The two neighborhoods can be representatives of "old" and "new" communities in Beijing.

Our perception of boundaries is both synchronic and diachronic. Merleau-Ponty (1945/2012) and the situationists focus on the first aspect by emphasizing the body in the perception of spaces. A space emerges only when bodily movements are seen and endowed with meanings for the spectator's understanding. Boundaries are "still here but already there" (Wolfrum & Janson, 2016, p. 87). Their own belongings, however, are ambiguous and to be defined, which requires understanding and interpretation in spatial situations. The second aspect is emphasized in the hermeneutics of Hans-Georg Gadamer (1975/2004) and Paul Ricoeur (1986/1991), where understanding and interpreting bring a text from one

context to another over time. At boundaries, bodily movements are understood and interpreted in each spectator's own context. This turns the perceptions of boundaries into an event of dialogs between various contexts (Zhu, 2017).

2 THE PERCEPTION OF COMMUNITY BOUNDARIES

The perception of boundaries is originated from the distinction of self from otherness. As Stavos Stavrides (2007) points out, boundaries both divide and bridges between the self and otherness. People encounter otherness, and when they consciously start to set up rules which distinguish themselves from others, boundaries are formed. For example, if someone watches at an open gate to a neighborhood, a strange would not boldly enter this gate, but a community member would do, or even have a small talk with the keeper. The community member does not think about his identity when he does so, while the stranger has to consider who he is and what the relationship between him and the community is at this moment. In this case, the gate is not a boundary to the community member, but a boundary to the stranger.

The perception of boundaries has a depth. As early as 1980s, the Japanese architect Ashihara Yoshinobu (1985) has paid attention to the boundary field where interactions between interior and exterior spaces take place. Kris Scheerlinck (2010) further represents the field into intelligible territorial depth. In different situations, people are allowed to reach the spaces at different depth, until where the boundary appears to them. At boundaries there is an uncertainty about rules. "Thresholds, like rituals, create conditions of intensity, transformation, the elevation of status and the blurring of social categories and rules" (Stevens 2007, P74). Boundaries rather appear in the perception of them, instead of being a law that preexists.

The relation with the surroundings is decisive for the perception of boundaries. Boundaries function as indicators of a territory only in the relationship with their surroundings (Norberg-Schulz, 1980). Keven Lynch (1960/1990) has mentioned the physical features decisive for the continuity of a territory - texture, space, shape, details, symbols, building types, functions, activities, residents, topography, etc. Boundaries are perceived where these features changes. Literatures on neighborhoods and society of China, along with first-hand observations and interviews in the two neighborhoods informed the focus on the followings features in the investigation for the perception of boundaries: physical stimulators, social interactions and management.

3 TEMPORALITY: SEASONAL, DAILY AND TEMPORARY BOUNDARIES IN DYNAMIC

3.1 SEASONAL BOUNDARIES

The boundaries of the two neighborhoods changes most significantly between winters and the other seasons, under the influence of the temperate monsoon climate of Beijing. The winter is cold and dry. The lowest temperature is about minus 10 degree Celsius, and can reach minus 20 degree Celsius occasionally. The air pollution is highest in winter. In 70-80% of the days in winter the PM2.5 index is above 100. Hence there are much less outdoor activities in winters. The springs and autumns are short in Beijing, and the summers are hot with rains sometimes.

3.1.1 SEASONAL BOUNDARIES OF XINYUANLI

The Xinyuanli neighborhood is surrounded by big city streets, and is further divided into several units by small inner streets with car lanes. Each unit consists of several yards with one or two residential building, and spaces between them. The yards were fenced and gated in the past, but today most of the gates are unwatched and open to everyone. Privatization is common at the spaces in front of building, which are further divided, occupied or fenced into parking spaces, extensions or front gardens.

Physical stimulators dominate the perception of boundaries in winters due to the reduction of outdoor activities. Spaces in front of buildings are understood as private territories as long as any object occurs there. Pavement or height changes in the yard mark the boundary of these spaces and no pedestrian in

the street transgress. Weather being against strolling strangers in the neighborhood, fences and gates of the yards do not set boundaries to residents who know the neighborhood good enough to shorten their route as possible to avoid the coldness.

Two service areas contribute to the gathering of residents in winter beside the busy vehicular and pedestrian flows at rush hours. One is the food market in a park next to the Airport Highway to the northeast of the neighborhood. Residents encounter each other on the way to it, to be specific, on the pedestrian walk of the city street between a small gate of the neighborhood in the west and the big crossroad where the street meets the Airport Highway. It is the path on daily routine of some of the residents in the west half of the neighborhood. On the side of the pedestrian walk next to the neighborhood, a wall separates the city street from the residential building facing it. The other side is separated from the motor traffic by parked cars. Residents on the way have nowhere else to go - they have to meet in this street, make a small talk, and walk away. The greetings and talks distinguish residents from strangers in the city. The boundary here appears not at the wall, but on the road. The second place is a street with two schools on its ends and retails along one side of the street between the schools. The retails serve both residents and pupils, where owners, residents, pupils and passers-by encounter each other. Their social identities are presented in the mixture of groups and boundaries can be felt due to their behaviors.

The property management in the neighborhood is run by the Residents' Committee , and covers merely the necessities, thus garbage collection, maintenance of public facilities and some of the parking spaces. The general management does not influence the boundaries much. However, there are autonomous yards that are closed and gated, and with better management. These yards have clear boundaries which do not change. In summer, various activities challenge the boundaries defined by physical indictors. At spaces in front of buildings, acquaintances of owners are invited into the gardens to sit and chat. Children play in the open spaces left next to buildings and on the steps. Crowds gather at shops and restaurants at yard gates. Their sitting, staying and dinning outside turn the spaces at gates into lively places. Strangers hesitate to pass the gate under the watch of the crowd. The boundary space defined by a gate on the one hand spreads between territories as a place on its own, and on the other hand emphasized to strangers.

Boundaries based on social interactions vary in summer as well. While the situation at the pedestrian walk with the wall remains similar, the street with schools is much livelier. Shop owners extend spaces of their shops by carrying out living activities in the street. The boundaries are pushed to the middle of the street. Pupils crowd into the street and shops. Their movements connect the spaces in and outside the shops together, including care lanes. The range of the lively street turns bigger too. Pupils walk in groups into streets in the neighborhood, and play while walking. The playing continues in yards and in front of building. The whole neighborhood is connected into a continuous playing space. Its boundaries are pushed to the surrounding city streets. Beside those two places, spaces with mixing identities appear in the community park and at the service center with offices, event rooms and shops, which attract outsiders to come. Activities of senior citizens such as group dancing, Taiji, Pingpang, or simply sitting and chatting keep these two places busy the whole day. The yards nearby become more open thanks to the frequently passing residents and outsiders (Figure 2).

Figure 2 – Seasonal boundaries of Xinyuanli, upper row, summer; lower row, winter.

3.1.2 SEASONAL BOUNDARIES OF THE OCEAN EXPRESS

The Ocean Express is closed by annexes and fences. A guarded gate and a side gate in the east with digital lock are the only entrances to the neighborhood. In front of the main gate there is a plaza with old trees, which is visually connected to the inner garden, but is divided by fences from the latter. The street circling the neighborhood serves only two neighborhoods and some business towers. The north part of the street is separated from other nearby neighborhoods with walls, and the south part is accessible from the nearby old neighborhoods and a shanty area, in and around which there are many retails supplying the whole area with meals. Especially the restaurants along the south part of the circling street are very popular and the pedestrian road is fully occupied by outdoor seats and dinners. In 2012, the government built a wall between the pedestrian walk and the car lanes of this part and made the road into an inner restaurant street.

Similar seasonal contrast to Xinyuanli takes place in the Ocean Express as well. There are significantly more activities in the garden, on the plaza outside, along the pedestrian road of the south streets next to the retails from the Ocean Express, as well as in the restaurant street. Even in the north part of the circling street, which aims to serve cars only, there are resting deliverers and walking residents or employees from the business towers in summer. However, the contrast in the amount of activities does not bring many changes to the perceived boundaries. The functional divisions in the area are strict, and the using of spaces is similar in summer and winter. For example, in the first fenced, and then walled restaurant street, the dynamic of boundaries only moves from eating indoor to eating outdoor between winter and summer. The influence of activities to the perception of boundaries does not exceed the wall.

The Ocean Express has a close relation with the nearby areas, although it is gated. It takes services such as dinning, shopping, home service, baby sitting from the outside, and at the same time shares the plaza and its garden with outsiders. One of the towers in the neighborhood is designed into SOHOs. Due to the business visiting required by this tower, there is not much difficulty to enter the neighborhood. The employee shares the crowded rush hours with employees in business towers, activities after lunch and apartment buildings. Beside those, shops in the annex can open doors to both the pedestrian walk and the inner streets. Some residents use shops as a short cut. According to a shop owner, "people walk through my shop. Some of them are my customers who support the business at times. They are welcomed. Some ask for the favor and appreciate it. They are welcomed as well. However some others who I do not know walk through buying and saying nothing, which is really a bad behavior." Yet all these connections beyond the gates of the neighborhood are necessary all the year round, and do not change the boundaries from season to season.

Same as Xinyuanli, the boundaries set up by property management of the Ocean Express do not change seasonally. The neighborhood hairs a professional team, and it regulates behaviors in the neighborhood strongly. Technically outsiders are not allow to access the neighborhood, but actually strictly controlled entries are those of leaflet distributors, homeless, strollers, cameras, street sellers, etc. these regulations are normally invisible, and maintaining the regulations need quite a lot work - the entre open spaces are under the surveillance of cameras. These regulations do not change with seasons or hours, so are the boundaries caused by them (Figure 3).

Figure 3 – Seasonal boundaries of the Ocean Express, upper row, summer; lower row, winter.

In both neighborhoods the physical indicators have stronger influences on the perception of boundaries in winter. As the amount of activities rises in summer, social interactions start to vibrate the fixed physical indicators. There are unshakable societal boundaries, such as management regulations.

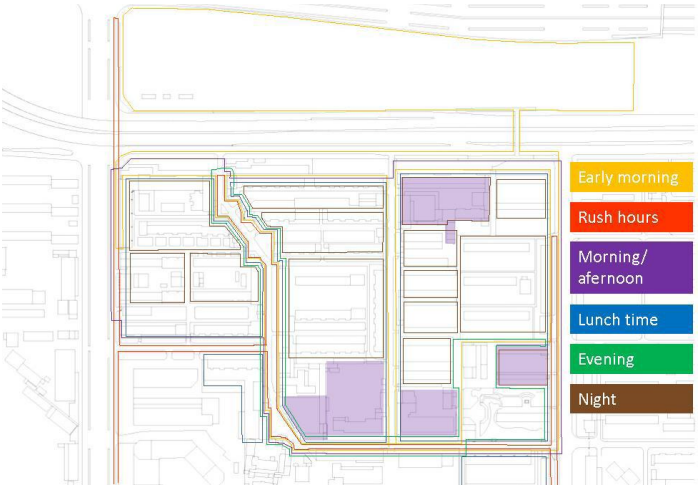

Figure 4 - daily boundaries of Xinyuanli

3.2 DAILY BOUNDARIES

3.2.1 DAILY BOUNDARIES IN XINYUANLI

Except in winter, Xinyuanli is full of activities all day round. In early mornings, senior citizens doing their morning exercises or going to the morning market dominate the space. They greet each other when they on the way, and walk together in groups to the park next to the highway or to the neighborhood park. They stay in parks until after 10am, when the rush hour is finished. Their daily rituals have turned the related spaces into an inseparable part of the community space. During the rush hours, people leave their buildings and pass the yard gate, and the gate of the neighborhood. They experience boundaries at different hierarchy levels until they join the busy traffic in the main streets, when they realize they are leaving the neighborhood. In mornings and afternoons, senior citizens and the self-employed stroll and sit around in the neighborhood. With their moving, chatting, and visiting each other, divisions among different yards and units are dissolved. The street in the north of the neighborhood is favored by taxi drivers for gathering in the break. They sit and chat along a plaza next to the street. Their appearance at an inner place of the neighborhood changes the hierarchical arrangement of spaces. During the lunch time, there is few activity outdoors. Physical indicators define boundaries again. In last afternoons after the school is finished, pupils occupy all the spaces in the street, challenging physical definitions of boundaries with their game playing. In evenings, shops at gates and along the main streets lighten up these spaces where resident take a walk after dinner. The parks are lively with dancing and other sports. In the late afternoon and evenings, the mixture of people turns the streets into boundaries with spaces of their own. In the night, the streets turn dark. Some open gates are closed voluntarily by residents. Some groups continue talking in yards, which a separated like islands (Figure 4).

The perception of a boundary means to set up a certain rule, which separate one group from another. The changes of boundaries in a day challenge the rules and making new rules. In such situations physical indicators are rather chances for interactions between different territories and groups than barriers. In this way each individual present on the spot influences the process of rulemaking.

3.2.2 DAILY BOUNDARIES IN THE OCEAN EXPRESS

Closed by fences, the Ocean Express has significant physical boundaries. Yet an access through the main gate is possible. The neighborhood is functionally closely connected to the surrounding area. During a day, different relations to these areas are constructed.

The morning starts in rush hours. The flow in streets consists of not only residents leaving for work, but also employees arriving from the subway. In the streets between the neighborhood and the subway station, temporary street sellers offer simple breakfast to the flow. Senior citizens, who are the minority among all residents, come out especially at this time for take-aways. Different flows encounter in the several alternative routes, which are the boundaries at this moment of the day. In mornings and afternoons, nannies with children stroll in the garden and the plaza where senior citizens from nearby neighborhoods take a walk as well. The boundaries of the neighborhood are set back to the building entrances with digital locks. At noon, employees in the business towers crowd into restaurants in the shanty areas, while the restaurants in the annexes of the neighborhood are not as popular. After lunch, people gather at the plaza in shadows, and some of the employees enter the neighborhood into the garden. They stay in the middle where the seats are, and do not go deep into small paths. Some people like to walk circling the neighborhood. With lively movements the entire area tends to be open. The boundaries are pushed to the big city roads in front of the business buildings. In evenings, the restaurant streets turn busy - the residents in the Ocean Express are averagely young, who prefer to eat out than cook for themselves. Compared to the lunch time, people can go to restaurants in bigger distance for dinner. The spaces in between are boundaries for them. Most of the restaurants close late in the night, and in the area there are also a few bars. People do not like to walk long for the fourth meal. In the night, the garden, the plaza and streets around the neighborhood are dark. In contrast the restaurant streets are bright and noisy, which become the center of the area. People returning home in the night prefer to take the shortcut through shops. Thus the boundary at one side of the neighborhood is penetrated (Figure 5).

Figure 5 – Daily boundaries of the Ocean Express

The daily dynamic of boundaries in the Ocean Express is not as various as that of Xinyuanli. Connections built between community territories and the nearby areas are limited to the main gates and informal passages through shops, due to the strictly kept rules under a "good" management. Even so, there is a mixture between people of different income, educational and class backgrounds at boundaries - the residents from the Ocean Express have higher income than those in the shanty areas. However they have meals next to each other, sits in the same garden, and stroll in the same streets. both neighborhoods, the boundaries suggested by physical indicators are modified by daily activities. It is the freedom of people present at boundaries to follow the rules or challenge them. For example, knowing that the Ocean Express is gated, some employees from business towers choose to stay in the plaza outside, but some others can go in even through shops. The choices depend on the definition of the relation between oneself and the community of each individual. The management maintains rules in the neighborhood, and anchors boundaries to fixed places, despite that it can be against the will of residents themselves (If there were no fence between the annexes, people would not use the shops as shortcuts).

3.3 TEMPORARY BOUNDARIES

Except for the annual and daily dynamic, boundaries are also changed occasionally by temporal behaviors or constructions. When a temporal boundary is reassured by repeated behaviors, it also may become a pattern of long term boundaries and enters the annual or daily dynamic.

In Xinyuanli, the most typical temporary boundary which has turned durable is that at open spaces in front of buildings. Residents from some buildings oppose to government's benefiting from collectively share spaces. As a protest, they put out private objects like flower pots, furniture or even professional parking locks to occupy or reserve their own parking spaces. "the spaces in the neighborhood belong to all the residents, the government has no right to take it away". A resident says so. The action of putting out private objects aims only to mark parking spaces, not to block the pedestrians, but they perceive a boundary out of the objects and do not enter the spaces any more. Despite the temporary look and movability of these objects, they bring changes to the boundary. Another example is about the green areas in the neighborhood that are in bad condition due to the lack of maintenance funds. A local governor Mr. Ding promoted a project to allow residents who are interested in gardening to voluntarily take responsibility for a plot of green area. Unfortunately the project was rejected by the upper municipality, and the boundaries designated to the volunteers do not exist anymore. In contracts, some residents from the ground floor have already planted their gardens in the green area in front of their windows illegally. They managed to redefine long term boundaries without being controlled (Figure 6).

Figure 6 – places where temporary boundaries occurred in Xinyuanli

Such temporary boundaries are rarely seen in the Ocean Express. The seasonal and daily dynamic of boundaries is stable without transformations.

4 PERFORMATIVITY: PRESENTATIONAL AND REPRESENTATIONAL BOUNDARIES IN PERCEPTION

The perception of community boundaries related to activities and behaviors of people can be understood as an event of emergence, which is a result of performative actions.

The term “performative” stems from philosophy of language. John Austin (1962) creates the word to indicate the situation when the utterance of specific words is itself an action. The term was introduced to the field of architecture by Sophie Wolfrum (2010/2015) in the book Performative Urbanism to describe the understanding of architectonic space as a situation of emergence, when space appears through the perception of and interactions with it . As an example of understanding movements in urban space as an analog of theater performance, Peter Brook writes "[a] man walks across this empty space whilst someone else is watching him, and this is all that is needed for an act of theatre to be engaged" (Brook, 1968/1996; P7).

Performatives produce meaning, which is not brought in by a plan or the intension of the actor, but brought up with the aesthetic act of an individual. The performative action is "event-ness" (Fischer-Lichte, 2004a). In other words, through performative actions individual "searching for meaning" and collective spirits shape each other and evolve together. The trigger of the event is the perception of a juxtaposition of "the order of presence" (based on individual corporal experience) and "the order of representation"(based on social norms) "(Fischer-Lichte, 2004b, P. 10). The spectator perceives herself as a perceiving subject, as well as

her body as a carrier, presenter, or challenger of rituals. As one of the participants in spatial situations, the individual transforms social norms through staging her movement, and hence partially forms the emerging space. The perception of boundaries as rules distinguishing self and otherness is a consciousness of in-between states between the two orders. Van Gennep (1909/1960) has introduced "liminality" to explain the phase in between two conditions in the rites of passage. Draw on theater theories of Erika Fischer-Lichte, we apply two perspectives of investigating dynamic community boundaries - the boundaries of presentation and the boundaries of representation.

4.1 BOUNDARIES OF PRESENTATION

The presence of a boundary is dependent on the corporal movements in the spatial temporality. Bodies occupy space, and are always defining the boundaries between self and other, which is not at the outline of the body, but in the spaces it influences. Other people's proximity in this space is dependent with his intimacy to me. Therefore my appearance in an open space already defines a boundary. However, only through conscious perception my corporal movements can become performative, and changes in behaviors can be symbolic or even paradigmatic. When we recognize a boundary from our own bodily movement, the boundary comes into being. For example, in the street between two schools in Xinyuanli, shops owners carry out living activities in front their shops in the day. Pedestrians walk in the car lane and do not move between the furniture of the shop owner. A boundary is presented due to the behaviors of both the shop owners and pedestrian.

Boundaries of presentation enhance or challenge physical indicators. In front of the gates of both neighborhoods, a stranger hesitates whether he is allowed to enter. If he watches many other entering without being questioned, he might be encouraged to make a try. On the contrary, if he sees from a distance already that other people are stopped by a guard, he might not even approach to the gate at all. Other people's behaviors are performative that presents us boundaries for them. These are referential hints on the rules for the stranger. As Kafka's parable "Before the Law" (http://www.kafka-online.info/before-the-law.html: Apr 2017) implies, a human constructs laws for herself, and only through the violation of them, he can see them. The boundaries presents to an individual when he hits them.

Therefore a boundary is a temporal presentation. It does not pre-exist in physical materials nor can be pre-defined by them. It is stimulated by them. Hence fences are not a sufficient condition for boundaries. It is because we perceived a boundary out of a fence that the fence becomes a symbol for boundaries. And this happening is temporal. A child perceives a climbing game on a fence. In this case no boundary is presented. The presentation of boundaries is also a presentation of territories. When this presence is challenged, so is the territory of a community. It is to be noticed that, the consistent boundaries in our perception consists of inconsistent events that "by chance" enhance the same presentation. There is the potential and possibility that the boundaries are changed in the next presentation.

The boundaries present in temporality, yet our perception is real. We don't experience reality in an empty physical space. Our perception of architectural reality is "far beyond its objective or visual features" (Wolfrum, 2010/2015, p. 13). Instead we experience it in process, in which all our senses, knowledge, and interpretations of other human beings, objects and their relations are involved. Our perception of a boundary endows its temporal presence with meaning. Thus it becomes our reality.

4.2 BOUNDARIES OF REPRESENTATION

Boundaries of representation reside in our interpretation of things out of convention. Gadamer (1975/2004) uses "ritual" to address actions, thoughts and speeches restricted by social norms, morals and customs. Human activities are always conformed like rituals consciously or unconsciously. As social creatures we have already been cultivated with rules of our societies. We unconsciously follow rules in most of our interactions with physical spaces. We avoid eye-contact in a crowded elevator, entering a building through doors instead of windows, and go to bathrooms to use a toilet. Yet differentiated interpretations can appear to a same thing. When it happens, we will be shocked, surprised, and be more conscious of the conventions that shape us. This is very important to the publicness of a space.

Economic activities influence the representations of boundaries. In Xinyuanli and the Ocean Express, retails stimulate our perception of a boundary. That is because, a mixture of people can bring more customers to the shop, and the gathering of shops can attract more people to come. The accessibility of the people is important, so that the shops prefer a location convenient for both residents and outsiders. Finally, a reaction chain is built in our minds - shops-mixture of people-boundaries. Xinyuanli has a loose management and dynamic boundaries. That is because; it was built into neighborhood units which were dissolved after the economic reform. When it was built, the ideology encouraged this typology under the influence of the Soviet Union. The typology fulfills the urgent need for housing in the post-war reconstruction. This constructs another chain of representation in our minds: old neighborhood-neighborhood units-open community. A similar chain suits the Ocean Express: new neighborhood-commercial compound-gated community. The two neighborhoods are very typical. When we see from afar the towers like those in the Ocean Express, we believe a gated and unshakable boundary. When we have to pass through an old neighborhood with 6-7 floor buildings, we do not expect a guarded gate await us at the boundary.

We endow meaning to things perceived and they come into being. Where is the meaning from? They come from all the events we have experienced in the part. The experiences form our cultural and social backgrounds. When we give meanings to a temporal event, we overlap past ones onto it. If we were stopped once by a guard at a gate, we do not try again at the same place. Our experience tells us a guarded gate normally does not welcome stranger. We would not try in the first place. These are examples when we overlap meanings from the past event onto the current. However they do not match in all cases and this is the precondition that boundaries of presentation can appear.

Boundaries of representation form another reality with have a span in time. The reality of presentation is a short one. When the action or perception stops, the reality ceases to exist as well. Representation is a way to endow events with a consistence in time. Through understanding and interpreting, representation put influence of the past to the present. "A narrative is an account of events occurring over time" (Bruner, 1991, p. 6). Representation connects the inconsistent boundaries into meaningful and consistent experience in the dimension of diachronicity.

4.3 THE TWO BOUNDARIES IN THE TWO NEIGHBORHOODS

The difference in changes of boundaries in the two neighborhoods can be understood with the two kinds of boundaries. In an old community like Xinyuanli, boundaries of representation have been slowly transformed by boundaries of presentation. The latter diverge from the former and bring vibrations in the community. The instability, temporality, and big amplitude are the features of boundaries of presentation. The new community is dominated by boundaries of representation, which tolerate smaller vibrations under the control of rules.

The seasonal changes of boundaries are smaller in the Ocean Express dominated by boundaries of representation, and bigger in Xinyuanli, dominated by boundaries of presentation. The seasonal changes of boundaries synchronize the atmosphere with nature. This can be perceived by resident, and are call in Beijing dialect "connection to the earth", a quality appreciated as healthy for one's life. The Ocean Express is often described with "fashion" and "quality", which we think, indicate that the stability of boundaries.

The daily changes of boundaries in Xinyuanli show a feature of penetration. The space of the neighborhood is porous, and the connection between residents and outsider take place in the major street between residential buildings. The changes of boundaries of the Ocean Express take place in the surrounding areas where the perception of boundaries is not restricted strictly by rules. The connection between inner and outer space of the neighborhood happens only at the guarded gate. The regulations at this gate are decisive for the daily changes of boundaries at this neighborhood. The daily dynamic of boundaries reveals the community's capacity of interaction inside and outside it general territories.

Temporal changes of boundaries take place only in the Xinyuanli, where boundaries of presentation may appear at any location of the neighborhood. The presence of temporal boundaries can be a public event that influences the social of the community, such as the participatory negotiation of parking places in Xinyuanli (now there are three parking modes, governmental management, spontaneous occupied, and

self-organized). To limit the possibility of temporal is to kill a possibility for publicness in community spaces.

Finally, both the two neighborhood have a stable boundary in both presentation and representation, thus, the walls.

5 FRAMEWORK: ANALYZING DYNAMIC COMMUNITY BOUNDARIES

Inspired by the observations and analysis of the temporality of boundaries in the two neighborhoods, and as a basis for new forms of analysis and discourses, this article proposes a framework of the most significant elements in the perception of boundaries changing in time.

Drawing upon the analog between theater and urban theories on performative actions, the text above has discussed the two different but interrelated perspectives of the perception of boundaries theoretically and abstractly. In combination with the discourses in the first part of specific changes of boundaries in time, we will provide practical and specific elements that influence the perception in four categories: physical stimulators, movements, regulation-participation, and interests-symbols.

- Physical stimulators: The stimulation of physical indicators is a result of both presentations and representations. There are significant physical stimulators, such as walls, gate, fences etc. are representation of social norms. Many stimulators are insignificant. They function in the interactions with humans. These stimulators include tables and chairs, flower pots, height differences and so on. The miss-use of some objects may change boundaries as well. For example, hanging clothes on fences, use flower beds as benches, accommodate or open shops in gate house, etc.
- Bodily Movements: Bodily movement influences boundaries of presentation. Some movements are temporal, such as pupils play with barriers in the middle of a street, residents play cards under a big overpass, people gather at a gate and chat, etc. some movements are durable, and may have impacts on physical spaces, such as building extensions or front gardens, regular street shops, etc. Some other movements repeat, but do not change physical spaces, such as traffic flow in rush hours, parents waiting to pick up children at the school gate, etc. These movements set up invisible boundaries at other times of a day, yet community members know them well.
- Regulation-participation: Regulations mainly influence boundaries of representation, and participation challenges or enhance regulations through presentation. Some regulations do not allow questioning, such as a door with a digital lock. Some regulations are presented through movements, such as private parking places without a mark. Only with agreement and support from the neighbors can it run good. Some regulations limit only specific behaviors, such as distributing leaflets, taking photos, etc.
- Interests-symbols: Interests-symbols support the formations of boundaries of representation. Economic interest drives the management in neighborhoods, and decides whether the boundaries are penetrable in different situations. Symbols in spaces or symbolic spaces are promoted by the drive for more benefits. Symbols are visualized desires for interests. In neighborhoods, symbols take the forms of splendid gates, slogans, uniforms etc. they enhance the distinguishing of self-other, and emphasize the exclusiveness of boundaries.

6 CONCLUSIONS

This article views community boundaries dynamically. The perception of boundaries is derived from the distinction of oneself and others. The seasonal, daily and temporal changes of boundaries in two typical neighborhoods in Beijing show that boundaries are results of both presentational and representational understandings. Based on theater and urban theories on performative, the article has argued, the differences in the boundary changes between old and new communities origins from the difference in the dominant type of boundaries. The presentational boundary dominated neighborhood tends to have intricate connections to the outsiders while the representational boundary dominated neighborhood has the connection outside in the surrounding area. The analyzing of dynamic boundaries in neighborhood

should consider the four aspects: physical stimulators, bodily movements, regulation-participation, and interests-symbols.

1. Evaluation of the temporality of community boundaries: Our observation in the two neighborhoods has shown: the more dynamic in time the boundaries are, the livelier the community is. Senior citizens make exercises, children play games, and employees take breaks - different groups of people in age and class encounter in boundary spaces. The tolerance to changes of boundaries promotes social interactions, which are positive aspects of urban life, and the urban development that Chinese government promotes.
2. The Chinese tasks: The dynamic of boundaries is relevant to the openness of the community. Hence an open community brings positive aspects to urban life. Closed neighborhoods were invented in China under the planned economy system. The strict function division segregates living, recreation, service, etc. Such arrangement cannot fulfill today's requirement on variety in life. On condition that there are still grate amount of gated communities in China, opening boundaries has a profound meaning in the basic demand for communication and participation of the contemporary urban life. The Chinese government has already recognized the importance and urgent need of openness in communities. In February 2016, the Chinese government published the CCCPC's "Opinions on further reinforce city planning, construction and management work", which points out "urban blocks should be promoted in the new built residential neighborhoods and closed Small Residential Districts (SRD) should be in principle avoided. The already built SRDs and Danwei Compounds should be opened gradually. …", open communities will be the main stream for housing in the future.
3. Duality and balancing: closed neighborhoods with boundaries of representation have stronger feelings of territory, which is better for security and maintenance. Open neighborhoods with presentational boundaries can promote interactions, liveliness and social coherence. In actual practices we should balance between the two types of boundaries and taking human activities into consideration.
4. Future works: Residents in China have the requirement of sense of security. This is the difficulty that open communities have to face. The future works should investigate design methods combining physical space and the behavior patterns of different groups of people at different times. Security and management methods of open communities, boundaries which promote social connections and coherence, and methods of opening existing closed neighborhoods should be developed in the future.

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ID 1695 | THE ROLE OF PUBLIC SPACE IN THE RECENT TRANSFORMATIONS OF MEXICO CITY. FROM PROTAGONIST TO FORGOTTEN ACTOR

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1 THE SENSE OF PUBLIC SPACE IN THE CITY

In recent years, the topic of public space has taken a lot of force, leading to discussion with different perspectives in forums of international importance and intertwining it with issues of urban planning, culture, economy, politics, disasters or morphology to name a few. Its recent relevance is not only because of its new consideration as a subject of study, but mainly because of its importance in practice, that is, due to its use, function and design with the main focus of caring for the human being in his daily life in the city.

In the 21st century, the public space is known in different ways, it can vary according to culture and territory (different practices in each city), as well as in the form: parks, squares, gardens, streets or public institutional spaces. The complexity of its study does not depend on its approach, but on the integration of several approaches to address the reality of the city. In this sense, the urban processes that transform the society also impose new trends for the public space, that is, the economic, political, technological and cultural transformations are captured in the public space as a reflection of a changing society with demands that go at great speed.

With the assumption that it is essential for urban studies to include different approaches, and to pay attention to the processes that transform the city, three views are taken into account for the understanding and analysis of the public space: 1. The social vision in the human sense of habitability, i.e. the human condition of public space, 2. The inclusive vision regarding physical and social aspects of the public space and 3. Finally a vision in the globalized sense of the trends reflected in the space.

The social vision in the human sense of habitability for the public space. New forms of life have been generated in the city from the advent of modern technologies and economies that produce different needs to those of other times, such as: WIFI connections to enter an alternate public space, individual electrical connections, if they are used as a place of work, stations to recharge electric cars, bicycle stations, to mention some of the recent elements in public spaces, however, there are dynamics in them that cross the barriers of time and that are part of the daily life to live the city, such as: places of rest, recreation, encounter and sociability. Currently new public spaces are being created that reinvent the city, making it more livable and of course more desirable.

When we talk about desirable public spaces, it could be seen as something subjective. Each human being thinks differently and according to their cultural characteristics, and to that extent, needs could vary. But even in the same country the geographical or economic situation of each family would imply different demands. Something is very certain, however, and that is that we all have the need to co-inhabit. Each

species on this planet has its natural habitat, fish water, monkeys the jungles and forests, lions the savannahs. Habitat is where species are born, grow, reproduce and die, that space on earth where they meet all their needs. Even when human beings are governed by this general rule, there are two fundamental elements that make them different from other species: the first and most important is that their habitat is not natural, but artificial; and secondly, apart from the physiological needs they need to satisfy, they are also creative beings (Chain; 2010).

Habitability is defined here as the capacity of a place to meet human needs (Mues M., 2011), and although several authors consider that habitability refers only to the material and structural conditions of built spaces (Blanchera, 1967), (Saldarriaga, 1981), (Juárez, 2003), without taking into account the social aspect in the outside (Velazquez, 2011), habitability for man would be as much within the architectural element as outside of it. Habitability goes beyond the door of the house to the street, towards the public space, where the social function, the community, comes into play, because it is there where "the expression and social identification of the others is built", based on the expression and symbolic construction of the space (Carrión, 2002: 5-7), we leave our house behind to find a huge machinery concentrating the totality of our culture, but which also encapsulates international movements and trends we must incorporate during our journey.

The habitable public space is one that maintains a balance between the material and immaterial elements that intervene in the places of free access for all human beings, regardless of gender, religion, race or social class in order to satisfy the collective needs. Elements of habitability in the public space can be

measured and diminished, as appropriate, taking into account the global and local transformations, and the determinants of type of settlement, but ... How do we know if the public space is to a greater or lesser extent livable? For this we consider three theories:

According to the theory of human need by Doyal Len and Gough Ian (1994), needs are constructed socially and derive from the cultural environment. The authors take into account indices to measure the welfare between nations based on the needs of: Appropriate health care, security, economic safety, clean water, adequate food, shelter as a means of protection from the elements, relationships of recognition, safe working environments, relationships of recognition and belonging (Len, Ian:1994 in Reyes:2012; 132). The needs proposed by this theory are general and can be considered basic in different territories and different social groups. It should be taken into account, however, that the cultural and natural environment, the new technologies and even the policies for urban space, make human requirements more complex and even different. This is the case of multicultural cities and the public space should regard it as principle to meet the needs mentioned above.

Max Neef's theory (1994) to analyze public space in the area of habitability combines criteria from existential and axiological categories, where existential categories focus on needs of being referred to personal or collective attributes, having which contain the mechanisms and laws required, doing as personal or collective actions and interacting in those spaces of action and construction of needs, satisfactors and economic goods; while the axiological categories cover the requirements of: subsistence, protection, affection, understanding, participation, creation, identity and freedom (Neef: 1994 in Reyes: 2012; 131). This refers us, in terms of the existential category, to social action that allows us to build axiological relations that give meaning to space.

Schiller's theory (2000) is that of the qualities of the habitable public space where, from variables with a specific meaning and value, he measures the habitable public space, and the qualities space should cover for habitability are: permeability to allow open connections in the urban fabric by measuring them according to the size of typical urban blocks and the elements that can limit them such as railroad tracks or other types of barriers; vitality as a characteristic of the spaces to be places of social interaction measured through the activity there; variety to encourage the complementary uses of the city, variation of typologies and uses; readability to facilitate social and spatial relations from the variable use and density of those who use the city; and robustness which allows an adequate combination and variety of uses at any time of the day with the ability to adapt the space (De Schiller, 2000:4 in Valladares, Chavez, Moreno:2008; 10-11).

According to the theories above, analysis of the habitable public space must be made taking into account physical elements and the design of the space, and also considering the social elements of basis subsistence and even the more complex ones such as identity and legal duty. Therefore, we can examine the public space in two dimensions, where the different needs of humans can be encapsulated for the

analysis of habitability in the public space, the first, the physical or material dimension, and the second the intangible dimension, which goes from the social to the spiritual.

In the physical or material dimension, it is possible to concentrate the tangible and quantitative elements that are presented in the urban space, such as: public water services, drainage and light, street furniture, transport infrastructure with subway systems, metrobuses, light rails, suburban trains, buses, combis, bicitaxis, bicycles, recreation areas, roads, streets, avenues, circuits, highways, communications infrastructure, public telephones, internet, police officers, security modules, road safety. It is important to mention that the city also has infrastructure for housing, education, health, among others. Similarly, in the immaterial dimension, which goes from the social to the spiritual, it would be the one where we find intangible elements such as: the urban social identity, symbolic interactionism, perception of security, culture, and social exchange.

The inclusive vision regarding physical and social aspects of the public space. The situation of inclusion has generated in this century a strong international interest impacting on issues such as education, housing, migration, health, public space. In this sense, the definitions of the public space towards an inclusive view of the city make sense mainly because they consider that they are by man and for man. Consequently, public places belong to all and are for all. They are spaces people can freely access with no distinctions of gender, religion, race or social class. Their inclusive meaning can be put at risk, however, on the one hand, due to the problems that arise in the city, such as: an uncontrolled population growth, global transformations, privatization, appropriation, fragmentation, segregation, among others; (Moreno, 2011) and it is complicated when "Environments, individuals and/or groups can be perceived as a threat, that affects access to the public space" (Tiesdell-Oc, 1998:648 in Asriany-Silas-Soemarno:2011; 163-167).

The 'inclusive' public space is the place where activities and discussions are open to all. It is the place where authorities have the responsibility to guarantee the existence of a public space where people express their opinions, assert their claims and use it for their purposes (Asriany-Silas-Soemarno: 2011; 163-167). However, if there is this concern about inclusion, it means that there are elements that make cities exclusionary so that inclusion-exclusion are studied in a dual way. To this end, two aspects of study are taken into account: 1. Social inclusion by exclusion and 2. Physical or design inclusion:

Social inclusion by exclusion. Public space historically has been valued as a factor of social inclusion, and as an inescapable instrument for urban planning. However, the loss of protagonism due to the weakening of previous forms of sociability (resulting in social inequalities and fragmentation) and the emergence of alternative forms of relationship (of communications and encounters introduced by technology, the feeling of insecurity), have sharpened the barrier between recreational and leisure spaces that are used by

different social groups. Not forgetting that people of higher income go to private places to recreate, using the street just to circulate, not caring about the state and the quality of public space, which often remains in the background and helps to generate what Bauman (2009) calls "ghettos of exclusion" (Vainer; Leicht; Varela; Rabellino and Musso: 2013).

Ramírez Kuri and Ziccardi identify as discriminatory practices those observed in the labor market, such as access to goods and services, the weakening of social cohesion; luxury consumption activities that can be dissolved by making effective economic, social, cultural and sustainable rights which encourage the integration of the society with the city; informal activities and social conflicts (Ramírez and Ziccardi, 2008: 23-48).

And on the other hand, we have physical inclusion or inclusion by design. In the search to determine the components that the public space has for inclusion, we return to the studies that have been carried out to identify the components of exclusion that Ramirez Kuri and Ziccardi analyze, such as: the location of the place to determine the quality of services and their infrastructure; the informal and established commerce that pervades the urban space and which fosters crime; the deterioration of the public space and its accessible design (Ramírez and Ziccardi, 2008: 23-48). However, these elements are taken in reverse, that is, on the positive side of that which the public space must have to be considered inclusive, such as enough urban infrastructure.

In the design of inclusive public spaces, it is essential to take into account the physical components that foster social integration. From the perspective of Sergio Zermeño, the following are identified as components of exclusion: inaccessible primary and secondary roads; public spaces of richer classes

appropriated by needy sectors; crossroads, roads, squares, parks, sidewalks, etc. .... which operate as frontiers, excess of surveillance, corridors watched by guards, police officers, cameras; and he also identifies social components such as: high risk of violence and virtual walls (Zermeño: 2008; 135-152).

A vision, in the globalized sense, of the trends reflected in the space. Cities, depending on their territory, are changing and growing at different and accelerated paces, fostering cultural exchanges and adopting trends that are fashionable in the urban landscape. For Manuel Castells, these global trends leave their traces in the public space, and make visible the economic, political, cultural and social differentiation that distinguishes the city in its local and metropolitan dimension. If we talk of divisions between public spaces through symbolic significations in the cities (Castells, 1977: 32); then places of public ownership are the expression of their society and culture in a temporality determined by the processes that influence on them.

Public-owned spaces must be able to adapt and survive to global transformations, which by their very contrasting nature absorb these changes in different ways, depending on their environments and the impacts public places are constantly having. Globalization, one of the strongest influences on a city in every sense, whether to its society, space or culture, reinvents them as great scenarios with strong economic and political rather than cultural and social alterations which irreversibly impact on the city's inhabitants. In this sense, the overall composition of the public space is witnessed in two aspects: The public space as an alienable resource, in the sense of appropriation and privatization; and the public space affected by its constructions, in the sense of transformations.

The public space as an alienable resource through appropriation and privatization of the space in a non-legal way. This causes scarcity of public spaces, mainly because of the wide commercialization of everything, a reflection of the globalization, bad economy, excessive appropriation and high delinquency, as this is fundamentally brought about by street vendors or informal establishments that create pervaded scenarios. The transformation of Latin American cities and their spaces are a consequence of social, cultural and technological phenomena. These changes create a new form of social organization, a new cultural model, which can be called postmodernity, globalization or neoliberal culture. This regards the space as a resource, a product, with social, sensual and symbolic policies, which appropriate, use and transform the spaces of cities (Remedi 2004: 15-19).

The public space appears increasingly blurred of the urban by obliterating the relationship between the public and private. This creates a new conception of the forms of organization in public spaces, which, for its better understanding, we will analyze in four different approaches: from the perspective of its transformations, looking for the historical context of its changes; from the point of view of actors who carry out specific practices, witnessing how social practices affect their structuring; from the local forms of appropriation and significance, and from the tensions and conflicts that their use and appropriation cause (Portal, 2007: 9).

On the one hand, there is a discussion about the detriment that has been caused to space due to this misappropriation and use. Duhau remarks that the intense use of public spaces for free transit, recreation, circulation and free access to commodities, as a crossroads of coexistence between strangers, etc., together with the public policies and globalization, has caused a crisis (Duhau, 2008: 137-145).+ On the other hand, there is the loss of quality of public spaces due to the effects of abandonment, deterioration, privatization and segregation, causing urban disintegration. Public spaces cannot be studied, disregarding the norms and regulations that rule them (Duhau , Giglia 2008: 45-53).

It is a reality that the deterioration of public space, and its privatization is a consequence of a badly planned or poorly governed city, but also of global inclusions not adapted to each culture but which are rather more generalized, and which are of a political or economic nature that benefits only the hegemonic class leaving aside the working classes. When this social segregation occurs, there are sometimes demonstrations of the people affected to defend places that are part of their daily life. This is also another way of appropriating public spaces. However, existing interests can be stronger, and appropriation of public spaces can become one of the most important factors of risk, which can lead to the destruction of public places. Appropriation contains social, state and private actors.

The public space affected by constructions, in the sense of transformations. It is evident that the production of public space in current cities has changed, the measures for its construction and even its activities are different, but, what is the cause? Although the causes can be many, there is still an ongoing

search for the logic that gives us elements to understand the urban transformations that have been tried to be defined with names that are sometimes even difficult to pronounce, composed or decomposed words or more than one to name what is happening: redensification, urbanization, consolidation, gentrification, multiculturalism, people participation, among others.

In Latin America, the study of processes such as gentrification is recent. Although it is true that the bases defining this concept are not new, the term itself is relatively young, invented by the British sociologist Rut Glass (1964), who observed the differences in social structure from the establishment of higher-cost housing in specific areas of central London, thus examining the invasion of middle and upper classes on working-class neighborhoods, displacing and changing the social fabric.

Later, the sociologists Bruce London and John Palen (1984) tried to explain gentrification by means of five theories that involve different aspects of the life in the city: the ecological-demographic theory, which refers to population and generational statistical aspects (baby boomers); the sociocultural theory, seen from the values, feelings, attitudes, ideas and beliefs of society; the political economic theory, which is based on two approaches: the traditional and the Marxist ones; the community network theory: the community lost and the community gained; and finally the theory of social movements and the influence of counter movements (London and Palen 1984: 4-26).

On the other hand, in 1987 Neil Smith's view proposed two theories to explain gentrification by observing the phenomenon from the economic and social point of view with the "production-side theory" and the "consumption-side theory". These theories address the problem of the automobile, urban expansion, changes in lifestyles, depopulation of the city center, transport and pedestrian spaces, where human relations are diminished, but above all, he focuses his research on the results of increased employment in business districts. The interest of this geographer in these elements is an answer to the very elements that have caused the greatest problems in recent decades and which have been part not only of gentrification, but also of the processes of redensification, rehabilitation and the numberless patches made cities (Smith, 1987: 462-465).

For gentrification to exist, it must be in a specific geographical space and it is considered to be happening when there is a process of investment and reinvestment of capital, when there are a series of transformations in the urban landscape due to the settlement of higher income social groups in these specific geographies and when there is a direct or indirect displacement of the existing social groups (Janoschka, 2011). In the current debate, Michael Janoschka addresses gentrification with 6 points: 1. Neo-liberal policies of Gentrification, all types of public policies that establish an alliance with the capital that is invested in the city; 2. Supergeneration, when a place has been gentrified at two different historical moments; 3. Gentrification of new areas, industrial areas or ports where there is no gentrification by direct expulsion, but through all the indirect processes that occur around these neighborhoods; 4. New geographies of gentrification: spaces that have not previously been identified as spaces of gentrification, rural and suburban neighborhoods; 5. Symbolic gentrification: virtual sale and placement of new economies; and 6. Resistance to gentrification: the congregation of the community to prevent the inflow of foreign capital. (Janoschka;2011). Thus, the integration of different urban processes affects constructions and make up, renew and transform the city, affecting the dynamics, practices and design of urban spaces, which is a witness of the reinvention of the city in smaller scales.

2 URBAN RECOMPOSITION IN MEXICO CITY

In the case of Mexico City, the last decades of the twentieth century brought a change in public policies and a depopulation of the central parts, especially due to the process of deindustrialization and the earthquake of 1985. This meant a reinvention of the city for this century, through standards that call for a Redensification and the opportunity to occupy spaces that were attractive to the private sector during the first decade. This meant that the city exceeded its limits, gentrifying spaces and consequently producing poorly rehabilitated residual public spaces or the creation of reduced spaces. New policies. The instrument for urban development policies called "Bando Dos", proposed to redensify the city with the specific objective of ordering the urban growth of Mexico City, preventing the construction of more housing in the outskirts of the city. The instrument was presented on December 7, 2000 by the then head of government (Andrés Manuel López Obrador). It had different objectives for the ordering of Mexico City, such as: To stop disordered growth; to safeguard the preservation of soil of the then Federal District (now

Mexico City DOF 05/02/2016), preventing the growth of the urban areas and thus avoiding covering the recharge zones of aquifers. It was determined that the districts that had suffered considerable depopulation were mainly four: Cuauhtémoc, Benito Juárez, Miguel Hidalgo and Venustiano Carranza, all located in the central area of the city. It was also assessed which had been disorderly populated, predominating the south and east. It was determined that there is little infrastructure in the city for a strong real estate development (Bando 2: 2000)

Among the policies implemented was the promotion of population growth towards the districts of Benito Juárez, Cuauhtémoc, Miguel Hidalgo and Venustiano Carranza to take advantage of the infrastructure and services that are currently underutilized, and the construction of housing for the lower-income classes (Bando 2: 2000). However, in these central districts, such as Benito Juárez, the project did not work as expected. At first there was a real estate boom, but if it was not successful was because of the high cost of housing and the poor infrastructure. In different neighbors, there was a wild transformation of the city landscape by cutting down trees, constructing big buildings: where there had been houses for 6 to 8 people, now there appeared buildings with 8 to 10 floors for many families. In these new buildings, however, not all apartments were sold. As a part of the first consequences, in 2010 the government of the Federal District at the time, together with the Ministry of Social Development (SEDESOL), the National Council of State Housing Entities (CONEREVI), The Autonomous University of Mexico (UNAM), the Housing Fund of the Institute of Security and Social Services for State Workers (FOVISSSTE), the National Workers Housing Fund Institute (INFONAVIT) and the Federal Mortgage Society (SHF), publish the guide for habitual re-densification in the internal city, in which they present a methodology to identify re-densification scenarios, as well as instruments to favor it so as to join the smart city growth system and position Mexico in the international environment in this respect, for which they are planned to address a series of issues, such as: Increase in the costs of displacements of the inhabitants of said areas; greater consumption of fuels and greater production of emissions polluting the atmosphere; loss of preservation areas, aquifer recharge zones and agricultural production areas; higher costs of urbanization that represent a significant burden for local governments; and social and economic segregation of urban space (GODF:2010).

The approximate ten-year wait for this guide to be published, to take measures on matters of re-densification policies, caused for constructions to be carried out during that time in different zones that lack integration with the social fabric, for it has been seen that elite zones are created, which keeps the population dissatisfied and afraid of being displaced. There was an unlimited number of claims derived from the implementation of the Bando 2, caused by: the fear of the modification of the environment, decrease of the quality of life, of safety, of the value of real estate, feelings of dispossession or feelings of injustice, for decisions were made that affected the territory without the main interested parties being informed, taken into account or heard, a loss of confidence of the population in the authorities and experts that promoted the project, above all when there is a tradition of local organization and mobilization, risk perception and a feeling of uncertainty. The technical and scientific studies that validated the project were questioned (Alba:2009;56).

Deindustrialization. With the economic opening abroad with the 1988 free trade agreement, there was a shift in the activities of the manufacturing industry that caused a process of deindustrialization. The industries were moved toward the outskirts of the city or even toward other territories (Asuad:2010). This process is not yet finished. There are still areas of the city with disappearing industries. With this movement and the change toward a tertiary economy, the reconfiguration of the city was affected on one hand due to the opportunity of land within the city, seized by the real estate power, and on the other hand due to the change of policies that did not work as expected. In Mexico City some of the areas that have passed through the process of deindustrialization at the end of the 20th century were the delegations Benito Juárez, Cuauhtémoc, Miguel Hidalgo, Venustiano Carranza, as well as Azcapotzalco and Gustavo A. Madero (Sobrino:2002;7). In recent years the mass production of housing has captured some of these areas, leading them to transformations that are a result of the inclusion-exclusion struggle that is reflected in the absent public space. An example of this is the case of the Granada and Ampliación Granada colonias, in the Miguel Hidalgo delegation, which has been a categorical place throughout History. From an economic point of we could say that it has gone through three sectors: agricultural, industrial and tertiary.

In 1920 the lands of the Hacienda de los Morales were divided, playing a significant role in the urbanization of the city of Mexico due to the fact that part of the space was used for the colonia Polanco

assigned to upper middle housing, in which the colonia project of the first half of the 20th century was based on public space. This was key as it grew until it was divided into five sections, sharply contrasting the Granada and Ampliación Granada colonias, which began to be industrially established without public spaces. The following are some of the factories in the place: the General Motors Factory in 1923, the Mexico glass factory in that same year, the Modelo Brewery and the General Popo in 1925, the Tabiques La Universal Factory, whose year of establishment is unknown, the Chrysler Factory in 1939 and thereafter until 1961, the Palmolive Factory, the Halaxtoc textile factory, Laminadora LMMSA, pharmaceutical industries, Factory in lake Andrómaco, Bolt Factory, Factories in lake Neuchatel, Furniture and Steel Factory and another Cotton factory (Palacios; 2010-79-96). Reconstruction of the territory. By the start of the 19th century, the Granada and Ampliación Granada colonias were changing their morphology, land use and population. The main change was the use of industrial land to residential land, which was attractive for real estate developers, who saw that its potential was supported by the urban image of the bordering colonia, Polanco. The two colonias were given different informal names following the first interventions: Ampliación Polanco, Polanco Bis, Polanco II or the Nuevo Polanco, however, a series of contrasts have been seen between Polanco and the Granadas (Ampliación Granada and Granada). The most significant contrast is the type of public space that there is between one and another, and in spite of the luxurious residential buildings that broke the specification of the Bando Dos and standard 26 to create housing construction of social and popular interest on urban land, and thereby re-densify the zones of Mexico City in which there is a certain lack of population, they lost the opportunity to create housing with quality public spaces (see figure 1).

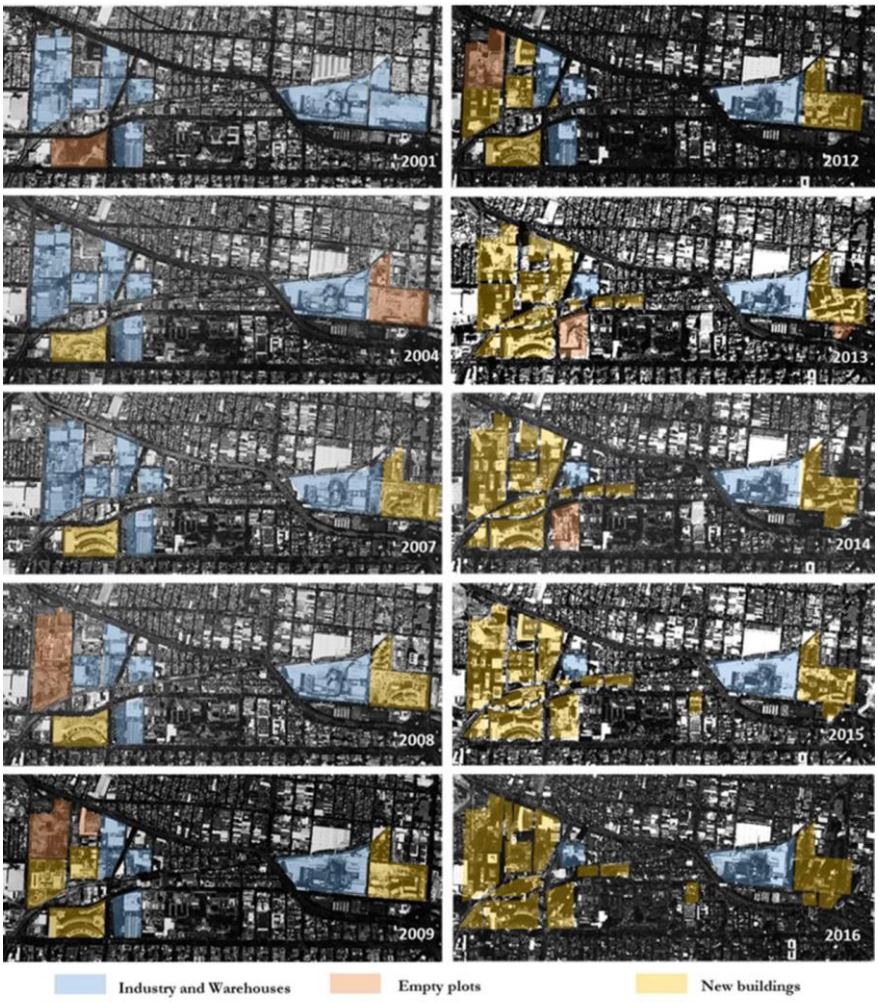

Figure 1. Urban transformations occurred in the XXI century in the territory of Ampliacion Granada (Expansion of Granada Neighborhood) and Granada Neighborhood in the period between 2001 and 2016. Source. Google Earth images from 2001 to 2007. Information from 2008 to 2016 is based on own field survey illustrated on Google Earth maps.

Due to the rapid and disordered growth in some areas of Mexico City, in 2013 the implementation of the standard that presented the redensification was detained due to the abuse of the land use and its changes in the type of housing that should be implemented. However, in that same year the Action through Cooperation System (SAC) was created, which is an instrument to manage and create policies that include public action, the intervention of the State, as well as the private party, that is, the participation of land owner companies to interact with each other in the interest of improving the city for which the Department of Urban Development and Housing (SEDUVI) is responsible.

One of the main characteristics of the area is that at its pace of development not only has housing been activated for elites, but commercial and service activity has also been developed, creating large office buildings or shopping centers with foreign brand stores. It has become common in the area for small shopping centers with convenience stores, mini-supers, restaurants, cafes and bars to be made in the lower part of housing buildings. The main problem was that there were no public spaces. However, far from providing a solution, due to the new constructions trees have also had to be cut down, trees that have been changed for ornamental plants that represent consequences for the environment and a deterioration in life quality. Thus the place only has what are now the public spaces of the 21st century, such as: pocket parks (three on the Cuernavaca Railroad), linear parks (that of the Cuernavaca Railroad) and low bridges (that of San Joaquín at the intersection with Moliere). In contrast with the wide parks and walkways that the Polanco has (see figure 2).

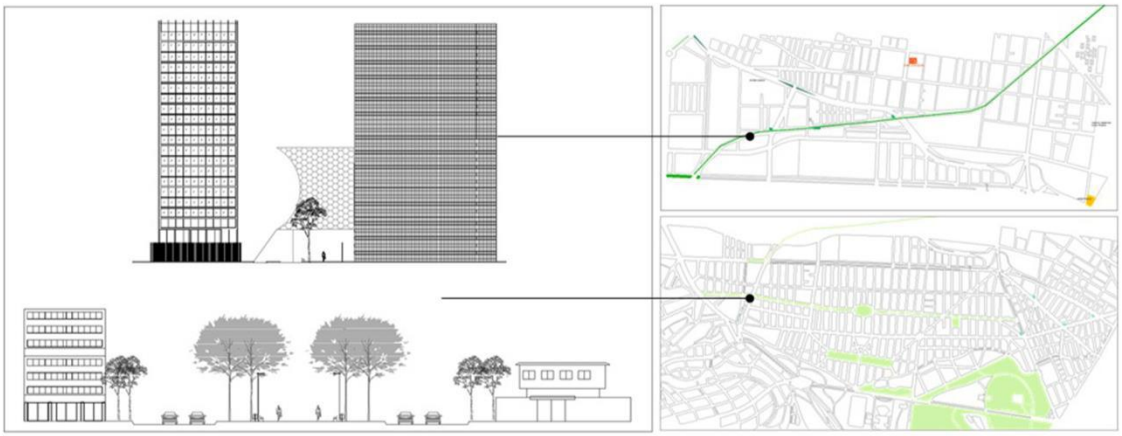

Figure 2. Urban sketches of public spaces in the Neighborhoods of Granada (left at the top) and Polanco (left at the bottom) and their location. Source. Own elaboration.

3 THE QUALITY OF PUBLIC SPACE IN THE 21ST CENTURY

Who builds public space in Mexico City? In Mexico there are various governmental instances responsible for intervening in or making public space, such as: The Department of Urban Development and Housing (SEDUVI), the Public Space Authority (AEP) or the different delegations. However, when the public space shows specific characteristics and values for which it has been cataloged as equity, the instances for intervening in it change, or they are accompanied by certain strict guidelines for their regeneration, such as the INAH, the INBA, the Historical Center Authority or the UNESCO, according to the case. Each one of the aforementioned instances intervenes in public space from different perspectives and with various actors. The Department of urban Development and Housing, for example, is responsible for designing policies applicable to the city, attempting for them to integrate society when acting and interacting with it, so as to transform the city in an inclusive manner. It creates the Programs of Delegations, Partial Programs and the Urban Development Program for the purpose of ordering the city in all its aspects; mobility, public space, housing, urban infrastructure, basic services, always with the idea of improving and positioning it as a safe city.

On the other hand there is the Public Space Authority (AEP), which is a decentralized entity of the SEDUVI. It not only designs policies to apply them to urban space, but also directly intervenes through the design of the space and the contracting and subcontracting of construction and design companies. Some of its programs and projects are: Ecopark, Bajo puentes, Pasos seguros, publicidad exterior, Parques de Bolsillo, Parques lineales, among others. The AEP was created in 2008. It works on the various projects

with different companies, for example: CTS Embarq with the model street, GABANA engineering and GCB Construcciones y servicios for the refurbishment of the street Torcuato Tasso, Proyecsa e Ingenieros, ANACE construcciones, group Q and B and Servicios integrados RUBE for the regeneration of the Alameda Central, Grupo Velasco, JM Constructora, Kassar Construcciones, 128 Arquitectura and Diseño Urbano para Espacios Públicos de Bolsillo, to mention a few.

With respect to the organization of the Historic Center of Mexico City, there is another decentralized entity called the Historic Center Authority, created in 2007, which proposes public policies for integration and promotes the refurbishment of public spaces located in this square. However, there are various actors that participate in the intervention and construction of public space. Even when the aforementioned entities are present, the participation of the citizens is already contemplated in almost the majority. Participating in the modifications of the urban environment means a social commitment more than a political one, but the action surpasses that which is social, political and economic.

Mexico City public space programs of the 21st century. Since the first decade a series of urban projects were implemented by the Department of Urban Development and Housing (SEDUVI) and the Public Space Authority (AEP), to create or intervene in spaces with characteristics of deterioration and abandonment in some cases, including economic activity, which addressed the demands of the inhabitants. On one hand, among the newly created public space projects were those that had a renewed design, with the minimum characteristics necessary to be used and enjoyed, such as: low bridge projects, public pocket parks or bonds of friendship. On the other hand are the projects of improvement and refurbishment of public spaces, in which there are: improvements of spaces with an inclusive design, refurbishment of heritage spaces, pedestrianization and semi-pedestrianization of streets, illuminate your city program, ecoparq and refurbishments of monuments (see Table 1.).

Mexico City public space programs of the 21st century.			
Newly created public space programs		**Public space refurbishment programs**	
Public pocket parks	Design of social interaction, identity and economic activity, in remaining streets or spaces between buildings.	Refurbishment of monuments	Its purpose is to rescue sculptural monuments, integrate them harmoniously into public space and recover them for interaction.
Bonds of friendship	Project in the development of cultural and political relationships between the two countries, through the donation of a sculpture placed in a newly created public space	Improvement of spaces with inclusive design	Improve pedestrian accessibility and the vehicular flow of the avenue that was inadequately designed for the intense pedestrian and automobile capacity.
Underbridges	This seeks to rescue abandoned or under-used public spaces, providing them infrastructure with high technical specifications to address the basic needs of the population, including spaces for commerce.	Illuminate your City Program	This unifies public lighting in primary and secondary roads to prevent the "zebra effect" from being produced, which is a phenomenon that creates variations in the intensity of the lighting of the streets.
Pedestrianization and semi-pedestrianization	Consolidate the pedestrian section of Public space of the Historic Center, promote sustainable mobility, optimize vehicular and pedestrian travel times, provide universal accessibility and optimize the heritage value of the area.	Ecoparq	Recovery of public spaces through the installation of parking meters. This improves the mobility of the city.
Mobile park	Spaces assembled in trailer parks, equipped with game tables for children, a rest area, green areas, with natural vegetation and chairs called Park-es. These are placed in spaces that are generally used as parking lots.	Refurbishment of heritage spaces	This complements the recovery of public spaces of the historic center, and additionally promotes the use of heritage spaces by optimizing their social function and spacing in benefit of the inhabitants.

Table 1 Public space programs activated in the 21st century in Mexico City. Source. SEDUVI

How is the quality of public space measured? With the history of the importance of public space in the City and the influence that urban interventions for luxury housing have had in recent years, as well as the recent public space programs, a Model is created to evaluate the quality of the public space in terms of inclusion or exclusion, measured using the following variables and instruments applied in the area of study of Granada, Ampliación Granada and Polanco (chart 2):

Variable	Instrument
Accessibility The degree or measure in which all people can use a public space	Plan or lines of public transportation (metro, bus, combi), plan for taxi sites, plan for bicycle sites, plan of virtual accessibility and crosstab plan
Balanced Residential Adjacency: The housing around public spaces must be balanced with the rest of the services	Land use plan (diversity of uses), residential land use plan, adjacent housing plan with real heights (2 levels, 3 levels, 5 levels, etc.), closed neighborhoods plan and Aerial Photography
Lighting, Temperature and Humidity: The characteristic of lighting in public spaces can determine their stay in them and their daily hours of life.	Heights of buildings, luminaries, terrestrial photography, aerial photography, lux meter and thermometer
Urban Furniture and Infrastructure: The tangible and quantitative elements that are in the public space	Plans of the public spaces chosen with details of furniture, urban infrastructure plan of the space, adjacent urban infrastructure plan, terrestrial photography and aerial photography
Perception of the Urban Space: How the resident feels about the place. In other words, if it is safe, if they feel included or excluded.	Photography, interviews, graphs and charts
Control: Physical elements of security that control the space, such as cameras, police, surveillance modules, neighborhood watch	Security camera record plan, security module record plan, photographic record of human elements of security and interviews.

Table 2 Variables and instruments for analyzing the quality of the public space. Source. Personal.

For clear representation, the results are shown in a graph in a model of six concentric axes, forming two hexagons on the same axes. The perimeter of the hexagon is the coordinate zero, while the perimeter of the external hexagon is the coordinate +2 (a very inclusive space). The center of either of the two hexagons shall therefore represent a very high exclusion. In other words, the more covered the area of the hexagon is, the more inclusive that public space will be. The model was applied in all spaces of Polanco and las Granadas. The main result was that in the Granadas colonias, although they had the determinants for their space to be recomposed through public spaces as the base of the project, this was done in an isolated manner, causing for the new pocket public spaces and linear parks determined by the economic tendencies to be places of exclusion, due to the fact that, for example:

- A lack of accessibility is seen as there are no free internet networks in the public space and there is no bicycle parking as opposed to Polanco, in which there are. Although there is public transportation near the place, it has become exclusive due to the saturation of its use;
- The residential adjacency is not balanced, for although the land use is variable, the residential complexes in the area are very high, for closed neighborhoods are dominant;
- They show records of temperature, humidity and lighting that are not comfortable in shade, since in some cases they have little exposure to the sun, and the sun directly in others. All of them are highly humid and the records go from the lower to the upper limit, due to their low vegetation and the material of their environment.
- In general their urban furniture and infrastructure is normal, for they have benches. However, they do not have trash bins, much less fountains, sculptures or playgrounds. However, although they do not have their own luminaries, they have exercise machines.
- An urban space is perceived in low conditions for use and enjoyment due to the previous determinants. They feel that it is unsafe and feel excluded from some parts by the physical barriers that are in the place, such as the cyclone wire fencing that divides it.
- In general, personal control systems and surveillance cameras are excessive in some parts (see figure 3).

4 CONCLUSIONS

The implementation of urban phenomenon, such as re-densification and gentrification, must be treated with more care and with plans of action for all. Failure to do so may cause:

A change of identity after a short time, the loss of neighborhood values, the displacement of neighbors, an abstract public space, a collective trademark image, insufficient urban equipment, vanishing of traditional

trade, a lack of roads, scarce and exclusive public spaces, change of land use, excessive trash, among others.

The need to produce and intervene in the public space is going to be determined based on the type of urban growth of the city. In other words, if it is a disordered growth, the functioning of the public space will be directly affected and it will be socially weakened.

Interventions in the city in an unplanned manner can cause problems, for example, of communication in the social and spacial sense, of urban infrastructure and of insufficient public spaces.

The creation and intervention of public spaces in Mexico City of the 21st century have been governed by economic, political and social determinants immersed in a global world in search of publicly owned spaces that have inclusive characteristics.

On the other hand, the production of public spaces in this century has been resulting in residual or nook spaces that have undermined spaces that make them have a struggle between the inclusion-exclusion duality.

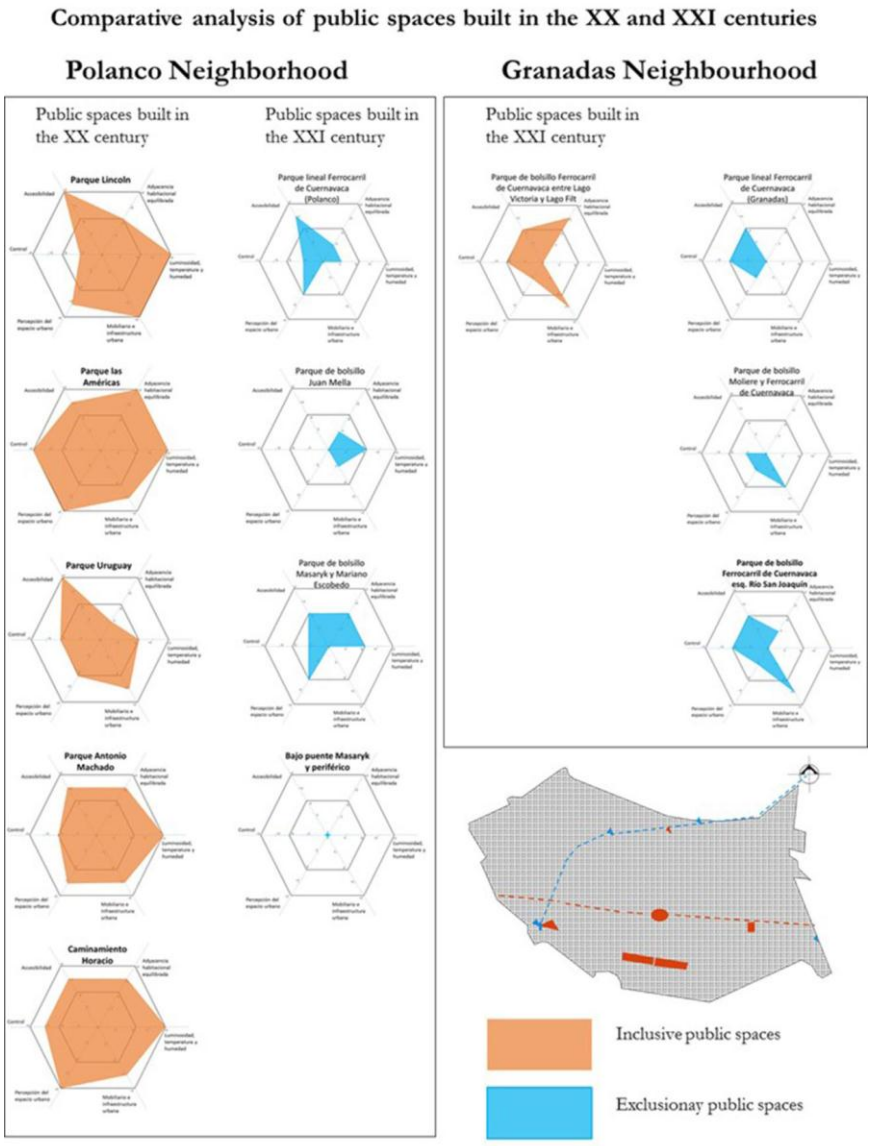

Figure 3. Comparative analysis of inclusion and exclusion characteristics of public spaces of the twentieth and twenty-first century in the Polanco and Granadas neighborhoods. Source: own elaboration.

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ID 1717 | REGENERATION STRATEGY AND EVALUATION OF SHANGHAI HUANGPU RIVER UNDER THE BACKGROUND OF TRANSFORMATION AND DEVELOPMENT

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ABSTRACT: Shanghai, as China's economic, financial, trade center, as well as national historical and cultural city, is undergoing urban transformation, to the global city forward. Shanghai City Master Plan (2016-2040) put forward the "global city - innovation city, eco-city, the city of humanities," the goal. However, with the development of urbanization, Shanghai has entered the stage of inventory development. Connotative development has become Shanghai 's Development Strategy, including innovation dynamics, city vitality, city regeneration, inventory planning, city character. The research object of this article is the regeneration strategy of the Huangpu River area in recent 15 years. Huangpu River is Shanghai's mother river, 61 km from north to south, through the central city of eight districts. The Huangpu River series has a lot of historical features of the city heritage areas, including the Old City, the Bund, Origin of modern industry, Luiiazui modern financial district, the Expo area, the old dockland. Planning area along riversides is about 144 square kilometers. The leading group for the regeneration of the Huangpu River was established In 2002 by Shanghai city government, overall planning and construction. In this article, the policy analysis, planning interpretation, construction implementation and preliminary evaluation of the regeneration will be carried out by field investigation, interviews, analysis and comparison, and data analysis. This article will focus on Fuxing Dockland area. The dockland is located in south of the Bund and east of the old city, representing the modern inland shipping characteristics. It is a continuous evolution of the cultural landscape. The implementation process is analyzed from the aspects of special study, planning and design, key project advancement and overall reform. The implementation results are evaluated from the aspects of functional transformation, building conservation and reconstruction, historical preservation and human settlement improvement. Also discusses the gentrification, authenticity and continuity. Shanghai is China 's fastest region of urbanization process over 90% urbanization rate. The demand for development represents the aspirations of many cities. Shanghai has promulgated a series of regulations, standards, codes to promote urban regeneration. The government-led integration of business and personal strength system represents the local characteristics of Shanghai. New City Agenda in HABITAT Ⅲ said, culture is the key source to what makes cities attractive, creative and sustainable. The urban heritage conservation and the scientific development of city will be taken seriously.

1 URBAN REGENERATION UNDER THE BACKGROUND OF TRANSFORMATION AND DEVELOPMENT

1.1 SHANGHAI UNDERTRANSFORMATION AND DEVELOPMENT

With the significant improvement of Shanghai comprehensive economic strength, industrial restructuring and upgrading speeding up, the Shanghai "four centers" construction promoted economic and social adjustment and transformation of the growing demand. 2011 Shanghai Municipal Committee promulgated the "the twelfth five-year" planning recommendations, clearly put forward "innovation-driven, transformation and development" of the general idea. "Shanghai City Master Plan (2015-2040)" outline the Shanghai city vision, "Shanghai: the pursuit of excellence in the global city, an innovative city, eco-city, humanized city." Urban development goals, the completion of the basic construction of the four centers in 2020, a comprehensive global city, international economic, financial, trade, shipping, science and technology innovation center and international cultural metropolis in 2040. "However, comparing with Paris, New York , Tokyo and other global cities, Shanghai's sustainable development capacity and urban innovation capacity still need to be greatly improved. At the same time, Shanghai is facing the negative growth of planning and constructs land, strictly control constraints of the population, the city put forward the "connotation development" model: the implementation of innovation and inspiration, the stimulation of urban vitality, the promotion of urban renewal, shifting to stock planning, enhancing urban quality and Spirit, leading the regional cooperation.

In this context, in order to improve the city's sustainable development capacity, Shanghai actively explore the “gradual regeneration model” based on the land use to meet the future development of space needs, while conserving and inheriting the diversity of urban culture. In the Shanghai development framework (see Figure 1), population, humanities, space, cultural elements constitute the connotation of the development of global cities.

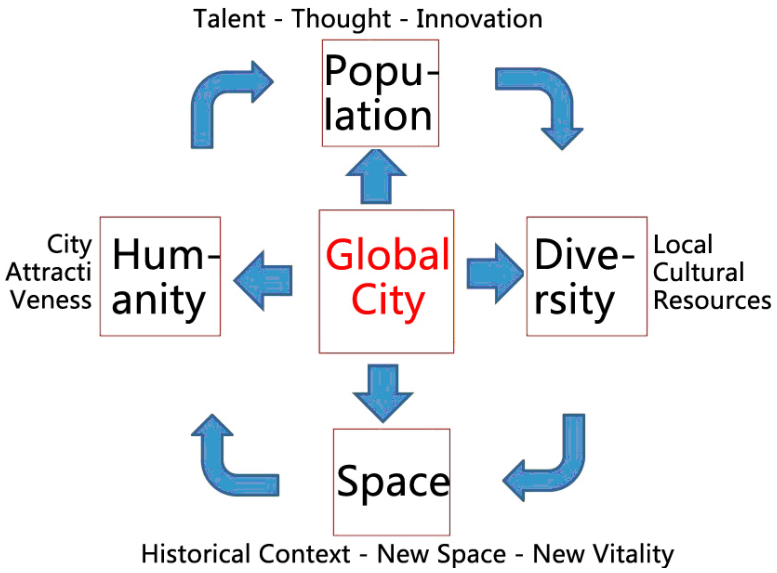

Figure 1 - The Composition of The Elements of The Global City
Source: "Shanghai City Master Plan (2015-2040)" Reports

1.2 REGENERATION OF SHANGHAI CITY

Shanghai's urban regeneration began in the 1980s, with urban housing reform and construction. The 1990s paid more attention to the market value of land and space. After the 21st century, it expanded into the connotative stage by extension, experienced renewal, urban redevelopment and regeneration.

So far, China has not yet a National City renewal, re-development and revival of special laws and regulations. However, some of the city's local regulations have been introduced or to be introduced, such as Shanghai, Shenzhen, Guangzhou and other cities. For example, the "Shanghai Urban Renewal Implementation Measures" was considered in April 2015. The term "urban renewal" refers mainly to the

construction activities of improving the urban spatial form and function of the city's built-up areas, including the improvement of urban functions, the strengthening of urban vitality, the promotion of innovation and development, the strengthening of community services, the improvement of public facilities, To improve the ecological environment, to strengthen the construction of green buildings and ecological blocks; improve the slow line system to facilitate the public life and travel; shaping the city characteristics, the protection of historical and cultural style, improve the urban landscape; improve infrastructure and urban security, To protect the public live and work, as well as the municipal government identified the need to improve the other circumstances. It can be seen that the "urban renewal" referred to in the Shanghai local regulations is close to the connotation of "urban renewal" in Europe and America. This article uses "urban revival", but the local regulations in the "urban renewal" is still using the original term (Renewal).

The scale of planning and construction land should be negative growth, "the transformation of land use mode to reverse the transformation of urban development" requirement, while the face of Shanghai built area of urban energy level is not high, lack of vitality, public space and service facilities are still a large gap, Urban slow-line system facilitation is not high, the city style protection is not enough and so on, urban renewal will become the tight constraints of resources under the conditions of Shanghai city planning the main direction.

2 REGENERATION AND DEVELOPMENT OF HUANGPU RIVERREGION OF BOTH SIDES

2.1 HISTORICAL LAYING PERSPECTIVE OF THE HUANGPURIVER

Almost all the city is the result of complex processes of layering through time. These processes have both contributed to the shaping of the physical landscape inhabited today and also, much more subtly, created an atmosphere of use, a demarcation of physical and social space and an experience of sense of the city .

Shanghai was due to the ports and Huangpu River area is the city's important development axis. For more than 100 years, as the Shanghai economic center, industrial base, energy and supply base, plays a huge role in the city economy and social life. As the "mother river" of Shanghai, the Huangpu River is an important historical fragment of modern Shanghai. is Shanghai's water transport hub; after opening(1943), along the river's financial trade, port transport, modern industry gradually developed; Due to the development of Pudong in the 1990s, Lujiazui area became a financial and trade center, Shanghai landmarks. At the same time, with the transfer of manufacturing to the periphery of the city, the transfer of goods to the deepwater harbor, the function of the Huangpu River gradually is declining.

2.2 15 YEARS OF HUANGPU RIVER REGENERATION AND DEVELOPMENT

In January 2002, Shanghai Municipal Committee and Municipal Government announced the "comprehensive development of Huangpu River waterfront region", the development of Huangpu River waterfront region officially rose to the city's major strategy. The development of the Huangpu River on both sides of the leading group and the Shenjiang River Development and Construction Investment (Group) Co., Ltd. was established, the municipal level of the Huangpu River development and management of the main body and the development of gradually well-organized. The relevant series of research and plan gradually started, e.g. "Huangpu River waterfront region comprehensive development master plan". "Shanghai Huangpu River development and construction management regulations" and other relevant policies focused on the introduction. In the past 15 years, from the municipal level to the district level, the policies and regulations, development plans, technical guidelines and planning & design of the Huangpu River waterfront region have been gradually perfected.

Figure 2 - The Development focusss in Thirteenth Five-Year Plan Source: Thirteenth Five-Year Plan

Policy and development plans for the past 15 years:

- 06/ 2003, "Shanghai Huangpu River development and construction management regulations"
- 03/ 2006, "Eleventh Five-Year Plan of Huangpu River waterfront region" (2006¬
- 2010) Fuxing□Dock□Land□
- 07/2012, "Twelfth Five-Year Plan of Huangpu River waterfront region" (2011¬2015)
- 03/2015 "Three-year Action Plan for Public Space Construction of Huangpu River waterfront region(2015-2017)"
- 11/ 2016, "Thirteenth Five-Year Plan of Huangpu River waterfront region" (2016¬2020)
- 03/2017, "Guidelines for Huangpu River waterfront region of the public space construction &design " Nearly 15 years of master plan and program:
- 2000, "Huangpu River waterfront planning international competition"
- 2002, "Huangpu River waterfront region comprehensive development master plan"
- 2002, "Huangpu River area planning optimization program"
- 2005, the "Huangpu River North extension of regional structural planning"
- 2005, "Huangpu River Southern extension of regional structural planning"
- 2016, "Huangpu River waterfront region of the public space conceptual planning "

Shanghai municipal government to 5 years to do the strategic development and deployment, Huangpu River from the concentration of infrastructure construction period, has made a total of three rounds of development planning. Combing the three rounds of planning, from the planning scope, strategic thinking, the development of key points of view, the Huangpu River region to implement a positive conversion function, stimulate the city vitality, protect the waterfront environment, enhance the quality of public space, the continuation of the historical context of the guiding ideology.

Development Plan	Time period	Planning rang	Strategy	Planning objectives	Development focusss
Eleventh Five-Year Plan of Huangpu River waterfront region	2006-2010	Both sides region between Yangpu Bridge - Lupu Bridge	—	In terms of functions, the initial construction of modern service industry gathering zone; In terms of space landmarks, the initial formation of the Riverside landscape belt; In terms of cultural characteristics, the Chinese and Western cultural characteristics of the bloom.	Expo area; Shiliupou - Dongchang Road area; North Bund - Shanghai Shipyard Surroundings.
Twelfth Five-Year Plan of Huangpu River waterfront region	2011-2015	Wusong mouth to Minpu II bridges between the Huangpu River, planning control area of about 144 square kilometers.	Enhance development; Coordinated development; Compound development; Orderly development; Sharing development; Green development; Continuous development.	Shanghai important core functional area; world - class riverside development zone; public high quality experience area of public activities.	Expo and surrounding; "Bund - Lujiazui - North Bund" area; Xuhui waterfront area.
Thirteenth Five-Year Plan of Huangpu River waterfront region	2016-2020	Wusong mouth to Minpu II bridges between the Huangpu River, planning control area of about 144 square kilometers.	People - oriented, the benefit of the people; Function first, to strengthen co-ordination; According to local conditions, classification promotion;	Significant improvement in public space quality; Infrastructure security gradually improved; Focus area to show functional image.	Huangpu South Bund; Xuhui Riverside; Front beach Expo area; Xin (Hua) Min(Sheng) Yang (Jing); Yangpu Riverside.

Table1 - List of Five-Year Plans of Huangpu River Waterfront Region

2.3 HUANGPU RIVER WATERFRONT REGIONREGENERATION STRATEGY

2.3.1 SUSTAINABLE SOCIO-ECONOMIC OBJECTIVES

Huangpu River waterfront of the regeneration and development is not just urban space, urban spatial structure development, but based on the promotion of urban energy level, promote urban economic development and improve the financial level, while improving people's livelihood, increase employment opportunities and urban economy development closely. In the process of urban regeneration, it aims to achieve urban sustainable development.

2.3.2 REASONABLE SPATIAL DEVELOPMENT STRATEGY

Urban regeneration as an important means of spatial reorganization, provides an opportunity for the reconstruction of urban space structure. There are a lot of functional recession or structural recession areas on both sides of the Huangpu River. From the perspective of economy, when the value of the surrounding land is higher than the value of the region, the necessity of regeneration is produced. From the perspective of the overall structure and function of the city, it is necessary to configure the city's major public service facilities, urban comprehensive functional areas, and generate new urban landmark areas. Such as the Expo area, by virtue of the opportunity to carry out urban renewal, to promote the Shanghai city function transformation and the surrounding area of the function of the upgrade, after the meeting to become a large enterprise global or regional headquarters, international cultural exchange center, cultural and creative base, international tourism exhibition center.

2.3.3 LOCAL CULTURAL DIVERSITY STRATEGY

In the context of globalization, local cultural diversity is the embodiment of the characteristics of the global city, historical resources is an important cornerstone of sustainable development. Huangpu River on both

sides of the rich historical layering, carrying Shanghai since the city since the unique cultural elements: China's first modern shipyard, Shanghai's first power plant, Shanghai's first trade port. Protect the historical resources, to maintain the historical features of the area, heritage local cultural diversity is one of the foundations of regeneration and development.

3 REGENERATION STRATEGY AND IMPLEMENTATION OF THE FUXING DOCK LAND

3.1 BASIC SITUATION OF FUXING DOCK AREA

Shanghai Fuxing dock land is the focus of the development of the Huangpu River waterfront area, from its own historical conditions, functional positioning, features and other aspects of view, the Fuxing dock land has a significant strategic significance. It covers an area of 16.40 hectares. It located in the Huangpu River West Bank, in north of the Bund, west of Shanghai old city, east of the Expo are across Huangpu River. As the premier freight terminal of Shanghai City, the birthplace of Shanghai urban industry and the concentration of historical relics of Shanghai Docks,It is the products of modern development of inland shipping of Shanghai.

After the regional recession of the function in the 1990s, the Fuxing dock land was once a large fruit wholesale market and officially launched to regeneration in 2004.

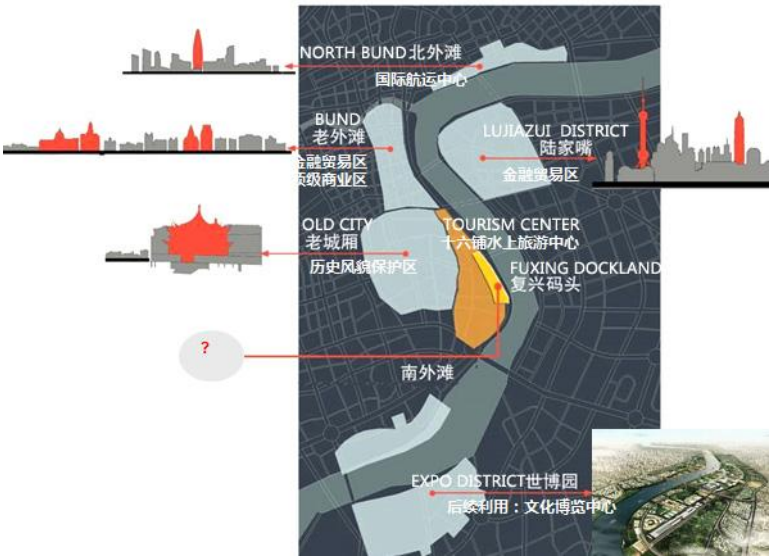

Figure 3 -Location Map of Fuxing Dock Land
Source: Research on Conceptual Planning of Shanghai Fuxing Dock Land

Figure 4 –Historical Pictures in 1990-1930
Source: Research on Conceptual Planning of Shanghai Fuxing Dock Land

3.2 REGENERATION STRATEGY OF FUXING DOCK LAND

3.2.1 REGENERATION BASED ON THE CONSERVATION

Figure 5 –Planning Concept

In order to extend the historical context, to conserve the existing historical buildings, "fish bones" street space, to maintain the atmosphere of the Shanghai dock land, from the creative lead, function upgrades, space combing, the authenticity of place, the plan aims to build the Shanghai characteristic historical area on the basis of integrity construction. From the perspective of space and life regeneration, to achieve protective development intentions.

3.2.2 INDUSTRIAL TRANSFORMATION AND FUNCTION UPGRADING

The terminal area will replace the original function of warehouse and fruit market, retain part of the traditional residential, add boutique hotels, business club, cultural show field, entertainment facilities. The function of the block has a mixed and flexible use, the specific function of the plots is not sure, but some single building with important significance is guided for certain functions. For example, the function of the seven warehouses in riverside is recommended for landscape restaurants, specialty hotels, cultural exhibitions and trade centers, folk art shops, galleries, themed bars and so on.

3.2.3 RESERVATION THE HISTORICAL SPACE ELEMENTS

Waima Road, Dock Street, Riverside Warehouse, river customs Building and other architectural relics, constitute a unique feature of the plot. Planning retains the "bund", "store", "warehouse", "block" as a feature of space elements for the continuation of the place space texture.

Figure 6 –Conservation of Space Texture
Source: Research on Conceptual Planning of Shanghai Fuxing Dock Land

3.2.4 CONTINUATION OF AUTHENTICITY

"Naked City: The Death and Life of Authentic Urban Places" said: "If the city can create a kind of origin of the experience, it is the original. The approach is to conserve the historical buildings and neighborhoods, to encourage the development of small boutiques and coffee shops and to achieve the unique cultural identity of neighborhood community ". Regeneration work start from small plots and construction based on the respect for the site historical information, in a sense, with progressive update content. "True urban places" should be in the context of a reasonable social change dynamic development, rather than being kidnapped for some reason to carry out certain mode and direction of development.

Figure 7 -Masterplan of Fuxing Dock Land
Source: Research on Conceptual Planning of Shanghai Fuxing Dock Land

Figure 8–Space Diagram of Fuxing Dock Land
Source: Research on Conceptual Planning of Shanghai Fuxing Dock Land

3.3 IMPLEMENTATION OF FUXING DOCK LAND PLAN

3.3.1 OVERALL ASSESSMENT OF PLANNING IMPLEMENTATION

The implementation of the regeneration area concentrated in the Riverside warehouse area, Jiqingli lane and along the build group along Zhongshan South Road. The plots in the neighborhood are being updated. The dock land has been initially set up a set of characteristics of commercial, cultural exhibitions, boutique hotels, urban tourism, riverside leisure functional system; It has been initially formed a convenient traffic, secured a strong infrastructure system; It has been initially promoted the riverside ecological environmental restoration and public environment enhancing; It has been the new landscape and new landmarks of the international metropolis, to attract urban public activities.

3.3.2 EFFECT OF THE IMPLEMENTATION OF REGENERATION

1. To conserve the history of buildings and space texture

Construction and implementation conserves the warehouse, traditional residential and other historical buildings, retains the street texture. The historical buildings and the reserved plots were all preserved and conserved, and the original intention of protection was well achieved.

2. Follow the planning guide for functional updates

Riverside warehouse area, Jiqingli lane well meet the planning requirements in the functional guide. 1,2,3 old warehouse along Huangpu River transformed into "Wofu 1846", features a unique bar, cafes, theme restaurants, high profile restaurants, garden clubs and so on. No. 1warehouse is for the boutique club, No. 2 warehouse is for the music bar, No. 3 warehouse is for the whirlpool culture theme area. Jiqingli neighborhood composed of more than 20 buildings was renewed overall for the "old dock land creative park" by combination of creative office, commercial and leisure creative park. Built as a boutique hotel, music bar, senior clubs, high-end restaurants in the gathering place, the old dock land becomes a new landmark.

3. Create the Shanghai dock style area

Fuxing dock land has become a rich Shanghai dock style fashion landmark. City Music Week, Creative Market, International Beer Festival and other city festivals gathered a lot of popularity, creating a community atmosphere.

Figure 9 –photo After the implementation
Source: http://blog.sina.com.cn/s/blog_770136e401016n2n.html

Note: " Research on Conceptual Planning of Shanghai Fuxing Dock Land " is planned by the Shanghai Tongji Urban Planning and Design Institute. The author is one of the main members of the project. Thank the project team and partners.

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ID 1728 | WINTER BUZZ AND SUMMER SIESTA IN ZAGREB - PERCEPTUAL DIFFERENCES IN SOUNDSCAPE OF THE SEQUENCE OF URBAN OPEN SPACES

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1 INTRODUCTION

What makes a good public space? There are many answers to this question, but no definite ones. This ongoing research focuses on perceptual differences within sequences of urban open spaces in the historical city centres of Zagreb, in Croatia, and Sheffield, in the United Kingdom, in the hope of providing some new insights. A harmonious historical setting is perhaps one of the most recognisable visual factors,

while soundscape is one of the most elusive. The former can be protected by law as cultural heritage, but the latter changes according to activities and weather conditions, regular or irregular daily or weekly rhythms, or even seasons. Yet both contribute to personal assessments of comfort in public space and in the end, directly to the quality of city life (Carr et al, 1992).

Both the chosen locations were recognised as containing sequences of acoustically specific urban open spaces, with different visual presence of historical elements. Studying their perceptual differences and similarities may lead to a better understanding of the importance that soundscape and the authenticity of a heritage setting have in the management and enhancement of urban open spaces.

The paper focuses on the sequence in Zagreb known as the Green Horseshoe. It consists of seven squares and one park of approximately the same sizes and shapes, with similar traffic regulation, but different ambiences in their central parts, due to different types of foliage, pavilions and activities. No square on its own conveys a particular aural experience, but in a sequence, they are worth investigating, as the fact that they are nearly the same shape and size eliminates the influence of these factors during comparison. The visual and acoustic properties differ from one square to the next, like the rooms within a Baroque enfilade from the salon to the boudoir – from the square housing the opera building to the Botanical Gardens. The complex was built in the late nineteenth and early twentieth centuries. Today, it forms a vital part of Zagreb's city centre, where the historical setting has been well preserved (Knežević, 1996). However, not all the urban open spaces in the sequence are equally important or adequately used in terms of their potential.

The research is primarily concerned with visual and aural perceptions and their congruence. Methodologically, it is based on onsite recordings, listening experiments held in laboratory conditions and software analyses of objective acoustic parameters. Monitoring was conducted in December 2013, February 2014, June 2014 and December 2016 in Zagreb; and in September 2016 and May 2017 in Sheffield. Monitoring enabled comparisons of the effect the different uses of the spaces through the seasons and subsequent changes in the soundscape have on the overall experience. This included temporary winter commercial activities during Zagreb's five-week Advent and Christmas Fair.

This research is part of the research project Heritage Urbanism – Urban and Spatial Models for Revival and Enhancement of Cultural Heritage (HRZZ 2032), funded by the Croatian Science Foundation and conducted at the Faculty of Architecture, University of Zagreb.

2 SEQUENCES OF URBAN OPEN SPACES 2.1 SOUNDSCAPE ASSESSMENT OF URBAN OPEN SPACES

Soundscape research started in the second half of the 20th century and has grown significantly in the last fifteen years. It is mainly concerned with finding holistic answers to noise mitigation. Noise has a negative effect on health and the overall quality of city life, and it affects people in enclosed and open spaces. The definition of noise is inherently subjective, so both qualitative and quantitative approaches are needed. Noise propagation models do not provide sufficient information for assessing acoustic comfort, which motivates ongoing research into models for soundscape quality prediction which could be implemented into urban planning and design (Aletta and Kang, 2016).

Standardisation of soundscape research is one of the most recent advances. It includes the descriptors for soundscape assessment defined by Axelsson et al (2010), along with the standardized soundscape assessment protocol and adoption of the ISO soundscape standard (Kang and Schulte Fortkamp, 2016).

The concept of soundscape is based on interaction between sounds, listeners and the environment (Truax, 2001). The acoustic features of urban open spaces in a strict sense are an important factor in the perception of urban soundscape (Maag, 2013). Urban morphology has a strong influence on sound propagation (Kang, 2007), while visual features influence both aural and visual perceptions (Marry, 2010).

Since every urban open space is experienced within its context, it is argued that the analysis of the sequences of urban open spaces is vital to assessment. The soundwalk is a soundscape research method that allows assessments of different ambiences within urban open spaces to be captured (Truax, 1999). Four major soundscape assessment methods have been recognised: soundwalks, laboratory experiments,

narrative interviews, and behavioural observations (Aletta et al, 2016). In order to enable comparison of the monitored locations, a hybrid method of soundwalks and laboratory experiment was used, by conducting a listening experiment based on the concept of a spatial sequence.

2.2 SEQUENCES OF URBAN OPEN SPACES IN ZAGREB AND SHEFFIELD

Both chosen sequences contain several squares, but are morphologically completely different. Both include a path leading from the square in front of a railway station to a central pedestrian zone. So both act as 'city entrances'. In Zagreb, the eastern and western parts of the horseshoe were planned as representative city axes – the eastern one forms part of the city's central axis, a straight line of almost 6.3 km, included in most 20th century urban plans, while the western one forms part of the axis connecting many buildings belonging to the University of Zagreb along 1.75 km. In 1913, it was planned to locate arts and cultural facilities in the eastern axis and science and education ones in the western axis (Bojanić Obad Šćitaroci and Obad Šćitaroci, 2004). The Sheffield sequence does not have these characteristics. It starts at the railway station at the eastern edge of the city centre and ends in a park in the west. The Zagreb sequence is more like a loop, with the station is positioned at the south eastern joint on the central axis. So the Horseshoe is morphologically similar to the grander sequence of public spaces around the Ringstrasse in Vienna. The squares in the Horseshoe are directly physically connected, square, in shape, and about 1.7 hectares in size. The squares in Sheffield's Gold Route are sometimes adjacent (Millennium Square and Peace Gardens) and at other times physically separated by up to 350 metres (Devonshire Green and Barker's Pool), and they differ in shape and size (from Leopold Square at 0.1 hectares to Devonshire Green at 1.4 hectares). However, it is the scale of the imaginary line connecting the squares that makes them comparable. Both are roughly 1.5 km long (the sequence in Zagreb is approximately 1.65 km and the one in Sheffield approximately 1.45 km), so they can be walked in thirty minutes (Figure 1, Figure 2). This study was motivated by key differences in the authenticity of the historical settings (high in Zagreb, in terms of surrounding buildings and urban and landscape design elements, and low in Sheffield, where only a few historical buildings surround a recently built public space) and soundscape features (the high presence of traffic noise in Zagreb, and low noise in Sheffield, with specially designed sound sources – water fountains). It is expected that that the comparison will determine the influence which different soundscape factors have on the quality of urban open spaces in relation to visual factors concerning cultural heritage issues. This paper, however, only focuses on the soundscape factors analysed in Zagreb, and the first deductions made from the different recordings made in summer 2014 and winter 2016 and the listening experiments conducted in winter 2014 and spring 2017.

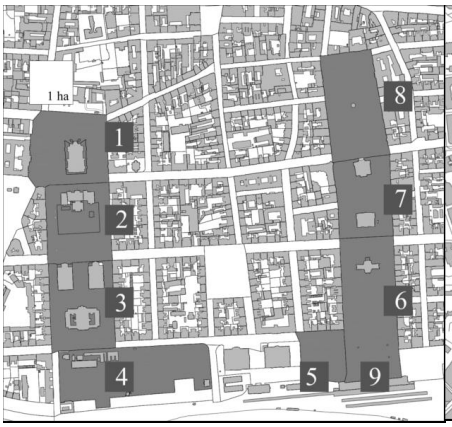

Figure 1 (left) – Map showing the analysed sequence of urban open spaces in Zagreb: 1) Marshall Tito Square, 2) Mažuranić Square, 3) Marko Marulić Square, 4) Botanical Gardens, 5) Ante Starčević Square, 6) King Tomislav Square, 7) Strossmeyer Square, 8) Nikola Šubić Zrinski Square, 9) Railway station.

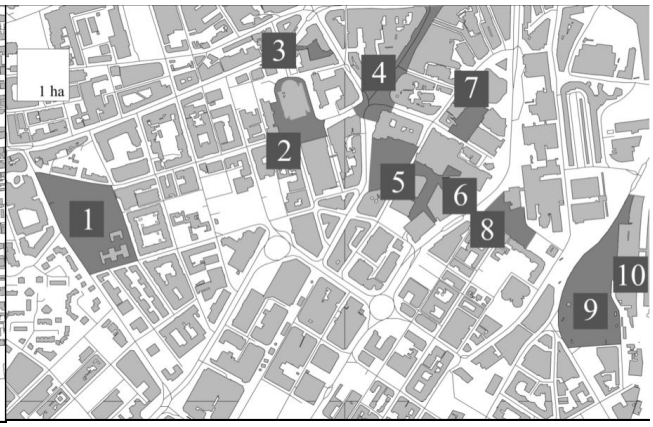

Figure 2 (right) – Map showing the Gold Route in Sheffield: 1) Devonshire Green, 2) Barker's Pool,
3) Leopold Square, 4) Fargate, 5) Peace Gardens, 6) Millenium Square, 7) Tudor Square, 8) Hallam Square, 9) Sheaf Square, 10) Railway station.

It is also important to mention differences in typology, since the functional-spatial type of urban open space influences planning and design, the way it is used, and how it is finally experienced. Bearing in mind the areas covered in foliage, hence the name Green Horseshoe, the spaces in Zagreb could well be called parks instead of squares, especially when compared to Peace Gardens in Sheffield. The presence and position of adjacent public buildings has perhaps contributed to this typological expression.

3 THE CASE STUDY METHOD

3.1 THE CASE STUDY SITE

This unique sequence of seven squares and one park is variously known as the Green Horseshoe, Park Horseshoe, Lenuci's Horseshoe or Zagreb Horseshoe. Its shape was defined by the late 19th century orthogonal grid of Zagreb extending from the main square and Ilica Street in the north to the railway line in the south. The horseshoe was the result of keeping a linear sequence of blocks for the purpose. They form an almost continuous urban open space intersecting with the street grid. The sequence is discontinued only in the southern part between the Botanical Gardens and Ante Starčević Square.

Each square has one or more public buildings and therefore contributes to the city's social life. They include the Croatian National Theatre, the Academy of Drama, the State Archives, the Importanne shopping centre underneath Ante Starčević Square, the Arts Pavilion, and the Academy of Sciences and Arts. The setting also includes the University of Zagreb's main building, the Academy of Music, the Museum of Arts and Crafts, the Museum of Ethnology, the Ministry of Culture, the main railway station, Hotel Esplanade, Hotel Palace and the Supreme Court.

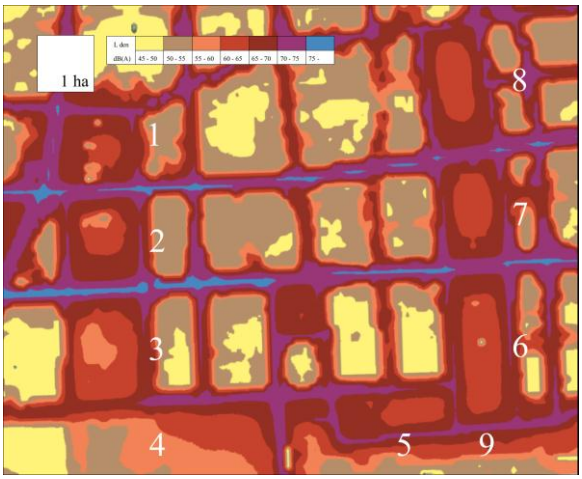

Figure 3 – Noise propagation model for the analysed location in Zagreb – road traffic (Lden). The sound pressure levels measured in situ correspond with the expected values shown in the model. (Retrieved May 30, 2017, from https://geoportal.zagreb.hr/Karta)

Implementing the horseshoe shape in the grid of Zagreb's 19th century centre was not integrally envisaged (Bojanić Obad Šćitaroci and Obad Šćitaroci, 2004). It came about as a result of partial plans and clever ad hoc design solutions by the engineer Milan Lenuci, along with the unfolding of historical circumstances (Knežević, 1996).

Parks in 19th -century town centres reveal a culture of providing a complete sensory experience of public space, and were planned to provide relaxation, peace, and relief from the psychological effects of the hectic city atmosphere (Hauser, 2008). These characteristics could be considered as the design requirements for the Zagreb sequence. The noise map model shown in Figure 3 suggests that the sequence's soundscape has surrendered to the contemporary traffic.

However, the historical authenticity of its urban and landscape design elements and surrounding buildings contribute greatly to its ambient value. The Horseshoe is protected by legislation and urban plans, including its historical mid-19th and early 20th-century strata.

3.2 THE SEQUENCE

Like in a Baroque mansion, where one room follows another, varying in size, shape and acoustical properties along the enfilade, so one square follows another along Zagreb's Horseshoe. From the mansion entrance, the sequence begins with a marble hall, followed by a large dining-room, a salon with silk-

panelled walls suitable for chamber music, then a smaller room, and ends in a satin-lined boudoir suitable for whispered trysts (Rasmusen, 1962).

The west wing of the sequence begins a similar gradation from the north with Marshall Tito Square, designed to impress with the dominant central building of the Croatian National Theatre and surrounding flower-beds. During the day, teenagers and students gather and roller-skate, while it becomes the theatre forecourt in the evening. To the south lies Mažuranić Square, mostly covered in chestnut canopies providing shade for children's playgrounds. It is followed by Marko Marulić Square.

Between the western and eastern arms lie the Botanical Gardens, next to the railway line which marked the border of the 19th -century city and stills forms a clear morphological break between the block grid and the unfinished pattern planned and built in the 20th century south of the railway line.

The eastern arm begins in the south as the entrance to the city from the railway station, with vistas opening onto King Tomislav Square and its deep aerial perspective to the north and Ante Starčević Square to the west. Strossmeyer Square follows behind the Arts Pavilion building, hidden behind the former Chemical Laboratory, with bushes and trees designed in the 1938 by the landscape architect Ciril Jeglič. The eastern arm ends with the oldest square in this sequence, Nikola Šubić Zrinski Square, mostly built between 1870 and 1893, surrounded by public buildings, shops and restaurants, and largely covered by plane-trees which flank its two symmetrical orthogonal axes and frame its centre (Bojanić Obad Šćitaroci and Obad Šćitaroci, 2004).

3.3 COMMERCIAL ACTIVITIES IN DECEMBER 2016

Commercial activities in Zagreb's city centre during festive periods have been organized regularly by the Zagreb Tourist Board since 2002, and include many souvenir and food stalls. Since 2011, they have also appeared on some parts of the Horseshoe (Pauček Šljivak, 2016). Through advertising abroad, they have become a significant tourist attraction (Koretić, 2017). The entire eastern arm of the Horseshoe was covered in souvenir and food stalls, stages equipped with amplification systems on Nikola Šubić Zrinski Square and Strossmeyer Square, and a temporary ice-skating rink on King Tomislav Square.

3.4 MONITORING AND FIELD RECORDING

Monitoring of the locations was conducted in December 2013, February 2014, June 2014 and December 2016. It included recording visual and aural data at selected measurement points in the early afternoon on working days. Field recordings were used as representative samples for listening experiments and software analyses.

At each measurement point, as shown in Figure 4, aural data were recorded using an omnidirectional microphone and a first-order Ambisonics microphone. Ten-minute periods were recorded to obtain a representative sample, including various combinations in the exchange of dynamics according to traffic and the use of the space.

Visual data collection was performed by taking panoramic photos from the exact position of the microphones. In 2016, spherical panoramas were also taken to enable future experiments based on the partial virtual reality principle.

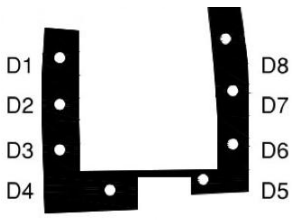

Figure 4 – Position of measurement points: D1 - Marshall Tito Square, D2 Mažuranić Square, 3) Marko Marulić Square, 4) Botanical Gardens, 5) Ante Starčević Square, 6) King Tomislav Square, 7) Strossmeyer Square, 8) Nikola Šubić Zrinski Square (Oberman, 2015)

3.5 TWO LISTENING EXPERIMENTS

Two listening experiments were conducted; the first in December 2014 (35 participants, average age 27) and the second in March 2017 (19 participants, average age 30). Both were conducted in the ambisonics-equipped auralisation laboratory at the Faculty of Electrical Engineering and Computing at the University of Zagreb. In order to isolate the influence soundscape has on overall perception and perception of visual features, identical panoramic photographs were used during both experiments. The first experiment was based on recordings made in June 2014, and the second on those made in December 2016.

In both listening experiments, the participants completed a questionnaire for each square based on the Swedish Soundscape-Quality Protocol, to provide information regarding the presence of certain types of sound sources (traffic noise, other noise, human sounds and natural sounds), soundscape perception descriptors, the quality of visual features and the correspondence between the aural and visual experiences. The results are shown in Figure 5.

4 CASE STUDY ANALYSIS

It was expected that the warm, sunny weather in June 2014 would result in a lively, vibrant soundscape, due to the many tourists who have been visiting Zagreb in the summer since Croatia joined the European Union in 2013 (Pauček Šljivak, 2016). It also turned out that the commercial events organized by the Zagreb Tourist Board during December and January transformed otherwise unused open places (due to cold weather) into busy ones.

The results of the experiment conducted in 2014 indicated several issues regarding the great discrepancy between visual and aural features, due to:

Figure 5 – Soundscape assessment results for (from top to bottom): dominance of sound source types in June 2014 and December 2016, soundscape perception values for June 2014 and December 2016, correspondence between visual features and soundscape appropriateness in June 2014 and December 2016 (Oberman, 2015)

- lack of human and natural sounds, and the much more noticeable presence of traffic noise at King Tomislav Square and Marko Marulić Square.
- the overpowering, unexpectedly high level of traffic noise in Ante Starčević Square and the Botanical Gardens, due to the adjacent railway which is not perceptible visually.

The results of the 2014 experiment also indicated the following positive assessments of this sequence:

- excellent congrence between visual and aural features at Strossmeyer Square
- excellent results of the assessment of visual features at Nikola Šubić Zrinski Square.

These made the temporary festive activities even more interesting, since they significantly changed three of the ambiences by adding amplified popular music, stages and stands, attracting large crowds. As Ante Starčević Square, the Botanical Gardens and the western arm of the Horseshoe were not part of these planned events, the assessment relating to them did not change significantly in the 2017 experiment. However, the change in soundscape caused the following differences in perception assessment:

- much better assessment of visual features and audiovisual congruence at King Tomislav Square

- Worse audiovisual congruence and assessment of visual features at Strossmeyer Square

The following are further discussed to illustrate the differences analysed: Strossmeyer Square, King Tomislav Square and Marko Marulić Square.

4.1 STROSSMEYER SQUARE

This square was assessed as the most audiovisually congruent in the first experiment. The central part is shielded from traffic noise to the north and south by the two buildings of the Croatian Academy of Sciences and Arts, while dense trees and bushes surround it visually to the east and west. The summer recording captured prominent human and natural sounds, and the soundscape was considered calm and pleasant. The addition of loud commercial activities and amplified music in the winter recordings shifted the assessment towards less congruent.

4.2 KING TOMISLAV SQUARE

The grand vistas from the railway station over the whole city to the north, in a deep perspective with the overlapping planes (from front to back) of the monument, pavilion, trees in neighbouring Strossmeyer Square, the cathedral spires and Mt. Medvednica in the distance, are well-known features of this square. They were deliberately accentuated, since the central part is approximately 1.5 m lower than the surrounding streets, pavements and buildings. This makes the pavilion on the north of the square seem taller and the perspective deeper. However, it also means that the ears of people walking in the square are at road level. The design of this urban open space is dominantly visual.

The square was assessed ambiguously and in complete discrepancy with its representative visual features during the first experiment, because traffic noise was the prevailing soundscape feature. This and the lack of human activities, meant it was assessed as less audiovisually congruent. The addition of features such as a temporary ice-skating rink and amplified music shifted the assessment towards more congruent and improved the assessment of visual features.

4.3 MARKO MARULIĆ SQUARE

The 2014 summer recordings of this square were sonically similar to King Tomislav Square, as were the assessments. Both King Tomislav Square and Marko Marulić Square are flanked on the east and west sides by residential buildings. Visually and spatially, however, they differ. Marko Marulić Square is less

imposing, despite the former National Library building, and its vistas are more enclosed. No commercial activities have been conducted there by the Zagreb Tourist Board. Although it proved to be characterised by the lowest sound pressure levels within the sequence, assessments were similar during both experiments: mostly monotonous and uneventful, audiovisually incongruent, and amongst the less pleasant places in the sequence.

Figure 6 – King Tomislav Square in June 2014 (above) (Oberman, 2015) and December 2016 (below)

Figure 7 –Marko Marulić Square in June 2014 (above) (Oberman, 2015) and in December 2016 (below)

The square changed its character when the National Library building became the State Archives in 1990s. Although the land use and academic character of the square have remained unchanged since 1910, the perception of it has changed drastically as the public space has become underused.

5 CONCLUDING REMARKS

This research report was motivated by impressions of the Advent in Zagreb Christmas Fair, which in December 2016 attracted more visitors than in previous years, and animated public spaces in Zagreb for five weeks in an unprecedented way.

At the local, site-specific level, the analyses showed that not all parts of the sequence were equally congruent, as some squares were underused by the public. The events organised in the eastern arm tended to exaggerate the contrast. Although there was no significant difference in average sound pressure levels, there was a high presence of traffic sounds throughout, and a significant difference in the frequency of sonic events of other sounds, such as people and music, was noticed. The temporary transformations have not changed how all the locations are experienced for the better. In the squares that were positively assessed before the introduction of commercial activities, the change was not great. But in the squares with poorly and/or ambiguously assessed soundscapes, temporary features such as the ice-skating rink and adjacent pop-up restaurants led to more positive assessments.

The effect of adding temporary commercial urban activities to public spaces characterized by low audiovisual congruence provided several insights which may be valuable for soundscape design. Added sounds changed the dominant perception descriptors, and also influenced assessments of visual features and congruence. Finally, it was not the weather conditions, but planned activities and advertising that contributed to more intense use.

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T05 | GREEN INFRASTRUCTURES: FOSTERING DIALOGUE ACROSS SCALES AND POLICIES

CO-CHAIRS: ANNA M. HERSPERGER; STEPHAN PAULEIT; ISABEL LOUPA RAMOS

Green infrastructure principally refers to a multifunctional network of healthy ecosystems and serves the interests of both people and nature. We strongly believe that in the light of the implementation of the EU green infrastructure strategy (European Commission 2013) this is a relevant topic to be discussed amongst the European Planning community at the AESOP conference in Lisbon 2017 in order to foster the development of approaches and tools towards its implementation.

It is widely acknowledged in academia and practice in Europe and beyond that green infrastructure should be designed and managed as a multifunctional resource capable of delivering a wide range of benefits to humans and ecosystems, such as flood control, climate mitigation, biodiversity conservation, production of renewable energy, enhancing identity, cultural values and resilience etc. (see e.g. the project Green Surge in the 7th Framework program). Building blocks of green infrastructure are natural and semi natural areas, features and green spaces ranging from large wilderness areas to green roofs in urban environments. Green infrastructure is thus connected to many policy domains such as agriculture, forestry, nature, water, transport, and disaster prevention. Spatial planning as a part of public policy can provide an overall framework and individual methods and tools required for a successful implementation and maintenance of a green infrastructure from local to EU-scales. Spatial planning seems best suited to ensure the necessary coordination across spatial scales and policy sectors, to facilitate the adaption of spatial concepts to real landscapes and to include the relevant actors.

Thus a session on green infrastructure provides a great opportunity to critically discuss current research and praxis on the planning and implementation of green infrastructure and explore ideas of how to progress on these issues. The session will particularly explore green infrastructure planning from rural to peri-urban and urban areas. Following, a preliminary list of potential questions and issues to be explored in a session:

What is the status of green infrastructure planning and implementation in Europe? What are achievements and good practice? Where are the shortcomings?
How can spatial concepts for green infrastructure be developed and operationalized in the context of spatial planning from European to local scale?
How can relevant sectoral planning in e.g. regarding flood management, climate change and biodiversity and cultural heritage conservation be integrated into an overall green infrastructure strategy to maximize to provision of ecosystem services?
Which governance regimes are suited to ensure that green infrastructure, once in place, can persist long-term?
How can the maintenance of green infrastructure be financed benefitting from the integration of sectoral policies?
How do people perceive and value green infrastructure and what do they expect from green infrastructure planning?

ID 1339 | GREEN SPACE SYSTEM PLANNING BASED ON THE GREEN INFRASTRUCTURE - A CASE STUDY OF JI´AN, CHINA

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1 LIMITATIONS OF CURRENT GREEN SPACE SYSTEM PLANNING IN CHINA

With the rapid promotion of China's urbanization, problems of rapid urbanization gradually threaten the healthy and sustainable development of the city. The theory and method of the traditional green space system planning is difficult to meet the basic requirement for modern cities, which embodies in: 1) Evaluates urban green space system planning and construction of urban green space by the green index, resulting in result in low benefit of many urban green space system planning; 2) Planning is mainly confined to the built-up area, and lack of consideration on the regional ecological integrity and the relationship between green spaces inside and outside the city. The green space system planning within the region is difficult to implement; 3) Lacks of mechanism to promote the effective participation of multi-subject. Planning Text often one-sided emphasizes on the harmony between human and nature, but lacks of the powerful means of space construction; 4) Green spaces and other construction sites are placed together and isolated in the city, and the result is that green spaces have been eroded by construction sites.

Therefore, the green space system planning in the new period must break through the limitations of the traditional green space system planning. The layout of the green space system must be based on the principles of Urban and Rural planning and ecological construction, and consider the green spaces within and outside the city integrated, systematic and ecological. This requires planning workers not only to consider problems with macroscopic spatial and temporal scale, but also implement specific work of meso and micro level. We should fully grasp the structure and function, form and elements of green space in a specific urban and rural environment, to make the artificial environment and the natural environment to form a coordinated system.

2 THE CONCEPT AND PLANNING METHOD OF GREEN INFRASTRUCTURE

2.1 CONCEPT

The concept of Green Infrastructure was proposed against the background of ecological destruction, environmental control and improvement brought by the industrial revolutions in western countries, as the requirement of modern ecological civilization and sustainable social development. Green Infrastructure (GI) was first defined in the U.S. in 1999, "Green Infrastructure is a national natural life support system, and a correlated natural ecological network (Williamson, 2003)". It was defined as one of the key strategies for achieving sustainable development objectives in the U.S., and its significance was promoted to the national natural life support system—a land and water protection network supports local species, maintains natural ecological processes, preserves air and water resources, and devotes to improvement of community, residents' health and life quality (Benedict and Mcmahon, 2001). In the past decade, concept and relevant practices of Green Infrastructure have gained popularity fast in the United States and Europe[1].

The ultimate goal of GI is to achieve the true integration of urban and rural green network, to integrate the city into nature, which coincides with the requirements of urban and rural planning and ecological civilization construction in China. Therefore, the construction of GI is an effective means to improve the living environment and improve the ecological quality of the city. Through the construction of the GI network, the green spaces can be promoted to the level of the urban infrastructure, to ensure the flexibility and priority of the green land boundary. On this basis, it can form a green space systemwith complete function (Tab.1).

Classification	Sub-classification	Type
Green infrastructure	Natural Semi-natural Artificial	Forest, marsh, water such as river and reservoir Orchard and cropland Landscape garden such as park, roadside garden
Gray infrastructure		Built-up land, involving residential, industrial, commercial and public facilities land Unused land, where all land covers have been cleared for development

Table 1 - Classification system of urban infrastructures

2.2 CONSTITUTION

Green infrastructure's components include a variety of natural and restored ecosystem and landscapes features that lead to a system known as "Hubs" and "Links"(Fig.1). Hubs anchor Green Infrastructure networks, providing origins and destination for the wildlife and ecological processes moving to or through them. Meanwhile, links are the connecting tying the system together and enabling green infrastructure network to work. Sites are also a type of green infrastructure network. Although the scale of sites are much smaller than hubs, and they are not necessarily connected with the regional protection system or the whole network, but are also important parts of green infrastructure.

On this basis, green infrastructure can develop into a more integrated network, including open space, low impact traffic, water, biological habitat and metabolism and so on. At the same time, GI can be extended to a social network which composed of residents, social organizations, green activities and practical projects.

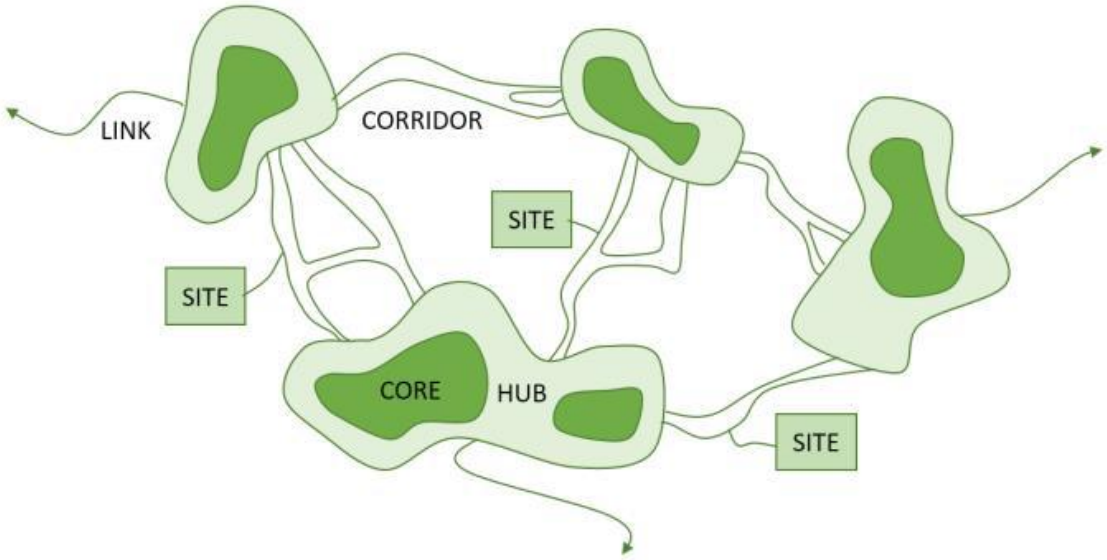

Figure 1 - Composition of GI System

2.3 PLANNING METHOD OF GREEN INFRASTRUCTURE NETWORK

2.3.1 PLANNING PROCESS

Up to now, a lot of research and practice on GI have been done in many areas, through summarizing the existing outstanding cases, the planning step green infrastructure is divided into the following phases: 1) Set goals: determine the specific objectives on the basis of the existing planning, the interests of the main views, urban positioning and protection objectives; 2) Collect data: collect the basic information of the research area, especially the land use data, which is the most important data source of GI; 3) Analysis and evaluation: analysis and evaluation of land use types that may be used as a component of green infrastructure by overlay analysis or other methods. It's a key step to construct the GI system; 4) Determine factors: according to the characteristics of each factor, the hubs, links and sites of the green infrastructure in the research area are determined on the basis of analysis and evaluation, and then

determine the overall spatial pattern of GI; 5) Construct GI priority protection system: take the green infrastructure priority protection system as the basis, and then comprehensive factors such as urban and rural layout, strategic focus, the status quo of land use, historical landscape, per capita green space and green space accessibility and so on to modified the GI priority protection system(Fig.2).

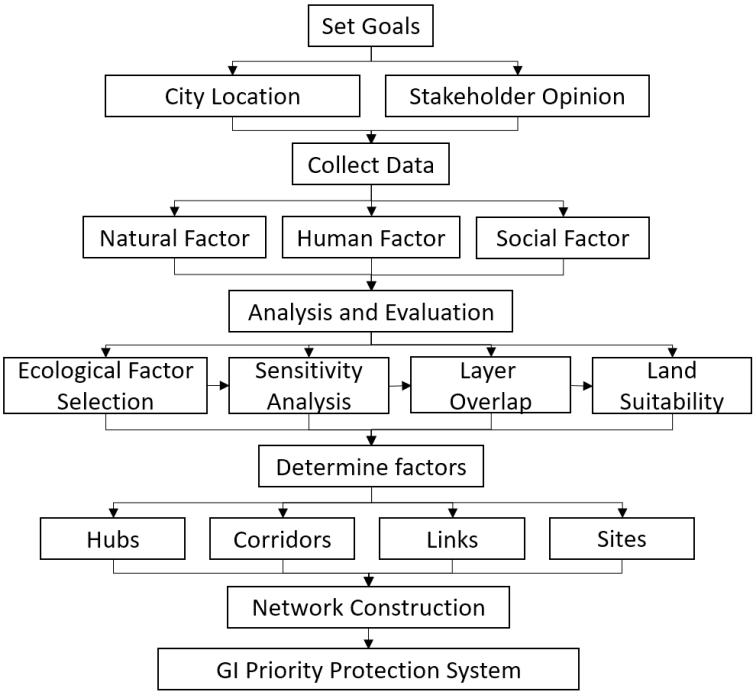

Figure 2 - The General Process of Green Infrastructure Planning

2.3.2 TECHNICAL MEANS

Superposition analysis method based on vertical ecological process[2]: process the basic data by using GIS and RS technology, and evaluate of ecological sensitivity in the study area by using the superposition method of vertical ecological process of McHarg. After the superposition of the influencing factors, the sensitivity level of each unit is divided, and the most sensitive landscape unit is the hubs or the source patches.

Spatial analysis method is based on horizontal ecological process: the minimum cost model is used to determine the location and pattern of the corridors. The minimum cost path does not necessarily mean that the species will use the corridor when moving between habitats, but should be considered as a potential path to reduce the cost of liquidity. Its meaning mainly refers to the potential ecological corridor is the lowest cost path. Through the resistance of the various factors on the horizontal movement of animals and plants, it's mainly to establish the resistance surface, using the minimum cost model to calculate the minimum cost path from the "centers" to the "hubs".

In addition, there are two kinds of methods, which are based on the graph theory and the analysis of morphological spatial pattern. But in this paper, we mainly use two methods: ecological superposition method and minimum cost model.

3 CASE STUDY OF JI'AN

3.1 REGIONAL OVERVIEW

The planning area is located on the west side of downtown Ji'an, Jiangxi, with a total area of 5.19 square kilometers. Planning area has obvious traffic advantage. After the completion of the Ji'an high-speed railway station, will further strengthen the central city of Ji'an in the central position of Jitai town group (Fig.3).

The planning area has the high terrain in north and south, and is low in the middle. Water runoff is from east to west, and the highest point of the terrain reaches 95.9m, to show a form of low hill crowded (Fig.4). The destruction of ecological environment is small, and the natural vegetation protection is good. In recent years, around the orientation of "Luling excelllent in culture, Ji'an famous for landscape", Ji'an vigorously promotes the construction of theme parks, ecological corridors and country parkswhich possess high quality. In the past few years, Ji'an has been named the China Excellent Tourism City, the National Garden City, the China Characteristic Charm City 200, the China Habitat Environment Award, and has laid a good foundation for the green space system planning.

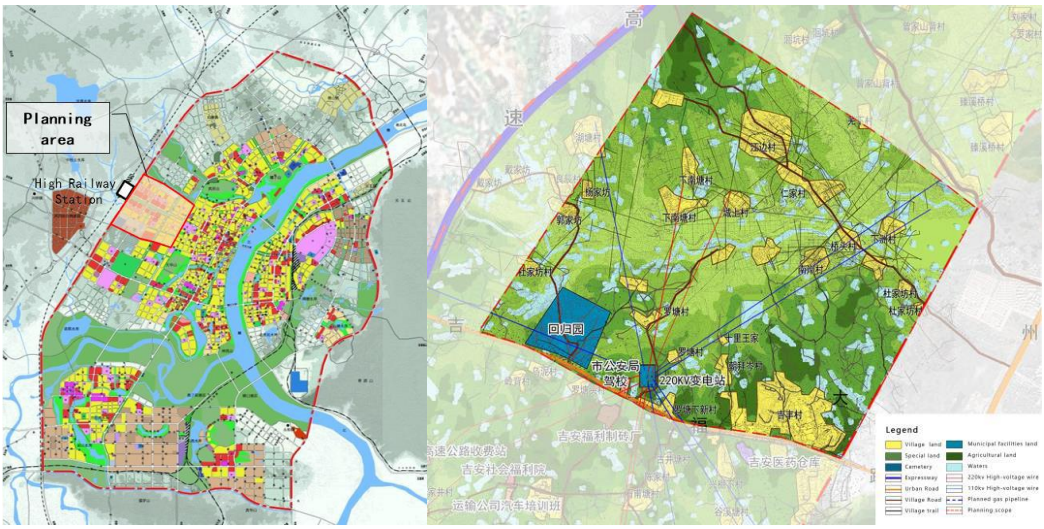

Figure 3 – Location Figure 4 - Planning area status

3.2 PLANNING OBJECTIVES

GI can effectively connect the artificial environment, semi-natural semi-artificial environment and natural environment, committed to improving the environment, enhancing the ability of sustainable development of the environment. GI planning emphasizes respect on the natural ecological environment and function, highlights the natural background, focuses on biodiversity conservation planning, stormwater management practices and climate change efficiency in planning and construction, which has strong ecological benefits; at the same time, GI has multiple functions of air purification, to alleviate the psychological pressure, and the protection of historic resources. It can bring the potential economic value of real estate appreciation, and the visit of GI to exercise or enjoy the ecological function can benefit residents' health. The social benefit can't be overlooked.

Planning area is located opposite the Ji'an high-speed railway station, which is the city's gateway, and has an important role in landscape display. Based on the construction of GI system with multiple complex functions, the green space system planning can be batter. On the basis of retaining the original natural ecological texture, we construct the urban green space network in planning, and carry a variety of urban activities, to create a natural and dynamic new area with culture and ecological experience.

3.3 SINGLE FUNCTION QUANTITATIVE EVALUATION

3.3.1 ECOLOGICAL PROTECTION FUNCTION

Three-dimensional space analysis technology of GIS can be used to visualize the environment of the region and its surroundings, in order to better study the regional elevation, slope and other indicators, while understanding the vegetation coverage of the planning area, finally provide more intuitive basic data for the green infrastructure construction(Fig.5).

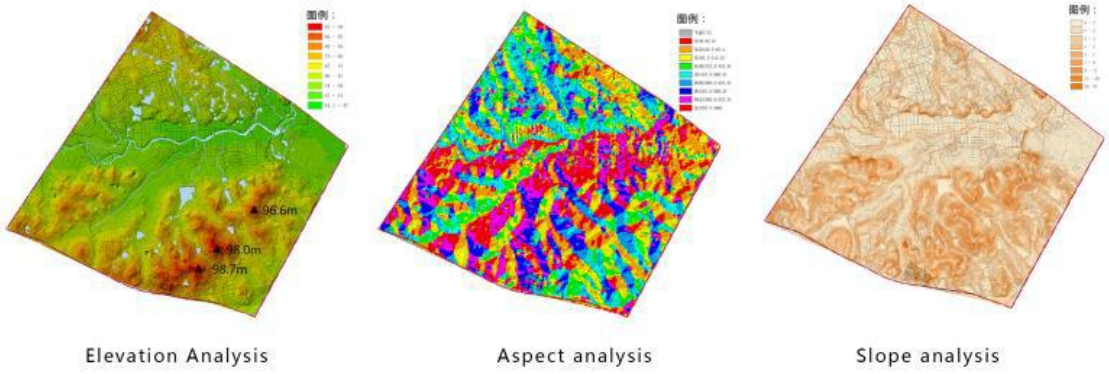

Figure 5 - Topography analysis

3.3.2 STORMWATER MANAGEMENT FUNCTION

GI construction is an effective way to reduce urban stormwater runoff.Countries and regions have gradually attached importance to the construction of GI, and rapid urbanization areas have upgraded attention to GI. The stomwater GI includes large reservoirs, wetlands, waterfront landscape, green street, rain gardens, detention ponds, ecological ditches and green roofs, reasonable planning and layout of the Rain GI has a significant impact on the hydrological characteristics, nutrient transfertation and combined sewer overflowing. Through the GIS analysis, we can get the main flow direction of the river and rain in the region, and control it through the GI (Fig.6).

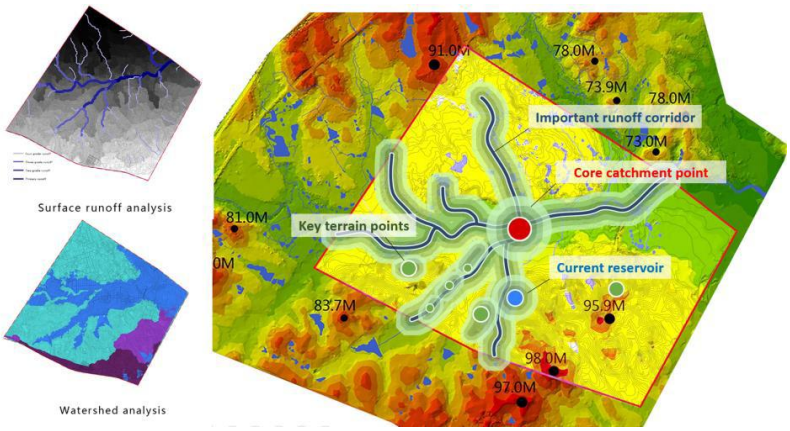

Figure 6 - Stormwater runoff analysis

3.3.3 ENTERTAINMENT AND LEISURE FUNCTION

The protection of green space system planning should not only pay attention to the natural environment, but also to provide a comfortable living environment for the city residents. It should provide leisure and entertainment places for residents, increase the “green” contact. The quantitative evaluation of entertainment and leisure function is to collect and screen the land use class diagram spot, and then extract the high representative recreation resources and active points.

3.4 GREEN SPACE SYSTEM PLANNING STRUCTURE OF JIAN

3.4.1 GI NETWORK

According to the above analysis, green infrastructure is a natural and artificial green space network system composed of hubs and links. Hubs and links contain various scales of natural and artificial landscape and ecological factors, such as green road, wetland, forest, park, shoreline and so on. The hubs are the

starting points and end points of GI, which provide habitat for wildlife growth or passage; Hubs and links connect to each other to ensure the ecological function of landscape connectivity, and to make the system to be a network; Sites are smaller than hubs, and may not be connected with the green network, but have an important contribution to the ecological and social value, such as the small open spaces and community parks.

(1) Building hubs relying on ecological background

The hubs of the green infrastructure of planning area consists of large areas of public parks (regional park, town park, local park and neighborhood park), existing private land (agriculture land, forest reserves and residential, institutional, etc.), cemeteries and undeveloped land (undeveloped open space and undeveloped committed future development). The hubs become the environmentally significant area to maintain the essential ecological processes, preserve the diversity of species, safeguard habitats, critical for the sustainable use of species and maintain the productive capacities of the ecosystem.

(2) Establishing links by rivers and roads

Links often follow natural or existing land or water features such as ridgelines, stream valleys, rivers, canals, utility corridors, and others. Although each link is unique, most connect recreational, natural, and cultural areas. Some links are designed for people to use for recreation and nonmotorized transportation, while others are designed for wildlife, biodiversity, and scenic beauty. The width and functions of links in planning area is shown in Table 2.The main corridor along the main layout of the planning, the main corridor along the rain runoff, high pressure corridors, community center green belt layout[3]. At the same time, in order to ensure the connectivity and accessibility of the corridor, three corridors are arranged along the road.

Grade of the links	Width	Function
Main links	90m-120m	Can be capable of absorbing and retention of runoff from the entire region in strong precipitation, while provide habitat for egrets and other birds and frogs, finally realize the symbiosis of man and nature. Can also be combined with community garden and leisure agriculture.
Secondary links	30m-90m	Can be able to absorb runoff in the middle intensity precipitation.
Three level links	20m-30m	Can absorb runoff in the low intensity precipitation.

Table 2–Grade of the links

(3) Using small sites to form ecological nodes

Sitesare small natural habitat and recreation site that is independent of a large natural area. It is a supplement to the hubs and acts as a stepping stone.Sites in this planningare the center green of the community, small gardens by the street, the landscape squaresand so on. They are evenly distributed in various communities, combined with the community center service facilities, to improve the living environment of the community, at the same time, provide leisure and entertainment venuesfor community residents.

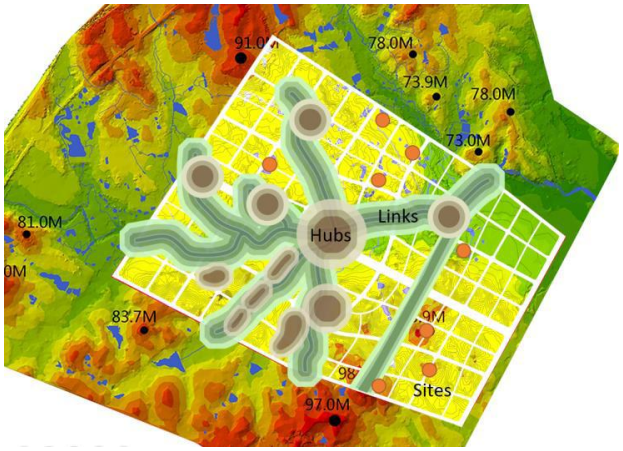

Figure 7 –Structure of GI

3.4.2 GI PRIORITY PROTECTION SYSTEM

According to the hubs, links and sites that have been identified, we determine the different evaluation factors, and give all kinds of evaluation factor to a certain weight value, then score them(Tab.3). On this basis we can get grading system of the hubs,links and sites. Based on these results, all kinds of elements with high scores can be extracted, then obtain the GI priority protection system, with strict protection all of the elements; various elements of low scores can be implemented within the appropriate development and construction.

Element	Evaluation factor	Weight
Hubs	Proportion of internal natural areas	6
	Flow length	4
	Vegetation coverage , Number of vegetation types	3
	Distance to main road, Distance to nearest hub, Wetland, Abandoned land	2
	Bio-diversity, Terrain, Soil type number, River connection	1
Links	Connect to the high level hubs.	8
	The average value of Mountain Block and Water Block, The number of connection breaks	4
	The grade of the road, the total number of species, Peripheral buffer suitability	2
	Total area,Stream length, Distance from the nearest main road and secondary road, Biological integrity,Wetland	1
Sites	Peripheral buffer suitability	8
	Distance to the hubs	6
	Part of the area of mature and natural vegetation	4
	The total number of species	3
	Total area,Stream length, Distance from the nearest main road and secondary road, Biological integrity,Wetland	1

Table 3 –Evaluation factor and weight[4]

3.4.3 GREEN SPACE SYSTEM PLANNING STRUCTURE

The green space system planning of this district is based on the GI priority system, taking the per capita green space index and all kinds of green spaces accessibility as the condition. It empahsizes on the accessibility and closeness to nature, and pays attention to the integrity, systematicness and ecological of urban green spaces, so as to improve the urban living environment quality and create green leisure spaces. According to the Ji'an city overall planning layout and planning objectives, we determine the green space system structure of the planning area as "one axis, seven hearts, four corridors, multiple points"(Fig.8).

One axis: that is the central green landscape axis from east to west, and has important position in building the green space pattern of high speed rail portal area.

Seven hearts: include Yangming Ecological Park, Junan Waterfront Park, Luling Cultural Park, Lubei Park, Shaoxi Park, Boan Park, and Kubei Reservoir Park that are located in the green landscape belt.

Four Corridors: combined with water systems, wedge shaped infiltration, to ensure the integration of urban land and the surrounding ecological green spaces.

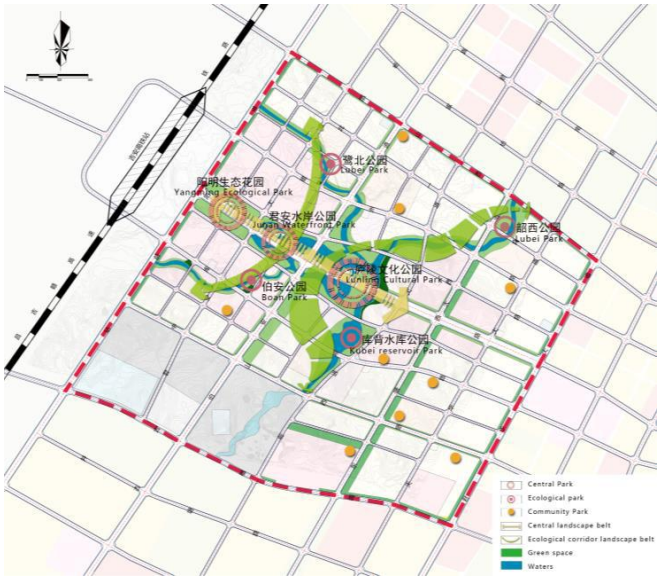

Figure 8 - Green space system planning structure

Multi- points: they are the public space nodes on the main entrance, node location, important terrain points, as well as the community and neighborhood parks.

3.5 GREEN INFRASTRUCTURE PLANNING OF MULTI SCALE

Green infrastructure is a multi-level system. In the regional and district level, GI supports critical ecosystem functions. The main elements include the National Park, the shoreline, the main river corridor and long distance trails; in the city or community level, GI formed an open space network by city parks, leisure, farmland, community gardens, street landscape and private garden, small water and streams, and roof gardens(Fig.9). Planning should take into account the connection and coordination of different scales, and make them to be a multi-scale green space system.

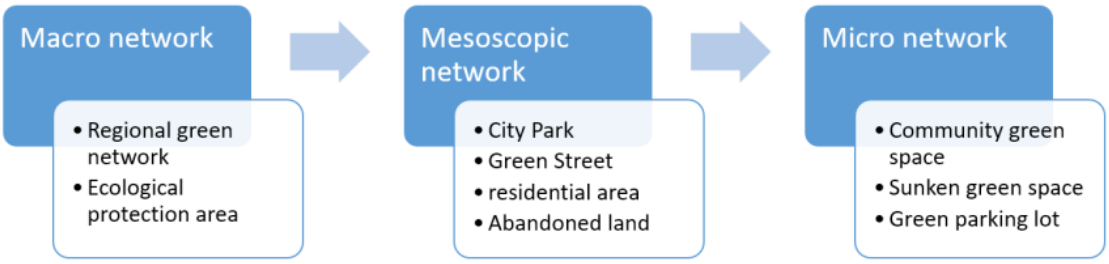

Figure 9 - Topography analysis

3.5.1 MACRO NETWORK

Analysis of the all kinds of green spaces and road system in the entire city of Ji'an, and the green space within the planning area is connected with the whole urban green space system, to achieve a wider range of GI connection, ensure the integrity of ecosystem (Fig.10).

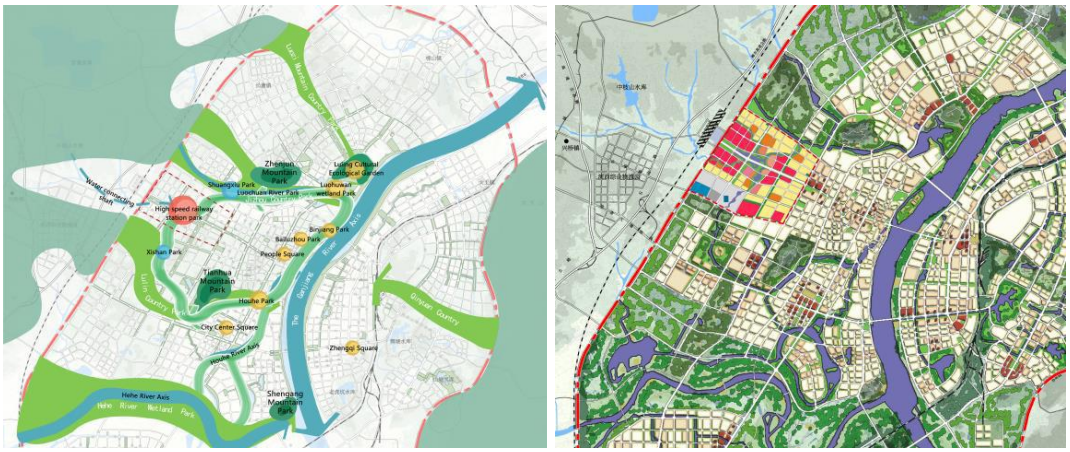

Figure 10 - The Connection of Regional Green Space System

3.5.2 MESOSCOPIC NETWORK

Green Street planted a variety of plantsin the green area of the street, to form a ecological treatment system of rainwater collection, retention, purification, infiltration and other functions. Itcan solve the city stormwater disaster problem under rainstorm events and protectthe plants; build the underground pipe gallery, to improve existing grey infrastructure, and create a beautiful natural scenery of the street (Fig.11). The purpose of the green street design is to reduce stormwater runoff and reduce surface source pollution; to alleviate the air

pollution caused by vehicle exhaust; to bring natural elements into the streets; to provide opportunities for the low impact traffic systems.

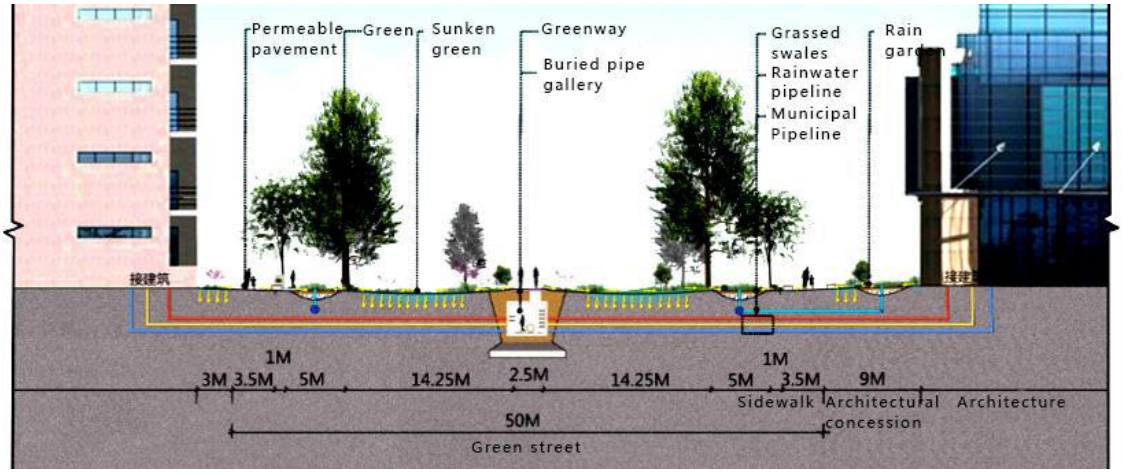

Figure 11 - The Connection of Regional Green Space System

The artificial wetland is an artificial design and manufacture.As a green infrastructure, it can bring a variety of benefits such as natural wetlands like. They can be used as economic and efficient measures for flood control and city stormwater management, also as a wild animal habitat, and can enhance the landscape aesthetic taste, provide recreational facilities. The planning makes a number of stormwater runoff planning to be the adjustable artificial wetlands. In the water season they can be used to store rainwater, and in the dry season they can be used asgreen spaces for the residents to play(Fig.12).

Figure 12 - Seasonal rainfall water level and green space

4 CONCLUSIONS

Green infrastructure has functions with complex characteristics, includes two aspects in summary: one is to serve people, by protecting and connecting the scattered green space to provide social services such as leisure, health and aesthetic; one is the service to the system of nature, through biological and habitat protection, keeping the connection of natural areas to maintain biodiversity, and avoid habitat fragmentation.

The function of green space, the structure of green space and the actual effect of planning are the key points of urban green space system planning. In the background of Rapid City, strengthen the concept that city green space is the city infrastructure, by GIS and other scientific analysis methods, identify elements that constitute the network of green infrastructure. On the basis, further improving the urban green space system planning, can provide a powerful guarantee for the scientificalness of green space function, the rationality of the structure arrangement and the effectiveness of the planning, to further promote the construction of the the smart city and spong city.

Because of the limited space, the author believes that the following two aspects can be discussed: first, the construction of citizen participation mechanism. GI involves a wide range of aspects, and involves a lot of the general public interest, but the current public participation mechanism is not perfect. We can further

discuss in the follow-up study; two is the limitations of the scale. About green infrastructure of district scale, the main contradiction is not the connectivity, but should consider the fairness of GI elements (such as city park) in space. On this basis, further optimize the research results.

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ID 1353 | GREEN INFRASTRUCTURE IN LIMINAL STREETSIDE SPACES: CASES FROM EUROPEAN CITY CORES

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1 INTRODUCTION

Human interactions ranging from everyday socialization to celebratory gathering and insurgency are all more or less accommodated along the streets of contemporary Western cities. In the denser quarters of European cities, in particular, the street is the setting along which much of the civic life of urban dwellers is played out. As the pedestrian moves laterally from the roadway curb outwards, a narrow ribbon of quasipublic/private space that emerges from adjacent buildings is usually encountered. In the city core and inner ring suburbs, this transition zone harbours stoops, landings, areaways, pavement gaps at foundation walls, facades, sills and lintels, handrails, stairwells, and other niches that present urban dwellers with tight-butsufficient opportunity for streetside horticulture and related accoutrements. It is this underappreciated transition zone, and the recreational and expressive activities associated with growing plants in it, that is addressed below. I use the term convivial greenstreet to convey an assemblage of features and patterns in a supportive context (street, built form). This setting is enacted by gardeners (residents, merchants, employees) who cultivate plants to a degree sufficient to elicit some sensory appreciation on the part of passers-by and, now and then, to prompt social engagement between cultivators, neighbours, and passers-by who share the street's frontage.

"Convivial greenstreet" as used here is a conceptual umbrella term for a range of greenstreet types that all have in common an emphasis on informal private and quasi-public installations. The ideal convivial greenstreet (hereinafter: CG) accommodates processes and patterns of socially inclusive, uncommodified, and culturally diverse horticulture that is situated in physically interstitial and socially liminal streetside niches in the tight quarters of contemporary cities (Steven, 2007). A proposed—and still evolving—typology with a focus on residential types is provided in Section 3, below.

The convivial greenstreet may be framed within the generally analogous rubric posed by critical urbanists, including Dovey (2008) and Miles (2000). Both scholars trace various kinds of citizen ornamentation and place-making as ways to reclaim urban space and ascertain local identities. Miles (2000, p.203) writes, "An understanding of the architectural everyday contributes to sustainability by emphasizing the specifics of locality…sustainable solutions to urban problems will be found outside the dominant structures of development." And Dovey (2008, p. 175) seems to anticipate a role for CGs in his call for "new ways of

putting roots in place which resist the totalizing retreat in space or time and the paralyzing view that freedom is found in enclosure." The quotidian, open, free-spirited cultivation occurring along the more robust convivial greenstreets may also be viewed as gentle kind of emancipatory 'play', reminiscent of the Situationist's unitary urbanism (Pinder, 2004; Sadler, 1998). However, whether any forms are directly antagonistic of the hegemony of the corporatized city is beyond this paper's scope. But that CGs may in some small way counteract the banal aspects of urban society seems apparent, as demonstrated later in the paper. Finally, as a mostly benign phenomenon that can contribute to local and civil society, I suggest ways that planners and urban designers can provide professional and moral support.

This paper builds on an initial examination of such streets in Tamminga (2014) that focused on conceptual reification and situating of the CG phenomenon in the theoretical literature. It observed that:

> *"In contrast to the generic public streetscape, [the convivial greenstreet] tended to be smaller-scale, walkable, and spatially intimate streets in and around the city core—linear spaces imbued with foliage, flower and fruit, and visibly well-tended. In such places it was readily apparent that pedestrians slowed their pace, curious over a plant or a bit of intriguing green infrastructure, or pausing when met by a waft of fragrance or a serendipitous butterfly. At routine times of day, when inhabitants, shopkeepers, and visitors crossed paths, friendly greetings were expressed. Children actually played in the streets after school. It seemed that both the horticultural activity and the objects of horticulture were serving as pretext for a sort of civic gezelligheid (Dutch) or gemütlichkeit (German)—both terms translate imprecisely as a warm and sociable togetherness. Certain streets in certain cities felt especially verdant, affable, and alive. Some of the more notable examples hinted at a locally expressive kind of neighbourhood sustainability—both in terms of the physicality of the space (ecology, materiality), and in terms of the planterly discourses (verbal, sensory, semiotic) in which sustainability values and practices might be shared and reinforced … Three key facets of the places observed—the social (conviviality), the material/ecological (greenstreet flora and its infrastructure), and the spatial (street volume)—are captured in the phrase "convivial greenstreet." …When sufficiently intense, the greenstreet is the active spatial context for a material culture of personalized-yet-interactive horticulture that expresses, demarcates, instructs, appropriates and contests."*

The notion of conviviality is an important variable in this conceptual framework. In his seminal critique of industrial society, Ivan Illich (1973, p. 12) criticizes the rise of professionalization, making an appeal to "enlarge the range of each person's competence, control, and initiative, limited only by other individuals' claims to an equal range of power and freedom." Illich would have appreciated the role of CG gardeners on the urban scene. While urbanists debate the ideal of conviviality (e.g., Purdy, 2014), others assert that conviviality in the city is "the very nourishment of civil society itself" (Peattie, 1998, p. 250) and "the essence of urbanity" (Shaftoe, 2008, p. 5). Nowicka and Vertovec (2014, p. 352) observe that even conflicts over "everyday issues such as gardens…are modes of civil interaction." And the renowned urbanist Jane Jacobs (1961, p. 30) wrote, "Sidewalks, their bordering uses, and their users, are active participants in the drama of civilization." At the scale of the metropolis, Lees (2004, p. 3) writes, "This century, even more than the last, will be an urban one in which the city is the measure of the civility and sustainability of society." More than just tolerant civility, however, place-based conviviality in the city connotes a kind of inclusive multi-community neighbourliness that embraces difference and exchange. Drawing on my initial work (2014, p. 4), I note that,

> *"conviviality and community in this context are not the same things. Communities have members and non-members, with members often making decisions about in- and exclusions. On the other hand, conviviality is contingent and dynamic and sometimes eventfully inclusive of visitors drawn to pause along their way. All the while, the greenstreet performs double duty as a public corridor that also accommodates the passage of others. Yet at its core conviviality draws on community for its cohesion. The spatio-physical environment and adjacent land use activities provide the continuity within which the convivial mood ebbs and flows, peaking now and then during daily events of personal engagement with the greenstreet materiality or inter-personal and inter-community interactions along the street."*

As the scholarship and praxis of urban green infrastructure (GI) develops, the range of green infrastructure components continues to expand to include newly identified tendrils and shards—such as CGs—that contribute to the health and well-being of urban dwellers. The European Commission (2016) contrasts GI with single-purpose, traditional grey infrastructure by noting that "green spaces can perform a variety of very useful functions, often simultaneously and at a fraction of the cost. One of the key attractions of green infrastructure is this multi-functionality." While the Commission asserts that GI is a "planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services," it also acknowledges the contributions of informal environs, stating that GI "includes semi-natural spaces such as parks, private gardens, and hedges" and places that "can be enhanced by individual gestures such as collecting rain water or leaving parts of a garden untouched." Focusing on the city, the Commission states that "green infrastructure can and should be an integral part of urban areas too–particularly in densely populated areas" that "can significantly enhance the health and well-being of urban residents, improving social cohesion and the quality of the living environment."

AESOP 2017's conference track #5 on Green Infrastructure echoes the Commission's stance: "Green infrastructure should be designed and managed as multifunctional resource capable of delivering a wide range of benefits to humans and ecosystems, such as…biodiversity conservation…enhancing identity, cultural values, and resilience." The work of the Commission and the exploration of GI through the forum of AESOP '17 help suggest that the collective impact of CGs in cities where they are emerging as a distinct GI form is likely to be meaningful in ecological, social and cultural terms, across the breadth of the contemporary urban core. In commenting on accessibility to urban horticulture, Maltby and Nandan (2017) note that "there is substantial research on the positive impact on people's mental state of having living plants be a part of their environment. In addition to the psychological and aesthetic benefits, more plants in our concrete environment will also provide crucial ecosystem services, such as mitigating air pollution and heat island effect, improving stormwater management, and potentially increasing bio-diversity." The relationships between urban environmental quality and human health and well-being are supported by research in environmental psychology, urbanism, and urban ecology, including the work of Hartig et al. (2003), Kaplan (2001), Kuo (2011), Matsuoka & Kaplan (2008), Saümel et al. (2016), Thwaites et al. (2013), and Ulrich et al. (2006), among others.

2 METHODOLOGY

Informed by relevant methodologies used in urban landscape analysis and urban ethnography (Foxley, 2010; Krase, 2014; Kusenbach, 2003; Nuvolati, 2014; Ramsden, 2014; Tilley, 2010), the lion's share of data collection activities comprised walking along, and documenting observations within, pre-targeted streets in select European cities (Table 1). My initial research focused on cities in the Netherlands, Rhineland area of German, and Belgium—where it is readily apparent that horticultural proclivities and urban living have co-mingled. Since then other European cities have been, and continue to be, added to the list. Selection criteria included urban spatial density, socio-economic diversity, land use (primarily medium-density residential and commercial) and walkability. Most readily identified CGs were found in historic urban cores, but notable cases do occur in contemporary inner ring suburbs in cities like Amsterdam and Cologne.

Country / City	Neighbourhood / Quarter	Dates
Netherlands		
Amsterdam	Jordaan, Grachtengordel-West	July 2011, Oct. 2014
Delft	Binnenstad, Centrum-oost	July 2011, Oct. 2014
Leiden	Binnenstad-Zuid/Noord, Stationsdistrict	July 2011, Oct. 2014
Leeuwarden	Centrum	July 2011, Oct. 2014
Katwijk	Katwijk aan Zee	Oct. 2014
Germany		
Cologne	Ehrenfeld, Altstadt-Süd, Sülz Lindenthal, Neustadt-Süd	May, 2013, Sept. 2014
Bonn	Altstadt, Zentrum, Südstadt	May, 2013, Sept. 2014
Frankford	Innenstadt	May 2013
Aachen	Aachen-Mitte	Sept. 2014
Andernach	city centre	Oct. 2014
Rostock	Stadt-mitte, Südstadt	June 2016
Denmark		
Copenhagen	Christianshavn, Indre By, Vesterbro	Aug. 2010, June 2016
Belgium		
Brussels	Saint-Gilles, Forest, Ixelles	Aug. 2011, Sept. 2014
Ghent	Centrum, Patershol	Sept. 2014
France		
Paris	Le Marais, Quartier d'Amerique Montmartre, Quartier Latin	Oct. 2014
Spain		
Barcelona	Gràcia, Eixample, Barceloneta, Horta, Ciutat Vella	June 2016
Lisbon, Prague, Budapest		pending, summer 2017

Table 1 - Research Locales

To select likely neighbourhoods, municipal websites were accessed and key informants (e.g. local planners and urban designers) were asked to provide direction. Virtual walkabouts on Google Street View reinforced the long list of potential greenstreets prior to travelling to each city. Once in situ, target neighbourhoods were crisscrossed by foot to locate those streets exhibiting relatively high densities of greenstreet artefacts. Selected streets were then inventoried for CG features through field notes, site measurement, and photo-documentation (Tamminga, 2014).

The number and type of convivial greenstreets examined to date vary widely from city to city. Typically, all cities visited contained examples of at least partially-formed CGs. Certain remarkable neighbourhoods, such as Binnenstad in Delft and the Hoefstraat area of Leiden (both in the Netherlands), exhibited street clusters where well-formed and fully functional CGs were close to becoming the convention. In other cities, neighbourhoods such as the very compact traditional communities of Gràcia and Barceloneta in Barcelona displayed only one or two horticultural components: façade-mounted floral baskets and sill planters in an architectonic streetscape otherwise devoid of greenery. Overall, the majority of the cities investigated had at least 2 to 3 cases of streetscapes that showed sufficient diversity and intensity of horticultural installations to be considered CGs, based the typology shown in Section 3 below.

Building heights and building height-to-street width ratios were estimated to give a sense of the spatial volumes that might accommodate streetside gardening. Vegetation apparently cultivated by residents and commercial employees (that is, not municipal workers) were assigned to basic plant form categories, along with container type and position and installation technology. Supportive accoutrements such as pottery, art, and bird houses, and private-sector accommodations that seemed available for pedestrian use such as benches and bicycle rails were noted. Any temporary accompanying installations that seemed integral to the identity or functioning of the CG were noted—for example, signs, notes and graffiti that suggested semiotic intents such as territorial marking, sponsorship, and interpretive messages for passers-by. Public streetscape installations (e.g. street trees, lighting and banners) were also documented. Case study streets were classified as to land use, and any indicator of socio-economic and cultural characteristics were noted. Both during and after inventorying, activities and social interactions along the street that appeared to be associated with streetside horticultural were observed and noted.

All data on streets displaying significant CG characteristics were then compiled and sorted to develop the typologies presented in the following section. Analysis of the steadily growing corpus of CG photos, maps, and field notes, as well as tie-in with literature in several disciplines, has continued to date.

3 TYPOLOGY AND CONCEPTUALIZATION

Field investigations and analysis of photo-documentation indicate 4 main types of convivial greenstreet in the cities visited. Note that it is quite possible that more categories will emerge as other European cities are studied (Prague, Budapest and Lisbon are scheduled for summer 2017). For each of the types shown in Table 2, land use, number of storeys along street frontage, building height-to-street width ratio, key actors along the street, and cadence, or rhythm, of horticultural and associated convivial activity is noted.

Type 1 Residential emerged as the most common and diverse type of CGs in the cities studied. This was expected for several reasons: i) by definition streetside horticulture installations are private or quasiprivate ii) residents are the most likely agents to engage in such activities on the daily basis required to grow plants successfully, and iii) horticultural diversity tends to mirror the diversity of cultures and sub-cultures common in the core sectors of European cities, while plants and their orchestration serve as an effective medium for individual expression.

As noted previously, residential sector convivial greenstreets are characterized by compact urban conditions with a dearth of private yard garden plots; thus, the only available space for gardening is within a narrow horizontal and vertical corridor along the street frontage where traffic activity is either inherently moderate or otherwise controlled by permit or regulation. Consistently, the richest examples of residential CGs were to be found on streets with 'human-scale' spatial volumes: narrow streets and 2–4 storey attached dwellings.

The exemplar of Trompetstraat in the Binnenstad quarter of Delft, the Netherlands, is shown in Figures 1 and 2. While this street dates back to the 1600s, there are some modern-era residential infill units that fit their context well. Referring to the keyed 'anatomy' in Figure 2, the street itself is narrow [A], and clad in permeable brick pavers. Only permitted vehicles allowed. The building height-to-street width ratio is about 1.5:1, with a human-scaled 2–2.5 stories of building frontage. Potted perennials on the stoop [B] and annuals sprouting from gaps along the foundation [C] mark the visually-important transition from horizontal to vertical. A domestic artefact doubles as a planter [D], and the adjacent entryway is framed by a well-tended vine [E]. Further into the vignette, a homeowner's bench [F] is offered to neighbours and passers-by.

CG type	Adjacent land use	Building height/ street width; # storeys	Key interacting agents/actors	CG activity cadence
Type 1. Residential				
Type 1a.	entirely Residential	2:1–1:2 2–4 storeys	resident–resident; resident–passers-by	home day-time, pre-workday, noon, evening
Type 1b.	mostly Residential; some small-scale Commercial and Institutional	2:1–1:2 2. 5–4 storeys	resident–resident; resident–merchant; resident–passers-by	overlapped business hours, home day-time
Type 2. Mixed Commercial				
Type 2a.	smaller-scale Commercial; interspersed Residential	2:1–1:3 3–5 storeys	merchants–passers-by merchant–resident passers-by–passers-by	business hours; minor pre/post-business
Type 2b.	larger-scale Commercial and Institutional	varies	passers-by–passers-by employee–passers-by	business hours, festivals
Type 3. Celebratory	varies	varies	varies: participants, consumers	varies; reflects celebration / ritual itinerary

Table 2 - Typological Framework (adapted from Tamminga, 2014)

Another potted plant [G] and a deciduous shrub [H] mark a front door. Sconce-hung potted geraniums, large [I] and small [J], add interest to facades. A simple but period-appropriate lamp [K] complements the plantings and contributes, along with the "eyes on the street" (Jacobs, 1961) that typify CGs, to enhanced night-time security. A ledge along the upper cornice of one residence provides a high perch for more flowers [L], drawing the eye upward and forward. Doorways [M] along greenstreets vie with plants in terms of colour and gracious materiality as they, too, are subject to the aesthetic impulses of residents.

As with most narrow CGs in the Netherlands, Denmark, Belgium and Germany, bicyclists [N] and pedestrians co-inhabit the street with little difficulty, while low landings [F, G] provide a plinth for pedestrians or sitters when needed. When a rare side yard does occur [O], a tree is often allowed to overtop and shade the street—in this case a linden. Overall, the individual parts work with the spatial volume and bounding facades as a whole to create a harmonious setting that appeals to the senses and invites neighbourliness. Part of the success of the street must be attributable to community cohesiveness—parents and children engage in life on the street. Residents have their own Trompetstraat Facebook page, and colourful street graphics reminding inhabitants of events or services are posted at key points.

Although it is difficult to capture the entirety of the assemblage of greenstreet elements—much less its full ambience—in singular photographs, the Trompetstraat images do provide a useful cataloguing of what comprises archetypal Type 1a and 1b greenstreets. Compared to Type 2 and 3 greenstreets, Type 1 streets embrace a much larger range of horticultural forms and artefacts:

Figure 1 - Scene Along Trompetstraat, Delft, the Netherlands

Figure 2 - Anatomy of a Type 1a Street, Trompetstraat, Delft, the Netherlands

at least 11 sub-classes of CG elements were identified during field work, ranging from doorstep/stoop potted plants to trellised dwarf fruit trees to façade-mounted sconce planters to the ubiquitous spontaneous-then-tended plants associated with interstitial gaps along the street. Such gaps often persist from historic street or infrastructure misalignments, providing opportunities for animated and engaging 'greenshards' planted and tended by adjacent residents. An excellent case is that of the Sustainable Quarters Contracts program in Saint-Gilles on the southwest perimeter of Brussels (Commune de Saint-Gilles, 2016). Figure 3 shows one of its collaborations along Chaussée de Forest.

Figure 3 - 'Greenshard' Along Type 1b Street, Chaussée de Forest, Saint-Gilles, Belgium

Residential installations, in fact, far exceeded Type 2 Mixed Commercial installations (discussed below) in terms of expressiveness, ingenuity, and diversity of form and patterns. Interestingly, there were cases in most cities where residents and merchants alike appeared to have at least the implicit permission of local authorities to remove several sidewalk pavers along their foundation wall to allow excavation, followed by backfilling with growing media and plant installation (Figure 4). Or perhaps some of these installations are evidence of a mild-mannered form of the public space insurgency discussed by Hou (2010).

Socio-economically, it is not the case that CGs are necessarily associated with enclaves of affluent urbanites, as might be expected. In fact, robust greenstreets were found in a wide variety of social and cultural contexts. There were, however, links evident between sub-communities and the kind of horticultural taking place on the street—whether artistically expressive or politically or ecologically dogmatic. Figure 5 shows an edible micro-ecology installation on an eye-height windowsill in the Altstadt neighbourhood of Bonn, Germany. The little signs loosely translate as, “Edible wild plants from the countryside.” In fact, edible plants are common to almost every Type 1 CG in the western European cities visited: tomatoes, peppers, gourds, vine fruits, and more are offered free-for-the-picking. Another good example is the slot rowhouse complex along Rodelijvekensstraat in Ghent, Belgium (Figure 6), an ornamental and culinary plant smorgasbord communally cultivated by the mixed Turkish–student community.

Figure 4 - Removed Paver with Fruit Tree Espalier, Altstadt Süd, Cologne, Germany

Figure 5 - Streetside Edibles, Altstadt, Bonn, Germany

Still, the vast majority of greenstreet installations serve to simply brighten up the street frontage and provide an outlet for outdoor gardening. Clearly, the daily tending of flowers and vines—sometimes unapologetically overlapping on public rights-of-way—contributes to the quotidian life of the street. I often observed resident plant-tenders chatting with neighbours who were taking their dogs for a walk. It seemed to me then that the public acts of streetside cultivation and dog-walking alike were as much pretences to socialize as they were about simply accomplishing the tasks at hand.

Figure 6 - Slot Street Along Rodelijvekensstraat, Ghent, Belgium

For reasons that have yet to be closely examined, certain residential streets exhibit much more horticultural activity than others, and certain neighbourhoods accommodate a higher density of greenstreets than others. It may be that horticulturally-inclined cultural groups tend to live in close proximity. Or it is possible that some streets harbour one or several trend-setting gardener-activists, after which ‘communities of practice’ develop (Wenger, 1998). Anecdotally, when I asked several residents along greenstreets in Amsterdam and Leiden about their horticultural learning, they were quick to acknowledge the valued presence of a local master gardener. At the larger scale, The Netherlands, northern Belgium, and western Germany are the three countries where there appears to be a strong correlation between regional horticultural tradition and translation to, or reinterpretation of, urban CGs.

Type 2 Mixed Commercial greenstreets are of two sub-types. Type 2a greenstreets tend to be associated with smaller and specialty retail, green grocers, and restaurant establishments in finer-grained commercial

‘main street’ located in close proximity to core area and inner ring residential districts. Streetscape spatial volumes are moderately larger scale than Type 1, with open volumes associated with wider commercial arterial streets. A key Type 2a variable is that vehicular traffic is in some way moderated; wide sidewalks, bump-out planters, and various regulatory traffic restrictions result in less pedestrian/traffic interaction. This situation, in turn, presents two-fold opportunity: merchants find space along the frontage and out to the curb line to install plants, benches and related paraphernalia, and pedestrians feel sufficiently buffered from traffic to enjoy the installations tended by store personnel. Overlapping jurisdictions are quite common, and seem to be either ignored or tolerated by local authorities, or actively embraced through partnerships and support programs.

Figure 7 shows an example in the Cologne inner ring suburb of Ehrenfeld, where commercial streetside gardening is encouraged through the Engaged in Ehrenfeld program (eva eV, 2017). Such initiatives involve non-profit/municipal partnerships that provide infrastructure, plants, and materials (soil, mulch, etc.) that are installed and maintained by adjacent proprietors and their employees. In other cases, there is simply agreement that maintenance of public installations is the responsibility of the adjacent storeowner.

Installations are often customized, taking on the local flair and perhaps even personalities of their caretakers.

While marketing tactics are likely also at play, in comparison with formal streetscapes and corporate installations, Type 2a greenstreets impart a sense of authenticity and convivial generosity.

Type 2b greenstreets are associated with larger-scale urban developments along major arterials.

Traffic impacts and the coarse-grained pattern of businesses along the frontage often combine to undermine the intents of streetside gardening. Large hotels and restaurants are frequent contributors, often installing rather formal and costly installations in the context of streetside cafés operated along the sidewalk by permit.

An aura of corporatist control can permeate Type 2b environs, although clients and passers-by alike seem to tolerate the lack of colloquial charm while they appreciate the shade, screening and sensory qualities afforded by the plant assemblages.

Type 3 Celebratory greenstreets are less common than Type 1 and 2 versions. Typically, they include plant installations associated with holidays or special events. A good example is the maibaum (“May tree”) tradition in some western German cities, during which 4 to 8 meter tall birches are harvested and distributed as part of May Day activities. At night, the trees are clandestinely strapped by secret admirers to building facades or utility posts near the residence of the focus of their affection. The trees are often festooned with colourful streamers and red paper heart cutouts. On some streets in Bonn and Cologne, the number and density of maibaum are such that they have a major, albeit short-lived, visual impact on the street. Conviviality often ensues as suitors, families, and friends take to the streets to celebrate the coming of spring and the possibility of new relationships.

Figure 7 - Type 2a Installation, Venloerstrasse, Ehrenfeld, Germany

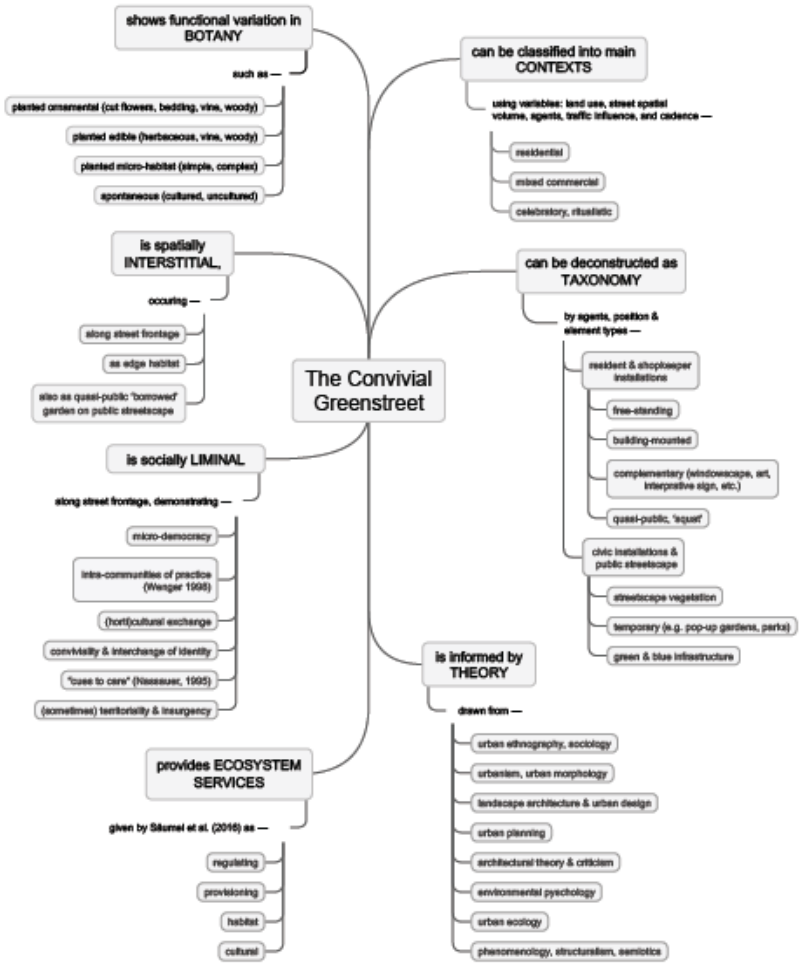

Figure 8 - Concept Map

With a working typology in place, and having conducted wide-ranging field studies and several cycles of literature review, it is now possible to construct a conceptual model that frames the essential components of both the idea and the physical reality of the convivial greenstreet. The Figure 8 concept map above shows multiple perspectives from which CGs can be considered. These include spatio-physical contexts, interstitial and liminal characteristics, functional variation in botany, taxonomic structure, ecosystem services provided, and paths by which the convivial greenstreet notion can be informed by the literature. As more cities have yet to be studied, the model should not be considered exhaustive.

4 CONCLUSION AND RECOMMENDATIONS

Convivial greenstreets of all kinds, and the myriad of elements and activities that go into their collective making, contribute to the vitality and inclusiveness in these European cities. We have seen that CGs are at their most expressive, diverse and genuine in the spatially constrained residential precincts in and around the urban core. In these contexts, the ostensible lack of gardening space becomes the impetus to plant and tend, rather than an excuse not to. While underlying sociological or anthropological questions remain, the careful cataloguing of greenstreet materiality and phenomena in the field since 2010 across 16 cities in 6 countries has resulted in a working typology and a corpus of many hundreds of streetside particularities that, taken together, help to build a picture of this small but special part of the urban morphology of contemporary European cities. In 2014 (p. 18), I wrote that, “Streetside gardening is at its core a bridging system, a lingua franca between the diverse actors along the street. From that standpoint, greenstreets are a hopeful phenomenon—a desire that city dwellers have to emerge; to freely engage their neighbors and the diverse life of the street; to both confront and embrace its possibilities and complexities.” Further and ongoing studies since then have helped affirm this stance.

My hope is that this paper will prompt AESOP '17 attendees to take up further convivial greenstreet questions as scholars, or to advocate for greenstreets as practitioners in their own places. If we have some consensus that convivial greenstreets are a largely positive force in the civil realm, then there's much work to do to ensure that they flourish and develop. As an outgrowth from what has become a longitudinal research project, I would suggest 3 frames of actions for urban policy-makers and designers to consider, as follows:

1. Walk. Become personally acquainted with convivial greenstreets—even just their nascent forms—in your own cities. Be on the street during the active times when horticulture (and GC culture) is taking place, both on weekdays and weekends. Observe, photograph, draw, map and otherwise document the phenomenon where it occurs.

2. Converse. Ask questions, both on the street and in the public forum. Listen to and acknowledge the benefits of streetside gardening and its myriad micro-installations, as well as contributions being made to the larger life of the city. Initiate conversation and gather stories from residents, merchants and visitors who are willing to share. Assure them that policy-makers and designers are ready to accommodate and support their beneficial greenstreet activities, whether ongoing or contemplated.

3. Support. Share your applicable knowledge, or leverage the knowledge of colleagues, in support of convivial greenstreets. Initiate programs, such as Bonn's Lehrpfad Stadtökologie ("city ecology educational trail") program that collaborates with communities on a range of greenstreet installations. Advocate for streetside gardeners who are trying to strike the sometimes precarious balance between free expression and responsible citizenry. Work with neighborhood leaders, master gardeners, and plant nursery suppliers to encourage sustainable, inspiring, and culturally diverse CG networks. Conduct workshops. Build intra-and inter-neighborhood communities of practice. Finally, ensure space for streetside gardening; if policies and codes are counter-productive or outdated, revise them. Provide accessible reference material as to best-practices that are tailored to local, evolving situations. Encourage respectful, inclusive creativity and healthy productivity through the act of planting and tending.

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ID 1369 | GREEN INFRASTRUCTURES: A FRAMEWORK TO APPLY A MULTISCALAR AND TRANSECTORAL APPROACH IN PLANNING

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1 TAILORING THE EU GREEN INFRASTRUCTURE STRATEGY

According to EU strategy green infrastructure is: "a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. […]. On land, GI is present in rural and urban settings" (EC, 2013b:3) therefore, it is recognised and referred to a multifunctional network of healthy ecosystems, serving the interests of both people and nature (Figure1).

Referring to planning instruments this drives to assume that a green infrastructure (GI) strategy should favour a better integration between territorial/urban planning and design with sectorial planning and other instruments and policies with spatial impact by the mean of the multifunctional nature of GI.

Figure 1 – Components of a Green Infrastructure (EC 2013b:8)

In order to foster the improvement of approaches and tools towards its implementation, the planning experience currently under way in Lombardy Region (IT) related to the new Regional Landscape Plan (RLP) is a good example that assumes concretely the role and potential of green infrastructures in spatial planning with a multi-scalar approach. The RLP fully undertakes the principles of the European Landscape Convention (ELC), where: "Landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (COE, 2000), recognizing the importance of environmental and ecological components in landscape planning, and improving the integration between cultural and environmental aspects. Moreover, according to the ELC, the plan pays great attention to "landscapes that might be considered outstanding as well as every day or degraded landscapes" (COE, 2000) considering that this typology of landscape covers a large part of Lombardy, corresponding to the metropolitan region of Milan.

The new plan proposes a strong integration between cultural asset (historical), natural (ecological, environmental) and agricultural components, adapting different protection or enhancement rules according to the wide range of diversity characterizing the regional landscape (Regione Lombardia, 2015; Pedrazzini, 2016). A very wide ranking of landscapes and environmental mosaic composes this ten million inhabitants region: from the metropolitan region of Milan, characterized by high anthropic and environmental pressure (up to 7,000 inhabitants/km2 in Milan), to the southern valuable agriculture plain and to the northern alpine region with its wilderness and high ecological value. According to this diversity and complexity in term of natural and cultural asset, antrophic pressure and environmental risks, the RLP sketches the main regional strategy and targets that should be further developed and applied at different level of governmental competence, with specific and tailored aims and operative solutions according to the local specificity and by favouring a citizens' participative approach.

2 A MULTI-SCALAR NETWORK FOR AN INTEGRATED AND EMPOWERED PLANNING

In order to give concreteness to the integration between environmental, ecological, agricultural and cultural aspects the main RLP project consists in designing and implementing the Regional Green Network (RGN) as the fundamental green infrastructure for a balanced regional development (figure 2). This is coherent and fully assumes the concept of multi-functionality of a Green Infrastructure, particularly important in a region with a very intense anthropic feature as in Lombardy. Due to the comprehensive character of the regional Landscape plan, the RNG represents a strategic project, in accordance with the cross-sectoral and cross-scale application as defined by the European Green Infrastructure strategy, particularly considering that "the implementation of green infrastructure would benefit from integrated spatial planning early in the planning process" (EC, 2016:150).

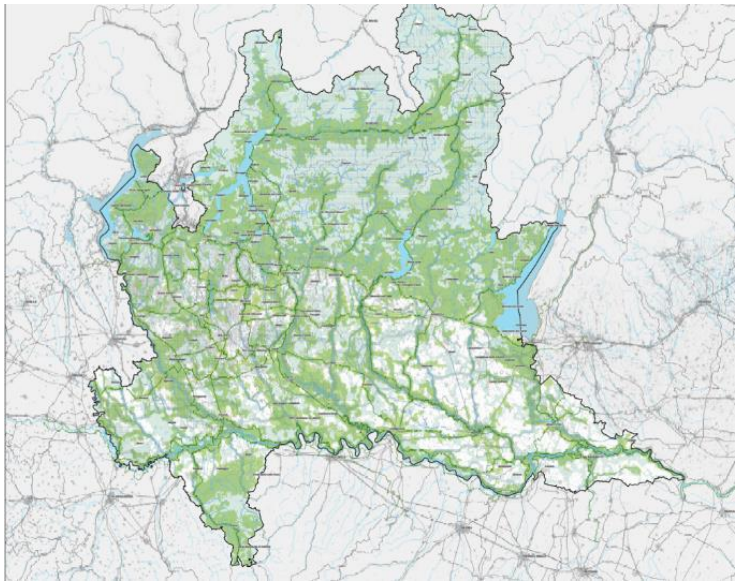


Figure 2 – Regional Landscape Plan: proposal of the RGI (RL and DASTU)

The proposed RGN is founded on the existing Regional Ecological Network (REN), composed of sites and networks of ecological importance and characterised by biodiversity (Natura 2000 sites, Sites of Community importance, Ramsar Sites, regional and national parks, etc.).

To the REN other components such as agricultural, cultural, historical and places of leisure are added providing and ensuring the accessibility to the regional green infrastructure by citizens. The added value of the RGN system is to allow a real comprehensive and integrated planning approach to the diverse elements of the natural, cultural and rural systems favouring the access and use of RGN by soft mobility and transport network such as pedestrian, cycle paths and public transport.

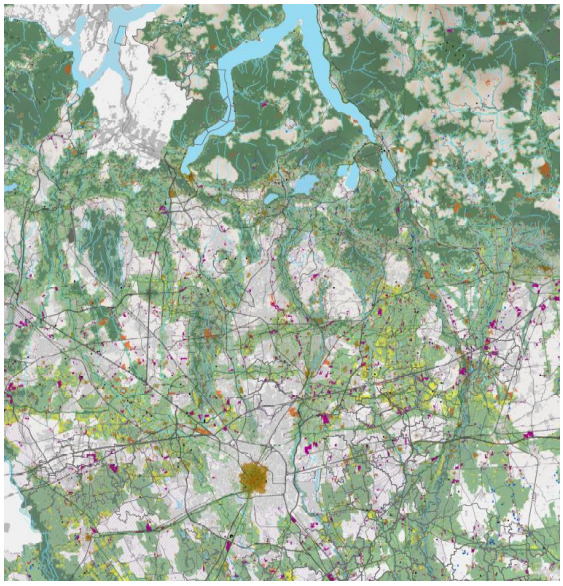
About the spatial planning dimension of the RGN, it works at different levels in term of contents, targets and governmental relationships. The network is designed by the RLP, appointing the main objectives at regional level as a multifunctional infrastructure; later are delivered to the different levels of administrative and spatial competences the task to improve and develop specific contents, subsequently the related Green infrastructure by the mean of the provincial and urban planning instruments will be planned.

Referring to the contents, the RGN is designed assuming the main landscape and environmental asset characterising the region (eg.: agriculture, lakeshores, peri-urban agriculture, forests, historical and irrigation canals, historical paths, green tranquil areas, spring water, etc.), finding out the main focal points where the environmental network and the landscape cornerstone elements converge (Figure 3).

According to the diverse territorial specificities, these elements could be open areas where the presence of ancient monasteries or historical rural settlements is combined with precious agricultural areas and wetlands, rural historical paths and irrigation canals, and where the RGN provides the integration of green and blue networks. This allows combining in a durable e strategic perspective the diversity and richness of a territory where the natural characterization was enriched during the time by the humankind, carrying out a spatial structure where natural and anthropic elements established a good integrated and working well system, identified in a typical landscape feature.

The RGN works proactively orienting its construction with linking sites of environmental importance to other elements of landscape and cultural importance in a unique network.

The RLP establishes by the RGN the main regional priorities in the environmental context and the focal points of the network. Strategic regional knots, cornerstones and areas (e.g.: main rivers, lakes, paths, eco-museums, etc.) are planned, giving to other administrative levels specific competencies and tasks to improve the system based in the regional ecological backbone network. Startig from the RGN network, provinces and municipalities will improve secondary networks and implement territoral development according to the RGN structure by the mean of their planning instruments.



To complement this approach the RGN works on areas, knots and part of the network under risk for anthropic pressure or intercepting derelict areas needing to be recovered as recognised of priority importance by the RLP.

Figure 3 – Regional Landscape Plan: proposal of the RGI – Detail (RL and DASTU)

As an example, in the metropolitan region of Milan, these sites are along the rivers or in the southern periurban fringe of the city that is particularly subject to settlement pressure but where is still present an important agricultural and environmental asset. Infact the metropolitan region is characterized by dense and sprawled urban settlements, residual open space, marginal agriculture, but also by valuable ancient rural settlements, ancient monasteries and the lasting countryside.

Further, residual spaces with important biodiversity, a valuable agriculture production and a tradition of rural activities still exist in this area. The RGN can help to put in value and give a specific perspective to urban agriculture, attention to the periurban landscape and revaluate derelict peripheral areas within an integrated green network strategy.

This way the RGN responds to both the principles of conservation (with protection) and restoration (with recovering), allowing to enhanche the territorial capital of a rich despite unbalanced region. The RGN acts in a more extended way compared to that proposed by the European Environmental Agency (EEA, 2014:19) where the RGN works mainly on the habitats and ecosystems.

Starting from the general objective of the landscape improvement as main target of the regional plan, the related aim is to recognize the RGN as a natural and semi-natural structure characterized by multifunctional functions.

It is designed and recognised as a multifunctional resource, capable of delivering a wide range of benefits to citizens and nature. It can contribute to climate mitigation, providing ecosystem services, biodiversity protection, renewable energy, enhancing identity, cultural values and resilience.

The plan of the RGN should establish at regional scale the governance rules and the main contents, aims and strategy for its implementation, giving to the decision makers at different scale of planning the responsibility (town and country planning) to develop and implement contents of the RGN at the different territorial scales. This is by the application of the principle of subsidiarity, in order to improve the role and responsibility of decision makers more close to citizens, with a multi-scalar and learning process and for improving active citizens' participation to the decision making process.

Further, in the plan it is very important to improve the role of a RGN in order to provide a framework useful to connect and coordinate at regional scale different policy domains such as agriculture, forestry, nature, energy, culture, tourism, and disaster prevention. In planning policies, the RGN should be useful to promote concrete and fruitful relationships between built up, periurban and rural areas, giving a framework in which connections and relationships include proactive protection and carefully transformation policies.

3 A LEARNING BASED PROCESS

The importance of this project is that RLP intends to develop the RGN as a green infrastructure with the contents of a GI strategy as a fundamental element in a comprehensive planning instrument. This can improve a strategy directly influencing sectorial planning/policies and territorial planning, in fact in Italy landscape planning is directly referred to a constitutional competence and then it is hierarchically higher and more powerful compared to other planning instruments. Then the Regional Landscape Plan can assume the role of a meta-coordinator of diverse but convergent strategies environmentally oriented (climate adaptation, sustainable energy, biodiversity, land taking, etc.).

A second issue that gives relevance to RGN project is because it allows a sort of extension to the concept of Green Infrastructure strategy, being the RGN tailored and adapted according to specific contents and feature of the diverse territories, and then giving a comprehensive value to the concept of multi-functionality of the RGN.

A third point of interest is referred to the structure of the RGN that implies a strong awareness of the diverse governmental competencies involved in its planning and management. It is created at regional level and contains the main strategic objectives but it is strictly linked to the further level of planning for its successfully implementation, then part of the contents and design have to be completed for its further improvement by other level of planning and management in a sort of vertical horizontal cross-disciplinary coordination.

As in the case of GI, they can work at different level: from the EU (with the GI strategy) to national and regional level with building up the main backbone network structure sketching the principal feature of a more extensive physical structure.

Local or town/city scale	Regional and national scale	EU level	Descriptor
Natural and semi-natural ecosystems, such as pastures, woodland, forest (no intensive plantations), ponds, bogs, rivers and floodplains, coastal wetlands, lagoons, beaches, marine habitats	Extensive agricultural and forest landscapes, large marsh and bog areas, rivers and floodplains, shorelines/coastal zones	Freshwater systems, major river basins, mountain ranges, regional sea basins	Core areas – outside protected areas
Local nature reserves, water protection areas, landscape protection areas, Natura 2000 sites	Regional and National Parks and wilderness zones (includes Natura 2000 sites)	Ecological Networks with cross-border areas, incl. Natura 2000 network	Core areas/protected areas
Restored areas which were before fragmented or degraded natural areas, brownfield land or disused quarries; transitional ecosystems due to land abandonment or regeneration processes	Restored ecosystem types	Restored Landscape systems covering a substantial part of agricultural/forestry areas and industrialised sites, including cross-border areas	Restoration zones
High nature value farmland and multi-use forests (such as watershed forests); protection forests (against avalanches, mudslides, stonefall, forest fires), natural buffers such as protection shorelines with barrier beaches and salt marshes	Extensive agricultural landscapes, sustainable forest management on regional and national level, functional riparian systems	Transboundary landscape features on river basin or mountain range level, sustainable coastal and marine management zones related to the respective sea basin	Sustainable use zones
Street trees and avenues, city forests/woodlands, high-quality green public spaces and business parks/premises; green roofs and vertical gardens; allotments and orchards; storm ponds and sustainable urban drainage systems; city reserves incl. Natura 2000	Greenways, green belts, metropolitan park systems	Metropolitan areas with substantial share of high quality green areas in Europe, including coherent approaches in cross-border urban zones.	Green urban and peri-urban areas
Hedgerows, stone walls, small woodlands, ponds, wildlife strips, riparian river vegetation, transitional ecosystems between cropland, grassland and forests	Multi-functional, sustainably managed agricultural landscapes, riparian systems	Supra-regional corridors, substantial share of structure-rich agricultural, forestry or natural landscapes	Natural connectivity features
Eco-ducts, green bridges; animal tunnels (e.g. for amphibians), fish passes, road verges, ecological powerline corridor management	De-fragmentated landscapes, improved areas along transport and energy networks, migration corridors, river continuum	European-wide or transnational defragmentation actions	Artificial connectivity features

Figure 4 – Physical features of Green Infrastructure in relation to scale and function (EC, 2016:156)

Particularly, at regional level have to be fixed the main strategic green hubs and linear elements of the network, constituting the cornerstones of the strategy in order to further improve a coherent network of GI at local level and further carry out operative measures (projects) springing up a virtuous circle (Figure 4).

In the case of a strong anthropic region like Lombardy a GI have to be tailored according to the specific territorial feature, taking in account and valorizing specificities of the complex mosaic composing it. The RGN and the subsequent Provincial Green Network and Local Green Network have to interact positively to work out efficient solutions against the risk of further fragmentation of the territory and ecosystems. In

positive, the diverse green networks can to improve relationships between the natural and antrophic systems in order to ensure efficient ecosystem services.

In the European Commission communication Green Infrastructure – Enhancing Europe's Natural Capital (EC, 2013a), GI is defined as a tool for providing ecological, economic and social benefits through natural solutions, helping people to understand the advantages nature offers human society and to mobilise investments that sustain and enhance these benefits (Figure 5).

Being the GI a spatial concept providing services at different scales it could assume the character of a governance instrument that allows coordination and integration of policies. In a very antropized region like Lombardy the most important resource will be even more an efficient and reliable territorial system and the RGN can help to go behind the typical conflict between grey and green infrastructures, focusing on the quality of landscape and environment as a key issue for the durable economic attractiveness of a region.

Figure 5 – GI provides multiple functions (EEA, 2014)

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ID 1392 | POLITICAL CONFLICT ON SPATIAL PRACTICE AT URBAN PARKS IN TURKEY: CASES OF ANKARA AND İSTANBUL

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1 INTRODUCTION: WHAT IS 'POLITICAL' AT URBAN PARKS?

Urban parks are defined as 'green', 'open' and 'public' spaces where citizens recreate themselves; interact with nature and each other. Furthermore, (as lived spaces) parks provide a backcloth for spatial practices and (re)produce urban everyday life via framing daily rhythms and behaviours within their physical boundaries. Nonetheless, urban parks (as conceived spaces) are regulated via official decisions of the state, especially by the hand of local governments, which implies the spatial policy of the party in power and capital accumulation process rather than use value of inhabitants and spatial quality of natural-built environment.

Indeed, spatial policy is fragile particularly in the countries like Turkey, since it is extremely influenced by the political-economic shifts. Moreover, neo-liberal spatial policies stretched the limits and definitions of public and private spaces; which led to both deformation of open-green areas and privatization of public spaces.

We can follow a disruption and displacement process within urban public spaces and green areas especially in the cases of Ankara and İstanbul, two great cities of Turkey. As an essential example, Ankara was conceived and re-designed delicately in 1920s as the capital of newly-established nation-state which has both a spatial and political essence in the planning history of Turkey. The re-creation of Ankara served for not only creating new publics with their (public) spaces but also constituting the examples of modern city planning in new Turkish Republic (i.e. Gençlik Park [meaning Youth Park, one of many examples constructed in several other Turkish cities in early-republican period] and Güvenpark [the name of the park means 'safety', 'trust'; it was designed with a symbolic-political content and formed as a part of both the master plan of the city (Jansen Plan) and micro design of the city–centre]). However, public space pattern of the city has been gradually disrupted in the following decades. Rather than staying in and practicing publicness, citizens tend to pass through open public spaces, which is partly a result of incremental and arbitrary approaches to the design and construction. Moreover, the political-symbolic displacement process –during the reproduction of open public spaces and urban greenery– led to a decrease in the socio-spatial quality of such spaces. On the contrary to the first era of early-republican period, dysfunctional and poor-quality public spaces have been constructed and reproduced through plans, codes and projects of decision makers hand in hand with market mechanisms though their recreational and public potentials via urban daily experience.

Parallel to the displacement process witnessed in the capital city, disruption and deformation were observed in quality and quantity of green areas in several locations, particularly in metropolitan cities. As the most critical case, the attempt to reconstruct Topçu Kışlası –one of the military barracks from Ottoman Period– in Taksim Square, İstanbul, by demolishing Gezi Park [in 2013] led to several struggles spreading all over the country. This contradiction appeared as a breaking point in both political and spatial history of Turkey. Nevertheless, the JDP (Justice and Development Party) Government has continued to interfere public spaces and green areas after June Resistance at Gezi Park (in İstanbul), such as construction of a mosque in Validebağ Grove in İstanbul, construction of the new house of president and Ankapark in AOÇ (Atatürk Orman Çiftliği – Atatürk Forest Farm), and destruction of almost 6000 trees in Yırca Village, in Soma, despite the legal rejection of the construction permit, which may be seen as 'sickness' (as caricatured in Fig. 1.). These attempts also resulted in conflicts, indicating the symbolic tension between the two faces of the public: the inhabitants (the 'public' as users) and the government (the formal 'public' in the role of state who has the right and responsibility to shape physical forms of public spaces and green areas), which implies the political dimension of the issue.

Figure 1 - A cartoon criticizing the green policy of JDP, Behiç Ak, 22.11.2014, Cumhuriyet
Source: http://www.cumhuriyet.com.tr/cizim/147115/Behic_Ak_Kim_Kime_Dum_Duma.html

The cartoon (in figure 1) criticizes the recent attempts of central government in Turkey; the translations are (from left to right, up to down): (1) “They were constructing a building in Validebağ Groove”; (2) “They were determined to cut the trees in Gezi Park”; (3) “A law was enacted to cut the olive trees”; (4) “Hundred, thousands of trees were cut for the construction of bridge and airport in İstanbul”; (5) “They are going to construct buildings on the open spaces for gathering during earthquakes”; (6) “Oh my god! The state has officially got sick!” The recent spatial policy of JDP’s government on environment and green is criticized in the cartoon, arguing that the state has got sick. Spatial policies interfere not only our physical environments but also via spatial projects they influence our daily lives, rhythms, rituals, construction process of self-identities and social bonds. The mentioned cases above indicate a turning point to a new era in the green policy of Turkish governments and also imply a potential field of political-symbolic struggle through urban space. Considering this turning point, “how urban parks function via reproduction of space recently” occurs as a critical question. Such spaces promise spatial practices linked to a pure use value rather than exchange value, so “how can urban parks survive within urban spatial pattern as ‘a natural’ and ‘an open public space’ within this mode of production”?

Although (open) public spaces, especially urban parks, are on the basis of our daily experience and self-reproduction process; in Turkish case, they have turned out to be places where we pass through and seem to be at the mercy of the decision makers or to be constructed through market mechanisms, which lead to arbitrarily developed open public spaces. However, they have great social, political and professional potentials. The recent attempt to demolish Gezi Park (and the struggles over it since June 2013) is a good example of both of these situations in Turkey. The opposition rose against not only the spatial intervention to our organization of public spaces but also to the undemocratic intervention to our everyday life and rhythms.

This transformation and struggle will be critical in following years in Turkey. This very recent struggle indicates the tension between users and (technically or politically) designers of these spaces. This study bulldozes the conflictual nature of urban parks in Turkish case within examples of reproduction of such spaces especially in Ankara (the capital city of Turkey) and in some other cases in İstanbul (the largest metropolis of the country) through the analysis of ‘reproduction mechanisms’, ‘meaning shifts’ and ‘spatial-historical phases’. These examples would both demonstrate a framework for the main question of the study: how has neoliberalism shifted the boundaries of symbolic/political content of Turkish urban parks; and would indicate the political-spatial potentials rested in this shift such as the case of Gezi Resistance during June 2013.

2 HISTORICAL PHASES FOR REPRODUCTION OF URBAN PARKS IN TURKEY

Most of the largest parks in Ankara were created in 1920s after the declaration the capital of new nation state: Turkish Republic. Urban parks did not occur until Republican Period (Oğuz, 2000). In the Ottoman Era, palace gardens existed under the ownership of the Sultan; society recreated themselves in the orchards (bağlar) and private gardens. Therefore, large urban parks in Ankara are products of 'Republican project to construct a modern society' (Oğuz, 2000: 165): [i.e. Gençlik (Youth) Park (see Fig. 2.) is the first planned urban park to supply the public recreation need in Ankara (Uludağ Sökmen, 1998a, 1998b; Oğuz, 2000)].

Figure 2 – Gençlik Park, 1953
Source: Gürkaynak Alpayeski's Personal archive, in 'Ankara Resimleri Meraklıları Platformu'[Facebook group]

The first dominant theme related to phases for urban parks, which indicates a transition process, is a revenge on socio-spatial inheritance of Ottoman Empire (İlkay, 2016). In the second half of 19th century, the industrial revolution and capitalist mode of production influenced the legal-institutional framework and spatial organisation in Ottoman cities as well. Ottoman Empire was open to capitalist relations; the new city centres were organised around banks, insurance firms, hotels, and office blocks rather than market places located around Bedesten [a covered Turkish bazaar]. The city centre was expanded with train stations, docks, harbours, post offices; and state buildings settled among this pattern as a result of rising bureaucracy in the empire. In addition to spatial re-organization of the centre, new transportation modes (such as cars, trams, ferries, suburban trains) evolved beyond pedestrianized patterns, which also led to urban sprawl, suburbanization and shifts in both societal stratification and types of landuse. Such a sudden urban transformation awoke the lack of legal-institutional organization and a necessity of planning. In 1836 and 1837, Van Moltke prepared the first plan of the Empire for İstanbul. In 1848, Ebniye Nizamnamesi (the Code of Structures) was legislated for İstanbul (Tekeli, 1998). This legislation aimed to regulate land expropriation, construction permits, width of streets, and height of buildings (Çalışkan, 1990; cited in Müftüoğlu, 2008). Moreover, as one of the first institutional regulations in the empire, in 1855, Şehreminliği / Şehremaneti (a kind of municipal authority) was established for the city of İstanbul (Tekeli, 1998, Kayasü, 2005); 'şehir' means 'urban' and 'emin' means 'trustworthy' in Turkish, which indicates a role attributed to a mayor or institution as the guard of the city (Cengizkan, 2002) and implies the roots of the conflict between ownership and possession of urban space in Turkish cases. In 1882, the first development law of Ottoman Empire, Ebniye Kanunu (the Law of Structures) was enacted. Construction was forbidden in recreation areas and urban parks were constructed in İstanbul in several locations such as Gülhane, Sultanahmet, Fatih and Üsküdar-Doğanlar, which was a positive dimension of the new law (Müftüoğlu, 2008). The first urban green area in Ankara was Millet Bahçesi –Garden of Nation (see Fig. 3.). This space, located in Ulus (the old city centre), was the only urban green (before Republican Era), consisting of a small pond with wooden theatre building. In addition to this garden, vineyards in districts of Ankara such as Çankaya, Etlik and Keçiören were used as recreational needs by the citizens of the city (Çalışkan, 1990; cited in Müftüoğlu, 2008).

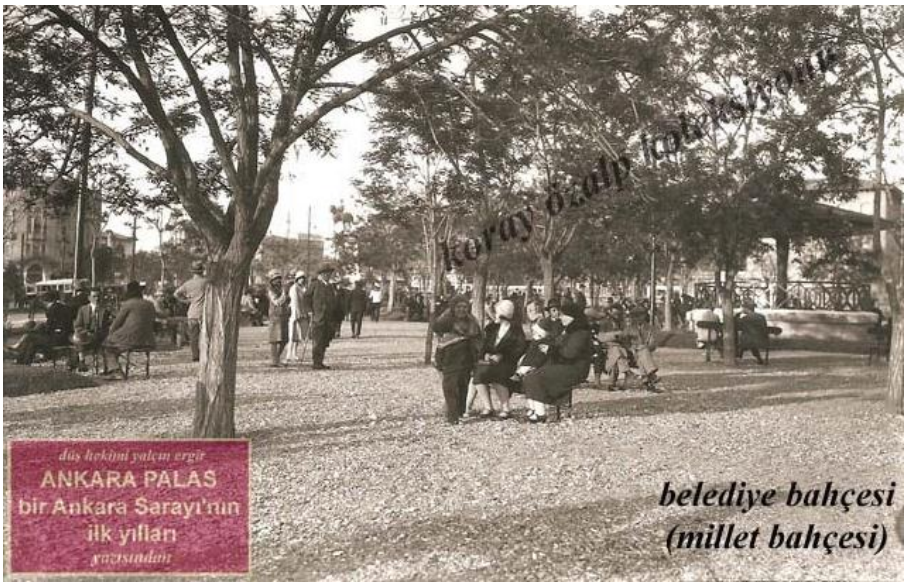

Figure 3 – Millet Bahçesi (Garden of Nation), Ulus
Source: http://www.ergir.com/2012/Ankara_Palas.htm

Spatial and institutional regulations continued till the beginning of 20th century in the empire, however these attempts were not enough to organize a holistic, planned beautification and development for cities; the macroform was not considered in these limited regulations, which was the most lacking issue in the Empire's spatial policy at that time. Moreover, these spatial re-organization attempts were condemned to be unsuccessful since a new political and spatial organization was forthcoming in this land. Şengül (2003) labels the urbanisation period after the establishment of nation state in Turkey as 'urbanisation of state' during the years between 1923 and 1950. Within this period, Ankara was declared as the capital city, which was attempted to be developed as a spatial project of the extension of the newly established nation state ideals.

This era indicates a rejection of the spatial-institutional inheritance of the Ottoman Empire and relatively a holistic spatial policy towards not only urban green areas but also all of the urban segments. The lack of central political-spatial organization and organic urban pattern (inherited from the Empire) complicated the control of central nation state, therefore the spatial transformations had to be organized at first nation state scale and then the city had to be re-organized as political-spatial node of the modernist project of the state (Şengül, 2003, Tekeli, 1998). Ankara, as the capital city, was selected as the model for this transformation, which was a challenge (Cengizkan, 2002).

Various legislations were enacted as a part of the new spatial policy (Cengizkan, 2002; Kayasü, 2005). Ankara Şehreminliği (The Directory of Development) was established in 1924 (Müftüoğlu, 2008), which was equipped with a great spatial authority (Tekeli, 1998). As the first activity, Lörcher, a German architect, was assigned to prepare a report (with three plans attached to it) on the inventory of spatial and social needs of Ankara (Cengizkan, 2002; Cengizkan, 2004). Lörcher Plan, which constituted the basis of Jansen Plan –the first official plan of Ankara approved in 1928– organized both the new neighbourhood as Yenişehir [recently Kızılay Square (which later turned out to be the new centre of the city in 1950s)] and the pattern of public spaces and green areas reproducing the public sphere within this neighbourhood and the whole city. The square with Güvenpark, attached to it, was designed as the node of this pattern through a holistic and organized planning attempt (Cengizkan, 2002).

Figure 4 – Güvenpark, Yenişehir (New City)
Source: Gürkaynak Alpayeski's Personal archive, in Ankara Resimleri Meraklıları Platformu [Facebook group page]

Güvenpark was also attached to Kızılay Square, and both were designed to be the symbol of the new republic and the public space of the bourgeoisie (see Fig. 4.). Located at the intersection of two main streets, Kızılay Square was planned to provide a new kind of public life via spatial elements such as Havuzbaşı and Güvenpark (Batuman, 2000; Batuman, 2002). Moreover, AOÇ (Atatürk Orman Çiftliği – Atatürk Forest Farm) was conceived in 1925, on a 150 000 da area, by the demand of Mustafa Kemal Atatürk, the founder of the nation state. With this multifunctional farm, a large area would turn out to be a huge urban green space in the very centre of both Ankara and the middle Anatolia (see Fig. 5). This space would provide space for both agricultural activities and recreational facilities for the citizens; and in addition to these functions, the daily needs of the citizens for milk, beer, cheese, oil, and yoghurt would be met via the production in this farm (Müftüoğlu, 2008).

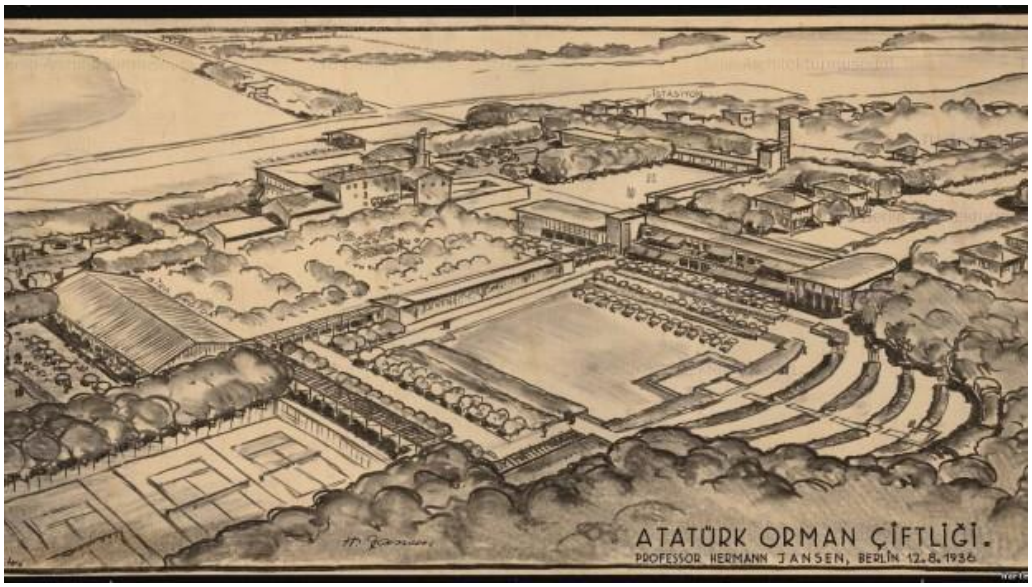

Figure 5 – A Drawing of Atatürk Forest Farm (AOÇ), 1936
Source: http://www.kuzeyormanlari.org/2014/08/21/ataturk-orman-ciftligi-arazisinin-ucte-ikisi-gitti/

Jansen Plan was sensitive to both protecting the natural layout of the city and creating a spatial structure of urban greenery. Within a holistic approach, valleys and brooks were planned to be protected and strengthened via green belts and the continuity of urban green spaces was proposed (Müftüoğlu, 2008). Furthermore, green areas were planned to meet citizens' recreational and social needs (Değirmencioğlu, 1997). Gençlik Park (Youth Park) was located at the city centre, Ulus, consisting of a huge water

component, which covered 1/3 of the total area (Kayasü, 2005); this space was realized in 1946, such a huge water element was a dream at that time at the heart of an Anatolian city (Uludağ Sökmen, 1998.b.). Güvenpark was conceived to be a 'square park' attached to Kızılay Park (see Fig. 6) as a component of the green space system defined in Jansen plan (Memlük, 2009). Kızılay Square consisting of Güvenpark was designed as a spatial strategy to create a public sphere with its spatial necessities (Batuman, 2000 & 2002). Atatürk Boulevard was playing an essential role as an axis connecting critical open and public spaces such as parliament, Güvenpark, Kızılay Square and Zafer Park (means 'Triumph Park' in English). This pattern created a public-recreational axis [north-south skeleton of public sphere in Yenişehir] (Batuman, 2002) reaching to Gençlik Park in Ulus. The parks on this axis [Gençlik Park, Kızılay Park, Güvenpark and Zafer Park] were meeting the recreational needs of the citizens (Memlük, 2009). In this period, youth parks, culture parks, and urban forests were constructed in several cities by the demand of Atatürk to provide public places for citizens to socialize and educate oneselves on the new public domain of the nation state. These urban green areas were designed as squares and public gardens in several cities (such as Adana, Afyon, Ankara, Antalya, Bolu, Bursa, Çanakkale, Gaziantep, İstanbul, İzmir, Samsun and Trabzon) between 1923 and 1945. These spaces were used as tools and stages to publicise the reforms of new period – i.e. Atatürk presented the new Turkish alphabet in Sarayburnu Park in İstanbul, on August, 9th, 1928 (Gündüz, 2002). Summarising during the urbanisation of state period open and green spaces were used as not only recreational places but also representational spaces forming the social-political perceptions of citizens.

Figure 6 – Kızılay Square and Güvenpark, 1942, postcard
Source: http://urun.gittigidiyor.com/ANKARA-KARTPOSTAL-KIZILAYMEYDANI_W0QQidZZ5248552

By 1950s, modernization in agricultural techniques led to massive population movements from rural areas to cities in Turkey. In fact, Ankara had experienced population growth after its declaration as the capital which resulted in difficulties to implement holistic plans and provide a regular urban development. Moreover, this era witnessed some other political-economic shifts. The rest of the world was passing through a process of Welfare state after the Second World War and Turkish economy was opened to wider capitalist relations by the help of Democrat Party after the transition period to multi-party regime. Şengül (2003) names this chaotic era as 'the urbanisation of working class'. Squatter settlements spread all over the large cities in the form of 'slum belts; informal sectors and authentic transportation modes (like 'dolmuş') appeared in the daily life of cities as a result of lacking systems of the state and control mechanisms with lacking infrastructure (Tekeli, 1998). New comers (coming from rural areas turned out to be workers from being farmers) encountered and conflicted at and through urban space with the urban inhabitants which had political and spatial consequences (Şengül, 2003). The first spatial transformation related to our issue was that, Kızılay (earlier Yenişehir as a housing neighbourhood) turned out to be a commercial centre by 1952 (Batuman, 2002). The public spaces of this area, especially Güvenpark, attracted the ambition of working classes who could not access there before, this occurred as both a political/symbolic and a spatial-social demand (İlkay, 2008). During this period, differentiated social groups and classes could encounter at Kızılay, which was a city centre and a square with an urban park, these

encounters developed differentiated narratives and symbols over the space which formed the political and symbolic content of the space (Batuman, 2002). The first and largest designed public space of the capital city turned out to be a political stage and an issue which was subjected to struggles [for a detailed narrative of this political-spatial shift, see: İlkay, 2007 and İlkay, 2008].

Şengül (2003) defines a third era in Turkish urbanization and planning history by 1980s as: 'Urbanization of capital'. In 1970s welfare state declined in leading economies of the world which resulted in a shift from redistributive spatial policies to growth oriented neoliberal spatial policies as well. Moreover, identity politics shone out and replaced distributional politics. By 1980s all of these changes influenced the urban green policy in Turkey in three dimensions: (1) use value has replaced with exchange value more deeply which limited the creation and reproduction of urban space; (2) such an approach led to a decrease in the spatial quality and a fragmentation of mechanisms and processes of reproducing urban space; (3) as a result of rise in identity politics, the space reproduction turned out to be more sensitive to representational politics and dynamics, which opened a path to increase in symbolic-political struggles on urban green areas and therefore the public character of the urban green areas precluded the natural dimension and open space character of such spaces (İlkay, 2016). These themes dominate the reproduction mechanisms for urban parks in Turkey, by 1980s, which will be discussed within examples in the next sub-section of the paper.

3 SYMBOLIC STRUGGLES (ON SPATIAL PRACTICE) AT URBAN PARKS

The economic-political context of Turkey brought a shift to exchange value from use value parallel to the world economies. This shift has been deepened in subsequent decades; 2002 is a turning point for Turkish politics, when the Justice and Development Party (JDP) grabbed the power. 'Deregulation' and 'liberalization' have framed Turkish planning and development structure by 2002, which catalysed private sector in urban spatial reproduction processes via legal and institutional rearrangements (Balaban, 2008). This facilitation decreased the quality and quantity of urban green areas (i.e. Fig. 7), which have hardly met the needs of increasing urban populations and developed lands. However, the official sources claim the opposite, which makes it difficult to document the exact transformation of amounts and quality of urban green spaces (İlkay, 2016). Nonetheless, in-depth interviews (conducted during the writer's PhD thesis [İlkay, 2016]) demonstrated that citizens perceive an 'impoverishment' of green and open spaces in Ankara.

Figure 7 – The decrease in green areas in İstanbul
Source: http://wowturkey.com/forum/viewtopic.php?t=136028&start=160

The planning system has been gradually fragmented; separate institutions conflicted in the same segment or thematic space of the cities and they had to interfere at a location with respect to various legal texts (Duyguluer, 2012). This resulted in a chaos, which grow this impoverishment up. In the cases of Ankara, the metropolitan municipality seems to either conflict or harmonize with the district municipalities, this leads to a duality in the manner to interfere the local spaces and to transfer funds for construction of urban parks. The discussions among municipalities or the juridical struggles between metropolitan municipality and the chamber of architects and planner imply the changing definition of urban green areas. The cases indicate that, the natural character and basic motivation for urban green areas have been withdrawn so

that the parks seem to be conceived as either 'symbolic spaces' or stages for political demonstrations. Figure 8 demonstrates an announcement of the opening ceremony of an urban park, which is attached to urban transformation project area; however in fact such an ceremony seems to perform two political motivations: (1) to give a stage to the existing prime minister to explain his party's propaganda for the forthcoming elections in June 2015 and (2) to legitimate the urban transformation processes via a ceremony of drawing lots for the possible inhabitants of the newly developed housing area (see Fig. 8) (İlkay, 2016).

Figure 8 – The announcement of Ankara Metropolitan Municipality for the opening ceremony of Hatip Çayı Park on 23.05.2015

In Turkish metropolitan cities, such a content for spatial development was not an issue of 2000s, rather it rooted from earlier. By 1990s, a new political era began with the local elections in 1994. Islamic municipal politicians captured the power of several cities; Refah (Welfare) Party won the elections at the prominent cities such as Ankara, and İstanbul which had been castles and models of spatial modernization project of newly established Turkish Republic since 1923 (Doğan, 2007). Between 1997 and 2002 the Islamic local governments performed several populist spatial implementations at Kızılay Square and Güvenpark such as İftar tents, free public transportation during Bayrams (religious festivals), concerts of popular singers, and delivering plastic balls after victory of national football team. Batuman (2002) discusses the symbolic function of such tents with free public transportation as providing the conservative poor populations (who are living in the peripheries of the city) to reach city centre both bodily and symbolically since they would be visible at urban open public spaces and green areas with their Islamic identity and cultural values. This was a reciprocal desire among the mayors, local politicians and the communities who gave charge to them (Batuman, 2002).

Doğan (2007) defines 'Islamist' as not a rise of spirituality, rather it is an ideology or legitimizing tool on the political stance of the Islamist Politics and it is framed through a set of systematic attempts to regulate both the state and the society. Refah (Welfare) Party [RP] continued their success in the next parliamentary elections in 1995, as becoming one of the prominent actors in the parliament after elections. This success influenced the symbolic struggles occurring in the urban space via spatial projects, symbols and limitations on spatial practice. Doğan (2007) examines the Islamist Municipal Governments in the case of Kayseri, one of the large cities of Turkey, located at Middle Anatolia. He argues the Kayseri case as a significant example of reproducing urban space as a part of their great representational project which serves for empowering the societal-political impact of the Islamist movement within public sphere. Şükrü Karatepe, the mayor, practiced a strategy called 'White City Kayseri' via reconstructing certain public spaces by reorganizing with Islamic motifs between years 1994-1998. These motifs would emphasize the conservative values while deleting the previous symbols and structures. Seljuk motifs and spatialisation symbols dominated such an attempt (Doğan, 2007).

Figure 9 – The decrease in green areas in İstanbul
Source: 'The Park, The Penguin, and The Gas', Öztürkmen (2014)

Related to this issue, one of the recent similar trials is the attempt to construct Topçu Military Post at Taksim Squre. This case is critical since not only it is a top-down intervention; but also, this specific intervention occurred with a potent to create counteraction on both symbolic content of spaces and freedom of everyday urban lives (see Fig. 9). Gezi Park in Taksim Square was attempted to be demolished by the party in power, towards the end of May in 2013. The JDP government aimed to re-vitalize Topçu Military Post as a part of pedestrianisation project conceived at the historical and political square of the city. This spatial intervention was certain to be a political attempt, which comprises a symbolic displacement process and an attack to the collective memory of the citizens in İstanbul, and Taksim Square. The government insisted on this spatial project though the counter-views rose; without any legal permit to reconstruct the military post, the trees were begun to be cut off and the police responded harshly to the ones who reject this illegal reconstruction. When the police's intervention got more violent towards activists, and inhabitants of the park –who were trying to protect the space, as the police burnt the tents of the inhabitants, the other cities also began to rebel against both this project and violent activities of the police. Figure 10 demonstrates the harsh struggles among policemen and protestors in Ankara, Kızılay, with reference to the events in İstanbul (İlkay, 2016).

Figure 10 – Kızılay District and Yüksel Street (one of the significant pedestrianized paths), Ankara Policemen are located at Güvenpark, in Kızılay while the protestors are struggling with them along the boulevard (photos by Hüseyin Aldırmaz)

This struggle was not solely against the destruction of a couple of trees; but also, it rooted from a reaction towards intervention on undemocratic re-organization of both our public spaces and daily rituals and rhythms. This conflict indicates the tension among the users and designers of the same space; also, it implies a struggle field on urban everyday spatial practice. Protests continued several days via severe struggles, death and injuries, polemics, all of which has influenced our political-societal atmosphere since then. However, Gezi Park, as a living site and environment showed us a potent to re-create our own urban daily life spaces and practices.

Figure 11. Protestors created their own daily spaces and practices after capturing the park, Gezi Park, İstanbul, 14.06.2013, (Personal Archive)

The protestors with the inhabitants of İstanbul, and out comers all together occupied the park, set their own daily life, rituals, and spaces such as library, forums, music, eating and drinking patterns (without paying money) and spatial-political discussions, activities (see Fig. 11). Although this democratic and communal atmosphere was destroyed with gas bombs and other interventions on the evening of 15th June [by demolishing tents, all the spatial setting, posters, stands, activity nodes], this spatial practice has been a symbol and a model of counter actions towards undemocratic spatial projects and interventions (İlkay, 2016).

Gezi Park event and June Resistance has echoed since then; several park forums and NGOs were created after this model struggle [Such as: Anıtpark Forumu, Atatürk Orman Çiftliği Halk Meclisi, Ayrancı Forumu, Çayyolu Üç Fidan Parkı Forumu, Çayyolu Atapark Forumu, Çayyolu Türkkonut Halk Meclisi, Eryaman Forumu, Ethem Sarısülük Parkı Forumu, Güvenpark Forumu, Seğmenler Parkı Forumu, Yüzüncü Yıl Forumu and Tuzluçayır Dayanışması (Ankara forumları hayallerindeki Ankara'yı konuştu, Sol, 29.09.2013: http://haber.sol.org.tr/kent-gundemleri/ankara-forumlari-hayallerindeki-ankarayi-konustu-haberi-80334)].

However, on the other hand severe interventions and undemocratic spatial projects also continued.

Government, with the help of private sector and certain local governments, has attempted to transform certain green spaces such as constructing a mosque in Validebağ Groove in İstanbul, which is a great breathing space among housing neighbourhoods; constructing the Presidential Palace and an entertainment park in Atatürk Forest Farm, which is both an inheritance of the founder of Turkish Republic and one of the largest and oldest urban green spaces of Ankara (see Fig. 12.); cutting almost 6000 trees in Yırca Village, in Soma, though there is a legal rejection of the construction permit (İlkay, 2016). Also, a recent attempt has threatened the existence and atmosphere of Roma Park in Cihangir, İstanbul, by destructing the most of the space for the construction of social entities although the site has also an archaeological potential.

Figure 12 – Destruction of Atatürk Forest Farm via Construction of the Presidential Palace, 2014
Source: http://kentinsesi.tv/?m=2014&paged=3

4 CONCLUSION

All these attempts led to conflicts, implying the symbolic contradiction among the two sides who define the physical boundaries and spatial practice of such spaces: the inhabitants (users) and the government (who has the right to define physical boundaries of public spaces). Urban parks and other public spaces are critical sites to be seen therefore easily turn out to be representational spaces. The form and content of the symbols and political hegemony depends on usually the party in power and relations among top to down and from bottom up societal movements; however, parks which are regarded as purely natural spaces usually function as political sites –scenes and subjects.

Examining the historical phases and transformation of political/symbolic content of urban parks in Turkey (in the cases of Ankara and İstanbul), three essential shifts draw attention: (1) Recent attempts of spatial transformation of urban parks and green spaces usually imply both a rejection a destruction of especially the spatial values and practices of early republican era, the spatial inputs created by Mustafa Kemal Atatürk and his colleagues. Atatürk Forest Farm and Gençlik Park in Ankara, and Gezi Park in İstanbul are essential examples. This turns out to be a demolishment process of previous political symbols and an attempt to be seen and applying pressure through space on the opposition. (2) As exchange value has been emphasized, the quality and quantity of urban green areas have been reduced. The green policy and approach has been shifted from a relatively more sensitive conception of nature to a more aggressive approach towards nature and urban space. (3) The holistic reproduction processes and planning tools have been left aside and fragmented institutional structure and planning attempts got on the stage. But all these negative aspects did not delete the importance of urban parks. Rather, urban parks gained significance as representational spaces and turned out to be critical castles of the struggles on spatial practice at urban green areas. Acknowledgements: Special thanks to Prof. Dr. Ali Cengizkan, who supported all dimensions of the study, and contributed to the process of shaping the boundaries of the research.

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ID 1406 | GREEN INFRASTRUCTURE AS EMERGING OPPORTUNITIES FOR INCLUSIVENESS. COMPLEXITY AND DYNAMICS IN MUNICH NORTHERN REGION

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1 BACKGROUND

Munich (Figure 1) is a growing city and is one of the most competitive metropolitan areas in Germany (Figure 2), characterised by a dense concentration of functions developed through complex and dynamic ecological, social and economic networks acting at city, region and global levels. The increase of landscape consumption due to settlement and traffic is accordingly above average and accounted for 6% between 2004 and 2010. The population of the City of Munich, currently about 1.5 Mio., is expected to grow by approximately 230,000 inhabitants until 2030. With around 7% the expected population growth between 2010 and 2030 is nowhere else as high in Germany; the actual number of population for the whole region is around 5,5 Mio.

Figure 1 – Englisher Garten, Munich (Stefanie Grüber, 2013)

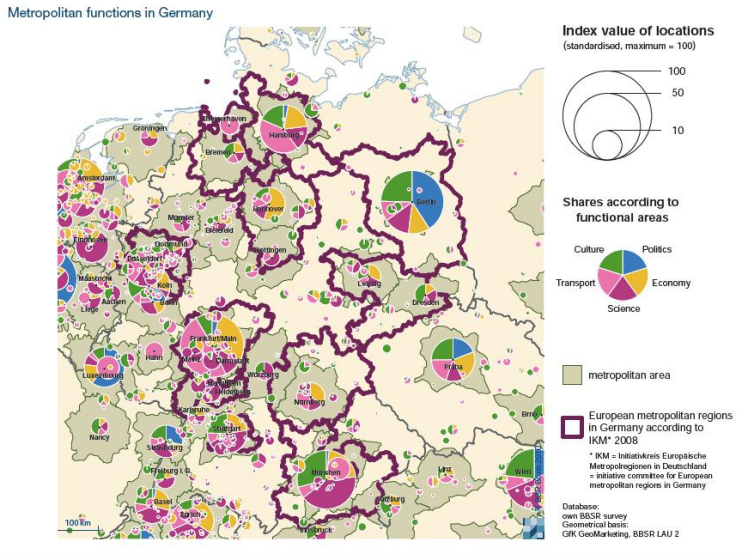

Figure 2 – Metropolitan functions in Germany (BBSR, 2010)

Within the city, the population density is one of the highest in Germany, with 47 residents per hectare. 39% of the residents are foreigners or Germans with a migration background. Population growth and urban development are increasing putting pressure on the urban green spaces. On the other hand, those trends reclaim the development of connected green blue infrastructure for recreation and other social benefits. Moreover, on-going social and environmental changes, such as the diversity of cultures and lifestyles, and the growing requirements for a healthy and resilient city already influence the space development of Munich at various levels, posing several intertwined challenges to the different stakeholders.

2 LANDSCAPES IN FLUX

Munich is situated in the Alpine foreland of Bavaria, in southern Germany. The subsurface is composed of Neocene and Quaternary formations made up of loose alluvial, fine- to coarse-grained sediments. Today's landscape is known as the Munich gravel plain, which comprises sander terraces formed during the Pleistocene glacial periods, as well as the modern floodplain of the Isar river (Bauer et al., 2006).

Extensive grassy heathlands and deciduous oak woodlands have formed over time, but today intensive agricultural lands and other human settlements have largely replaced them. The Isar river (Figure 3) - whose floodplain represents the most important green corridor of Munich - comes to the surface only in the northern part of the city, where extensive marshlands can be found. Former west-east railway networks also represent valuable urban ecological linear systems for ecological connectivity. Natural protected areas - protected by law - urban parks and public open spaces are directly managed either by the municipality or the Bavarian state (Oppermann and Pauleit, 2005; Pauleit, 2005). Around 11% of the region belongs to the Natura 2000, the largest coordinated network of protected areas in the world, listed under both The Birds (Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) and the Habitats (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) directives. A green belt, comprising almost 335 km2, surrounding the city of Munich is of great importance for biodiversity, ground water recharge, and recreation, as well as for climate mitigation functions.

Figure 3 – The Isar river (www.muenchen.de)

3 THE GREEN INFRASTRUCTURE APPROACH

Through the adoption of four planning and design principles – multifunctionality, connectivity, green-in-grey integration and social inclusion – Urban Green Infrastructure (UGI) can help to maintain and enhance quality of life in urban areas. Multifunctionality is concerned with the provision of several ecological, socio-cultural, and economic benefits, intertwining different functions of urban green space. Connectivity includes both ecological and social connectivity. Integration recognizes the potential of a more holistic approach by linking green and grey infrastructures, while socially inclusive planning is concerned with equity and environmental justice in planning and design processes. Thus, the green infrastructure approach is based on several main principles to promote social cohesion, biodiversity, climate change mitigation and adaptation, physical and mental health and well-being, and green economy (Andreucci, 2017; Hansen et al., 2016).

Urban Green Infrastructure implementation processes are open to all and incorporate the knowledge and needs of diverse parties, with special emphasis on including affected and vulnerable social groups and disadvantaged people. Consequently, Urban Green Infrastructure is seeking to balance the interests of different stakeholders in order to reach a higher level of accessibility to green space services and benefits.

Complementary to the functional issues of the UGI, there are also aspects to take in consideration, which comprises the urban and architectural quality of the surroundings of the green open spaces and the aesthetics of both.

The aesthetical and three-dimensional qualities of dwellings und open space systems are especially important in the periurban situations, because they are often anonymous, sometimes even degraded, places lacking clear characteristics. The public space represents in those contexts the “medium” able to structure and define the citizens’ mental map, facilitating orientation and identification within the daily and ordinary living spaces.

4 PERSPECTIVE MUNICH - “COMPACT – URBAN – GREEN”

The Perspective Munich “Compact – Urban – Green” urban development concept was established by the city council in 1998 and since then continuously updated. A main principle “City in Balance” has also been launched in 2015, with four strategic guidelines and ten action areas of urban development. “Foresight and cooperative management”, “Open atmosphere and attractive appearance”, “High quality and characteristic urban spaces”, “Caring and committed urban society” - the strategic guidelines - are cross section-oriented, tailoring relevant action plans to future challenges. Thematic guidelines contain specialized objectives on almost all the important urban development issues, such as welfare, mobility, education, health, business, cityscape, and ecology. Together with the strategic guidelines, objectives provide input and define future urban development goals. Strategies are implemented and turned into programmes,

actions and projects, where both risks and opportunities - focussed on individual city districts – are carefully evaluated across disciplines. Projects, actions and programmes are finally articulated following the guidelines (Perspective Munich, 2015).

4.1 MUNICH NORTHERN REGIONS

The regions between the rivers Isar and Amper, differently from southern Munich, which enjoys environmental quality and a recognized role in recreation and touristic activities, deserves specific attention needing to be conceptually re-thought. The on-going hybridizations of functions is generating a vivid debate about ecological and environmental concerns, as well as social bottom-up initiatives towards inclusiveness. The move of the Munich airport from München-Riem to its new location - 35 km north of the city centre - and its forthcoming enlargement represent, in particular, major threats for those fragile and valuable lands, having boosted anthropic growth towards the periurban north-east.

Specifically, in view of its potential for large settlements, Munich northeast becomes a strategic location, mid- to long-term, as an emerging new housing and commercial location. Coupling new building and transport infrastructure construction with landscape protection and with local demand for recreational opportunities represent a crucial concern.

With this respect, Green Infrastructure should be considered the most suitable approach in order to foster new connections among existing fragmented natural and semi-natural areas, and to provide opportunities for inclusive urban and peri-urban landscapes.

Prerequisite for any sustainable urban development is certainly the upgrading of the mobility infrastructure. Inter-connecting the old and new neighbourhoods requires improving both the road network and the public transportation - building the S8 tunnel, extending the U4, and/or the tram – and with this respect the risk of soil sealing is to be taken carefully into account (Perspective Munich, 2015).

In other northern areas, between Kunstareal and Olympiapark, the planned restructuring of the areas around the Olympic park and the Dachauer Straße offers an unusual opportunity to re-organise a large city district. This plan includes the development of the so-called “creative quarter”, a new city neighbourhood in which a new concept of living and working creatively will be implemented. Other programs envisage the reorganisation and the up-grading of the existing neighbourhoods’ openspace and green areas around the Olympic park, as well as the further development of sportive, recreational and cultural opportunities, all extremely appreciated by the population and visitors alike (Perspective Munich, 2015).

Between Milbertshofen and Freimann, the re-qualification and re-use of the former barracks and commercial areas - Bayernkaserne and Funkkaserne - into new city districts are also emerging in Munich’s north. With the extension of the Research and Innovation Centre (FIZ) by BMW, Munich technological pole will be further strengthened. This will require innovative mobility and social policies, effective beyond district limits. Apart from specific education facilities, like the BildungsLokal in Hasenbergl, new education and sport services - giving encouragement for requalification and offering attractive opportunities for recreation - would also need to be implemented. Sports are of great importance for integration, as well. Further topics already included in the programming activities are securing the existing and developing new commercial areas, while preserving the landscape, especially the heathlands, in cooperation with the neighbouring municipalities (Perspective Munich, 2015). Effective and innovative governance, consequently, represents a major challenge.

The action area of Allach-Untermenzing, also in the north of Munich, is defined by close interrelation among the issues of housing and commercial areas development, on one side, and the instances of landscape and nature protection, on the other. By re-functioning commercial into housing areas, potential areas for large settlements are emerging. The demographic growth and the change in population mix is already urging new urban open spaces. Major requests include the up-grading of social, technical and traffic infrastructural networks and the requalification of the existing natural elements and systems of the area, their importance with regard to the urban climate mitigation and adaptation, and their functions as important recreation areas. A relevant concern is also the socially critical merging of new and existing settlements and communities. A vital impulse for Allach could also possibly come from the planned new district centre at the Oertelplatz (Perspective Munich, 2015)

5 OPEN SPACE DEVELOPMENT STRATEGY MUNICH 2030

The metropolitan region of Munich offers in general a high quality of life. Besides the urban setting with its cultural values, this is also because of its natural and semi-natural landscapes, offering a variety of recreational destinations (Figure 4). Together with riverine landscapes (Isar, Amper and other rivers), urban parks, castles and other existing green spaces, Munich green belt structures the green network layer of the Open Space Development Strategy Munich 2030 - Freiraum München 2030 (Figure 5).

The focus of the urban landscape and green planning - levering on both formal and informal instruments - is above all the quality of life in the dense city of Munich. This translates into well-equipped spaces for leisure and recreation, attractive city landscapes, conscious uses of the natural resources, as well as protective measures to preserve urban biodiversity (Freiraum München 2030, 2015).

The green belt of the outskirts of Munich, in particular, fulfils an important balancing function for the city climate and serves the citizens and visitors of Munich as an important recreation area. These functions are to be maintained and strengthened. Then comes securing the agricultural usefulness (Figure 6) and linking of the green areas (greenways) in cooperation with the neighbouring municipalities. A further challenge exists in improving the styling of the city districts on the outskirts, particularly in the revaluation of urban construction quality and public areas (Perspective Munich, 2015).

The strategy Open Space Development Strategy Munich 2030 presents, in particular, three guiding themes: (i) Open space and "slow down": escaping hecticness and cautious staging of specific characteristics are key issues; (ii) Open space and “densification”: re-densification of urban structures implies also revitalization and renewal of open space qualities, (multi-dimensional spaces); (iii) Open space and “transformation”: systematic connections of city and nature, water management, urban cooling, landscape recycling, food landscapes and incremental value generation, through the implementation of aesthetic and spatial strategies.

The "park miles" are core elements of the future Munich open space development. Green corridors, that connect existing parks with the open landscape; especially at the city fringe, the park miles have great importance. They reduce also visitor pressure from natural protected areas. Among others, this strategy involves the following measures: connecting people and the environment; activating actions, programs and initiatives; stimulating participation at all level; and cooperating, especially in governance, in order to realize full potential.

Figure 4 – Overlooking Munich landscape (Fritz Auweck, 2016)

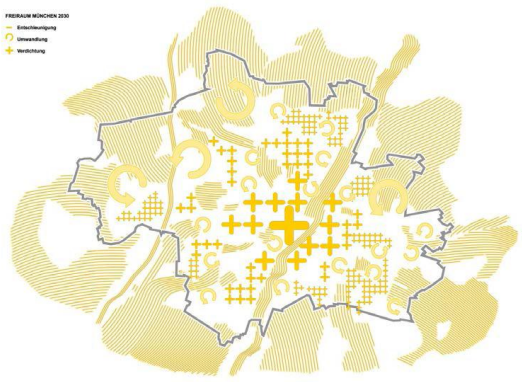

Figure 5 – Freiraum München 2030 (City of Munich, 2015

Figure 6 – Northern periurban Munich (Maria Beatrice Andreucci, 2017)

6 CONCLUDING REMARKS

In Munich dense areas, several issues and sometimes conflicting interests need to be thought in one place together: biodiversity and climate change adaptation, agriculture and recreation, transport and quality, design quality and do-it-yourself. Multiple and overlapping uses as well as temporary one at a time reclaim new strategies and tactics of cooperation amongst different stakeholders.

Munich development in coming years will show a special dynamics in the selected area by way of larger restructuring (commercial to living space) and densification (living and commercial space) activities, accompanied by substantial potentials for improving the quality of urban development. Next to energy-efficient urban redevelopment in existent buildings and new construction this includes the extension of the greenway system and the renewal of existing parks, which will contribute to better interlinking of existing and new settlement structures. There are furthermore potentials for improving the living quality on heavy traffic streets, such as Mittlerer Ring, particularly through nature-based solutions with regard to noise protection. A further goal is the maintenance and promotion of social stability in the districts through the need-based development of the social infrastructure (e.g., day care centres and schools) as well as measures for integration and education. Therefore, as stated by the Department of Urban Planning and Building Regulation of the City of Munich (2015) “the development of interdisciplinary goals and a common planning understanding for those areas as well as the accompanying integrated view and approach are of great importance” for sustainable and inclusive Munich long-term development.

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ID 1428 | ARTICULATING NATURE, CULTURE AND URBANIZATION: AN EXPERIENCE OF METROPOLITAN PLANNING IN BELO HORIZONTE

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ABSTRACT: The Trama Verde e Azul, blue and green network, or simply TVA, is one of the main territorial structuring dimensions of regional/metropolitan planning adopted for the Belo Horizonte Metropolitan Region - RMBH, Southeast Brazil. Developed as a result of a bottom up participatory planning process and inspired by international as well as local green infrastructure and river restoration programs, the TVA proposal seeks to articulate nature, culture and urbanization, through the combination of a series conservation units, open spaces, community facilities and other environmental and cultural assets, all connected by a water system of rivers, streams and lakes, and focusing on planning strategies for land use control, organic and family agriculture, ecologic tourism and ecosystem service delivery programs, among others. This paper discusses the extent to which these metropolitan planning strategies may lead to social and environment transformation towards justice, focusing on TVA implementation,

highlighting zoning categories, design criteria and other planning and community involvement programs being collectively built through a rich but very contentious combination of statutory instruments and negotiation strategies involving stakeholders, public officials, planners and policy makers.

KEYWORDS: Metropolitan Planning, Green infrastructures, Green-blue network, Belo Horizonte.

1 FOREWORD

The Federal University of Minas Gerais (UFMG) has carried out, for eight years now, an innovative experience of metropolitan planning in Belo Horizonte, Brazil, involving a significant number of faculty members, students and some independent consultants in a bottom-up participatory process that has included public officials and civil society representatives of the 34 municipalities that integrate the metropolitan region. Belo Horizonte Metropolitan Region (RMBH for the corresponding Portuguese acronym), is located in the Brazilian Southeast and is the third largest in population in the country, having 5. 873. 841 inhabitants according to 2016 latest census estimates (Figure 1).

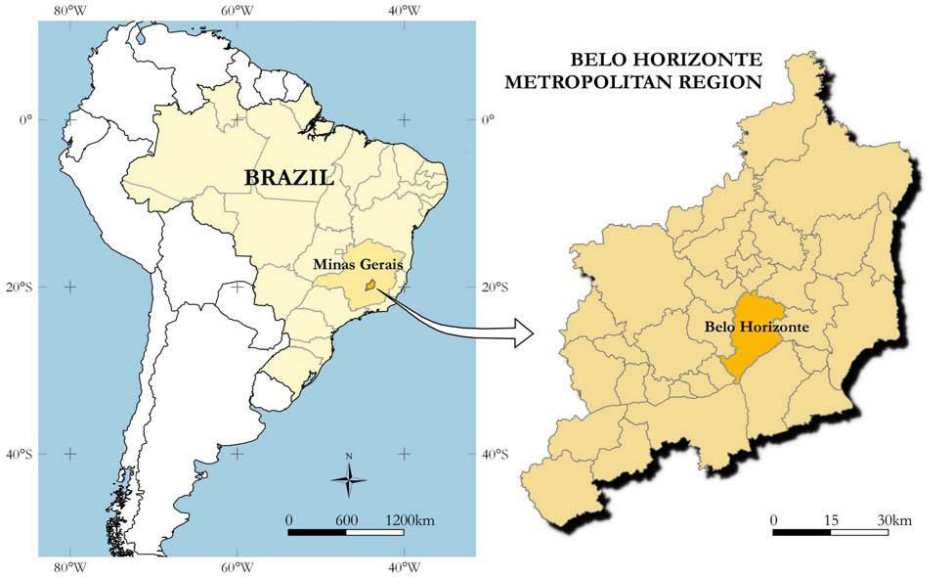

Figure 1 – Belo Horizonte Metropolitan Region in Minas Gerais State and Brazil, UFMG (2017)

This activity started as an extension project in 2009 when the University was invited by the State Government to lead, under consulting basis, the formulation of the Integrated Development Master Plan (PDDI as for its Portuguese acronym) with funds provided by the Metropolitan Development Fund[1] and authorized by the Metropolitan Development Council. Within a period of 18 months, a team of 50 faculty and 80 graduate and undergraduate students in Architecture, Geography, Economics, Social Sciences, Education, Planning, Engineering, and other related fields, developed the PDDI for the RMBH based on collected data, mapping and transdiciplinary thematic studies, but mainly on the results of a series of participatory activities such as workshops, seminars, open meetings and public hearings.

Coming from a very authoritarian, technocratic and comprehensive top-down metropolitan planning tradition, this experience has meant a shift from social reform to mobilization and social learning processes, according to Friedman's theoretical framework (1987) which have been central to bridge gaps between technical knowledge and everyday practices, aiming at the achievement of more accurate understanding of local processes, the strengthening of collective actions and the supporting of policies and

[1] This fund is the result of annual voluntary contributions of the 34 municipal members plus an equal total amount provided by the State of Minas Gerais. The Metropolitan Development Council, comprised by seven municipal representatives, five from the state executive sector, two from civil society and two from the state legislative power, is the organism that decides on priorities and the use of this funding. A complete view of RMBH's metropolitan governance structure (Arranjo Metropolitano) can be obtained in www.rmbh.org.br or and authorized by the Metropolitan Development Council. Within a period of 18 months, a team of 50 faculty and 80 graduate and undergraduate students in Architecture, Geography, Economics, Social Sciences, Education, Planning, Engineering, and other related fields, developed the PDDI for the RMBH based on www.agenciarmbh.mg.gov.br

programs that are oriented to social engagement and transformation other than to the reinforcement of status quo, hegemonic priorities and socio-spatial exclusion.

PDDI was officially launched in 2011 and starting in October 2013, the Metropolitan Macro-Zoning ordinance (MZ as for its acronym in Portuguese) was also developed under similar methodological arrangements, involving around 90 UFMG faculty and students. The MZ is considered one of the main strategies to implement the spatial restructuring of the metropolitan territory proposed by PDDI, along with infrastructure and housing investments. Currently, the same team is working on reviewing and updating eleven of the 34 RMBH's Municipal Master Plans (PDM as for the acronym in Portuguese) to match PDDI's guidelines and MZ criteria.

The participatory process for the Metropolitan Plan lasted almost two years, and accounted for around 3000 participations and 610 institutions and civil society organizations. The following Macro-Zoning development lasted 15 months and accounted for 1120 participations. Both processes involved a series of activities, which were initially geographically and thematically organized, and were progressively disciplinarily integrated both at the local and regional scales. Theatre sketches on metropolitan issues, collective mapping, a project newsletter and an internet site with permanent on-line access to all work-in-process information were some of the innovative strategies used to mobilize and involve local residents and stakeholders.

This paper discusses the planning strategies developed by the Metropolitan Macro-Zoning Project aimed to materialize the proposed PDDI spatial structure guidelines on the regions' territory. It focuses on the implementation of the Blue and Green Network (Trama Verde e Azul in Portuguese or simply TVA as for its acronym) and describes the zoning categories, the design criteria and other planning and community involvement programs that were collectively built through a rich but also very contentious combination of statutory instruments and negotiation strategies involving stakeholders, public officials, planners and policy makers within a common participatory platform meant to articulate different scales as well as metropolitan interests and local needs.

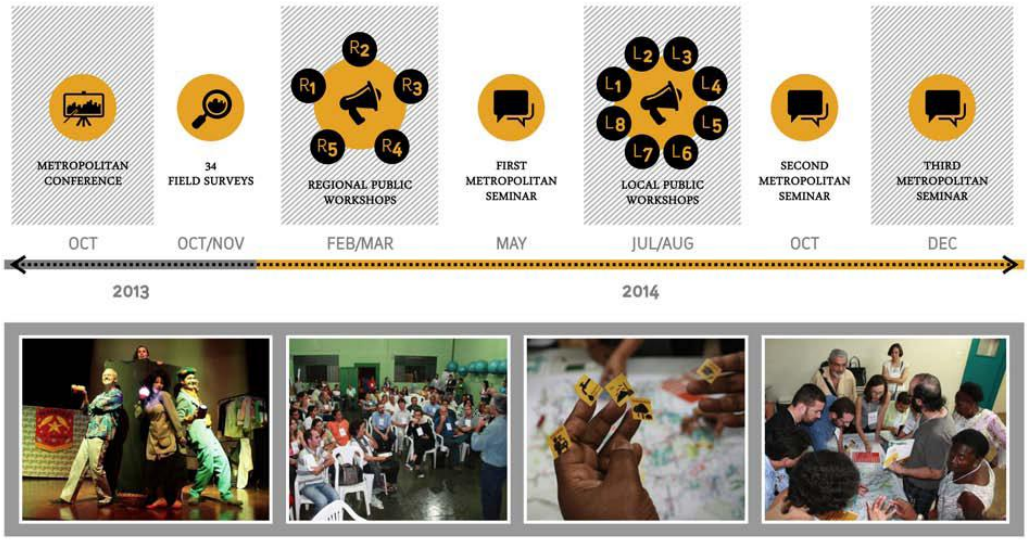

Figure 2 – MZ participatory process scheme and activities, UFMG (2013)

2 RESHAPING THE METROPOLITAN SPATIAL STRUCTURE: CENTRALITIES, MOBILITY NETWORK, METROPOLITAN INTEREST ZONES AND THE BLUE AND GREEN NETWORK - TVA

TVA was initially conceived as a background element of RMBH spatial restructuring scheme proposed by PDDI which also included a main roads and transportation system, a hierarchical network of urban centralities and specific zones and areas of special metropolitan interests, assigned for environmental and cultural heritage protection, water supply resources, food production, improved mobility and economic

development. This proposed new spatial structure has been basically meant to face historical social, economic, and environmental problems caused by the existing one-centred radial spatial structure, too much concentrated in Belo Horizonte and surrounded by extended unequipped peripheries: a spatial translation of an unbalanced and unfair distribution between costs and benefits or urban development (Figure 3). During the MZ development process, the TVA idea gained momentum from both technical and public support, becoming one of the main guidelines for the metropolitan spatial structure implementation strategy.

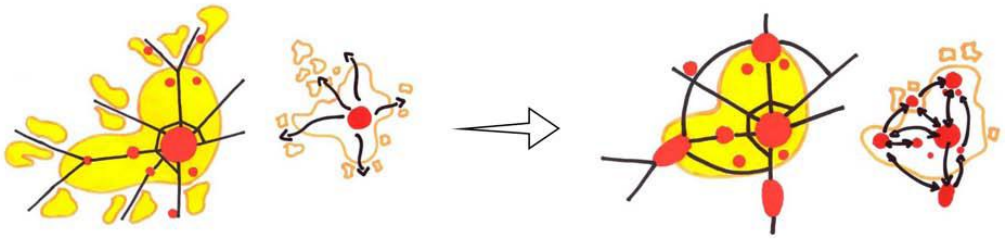

Figure 3 – PDDI spatial restructuring scheme for RMBH, UFMG (2011)

Aiming at an alternative planning strategy for the Region, Metropolitan Interest Zones (ZIM as for the acronym in Portuguese) were collectively designed throughout the Macro-Zoning project process, having their boundaries and contents justified by public functions of common interests oriented by the following main PDDI's guidelines: (1) develop existing and new urban centralities, (2) enhance economic development axis, (3) increase density in selected areas for housing and mixed uses and control urban sprawl, reducing pressure over environmentally sensitive areas and food production regions, (4) protect water supply resources and conservation areas; (5) favour the provision of affordable and social housing, open spaces and community facilities in the centralities, (6) avoid the aggravation of social spatial segregation and (7) develop strategies for the implementation the blue and green network, TVA.

This way, under an integrated participatory planning approach, involving local stake holders in the decision making process, three very strong taboos in Brazilian planning tradition have been somehow broken. The first refers to the historical split between urban development and environmental protection, seen as two incompatible motivations that usually result in conflicting regulations and policies coming from different rationalities as already highlighted in Costa (2008). The second has to do with the use of zoning ordinances limited to urban areas, leaving the rural ones unregulated, even though Federal Law 10.257/2001, also known as The City Statute, has established the obligation for Master Plans to cover the entire municipal territory[1]

The third has to do with what Fernandes (2005) among other authors call municipal autonomy at all costs that result in the lack of continuity and conflicting rules within similar environmental constraints or urban dynamics throughout different municipal boundaries, especially in metropolitan areas submitted to conurbation.

The ZIMs were subdivided into three different types according to their main characteristics and planning objectives: (1) socioeconomic development zones related to centralities and main highways and transportation axis, (2) water management zones, corresponding to water catchment areas for metropolitan supply purposes and (3) landscape protection sites and mining territories. On top of theses ZIMs, another zoning layer called Special Metropolitan Guideline Zones (ZDEM as for the acronym in Portuguese) has been proposed to address specific issues under specific policies such as central city requalification, slum upgrading, illegal settlement regularization, infrastructure upgrading, mining area rehabilitation and TVA implementation. Besides, Areas of Metropolitan Interests (AIM as for the Portuguese acronym) have also been identified throughout the whole remaining territory outside the ZIMs as privileged places for the implementation of PDDI programs, designed to encourage, for example, organic and family agriculture, ecologic tourism and payment for eco systemic service delivery (Figure 4).

[1] A research project sponsored by Ministério das Cidades, the Brazilian Federal Authority for urban development planning and policies, in 2011 evaluated, from a critical perspective, the series of recent Municipal Master Plans developed after Federal Law 10257/2001, Brazilian main reference for urban planning also known as The City Statute.

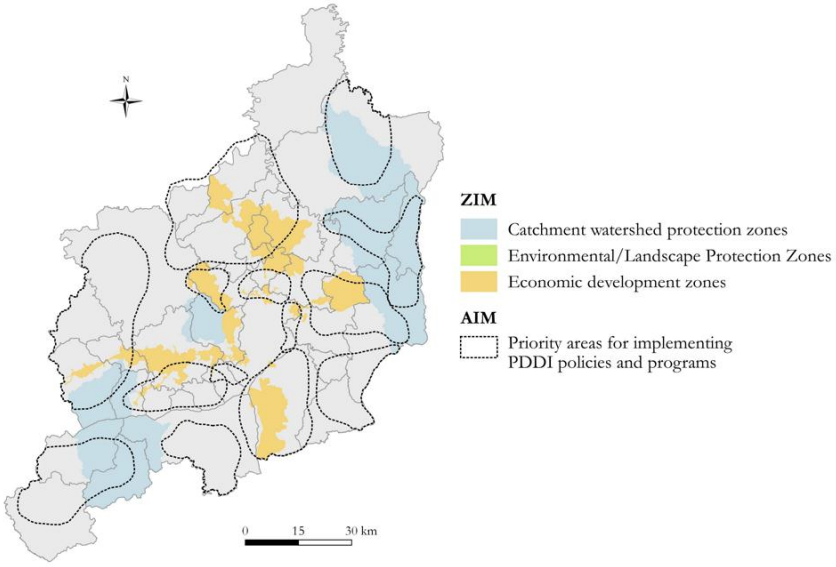

Figure 4. Zones and Areas of Metropolitan Interest, UFMG (2015)

Each ZIM has been internally divided into sub zones with respect to specific urban and environmental dynamics, resulting in different requirements for density limits, minimum lot sizes, minimum pervious surface area, height and bulk ratios and other subdivision, land use and design criteria (Figure 5).

Specifically about the control of maximum building limits per lot surface area, another vicious aspect of Brazilian zoning tradition has been broken: the mistaken merging of two originally separated rights over urban land, which are property rights and building rights, being the second the result of a discretionary act by local government according to common public interests, environmental and infrastructure carrying capacity, among other planning requirements, as a materialization of the social function of urban property as established by the 1988 Brazilian Federal Constitution[1]

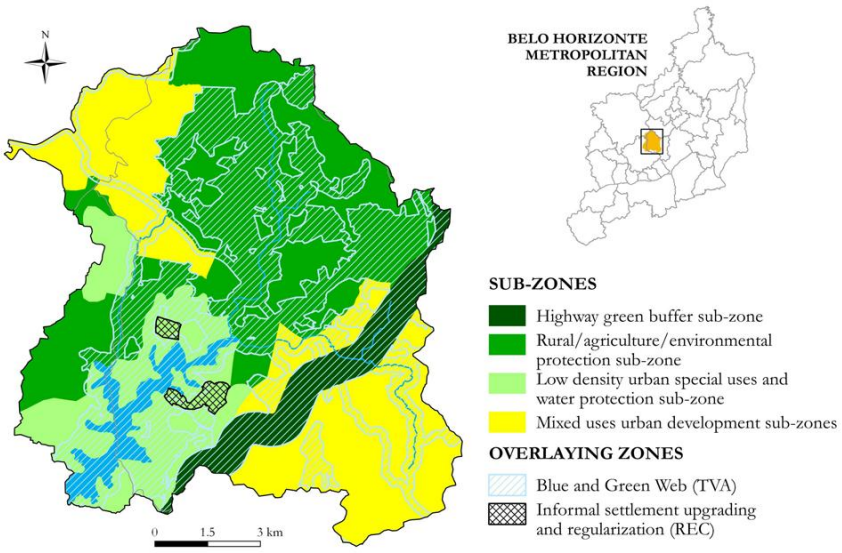

Figure 5. RMBH Macro-zoning sub-zones, UFMG (2016).

This way, according to the MZ final negotiated proposal, the general building potential for all zones was assigned as 1.0 (equal to the plot surface area) being any variation above this value subjected to planning conditions and/or payment of development rights, up to a maximum amount established for each zone. A

[1] The concept of social function of urban property, conceived as a submission of private property rights to common interests and community priorities, has been regulated by The City Statute in 2001, which assigned Municipal Master Plans to locally determine where and how within the municipal territory it shall be materialized.

similar reasoning was agreed to support for the percentage of social housing and provision of public spaces required for new development projects which, according to their characteristics, are also supposed to be submitted to environmental impact analysis and planning permits through an integrated metropolitan process.

The MZ experience has showed us that, even though the use of more sophisticated and complex instruments in planning regulation and management has been a prevailing trend to face old and new urban environmental issues, bringing social practices and regulation closer to each other seem to be a much more promising way to achieve more effective planning instruments. Avoiding marked oriented zoning ordinances which have traditionally aggravated social spatial segregation in Brazilian urban areas is a way, as Rolnik (1999) points out, of putting down invisible walls between formal and informal ways of accessing urban land, housing and a healthy environment for all.

3 TVA: AN INSPIRING CONCEPT

Over the course of planning history, many utopian models have included green spatial structures as key elements to organize urban spaces. Understanding their evolution has not only helped us realize how society's relationship with the environment has changed but it also has also inspired the search for new strategies for articulating nature, culture and urban development, as in the present TVA case study.

The origins of planned urban green facilities date back from the 18th and 19th centuries when public parks and gardens were created in reaction to the poor environmental conditions in industrial revolution cities both for recreation and aesthetic purposes (TUNER, 1998). Ebenezer Howard's garden city concept is at the base of English New Towns by Parker and Unwin, where a chain of green open spaces, parks and protected farm land formed the so called green belts involving urban areas, also as an attempt to control growth. The proposal of connecting urban parks developed by Olmstead and Vaux launched the idea of corridors integrating open spaces for natural resource protection, social use and circulation, as well as for landscape structuring, being the Boston Emerald Necklace (1895) an emblematic example.

This idea of a system of green areas and public open spaces connected by linear elements such as vegetated roads and water ways has progressively evolved to what became the green structure model from the late 20th

Green web is also a late 20 century, conceived as a strategy for territorial land use planning and environmental management (FABOS and RYAN, 2004). This approach is based on three main components: natural corridors and ecologically significant systems, parks and green axis connecting recreation areas on land or water, cultural and historic heritage assets.

th century concept that proposes the integration of open spaces by vegetated roads and infrastructure buffer zones, bikeways, bridges, waterways, parks, coast lines and all kinds of green corridors. They merge ecological and social functions, providing new green use possibilities and connecting the existing ones to enhance biodiversity and community life. The notion of green infrastructure also refers to these systems but is more commonly applied to small scale interventions such as urban green road and sidewalk side spaces, river restoration banks, flood control devices such as detention reservoirs, bio ditches and infiltration pits[1]

According to Quintas (2014) the term Urban Green Structure has first been nationally used in Portuguese planning in a central government document published in 1992 by DGOT, which is the General Authority for Territorial Management, and then, in the Lisbon Green Plan, developed in the 1993 and published in 1997. Aimed primarily at supporting the review of the Municipal Master Plan – PDM (as for the acronym in Portuguese), this plan proposed a system of open spaces, green areas and surface water bodies, encompassing both urban and rural areas, involved by a system of natural occurrences related to the

[1] For more elements on the evolution of the concept of green infrastructure, see also Thomas (2010) and Quintas (2014).

concept of continum naturalis defined by Cabral (1980) and later expressed by the 1987 National Environmental Law[1].

It resulted in a sequence of continuous and discontinuous portions of the territory recognized by their own identity given the cultural and landscape values of both urban and natural environments (TELLES, 1993). Although the "web" concept, formed by vegetated surfaces (the green dimension) interwoven by water lines and bodies (the blue dimension), is not explicit in this plan, streams and run off related morphological elements (water headboards and splitters, slopes and flood plains) are the key elements of the proposed structure merged to a cultural dimension that encompassed landscape unities and urban ensembles recognized by their genius loci[2] and areas identified as suitable for urban growth and rural activities.

Although this plan was not at that time entirely incorporated in the 1994 PDM, its main elements were present in the 2007 PDM which has been reviewed in 2012, as well as in the Lisbon Metropolitan Region Territorial Management Plan adopted in 2001 and also reviewed in 2012. It showed a deliberate attempt to articulate territorial scales (metropolitan, municipal and neighbourhood) as well as planning and project strategies to implement the proposed green structure, including design criteria and guidelines for specific site interventions. and areas identified as suitable for urban growth and rural activities.

Belo Horizonte's TVA also relates to this systemic notion of a spatial structure based on a hierarchized network of connections among green areas and water bodies, urban as well as rural, more or less anthropized, protected or still to be valued and recognized. However, there is much more to it than just ecological and functional purposes. It departs from the notion of nature as part of the process of production and appropriation of urban space and as one of the main territorial axis of PDDI's metropolitan spatial restructuring proposal, and it derives from the effort to "articulate adequate conditions of attraction and reproduction of the hegemonic productive capital – mining, property development, advanced services – with actions that reinforce, protect, and give visibility to small scale collaborative local and micro-regional activities – agriculture, crafts, services, among others (MONTE-MÓR et al, 2017).

Two other relevant planning experiences are also important to mention here as inspiring references to TVA. The first is the DRENURBS project, which has been carried out in Belo Horizonte municipality for 15 years now. It focuses on urban creek recovery through integrated interventions that include removing informal settlements from flood prone areas, housing the removed population in social housing projects as close as possible, providing sewer, drainage, solid waste disposal and mobility solutions taking the whole watershed into consideration and improving recreation opportunity and environmental management by the implementation of urban parks, erosion and sediment control devices and green corridors. In spite of its limited reach (only five of the eighteen priority catchment basins have been so far retrofitted) and recent reduction of its political support and financing capacity, it had a great impact as demonstration of alternative and more comprehensive sanitation solutions as compared to the traditional rectification and channelling of stream beds[3].

The second inspiration for TVA is the French concept of trame verte et bleu which stands for green and blue infrastructure, a network of land and water ecological continuities identified by regional ecological studies and planning documents produced by the French government, local authorities and groups of authorities and applying to the whole country territory. It includes ecological continuities, core areas of biodiversity, ecological corridors, watercourses and wetlands and contributes to improving the conservation status of natural habitats and species and achieving good environmental status for water bodies (http://www.trameverteetbleue.fr/). These principles have been increasingly adopted in European regional environmental development and recovery plans, particularly in places experiencing severe degradation such as former decaying mining areas (MONTE-MÓR et al, 2017).

[1] National Law 11/87, later modified by National Law 13/2002, or "Lei de Bases do Ambiente", is the main reference in Portugal for environmental protection in planning practice.
[2] It refers to a phenomenological approach to the environment and the interaction between place and identity as proposed by Schultz (1981).
[3] Belo Horizonte's 2011 Urban Drainage Plan has analyzed the 98 municipal watersheds and indicated the priorities for intervention in 16 of them, based on sanitary conditions, population and flood hazard vulnerability. For more information on the Drenurbs Program, its outcomes and recent pitfalls see Costa et al, 2012 and Araújo and Pinheiro, 2015.

Searching to move forward, Belo Horizonte Metropolitan Region TVA was conceived to be gradually formed by the interweaving of many complementary existing and proposed elements which can be gathered by their common nature as the following: (i) green infrastructure such as parks and other conservation areas, remaining forests and agricultural land, natural monuments, geological heritage sites, ecological corridors and other potential green areas to be protected; (ii) blue infrastructure of surface water bodies and underground water reserves, flood plains, wetlands and other relevant water resources, including the existing metropolitan water supply watersheds; (iii) cultural and natural heritage assets such as museums, cultural facilities, historical and cultural ensembles, libraries, places related to non material heritage practices (iv) places related to ecological tourism and cultural policies; (v) areas of urban ecological agriculture and small scale processing of food and crafts, among several other communal uses of the metropolitan territory; (vi) alternative networks of mobility such as bicycle and walking tracks, small roads, train corridors, pedestrian oriented roads systems, among other forms of connections.

The proposal, still to be further developed, embraces a set of principles and a general physical structure to be detailed, adapted and adopted by public as well as private social agents that produce and use the metropolitan space, establishing an increasing network of natural and built environmental collective values that articulate nature, culture and urban development (Figure 6).

As highlighted by Monte-Mór et. al. (2017), the TVA

> *"broadens the meanings of the proposed territorial restructuring associating the production of abstract space with the appropriation of social spaces at metropolitan level. As such, the political and institutional articulations to make it happen are still to be invented, but will certainly influence metropolitan and local policies. It constitutes a utopia of the future, bringing nature and culture as central to the process of production of space, recognized as a source of learning, to be appropriated and transformed by society through everyday life".*

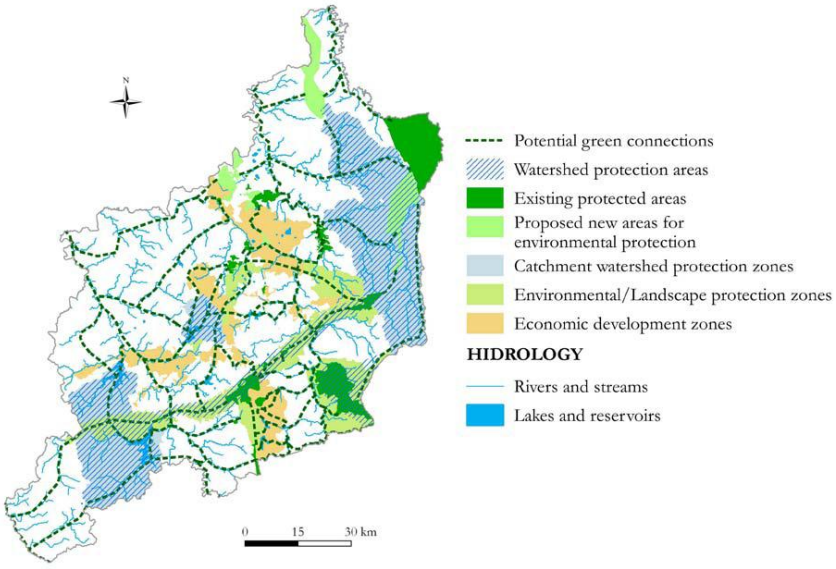

Figure 6. The TVA general scheme and elements, UFMG (2015).

4 EXPLORING IMPLEMENTATION STRATEGIES

As a view and a planning framework, a structural guidance for a future ideal scenario to be constantly searched but never necessarily completed, TVA is considered a long-term project, which requires different levels of participation and engagement, collaboration and governance. It should also count on regulatory command-and-control types of instruments as well as induced and voluntary initiatives, coming both from the public and private sectors, as well as from civil society. As far as the necessary financing, investments should come from Federal, State and Municipal government levels, but also from the private sector, civil society institutions and public-private partnership to ensure the required funds, to implement the proposed

green structure and promote a diversity of associated economic activities and, at the same time, to create opportunities for work and income generation.

The following are some implementation strategies that are already available or possible to be developed within the Brazilian regulatory framework and planning tradition (Figure 7). Many of them have been incorporated to the legislative project that is currently being discussed and negotiated to become the Macro-Zoning State Law to which all Municipal Master Plans to the 34 metropolitan members will have to conform.

i. Statutory requirements related to specific planning regulations and permits for new subdivisions and development projects such as compulsory provision of open public space, buffer zones, green areas and public facilities;
ii. Mitigation and compensation measures originated from environmental permit processes of new development projects and activities subjected to Environmental Impact Analysis: creation of conservation areas, maintenance of green spaces, adoption of environmental control devices such as green rooftops, rain water capture and reuse, infiltration pits and run off detention reservoirs;
iii. Metropolitan and municipal zoning design criteria: TVA is part of all Metropolitan Interest Zones – ZIMs which have specific parametric requirements, some specifically designed to allow for parcel based incremental green infrastructure implementation: green setbacks, minimum impervious ratio and minimum tree coverage ratio are some of them;
iv. PDDI policies and programs, especially those designed to Metropolitan Interests Zones - ZIMs and Metropolitan Interest Areas - AIMs conceived to promote small scale and family based agriculture production, agro ecologic agricultural practices, urban agriculture, food security, eco systemic service delivery payment and ecologic tourism activities;
v. Degraded mining area recovery complying to environmental legal requirements and having a social use as public facilities, parks and recreation areas, whenever possible;
vi. Cultural and landscape heritage protection, including environmental features as part of buffer zones and surroundings to the core listed assets;
vii. Public-private partnerships, guaranteed the public use of open spaces resulting from planning gains negotiated as part of each development project;
viii. Adoption of TVA concepts at different planning scales, such as the municipal level, water basin committee level, among other planning instruments and governance frameworks.

Figure 7: Examples of implementation strategies for TVA, UFMG (2016).

Besides the formal regulatory schemes and planning instruments already mentioned, which are fundamental to the continuous process of construction of the TVA, other strategies shall be added and experimented, as suggested by Cabral (2015), arisen from the articulation of the proposed structure (a political planning view) to the opportunities for action (through social mobilization, policies, plans and projects) provided by metropolitan governance within a permanent and systemic institutional design for collaborative planning.

5 FINAL REMARKS

This paper meant to discuss the extent to which metropolitan planning strategies may lead to social and environmental transformation towards justice, focusing on TVA implementation, through a rich but very contentious combination of statutory instruments and negotiation strategies involving stakeholders, public officials, planners and policy makers.

As part of a long term extension project led by the Federal University of Minas Gerais, short term political interests within four-year governmental office periods could be reduced in favour of more community involvement and a collectively built structural view for RMBH, emphasising process rather than product as a result of a metropolitan planning experience.

While the PDDI centralities network and the Macro-Zoning criteria attempt to combine land use planning with reduction of socio spatial disparities, the TVA web emphasizes a different but complementary logic that seeks to articulate nature, culture and urbanization. The discussion involved seems an important way of developing a broader comprehension of metropolitan citizenship, a concept widely applied during the participatory process, as a sense of place, a feeling of belonging to a large articulated territory, in which nature and urbanization can be conceived and experienced together. The virtual horizon orienting this planning conceptions is one in which the metropolitan area could be restructured through both TVA elements combining nature and urbanization as lived spaces, and the proposal of reinforcing a network of centralities articulated by a multimodal mobility network. The two seek to put together principles of social and economic equity, urbanity and environmental and cultural justice.

Of course such proposal represents a contra hegemonic project in a highly contested terrain, related to real estate market and land property, mining and industrial capital interest, among others which see nature – mainly land and water - primarily as an economic asset to be explored. But it is interesting to notice that during the participatory workshops where the TVA was discussed, there was widespread acceptance, even a sort of enchantment with the idea, by the participants. Although it may sound naïve, it is important to emphasize that it is only through social engagement, recognition of conflicts and mutual learning between faculty, professionals and the population that such ideas can be made possible.

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ID 1509 | UTILIZING SPATIAL AND LANDSCAPE PLANNING TO PROMOTE ECOLOGICAL CONSERVATION ON UNIVERSITY CAMPUSES

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ABSTRACT: Universities globally have committed themselves to behaving as responsible citizens in addressing global ecological challenges through physical planning and management of their campuses. At the Technion – Israel Institute of Technology, a comprehensive, two-year planning effort was made to revise the vision and physical plans of the main university campus in Haifa to meet emerging 21st century challenges facing the academic community. Defining and addressing ecological challenges was integral to this effort and an ecological advisory team worked closely with campus planners to envision an ecologically sustainable campus. This paper reflects upon this process, from its first stages of problem definition and goal setting, through a multifaceted ecological survey and the integration of architectural and urban planning students into the planning process, to production of the final statutory zoning plan and strategic master plan. The study highlights the particular challenges of a campus that sits on the interface between urban and natural ecosystems and one that demands rapid development with a concurrent desire to preserve ecological integrity. Conclusions highlight the universality of the ecological responsibilities and challenges that universities face, suggest general strategies for exploiting the planning process towards ecological sustainability goals, and advocate for the integration of students into campus design activities.

1. INTRODUCTION

The role of the university, as often defined in terms of its responsibilities towards larger society, is to prepare students to be socially responsible global citizens (Harkavy, 2006), to produce knowledge for addressing global social, economic and ecological (i.e. sustainability) challenges (Alshuwaikhat and

Abubakar, 2008; Finlay and Massey, 2012), and to act as a socially-responsible institution (Alshuwaikhat and Abubakar, 2008; Viebahn, 2002). As teaching and research institutions, the knowledge produced within university campuses should be applied for the benefit of humankind. As such, since the 1990s, universities have looked inward to their own campuses in order to reshape them as exemplary models for sustainability, particularly within the environmental realm (Alshuwaikhat and Abubakar, 2008; Finlay and Massey, 2012). Among the many sustainability criteria are the institution's commitment towards distinctly ecological priorities of preserving biodiversity and ecosystem integrity. However, the relative emphasis of ecological priorities varies greatly from being a central facet of university objectives to, more often, a relatively minor element.

Even among environmental considerations, ecological priorities are relatively minor. The Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment & Rating System (STARS) awards an institution's efforts conserving endangered species or environmentally sensitive areas, or general environmentally sustainable grounds management (Association for the Advancement of Sustainability in Higher Education, 2014). But while these ecological considerations are explicit in the STARS criteria, they are only a few of over 60 criteria that include all aspects of sustainability, from educational curriculum and research, to campus and community engagement, to university operations, and planning and administration (AASHE2014). As such, the university sustainability literature that focuses on biodiversity is only a small part of the overall oeuvre. In comparison, much of the literature focuses on ecosystem flows, including carbon and water cycles as expressed in energy use, architecture, and transportation. Representative of this phenomenon is the University of Massachusetts, Amherst, which dedicated a revision of its master plan to sustainability issues, which dealt almost exclusively with energy use and greenhouse gas emissions. Biodiversity, when mentioned, is in reference to the role of vegetation in carbon sequestration. The program includes additional foci including food and waste management and a management focus on runoff water including creation of wetlands and ponds for multiple benefits, including biodiversity (Pavlova-Gillham et al., 2015).

The current research deals exclusively with the ecological aspects of campus design. Ecological, in this sense, focuses on biota and ecosystem processes on campus, and in particular, the protection of biodiversity, the long-term provision of ecosystem services and positive intervention in ecosystem processes (e.g. ecological integrity). There are three reasons why universities should be particularly concerned with ecological challenges. The first, as noted above, is their stated commitment to good citizenship and global and regional sustainability. The second is the plethora of scientific knowledge and a fitting venue for its application, making it efficient for university faculty to "act locally". Finally, university campuses occupy a significant amount of land in multiple ecosystem types, and therefore their physically planning can have a profound impact on ecological characteristics of their region. For example, the University of Michigan has historically occupied between 8 and 10% of the total land area of Ann Arbor, Michigan (Brinkman, 1981).

University campuses vary widely with regard to their physical locations vis-à-vis cities, with some being distinctly urban with few open spaces, while others are located along a gradient between the built and the non-built environment, encompassing natural and semi-natural ecosystems (e.g. Cornell University, 2008). The sheer spatial size of campuses and their population leads some planners (e.g. Sasaki, 2009) to compare them to, and plan them as, small cities. Additionally, many universities possess satellite properties that serve as nature reserves, botanical gardens, and biological field stations. These satellite properties, while crucial for fulfilling the universities' ecological goals and responsibilities, do not face the same planning dilemmas as the central campuses with their multiple, often competing, development goals. The present work addresses the main core campus of universities, where most of the research, education and administration takes place.

This paper documents efforts to integrate ecological considerations into an urban university campus, the Technion – Israel Institute of Technology. We describe a two-year process in which an ecological advisory team worked in parallel to a larger multi-disciplinary planning process of the university's physical environment. As noted, the paper addresses a somewhat neglected consideration – ecology, in terms of biodiversity and ecosystem integrity, which is generally subsumed within the larger university sustainability literature. We suggest that the process of physical planning affords a novel and productive opportunity to integrate ecological considerations into the priorities and objectives of the university, although the process also reveals the challenges in prioritizing ecological considerations.

2. ECOLOGY AND THE TECHNION PLANNING PROCESS

The Technion – Israel Institute of Technology was founded in 1924 and the Faculty for Architecture (later Architecture and Town Planning) was among its first departments. The university campus was located in the Hadar neighborhood of Haifa, and was moved in 1954 to a 130-hectare piece of land on a steep hillside adjacent to Haifa's Neve Sha'anan neighborhood. According to aerial photographs, the land on which the Technion was built consisted primarily of heavily grazed, Mediterranean chaparral – shrubs and annual plants – that was later forested with Stone pines and Aleppo pines (Pinus pinea and Pinus halepensis, respectively), which were popular forestry trees through most of Israel's history (Fig. 1 and 2; Tal, 2013). The topography of the campus influenced the architectural designs. Three wadis (dry riverbeds that run only following winter rains) run through the campus from south to north, two of which are on the borders of the campus and one running through the center. Early plans of the campus envisioned the central wadi as a green stripe and pedestrian pathway through the campus, and building was avoided in this area (Fig. 3). Between 1965 and 2012, four additional campus master plans were utilized. The most recent plan allowed for 50 hectares of built space. Today, the southern (upslope) portion of the campus consists of a planted pine woods, while a 2 hectare plot in the northern area of the campus is designated, since 1982, as an ecological garden.

In 2012, the institution commissioned a new master plan, and turned to its Building and Maintenance Division and to the Faculty of Architecture and Town Planning to complete the task. The new planning committee was headed by architects, landscape architects, and planners, and was supplemented with a wide range of subject-area advisors, including faculty experts in transportation, ecology, environmental psychology, education and others. Technion graduate students were also integrated into the planning staff as both advisors and research assistants. The committee had three objectives: a strategic master plan for creating the vision of the Technion, a statutory, zoning land-use plan, and a plan for real-time project interventions (Assif et al., 2015).

The strategic master plan is a vision statement that aims to "enhance [the campus'] unique spatial characteristics as a home base for its faculty, staff, students and visitors, and to lead the campus towards better integration in its urban and natural contexts" (Assif et al., 2015; p.13). It requires (and received) the approval of the institution's Board of Governors. The zoning code is a statutory document that requires approval by city and regional planning committees and that designates permitted land uses within the Technion. The intervention and involvement plan "takes immediate action to reflect and fulfill components of the strategic plan in real time (Assif et al., 2015; p.13).

In recognition of the planning committee's emphasis on ecological sustainability (which was, as yet, only vaguely defined), the committee provided support and resources to support a multi-phase ecological assessment of the campus in order to receive ecologically-sound recommendations.

3. THE ECOLOGICAL ASSESSMENT OF THE TECHNION CAMPUS

The ecological assessment team divided its work into four parts: 1) review of ecological planning on university campuses (grey literature review of university planning documents) and defining the "ecological campus" concept based on ecological principles, and examples and precedents from other universities; 2) assessment of the biodiversity and ecosystem services found in the Technion campus, and assessment of the potential for their conservation and improvement; 3) review of administrative structures for supporting ecological planning, and 4) development of an ecological vision for the Technion campus, including guidelines and recommendations on how to integrate this vision into the masterplan and actual development of the campus.

3.1 REVIEW OF ECOLOGICAL PLANNING ON UNIVERSITY CAMPUSES: COMPACT, CONNECTED, CONSERVED

There was little available in the English-language academic literature with regard to particular ecological guidelines in campus planning and development[1]. There is, however, abundant material within the grey literature, including reports and planning documents from university campuses that have emphasized the importance of ecological conservation and provide guidelines for campus planning and management. Therefore, we relied mainly on grey literature (reports and planning documents from university campuses) and websites that were dedicated to these issues. Our objective was to glean the main ecological principles that have been integrated into such plans and gain a clear view of the "state of the art". Our starting point was several reviews and ranking of universities published in online news websites[2]. We expanded the information obtained from these sources through an internet search for several relevant keyword combinations (campus* + ecolog* + plan* + university*). The master plans of some universities were readily available, while other institutions had websites presenting plan essentials and related activities.

Our review of university precedents for ecological planning revealed three main principles that were common in many universities as reflected in their planning documents: (1) compact development (Fig. 4) – concentrating development in existing core areas; giving precedence to renovation of existing structures; prioritizing development in areas with existing infrastructure; (2) connectivity of open spaces and natural habitats (Fig. 5) – this often includes a classification or hierarchical division of the campus into units based on multiple criteria such as land cover, hydrology, topography, and land use; and (3) conservation of high quality and key natural habitats (Fig. 6) – this can include conservation of large areas as preserves or reserves, undertaking ecological reclamation and restoration projects, and taking steps to improve the ecological value of habitats, also in the developed areas (e.g., vegetation soil and water restoration, prioritizing native species in gardening and landscaping, monitoring and treating invasive species, avoiding the use of pesticides and herbicides. These three themes are exemplified in the University of Wisconsin (UW), Eau Claire Master Plan whose vision headings are “connected and engaged,” “green and open,” and “compact and integrated” (Campus Master Planning Team, 2011). It is important to note that in most cases, including UW Eau Claire, that while these three themes are consistent with ecological objectives, ecology is not the primary focus of the themes, but rather they are associated to social, transportation and educational goals (see below).

3.1.1 COMPACT

Due to the severe impact of urban development on biodiversity (Hansen et al., 2005; McKinney, 2002), compact urban development is recommended across the planning and ecology literature in order to slow the impact of urban development and conserve open spaces for their ecological value. Compact and high-density development is recommended in many campus master plans as serving multiple economic, social and environmental goals. The most common of these is creation of walkable and public-transit oriented campus centers, but also include efficient use of infrastructures, catalyzing social and scholarly interactions, defining a clear campus boundary and identity, and preservation of open spaces elsewhere in the campus (Campus Master Planning Team, 2011; Cornell University, 2008; Sasaki, 2009; University of Idaho, 2000). Most of these campus plans refer to a compact academic center, while the built environment (research parks, athletic complexes, residential areas) extend beyond this center, suggesting that ecological considerations are not the primary driver of compact development.

3.1.2 CONNECTED

Connectivity between habitats is a predominant theme of the conservation ecology and planning literature (Pulliam and Johnson, 2002; Zipperer et al., 2000). Networks of open spaces are discussed in some university planning documents in terms of ecologically connectivity (Sasaki, 2009). But more often they are promoted for sense of place, integrative design with the built environment, aesthetics, providing coherence

[1] Curiously, the largest proportion of this small literature comes from Chinese case studies. These sources have English-language abstracts, but are rarely available in English-language journals.
[2] http://grist.org/article/2009-08-20-top-20-green-colleges/full;http://collegestats.org/2009/10/the-nations-greenestuniversities-top-10-eco-friendly-colleges; http://www.princetonreview.com/green-guide.aspx

and green connectivity between the built environment, and their role as a social and recreational venue in the natural environment (Brook Mcllroy Planning & Urban Design, 2003; Campus Master Planning Team, 2011; Carol R Johnson Associates Inc, 2012; Cornell University, 2008; Sasaki, 2009; The University of Warwick, 2007; UMass Amherst Campus Planning Division, 2012; University of Idaho, 2000). These plans often note the ecological relevance of open space connectivity for ecological reasons, though they give far less attention to the ecology per se than to the other justifications.

Another aspect of ecological connectivity concerns the connection of a campus to prominent features of the natural environment, including rivers and other water bodies, university ecological reserves (see below) and natural landscapes. The Master Plan for the University of Wisconsin, Eau Claire, for example aims to use campus planning to better integrate and connect the campus to The Chippewa River and Little Niagara Creek (Campus Master Planning Team, 2011).

3.1.3 CONSERVED

The third guideline, conservation of open spaces of high ecological value, is touted for multiple reasons, including, but not limited to, the goal of preserving biodiversity and important habitats. The preservation and expansion of green infrastructures is a very prominent theme among campus planning documents(e.g. Campus Master Planning Team, 2011; Sasaki, 2009; University of Idaho, 2000), although here, too, the emphasis is on human uses of green spaces and then only sometimes (and briefly) in connection to biodiversity or habitat conservation. Prominent reasons for preserving and expanding green spaces on campuses include providing recreational spaces for the campus community, emphasizing connectivity between built spaces, strengthening the connection between the campus and local communities and enhancing the cultural relevance of the institution (Sasaki, 2009; Skidmore Owings & Merrill LLP, 2008). Water bodies, including wetlands, riparian areas and waterfronts, sometimes receive mention for their biodiversity value and potential for restoration (e.g. The University of Warwick, 2007), In addition to physical planning, campus master plans emphasize the importance of landscape planning and its role in obtaining ecological objectives. Tree plantings are a commonplace recommendation. Some campus master plans are accompanied by a landscape vision and detailed operational instructions, such as that of University of Tennessee, Knoxville (a urban campus), which promotes the use of native plants for purposes of biodiversity enhancement and ecological health (Carol R Johnson Associates Inc, 2012). Native plants are also suggested for water conservation (e.g. University of Utah).

3.2 BIODIVERSITY AND ECOSYSTEM SERVICES SURVEY OF THE TECHNION CAMPUS

We conducted two biodiversity surveys in the Technion campus, one for the fall season (August-September 2014) and one for the spring season (March-May 2015). Each survey assessed the species richness of five taxonomic groups in randomly selected locations throughout the Technion campus. In order to select the sites for the survey we superimposed the map of the Technion with a 30 x 30 meter grid and selected randomly 31 cells. These cells represented the range of land cover types found in the Technion – including entirely undeveloped areas (no structures or paved surfaces) onto areas with partial to nearly complete artificial cover (90-100% structures, paved roads etc.). In both seasons the surveyors visited and surveyed the same sites. The five groups were: medium-sized and large mammals (using trap cameras), bat (using bat detectors), plants, butterflies and birds (the latter three through direct observation).

The main findings of these surveys were that the Technion Woods, a forested plot in the southern, up-slope campus is unique in comparison to the rest of the campus, including species not found elsewhere in the campus such as wild boars (Sus scrofa), golden jackals (Canis aureus), rock hyrax (Procavia capensis), chukar partridge (Alectoris chukar), and a red-listed (endangered) plant species Myrtle (Myrtus communis). We concluded that the presence of these species only in this area is a result of its being a part of a large tract of natural and semi-natural areas found to the south of the Technion that lay on the fringes of Haifa's developed area (i.e., the rural-urban interface). Overall, the species richness found in the Technion was representative of urban areas and similar to that found in a biodiversity survey conducted in Haifa in 2012.

An ecosystem service assessment of the Technion campus was conducted in 2014-2015. The assessment consisted of the three steps: (1) A team of expert assessors conducted preliminary fieldwork to determine the presence and quantity of the various ES in the built and forested areas of campus. The team adopted the ES outlined by the Israel National Ecosystem Assessment (INEA) for reference; (2) 27 interviews with representatives of the various campus stakeholder groups (e.g. faculty, students, administrators, visitors) aimed at defining "high priority" ES, and; (3) a matrix of high priority ES was developed and analyzed in terms of value and connection to underlying ecosystem processes. The team analyzed the provision of high priority ES as affected by different campus development plans relative to the current state.

High priority ES, as defined in the stakeholder interviews were primarily cultural services. Among them, relaxation was the most commonly noted, with "existence value and biodiversity" receiving the second most attention. An additional unique benefit that emerged in the interviews is the importance of nature in giving a campus "prestige and status", as the natural components of the campus are seen to attract both donors and students. This finding would later play an important role in connecting tree cover to the overall image of the campus that planners chose to develop. The only regulating ES that received considerable attention, and thus considerable weight when assessing the services, was the air quality improvement. No provisioning services were noted by the interviewees. The research team used the ES inventory to assess how different campus development scenarios would increase or decrease the provision of these services, thereby affecting wellbeing of the campus community.

3.3 ADMINISTRATIVE STRUCTURE

Since we were considered not only with the ecological principles needed to protect and embellish biodiversity and ecosystem integrity on campus, but also with the administrative means for implementing ecological recommendations, we also queried the literature and selected universities regarding the administrative structure of institutions who have implemented sustainability programs. We reviewed available literature and conducted interviews with staff at eight American universities to learn about the administrative processes by which these universities initiated and incorporated sustainability into their decision-making processes. Ecological priorities are included under the broader umbrella of "sustainability" objectives. While we found many campuses that emphasized carbon, water and waste policies, very few explicitly noted ecological objectives, and among them ecology (wildlife conservation or ecological integrity) was rarely a primary objective. We also investigated the administrative structure of the Technion to identify key personnel who might be willing, able, and empowered to help us turn a conversation about sustainability into action.

Most campuses that prioritize environmental sustainability have dedicated sustainability offices on campus. A sustainability office works closely with ground and maintenance on campus, usually directed by an administrative committee. Committees are divided into subunits, each with a specific sustainability focus, e.g. water, food, buildings, transportation, etc. Each of these schools has a written sustainability plan, either incorporated into a master plan or as a standalone document. Campuses also make significant efforts to publicize their environmental efforts and educate the campus community.

4. DEVELOPMENT OF AN ECOLOGICAL VISION FOR THE TECHNION CAMPUS – GUIDELINES AND RECOMMENDATIONS

The ecological advisory team concluded its work by formulating guidelines and recommendations to the planning team. The recommendations were based on the two prior stages – the lessons learned from other universities and the findings of the surveys conducted in the Technion. These recommendations were divided into three:

a. Recommendations in accordance with the three presiding themes of ecological campus planning: compact development, connectivity of open spaces, and conservation of high ecological quality land. In this regard, it was recommended that the southern forest patch (The Technion Woods) and the ecological garden serve as the primary open spaces on campus and that building be avoided in these areas. Moreover, the central wadi would serve as a green belt connecting the

two areas. These recommendations were indeed adopted and reflected in the campus statutory zoning plan (Fig. 7).

b. Recommendations that are based on intensity of land use – low intensity (the Technion Woods and the Ecological Garden), interstitial spaces, and the built environment. For primarily open/natural areas, the advisors recommended a management policy emphasizing both biodiversity potential and cultural ecosystem services. The team recommended thinning the forest in accordance with the advice of biodiversity surveyors to encourage the growth of annual plants and shrubs, thereby increasing diversity of plants and animals, as well as developing a low-impact infrastructure for human use (pathways, picnic areas, educational signage) and a longterm socio-ecological research platform (Mirtl et al., 2013). Interstitial spaces between buildings and in the central campus emphasize ecological gardening. Landscaping, in which the use of native species are emphasized, has been emphasized as a crucial mechanism for university campuses to conserve and enhance biodiversity (Kermath, 2007). We developed two simple rules of thumb for campus gardeners which would be easily remembered and which reflect the overall findings of the biodiversity survey. First, we recommended managing gardens to increase habitat availability for birds, bees, butterflies and bats. Second, we recommended that all plant choices for campus gardens fit at least two of three criteria: (1) Be a local species to Mount Carmel; (2) Be an aesthetically pleasing species, and (3) Be a species that can provide habitat for a target species from the taxa noted above[1]. Finally, recommendations for buildings and their immediate surroundings included the development of green roofs and walls and the placement of nesting boxes and bird feeders.

c. Recommendations for specific projects for increasing the potential for campus biodiversity and for cultural ecosystem services. These recommendations were diverse and included the restoration of the central campus wadi, the establishment of the forest education and research site, improving access to the Ecological Garden, employing a professional gardening team for the campus that also had experience in ecological gardening, and coordinating ecological goals with those of transportation, education and energy. Indeed most of the recommendations here have synergies with other campus goals including resource conservation, strengthening the physical image of campus, integrating students and staff from different faculties and more.

5. ECOLOGICAL CAMPUS PLANNING IN THE CLASSROOM

Scholars note the importance of connecting the content of university courses with the sustainability goals of the institution, as well as preparing a cadre of young adults who are intellectually equipped to address global environmental challenges (Alshuwaikhat and Abubakar, 2008; Kermath, 2007; Koester et al., 2006). A curriculum that emphasizes sustainability is considered a crucial component of an overall university sustainability plan. Further, the natural physical space of universities provides opportunities for outdoor education, and in particular for ecological education. This pedological resource is noted generally in campus planning documents (e.g. Cornell University, 2008) and more specifically in others, such as the development of outdoor classrooms for ecological education (Campus Master Planning Team, 2011). Kermath (2007) cites the use of the physical planning process as an excellent mechanism for educating landscape architects and planners about ecologically sustainable landscape planning.

Even prior to the beginning of the campus planning process at the Technion, the physical campus was used as a focal study object for ecology courses for landscape architecture students. Each year, graduate students in this mandatory course were required to assess the ecological challenges of the broader region (e.g. habitat degradation and loss, invasive species proliferation, species extinctions) and then propose a design intervention in the university that would address their selected challenge. Students were allowed to focus at any scale they selected, from campuswide to a single building or small patch of ground. They chose challenges as diverse as habitat preservation for both common and endangered species, restoration of campus streams, and increasing the ecological literacy of students and campus visitors. They were directed to the Landscape Architecture Foundation “Landscape Performance Series”[2] projects

[1] These criteria allow for the possibility of use of exotic species if, and only if, they provide habitat for other species of interest. We allow for this possibility due to the fact that butterfly surveys of the campus found that the diversity of that taxon was low, even for an urban environment. The butterfly surveyor suggested using (exotic, though not invasive) plants to attract particular native species of butterflies.

[2] https://landscapeperformance.org/

that received accolades for addressing ecological challenges through design for inspiration and ideas. While the students' work was intended for purely for educational purposes, when the course instructor was approached to act as ecological advisor to campus planning, he was uniquely equipped with a reservoir of studentinspired ideas for implementation. Further, several students were recruited to work on the plans, as well. As a result, several ideas directly inspired by students found their way into both the master and the statutory plans. In this way, successive generations of students acquired theoretical experience in campus planning, while learning about the potential for university campuses to serve as exemplars of ecological conservation in the urban environment.

6. DISCUSSION

In this work we show that spatial and master planning of campuses can be an effective mechanism for advancing the ecological goals of the institution, particularly when ecological goals are synergistic with a suite of other goals, including connectivity, creating spaces for learning and social activity, and creating an outdoor environment that reflects the university's cultural identity.

Many of the recommendations above were integrated into each of the three planning products at the Technion Campus (The strategic master plan, the new zoning code and the active intervention plan). The presence of multiple ecological concerns and objectives in the master plan document suggests that, with some initiative, ecological objectives can be raised and pursued with the support of the plan, which has been approved by the institution's board of governors.

University campuses are often considered small cities (Alshuwaikhat and Abubakar, 2008; Finlay and Massey, 2012), although they can be divided into the larger environment in which they are nested, whether it be urban, agricultural or natural (undeveloped) or some combination thereof. Reconciling the place of the Technion in a heterogeneous environment was a central feature of the planning process. The most significant contributions of the ecological assessment to the outputs of the planning process were (1) the inclusion of the Technion Woods, the Ecological Garden and the central wadi into an "Ecological-Historic Corridor" in the statutory zoning plan, and (2) the definition of the image of the Technion as a "ForestCity" with its emphasis on the significance of tree cover in the strategic master plan.

Kermath (2007) noted that the simultaneous emphasis on cultural and natural heritage on university campuses can have a synergistic impact on both social wellbeing and ecological conservation. The Technion campus image, as described in the master plan, is one of a city within a forest and the plan is enthusiastic in its endorsement of the value of forest cover and its benefits for both academic life and the environment. Alongside this image is the fact that the campus itself is nestled in the midst of a city and hosts a large population of students, staff and visitors. Rather than emphasize the potential conflict between these two images (city and forest), the master plan adopts the "ForestCity" image as a new and unique concept tailored for the Technion campus. As a ForestCity, the Technion plans aim to preserve a central greenspace and enhance the tree and plant cover throughout the campus – in the preserved areas, the interstitial spaces and integrated into the buildings themselves.

Nearly a decade ago, Alshuwaikhat and Abubaker (2008) noted that most universities, despite environmental proclamations and commitments, approached sustainability in an ad-hoc and limited way, often focusing on a limited number of environmental parameters (this point is re-emphasized by Finlay and Massey, 2012, and others). Our analysis suggests that ecological conservation receives only limited attention in most university plans, and then usually in relation to other social, economic or environmental objectives. Most plans focus primarily on energy, water and waste cycles with the objectives of conserving resources and reducing waste (Finlay and Massey, 2012). These are perceived by planners and consultants as "low-hanging fruit" that are economically beneficial in addition to their environmental benefits, and are therefore common first steps since they can be justified financially. We suggest this is positive and desirable, but it does not allow for realizing the full potential of university campuses to be positive actors in ecological conservation. Arguably, universities that address energy, water and waste flows are addressing ecological systems from an ecosystem perspective, considering their local to global scale impact with regard to greenhouse gas emissions, and energy and water consumption. Some university plans discuss landscaping in terms of hydrological flows or [generalized] habitat creation or protection. However, very few of the outline plans we reviewed here addressed species- and habitat-level

ecological conservation considerations as recommended in the ecocity model (Finlay and Massey, 2012) and has been attempted in the Technion plans.

Sustainability, in the broad sense, also receives prominent attention within the master plan. As is common in most of the university planning documents reviewed here, the Technion plan expresses commitment to environmental management of resources, including energy efficiency, waste reduction, and water conservation. However, as a result of the active participation of an ecological advisory team and the positive reception to its recommendations by the planning team, ecological conservation also plays a significant role in sustainability goals. As such, the master plan directs “increased emphasis on the harmonic relationship between the campus community and the unique ecology of Mount Carmel” (Assif et al., 2015; p.86), and sets as a planning goal “preserving and nurturing the unique natural environment in which the campus is situated” (Assif et al., 2015; p.87)

The strategic decision to develop the campus image as a “ForestCity” ensures the maintenance of green landscapes within the campus, but does not alone assure ecological objectives beyond those associated with green infrastructures, such as cultural ecosystem services, carbon sequestration, shade, etc. Biodiversity must be addressed through specific directives regarding habitat creation and restoration and species choices for gardening and forestry. While ecological conservation is one of many considerations driving planning objectives at the Technion, ecological considerations received greater emphasis in its strategic and statutory zoning plans than is typical of the university planning documents reviewed here, and certainly more than they had in past Technion planning documents. This was made possible through collaboration between planners and an ecological advisory team, through the sponsorship of biodiversity and ecosystem service assessments, and through extensive discussion, coordination and integration of ecological considerations final planning documents. The integration of students into the planning process via academic courses created a win-win situation, provided planners and ecological advisors with ideas, models, and research, while providing students with hands-on experience and the gratification of seeing some of their analyses and ideas work their way into final planning documents.

7. FIGURES

Figure 1: Aerial photograph of Technion campus, circa 1962

Figure 2: Aerial photograph of Technion campus, circa 2012

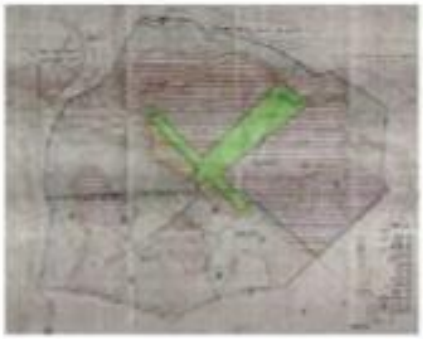

Figure 3: Campus development plan (“Klein plan”, 1950s)

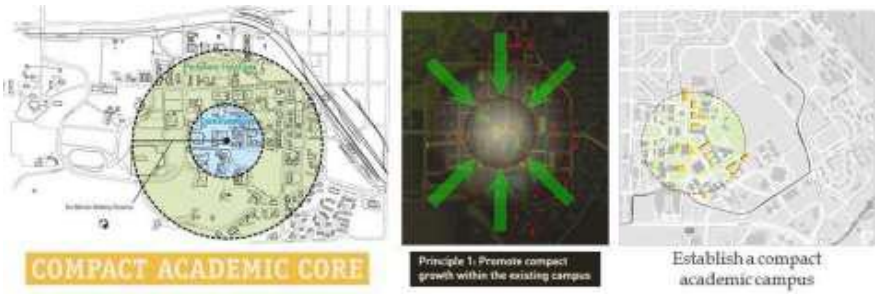

Figure 4: Examples of compact campus planning. From left to right: University of Idaho (University of Idaho, 2000),Purdue University (Sasaki, 2009), and the University of Utah (Skidmore Owings & Merrill LLP, 2008).

Figure 5: Examples of connectivity in campus planning. From left to right: Cornell University (Cornell University, 2008), University of Idaho (University of Idaho, 2000), and Purdue University (Sasaki, 2009).

Figure 6: Examples of preservation of quality habitat in campus planning: From left to right: Purdue University (Sasaki, 2009) and University of Wisconsin, Eu Claire (Campus Master Planning Team, 2011).

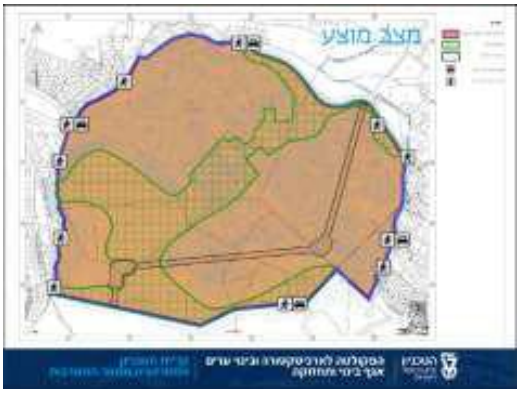

Figure 7: The Technion Campus statutory zoning plan. The Technion Woods (lower left), the central wadi, and the ecological garden (upper center) are to be conserved as open spaces, each with a unique recommended management plan.

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ID 1541 | PARTICIPATIVE APPROACH FOR DEVELOPING NATIONAL LEVEL GREEN INFRASTRUCTURE POLICY: A REFLECTION ON SLOVENIAN SPATIAL DEVELOPMENT STRATEGY

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1 INTRODUCTION

This paper addresses three issues:

1. First, the contents (outcomes), as well as the process of the development of Slovenian spatial development strategy 2030 (SPRS 2030) will be presented. SPRS is the strategic national planning document, which was adopted in 2004 and is currently in the process of revision.
2. Second, green infrastructure planning within the SPRS will be discussed.
3. And third, the findings from the evaluation study, explicitly analyzing the vertical and horizontal integration potential will be presented.

2 THE REVISION OF SLOVENIAN SPATIAL DEVELOPMENT STRATEGY

Slovenian spatial development strategy is a national strategic planning document. The strategy was adopted in 2004 and it's currently under the process of revision. The whole process follows the policy development cycle and can be divided in three basic steps: (1) first, spatial policy is adopted/developed, (2) second, measures and projects are implemented, and (3) third, the implementation of measures and projects is evaluated.

Figure 1 – Three basic steps of SPRS development (Source: Miklavčič et al., 2016, pp. 13)

After SPRS was adopted in 2004, several studies and evaluation reports have been prepared from to evaluate spatial development and the implementation of SPRS: Zero report on the status of spatial planning (Černe and Kušar, 2005), An analysis of current situation, development trends and guidelines for Slovenia spatial development (Pogačnik et al., 2011), SPRS 2030 - An analysis of the implementation of SPRS programmes and measures (Golobič et al., 2014). In 2016 Report on spatial development of Slovenia (Miklavčič et al., 2016) was prepared as a synthesis of all aforementioned reports. It also serves as expert groundwork for the preparation of new spatial development strategy.

The evaluation of spatial development on the basis of selected indexes has shown, the decline of implementation from the strategy's goals. According to SPRS 2030 - An analysis of implementation … (Golobič et al., 2014) one of the main reasons for the gap between the goals and their implementation was weak vertical and horizontal integration, i.e. the ability of the spatial policy to coordinate other policies influencing the spatial development and weak control over local planning. The necessity that the document

would be accepted as their own among the stakeholders was recognized as an important improvement in this context.

Therefore, the revision of SPRS has been planned as a participatory process, where various sectoral policies and other public interests will be tuned. Different stakeholders are included in the preparatory process, and public debate is encouraged, to ensure that the new SPRS will be adopted as a document, which will be recognized as their own among different stakeholders.

2.1 SPRS 2030 TIMELINE AND PUBLIC PARTICIPATION

Although the Ministry of the environment and spatial planning has initiated the revision of SPRS already in 2013, the first activities have been launched in 2015, when baselines and process plan of the SPRS 2030 have been introduced. Inter-sectoral working group was formed and the first public consultation on the baselines of the SPRS 2030 was organized, followed by the on-line public conference. Later that year, the draft of SPRS 2030 goals and vision has been prepared. In the period from July 2015 to September 2017 several public conferences for different stakeholders and inter-sectoral meetings are being organized. Four thematic groups have been formed, where experts from different fields have been gathered to discuss four main topics: (1) functional urban areas, (2) possibilities for low-carbon society, (3) countryside and green infrastructure, and (4) mountain and border areas.

The results from all four thematic groups will be synthesized in “Spatial development model of Slovenia”, which will be developed in 2017. Later in 2017 and in the beginning of 2018, the draft version of SPRS 2030 will be put into public consultation and sectoral reconciliation. After that, the final document will be revised and adopted.

Figure 2 – The SPRS preparation process and public participation (Source: Prenova Strategije …)

2.2 SPRS 2030 VISION, GOALS AND FOUR MAIN TOPICS

As it was discussed in previous subchapter, the whole process of SPRS 2030 revision is planned as participatory, where different stakeholders, public bodies, as well as general public are encouraged to cooperate within the process to achieve the common goal: spatial strategy, where various interests will be reconciliated and tuned in order to achieve resilient/sustainable spatial development.

The vision of spatial development is based on the values towards which the Slovenian society is oriented: solidarity, tolerance, cooperation, safety, peace, quality of life, innovative society, trust, knowledge, skills, identity, democracy, equality and efficiency. Slovenia in 2030 is a safe country, which ensures well-being and contentment of its citizens in healthy environment. People are closely connected to nature, cities are green and the process of suburbanization is controlled. Countryside is well-connected with cities, public services are accessible and its traditional cultural landscape is preserved. Natural resources are used sustainably, the country aims towards food and energy self-sufficiency. Citizens are proud on their country and they participate spatial planning policy development and implementation.

The strategy itself is based on the vision and five goals, which have been set in the beginning of SPRS 2030 development:

1. Rational and efficient spatial development.
2. Competitiveness of Slovenian towns.
3. High quality of life in towns and in countryside.
4. Slovenia's spatial identity.
5. Resilience (Vision and goals of the …, 2016).

Each of the five main goals is divided into more specific sub-goals, which will be further elaborated in the strategy.

In the current strategy (SPRS 2004) guidelines for spatial development are presented within three main chapters: (1) settlement structure/pattern, (2) infrastructure, and (3) landscape, whereas in the revised strategy (SPRS 2030), a slightly different organization of topics is being introduced. Spatial development vision and goals are being elaborated/discussed/implemented within four main topics:

1. Functional urban areas,
2. Possibilities for low-carbon society,
3. Countryside and green infrastructure, and
4. Mountain and border areas.

For each of these topics, a thematic group with stakeholders from different fields has been formed. Four groups of researchers who are experts in the various fields of planning (e.g. spatial, regional and urban planning, landscape architecture, geography, agriculture, forestry) were developing the expert groundwork for each topic, whereas the Ministry of the environment and spatial planning led the whole process. Several meetings with the ministry as well as workshops with stakeholders have been organized. Stakeholders received the material in advance and have been asked to actively participate on the workshops where several questions have been discussed. All the comments and recommendations from the workshops have been discussed and on the basis of these recommendations the reports have been supplemented. A need for a joint workshop has been recognized after the first round of workshops, since especially the topics (1) Functional urban areas, (3a) Countryside and (4) Mountain and border areas have been recognized as overlapping and intertwining. For the purposes of the second workshop, six types of areas have been determined and discussed:

- Urban areas (1),
- Suburban countryside areas (1+3a),
- Suburban border areas (1+4),
- Border countryside areas on lower altitudes (3a+4),
- Border countryside areas on higher altitudes (3a+4), and
- Mountain areas (4).

One of the main emphases of the workshop was the discussion on SPRS 2030 goals and the means/measures for achieving these goals within abovementioned areas as well as within different fields/topics (e.g. (2) low-carbon society, (3b) green infrastructure). The latter have been discussed separately, whereas the goals and measures for their implementation do not necessarily follow the abovementioned typology. The results from each group as well as the results from joint workshop will serve as the expert groundwork for the strategy.

3 GREEN INFRASTRUCTURE (GI) PLANNING

3.1 THEORETICAL BACKGROUND FOR GI DEVELOPMENT

According to Dige et al. (2014, 8), green infrastructure is defined as: "… a tool for providing ecological, economic and social benefits through natural solutions, helping us to understand the advantages nature offers human society and to mobilise investments that sustain and enhance these benefits." Naumann et al. (2011, 1) understand GI as: "…the network of natural and semi-natural areas, features and green spaces in rural and urban, and terrestrial, freshwater, coastal and marine areas, which together enhance ecosystem health and resilience, contribute to biodiversity conservation and benefit human populations through the maintenance and enhancement of ecosystem services. Green infrastructure can be

strengthened through strategic and co-ordinated initiatives that focus on maintaining, restoring, improving and connecting existing areas and features as well as creating new areas and features."

On the basis of the above mentioned definitions, the main characteristics of GI and the objectives, which guided the development of GI concept within SPRS 2030 have been defined:

1. GI should not be considered just the result of a planning process but also as the process itself. GI planning is a strategic approach to conservation planning (McDonald et al., 2005), combining the planning methodologies from ecological planning (Ndubisi, 2002) with the key principles of landscape ecology (Ahern, 2007). The knowledge of ecological systems' structure and functioning is derived from landscape ecology, whereas ecological planning methods enable planning and management of landscape changes in a way that various functions of GI are preserved and/or enhanced.
2. GI is a system of interlinked elements and processes, which provide various functions on different levels. Three basic elements of GI can be identified: (a) hubs as the core areas, interlinked with (b) corridors and (c) stepping stones. GI is a dynamic system, where constant flows of energy and material among and within its elements maintains equilibrium of the whole system.
3. Three principles guide the development of GI: (a) heterogeneity among and within its elements, (b) connectivity among different elements of the whole system and (c) multifunctionality of its elements as well as the system as a whole.
4. GI is hierarchical system and all sub-systems need to be in balance in order to the system as a whole functions well. Different functions are emphasized on different levels and within different spatial contexts. On the international (continental) level, GI has a key role in providing ecosystem and ecological functions, whereas on urban level, social and cultural functions are emphasized.
5. Regarding the (wider) spatial context, four different strategies can be applied in GI planning: (a) protective, (b) defensive, (c) offensive and (d) opportunistic (Ahern, 1995). In GI planning several strategies are usually combined in order to achieve the consistency of system.

3.2 GREEN INFRASTRUCTURE CONCEPT WITHIN SPRS 2030

As it was already discussed in the previous chapter, green infrastructure has been recognized as one of the main topics in the SPRS 2030. Although Slovenia is characterized by well-preserved natural environment, deviations from goals, set in the SPRS 2004 often result in negative impact on green infrastructure. Urban sprawl, non-rational land use for industrial zones and adjacent infrastructure, and also forest overgrowth have been recognized to have the biggest negative impact on green infrastructure.

The necessity to address the issue of green infrastructure on the national level, as well as to interlink the national GI concept within international environment, and, to set the guidelines for the development of GI on regional and urban level, has resulted in the inclusion of GI into one of the four main topics of SPRS 2030.

Considering the theoretical background of GI planning and the Slovenian spatial context, the concept of GI planning within SPRS 2030 was based on objectives from the chapter 3.1.

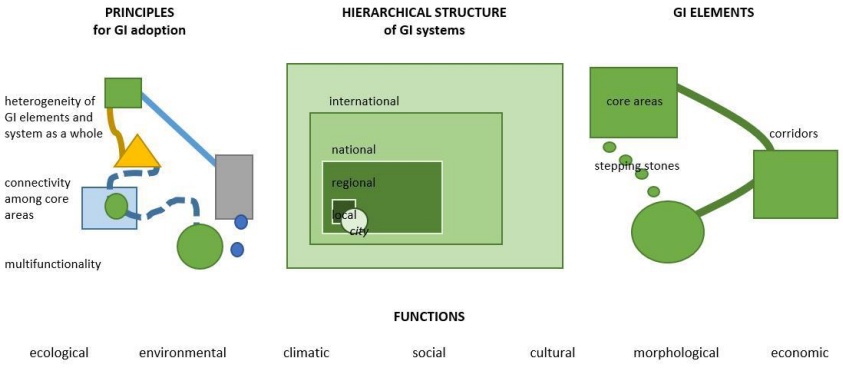

Figure 3 – Different aspects considered in GI planing for SPRS 2030

3.2.1 THE DEVELOPMENT OF GI ON NATIONAL LEVEL

Since SPRS 2030 is a national planning document, GI concept has been based on national level. The connections to international, European level have also been considered, since almost whole Slovene territory is considered as a conservation area within European GI network, while it provides ecosystem services and represents an important habitat area within Europe.

Therefore GI concept on national level (Figure 4) has been developed on two main hubs, which are both a part of important naturally preserved areas in European context: Alpine and Dinaric area. Four main watercourses: Sava, Drava, Mura and Soča are the most important corridors, which interconnect national GI system with neighboring countries, and, stepping stones between two core areas should be defined to enable key ecosystem functions on European level (e.g. migration of big mammals).

Elements, which form a backbone of GI on the national level, the measures for their selection/inclusion, and functions of proposed elements have been proposed and discussed on the final joint workshop with stakeholders.

Furthermore, guidelines for the development of GI on regional and local levels have been set, as well as guidelines for the development of urban GI.

River corridors	Rivers Sava, Drava, Mura and Soča	Corridors	xx	x	x	x	x	xx	0
Landscapes of national importance	Areas which overlay with above mentioned elements; stepping stones within intensively cultivated/ densley populated landscape	Core areas/stepping stones: cultural landscape	0	0	0	x	xx	xx	x
Outstanding landscapes									
Forests with important ecological function	All	Core areas: managed natural landscape	xx	xx	xx	xx	x	0	0
Forests with important social function									
Conservation forests			xx	xx	x	0	0	0	0
Forest reserves									
Agricultural land	High nature value farmlands; agricultural land of lower quality and not within larger agricultural complexes	Core areas/stepping stones: cultural landscape	x	0	0	x	x	x	x
National nature conservation areas	Landscape and regional parks which serve as stepping stones and corridors	Core areas: managed natural and cultural landscape	x	x	0	x	x	x	x
Biosphere reserves	Areas within intensively cultivated landscape, stepping stones	Core areas/corridors: biosphere reserves	x	x	0	0	0	0	0
Habitats of large carnivores	Partly included as Natura 2000 areas; migrations	Core areas and corridors	x	x	0	0	0	0	0

** The importance of each function for the national level GI system as a whole is evaluated on 5-stage scale; value 1 means that the function is of no/ minor importance on the national level and value 5 means that the function is of major importance on the national level.*

*** The importance of individual elements' function is evaluated on three stage scale: xx – function of great importance, x – function of medium importance, 0 – function of minor or no importance.*

E - economic, S – social, P – physical (reference to Figure 6)

Table 1 – GI elements, functions and measures for inclusion of elements into national GI system (Source: Penko Seidl et al., 2017)

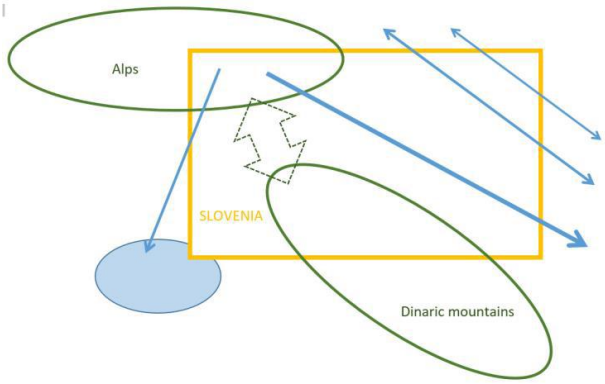

Figure 4 – The concept for GI development on national level

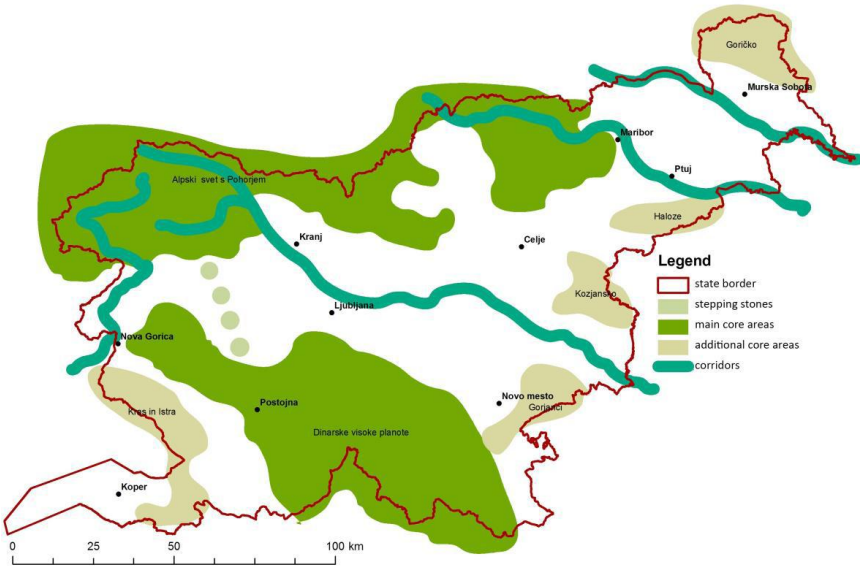

Figure 5 - Green infrastructure on national level

4 STRATEGIC (EX-ANTE) EVALUATION OF SPRS

Strategic evaluation has been commissioned in spring 2016 in parallel to the process of SPRS 2030 development with the aim to support its coherence, relevance and effectiveness in terms of achieving territorial cohesion. The concept of territorial cohesion (Camagni 2007, EATIA 2011) has been chosen as a reference for SPRS 2030 as well as its strategic evaluation (Figure 6). As space is a limited natural resource, the only possibility for an increased efficiency of its use (without overusing and degrading it) is in its multifunctionality, which in parallel brings synergistic effect to its users and increases territorial cohesion (territorial identity, efficiency and quality). The priority should therefore be given to projects and measures according to their overlapping and synergistic function.

The interim report of the strategic evaluation (November 2016) focused on intervention logic of spatial development policy. The findings from the previous research (Pogačnik et al., 2011, Zavodnik Lamovšek et al., 2014, Golobič et al., 2014) indicated that the results of spatial development diverged from the set objectives of spatial policy. The gap between the formal consistence of different sectoral documents with spatial objectives and actual outcomes, indicate serious shortcomings in policy implementation. One of the main reasons is inappropriate intervention logic of the spatial policy. While its objectives underline interdisciplinary and trans-sectorial approaches, the policy measures predominantly rely on normative and top-down implementation. These are too weak in the circumstances of complicated administrative processes, unclear and often changing competences of different administrations and low level of trust among the stakeholders. The new vision, as formulated within SPRS 2050 (Bartol et al., 2016), recognized this problem and promotes change towards more participative and communicative approaches to spatial management. However, the process of SPRS 2030 preparation until now did not succeed to showcase such approach. Despite its declared participativeness, supported by a large number of organized events

and involved persons, the actual stakeholders' contribution and level of commitment is questionable. The competence and formal (political, administrative) power and responsibility of involved representatives was low, and the process was too loosely organized to achieve the communicative process. The evaluation team proposed to adopt a more structured process, which would require (1) for each sector to indicate own priorities, (2) to identify overlapping issuess between the spatial and every other relevant sector (as synergistic or conflicting), and (3) to develop the proposals for projects and measures, which would support the synergistic and resolve the conflicting issues. To enable this process and improve the spatial policy implementation, a few measures need to be enforced: electronic evidence on land use and related regimes, land management (financial) instruments, intersectoral body with clear responsibilities and regional planning.

As regards green infrastructure, the multifunctionality and territorial cohesion concept are of key importance. The hierarchy and priority as well as guidelines for planning and management should be defined according to principal and overlapping functions of GI: economic - E, social - S or physical – P (see Table 1); and their contributions to territorial cohesion; i.e. territorial identity (Ti), effectiveness (Te) or quality (Tq). As can be concluded from Table 1; the elements most contributing to territorial cohesion (TC) are: nature conservation areas/national, landscape and regional parks and high nature value farmlands; (contributing to all elements of TC), Natura 2000 and forests with important ecological function (contributing to Tq) and landscapes of national importance (contributing to Ti).

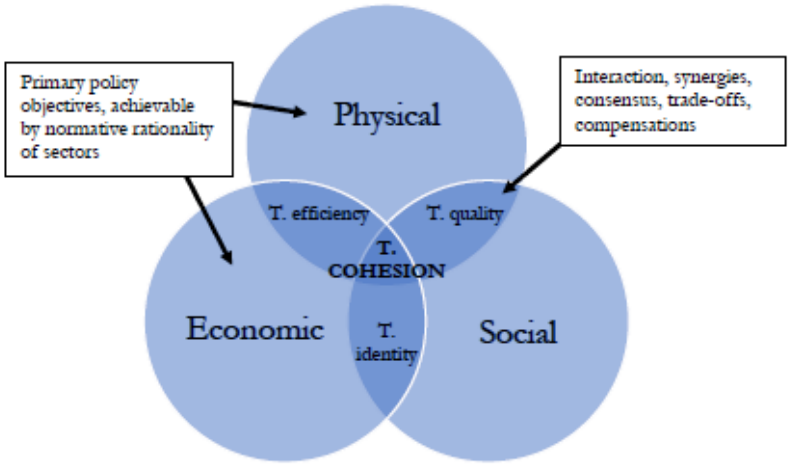

Figure 6 – The concept of territorial cohesion

5 CONCLUSIONS

Three issues have been addressed and discussed in this paper:

1. The process of preparation of Slovenian spatial development strategy,
2. The role of green infrastructure planning within SPRS, and
3. The strategic evaluation of the process as well as the document.

Spatial development in Slovenia since the adoption of SPRS 2004 diverged from the set objectives of spatial policy. According to the strategic evaluation for the policy revision, the main reasons is inappropriate intervention logic of the spatial policy. While its objectives underline interdisciplinary and trans-sectorial approaches, the policy measures predominantly rely on normative and top-down implementation. Accordingly, different stakeholders did not accept the strategy as their own development opportunity. The new vision, as formulated within SPRS 2050 (Bartol et al., 2016), recognized this problem and promotes change towards more participative and communicative approaches to spatial management. Therefore, the process of SPRS revision has been set as a participatory one, where different stakeholders are included in the preparation of the document. But the inclusion of various stakeholders into the process often means the collision of diverse value systems and consequently diverse ends and means for their achievement. Reconciliation of all these interests and appetites has proved to be a challenging process. According to findings of strategic evaluation of the SPRS 2030, this shift was not completely successful. Despite a large number of organized events and involved persons, the actual stakeholders' contribution

and level of commitment is questionable. A more structured process would be required, consisting of the following steps (1) for each sector to indicate own priorities, (2) to identify overlapping issuess between the spatial and every other relevant sector (as synergistic or conflicting), and (3) to develop the proposals for projects and measures, which would support the synergistic and resolve the conflicting issues.

The deviation from goals, set in SPRS 2004 has resulted also in negative impacts on natural environment. The development of green infrastructure concept on national level is an attempt to strategically plan and manage (generally well preserved) natural environment in order to implement various functions. The concept was based on the interconnection of different types of naturally preserved areas, which create a backbone of national green infrastructure, provide opportunities for inclusion into international GI system, as well as set guidelines to establish GI on regional and local level.

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ID 1550 | MODELING ECOLOGICAL NETWORKS AND LAND VALUE FOR THE PRIORITIZATION OF NATURAL AREAS CONSERVATION

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1 INTRODUCTION

The strategy promoting Green Infrastructure (GI) from European institutions (2013) considers the spatial structuration of (semi) natural areas as a network and resulting environmental features impacting populations. The strength of the GI's approach lies in the effort to integrate the ecological and social values of natural areas in combination with other land development (Lafortezza et al. 2013): this strategy encourage an integrated approach of space planning at different scales and promote the multiple services associated with natural areas. From a conservation biologist perspective, it is not a new idea, since it is based on environmental continuity, ecological networks and landscape connectivity. Yet, considering natural landscape as a network that offers a structural frame for the development of the biodiversity of tomorrow (and secure some ESS for our societies) forces to rethink our spatial planning approaches.

Landscapes are seen in this paper as a dynamic and structured spaces with a social dimension where management and planning play a key role. Physically, landscapes are composed of artificialized components (Grey infrastructure) and natural components (Green infrastructures) in interaction.

In France, planning process is historically a top-down process based on technical and professional expertise. After several decades of planning at national scale, French government tends to give more decisional power to regional and local scales (i.e., decentralization). Multiple guidance documents of soft planning such as SCOT (Schéma de Cohérence Territoriale/ territorial coherence program), present a mix between national, regional strategies and the translation of European directives about environment and socio-economy. Town planning regulations are now framed by this soft planning, but local collectivities still have to adapt it, dealing with all the contextual and operational components. Their task is to spatially, legally and institutionally define and regulate urbanistic rules at the finest scale (hard planning; Purkarthofer, 2016). Moreover, the planning process is gently opening to democratic participation with mitigate successes. We will focus on a problem coming from the difficulties to take account of the different values of natural areas. These values correspond to different estimations of natural areas in ecological or socio-economical terms.

Findings some tools that could shed light on the importance of the identified stakes are requested, especially in urban areas with high levels of artificialization and under sprawl dynamic. Several tools have already been developed to assess values of natural areas or values of landscapes but they are poorly transferred together to operational field because of their focus on a single value. From conservation

biology field, Beier et al. (2011) made a first step to a better cohesion between planning institutions and spatial sciences, highlighting the main technical and organizational points that have to be monitored in order to build a coherent connectivity map at regional scale. But more than a protocol to build a common tool, a common framework between sciences and planning is lacking to take account of all kind of values associated with natural areas.

The awareness of these different values can be seen through the spread of environment concept (70's), biodiversity concept (90's and 2016) and ecosystem services (ESS) concept (70's and reborn in 2005). Santolini et al. (2016) highlight that "The ESS framework could [also] be a useful interface between science and decision-making". Mobilizing ESS concepts, GI's approach could be the needed hall where science and operational planning meet again. A framework, based on both scientific knowledge and "good practices", that is claiming to consider the different values of nature at any scales of planning. In urban contexts such as metropolitan areas, GI's approach encourages the participation of new stakeholders to the decision making process. It can also lead to be construed as a guidance to limit urban sprawl and promote urban regeneration.

If in one hand the planning processes become more complex, with more stakes to deal with, in another hand it's aiming to a better integration of the social, economic and environmental components in space. It is slowly shifting from a discontinuous process approach to a continuous one. As a consequence, this context brings scientists to work on several questions about the value of natural attributes as a (dis)service set and about the value of landscapes.

This fresh started Phd project aims first to discuss about technical and methodological contributions identified as useful to clarify some central stakes into future planning and decision making. Our research object deals with the valuation of natural areas through two different prisms: ecology and socio-economic. The main research question of the project can be stated as:

How can the values of (semi-)natural areas be captured, discussed and prioritized into the planning process?

Our final objective is to propose a method allowing decision makers to perceive and assess different values of natural areas. Yet, a part of this research work also aims to understand the relations between the different values associated with natural areas. Our study case will take place in the Grenoble-Alpes Metropole area, a region in France with several degrees of urbanity and a large panel of natural characteristics.

The first section of this paper presents how ecologists assess the ecological value of a landscape through the analyze of an ecological network with connectivity measures. The second section presents econometric methods to capture socio-economical values of a landscape and a method to capture people perceptions of natural attributes in their environment. The last section presents briefly the working prospects of this Phd project.

2 ECOLOGICAL NETWORKS AND LANDSCAPE CONNECTIVITY

Ecological networks aim at reconnecting fragmented natural areas in landscapes, with different degrees of urbanization. As landscapes are dynamic objects, connectivity is not stable over time. In the following paragraph, we will give a brief definition of landscape connectivity, introduce some modeling approaches and give an outlook of the proposed methods to build our ecological network.

2.1 WHAT IS LANDSCAPE CONNECTIVITY?

Connectivity is the extent to which movements of genes, propagules (pollen and seeds), individuals, and populations are facilitated by the structure and composition of the landscape (Rudnick et al. 2012). It depends both on the distribution of particular habitats in space, on the permeability of the matrix (non-habitats) which is composed of habitats non-suited for a species and on the presence on barriers like cliff, highways, high-speed railway lines or rivers which often are linear object. Assessing connectivity is a

species centered approach (Pearson et al., 1996), based on the requirements for species to survive at the population level.

Connectivity can be split in two main components:

i. Functional connectivity (or realized connectivity) describing the states of genes, individuals or populations flows in the landscape. Ecological surveys and monitoring can be deployed to capture this functional connectivity for some species.
ii. Structural connectivity describing the physical landscape: topography, hydrology, type, size and organization of habitats. In conservation planning, the “continuum concept” is mobilized to build ecological corridors between two focal conservation areas. This concept aims to physically link the same types of habitat and is a perfect example of structural connectivity.

These two components are linked, but a “good” structural connectivity does not induce a “good” functional connectivity (Taylor, 2006), whether for the target species or for the others species sharing the same habitat. Some physically disconnected habitat can also present a good functional connectivity for some flying species, like birds, or species with high dispersal capabilities.

When data about the distribution and the realized movements within and between populations is scarce or missing, the structural approach can be a first step to integrate the management of natural areas in decision making (Urban and Keitt, 2001). A potential tool to theoretically assess connectivity is graph theory, which can be defined as an idealized representation of networks pattern (Dragicevic and Sinclair, 2013). This method has been widely mobilized to implement ecological corridors in landscapes. The “Trame Verte et Bleue” program in France is based on graph theory, serving as a high level vision of landscape connectivity in urbanism documents. To go beyond the limits of structural connectivity, in a « learning by doing » process (Kato and Ahern, 2008) and improved by consecutive steps of adaptative planning, Functional connectivity can be assessed by monitoring the distribution and dynamics of species populations.

An alternative to the adaptive planning is to improve modeling of the functional connectivity of ecological networks: the structural networks are enhanced with ecological data related to one or several species. We chose to mobilize this approach also called potential connectivity by conservation professionals.

2.2 MODELLING APPROACH AND METRICS

There are several ways to model the landscape connectivity and most of them use GIS software in order to spatialize the data. Spatial patterns indices, nearest neighbor distance, buffer radius or graph theory are used to evaluate potential connectivity (Calabrese and Fagan, 2004). The strengths of graph theory approach in modeling connectivity are highlighted by Rayfield et al., (2011):

i. The possibility to characterize connectivity at large scales with many habitat patches
ii. The ability to balance data requirements with information content
iii. The possibility to incorporate ecological data, like species biology requirements or dispersal capabilities to build the graph

In other words, by adding the modeling of species-specific dispersal in the graph building, we can assess a potential connectivity of landscape.

To build our ecological network, we chose to mobilize the Graph theory. In this method, we consider habitat patches (nodes) are considered to provide all environmental and natural resources that a focal species needs to realize their entire cycle of life. Those nodes are connected by potentials corridors (edges) which are generated between habitat patches.

In a first step, habitats for individual species are identified at a chosen time. We will mobilize minimum habitat area and habitat quality data for every species in order to identify the potential nodes. In a second step, the species median dispersal distance will be approximated via trait based predictions (Whitmee and Orme, 2013; Mimet et al., 2016). These predictions only exist for terrestrial mammals on which our model will focus. To build the edges of our graph, we selected two main methods which are based on dispersal species-specific distance and on a simplified landscape grid, usually built from land use and/or land cover

maps, crossed with topographic models. Each cell has a resistance to movement value, or a probability of dispersion to an adjacent cell.

i. The multiple least-cost paths method is based on the idea that a species will use the shortest way between two habitats in terms of movement costs. This approach is based on species dispersal distance, its capacities to perceive environment and on the landscape resistance to movement. Least-cost method can be used to delineate corridors in more or less elaborate ways for every focal species identified as pertinent at a given scale.
ii. The circuit theory method supposes a more random walk of individuals in the landscape (probability to disperse from a cell to another in the landscape grid). If it can help to delineate corridors spatially, its main strength is that this method allows us to build current density maps with multiple pathways between habitats patches and inform us about existing dispersal bottlenecks in an identified corridor or in the landscape. This method was proven effective for gene flows (Mc Rae and Beier, 2007). Those bottlenecks are labeled of high priority in order to keep or enhance connectivity for a given species.

Beyond the difficulties to select connectivity metrics, building permeability or the resistance grid is the critical part of the modeling. The resistance value of each cell is a proxy of the real crossing cost for a particular species. Moreover, as it is difficult to assess the pertinence of a resistance value through a component of the landscape for a given species, the values are generally “expert estimates” or extrapolated from field survey (e.g. GPS tracking).

However, it is fundamental to understand the limitation of modeling and metrics used in order to assess connectivity (Kindlmann and Burel, 2008). These connectivity metrics depend on the focal species, landscape/time scales, and spatial neighborhood. Pascual-Hortal and Saura (2006) proposed to test simple metrics under scales and landscape complexity changes. The most common way to assess landscape connectivity is to use a set of different metrics, informing us on element, component and network scales (Rayfield et al. 2016).

All those methods are currently used mostly for a single species and can be mobilized for operational work on fine scale. The choice to work with some focal species and not others seems to be a strong bias to legitimate a corridor planning to preserve biodiversity at large scale.

2.3 MULTISPECIES APPROACH

Optimally, we have to take into account every species present in a landscape. Currently, multispecies approaches are still in development. We present here some approach to deal with this issue.

A common way to take account of several species is to build several species-specific networks. Poodat (2013) suggests to represent the connectivity outcomes seen as different alternatives, then to let the decision makers to fix planning prioritization choices.

In a case of a located arrangement, like a structure to cross a highway, Mimet et al. (2016) propose to mobilize multivariate representations and to choose the location that can concern the most of the species. As an alternative, some authors propose to create some cluster of species with the same ecological characteristics (dispersal capabilities, preferred habitat types kind and minimum habitat area) in order to build virtual model species. This approach by cluster can also work at broad scales as demonstrated by Correa Ayram et al. (2017) who have built three virtual species from forest areas in order to obtain three scales of landscape connectivity The last way is to build a multispecies ecological network is to study the connectivity of an umbrella species habitat. Theoretically, an umbrella species is supposed to live in an ecological network overlaying several others species specifics networks. Yet this approach has encountered many critics from operational fields: professionals highlighting a problem of network viability as the optimum habitat quality cannot be the same for a lot of species due to resources and niches competition.

2.4 RESEARCH OUTLOOK

In this first part, we presented several approaches used to build ecological networks in conservation planning. From a planning perspective, a linear corridor identified at regional scale, either by habitat continuum or by least-cost paths method can be stated at local scale by mobilizing circuit theory approach. If the data is accurate enough and mobilizing graph theory approach (Crombette, 2016), urban corridors can be designed in highly artificialized areas, in order to enhance ordinary biodiversity. To fulfill this purpose, it does not always require connecting two or more natural spaces nodes. A current density map based on several species characteristics could give us an estimation of the importance of an area in terms of connectivity. At last, this current density map could inform us on some areas with high medium or low value of connectivity, opening preferably some areas to urbanization for conservation purpose.

These methods offer some ways to preserve biodiversity by taking account of the different flows present in (semi)natural landscapes. Yet this ecological valuation of natural areas only represents a dimension of the landscapes value and brings some more questions in a planning perspective. Decision makers also need to take account of other parts of natural landscapes value, through different valuation methods in order to answer questions.

Do the areas of high connectivity value match with high socio-economical values of natural landscape perceived by people? Locating and detecting potential conflictual areas between ecological and socio-economical stakes looks like a prerequisite to state a consistent development strategy. We will present the methods we chose to capture the socio-economical values of natural landscape in the next part.

3 PERCEIVED NATURAL AMENITIES

The fragmentation of landscape has ecological impacts, but has also direct and indirect impacts on society. People can set a positive or negative value of some landscape's attribute depending on their perception of the environment, their personal sensitivity and practices.

In economy, two kind of approach coexist to evaluate the implicit prices of the landscape attributes. The first one is based on revealed preferences from the market condition (e.g. hedonic pricing method), every comportments that can be observed from real market of a good or service. The second one is based on stated preference (e.g. contingent valuation method). Both approaches are well described in literature, but hedonic pricing method offers us two advantages. First, this method is spatially explicit, and can be integrated under GIS software. Second, some reference close to our case study on periurban landscapes are already available (Cavailhes et al., 2007). We plan to mobilize this method in order to capture the impact of natural amenities on property prices or rents.

3.1 NATURAL AMENITIES AND HEDONIC PRICING

Hedonic pricing (Rosen, 1974) is an econometric method based on revealed preference theory. It is built in order to analyze people' choice from empirical data. Applied to real estate field, this method supposes that a (real or rental) property is a composite good divisible into a set of characteristics but sold as one. Those characteristics co-determine the property price and can be embedded (dwelling area, age of housing, etc.) or extrinsic, like neighborhood factors spatially localized (commuting costs, accessibility or proximity to amenities or services).

An amenity is originally an economical term used to describe a non-produced public good that have no explicit price. The presence of characteristic set of amenities (e.g. proximity and accessibility to schools, health services, urban parks, natural areas, etc.) can attract some people whose work may not be the main purpose to select a location (Chen et al., 2008). It can be identified as a driver of development at regional (Ullman, 1954) or city scale (Clark et al. 2002). Natural amenities are more specific and can be define as"[…] elements of the environment (e.g., climate, water bodies, coastlines, mountains, and forests) that attract people" (Kovacs et al., 2017). We will adopt a more generalist definition proposed by Schaeffer and Dissart (personal communication): A natural amenity for a group of people or firms is a (bundle of) place-based biophysical attribute(s) that generate(s) localized benefits valued by most members of this group.

Amenities are heterogeneously distributed in the landscape and scarce in a given context: lakes or trees in highly artificialized areas, health services in rural areas etc. The literature on natural amenities does not show a clear result between natural characteristics of landscape and property price (Brossard et al., 2011): it is all context and data dependent. Moreover, impacts from a bundle of natural amenities on property prices can be constant, or depend on distances between amenities and property location. These inconsistent results could be explained by the quality of environmental data used in modeling process. Natural areas of landscapes are mostly simplified into ground cover layers, without taking account of the use of spaces. Brossard et al. (Ibid.) proposed to cross ground cover data with the legal status of plots to overcome this issue. It is an approach that may offer a representation closer to the real accessibility to some areas. It could also bring a better estimation of "futures ground cover changes" (e.g. private woods/farmland that could be opened or closed to urbanization. Inconsistent results could also come from a spatial modeling issue as the study area extent can also capture several effects that an amenity can have on real estate market at different scales. We will see in next part how to go beyond this limit.

3.2 MODELLING ISSUES

In practice, a spatial regression model is built in order to explain the price of the property, or the rent (explained variable), by a set of characteristics (explanatory variables). Assuming the market is in equilibrium, we can estimate the marginal price of a characteristic impacting the property price, referred as the willingness to pay of the good' owner. The selection of the characteristics is a critical issue for the interpretation of the model and exposes it to critics. In order to build the model, two approaches can be mobilized: a machine learning approach where characteristics are selected from empirical data or an approach by choice where characteristics are selected on the base of their importance in case context, or in the literature. To sum it up, the categories of explanatory variables mainly used in hedonic pricing literature are structural variables (e.g. dwelling area, number of rooms, parcel size …), neighborhood variable (e.g. income, travel time to work, distance to road/railroad/golf course …) and natural amenities from open spaces (e.g. distance to nearest forest/park, forest density, shape of the patch…).

In order to get a robust estimate of the marginal price of a characteristic, it is essential to reduce all kind of correlation (spatial and a-spatial) between the variables of the model. Yet, some limits of statistical analysis of spatial data reside in the difficulties to get rid of it, even if some methods allow us to go through these issues

In one hand, endogeneity between variables can create interpretation biases and inconsistency of coefficients. It is the case when two or more characteristic can be explained by another one omitted in the regression, or by a characteristic that we can't capture. E.g., the neighborhood prestige can be hard to measure by itself, but it plays a major role into real estate market through a "between us" effect. The price of property depends on the location of amenity and inversely, so it is not possible to compartmentalize the pure effect of each variable. Endogeneity can also be observed through the correlation between a characteristic and the error term of the model. A way to take account of heterogeneity consists in using instrumental variables correlated to endogenous characteristics and independent to model residuals.

In another hand, the spatial dimension of the model bring a spatial correlation issue that we have to take into account, otherwise the regression coefficients are biased and cannot be mobilized to estimate a marginal price (Le Gallo, 2002). Spatial autocorrelation is based on the first law in geography: "Everything is related to everything else, but closer things more so" (Tobler, 1970). To detect the spatial structure of the data, we have to analyse if a characteristic is randomly distributed in space, or clustered (high values in a contiguous area, low values in another) or "chess like distributed" (high values area surrounded by low values area and inversely).

Several spatial models already exist and are exposed and discussed in Gelfand et al. (2010) or Anselin et al. (2013). Yet, according to these issues, the data "quality" have to be tested in order to select which spatial models can be applied (Anselin, 2002) to calculate consistent marginal prices. To sum it up, the hedonic pricing approach can help us to capture a monetary value of natural amenities through real estate prices. But several technical and data related complications can lead to misinterpret the results.

3.3 LOCAL KNOWLEDGE

Even if we can identify which natural amenities are preferred through a will to pay to benefit from it, we are far to be able to capture the resident local knowledge of the environment. Human and social sciences developed several methods to capture it, but results are usually hard to capture, qualitative, vague, and hard to incorporate in planning processes (Rentanen and Kahila, 2009). Still this local knowledge has been identified as fundamental to build and legitimate a planning decision in the eyes of the public (Douglass and Friedmann, 1998). We did not delve enough to present different approaches to capture local knowledge, we will focus on a single concept that could be mobilized in our study.

The concept of Public participation GIS (PPGIS) could be an approach mobilizing people through a map-based participation tools permitting to capture the local knowledge of environment and the value of landscape for people. This map could be overlaid and compared with results from ecological and econometric models. This PPGIS concept has been criticized because of the complexity of GIS interaction, unable to mobilize non expert people and thus far from people experiences of environment exhaustiveness (Poplin, 2012). But development of user friendly SIG tools and open source technologies allow more and more people to express their perceptions and their value.

Methods like softGIS developed in Aalto University (Finland) take account of the needs of planners in operationalizing terms (Rantanen and Kahila, 2009; Kyttä et al., 2013): testing the representativeness of the people answering to a survey program, feeding back the users on the results, questioning the complementarity between technical and local knowledge and thus their weight in decisional process etc. Data from local knowledges captured via a softGIS approach could even be incorporated in hedonic pricing approach (Czembrowski et al. 2016). In this last approach, the local knowledge is used in order to improve the quality of environmental data mobilized in the hedonic pricing model.

Yet, in order to capture a ‘social’ value of landscape from residents perceptions, several other approaches have still to be considered.

4 WORKING PROSPECTS

At a later stage, the doctoral work will focus on the discussion about convergences and contradictions between the selected values associated with natural areas (cf. section 2 and 3.). Both a force and a limit of our project is to propose methods spatially-explicit methods. The interest of spacialization is to offer a medium support between different kinds of values (ecological, economic or social) and a critic of this approach is that non spacialized values are not taken into account.

Our final goal aims to discuss and propose technical advices in spatial specific contexts to shed light on the prioritization choice of a value over another under urbanization pressure and sprawling process. Some prioritization tools have been jointly developed between scientists and planning actors and can take a lot of forms. We already identified two kinds of tools that can be used in order to shed light on prioritization of land use for nature conservation, both based on GIS approach. Moilanen et al. (2005) have developed the Zonation software, a tool based on a weighted prioritization process. Strength of the weighted approach is to propose a prioritization but a drawback of this approach is a lack of local flexibility since this weight is based on a global choice of prioritization. Another way to support decision is to mobilize GIS-Based Multiple-Criteria Decision Analysis, a modeling process often considered as a complex black box by decision-makers (Greene et al., 2011). Consequently, those tools do not challenge the discussion prior to decisional process and thus are not widely mobilized. Ultimately, the researcher can inform and supplement the planning process, mobilizing and crossing different methods and technique, but also have to bring support tools that can be mobilized. The choice to use it does not only depend on the tools accuracy, but also of their acceptability by decision makers.

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ID 1591 | ACHIEVING SPATIAL QUALITY IN INTEGRATED PLANNING: AN EVALUATION OF THE DUTCH 'ROOM FOR THE RIVER' PROGRAM USING QUALITATIVE COMPARATIVE ANALYSIS

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ABSTRACT: In line with recent trends towards area-oriented planning, flood risk management has seen a shift from a water control strategy towards a water accommodation strategy. In the Netherlands, this resulted in the policy program Room for the River. The projects in this policy program are expected to achieve two key objectives: first, the accommodation of higher flood levels, i.e., water safety, and second, improving the spatial quality of the riverine areas. Whilst research has shown that the program is successful with respect to increasing water safety, less is known about its second objective. This paper thus has two aims: (1) assessing the extent to which the program has been able to achieve spatial quality and (2) identifying the conditions that explain this. To these aims, archival and survey data were collected, and analyzed using Qualitative Comparative Analysis (QCA). The analysis shows that there are various combinations of conditions for achieving spatial quality. We conclude that these different combinations entail different strategies, and that by means of those, the program management has been successful in achieving spatial quality in the Room for the River program.

KEYWORDS: Area-Oriented Planning; Program Theory Evaluation; Project Evaluation; Project Management and Organization; Qualitative Comparative Analysis; Room for the River; Spatial Quality

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1 INTRODUCTION

Recently, flood risk management in the Netherlands has seen a strategic reorientation from controlling the water, by constructing and maintaining flood defenses such as dams and dikes, towards a strategy that stresses the accommodation of the water (Jong & Van den Brink, 2013; Meyer, 2009; Wiering & Arts, 2006). This reorientation is characterized, first, by an increasing importance of spatial planning in flood risk management (Jong & Van den Brink, 2013; Van Buuren, Edelenbos, & Klijn, 2010; Wiering & Immink, 2006): when possible, spatial planning solutions are preferred over technical solutions (Van Buuren, Edelenbos, et al., 2010). Second, in the new strategy, the physical water system conditions the water management and not the other way around (Van Buuren, Edelenbos, et al., 2010). Thus, water management has become increasingly area-oriented; flood risk management is now planned conjunctively with other spatial policy objectives such as transport, nature, and agriculture (Van Buuren, Edelenbos, et al., 2010; Wiering & Driessen, 2001; Wiering & Immink, 2006). This trend towards area-oriented planning can be observed in other fields as well, such as transport infrastructure planning (Heeres, Tillema, & Arts, 2012).

The proliferation of area-oriented planning is visible in the Dutch € 2.362 billion policy program 'Room for the River' (Rijke et al., 2012). In this program, Rijkswaterstaat[1], provinces, municipalities, and regional

[1] Rijkswaterstaat is the executive agency of the Dutch Ministry of Infrastructure and the Environment. It is responsible for the design, construction, management, and maintenance of the main infrastructure facilities, including the waterway network and systems (Rijkswaterstaat, 2012).

water authorities (i.e., water boards) are cooperating in the implementation of 34 projects (Ministerie van Infrastructuur en Milieu, Ministerie van Economische Zaken, & Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2016; Ruimte voor de Rivier, 2016c). The objective of the policy program is twofold: first, the accommodation of higher flood levels, i.e., water safety, and second, improving the spatial quality of the riverine areas. Although the program's midterm evaluations concluded that this dual objective proved effective in terms of the achievement of integrated solutions that address both water safety and spatial quality (Hulsker et al., 2011; Van Twist et al., 2011), the evaluations also stressed that the projects still had to be implemented. Currently, the program is close to completion. As part of its final evaluation, this paper presents the evaluation of the program's instruments that were deployed to achieve spatial quality. Given the program's status as an international frontrunner in integrated planning and water management (Zevenbergen et al., 2013), this evaluation bears relevance to the international academic community as well.

The program's dual objective can be seen as the incarnation of the area-oriented planning approach in Dutch flood risk management. Whereas recent research on area-oriented planning has indicated that the approach is taking root (Heeres, 2017), scholars have also warned that it is demanding and easily abandoned when policymakers are confronted with the high (transaction) costs that come with it (Hijdra, 2017). Generally, when complexity in spatial planning increases – e.g., in terms of multiple objectives and the inter-sectoral and inter-organizational cooperation required to achieve those – under time and budget pressures, the tendency to simplify and revert to old routines increases (Salet, Bertolini, & Giezen, 2013; Verweij, Teisman, & Gerrits, 2017). This was also reflected upon in the midterm evaluation of the Room for the River program: "the water safety objective is strongly supported and it is endorsed by the national politicians, but the spatial quality objective is generally seen increasingly as a luxury that is costly and mainly focused on new nature in the river areas, whereas simultaneously budgets are cut on new nature in other areas" (Van Twist et al., 2011, p. 15).[1] Therefore, this paper has two aims: (1) to assess the extent to which the Room for the River program has been able to achieve the spatial quality objective, and (2) to identify the conditions that explain this.

To these aims, we collected archival and survey data and analyzed it using Qualitative Comparative Analysis (QCA) (Rihoux & Ragin, 2009; Schneider & Wagemann, 2012). Specifically, we applied QCA in its capacity as a method to evaluate the program theory of Room for the River (cf. Varone, Rihoux, & Marx, 2006). QCA has recently been introduced in the fields of spatial planning (Verweij et al., 2013) and water management (e.g., Huntjens et al., 2011). QCA is well-suited to comparatively analyze a medium-n of cases and to identify combinations of conditions for explaining a certain outcome of interest. Moreover, QCA systematizes and formalizes the comparative process, thereby increasing the rigor and transparency of the comparison.

This paper is further structured as follows. In the next section, the background of the Room for the River program is provided, including results of its midterm evaluations (Section 2). In Section 3, the program theory is elaborated, focusing on the program's instruments that were deployed to achieve spatial quality. Next, the data and method are explained in Section 4. The analysis and results of the QCA are presented in Section 5. In Section 6, conclusions are drawn and the results are discussed.

2 THE 'ROOM FOR THE RIVER' PROGRAM

2.1 BACKGROUND OF THE PROGRAM

After a flooding and two near-dike breaches in 1993 and 1995, the Dutch national government decided to increase the flood safety levels of the country's main rivers: the Rhine, the Meuse, and their branches including the Waal and the IJssel (see Zevenbergen et al., 2013). Figure 1 provides an overview of the rivers and their average discharges. The expected increase in river discharges, partly due to climate change, caused a shift in focus from dike reinforcements towards creating room for the rivers. This was accompanied by a growing awareness of the economic, ecological, and landscape value of the river areas, resulting in an increasing focus on spatial quality. This led to the introduction of the Room for the River program (Ruimte voor de Rivier, 2007).

[1] This quote is translated from Dutch.

Figure 1: Map of the partition of Rhine and Meuse water among the various branches of their delta 2000-2011 (source: Maximilian Dörrbecker, Wikipedia)

The program was given a legal basis with the so-called 'Spatial Planning Key Decision' (in Dutch: Planologische Kernbeslissing; PKB) in 2007 (Ruimte voor de Rivier, 2007). The PKB enabled the government to formulate an integrated policy approach on the level of a whole river area, so as to take into account the different spatial functions and processes within it conjunctively (Ruimte voor de Rivier, 2007). The PKB is structured around two objectives. The first objective is to improve the protection of the river basins against floods. Specifically, the aim is to accomplish a minimum discharge capability of 16,000 m3/s for the Rhine at Lobith. The required discharge from the Rhine into the IJssel is 250 m3/s (Ruimte voor de Rivier, 2007). The PKB's secondary objective is to improve the spatial quality in the river areas. Following the so-called 'National Spatial Strategy' (in Dutch: Nota Ruimte) (see Priemus, 2007), the Room for the River program aims to maintain the unique character of the particular river basin, focusing on ecological, cultural-historical, economical, and aesthetic values (Ruimte voor de Rivier, 2007). The program has a budget of € 2.362 billion (Ministerie van Infrastructuur en Milieu et al., 2016) and consists of 34 projects. In the program, these projects are coined 'measures' and they can be found along the river Rhine and the Rhine's branches the Waal, IJssel, and Nederrijn. This is shown in Figure 2 (Ruimte voor de Rivier, 2016c). The measures include, amongst others, floodplain excavations, dike relocations, and 'depoldering' (Ruimte voor de Rivier, 2007, 2016a), as shown in Figure 3. Currently, 26 projects have been completed (Ruimte voor de Rivier, 2016a).

Figure 2: The measures (projects) in the 'Room for the River' program (source: Ruimte voor de Rivier, 2016c)

The program is coordinated by the 'Program Directorate Room for the River' (in Dutch: Programma Directie Ruimte voor de Rivier; PDR), which is part of Rijkswaterstaat.3 Within the PDR, the 'Cluster

Spatial Quality' (in Dutch: Cluster Ruimtelijke Kwaliteit; Cluster RK) is responsible for the coordination of the program's second objective, focusing on directing, facilitating, and monitoring the different projects in achieving spatial quality. The Cluster is supported by the so-called 'Quality Team' (Q-team), which has an advisory role (Collignon-Havinga et al., 2009; Klijn et al., 2013).

The program followed a decentralized approach: the individual projects are managed by various appointed governmental bodies. These include municipalities, provinces, water boards, and Rijkswaterstaat. Each individual project is developed in a planning phase and a realization phase. The Cluster RK and the Q-team visit and advise the projects during both phases. The Cluster RK furthermore assesses the projects at key moments in their development, i.e., after the development of a design that marks the end of the planning phase and at the end of the realization phase (Collignon-Havinga et al., 2009; Feddes & Hinz, 2013).

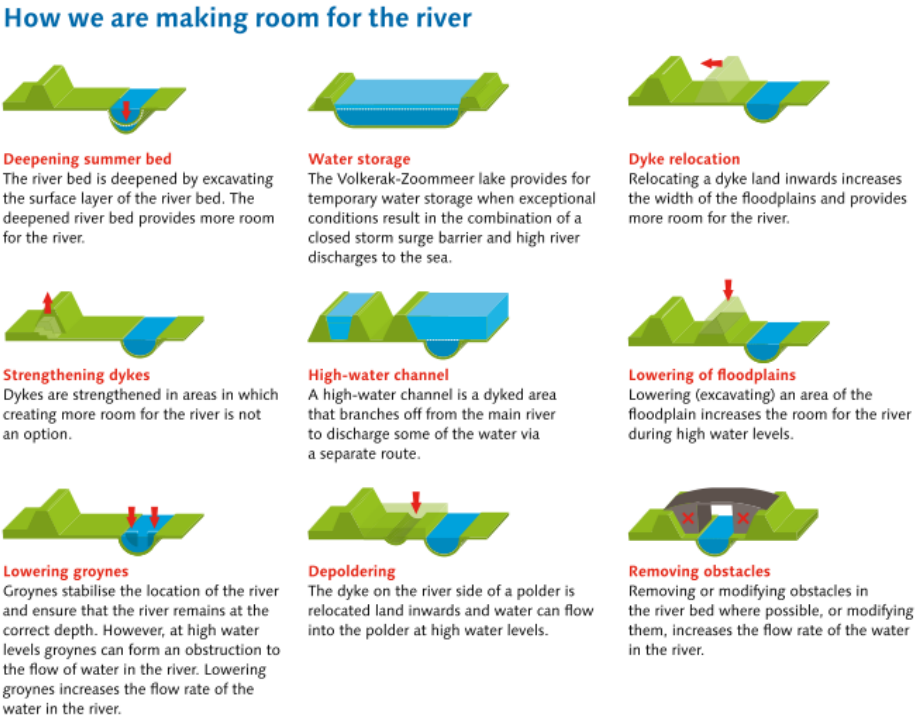

Figure 3: The different types of measures in the 'Room for the River' program (source: Ruimte voor de Rivier, 2016b)

2.2 PREVIOUS EVALUATIONS OF THE PROGRAM

During the implementation of the Room for the River program, several midterm evaluations were conducted, focusing on how spatial quality was included in the different projects. In 2011, Van Twist et al. (2011) evaluated the program's general progress regarding the PKB-objectives, also giving attention to the instruments used to achieve them. They concluded that, in general, the involved persons were satisfied with the multi-level organizational structure of the program, where the central and strategical steering of the PDR was combined with the decentral implementation of projects. Swift implementation was enabled by taking account of future project phases, appointing the Q-team, and by the facilitating role of the PDR. Furthermore, the combination of binding administrative agreements with informal meetings supported projects in remaining on track.

In addition to the general evaluation by Van Twist et al. (2011), Hulsker and colleagues (2011) specifically reviewed the planning phase and its results regarding spatial quality. The decentralized implementation of the projects accommodated an integrated approach in which water safety and spatial quality were combined, although the evaluators were critical on the extent to which this integration was sufficiently captured in the administrative agreements. Ensuring spatial quality was facilitated by combining formal and informal instruments, focusing on both the content and the process of the projects. Instrumental was the development of an integral design created by an interdisciplinary team, with an important role for the landscape architect. The design is a content- focused instrument, which received less public resistance

when local stakeholders were involved in its development process. It was further concluded that the project-based implementation approach might have decreased the coherence between the projects on the program level of the whole river area.

The third midterm evaluation focused on the realization phase (Feddes & Hinz, 2013). It was found that achieving spatial quality was subject to various frictions, inter alia in translating the design and spatial quality requirements into realization contracts, especially so when the implementing agency also created parts of the design. It was further concluded that designers and landscape architects can play an important role after the planning phase in safeguarding spatial quality during implementation. It was finally observed that the design was legally secured, binding the implementer to the spatial quality requirements. Instead of focusing on the legal requirements, though, the Cluster RK often applied a more informal strategy for safeguarding spatial quality where they tried to communicate the integral meaning and value of the projects.

3 THE PROGRAM THEORY OF 'ROOM FOR THE RIVER'

Public programs or policies are based on (often implicit) assumptions about the outcome to be achieved by the policy and the conditions and actions required to that end (Varone et al., 2006). A policy or program, such as Room for the River, can be understood as a theory in the sense that:

> *"…It describes a cause-and-effect sequence in which certain program activities (administrative outputs) are the instigating causes and the social benefits (policy outcomes) are the effects that they eventually produce. (…). The model of causality of a public policy is always a normative representation of the 'operation' of society and the State. Proof of its validity comes through implementing and evaluating the effects of public policies" (Varone et al., 2006, p. 219).*

Program theory evaluation is a form of realistic evaluation (Astbury & Leeuw, 2010; Blamey & Mackenzie, 2007; Pattyn & Verweij, 2014). In realistic evaluation, policy programs are presented as CMO-configurations: a program consists of Mechanisms (M) which are intended to produce an Outcome of interest (O) in a certain Context (C). In the present evaluation, we apply QCA as a method for realistic evaluation (cf. Befani, Ledermann, & Sager, 2007; Befani & Sager, 2006). This requires that the program theory is operationalized in terms of an Outcome (Section 3.1) and C/M-conditions (Section 3.2) that potentially produce this outcome. In the present evaluation, the instruments deployed by the Room for the River program represent the M-conditions.

3.1 OUTCOME: SPATIAL QUALITY

In the Room for the River program, spatial quality is defined in three dimensions: use value, experience value, and future value (Ruimte voor de Rivier, 2015; Terra Incognita, Bureau Stroming, SAB, & Alterra, 2009).[1] Use value refers to the utility, efficiency, and effectiveness of a physical structure and its surrounding space, experience value refers to the perception and experience of it, and future value refers to the robustness and sustainability of the structures and the space (Hooimeijer, Kroon, & Luttik, 2001). This conceptual triplet is derived from ancient Roman author and architect Vitruvius, who said that structures should exhibit three qualities; they should be useful (utilitas), beautiful (venustas), and solid or robust (firmitas) (Hooimeijer et al., 2001). In the program, area- oriented planning has been an important point of departure to increase spatial quality along these dimensions. That is, by integrating water safety with other spatial policy objectives including economy, nature, and recreation, the use, experience, and future values are believed to increase (Ruimte voor de Rivier, 2015). The 'Vitruvius Triplet' was translated by the Q-team into the coherence between hydraulic effectiveness, ecological robustness, and cultural meaning and aesthetics (see Klijn et al., 2013).

The spatial quality was assessed by the PDR at two moments in the projects: spatial quality at the end of the planning phase – which we abbreviate in this paper as SQ_PLAN – and spatial quality at the end of the realization phase for the PKB-objective as a whole – which we abbreviate in this paper as SQ_PKB (see

[1] In Dutch: gebruikskwaliteit, belevingskwaliteit, and toekomstkwaliteit.

also Table 3). For the planning phase, the spatial quality is expressed in the design of the spatial plan, i.e., the quality of the design. This was assessed in the program in terms of sufficiency (see Table 3). For the realization phase, the spatial quality is found in the "concrete result" of a project (Klijn et al., 2013, p. 291), that is, whether the intended plan was realized. It concerns the relative improvement of spatial quality compared to the baseline situation prior to the initiation of the program (see Table 3).

Various instruments were deployed in order to achieve spatial quality. These instruments were deployed in a certain project context. Together, the instruments and context are, in QCA-terms, the 'explanatory conditions' for spatial quality. Figure 4 provides an overview of the conditions in the Room for the River program theory. The conditions are further elaborated in Section 3.2 and subsequently operationalized in Section 4 (Table 3).

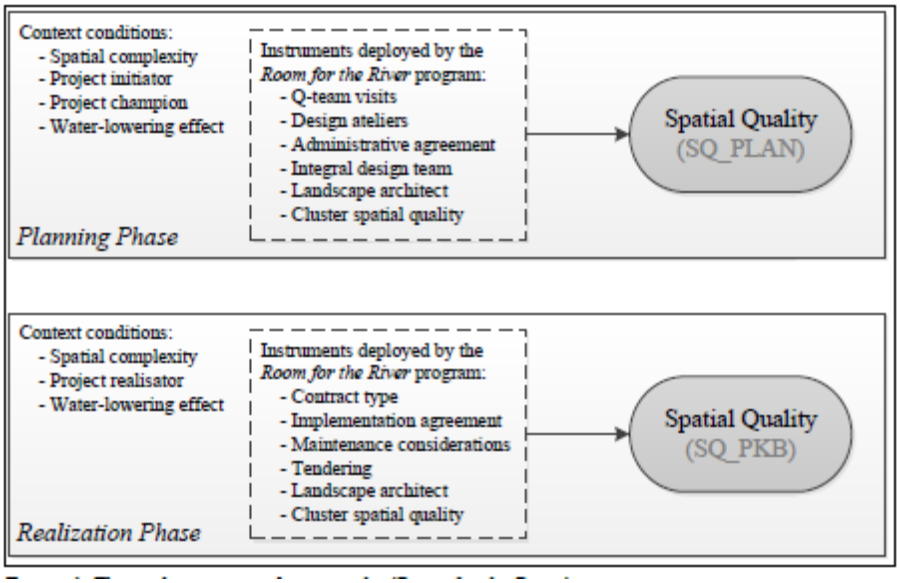

Figure 4: The explanatory conditions in the 'Room for the River' program

3.2 EXPLANATORY CONDITIONS: CONTEXT AND INSTRUMENTS

The projects in the Room for the River program are developed in two phases: a planning phase and a realization phase. In the planning phase, spatial designs are developed that are aimed at improving spatial quality. In the realization phase, the spatial designs are implemented and the projects are constructed. In the two phases, different instruments are deployed, under different context conditions, to achieve these goals. Because spatial quality achieved in the designs might not materialize in the "concrete result" (Klijn et al., 2013, p. 291) of the project at the end of the realization phase, separate analyses will be conducted for the two phases (see Section 5).

3.2.1 EXPLANATORY CONDITIONS: PLANNING PHASE

The first context condition is Spatial Complexity (PLAN_SC). In area-oriented planning approaches, spatial quality is expected to increase through the integration of different spatial policy objectives related to, e.g., water, transport, nature, and agriculture (Heeres, 2017; Van Buuren, Edelenbos, et al., 2010). This integration is expected to lead to synergy gains. However, it also increases complexity as different spatial functions may impose different, possibly conflicting, demands on the spatial design (Verweij et al., 2013). Hence, integrated approaches are more complex than solutions that only involve the embedding of flood risk measures in the existing landscape (Rijkswaterstaat, 2007). In the Room for the River program, three general types of measures are distinguished (see Figure 3):

- Technical measures, e.g., strengthening dikes.
- Measures within the banks, i.e., the 'wet area' inside the banks that is not protected against floods (in Dutch: buitendijkse maatregelen), e.g., lowering floodplains.

- Measures beyond the banks, i.e., measures in the area behind the dike where residential areas can be found (in Dutch: binnendijkse maatregelen), e.g., dike relocation and depoldering.

Whereas the measures within the banks generally have a more technical nature, the measures beyond the banks mostly concern complex integrated area-based planning projects, involving multiple spatial functions and often implying the realization of a new water concept. In fact, the measures beyond the banks represent the reorientation from the water control strategy towards the water accommodation strategy (Alberts, 2009). For instance, the dike relocation at Lent, as part of the project Ruimte voor de Waal (see Appendix 1), involved the demolition of existing structures including dwellings (Projectgroep Dijkteruglegging Lent, 2007). This increased the impact and complexity of the project in terms of, inter alia, political sensitivity, but it also offered opportunities to redesign the area in such a way that spatial functions are conjunctively addressed, allowing for synergy gains (Van Buuren, Edelenbos, et al., 2010; Verweij et al., 2013). In the present evaluation, we take the type of measure as a proxy for spatial complexity (see Table 3). The expectation is that more complex measures lead to higher spatial quality in the spatial design.

The second context condition is the Project Initiator (PLAN_INI). The project initiator is formally responsible for completing the project (Rijke et al., 2012). In the Netherlands, a broad distinction is made between general, territorial governments (in Dutch: algemeen bestuur) and functional governments (in Dutch: functioneel bestuur) (Raad voor het Openbaar Bestuur, 2015). The projects in the program can be initiated by either of them. The functional governments concern the water authority at the local level (i.e., a so-called water board) or Rijkswaterstaat at the national level, both of which have a strong orientation towards water safety. The mandate of Rijkswaterstaat, though still primarily focused on water safety, is somewhat broader since it is involved in determining the goals of Dutch water management on the strategic level (Ministerie van Infrastructuur en Milieu & Ministerie van Economische Zaken, 2015). The general, territorial governments in the program concern the local municipalities and the regional provinces. The municipal and provincial governments are charged with integrally balancing the various interests, of which water safety is only one amongst others (Unie van Waterschappen et al., 2011). Whereas the municipal governments are concerned with balancing interests on the local level, the provinces act as ‘area directors’ (in Dutch: gebiedsregisseur) on the regional level, allowing them to orchestrate the integration of different spatial policy objectives on the level of a whole river area. Hence, the expectation is that when general, territorial governments – and provinces above all – are initiating the project, this will contribute to higher spatial quality.

The third context condition is the Project Champion (PLAN_CHAMP). Project champions are persons outside the initiator’s project team, who “do not have to do what they do to aid the project; they go well beyond their expected and traditional job responsibilities” (Pinto & Slevin, 1989). They can be local champions (e.g., Raadgever et al., 2016), such as an alderman who encourages a project team to increase spatial quality, or persons from national governments such as Rijkswaterstaat. Project champions can play an important role in successfully developing projects (Pinto & Slevin, 1989). In the United Kingdom, for example, project champions were key in the promotion of environmental restoration in river management (Adams, Perrow, & Carpenter, 2004) or sustainable urban drainage systems (Alexander et al., 2016). Traditionally, water management is a technocratic discipline dominated by engineers (Van Buuren, Edelenbos, et al., 2010); a project champion who focuses on spatial design considerations can then, so is the expectation, contribute to higher spatial quality, as opposed to a situation where a project champion is absent.

The fourth context condition is the Water Lowering Effect of a project (PLAN_WAT). This condition reflects the program’s water safety ambitions. Water safety can be understood as the primary and initial objective of the program and spatial quality is the secondary objective that conditions the measures that are chosen in the project (Ruimte voor de Rivier, 2007; Groenendijk et al., 2016; Hulsker et al., 2011). Initially, as prescribed in the PKB (see Section 2.1), the projects were required to develop three alternative measures: one with a maximum water lowering effect, one with a maximum improvement of spatial quality, and one with the lowest costs (Hulsker et al., 2011). This, however, was at odds with the integrated approach of combining the objectives of water safety and spatial quality. In the end, most projects have been able to develop a more integrated approach in their planning phases after all; the midterm evaluation showed that this resulted in effective solutions with spatial quality (Hulsker et al., 2011). Altogether, as the two objectives are supposed to be interlinked, the expectation is that the water lowering effect of a project can

influence the degree of spatial quality realized in the spatial plans, but whether this influence was actually positive of negative is not clear. The QCA-analysis can shed light on this.

The first instrument condition is the influence of the Q-Team (PLAN_QT). The Q-team is an advisory team, which was chaired by the State Advisor for the Landscape (in Dutch: Rijksadviseur voor het Landschap), and which consisted of five specialists with different disciplinary backgrounds: landscape architecture, urban planning, river engineering, ecology, and physical geography (Klijn et al., 2013; Q-team, 2012). The Q-team was tasked with producing "independent recommendation[s] on enhancing spatial quality; i.e., on request as well as unasked, and unrestrained by formal governmental or institutional opinions. (…). The Q-team was commissioned to coach the planners and designers, to peer review the designs and plans, and to report to the minister about the spatial quality achieved" (Klijn et al., 2013, p. 289). Of particular importance were the visits of the team to the projects, where suggestions to further improve spatial quality were provided (Collignon-Havinga et al., 2009). Previous evaluations of the Room for the River program indicated that the Q-team contributed to increasing the spatial quality in the project designs (Hulsker et al., 2011; Van Twist et al., 2011).

However, for the planning phase, no explicit expectation can be formulated about the relationship between the number of visits by the team and spatial quality (SQ_PLAN). That is, on the one hand, more visits are supposed to increase spatial quality. On the other hand, however, a high number of visits could also indicate an initial low spatial quality requiring additional efforts of the Q-team. The QCA-analysis may shed light on which is actually the case. For the realization phase (SQ_PKB), for which spatial quality is measured relatively (see Table 3), the expectation is that a higher number of visits increases spatial quality.

The second instrument condition is the Design Ateliers (PLAN_DES). Design ateliers are a form of interactive planning where different participants co-design the projects (Heeres et al., 2016). Such co-design processes have the potential to improve the quality of spatial planning outcomes (see e.g., Enserink & Monnikhof, 2003; Lamers et al., 2010). In general, stakeholder involvement can also reduce resistance to the project and increase stakeholder satisfaction (see e.g., Roth & Warner, 2007; Verweij et al., 2013). Design ateliers can play an important role in this (Van Buuren, Klijn, & Edelenbos, 2012). The previous midterm evaluation of the Room for the River program in fact indicated that sufficient and timely participation in several projects "has led to a significantly better spatial quality" (Hulsker et al., 2011, p. 47; see also Van Twist et al., 2011, p. 14).[1] In the abovementioned Ruimte voor de Waal project, for instance, the design process resulted in "improvements to the quality of the area as well as to the technical functioning of the channel in terms of water safety" (Heeres et al., 2016, p. 424). A recent evaluation of three major water safety policy programs in the Netherlands (including Room for the River) likewise concluded that (local) participation can increase support and improve spatial planning designs (Groenendijk et al., 2016). The expectation thus is that when the design ateliers were well-timed and sufficiently organized, this resulted in a more interactive, inclusive process approach where local knowledge is mobilized leading to improved spatial quality.

The third instrument condition is the concretization of the spatial quality objective in an Administrative Agreement between the public partners (PLAN_AGR). The "administrative agreements about the division of tasks and cooperation must ensure rapid and effective implementation of measures" (Van Stokkom, Smits, & Leuven, 2005, p. 81). The partners include Rijkswaterstaat and, normally, regional governments such as water boards and provinces. For each project, an administrative agreement is signed which outlines the framework within which the project is to be developed. This agreement is an important instrument for securing spatial quality in the projects (Collignon-Havinga et al., 2009). Previous midterm evaluations indicated that the dual objective of the Room for the River program was recorded well in the project agreements, but the integrated approach towards achieving the dual objective was not (Hulsker et al., 2011; Van Twist et al., 2011). As said above, initially the projects were required by the PKB to develop three alternative measures, which was at odds with the integrated approach of combining the objectives of water safety and spatial quality. Hence, the expectation is that it is not so much important that the spatial quality objective is stated in the agreement; what is important is that spatial quality is specified beyond the general notion that it has to be taken into account. If this is the case, this is expected to provide extra impetus for achieving spatial quality.

[1] This quote is translated from Dutch.

The fourth instrument condition is the Integral Design Team (PLAN_INT). Traditionally, designers are the top-down mechanistic experts in charge of developing a technical design focused on the optimization of territorial solutions, which in the present study would imply a strong focus on optimizing the design for water safety; the designers work rather independently and become ad-hoc involved only when their expertise is required at a certain stage in the planning process (Heeres et al., 2016; Vos, 2014). However, creative and innovative solutions are more likely to emerge in multidisciplinary teams where various competences, knowledge, and skills are combined through interactive processes of knowledge sharing and creation (Alves et al., 2007; Fong, 2003). The multidisciplinarity is important because "spaces and places do not have singular identities but can have multiple identities" (Heeres et al., 2016, p. 413), including those related to water safety and spatial quality, and multidisciplinarity allows for observing and combining these in an integrated planning solution (Heeres et al., 2016; Klijn et al., 2013). In the Room for the River program, multiple disciplines were involved in the design for the projects. The integral design team consists of a spatial designer, a river expert, an ecologist, a geologist, a cultural historian, and a cost expert (Hulsker et al., 2011). The expectation is that, by involving multiple disciplines, synergies can be achieved resulting in designs with higher spatial quality.

The fifth instrument condition is the role of the Landscape Architect (PLAN_LAND). The landscape architect played an important role in the planning phase (Klijn et al., 2013). From a more traditional architectural perspective, "spatial design is often understood as a product, with a strong focus on the content of plans and designs" (Heeres et al., 2016, p. 412). In that capacity, landscape architects in Room for the River are involved in creating a specific spatial quality plan. In these instances, the landscape architect was only asked by the project team to deliver a specific product rather autonomously. From a spatial planning perspective, designs are "a way to manage a wider creative process of arriving at decisions and action" (Heeres et al., 2016, p. 412). In that capacity, the landscape architects, as members of the integral design teams and with input from the design ateliers (cf. Van Buuren et al., 2012), were not only asked to deliver a product but played an important role in the interactive planning process as well. The expectation is that the landscape architect in the second capacity can contribute more to the realization of spatial quality in the planning phase.

The sixth instrument condition is the involvement of the Cluster Spatial Quality of the Room for the River program in the individual projects (PLAN_CLUS). The Cluster RK is responsible for the coordination of the program's spatial quality objective and facilitates the projects herein. To this purpose, it uses various resources, ranging from more formal assessments of plans to a helpdesk where projects can go to for questions and assistance (Collignon-Havinga et al., 2009; Hulsker et al., 2011). The midterm evaluation indicated that the Cluster's role as a facilitator, "without sitting on the designer's seat", was influential in achieving spatial quality (Hulsker et al., 2011).[1] The expectation thus is that the more closely the Cluster was involved in a project as facilitator and guardian of spatial quality, the higher the achieved quality of the project design.

3.2.2 EXPLANATORY CONDITIONS: REALIZATION PHASE

The three context conditions in the realization phase are Spatial Complexity (REAL_SC), the Project Realisator (REAL_REA), and the Water Lowering Effect of a project (REAL_WAT). For these conditions, the same program theory applies as detailed for spatial complexity, project initiator, and water lowering effect in the planning phase (see Section 3.2.1). Regarding spatial complexity, the chosen measures designed in the planning phase (e.g., strengthening dikes, lowering floodplains, or depoldering) are also the measures that have actually been realized at the end of the realization phase (see Tables 1 and 2). However, with respect to the project realisator, i.e., the administrative body responsible for acquiring permits, tendering, and the contracting of private parties for the realization of the plans (Rijke et al., 2012), this is not necessarily the same administrative body that also acted as project initiator.[2] Regarding the water lowering effect, it should be mentioned that the actual effect realized at the end of the realization phase can be higher or lower than the prospected effect at the end of the planning phase.[3]

[1] This quote is translated from Dutch.
[2] Compare the data for the conditions PLAN_INI and REAL_REA in Tables 1 and 2.
[3] Compare the data for the conditions PLAN_WAT and REAL_WAT in Tables 1 and 2.

The first instrument condition is the Contract Type (REAL_CON). Contracts are formal arrangements that legally bind the implementation actors. In the Room for the River program, four contract types have been used (Feddes & Hinz, 2013):

- Traditional 'RAW' contracts, where the project realisator specifies the technical design including the "underlying calculation of materials needed and construction time" (Lenferink, Tillema, & Arts, 2013, p. 617) to be implemented by the private contractor (Feddes & Hinz, 2013).
- Engineering and Construct (E&C) contracts, where the contractor is now responsible for working out the technical and logistic details of the design (Feddes & Hinz, 2013; Lenferink et al., 2013).
- Design and Construct (D&C) contracts, where the contractor becomes responsible for the whole design and not just the working out of the details of the design (Feddes & Hinz, 2013; Lenferink et al., 2013).
- Plan, Design, and Construct (PD&C) contracts, where the private contractor, in addition to the design, is now also responsible for the spatial planning process (PIANOo & Unie van Waterschappen, 2016; Ruimte voor de Rivier, 2015).

The PD&C contract is the most inclusive one in that it integrates different phases of project construction into a single agreement. It allows the private contractor to (partially) parallelize and align the processes of planning, design, and construction, allowing for faster, more efficient, and higher quality project realization (Lenferink et al., 2013; PIANOo & Unie van Waterschappen, 2016; Ruimte voor de Rivier, 2015). In terms of inclusiveness, the D&C contract comes second, followed by the E&C, and the RAW contracts. The expectation is that the more inclusive the contract, the higher the quality that can be achieved.

The second instrument condition is the concretization of the spatial quality objective in a Realization Agreement between public partners (REAL_AGR). The realization agreement outlines the framework of ambitions, collaboration, and responsibilities within which the project is to be implemented. Specifically, it describes "the quality, budget, time, market approach, project control methodology, and risk distribution between [the] region and Rijkswaterstaat" (Rijke et al., 2012, p. 374). This agreement is an important instrument for the successful implementation of the program's projects (Groenendijk et al., 2016). The midterm evaluation of the realization phase identified as a success factor the degree to which the spatial quality objective is specified in this agreement beyond a general reference to the design resulting from the planning phase (the so-called 'SNIP-3' document), that is, whether or not a "brief description is included of what is essential for the spatial quality of the plan" (Feddes & Hinz, 2013, p. 34).[1] The expectation thus is that it is not so much important whether the spatial quality objective is referred to or not in the realization agreement (because it always is); what is important is that spatial quality is specified beyond the general notion that it is important. If this is the case, this is expected to provide extra impetus for achieving spatial quality as it implies that spatial quality is more strongly safeguarded.

The third instrument condition is the inclusion of Maintenance Considerations in the realization phase (REAL_MAIN). The early consideration of maintenance issues is important to prevent high maintenance costs after project realization (e.g., Van Vuren, Paarlberg, & Havinga, 2015), to ensure that plans are realistic and that designs are of a good quality (Rijke et al., 2012), and to ensure that spatial quality after project realization conforms to the preferences of the local communities – e.g., some people prefer wilder landscapes whilst others prefer well-kept landscapes (Buijs, 2009). In the Room for the River program, maintenance plans were drafted in the so-called 'SNIP-3' document (see above) at the end of the planning phase, which plays an important role in anchoring spatial quality (Van Herk et al., 2015). In some projects, these plans were updated during the realization phase to ensure the continued focus on spatial quality. The previous midterm evaluation indicated that spatial quality is easily lost out of sight, especially when projects transition from one phase to the next (Hulsker et al., 2011). It is therefore expected that when the maintenance plans were updated during the realization phase, this contributes to a better safeguarding of spatial quality.

The fourth instrument condition is the extent to which spatial quality was included in the Tender Document of the project (REAL_TEN). The tendering documents play an important role in anchoring spatial quality (Feddes & Hinz, 2013; Van Herk et al., 2015). In the projects, "spatial quality was a selection criterion in tender procedures and was detailed in accompanying ambition documents" (Van Herk et al., 2015, p. 93). However, the projects differed in the extent to which this criterion was anchored in the tender documents

[1] This quote is translated from Dutch.

(Feddes & Hinz, 2013). For instance, the extent to which private contractors are rewarded for including spatial quality depends on whether or not spatial quality was a so-called 'EMVI-criterion' (Ruimte voor de Rivier, 2015), i.e., 'Economically Most Advantageous Tender' (see Rijkswaterstaat, 2016).[1] In the project Ruimte voor de Waal, for instance, spatial quality was an EMVI-criterion (see Table 2), which made it an explicit requirement for the project design by the private contractor (Brouwer, Schouten, & De Vries, 2017). The expectation is that when spatial quality requirements are more explicitly included in the documents, this has a positive influence on the realization of spatial quality.

The fifth and sixth instrument conditions are the role of the Landscape Architect (REAL_LAND) and the role of the Cluster Spatial Quality (REAL_CLUS). For these conditions, the same program theory applies as detailed for the equivalent PLAN_LAND and PLAN_CLUS conditions in the planning phase (see Section 3.2.1). For both conditions, the expectation is that closer involvement of the landscape architect or Cluster RK implies that spatial design consideration are taken into account more during the realization phase. This is of particular importance since in the realization phase, financial considerations often start to dominate the process (see e.g., Verweij, 2015a).

4 DATA AND METHOD

The QCA-approach for this evaluation consisted of five steps (Rihoux & Lobe, 2009; e.g., Verweij, 2015b). In the first step, the cases were selected. The Room for the River program consists of 34 projects. Currently, 26 projects have been completed; 8 projects are still being realized (Ruimte voor de Rivier, 2016a). Initially, 23 projects were selected for this evaluation because these were completed and because Rijkswaterstaat had archival data available for these projects (see Appendix 1). For the final analyses, only those projects were selected for which data on all the conditions were available (see Tables 1 and 2). This means that for the planning phase, 20 projects were analyzed (see Table 1) and for the realization phase, 19 projects were analyzed (see Table 2).[2]

In the second step, the data were collected. The first data source is written documents from the archives of the Room for the River program. The data were collected by one of the researchers, in the period September 2016 to April 2017. Access to the data was provided by Rijkswaterstaat. The collection of the data and the construction of the conditions (see Section 3) evolved iteratively (cf. Berg-Schlosser et al., 2009; Rihoux & Lobe, 2009). That is, the collection of documents and the regular meetings between the researchers and the program managers from Rijkswaterstaat who commissioned the present evaluation, progressively provided insights into the program's theory, and this, in turn, informed the researchers about the data that needed to be collected. The second data source is questionnaires. Since the archives did not provide data on all the conditions, a small survey was sent out to project managers to collect additional data. The relevant project managers for the survey were identified by the program managers from Rijkswaterstaat. The survey data were collected in the period April 2017 to May 2017. After all the data were collected, two data matrices were constructed: one for the planning phase (i.e., Table 1) and one for the realization phase (i.e., Table 2).

In the third step, the cases were calibrated. Calibration is the process of transforming the raw project data from the data matrices (Tables 1 and 2) into scores between 0 and 1 by clustering similar cases per condition (Ragin, 2008; Schneider & Wagemann, 2012). Basically, per condition, cases are ranked from high to low, after which (program) theory and/or cluster analysis are/is used to group the cases: projects within a group are considered similar cases and projects from different groups are considered dissimilar cases. The quantification that occurs here serves to ensure a systematic and transparent comparison. For instance, spatial quality after the realization phase (SQ_PKB) was assessed by the 'Program Directorate Room for the River' with a five-value scale: worsened, not improved, barely improved, improved, and strongly improved (see Table 3). This five-value scale was calibrated into 0.0 (worsened), 0.3 (not improved), 0.6 (barely improved), 0.8 (improved), and 1.0 (strongly improved). The middle value of 'barely

[1] In Dutch: Economisch Meest Voordelige Inschrijving.
[2] Note that the projects' names as publicly known and communicated about (see Ministerie van Infrastructuur en Milieu, Ministerie van Economische Zaken, & Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2016; Ruimte voor de Rivier, 2016a) are sometimes different from how they are internally administrated, managed, and monitored by Rijkswaterstaat (see Appendix 1). For the case names of the projects, we adopted the names as internally administrated by Rijkswaterstaat. For clarification purposes, we also provide the project labels under which they are known in the public policy documents (see Appendix 1).

improved' is calibrated as 0.6, expressing that it is still more positive than negative, but not overly positive.[1] The calibration rules for all the conditions are provided in Table 3. The calibration process resulted in the calibrated data matrix provided as Appendix 2.

In the fourth step, the calibrated data matrix (Appendix 2) was transformed into so-called 'truth tables' (see Appendices 3 to 6) using the QCA-package in R (Duşa, 2007, 2016). A truth table sorts the empirical cases over the logically possible configurations; it is the core of the QCA-analysis (Schneider & Wagemann, 2012). Each row in the truth table presents one logically possible configuration. The number of truth table rows is determined by the formula 2k, where k stands for the number of explanatory conditions included in the analysis. First, each of the 20 or 19 cases was assigned to one of the truth table rows. Then, based on the cases in the truth table row, the truth table row was assigned a score on the outcome. Each row in the truth table can thus be read as a statement of sufficiency: when the row was associated with spatial quality, that particular configuration was considered sufficient for the outcome to be produced (Rihoux & Ragin, 2009; Schneider & Wagemann, 2012).

The fifth step was the truth table minimization using the QCA-package in R (Duşa, 2007, 2016). This involved the pairwise comparison of truth table rows that agreed on the outcome and differed in but one of their conditions (Schneider & Wagemann, 2012). The condition in which two truth table rows differed was logically redundant: whether the condition was present (i.e., a score of 1.0) or absent (i.e., a score of 0.0), the outcome was produced irrespectively. This fifth step resulted in minimized solution formulae that show which combinations of necessary and/or sufficient conditions are related to the achievement of spatial quality (see Tables 4 to 7 in Section 5). A condition is necessary when it has to be present for the outcome to occur. Necessary conditions are identified in a separate analysis prior to the truth table minimization (Schneider & Wagemann, 2010).

It should be stated that the third to fifth steps have been an iterative process, as is normal in QCA (Berg-Schlosser et al., 2009; Rihoux & Lobe, 2009). For instance, if a truth table contained cases that agreed on all the conditions (i.e., are in the same truth table row) but contradicted on the outcome, then this so-called 'contradiction' had to be resolved (Schneider & Wagemann, 2010). This was done by, inter alia, recalibration, removing conditions from the analysis, or excluding the contradictions from the truth table minimization (Rihoux & De Meur, 2009).

Case label	Conditions									Outcome
	Context Conditions				*Instrument Conditions*					
	PLAN_SC	*PLAN_INI*	*PLAN_CHAMP*	*PLAN_WAT*	*PLAN_QT*	*PLAN_DES*	*PLAN_AGR*	*PLAN_LAND*	*PLAN_CLUS*	*SQ_PLAN*
Case_01	Dijkverlegging	Municipality of Nijmegen		27	3		No			Sufficient
Case_02	Kribverlaging	Rijkswaterstaat	No	9 (μ)	11	1,5	No	4	5	Sufficient
Case_03	Langsdammen	Rijkswaterstaat	Yes (Importance: 8/10)	9 (μ)	11	0	No	7	4	Insufficient
Case_04	Dijkverlegging; Uiterwaardvergraving	Water board Rivierenland	Yes (Importance: 6/10)	11	6	Multiple	Yes	8	8	Sufficient
Case_05	Uiterwaardvergraving	Municipality of Gorinchem		5	2		Yes			Sufficient
Case_06	Ontpoldering	Rijkswaterstaat	Yes (N/A)	30	6	Many	Yes	8	No role	Sufficient
Case_07	Ontpoldering	Province of Noord-Brabant	Yes (Importance: 6/10)	30	3	6	No	6	0	Sufficient
Case_08	Berging	Rijkswaterstaat	Yes (N/A)	7 (μ)	7	> 10	No	7	N/A	Insufficient
Case_09	Uiterwaardvergraving	Rijkswaterstaat	No	2	5	2	No	6,5	Limited	Insufficient
Case_10	Uiterwaardvergraving	Rijkswaterstaat	No	3	5	2	No	6,5	Limited	Insufficient
Case_11	Uiterwaardvergraving	Rijkswaterstaat	No	6	5	2	No	6,5	Limited	Insufficient
Case_12	Obstakelverwijdering	Rijkswaterstaat	No	5	5	2	No	6,5	Limited	Insufficient
Case_13	Uiterwaardvergraving	Province of Utrecht	No	6	7	3	No	9	6	Sufficient
Case_14	Dijkverlegging	Water board Veluwe	Yes	35	10	Multiple	No	4	4	Insufficient
Case_15	Dijkverlegging	Water board Veluwe	Yes	29	10	Multiple	No	4	4	Insufficient
Case_16	Uiterwaardvergraving	Municipality of Deventer; Province of Overijssel	Yes (Importance: 7/10)	14 (μ)	6	6	Yes	9	6,5	Sufficient
Case_17	Dijkverlegging	Municipality of Zwolle	No	8	4	Many	Yes	8	1	Sufficient
Case_18	Uiterwaardvergraving	Province of Overijssel		15	4		Yes			Sufficient
Case_19	Zomerbedverlaging	Rijkswaterstaat	Yes (Importance: 8/10)	29	8	Many	No	8	7	Insufficient
Case_20	Uiterwaardvergraving	Rijkswaterstaat	Yes (N/A)	7	7	Few	Yes	Low	Positive	Insufficient
Case_21	Dijkverbetering	Water board Rivierenland	No	0	7	5	No	5	7	Insufficient
Case_22	Dijkverbetering	Water board Rivierenland	No	0	1	0	No	9	9	Insufficient
Case_23	Dijkverbetering	Water board Brabantse Delta	No	0	3	0	No	Low	8	Sufficient

Table 1: The data matrix for the planning phase
Marked cells indicate missing data. Cases with missing data are not included in the analyses.

[1] A value of 0.5 is not possible in QCA, because it indicates that a case is ambiguous and thus cannot be used in the analysis (Schneider & Wagemann, 2012).

Case label	Conditions								Outcome
	Context Conditions			Instrument Conditions					
	REAL_SC	REAL_REA	REAL_WAT	REAL_CON	REAL_MAIN	REAL_TEN	REAL_LAND	REAL_CLUS	SQ_PKB
Case_01	Dijkverlegging	Municipality of Nijmegen	34	D&C	Yes	EMVI-Criterion	Close Involvement; Influential	Influence 5; Involvement 4	Strongly Improved
Case_02	Kribverlaging	Rijkswaterstaat	9 (μ)	D&C	No	Limited	At Distance	Influence 6 (μ); Involvement 7	Strongly Improved
Case_03	Langsdammen	Rijkswaterstaat	9 (μ)	D&C	No	Limited	Not Involved	Influence 6,5 (μ); Involvement 8	Locally Improved; Regionally Worsened
Case_04	Dijkverlegging; Uiterwaardvergraving	Water board Rivierenland	12	E&C	Yes	Limited	At Distance	Influence 9; Involvement 8	Strongly Improved
Case_05	Uiterwaardvergraving	Municipality of Gorinchem	11	E&C					Strongly Improved
Case_06	Ontpoldering	Rijkswaterstaat	24 (μ)	D&C	Yes	Yes; EMVI-Criterion	At Distance	Influence 8; Involvement 8	Strongly Improved
Case_07	Ontpoldering	Water board Brabantse Delta	27	D&C	Yes	No	At Distance; Low Influence	Influence 6; Involvement 0	Strongly Improved
Case_08	Berging	Water board Brabantse Delta	10	E&C	Yes	Limited	Varied For Different Project Parts; In General Influential	Influence 3,5 (μ); Involvement 2	Barely Improved Brabant Side; Improved Zeeland Side
Case_09	Uiterwaardvergraving	Rijkswaterstaat	3	PD&C	No	No EMVI; Hard Requirement	At Distance; Low Influence	Influence 4,5 (μ); Involvement 8	Strongly Improved
Case_10	Uiterwaardvergraving	Rijkswaterstaat	3	PD&C	No	No EMVI; Hard Requirement	At Distance; Low Influence	Influence 4,5 (μ); Involvement 8	Barely Improved
Case_11	Uiterwaardvergraving	Rijkswaterstaat	3	PD&C	No	No EMVI; Hard Requirement	At Distance; Low Influence	Influence 4,5 (μ); Involvement 8	Improved
Case_12	Obstakelverwijdering	Rijkswaterstaat	13	PD&C	No	No EMVI; Hard Requirement	At Distance; Low Influence	Influence 4,5 (μ); Involvement 8	Strongly Improved
Case_13	Uiterwaardvergraving	Rijkswaterstaat	8	D&C	No	EMVI-Criterion	Limited Involvement	Influence 5; Involvement 0	Strongly Improved
Case_14	Dijkverlegging	Water board Veluwe	31	D&C	No	No	Involved; Moderate Influence	Low Importance	Strongly Improved
Case_15	Dijkverlegging	Water board Veluwe	26	D&C	No	No	Involved; Moderate Influence	Low Importance	Strongly Improved
Case_16	Uiterwaardvergraving	Water board Groot Salland; Water board Veluwe	14 (μ)	E&C	Yes	No	At Distance; Low Influence	Influence 5; Involvement 0	Strongly Improved
Case_17	Dijkverlegging	Water board Groot Salland	9	E&C					Strongly Improved
Case_18	Uiterwaardvergraving	Water board Groot Salland	14	E&C					Strongly Improved
Case_19	Zomerbedverlaging	Province of Overijssel	41	D&C	Yes	Yes; EMVI-Criterion	Involved; Moderate Influence	Influence 8,5 (μ); Involvement 7	Improved
Case_20	Uiterwaardvergraving	Rijkswaterstaat	7	D&C	Yes	No	Not Involved	Important Stimulating Role; Involvement N/A	Strongly Improved within Project Scope; Overall Improved
Case_21	Dijkverbetering	Water board Rivierenland	0	RAW	No	No	Very Limited Involvement	Influence 2; Involvement 2	Strongly Improved
Case_22	Dijkverbetering	Water board Rivierenland	0	PD&C					Strongly Improved
Case_23	Dijkverbetering	Water board Brabantse Delta	0	RAW	No	Limited	Limited Involvement	Influence 8; Involvement 0	Improved

Table 2: The data matrix for the realization phase
Marked cells indicate missing data. Cases with missing data are not included in the analyses.

Condition	Raw data	Our calibration	Explanation of our calibration
Outcomes			
Spatial Quality in planning phase (SQ_PLAN)	Archival data; data from assessments by the PDR. No standardized scale was used by the PDR to assess the spatial quality after the planning phase. The data are largely qualitative descriptions.	0.0 = insufficient 1.0 = sufficient	In the absence of a standardized scale and because the data are qualitative, we only broadly distinguished between two categories: insufficient and sufficient. Cases were coded as 0.0 or 1.0 based on the PDR's qualitative descriptions.
Spatial Quality in realization phase (SQ_PKB)	Archival data; data from assessments by the PDR. The PDR assessed the overall spatial quality (of the projects as a whole) relative to the PKB-objective. The PDR used a five-value qualitative scale: strongly improved, improved, barely improved, not improved, and worsened (see Table 2).	0.0 = worsened 0.3 = not improved 0.6 = barely improved 0.8 = improved 1.0 = strongly improved	The cross-over point is set at 0.6, because 'barely improved' still indicates a positive score, but not overly positive. Because the program's objective is to increase spatial quality, the category 'not improved' is calibrated into a negative score. Projects that were assesses with scores in-between two qualitative categories (i.e., Cases 03, 08, and 20; see Table 2) were calibrated by averaging their quantitative scores (see Appendix 2).
Conditions planning phase			
Spatial Complexity (PLAN_SC)	Archival data; data from the public website of the program.[16] Nine different measures can be found across the projects. These are shown in Figure 3.	0.0 = technical measures 0.7 = *buitendijkse* measures 1.0 = *binnendijkse* measures	The measures beyond the banks (in Dutch: *binnendijkse maatregelen*) are most complex and calibrated as 1.0. These measures are: depoldering, dike relocation, and high water channels. Technical measures do not concern the involvement of multiple spatial functions and are hence calibrated as 0.0. These measures are: dike strengthening, lowering groynes/*langsdammen*, removing obstacles, and deepening summer beds. The measures within the banks (in Dutch: *buitendijkse maatregelen*) are more complex than technical measures, because different functions become involved, but less complex and less politically sensitive than the measures beyond the banks, because usually the current water safety concept is maintained. They are calibrated as 0.7. These measures are: lowering floodplains and water retention. In the case of multiple measures (i.e., Case 04; see e.g., Table 1), the most complex measure is used for the calibration.
Project Initiator (PLAN_INI)	Archival data; data from the administrative agreements. In principle, only one administrative body acts as the project initiator. There are four possible initiators: water boards, Rijkswaterstaat, municipalities, and provinces.	0.0 = water boards 0.3 = Rijkswaterstaat 0.7 = municipality 1.0 = province	General territorial governments (i.e., provinces and municipalities) are more area-oriented than functional governments (i.e., Rijkswaterstaat and water boards). Provinces are most area-oriented and hence calibrated as 1.0. The functional governments are less area-oriented. Of the two, the water boards have a narrower mandate than Rijkswaterstaat and are hence calibrated as 0.0. In one project there were two initiators (i.e., Case 16; see Table 1); this case was calibrated by averaging the quantitative scores.
Project Champion (PLAN_CHAMP)	Survey data. Project managers were asked whether or not a project champion was present and how important s/he was (on a scale from 1 to 10) for achieving spatial quality in the spatial design.	0.0 = project champion absent 1.0 = project champion present	When a project champion was present, this is calibrated as 1.0. When a project champion was absent, or when project managers indicated that the champion was unimportant (score of 5/10 or lower), this is calibrated as 0.0.
Water Lowering Effect (PLAN_WAT)	Archival data; data from the 'Spatial Planning Key Decision' document. The water lowering effect is measured as the aimed water level reduction in centimeters.	0.0 = ≤ 8.8 cm 0.3 = 8.9 to 17.5 cm 0.7 = 17.6 to 26.2 cm 1.0 = ≥ 26.3 cm	In the absence of a standardized scale or theoretical expectations about the water lowering effect on spatial quality, we performed a cluster analysis with the Tosmana threshold-setter (Cronqvist, 2016). When multiple values were provided within a project for different locations (Cases 02, 03, 08, and 16; see Table 1), the water lowering effect was averaged. We tested for multiple thresholds, indicating 17.5 cm as the cross-over point.
Q-Team (PLAN_QT)	Archival data; data from Q-team reports. The condition is measured as the number of visits as documented in the final report of the Q-team after the planning phase.	0.0 = ≤ 3.5 visits 0.3 = 3.6 to 6 visits 0.7 = 6.1 to 8.5 visits 1.0 = ≥ 8.6 visits	In the absence of a standardized scale of precise theoretical expectations on the number of visits for achieving high spatial quality, we performed a cluster analysis with the Tosmana threshold-setter (Cronqvist, 2016). When a single visit included multiple projects (i.e., Cases 02&03, Cases 09-12, and Cases 14&15; see Table 1), these visits were counted for each project. We tested multiple thresholds, indicating 6 visits as the cross-over point. Because the cross-over point indicates ambiguity,[13] Case 06 and 16 with 6 visits were further examined using the survey data; this showed that the importance of the Q-team for spatial quality was low in Case 06 (score of 1/10) and high in Case 16 (score of 7/10). Hence, Case 06 is calibrated as 0.3 and Case 16 as 0.7.
Design Ateliers (PLAN_DES)	Survey data. Project managers were asked how many design ateliers were organized, how important the ateliers were (on a scale from 1 to 10) for achieving spatial quality in the spatial design, and whether or not the number of organized ateliers was sufficient.	0.0 = no ateliers 0.7 = few but sufficient (1 to 3) ateliers 1.0 = many ateliers (≥ 6)	In the absence of any standard or minimum number of design ateliers and because the project managers used various and different ways (both qualitative and quantitative) in response to the survey question, we broadly distinguished between three categories. For projects with only a few ateliers (1 to 3 ateliers) the project managers consistently indicated this was 'sufficient' and these cases are hence calibrated above the cross-over point. Cases with 6 or more ateliers are calibrated as 1.0 because there is a clear gap between cases with 3 ateliers and cases with 6 ateliers.
Administrative Agreement (PLAN_AGR)	Archival data; data from the administrative agreements. In the administrative agreements, the spatial quality objective was either generally mentioned ('no' specification) or it was specified.	0.0 = general notion spatial quality 1.0 = spatial quality specified	Cases where spatial quality was concretely specified are calibrated as 1.0. Cases where spatial quality was only generally referenced are calibrated as 0.0.
Integral Design Team (PLAN_INT)	Survey data. Project managers were asked which of the six disciplines were involved in the projects.	N/A	Because in all the projects (nearly) all disciplines were involved, this condition is not included in the analysis (no variation).
Landscape Architect (PLAN_LAND)	Survey data. Project managers were asked in which way the landscape architect was involved in the project, how satisfied they were with the architect's involvement, and the extent to which they were an integral member of the project team (on a scale from 1 to 10, where 10 indicates maximal process-oriented involvement).	0.0 = landscape architect focused on planning product 1.0 = landscape architect focused on planning process	Because some respondents (Cases 20 and 23) assessed the role of the landscape architect qualitatively (see Table 1), we only broadly distinguish between two categories. Cases with a score of 6.0 or higher are calibrated as 1.0 because this indicates that the role of the landscape architect is more process-oriented than product-oriented. The respondents' answers to other (qualitative) questions on the role of the landscape architect further corroborate this calibration.
Cluster Spatial Quality (PLAN_CLUS)	Survey data. Project managers were asked about the extent to which the Cluster Spatial Quality contributed to achieving spatial quality in the spatial design (on a scale from 1 to 10). Additional questions focused on the specific instruments deployed by the Cluster, i.e., the formal assessments, the helpdesk function, and the spatial quality manual.	0.0 = limited or negative contribution 1.0 = important contribution	Because some respondents (Cases 06, 09-12, and 20) provided a qualitative assessment of the involvement of the Cluster Spatial Quality (see Table 1), we only broadly distinguish between two categories. Cases where the involvement was scored 6.0 or higher are calibrated as 1.0, because this indicates an important contribution rather than a limited or negative contribution of the Cluster. Data for Case 08 were ambiguous (see Table 1), but the case was calibrated as 0.0 as the data did not clearly indicate importance of the Cluster.
Conditions realization phase			
Spatial Complexity (REAL_SC)	Same as PLAN_SC (see above).	Same as the calibration of PLAN_SC	Same as the calibration of PLAN_SC (see above).
Project Realisator (REAL_REA)	Archival data; data from the realization agreements. In principle, only one administrative body acts as the project realisator. There are four possible realisators: water boards, Rijkswaterstaat, municipalities, and provinces.	Same as the calibration of PLAN_INI	Same as the calibration of PLAN_INI (see above).
Water Lowering Effect (REAL_WAT)	Archival data; data from the 'Room for the River' progress report (2016a). The water lowering effect is measured as the realized water level reduction in centimeters.	0.0 = ≤ 10.2 cm 0.3 = 10.3 to 20.5 cm 0.7 = 20.6 to 30.8 cm 1.0 = ≥ 30.9 cm	Similar to the calibration of REAL_WAT. When multiple values were provided within a project for different locations (Cases 02, 03, 06, and 16; see Table 2), the water lowering effect was averaged. We tested for multiple thresholds, indicating 20.5 cm as the cross-over point.

Contract Type (REAL_CON)	Archival data. Four different contract types are present amongst the projects: RAW, E&C, D&C, and PD&C.	0.0 = RAW 0.3 = E&C 0.7 = D&C 1.0 = PD&C	The PD&C contract is the most inclusive one, followed by the D&C contract. These are hence calibrated as 1.0 and 0.7, respectively. The E&C and RAW contracts are non-inclusive contract types, but the first is more inclusive than the latter. They are hence calibrated 0.3 and 0.0, respectively.
Realization Agreement (REAL_AGR)	Archival data; data from the realization agreements. In the realization agreements, the spatial quality objective was either generally mentioned ('no' specification) or it was specified.	Same as the calibration of PLAN_AGR	Same as the calibration of PLAN_AGR (see above). This condition was in the end not included in the analysis.
Maintenance Considerations (REAL_MAIN)	Survey data. Project managers were asked whether or not the maintenance plan of the project was updated during the realization phase.	0.0 = maintenance plan not updated 1.0 = maintenance plan updated	When the maintenance plan of a project was updated, this is calibrated as 1.0. When this was not the case, this is calibrated as 0.0.
Tender Document (REAL_TEN)	Survey data. Project managers were asked to what extent spatial quality was included in the tender documents as criterion and whether or not it was an *EMVI*-criterion.	0.0 = not included 1.0 = included	When spatial quality was explicitly included in the tender documents as an *EMVI*-criterion – or as a hard requirement otherwise – this is calibrated as 1.0. When this was not the case, this is calibrated as 0.0.
Landscape Architect (REAL_LAND)	Survey data. Project managers were asked whether or not and in which way the landscape architect was involved in the project, how strong his/her influence was in achieving spatial quality (on a scale from 1 to 10), and how good his/her relationship was with the private contractor (on a scale from 1 to 10).	0.0 = no or limited involvement of landscape architect 1.0 = close or influential involvement of landscape architect	Because respondents varied in the way they answered the survey questions, we only broadly distinguish between two categories. When the landscape architect was not involved or only in a very limited way ('at distance' from the project), this is calibrated as 0.0. When the landscape architect was closely involved or influential, this is calibrated as 1.0.
Cluster Spatial Quality (REAL_CLUS)	Survey data. Project managers were asked about how close the Cluster Spatial Quality was involved with the project and the extent to which the Cluster was influential in achieving spatial quality in the project (both on a scale from 1 to 10). Additional questions focused on the specific instruments deployed by the cluster, i.e., the helpdesk function and the program-wide meetings.	0.0 = not involved, not influential 1.0 = involved, influential	Because some respondents (Cases 14, 15, and 20) provided qualitative assessments (see Table 2), we only broadly distinguished between two categories. The quantitative scores on involvement and influences were averaged. Subsequently, cases with a score of 6.0 or higher are calibrated as 1.0.

Table 3: Operationalization and calibration of the outcomes and the conditions
See: https://www.ruimtevoorderivier.nl/projecten/ (last accessed: May 1st, 2017)

5 ANALYSIS AND RESULTS

We first tested for necessity and found no single necessary conditions. The condition with the highest consistency score for necessity was the absence of REAL_WAT for the realization phase, with a consistency of 0.806. This does not meet the required 0.9 consistency threshold for necessity (Schneider & Wagemann, 2012). For the analysis of sufficiency, we performed truth table analyses.

For the planning phase, the truth table would consist of a total of 512 (i.e., 29) logically possible configurations, because there are in total 9 conditions (4 context and 5 instrument conditions). For the realization phase, the truth table would consist of 256 (i.e., 28) logically possible configurations, because there are in total 8 conditions (3 context and 5 instrument conditions). Because only a medium-n of cases is available for the analyses of both phases, this produced many so-called logical remainders. A logical remainder is a truth table row for which no or not enough empirical evidence (i.e., cases) is at hand (Schneider & Wagemann, 2012). These logical remainders are problematic, because the analysis of the truth table entails the pairwise comparison of truth table rows that agree on the outcome and differ in only one of their conditions (with many empty truth table rows, a very few pairwise comparisons can be made). Therefore, we performed separate analyses for the context and instrument conditions, for the planning and realization phases respectively. We thus conducted four analyses. The results of the analyses are shown in Tables 4 to 7.

For all the analyses, we have provided the complex solutions, as shown in the tables below. In the tables, the black circles (●) represent the presence of a condition and white circles (○) represent the negation of a condition. Blank cells represent irrelevant (redundant) conditions. In generating the complex solutions, no logical remainders are included in the minimization of the truth tables (Schneider & Wagemann, 2012). Hence, we have not made any assumptions about logical remainders, i.e., empty truth table rows.

For the analysis of the context conditions in the planning phase (Table 4), the truth table consists of 16 configurations (24) of which 9 are empirically present (see Appendix 3). The consistency cut-off point ("Incl.") was set at 0.538 because all the cases in Configurations 16, 13, and 15 have the outcome (see Appendix 3); the other configurations are either contradictions or only cover cases that have the non-outcome.

For the analysis of the instrument conditions in the planning phase (Table 5), the truth table consists of 32 configurations (25) of which 12 are empirically present (see Appendix 4). The consistency cut-off point ("Incl.") was set at 0.769 because all the cases in Configurations 15, 16, 32, and 2 have the outcome (see Appendix 4); the other configurations are either contradictions or only cover cases that have the non-outcome.

For the analysis of the context conditions in the realization phase (Table 6), the truth table consists of 8 configurations (23) of which 5 are empirically present (see Appendix 5). The consistency cut-off point

("Incl.") was set at 0.846 because all the configurations have the outcome. Only one configuration constitutes a contradiction (i.e., Configuration 1) that is caused by Case 03. This is only a minor contradiction, as this case has a raw score on the outcome of 0.4. In that case, the spatial quality was improved locally, but it had worsened regionally (see Table 2). Moreover, the other 4 cases in that configuration do have the outcome. Hence, all configurations were included in the minimization of the truth table.

For the analysis of the instrument conditions in the realization phase (Table 7), the truth table consists of 32 configurations (25) of which 12 are empirically present (see Appendix 6). The consistency cut-off point ("Incl.") was set at 0.850 because all configurations have the outcome; only Configuration 18 constitutes a contradiction, which is caused by Case 03, and was hence not included in the minimization of the truth table.

	Path 1	Path 2
PLAN_SC	●	●
PLAN_INI	●	●
PLAN_CHAMP	●	
PLAN_WAT		O
Raw coverage	0.250	0.262
Unique coverage	0.163	0.175
Consistency	0.769	0.583
Cases	Case_16; Case_07	Case_13, Case_17; Case_16
Solution coverage: 0.425 | Solution consistency: 0.694		

Table 4: Results truth table analysis for context conditions in planning phase

	Path 1	Path 2	Path 3
PLAN_QT	O	O	
PLAN_DES	O	●	●
PLAN_AGR	O	●	●
PLAN_LAND	O	●	●
PLAN_CLUS	●		●
Raw coverage	0.125	0.300	0.212
Unique coverage	0.125	0.175	0.087
Consistency	0.769	1.000	1.000
Cases	Case_23	Case_06, Case_17; Case_04	Case_04; Case_16
Solution coverage: 0.512 | Solution consistency: 0.932			

Table 5: Results truth table analysis for instrument conditions in planning phase

	Path 1	Path 2	Path 3 (M1)	Path 4 (M2)
REAL_SC			●	●
REAL_REA	O	●	O	
REAL_WAT	O	●		●
Raw coverage	0.588	0.124	0.576	0.276
Unique coverage	0.194 (M1) 0.482 (M2)	0.071 (M1) 0.047 (M2)	0.182	0.147
Consistency	0.917	0.913	0.990	1.000
Cases	Case_02, Case_03, Case_12, Case_21, Case_23; Case 04, Case_08, Case_09, Case_10, Case_11, Case_13, Case_16, Case_20	Case_19; Case_01	Case_04, Case_08, Case_09, Case_10, Case_11, Case_13, Case_16, Case_20; Case_06, Case_07, Case_14, Case_15	Case_06, Case_07, Case_14, Case_15; Case_01
Solution coverage Model 1: 0.859 | Solution consistency Model 1: 0.930 Solution coverage Model 2: 0.824 | Solution consistency Model 2: 0.927				

Table 6: Results truth table analysis for context conditions in realization phase

	Path 1	Path 2	Path 3	Path 4	Path 5	Path 6	Path 7	Path 8 (M1)	Path 9 (M2)
REAL_CON	O	O	●	●	O		●	●	●
REAL_TEN	O	O	●	●	O	O	O	●	●
REAL_MAIN	●	●	O	●		●	O	●	
REAL_LAND		O	O	●	O	O	●		O
REAL_CLUS	O				O	O	O	●	●
Raw coverage	0.118	0.118	0.241	0.082	0.182	0.171	0.082	0.082	0.241
Unique coverage	0.041 (M1) 0.041 (M2)	0.041 (M1) 0.041 (M2)	0.241 (M1) 0.041 (M2)	0.041 (M1) 0.082 (M2)	0.106 (M1) 0.106 (M2)	0.094 (M1) 0.094 (M2)	0.082 (M1) 0.082 (M2)	0.041	0.041
Consistency	1.000	1.000	0.872	1.000	0.939	0.967	1.000	1.000	0.872
Cases	Case_16; Case_08	Case_16; Case_04	Case_13; Case_09, Case_10, Case_11, Case_12	Case_01; Case_19	Case_21, Case_23; Case_16	Case_16; Case_07, Case_20	Case_14, Case_15	Case_06; Case_19	Case_09, Case_10, Case_11, Case_12; Case_06
Solution coverage Model 1: 0.806 | Solution consistency Model 1: 0.938 Solution coverage Model 2: 0.806 | Solution consistency Model 1: 0.938									

Table 7: Results truth table analysis for instrument conditions in realization phase

6 CONCLUSIONS AND DISCUSSION

At the outset of this paper, we aimed (1) to assess the extent to which the Room for the River program has been able to achieve the spatial quality objective, and (2) to identify the necessary and/or sufficient conditions for achieving spatial quality. In Section 6.1 we address the first aim and in Section 6.2 we address the second aim.

6.1 HAS THE ROOM FOR THE RIVER PROGRAM ACHIEVED ITS SPATIAL QUALITY OBJECTIVE?

Using the advisory reports of the Q-team as input, the projects were assessed by the Cluster Spatial Quality of the Room for the River program after their planning phase and after their realization phase for the PKB-objective as a whole. The results indicate that at the end of the planning phase, 12 of the 23 projects (52%) still performed insufficiently (see Table 1). It should be noted that for the four Nederrijn projects (Cases 09-12), no clear final assessments were available. However, the available qualitative reports listed various improvement measures[1], indicating that the spatial quality was still insufficient at that point.

For the evaluation of the program's performance after the realization phase relative to the PKB-objective as a whole, the projects were assessed on a five-value scale (see Table 3). With the exception perhaps of the project Langsdammen Waal (Case 03) where, although it was improved locally, spatial quality had worsened on the regional level, there are no projects were spatial quality has worsened or not improved compared to the situation before the Room for the River program (see Table 2). Of the 23 projects, 20 projects have seen an 'improvement' (3 projects; 13%) or 'strong improvement' (17 projects; 74%). Whereas the previous midterm assessments of the program (Feddes & Hinz, 2013; Hulsker et al., 2011; Rijke et al., 2012; Van Twist et al., 2011) concluded that the Room for the River program enhanced spatial quality, the present evaluation confirms this on the basis of a larger set of projects that now also have been finalized.

6.2 WHAT ARE THE NECESSARY/SUFFICIENT CONDITIONS FOR ACHIEVING SPATIAL QUALITY?

Based on the results of the analysis, we conclude that there are no necessary conditions for achieving spatial quality. Based on the truth table analyses, we also conclude that there are no sufficient conditions, i.e., conditions that by themselves produce spatial quality: as can be observed from the results (Tables 4 to 7), at least two conditions are required to produce spatial quality in any situation. In the remainder of this section, we will discuss the results.

6.2.1 PLANNING PHASE: IMPORTANT CONDITIONS AND EFFECTIVE STRATEGIES

Table 4 indicates that two configurations of context conditions can explain the achievement of a high spatial quality: a high spatial complexity together with a territorial government as project initiator and the presence of a project champion (Path 1), or a high spatial complexity, again with a territorial government as project initiator but now combined with a low water lowering effect (Path 2). These results indicate the importance of a high Spatial Complexity – i.e., measures within the banks (i.e., lowering floodplains and water retention) or measures beyond the banks (i.e., depoldering, dike relocation, and high water channels) – for the achievement of spatial quality in the planning phase (see Table 4). This is in support of the theoretical expectation that a higher complexity may allow different spatial functions to be addressed conjunctively, resulting in synergy gains (Heeres, 2017; Van Buuren, Edelenbos, et al., 2010; Verweij et al., 2013). The results also indicate the importance of having territorial governments – i.e., a municipality or a province – as Project Initiators. This is in support of the expectation that territorial governments may be more concerned with balancing different spatial interests than water boards or Rijkswaterstaat, who are more focused on realizing the water safety objective (see Section 3.2). Interestingly, the results show that

[1] These are the so-called 'Besluit Nederrijn3: Toets Ruimtelijke Kwaliteit' documents.

a Project Champion can indeed play an important role in achieving spatial quality (Path 1) – which is in support of the theoretical expectations (see Section 3.2) – but is not required by necessity (Path 2). In fact, in projects with a low Water Lowering Effect (Path 2), a project champion may help in promoting spatial quality (Case 16), but is not required (Cases 13 and 17). This could indicate that in projects with a low water lowering effect, there may be more latitude, that is, room to develop spatial solutions that maximize spatial quality, thus making the presence of a project champion who fights for safeguarding or promoting spatial quality less needed.

Table 5 shows that spatial quality can be achieved by means of three configurations of instrument conditions. The first strategy is to basically go 'all-in' and to maximize efforts to increase spatial quality (Path 3). Through a close involvement of the Cluster Spatial Quality, the landscape architect, and the Q-team[1], and through organizing design ateliers, and specifying spatial quality in the administrative agreement, a high spatial quality can indeed be achieved. We coin this strategy the going-all-in strategy. This strategy is effective, but may be less efficient in terms of the resources (time, budget, personnel) it requires. The results indicate two other strategies that are also effective and may be more efficient as well. In the second strategy, the efforts are focused on the role of the Cluster Spatial Quality. The Cluster operates on the program management level. Hence, we coin this strategy the program-as-guardian strategy (Path 1). Through a strong involvement of the Cluster Spatial Quality as a facilitator and guardian of spatial quality, less resources need to be devoted to the Q-team, design ateliers, spatial quality in the administrative agreement, and the involvement of the landscape architect. An alternative explanation of this strategy is that, when little energy is devoted in a project to achieving spatial quality by means of those project management instruments, it is required that the Cluster Spatial Quality steps in to steer the project in the right direction. The third strategy mirrors the program-as-guardian strategy. We coin it the project-as-driver strategy (Path 2). Here, the steering by the program management is less dominant, and the motor block for achieving spatial quality is formed by the projects themselves through organizing many design ateliers, explicating spatial quality in the administrative agreement, and a close involvement of the landscape architect.

It will be interesting to further study the types of program management present in the different strategies (cf. Buijs & Edelenbos, 2012; Busscher, 2014; Van Buuren, Buijs, & Teisman, 2010). Although this will require additional qualitative data collection and analysis, the program-as-guardian strategy seems to imply a type of program management in which the program monitors the projects and intervenes in the projects' scopes when progress towards spatial quality is hampered. Conversely, in the project-as-driver strategy, a much more facilitative type of program management seems to be in place. In this strategy, the role of the program does not seem to be to enforce projects to achieve spatial quality, but to enable and empower them in their ambitions to strive for spatial quality. Finally, the going-all-in strategy seems to implicate a program management that is pro-actively stimulating the projects to work towards improving spatial quality. In this strategy, the program seems to function more as a partner. Hence, it seems to adopt a type of program management somewhere in between the other two strategy types.

The results further indicate that with regard to the Q-Team, a low number of visits seems to be associated with the achievement of a high spatial quality (Paths 1 and 2). Whereas the previous evaluations of the Room for the River program indicated that the Q-team contributed to increasing the spatial quality in the project designs (Hulsker et al., 2011; Van Twist et al., 2011), we argued that a high number of visits could actually indicate a low initial spatial quality requiring additional efforts of the Q-team (see Section 3.2.1). Inversely, our results indicate that a low number of visits may be associated with a high initial spatial quality. Although follow-up analyses into the relationship between the involvement of the Q-team and the spatial quality in the realization phase are required to shed more light on this finding, our analysis does show – in contrast to the previous midterm evaluations that were based on fewer cases with less formalized research approaches – that many Q-team visits does not necessarily lead to high spatial quality in the planning phase. The Q-team does not seem to have been the core instrument around which the success of the Room for the River program revolved. In fact, our results indicate that the Design Ateliers, the Administrative Agreement, and the Landscape Architect are more important instruments for achieving spatial quality (Paths 2 and 3). The importance of these project-level instruments was also found in the previous midterm evaluations (Hulsker et al., 2011; Van Twist et al., 2011). It is also in support of

[1] The condition PLAN_QT is indicated as redundant in Path 3. However, the raw data show that for both Cases 04 and 16, the Q-team paid six visits to the projects, which is very close the cross-over point (see Table 3). Moreover, in Case 16, the survey respondent also assessed the Q-team's role in the planning phase as important with a score of 7/10 (see Table 3).

theoretical expectations about the importance of co-design and the involvement of multiple disciplines in spatial planning for achieving spatial quality (Heeres et al., 2016). Finally, the results indicate that the Cluster Spatial Quality indeed played an important role in achieving spatial quality in the planning phase (Paths 1 and 3), but that its efforts are less so required in projects where strong efforts are practiced by the projects themselves (i.e., the project-as-driver strategy; Path 2).

6.2.2 REALIZATION PHASE: IMPORTANT CONDITIONS AND EFFECTIVE STRATEGIES

Table 6 indicates multiple configurations of context conditions that can explain the achievement of a high final spatial quality: a functional government as project realisator combined with a low water lowering effect (Path 1), a territorial government as project realisator combined with a high water lowering effect (Path 2), a high spatial complexity combined with a functional government as project realisator (Path 3), or a high spatial complexity combined with a high water lowering effect (Path 4). The results indicate the variety of contexts within which projects have been realized; there do not seem to be unambiguous relationships between any of the conditions and the achievement of spatial quality. In different configurations, Spatial Complexity, the Project Realisator, and the Water Lowering Effect contribute to the achievement of spatial quality in different capacities. Interestingly though, projects with a low water lowering effect are often realized by a functional government (Path 1 and also partly Path 3) – i.e., a water board or Rijkswaterstaat – whereas projects with a high water lowering effect are often realized by territorial governments (Path 2 and also partly Path 4) – i.e., a municipality of province. This is perhaps counterintuitive in the sense that it may have had been expected that the functional governments are more focused on water safety and would hence be the realisator for the projects with a high water lowering effect (see Section 3.2). Although this would require additional qualitative data collection and analysis, an explanation of this result could actually be that in those projects where a high water lowering effect has been achieved, the goals of the water board or Rijkswaterstaat with respect to water safety have been satisfied, after which a municipality or province was then given the lead (or provided the latitude), within the scope set by the water lowering effect, to maximize spatial quality.

Table 7 shows that spatial quality in the realization phase can be achieved by means of nine configurations of instrument conditions. These results are puzzling in the sense that the sheer number of possible paths towards the achievement of spatial quality makes it difficult to draw clear and unambiguous conclusions. Taking into account as well the somewhat puzzling results of the analysis of the context conditions, a follow-up analysis may be required in which the number of conditions is decreased and in which the context and instrument conditions are combined in one comparative analysis (see Schneider & Wagemann, 2006). Still, some observations can be made. First of all, Paths 4 and 8 may again be characterized as going-all-in strategies. In those cases, the strategy was to nearly go ‘all-in’ and to maximize efforts to increase spatial quality with respect to deploying 4 out of 5 instruments. In particular, inclusive contracts – i.e., D&C or PD&C contracts – combined with the specification of spatial quality in the realization agreement and the updating of the maintenance plans, supplemented with either the close involvement of the landscape architect (Path 4) or of the Cluster Spatial Quality (Path 8), proved effective for achieving spatial quality. At least equally interesting is that in three cases, represented by Path 5, quite the opposite seems to have occurred. There, contracts were non-inclusive, spatial quality was not included in the tender documents as a criterion, and the landscape architect and the Cluster were not closely involved. With this strategy, which we tentatively coin the remote strategy, spatial quality was hardly safeguarded, but it was achieved nevertheless. This path perhaps points towards the importance of organizing for spatial quality in the planning phase, laying the fertile ground for the realization phase. It might be that in these cases, spatial quality had already been so well developed – both in terms of content (what is to be realized) as well as process (how will this be realized) – that spatial quality did not need specific attention anymore in the realization phase of the project. It also points to deviant cases that may be selected for further case study research (see Schneider & Rohlfing, 2016). The remaining configurations (Paths 1-3, Path 6-7, and Path 9) showcase various particular strategies. Two subsets of strategies may be distinguished here. One is what may be coined the limited-steering strategy. This strategy is represented by Paths 1, 2, and 6. In those cases, there was limited steering on the safeguarding or promotion of spatial quality and the steering that occurred was focused on updating the maintenance plans to ensure that maintenance considerations would be taken into account early in the realization process. The other strategy, represented by the remaining Paths 3, 7, and 9, may be coined the contract-steering strategy. In those cases, steering was less limited (although not ‘all-in’) and focused on

the specification of spatial quality in tender documents and/or on project realization through inclusive contracts.

The results indicate that the various instruments applied in the Room for the River program's realization phase – i.e., Contract Type, the inclusion of Maintenance Considerations, the Tender Documents, the involvement of the Landscape Architect, and the involvement of the Cluster Spatial Quality – have contributed to achievement of spatial quality in different capacities. First, more inclusive contracts can indeed contribute to higher spatial quality (cf. Lenferink et al., 2013) but not necessarily so. Follow-up analyses may further delve into the question of whether and in what ways more inclusive contracts indeed stimulate a higher spatial quality. That is, it may well be that it is not so much the contract type per se that is important, but rather what is actually determined as the project scope in the contract, and the way contracts are managed and implemented (Verweij, 2015a). Second and likewise, updating the maintenance plans and the specification of spatial quality in the tender documents can indeed contribute to spatial quality, but much will depend on how the private contractors actually act upon what was agreed in the plans and documents. With respect to the involvement of the landscape architect, thirdly, it is noticeable that his/her role has been less prominent compared to the planning phase. In the planning phase, s/he was closely involved in fourteen of the projects and in the realization phase in just five of the projects. Finally, the results indicate that the Cluster Spatial Quality can indeed play an important role in achieving spatial quality in the realization phase (in particular Paths 8 and 9), but that its efforts are generally not required (Paths 2-4) or that projects even benefit from a remote role of the Cluster (Paths 1, 5-7).

6.3 IN CONCLUSION

Based on the results of the analysis, we have concluded that the Room for the River program has been successful in achieving spatial quality and we have identified different strategies that are effective to that end. On the basis of our research, we can also conclude that integrated area-based planning is indeed further developing in the Dutch river policy domain. In contrast to previous warnings about high transaction costs (Hijdra, 2017) and the tendency to simplify and revert to old routines when complexity increases (Salet et al., 2013; Verweij et al., 2017), we observed that in the context of the Room for the River program, spatial quality is no longer only seen "as a luxury that is costly and mainly focused on new nature in the river areas" (Van Twist et al., 2011, p. 15). Rather, various practical strategies have been developed for realizing the secondary objective of the Room for the River program in concrete water planning practices. Given the program's status as an international frontrunner in integrated planning and water management (Zevenbergen et al., 2013), these strategies may prove valuable for planning practices in other countries as well. As a final remark, we note that the analyses presented in this paper will be supplemented by in-depth case studies of projects that are representative of many of the paths identified through the QCA. These case studies will enable us to delve deeper into the intricate relationships between the conditions that constitute the paths towards the achievement of spatial quality.

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APPENDICES

Case label	Case name (in Dutch)	Type of measure (in Dutch)	Case name in 'Room for the River' progress report (2016a) (in Dutch)
Case_01	*Ruimte voor de Waal*	*Dijkverlegging*	*Dijksteruglegging Lent*
Case_02	*Kribverlaging Waal*	*Kribverlaging*	*Kribverlaging Midden-Waal; Kribverlaging Waal-Fort St. Andries; Kribverlaging Beneden Waal*
Case_03	*Langsdammen Waal*	*Langsdammen*	*N/A*
Case_04	*Het Munnikenland*	*Dijkverlegging; Uiterwaardvergraving*	*Uiterwaardvergraving Brakelse Benedenwaarden en Dijkverlegging Munnikenland*
Case_05	*Uiterwaardvergraving Bedrijventerrein Avelingen*	*Uiterwaardvergraving*	*Uiterwaardvergraving Avelingen*
Case_06	*Ontpoldering Noordwaard*	*Ontpoldering*	*Ontpoldering Noordwaard*
Case_07	*Ontpoldering Overdiep*	*Ontpoldering*	*Ontpoldering Overdiepse Polder*
Case_08	*Berging op het Volkerak-Zoommeer*	*Berging*	*Waterberging op het Volkerak-Zoommeer*
Case_09	*Nederrijn: Uiterwaardvergraving Doorwerthsche Waarden*	*Uiterwaardvergraving*	*Uiterwaardvergraving Doorwerthsche Waarden*
Case_10	*Nederrijn: Uiterwaardvergraving Middelwaard*	*Uiterwaardvergraving*	*Uiterwaardvergraving Middelwaard*
Case_11	*Nederrijn: Uiterwaardvergraving De Tollewaard*	*Uiterwaardvergraving*	*Uiterwaardvergraving De Tollewaard*
Case_12	*Nederrijn: Obstakelverwijdering Machinistenschool Elst*	*Obstakelverwijdering*	*Obstakelverwijdering Machinistenschool Elst*
Case_13	*Ruimte voor de Lek Vianen*	*Uiterwaardvergraving*	*Uiterwaardvergraving Honswijkerwaarden, Stuwetland Hagestein, Hagesteine Uiterwaard en Heerenwaard*
Case_14	*Dijkverlegging Cortenoever*	*Dijkverlegging*	*Dijkverlegging Cortenoever*
Case_15	*Dijkverlegging Voorsterklei*	*Dijkverlegging*	*Dijkverlegging Voorsterklei*
Case_16	*Ruimte voor de Rivier Deventer*	*Uiterwaardvergraving*	*Uiterwaardvergraving Bolwerksplas, Worp en Ossenwaard; Uiterwaardvergraving Ketzers- en Stobbenwaarden en Olsterwaarden*
Case_17	*Ruimte voor de Rivier Zwolle: Dijkverlegging Westenholte*	*Dijkverlegging*	*Dijkverlegging Westenholte*
Case_18	*Ruimte voor de Rivier Zwolle: Uiterwaardvergraving Scheller-Olderneler Buitenwaarden*	*Uiterwaardvergraving*	*Uiterwaardvergraving Scheller en Olderneler Buitenwaarden*
Case_19	*Ruimte voor de Rivier IJsseldelta: Zomerbedverlaging Beneden-IJssel*	*Zomerbedverlaging*	*Ruimte voor de Rivier IJsseldelta, Gedeelte Zomerbedverlaging*
Case_20	*Uiterwaardvergraving Meinerswijk Arnhem*	*Uiterwaardvergraving*	*Uiterwaardvergraving Meinerswijk*
Case_21	*Dijkverbetering Steurgat*	*Dijkverbetering*	*Dijkverbetering Steurgat/Land van Altena*
Case_22	*Dijkverbetering Schoonhovense Veer-Langerak*	*Dijkverbetering*	*Dijkverbetering Lek/Alblasserwaard en de Vijfheerenlanden*
Case_23	*Dijkverbetering Amer/Donge*	*Dijkverbetering*	*Dijkverbetering Amer/Donge*

Appendix 1: Overview of the projects (cases) in the 'Room for the River' program

Case label	Outcomes		Conditions Planning Phase ("PLAN X")[19]								Conditions Realization Phase ("REAL X")[19]							
	SQ_PLAN	SQ_PKB	SC	INI	CHAMP	WAT	QT	DES	AGR	LAND	CLUS	SC	REA	WAT	CON	MAIN	TEN	LAND	CLUS
Case_01	1	1	1	0,7		1	0		0			1	0,7	1	0,7	1	1	1	0
Case_02	1	1	0	0,3	0	0,3	1	0,7	0	0	0	0	0,3	0	0,7	0	0	0	1
Case_03	0	0,4	0	0,3	1	0,3	1	0	0	1	0	0	0,3	0	0,7	0	0	0	1
Case_04	1	1	1	0	1	0,3	0,3	0,7	1	1	1	1	0	0,3	0,3	1	0	0	1
Case_05	1	1	0,7	0,7		0	0		1			0,7	0,7	0,3	0,3				
Case_06	1	1	1	0,3	1	1	0,3	1	1	1	0	1	0,3	0,7	0,7	1	1	0	1
Case_07	1	1	1	1	1	1	0	1	0	1	0	1	0	0,7	0,7	1	0	0	0
Case_08	0	0,7	0,7	0,3	1	0	0,7	1	0	1	0	0,7	0	0	0,3	1	0	1	0
Case_09	0	1	0,7	0,3	0	0	0,3	0,7	0	1	0	0,7	0,3	0	1	0	1	0	1
Case_10	0	0,6	0,7	0,3	0	0	0,3	0,7	0	1	0	0,7	0,3	0	1	0	1	0	1
Case_11	0	0,8	0,7	0,3	0	0	0,3	0,7	0	1	0	0,7	0,3	0	1	0	1	0	1
Case_12	0	1	0	0,3	0	0	0,3	0,7	0	1	0	0	0,3	0,3	1	0	1	0	1
Case_13	1	1	0,7	1	0	0	0,7	0,7	0	1	1	0,7	0,3	0	0,7	0	1	0	0
Case_14	0	1	1	0	1	1	1	0,7	0	0	0	1	0	1	0,7	0	0	1	0
Case_15	0	1	1	0	1	1	1	0,7	0	0	0	1	0	0,7	0,7	0	0	1	0
Case_16	1	1	0,7	0,85	1	0,3	0,7	1	1	1	1	0,7	0	0,3	0,3	1	0	0	0
Case_17	1	1	1	0,7	0	0	0,3	1	1	1	0	1	0	0	0,3				
Case_18	1	1	0,7	1		0,3	0,3		1			0,7	0	0,3	0,3				
Case_19	0	0,8	0	0,3	1	1	0,7	1	0	1	1	0	1	1	0,7	1	1	1	1
Case_20	0	0,9	0,7	0,3	1	0	0,7	0,7	1	0	1	0,7	0,3	0	0,7	1	0	0	0
Case_21	0	1	0	0	0	0	0,7	0,7	0	0	1	0	0	0	0	0	0	0	0
Case_22	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1				
Case_23	1	0,8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Appendix 2: The calibrated data matrix

Conf. No.	PLAN_SC	PLAN_INI	PLAN_CHAMP	PLAN_WAT	Outcome	N	Incl.	Cases
16	**1**	**1**	**1**	**1**	**1**	**1**	**1.000**	**Case_07**
13	**1**	**1**	**0**	**0**	**1**	**2**	**0.609**	**Case_13, Case_17**
15	**1**	**1**	**1**	**0**	**1**	**1**	**0.538**	**Case_16**
11	1	0	1	0	0	3	0.378	Case_04, Case_08, Case_20
12	1	0	1	1	0	3	0.365	Case_06, Case_14, Case_15
1	0	0	0	0	0	5	0.321	Case_02, Case_12, Case_21, Case_22, Case_23
4	0	0	1	1	0	1	0.130	Case_19
9	1	0	0	0	0	3	0.125	Case_09, Case_10, Case_11
3	0	0	1	0	0	1	0.103	Case_03

Appendix 3: Truth table for context conditions in planning phase for spatial quality[20]

Conf. No.	PLAN_QT	PLAN_DES	PLAN_AGR	PLAN_LAND	PLAN_CLUS	Outcome	N	Incl.	Cases
15	**0**	**1**	**1**	**1**	**0**	**1**	**2**	**1.000**	**Case_06, Case_17**
16	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1.000**	**Case_04**
32	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1.000**	**Case_16**
2	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**0.769**	**Case_23**
28	1	1	0	1	1	0	2	0.500	Case_13, Case_19
25	1	1	0	0	0	0	3	0.333	Case_02, Case_14, Case_15
11	0	1	0	1	0	0	5	0.244	Case_07, Case_09, Case_10, Case_11, Case_12
4	0	0	0	1	1	0	1	0.231	Case_22
19	1	0	0	1	0	0	1	0.000	Case_03
26	1	1	0	0	1	0	1	0.000	Case_21
27	1	1	0	1	0	0	1	0.000	Case_08
30	1	1	1	0	1	0	1	0.000	Case_20

Appendix 4: Truth table for instrument conditions in planning phase for spatial quality[20]

Conf. No.	REAL_SC	REAL_REA	REAL_WAT	Outcome	N	Incl.	Cases
6	**1**	**0**	**1**	**1**	**4**	**1.000**	**Case_06, Case_07, Case_14, Case_15**
8	**1**	**1**	**1**	**1**	**1**	**1.000**	**Case_01**
5	**1**	**0**	**0**	**1**	**8**	**0.985**	**Case_04, Case_08, Case_09, Case_10, Case_11, Case_13, Case_16, Case_20**
1	**0**	**0**	**0**	**1**	**5**	**0.919**	**Case_02, Case_03, Case_12, Case_21, Case_23**
4	**0**	**1**	**1**	**1**	**1**	**0.846**	**Case_19**

Appendix 5: Truth table for context conditions in realization phase for spatial quality[21]

Conf. No.	REAL_CON	REAL_MAIN	REAL_TEN	REAL_LAND	REAL_CLUS	Outcome	N	Incl.	Cases
9	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**1.000**	**Case_16**
10	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**1.000**	**Case_04**
11	**0**	**1**	**0**	**1**	**0**	**1**	**1**	**1.000**	**Case_08**
19	**1**	**0**	**0**	**1**	**0**	**1**	**2**	**1.000**	**Case_14, Case_15**
21	**1**	**0**	**1**	**0**	**0**	**1**	**1**	**1.000**	**Case_13**
25	**1**	**1**	**0**	**0**	**0**	**1**	**2**	**1.000**	**Case_07, Case_20**
30	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1.000**	**Case_06**
31	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1.000**	**Case_01**
32	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1.000**	**Case_19**
1	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0.900**	**Case_21, Case_23**
22	**1**	**0**	**1**	**0**	**1**	**1**	**4**	**0.850**	**Case_09, Case_10, Case_11, Case_12**
18	1	0	0	0	1	0	2	0.786	Case_02, Case_03

Appendix 6: Truth table for instrument conditions in realization phase for spatial quality[21]

ID 1643 | EVALUATING NEIGHBOURHOOD SUSTAINABILITY ASSESSMENT METHODOLOGY AS A LOCALIZATION TOOL FOR GLOBAL TARGETS

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ABSTRACT: In the last two decades, global sustainable development concerns have become more decisive on urban development strategies. This new order also created two major sub-processes. While the first one mainly covers the interpretation of major scale sustainable development goals into sub-national strategies, the second one includes providing a successful sustainability monitoring mechanism in coherence with national obligations for global sustainability targets. Sustainability assessment methodology (SAM) have gained importance by standing at the intersection of these two sub-processes. SAM tools have been developed in different geographies for monitoring and supporting sustainable development principles throughout the design and implementation processes. In this context, this paper presents a framework for the utilization of these methodologies in the localization of global sustainability targets through the case of Turkey. For this purpose, criteria of eight existing Neighbourhood Sustainability Assessment Tools (NSAT) were compared for obtaining a combined matrix. In the first stage, provided

matrix evaluated in terms of global sustainability targets and Turkey's national obligations. For providing a local framework and discussing the coherence between national sustainable development strategies and sectoral priorities. Analytic Hierarchy Process (AHP) was used as a simple prioritization technique and applied to decision makers, academicians, activists and project executors from different sectors. The applied framework brings a new perspective and provides an initial guideline for localization of global sustainability goals over discussions on Turkey.

Keywords: Sustainability Assessment, Neighbourhood, Sustainable Development, Localization

1 INTRODUCTION

In parallel with the increasing importance of sustainable development policies, the need for process monitoring and assessment increased as well, and the most important impact of this approach on communities is the recognition of the essential role of local values and policies in the implementation process of global principles. Combining these two approaches in 2002 Local Action 21, nations focused on the effective implementation of sustainability including monitoring and continuity. In this process, it is crucial to choose the right tools that compatible with local characteristics (Kusakabe, 2013). New generation sustainability assessment methodologies (SAMs) provide alternative options that applicable in different geographies and offer a comprehensive tool at various scales for assessing sustainability performance from decision making to post-implementation periods (Adinyira, Oteng-seifah, & Adjei-kumi, 2007; Alberti, 1996; Bebbington, 2009; Böhringer & Jochem, 2007; Shen, Jorge Ochoa, Shah, & Zhang, 2010). Due to these performance-based methodologies mainly used at building scale neighbourhood sustainability assessment methodologies (NSAMs) have taken its place among the common assessment tools. On the other hand, applications of urban scale SAMs could not spread as much as other methodologies as a result of the long and multi-staged assessment process.

Several studies have been conducted with the emphasis on the role of neighbourhoods in the comprehensive sustainable development process. Besides the common debates on negative impacts of urban sprawl, and rapid suburbanization, weakened ties in community – environment relations, and context-specific development practices became the new focus of these studies, and NSAMs were evaluated as a tool to reinforce the links between society, environment, economy, and politics by defining local obligations and necessities for sustainability through measurable criteria sets (Adinyira et al., 2007; Berardi, 2013; Pope, Annandale, & Morrison-Saunders, 2004; Sharifi & Murayama, 2014). Recently, neighbourhood scale methodologies spread to the world as an effective tool for comprehensive sustainability (Sharifi, 2013). In this study, eight successful examples of NSAMs introduced and comparatively analysed according to according to the context-specific criteria sets.

2 NEIGHBOURHOOD SUSTAINABILITY ASSESSMENT

Although global sustainability goals successfully degraded to the neighbourhood design principles, applications are hardly achieving the long-term targets, mainly as a result of different local characteristics. NSAMs propose a new local methodology for translating these principles to a measurable, context-specific criteria sets. Each of these methodologies involves a set of category, criteria, and indicator. Each criterion has a specific weighting that given in accordance with local priorities (Oktay & Özdede, 2009; Poveda & Lipsett, 2011; Sharifi, 2013). In the last decade, many countries developed a national assessment methodology at the neighbourhood scale. LEED-ND (United States) BREEAM Communities (United Kingdom), DGNB NUD (Germany), Green Star Communities (Australia), QSAS Neighbourhoods (Qatar), Pearl Communities (Abu Dhabi) and Green Mark for Districts (Singapore) provide the best examples by representing different geographies from the earth.

LEED-ND

US Green Building Council (USGBC) developed the first green building assessment methodology in 1998 for new constructions. With LEED-ND assessment tool, USGBC aimed to certify newly developing mixed-use neigbourhoods and single-use infill for promoting sustainable, healthy, affordable and environment-

friendly settlements. Many professionals and entrepreneurs from various sectors included in the development process of the methodology. New Urbanism and Smart Growth as leading urban planning approaches in the US have reflected in the criteria sets along with the basic principles of existing LEED methodologies. The methodology covers 12 prerequisites, 44 criteria under 3 main, 1 additional and 1 bonus categories, which are Smart Location and Linkage (SLL), Neigbourhood Pattern and Design (NPD), Green Infrastructure and Buildings (GIB), Innovation and Design Process (IDP) and Regional Priority Credit (RPC). First, two of the three main categories promote urban design principles of the two leading approaches, such as housing and jobs proximity, compact development or transit facilities (CNU, NRDC, & USGBC, 2011).

BREEAM COMMUNITIES

Building Research Establishment Environmental Assessment Method (BREEAM) Communities has been introduced in 2011 for supporting design processes including decision-making and implementation. Although the methodology is partially adaptable to different contexts and spread to many parts of the world in a few years, United Kingdom territory defined as the main target for applications and criteria developed according to the local context of this territory (BRE Global Limited 2014).

Assessment process defined starting from the master planning, and it only covers new developments and renewal areas/brownfield developments. The methodology includes 41 criteria under 6 categories that Governance (GO), Social and Economic Wellbeing (SE), Resources and Energy (RE), Land use and Ecology (LE), Transport and Movement (TM) and Innovation (Inn) (BRE Global Limited, 2014).

CASBEE UD

CASBEE for Urban Development (CASBEE UD) requested by Urban Renaissance Headquarters and has been developed in 2006 by Japan Sustainable Building Consortium (JSBC) as against to global warming and the heat island effect. There are two approaches in the evaluation process, Environmental Quality in Urban Development (QUD) and Load Reduction in Urban Development (LRUD). QUD consists of 3 categories, QUD1 Natural Environment (microclimates and ecosystems), QUD2 Service functions for the designated area, and QUD3 Contribution to the local community (history, culture, scenery, and revitalization). These 3 categories later separated into 15 criteria and 35 sub-criteria. Similarly, the second approach, LRUD includes 3 main categories, LRUD1 Environmental impact on microclimates, facade, and landscape, LRUD2 Social infrastructure, and LRUD3 Management of the local environment. These categories later separated into 16 criteria and 43 sub-criteria (IBEC, 2007).

DGNB NUD

DGNB New Urban Districts (NUD) introduced by German Sustainable Building Council (DGNB) in 2011 for a comprehensive evaluation of environmental, and economic performance. The methodology developed with an efficient participation of the public and private sectors, academia, and entrepreneurs. The process provides both an assessment and a design tool for new developments primarily in Germany and Scandinavian countries (Anders, 2013; Mansfeldt, Pedersen, Sørensen, & Jensen, 2012). The methodology focuses on quality categories, Environmental Quality (ENV), Economic Quality (ECO), Sociocultural and Functional Quality (SOC), Technical Quality (TEC), and Process Quality (PRO). These categories later separated into 14 sub-categories and 45 criteria. Mix-use development defined as the basic requirement for all projects in the assessment process. Accordingly, the system defines minimum 10%, maximum 90% housing development for the site to be assessed (Anders, 2013).

GREEN STAR COMMUNITIES

Green Star Communities developed by Green Building Council of Australia (GBCA) in collaboration with different sectors and introduced in 2012 as a neighbourhood sustainability assessment methodology to provide a guideline for local administrations in line with the sustainable planning objective. In terms of similar climatic conditions, applications focus on new and infill developments in Australia, New Zealand,

and South Africa (GBCA & AECOM 2012). In the development process, the methodology has evaluated in terms of the national framework and as a rating tool for providing a comprehensive approach. 6 main categories, which include “Governance, Design, Liveability, Economic Prosperity, Environment, and Innovation”, were determined in accordance with the national development strategies, “enhancing livability, economic prosperity, environmental responsibility, design excellence and strong governance”. These categories later separated into 38 criteria. In the certification process, a great importance has given to the commitment to the Green Star Communities’ principles. Accordingly, certified neighbourhoods have to achieve necessary criteria and receive a certificate once in every five years (GBCA & AECOM, 2012).

GSAS/QSAS NEIGHBOURHOODS

GSAS/QSAS Neighbourhoods developed by Global Sustainability Assessment System (GSAS) and Qatar Sustainability Assessment System (QSAS) developed by Gulf Organisation for Research and Development (GULF), for assessing the environmental performance of a project, testing building, and infrastructure system and ensuring project’s commitment to the smart growth and sustainable urban planning principles. The methodology developed along with the master plan and development plans and defined as applicable to both new developments and existing neighbourhoods. The main categories involve “urban connectivity, site, energy, water, material, and indoor environment”. The rating ratio defined from -1 to 3 (GSAS/QSAS Technical Committee & GORD, 2013).

PEARL COMMUNITY RATING SYSTEM (PCRS)

PCRS developed by Estimada in 2010 in the context of The United Arab Emirates along with the Vision 2030, which requires at least minimum level certification for all new developments. The methodology developed for rating development projects through the lifecycle. The main categories were identified as “integrated development process, natural systems, livable communities, precious water, resourceful energy, stewarding materials, and innovating practice”. These main categories were later separated into 64 criteria. The first stage of the assessment process “Pearl Design Rating” developed for increasing the vitality of real estate market. In the second stage, “Pearl Construction Rating” measures the improvement and the achievement of the project. The last stage defined as “Pearl Operational Rating” which can be applicable only the occupancy rate of the area reached to 80%, and two years after the application is completed (UPC & Estimada, 2010).

GREEN MARK FOR DISTRICTS

The NSAM developed by Building and Construction Authority (BCA) of Singapore in 2009 for ensuring and monitoring environmentally sensitive master planning. In parallel with the 2030 vision of the country, the main objective introduced as providing a new platform for participatory planning and future partnerships and leading high performance in sustainability. The main categories involve “energy efficiency, water management, material and waste management, environmental quality and protection, and green building and other green features”. These 5 categories later separated into 24 criteria. The highest importance has given to the environmental quality and protection category and the highest possible score for the area is limited with 185 points (BCA, 2013).

2.1 COMPARATIVE ANALYSIS OF EXISTING METHODOLOGIES

Previous studies reveal that the main target of these methods is to achieve globally accepted sustainability principles at local scales, on the other hand, the achievement depends on the localizing these principles in terms of local context (Berardi, 2013; Nguyen & Altan, 2011; Sharifi & Murayama, 2014). National strategies and geographical features are the main constituents of differences. Hence, their origin could be based on different planning approaches. For instance, CASBEE UD and BREEAM Communities are based on Urban Renaissance in UK and Japan, LEED ND, Green Star Communities and QSAS Neighbourhoods follows Smart Growth and New Urbanism principles in the USA. Accordingly, LEED ND emphasized urban design and physical improvement in the criteria sets, BREEAM Communities, CASBEE

UD and DGNB NUD focused on the social dimensions, such as equality in land use and participation. Australia, Qatar, Singapore and Abu Dhabi gave importance to climate and energy issues in Green Star Communities, QSAS Neighbourhoods, Green Mark for Districts and Pearl Communities as a result of their geographical position (Ozdal Oktay, 2015).

When the categories and criteria of all these methodologies compared in accordance with the overlaps, meaning resemblances, and differences in criteria and indicators, for a clear and integrated criteria set, the provided matrix constitute from 9 main categories and 64 criteria. The main categories include “location and site selection, natural environment protection, land use management and urban design, social integration and participation, sustainable building, sustainable infrastructure, economic integration, governance and innovation” (Ozdal Oktay 2015). Examination of NSAMs in accordance with defined categories and criteria reveals that most of the criteria related to “location and site selection” covered by LEED-ND in parallel with US’ national mitigation strategies on urban sprawl. The largest number of criteria related to natural environment included by the CASBEE UD. 16% of DGNB NUD criteria defined under the land use management and design category. BREAAM Communities and Green Star Communities give great importance to social criteria. While LEED-ND focuses on sustainable building category, CASBEE UD promotes sustainable infrastructure in the assessment process. Along with the role of the central government in Abu Dhabi, Pearl assessment methodology included the highest number of criteria under the governance category. Innovation related criteria were not covered in CASBEE, DGNB, and QSAS. Each NSAM defined the size of the application according to different measures, such as population, the number of buildings or the area of the application site. While CASBEE and Green Mark defined no upper limits, QSAS Neighbourhoods doesn’t require both upper and lower limits for the application (see Table 1) (Ozdal Oktay, 2015).

Prioritization of defined categories and criteria is very important for emphasis of the local needs and the priorities and adaptability of the universal sustainability principles. It also allows for adaptation of existing methodologies into different local conditions, such as BREEAM Communities. In this framework, each category and criterion are assigned a weight according to the predetermined national standards (LEED), calculated impact values (DGNB), and expert opinions and evaluations (CASBEE, BREEAM, DGNB, Green Star, Pearl, and Green Mark). As values can be defined directly by the experts, several prioritization methodologies can be used, especially when the number of the participants is high. Analytic Hierarchy Process (AHP) is one of the most common methodologies by offering simple and effective evaluation process (Bhatt, Bhatt, & Patel, 2010; Rosa, 2013; Saaty, 1980, 2008).

SNAs	LEED ND	BREEAM Communities	CASBEE UD	DGNB NUD	Green Star Communities	GSAS/GSAS Neighborhoods	Pearl Community Rating System	Green Mark for Districts
Origin & Applicability	US - 2007 Primarily to US and Canada International	UK - 2011 Primarily to UK International	Japan - 2006 Specific to Japan and Applicable in some parts of Far East	Germany - 2011 Primarily to Germany and Scandinavian countries International	Australia - 2012 Specific to Australia and New Zealand Applicable in South Africa	Qatar - 2009 Specific to Qatar and Gulf Region	Abu Dhabi - 2010 Specific to Abu Dhabi and The United Arab Emirates	Singapore - 2009 Specific to Singapore and Tropic/Sub-tropic region
Organization & Stakeholders	US Green Building Council (USGBC) Congress for The New Urbanism (CNU) Natural Resources Defence Council (NRDC)	Building Research Establishment (BRE) Related Local Authorities	Japan Sustainable Building Consortium (JSBC) Building Environment and Energy Conservation (IBEC) Urban Renaissance, Industry Academy	German Sustainable Building Council (DGNB) Construction Sector Investors Akademy	Green Building Council Australia (GBCA) (with participation of different sectors)	Gulf Organization for Research & Development (GORD) Central Government	Estidama Central Government	Building & Construction Authority (BCA) Central Government
Field of Application	New development Infill development Urban regeneration	New Development Urban Regeneration	New Development Urban Regeneration	New Development Urban Regeneration	New development Infill development	New development Existing neighborhoods	New development	New development
Fixed Size	Number of buildings and Size of the application area Lower limit - 2 buildings Upper limit - 130 ha	Number of buildings Lower limit: 2 Small: 2-9 Medium: 10-499 Large: Up to 5999 Bespoke: 6000 and above Upper limit: -	Number of buildings Lower limit: 2 Upper limit: -	Size of the application area Lower limit: 2 ha Upper limit: -	Number of buildings Lower limit: 300 Upper limit: 20000	No limits	Number of person Lower limit: 1000 Upper limit: 20000-30000	Size of the application area Lower limit: 20 ha Upper limit: -
Certification Stages	Conditionally Approved Pre-certified Certified	Registration Interim Certificate Final Certificate	Pre-design Design Post-design	Pre-certificate Certificate-infrastructure Urban District	Registration Submission Assessment Certify Re-certify	Request for Proposal Assessment	Design Rating Construction Rating Operational Rating	Pre-assessment Actual Assessment
Certificates	Highest Score: 110 points 40-49 Certified 50-59 Silver 60-79 Golden 80 w izen Platinum	Highest Score: 100 (%) 30-45 Pass 46-55 Good 55-70 Very Good 70-85 Excellent 85 < Outstanding	According to BEE value 0.5 > "C" Poor 0.5-1 "B-" Fairly Poor 1-1.5 "B+" Good 1.5-3 "A" Very Good 3 < "S" Excellent	Highest Score: 100 (%) 35-50 Certified 50-65 Bronze 65-80 Silver 80 < Gold	Highest Score: 100 (%) 10-20 1 Star 20-30 2 Star 30-45 3 Star 45-60 4 Star 60-75 5 Star 75 < 6 Star	Highest Score: 3 points 0-0.5 1 Star 0.5-1 2 Star 1-1.5 3 Star 1.5-2 4 Star 2-2.5 5 Star 2.5-3 6 Star	Highest Score: 150 points 55 pusn ath 1 Pearl 55-75 2 Pearl 75-100 3 Pearl 100-125 4 Pearl 125 < 5 Pearl	Highest Score: 185 points 60-75 GM Certified 75-90 GM Gold 90-100 GM Gold+ 100 < GM Platinum

Table 1 - Comparison of Eight NSAMs (Ozdal Oktay, 2015)

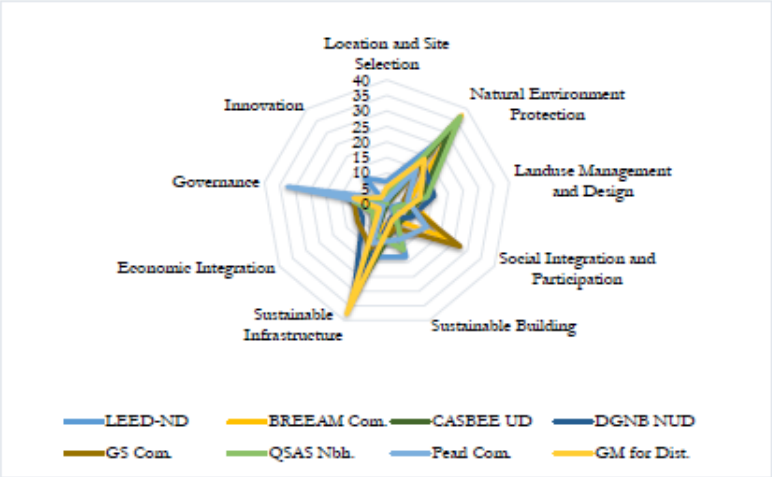

Figure 1 - % Distribution of the criteria in accordance with eight main categories

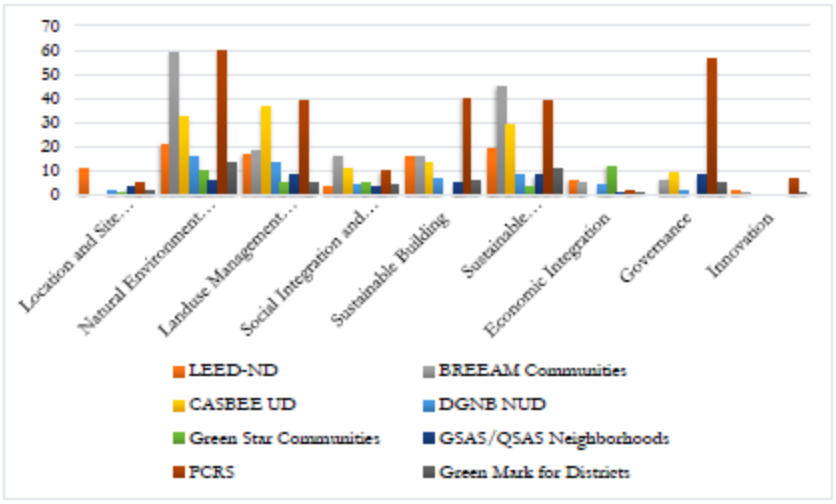

Figure 2 - Distribution of the indicators

3 FRAMEWORK DEVELOPMENT FOR TURKEY

Adapting an existing methodology or weighing categories and related criteria obtained from multiple selected SAMs in accordance with the local priorities of the application area is one of the widely excepted methods in developing a context-specific NSAM (Ozdal Oktay, 2015).

3.1 THE AHP METHODOLOGY

The Analytical Hierarchy Process (AHP) introduced by Thomas Saaty in 1980 for providing a simple, flexible and powerful tool for complex decision making and prioritization (Rosa, 2013; Saaty, 2008). The methodology enables to obtain the optimum results in a transparent and a relatively objective manner by including multiple category and sub-criteria, and reflecting both qualitative and quantitative factors (Saaty, 1980, 2008; VillarinhoRosa & Haddad, 2013). AHP provides an effective measurement for pairwise comparisons based on expert opinions and uses expert opinions to obtain a hierarchy (Saaty, 2008). To be able to structure the hierarchy AHP requires the definition of the problem, a collection of related data, and identification of alternatives, categories, and sub-criteria. (Saaty 1980; Saaty 2008; VillarinhoRosa & Haddad 2013). Once the comparison matrix has been built, the relative importance is calculated for each criterion according to 1 to 9 numerical scale (see Table 2), then the results are normalized by making the sum of the values on each column equal to 1, and averaging the values on each row (Saaty 1980).

Numerical Scale	Interpretation
1	Equally important
3	Slightly more important
5	More important
7	Strongly more important
9	Absolutely more important
2,4,6, and 8 are intermediate values	

Table 2 - Numerical scale for the relative importance

To combine individual evaluations in a group, final values are aggregated by calculation of the geometric mean. The result gives the global score of each category and criteria (Saaty 1980). The AHP incorporates the calculation of the Consistency Index (CI) and Consistency Ratio (CR) for calculation of the possible inconsistencies in the expert evaluations. CR value is obtained from the CI/RI equation. RI represents the Random Index when comparison values for each category and criterion are completely random. Accordingly, if CR value is smaller than 0.1, the results are considered as consistent and a reliable result can be expected from the AHP (Saaty 1980; Saaty 2008; Rosa 2013; Bhatt et al. 2010).

3.2 LOCALIZATION OF THE EXISTING NSA CATEGORIES THROUGH AHP

The government of Turkey committed to use Agenda 21 and Millennium Development Goals as a guideline for its national sustainable development process. In the 2014 development report, the biggest achievement was defined as the elimination of extreme poverty and improvement in the community health. On the other hand, improvements are still not enough for reducing the gender inequality, especially in education, and achieving the comprehensive sustainability. According to the national statistics, the inequality ratios are increasing each year. Since 1996, 7th Development Plan, sustainable development is the part of national strategies. However, the scope is extended in 2014 with the 10th Development Plan. In this context, for the first time sustainability was discussed separately in “liveable spaces and sustainable environment” chapter. Although there are several LEED and BREEAM certificated luxury housing projects in Turkey, there is no application at the neighbourhood scale. Additionally, since 2007 three national building SAM has been developed by Environment Friendly Green Building Association, Mimar Sinan Fine Arts University and Turkish Standards Institution. Nevertheless, none of these methodologies has been applied yet (Ozdal Oktay, 2015).

In order to establish a local, neighbourhood scale framework for Turkey, categories of eight successful NSAMs combined in a matrix, and afterward AHP principles tested on each of them. To be able to build the hierarchy the goal defined as Sustainable Neighbourhood Development and pairwise comparison matrices generated from the 9 categories obtained. In the data collection stage, questionnaire based on the AHP was sent to 23 institutions. Particular attention was paid to select participants from different regions of Turkey. 40 expert opinions were received from government institutions, the private sector, academia, and NGOs. Maximum CR value calculated as 0,0012 which is smaller than 0,1. Therefore, the results accepted as consistent and reliable. Pairwise comparisons applied to categories separately. The maximum normalized score calculated as 1,00, and this score received by two categories involving “location and site selection and natural environment protection”.

Goal: Sustainable neighbourhood Development

Categories	Global Weights
Location and Site Selection	1,00
Natural Environment Protection	1,00
Land use Management and Design	0,69
Sustainable Infrastructure	0,69
Social Integration and Participation	0,65
Governance	0,50
Sustainable Building	0,50
Economic Integration	0,40
Innovation	0,24

Table 3 – Given Global Weights of the Existing Categories

As a result of the AHP questionnaire, the three sectors of four has given the highest priority to the “natural environment and protection” category. The private sector weighed the “location and site selection”

category at the highest level. On the contrary of other three sectors, the academia has evaluated land use management and design category at the 7th row. “Social integration and participation” weighed differently by each sector. In relation to the national priorities on gender equality especially in education, the criteria under this category should be enhanced by defining prerequisites. According to the national agenda, besides the inequalities, energy production, greenhouse gasses emissions, and the earthquake risk at the centre of the current development strategies. Therefore, related criteria under “land use and design, and economic integration” should be defined as prerequisites. This approach will also help to build a framework that promotes local needs and national priorities (Ozdal Oktay, 2015).

Figure 3 - Distribution of the indicators

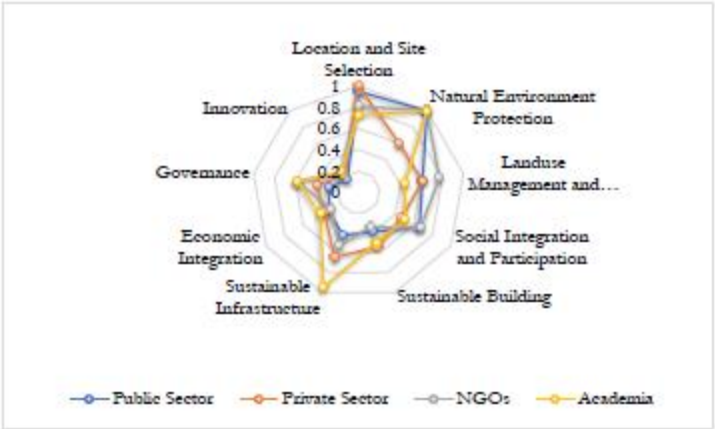

Figure 4 – Sectoral Distribution of the Global Weights

4 CONCLUSION

The prioritization of the categories of eight existing NSAMs will provide a simple framework for structuring a local methodology in combination with the national obligations and local priorities. This suggested methodology is a part of the larger study that involves not only categories but only related sub-criteria. The matrix obtained from the comparative analysis of selected NSAMs can be extended diversified as well as the number of the participants. On the other hand, it is important to keep the framework solid and in relation to the projected scale. Also, AHP provides an effective and easily applicable tool for complex issues and enables to a great number of participants.

Based on the results of this study common principles of neighbourhood sustainability can be easily localized in consideration with different local aspects and national context, and by applying effective prioritization tools.

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ID 1686 | WHICH STANDARDS FOR PUBLIC OPEN SPACE? A NEW CONCEPTION FOR THE 21ST CENTURY CITY

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1 INTRODUCTION

What all historical centres have in common is that they are built along streets, and streets make up most of their public space. Streets make up between 25 and 35% of the land area of these urban centres. It is not too difficult to see the impact of modern ideas of city planning on the urban fabric. Watch whatever city on google maps and shift outwards to almost any new development begun in the latter half of the 20th century. All these areas are characterized by having fewer streets; greater distances between intersections; mid to low building coverage; either high or low rise buildings and density; but always extensive open spaces, mostly green areas.

Cities are made of buildings and the spaces between them, both private and public (Marshall, 2004). Planners and policy makers have invested more in the design and regulation of the built up areas, standards mandating parks and gardens being a notable though limited exception to the rule. The recent critique of contemporary urbanism, has stressed the need of interconnecting again the two separate halves.

In this paper we deal with the problem of what should we demand from public open space (POS) in the cities of the 21st century. In particular, we address the question of the balance between streets, public parks and gardens. Eventually, we ask the question of how much POS is needed and what are the best ways to supply it? Until fairly recently, “orthodox” planning culture would have answered unanimously in favour of more parks and gardens, a trait severely criticized by Jacobs in the following quote:

In orthodox city planning, neighborhood open spaces are venerated in an amazingly uncritical fashion, much as savages venerate magical fetishes… Walk with a planner through a dispirited neighborhood and though it be already scabby with deserted parks and tired landscaping festooned with old kleenex, he will envision a future of More Open Space (Jacobs, 1961, p. 96) .

Why this? And why has planning given up on streets as social spaces and relegated them to movement and access functions only?

In order to answer these questions, we first address the notion of open space and in particular of public open space (POS), sketching rapidly the intertwined elaboration of measures, forms, and needs. Dealing in particular with the UK, Italian and other European cases, we show that standards, far from being a plain policy tool, result from a complex web of policy assumptions.

Secondly, we propose an analytical framework to understand how standards rely, in different countries either on political justifications or technical measures. In fact, they are a non-neutral policy tool, often

justified by social, ecological and health reasons as well as technical knowledge. Any change of standards is in fact related to corresponding changes of a multi-layered policy and knowledge structure.

Thirdly, we dissect the consequences of POS standards, showing how they contribute to the creation of non-urban development and make it next to impossible to build dense, lively urban places. Further, we address the dilemma arising from the still ill-considered contrast between space and density, and between urban and metropolitan form. We are concerned in particular with the impact of POS standards on the possibility to achieve functioning urban neighbourhoods and projects.

In the conclusions, we suggest that time has come to allow our standards of POS to reflect the recent evolution of street standards recognizing them as an essential part of the public space. This move will reduce the need for public land in new development, while providing for a diversity of allocations and density as well as dynamic change. Even more important, it will require and incentivise the design of streets as real social space, adapting them to new urban and metropolitan contexts.

2 THE EVOLUTION OF PUBLIC OPEN SPACE STANDARDS

Urban streets and green areas are old love and hate affairs of cities, the story of modern cities being one of eradicating and controlling the wild life of streets (Winter, 2013) and setting aside vegetated areas as parks.

Historians are trying to reconstruct the complex origins of guidelines, unravelling the fascinating social and conflictual construction of the plainest technical rules. It is worth noting that green areas were initially meant as amenities or functional spaces, while environmental reserves and complex forms like the suburban green belt developed in parallel. An increased awareness of the benefits of parks arose from the opening of the private gardens of enlightened rulers or aristocrats: the first public park was established in Munich in 1792 (Brantz and Dümpelmann eds., 2011), and was followed by frequent commissions in other cities.

Since the beginning of the park movement in the 19th century, the provision of parks and playgrounds was seen as a clean, healthy and righteous alternative social space to city streets (Schmidt, 2008). One should not underestimate the circulation of these models; for instance, Olmsted and Eliot started the Boston Park system (the ‘Emerald Necklace’) during the late 19th century. It is noteworthy to remember, however, that Olmsted designed parks and parkways, as well as urban and suburban neighbourhoods, at the same time.

However, the two traditions of thought related to streets and parks have often crossed paths, and have been reframed, igniting new waves of policies and propelling the transfer of models (the “city beautiful” and the “garden city” being just two examples of the international circulation of models). The notion of ‘open space’ is in fact the offspring of this couple, whose ties seemed quite apparent until not long ago. The notion of the importance of open space likely dates back to the ‘Select committee on public trails in London’ (Turner, 1992) that arose in 1833 with a concern for “the exercise and amusement of the middle and humbler classes.”

In the modern planning movement, beginning with the garden city, and increasingly throughout the 20th century the street was considered a physical, social, and moral danger (Hall, 2014; Miller, 1990). In a very real sense, after the mass entry of motorized vehicles into cities in the 1920s, streets definitely became more dangerous, particularly for children. Howard, Frank Lloyd Wright, Le Corbusier and many others attempted to reconcile man, nature, and machine, either disguising development as nature or surrounding it by nature. The latter dissolved the city in a bucolic park occupying only 15 percent of the land (Fishman, 1991, pp. 163– 263), strongly advocating the abolition of urban streets, and the complete separation of pedestrian and vehicular movement.

The English and Italian cases offer some interesting parallels, having been reconstructed by historians, which might resonate with other national experiences. The first, interestingly designs a four step progress which somehow anticipates a general trend from quantitative to qualitative approaches (Maruani and Amit-Cohen, 2007). In particular, the London Plans (1929, 1943-44 and mostly that of 1976) have been landmark moments of change:

- An initial standard was proposed by Unwin building upon the patronizing attitude toward the lower class, which were supposed to adopt and benefit from the same healthy lifestyle of the nobility[1];
- During WW2, the Abercrombie plan fostered a more systematic approach introducing the notion of the network of open space, a reformulation of the green belt; standards were reduced[2], yet it introduced a concern for the unequal distribution of POS in different areas;
- Later, social scientists were involved in introducing a richer view of the qualitative dimensions of accessibility, appropriation and feelings though with scant practical effect (Turner, 2012; Burton and Veal, 1971).
- Finally, a typology of green areas replaced the POS standard since the mid-seventies, each one corresponding to a catchment area[3].

A negotiation between planning authorities and applicants will define the precise amount, location, type and design of green areas. However, the share depends on the number of dwellings or the extent of site (300 dwellings or 15 hectares being usually the threshold). The outcome will depend also on the specific characteristics of the site and its context. In contemporary development projects, a comparatively higher density of people will become rapidly incompatible with the standard, although it is often recommended by policy guidelines.

In the Italian case, the fascist government introduced a modern planning law in 1942, and standards were introduced after WW2. Similarly to the French case, the state was bound to provide for open space and public buildings, but no standard was introduced. Only in 1967, a national law mandated each local plan to ensure that a certain amount of land was made available for public use. The original concerns derive from an unusual actor: it laid in the social concerns and political demands promoted by the early women movement in the 1950s (Renzoni, 2014).

Standards were thus conceived as direct obligations of municipalities to set land aside for public use, being the minimum ratio between the space allocated to facilities of public and social interest, and the sum of zoned uses (residential, production, etc.). They were meant to provide for green areas and for other public services, notably schools, parking lots and social services[4].

The norm entitles each perspective inhabitant to a minimum of 9 sq.m. of green areas, and as much for all the rest (18 sq.m. per capita in total), that the municipal plan must provide. In theory, that land should be in the same planning zone, and should be acquired by the city in the immediate period following the approval of the plan, which recently has been limited to five years.

A similar standard has been later introduced in Spain too (Càceres 2003). However the law does not bound the state to a fixed standard, as in France (Aja 1997), though the local plans can introduce quantitative prescriptions. The government aims at providing 10 sq.m. of gardens and parks per inhabitant., sporting facilities or forests being included in a second target of 25 sq.m. per capita.

In a slightly different way, the German city of Hamburg determines the provision of green areas and parks as a ratio which is derived from global directives, landscape programmes, or local assessments. Eventually, requirements per capita come down to 6 sq.m. of green areas in close proximity to dwellings (up to 500 m. walking distance), plus 7 sq.m. of principal parkland (13 sq.m. in total).

All of these design guidelines, through the various subsequent reformulations, seem inadequate to cover increasingly varied development models. In fact, they roughly converge in quantitative terms only in the case of medium density of between 100-150 inhabitants/hectare. Applying the two models, either preserving 10-15% of green areas or calculating 10-15 sq.m. per capita, we get more or less the same results (Table 1) in cities with a density of about 140-150 inhabitant/ha (the case of Manhattan). For lower

[1] As early as 1925, the National Playing Field Association , delving upon contemporary literature on US cities (Turner, 1992). Later in 1929, Raymond Unwin reused it for the Greater London Planning Committee, which eventually implied an earlier formulation of the Green Belt. The resulting standard postulates 7 acres of open space for 1000 people (28 sq.m. per capita), mostly being private, and ¼ POS (7 sq.m.) (Turner, 1992).

[2] Approximately, 16 sq.m. per capita (4 acres of open space per 1000 population).

[3] A regional park of 400 ha is thus suggested for an area of a radius of 8 km (the size of metropolis); a district park of 60 ha for an area of a radius of 3.2 km of (the size of a city); and so on.

[4] In particular, the minimum standard of public space included 9 sq.m./p of gardens and parks, 2.5 of parking lots, 4.5 for schools and 2 for general equipment.

density (cities like Hamburg or London, for instance) or higher density (Paris or Hong Kong) standards tend to diverge and produce incompatible results.

Density inhab./ ha	Standards 13% of Land Outcome in sq.m./per capita*	9 sq.m. per capita Outcome in % POS of total.
25	52	2
50	26	5
100	13	9
150	9	14
200	7	18
250	5	23

Table 1: Density and standards

Density is thus the crucial cleavage in applying POS standards. In recent years, despite the growing awareness of the importance of city streets to the liveability of urban environments, the research on public health and urban planning still tends to highlight the importance of public parks and gardens for health and well-being (Barton, 2009; Fan et al., 2011; Serag El Din et al., 2013). Thus there is still a conflict between those who advocate for more green open space, and those that advocate for more lively urban public space (Hebbert, 2008). Even more so, the issue of urban POS per capita remains controversial either from a normative or a technical approach. An often quoted WHO standard suggest a minimum of 9 sq.m. of green open space per capita. Developed countries tend to adopt a much higher standard of 20 sq.m. per capita. Of late, environmental experts fostering the balance between carbon dioxide with oxygen production suggested raising the standard to 40 sq.m. of urban green space in high quality and 140 sq.m. suburban forest area per capita or about 50% of a neighbourhoods surface area, but this includes both public and private areas (Szulczewska et al., 2014).

3 PUBLIC OPEN SPACE IN CODES AND GUIDELINES

In POS, public means that all these spaces can be used for individual and collective purposes by respecting a set of codes, which are both cultural and regulatory. Codes however are publicly debated and publicly enforced rules. Often, such complex codes are a better guaranty of open and free use than the mere condition of being a public property. The worldwide spread of quantitative standards has been justified for their clarity as a measuring tools and their easiness of implementation (Gold, 1973; Hill and Alterman, 1977).

A national system of planning regulates POS according to different dimensions, namely a normative, technical and regulatory dimension. Two ideal types are shown in Table 1. The first ideal type conceives POS as spatial objects; whose ideal distribution depends on a catchment area defined by pedestrian mobility; and practically negotiated with developers. The second ideal type conceives POS as legal attributes; whose size depends on the number of present or future users, with only secondary attention to spatial positioning; and is enforced by a central agency in control of local authorities. Even if many combinations are possible, the British and Italian planning systems can epitomise the two types (Table 2).

	Type A	Type B
Normative	Performative: The dimensions and quality of working POS units (parks, gardens, small open space)	Legal: Individual needs or a collective right to POS
Technical	Scalar: A typology of POS units made to fit the geographical scale	Linear: A quantitative requirement per capita, sometimes articulated in functional subsets
Regulatory	Discretionary: The control is meant to regulate markets, and directed towards private developers	Mandatory: The control is meant to regulate government, and directed towards lower tiers of governments

Table 2: POS in Planning systems

The normative level designates POS and prescribes how to recognise and name them. The English case interestingly classifies different objects, i.e. parks or streets, according to specific sets of qualities, extension being just the first; this is an apparent culture led activities, where different cultures of planning or sensibilities are likely to emerge across time or countries; not surprisingly, cultural attitudes towards planned objects are subject to revisions, and change has in effect occurred several times. For instance, the London Plan classifies parks according to width and geographical scale (Regional, Metropolitan, district or local); and green area according to size and form (Small Open Spaces, Pocket Parks, Linear Open Spaces). In the Italian system, on the contrary, no previous definition of POS is provided, the discussion is being left to evolve according to changing sensibility (particularly apparent at a local scale).

Eventually, normative assumptions lead to technical statements. These are typical planning tools linking land to people through either binding or indicative relations. However, planners deal with POS in many different ways, the main difference being whether their technical estimation is based upon the aggregate appraisal of urban space (a share of total surface); or the requirements (or rights) of individuals. Planning relates these objects to the actual or future population, indicating a ratio according to either quantitative or qualitative threshold; these normative statements vary enormously, depending in part on asserted policies, in part on discretionary arrangements between actors.

Finally, as far as regulation is concerned, planning law and codes can make stronger or weaker obligations to which either public or private actors have to comply. These obligations depend on the style of regulation, the administrative language and multilevel negotiations among layers of government. These technical approaches reflect divergent political concerns and policy origins. It is not difficult to impute to the English case a concern with the control of land, the dysfunctionality of the markets, and thus economic values and developers' options. On the contrary, it is possible in the Italian case to retrieve an assessment of human needs, resulting from a political claim for a basic right, and the aim of controlling the population at the same time, and reducing local governments' freedom of decision in the second case.

4 WHAT THE STANDARDS DO TO THE CITY?

So if access to public and open space is important, the question remains: how much open space? The response, historically, has been to establish minimum standards of POS per person, in a similar way to the space standards imposed on residential buildings in order to insure reasonable living standards. However, these standards vary widely from place to place. The influential World Health Organization (WHO) recommends a minimum of 9 sq.m. of green space per capita, and that all residents live within a 15 minute walk to a green space (UN-Habitat, 2015a). This space allocation has to be added up to the allocation for public services (such as schools, kindergartens etc.) and the necessary streets to allow for access to buildings. The application of this standard, puts practical limits on the gross density of urban development, if it is applied equally across all neighborhoods of the city (Figure 1). This is because as the density increases, the percent required for public land use exceeds 60%, which means that net density rises, limiting the building typology to high-rise building (Alexander, 1993).

There is much research on the importance of urban density for city economic and social liveability (De Nadai et al., 2016; J. M. Jacobs, 1961), transportation sustainability (Ewing & Cervero, 2010; Kenworthy & Newman, 1999), and not least the overall expansion of cities over arable and useful land (Angel, Parent, Civco, & Blei, 2011). One can see from the graph in figure 1, that different open space standards have significant impact on the feasibility of urban density, and on the urban fabric itself. With a 9 sq.m. per person standard, it is not feasible to build at a density higher than about 105 dwelling units to the hectare. While a standard of 3 sq.m. to the hectare will allow a density reaching 200 units to the hectare.

The consequences of high POS standards are that they limit our ability to reach high urban densities with low and mid-rise buildings and force us to build either high rise buildings or at a mid-low density. Both of these typologies make it difficult to create walkable, vibrant cities. Public transport is also less viable, and urban sprawl and automobile dependence are increased. Low densities also make it harder to create mixed use areas. Therefore, existing POS standards contribute to sprawl and diminish the sustainability of urban areas.

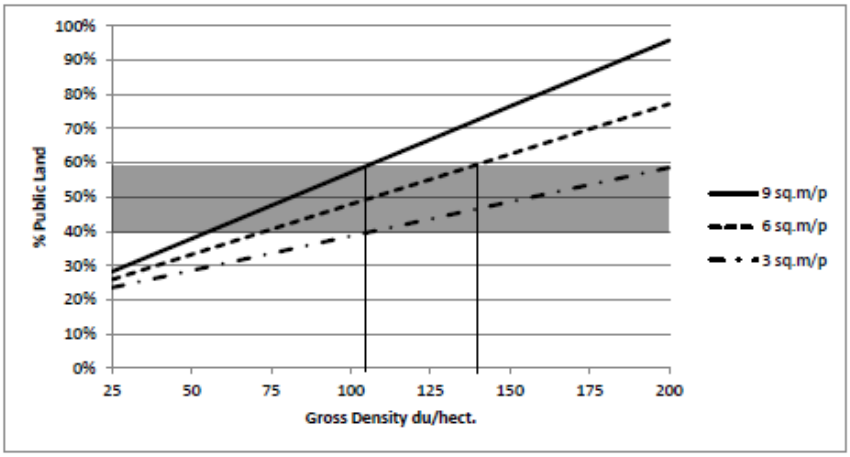

Figure 1– The relationship between Gross density and public land using different sq.m./p standards

The calculations assume: a neighbourhood development of 10,000 units and a mean household size of 3.1 persons/hh. The street area is progressively calculated from 20% at the lowest density to 30% at the highest.

4.1 SOME OTHER PROBLEMS WITH PUBLIC OPEN SPACES

Moreover, in research comparing POS quality and use in neighbourhoods in Israel (Feierstein & Rofe, 2010; Rofè, Zarchin, & Feierstein, 2012), we found that in lower density neighbourhoods, there was over provision of public space, because the regulations for the accessibility to POS, and their minimum size, were governing the size and location of POS. Thus, neighbourhoods already enjoying a large allocation of private open space, were also enjoying POS allocation that reached between 15-30 sq.m. per person. Furthermore, our study showed that the green POS in the neighbourhoods were used much less than civic POS, located close to commercial and service areas. POS were mostly used by adults accompanying toddlers to playgrounds, and even children stop using them when they begin to go out into the neighbourhood on their own. Finally, in a survey of neighbourhood residents we found that spending time in the neighbourhood park is the activity less enjoyed outdoors, relative to walking along the neighbourhood's streets, which was the second preferred activity after sitting in one's own private open space.

5 A NEW FLEXIBLE STANDARD INCLUDING STREETS

It seems that the standards cause an inflation of POS. A comparison between areas of traditional urbanism (Nice), modern urban planning (Ashdod in Israel), New Urbanism (Poundbury, UK) and contemporary informal housing area (Santo Amaro in Recife, Brazil) has shown that while traditional and informal urbanism have a rate of 4-5 sq.m. of public space per person, modern urbanism has four times as much at about 19 sq.m./person, and the new-urban development an incredible 65 sq.m/person (Schocken & Ludermir Bernardino, n.d.). This is similar to findings with regard to distance between major streets (Porta, Romice, Maxwell, Russell, & Baird, 2014). In both cases these are the results of modern planning standards that are still mandated. We seem to be at a conundrum. POS are important for health and well-being, as well as the environmental functioning of the city, but it seems that when they are mandated, they are actually over-supplied, little used, and become a burden on the community's resources.

The reason for the conundrum, is that we have become oblivious to the major resource of POS in the city. Even in modern planned cities, streets constitute the largest extent of public space. They are necessary, because they provide access to private property. We know that they are the place where most encounters occur in public space. But in order for encounters to happen, there has to be co-presence and awareness of each other in public space. Gehl and Gemzoe calculated that the average density in public space in Copenhagen remained roughly 12 sq.m./person (Gehl & Gemzoe, 2003), thus as space for pedestrian activity became available, more people came to use it. As we saw historic and informal cities have a POS to population ratio between 3-6 sq.m. per person (at the urban quarter level). Thus, in order to create lively

streets it seems that between a quarter and half of the population living in its vicinity needs to be outside in it at any one time, which seems a rather high number. In reality, we know also that most pedestrian movement occurs on major streets (Hillier, Penn, Hanson, Grajewski, & Xu, 1993; Jiang, 2009; Lerman, Rofè, & Omer, 2014), and that these main streets are also responsible for the majority of social and economical life of the city (Carmona, 2014). Boulevards and main streets function better as human spaces when more than 50%, and often about 70% of their section is felt to be a "pedestrian realm" – an area where pedestrians feel unthreatened by cars, even if cars are allowed within it (Allan B. Jacobs, Macdonald, & Rofe, 2003; Rofe, Yerushalmi, Margalith, & Windsor, 2015). This means that a large investment in streets is in order to make them functioning public space. But this investment will not be possible if that space is not considered as part of the needed provision of POS in an urban area, thus allowing a corresponding reduction in the amount of parks and gardens for which land needs to be allocated.

What would happen if we begin to actually take seriously the fact that streets are an important part of public space, and begin to count them as part of the space required by the POS standard? Provided, of course, that they are designed in such a way as to allow between 60-70% of street space to be pedestrian oriented and therefore potentially public space. Indeed, in the UN-Habitat, Global Public Space Toolkit (2015b), the first three principles are:

1. Adequate space for streets and an efficient street network (30% of land area)
2. High density (a minimum of 15,000 p/sq.km. which translates to 150 p/hect. or roughly 50 du/hect.)
3. Mixed land use (40% of the floor space for economic uses)

Thus, it is possible that 40-60% of the area of all streets will be designed and managed as a pedestrian realm. While in narrow and local streets the pedestrian realm occurs almost automatically, wide and major streets have to be designed as boulevards and green corridors (Bosselmann, Macdonald, & Kronemeyer, 1999; Mehaffy, Porta, Rofe, & Salingaros, 2010). This will result in natural traffic calming and therefore a reduction in number and severity of accidents, and the ability to meet the POS standards, without losing the possibility to achieve high density.

As can be seen in figure 2 below, taking into account the streets as part of the public space needed to satisfy the standard allows us to achieve even 15 sq.m per person while still arriving at a density of about 100 du/hect. (or about 300 people/hect.). At a standard of 3 sq.m. per person we can achieve a density of 200 du/hect. While still maintaining public land beneath 40% of the area of the development. Between these two extremes we can reach a diversity of allocations, according to the type of development required, and the urban context. Peripheral areas may have a larger ratio of public space per inhabitant, while central and dense areas may be planned to a lower space standard (but probably higher quality and complexity). Obviously, when applying the standard, one will have to make sure that the streets are indeed designed in such a way as to enable them to become a social space, and that will give the city, and developers an incentive to do so, because it will enable them to increase density, and to allocate less land to public uses, and more to private, income producing land.

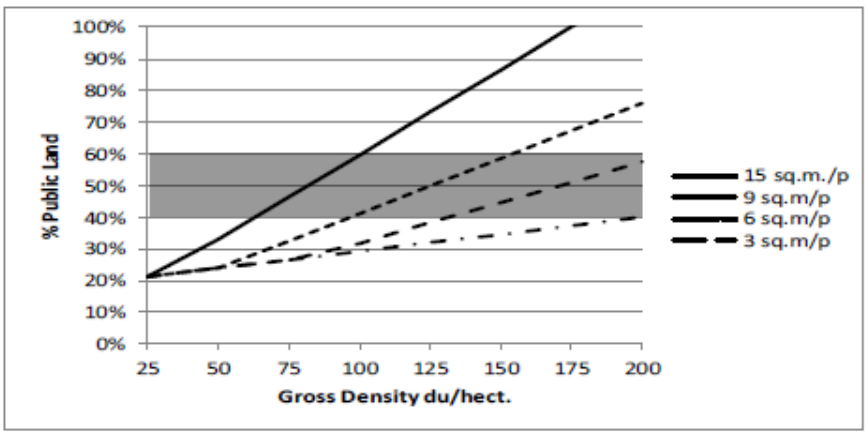

Figure 2– The relationship between Gross density and public land proposed standards taking into account streets as part of POS.

Indeed, as cities grow and consolidate they reduce the ratio of population to public land available, and transform the land from public open space to mostly streets. Thus the standard could be seen as capturing both the spatial change in cities from centre to periphery, as well as the temporal dimension of growth, densification and consolidation. An area that starts with 15 sq.m. per person or higher, as it grows, adds height to the buildings, and people to homes, it usually will not increase in the quantity of streets and public spaces it has – therefore the ratio of POS per person will become lower, and the density higher. Thus, this variable standard will allow once again cities to grow naturally, without attempting to add public space as they densify. Thus this system also merges the two regulations systems discussed above (Table 2). It allows for a variability in POS allocation per inhabitant, according to the context and cultural preferences, while maintaining the viability of the urban system as a whole by controlling the overall proportion allotted to public space.

6 CONCLUSION

A consensus position since the 19th century is that, of all the unbuilt parts, public open space (POS) is a fundamental component of a city. We remind readers that POS is the sum of two key components of the unbuilt part of a city: first, all kinds of streets and secondly green areas. Though early industrial developments heavily ignored environmental concerns for the sake of profit and control, green areas have been on the front stage of cultural debates due to their social and formal implications.

The need for open space has often been claimed for different reasons. In the modernist approach of the city as a 'living machine', built and unbuilt parts are disconnected: in the unbuilt side, streets were demoted to traffic corridors, in order to support increasing mobility. Car mobility in particular has led to dematerializing streets into the notion of networks, and confined them to the realm of engineering rather than place-making.

Parks have however resisted the reduction to functional machines. Most of the research has concentrated on the profound social and pedagogical implications of green areas. Only recently, parks have been reinvigorated by the international concern with public health, the environment and urban sustainability, and recently urban metabolism.

On the other hand, the metropolitan restructuring of cities leads to a re-conceptualisation of urban tools, like parks and streets. The new geographical scale changes also the appreciation of age old issues, in particular: the lack of natural space; density; and the role of networks in interconnecting both artificial and non-artificial spaces. Recently, green networks have been called upon to play an increasingly important role in fostering a sustainable model of urban development (we deal with the greening at the metropolitan scale in a forthcoming paper). Researchers and advocates call for increased allocations of green spaces in the city, not always distinguishing between the metropolitan scale – where the mean amount of POS per capita is often measured, and the standards based on these means that operate at the level of urban neighbourhood or project.

In parallel, there has been a re-evaluation of the importance of streets to urban public space (Gehl, 1987; Hebbert, 2005; Jacobs, Macdonald, & Rofè, 2003; Murrain, 2002). This has led to substantial changes in policy and guidelines. There are also signs that policy makers' attitudes are changing, as underlined by UN-Habitat director J. Clos in preparation of the recent Habitat III conference.

However, there seems to be still a disconnection between these two streams of thought, seeking to create an urbanism adequate to the challenges of the 21st century. We suggest that the time has come to reconsider streets as an essential part of the public space network that is needed to satisfy the policy standard for POS, and to unify the standards for both streets and public space provision. This move allows moderating the need for public land in new development, while providing for a diversity of allocations and density as well as dynamic change. Even more important, it requires designing streets as real social space, and adapting them to new urban and metropolitan contexts.

Does it mean that POS standards will change? The answer is no unless both the normative and regulative dimensions are taken into account. As shown by a recent body of comparative research, national planning systems are quite different from each other (European Commission, 1997; Newman and Herschel, 2002), reflecting national traditions and legal and political frameworks. Planning cultures are even more diverse,

and they interfere consistently with the normative side of planning (Sanyal, 2005). Structuring issues and circulating ideas (Healey and Upton, 2010) have been constantly part of an ongoing discussion between reformers and policy-makers. All planning systems have addressed the question of how much open space is required in a given situation: but the answer depends as much on the political side as on the technical one.

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ID 1693 | OILANDSCAPES. THE RECONVERSION OF FOSSIL FUELS MESHES AS "GREEN ENERGY BACKBONES" FOR THE TERRITORIAL RESTRUCTURING OF THE THIRD INDUSTRIAL REVOLUTION

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ABSTRACT: Fossil fuels industry has always been carrier of huge spatial transformations: first of all, because the extraction of carbon-fossil resources requires the investment of huge amounts of funds to deploy a widespread infrastructural network, and secondly, because the associated industrialization process deeply contributed in the definition of new urban morphologies and settlements. We could affirm that fossil fuels and industrial revolutions represent two sides of the same coin. Since the end of XVIII century, the two industrial revolutions have been dominated by a fossil fuels' monopoly in terms of energetic production, firstly driven by coal-based activities and later by oil. As already known, hydrocarbon resources are not equally and democratically distributed in the subsoil, and this has created over the centuries some vertical dependences between fossil fuels suppliers and consumers, which completely redefined the geo-political equilibrium among countries. One of the most remarkable effects of this unbalanced distribution of fossil resources in the subsoil had been, especially during the first industrial revolution, the territorial attractiveness of hydrocarbon-rich territories for the settlement of huge heavy industry sites. The consequent high concentration of employment reshaped the territorial hierarchies among population, countryside, urban areas and infrastructures. The aim of the first part of the paper is to investigate about the role that fossil fuels industry played in the definition of territorial hierarchies during the first and the second industrial revolutions. The analysis will be led through a comparative study of some GIS cartographies of two renowned European territories: the "Ruhr region" and the "central Veneto region". In the second part of the paper, we will focus in a more proactive way on the "oil mesh of the North-Eastern Po valley" and wonder about how fossil fuels infrastructures could be "deengineered", albeit maintaining their energy production identity, and imagined as "green infrastructures", so becoming those landscape articulators which can foster the dialogue across territorial, urban and architectural scales thanks to their new socio-ecological role. The "scenario building" (Viganò, 2012 and Sijmons, 2014) will root its beliefs, assumptions and constraints around the vision of the "energetic transition towards the third industrial revolution" which, as advocated by the American economist J. Rifkin (2011), envisages a massive shift towards new renewable and territorially distributed forms of energy production.

1 A COMPARATIVE ANALYSIS OF TWO POLYCENTRIC MODELS: THE RUHR AND THE CENTRAL VENETO REGIONS

1.1 INDUSTRIALIZATION PROCESS

Not by chance one of the most important industrial development processes, tightly dependent on coal mining activities, settled up in Ruhr region. The reasons date back to Carboniferous era, something like 320 million years ago, when the equator passed right by this region. The process of petrification and coal formation of hermetically-sealed and compressed coastal forests in the marshy lowlands required million of years and was concentrated along an East- West area which went from the Ruhr region to Belgium, passing through southern Netherlands, perpendicularly to the river Rhine. At the beginning of the XIX century, the Ruhr region was still an agricultural area, characterized by small, handicrafts and semi-rural towns of about 8'000 inhabitants. Between 1840 and 1860, a revolutionary technical innovation in deep coal mining, which allowed digging up to 600 m deep and catching bituminous coal, kicked off a wide territorial industrialization process which lasted for almost a century (fig.1). The main industrialization trends can be summarized as follows (Reulecke, 1984 and Hötker, 1988):

- the first period (1840-1860) is characterised by the opening of new deep mining sites all over the "Hellweg strip", a sub-region comprised between the rivers Emscher and Ruhr which is crossed by the homonymous medieval trading route. New collieries and iron plants were settled up in rural contexts close to coal mining sites and to the existing small, semi-rural villages along the Hellweg trading route (Duisburg, Essen, Dortmund), contributing to their rapid urban growth;
- the second industrial development era (1860-1890) can be considered as the "golden age" of the productive Ruhr region because the enthralling power of industrialization moved North, towards the river Emscher, and led to the opening of several coal open pits in the middle of almost uninhabited territories (Oberhausen, Gelsenkirchen, Herne);
- only in the 1960s, after the end of the Second World War and the necessity to reconstruct the economy of a devastated country, the "Ruhrgebiet" witnessed another important industrial development era in its Northern part, towards the river Lippe. While coal industry was starting to collapse, the cooperation between petroleum and chemistry boosted the settlement of some huge petrochemical industrial complexes on the banks of the river Lippe. This industrialization stage never reached the envisioned amplitude because of the oil crisis at the beginning of the 1970s.

It is interesting to notice that while the Ruhr region faced the apex and the crisis of an economy based on a concentrated industrialization over a century, Veneto region was not touched by any massive industrial revolution (fig.2). Indeed, according to Roverato (2008) and Bagnasco (1977), a long, soft and dispersed industrialization process, opposite to the rapid industrial concentration occurred on the occasion of the "industrial triangle" (Milan-Turin-Genoa) and based on the consolidation of some SME industrial districts operating around smaller urban centres, began to take root in the region from the end of the XIX century. This phenomenon gave rise to what Bagnasco calls "the third Italy", so as to highlight an alternative territorial development model which differs from the usual dichotomy between the North-Western Italy's industrialization and the backwardness of the South. The richness of the spontaneous and diffuse SME industrial pattern around small urban centres was not perceived by the politics of the time to the point that Veneto, until the 1960s, was considered an agricultural and underdeveloped region, "the South of the North Italy" (Roverato, 2008), so as to enact special laws to boost the economic development of depressed areas.

Only two concentrated industrial episodes around the most important urban centres of the region had been experienced in Veneto, namely:

- Porto Marghera, where refining and petrochemical activities were settled from 1920s taking advantage of the logistic harbour which allowed to accommodate oil tankers coming from Italian colonies in North-Eastern Africa;
- the industrial platform in the South-eastern outskirts of Padua, where an inland port and a highly diversified industrial production settled up.

During the 1950s, these two big industrial poles deeply contributed in the consolidation of that fragile, dispersed and decentralized industrialization thanks to sectorial productive synergies and to the accumulation and sharing of experiences, knowledge and human capital. But it is with the crisis of big

industrial productive sites from the middle of the 1970s that the decentralized industrialization model affirmed itself as the predominant model of the region and became visible to the most through a pervasive cohabitation of industrial landscapes with rural ones.

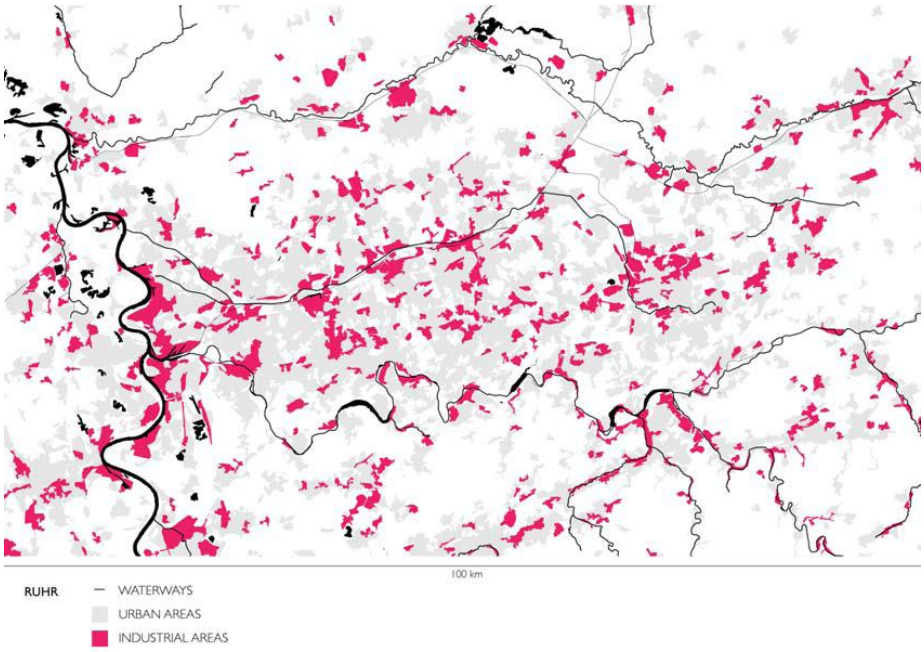

Figure 1 – The industrial pattern of the Ruhr region
(elaborated by the author, source: Corine Land Cover 2012 metadata)

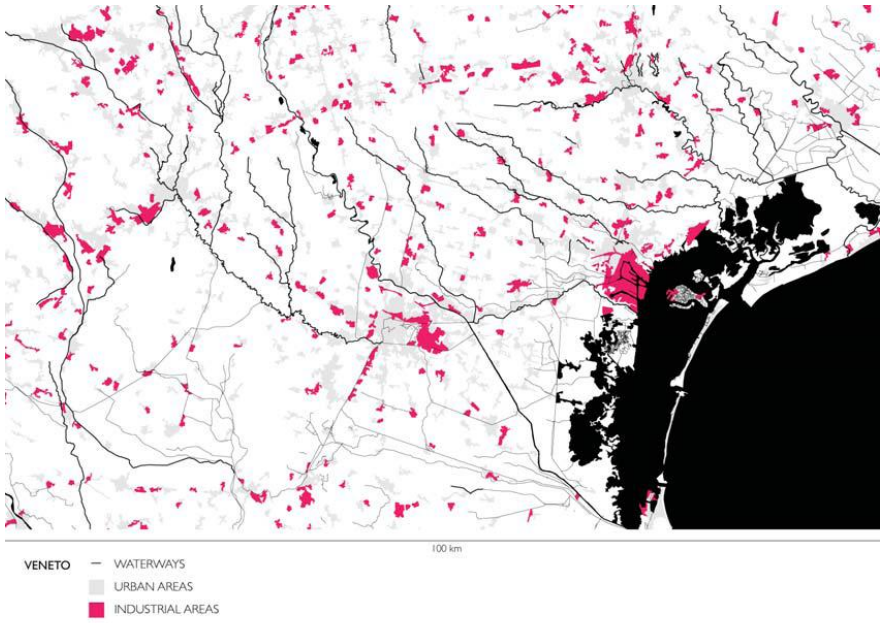

Figure 2 – The industrial pattern of the central Veneto region
(elaborated by the author, source: Corine Land Cover 2012 metadata)

1.2 INDUSTRIALIZATION AND RAILWAY INFRASTRUCTURES

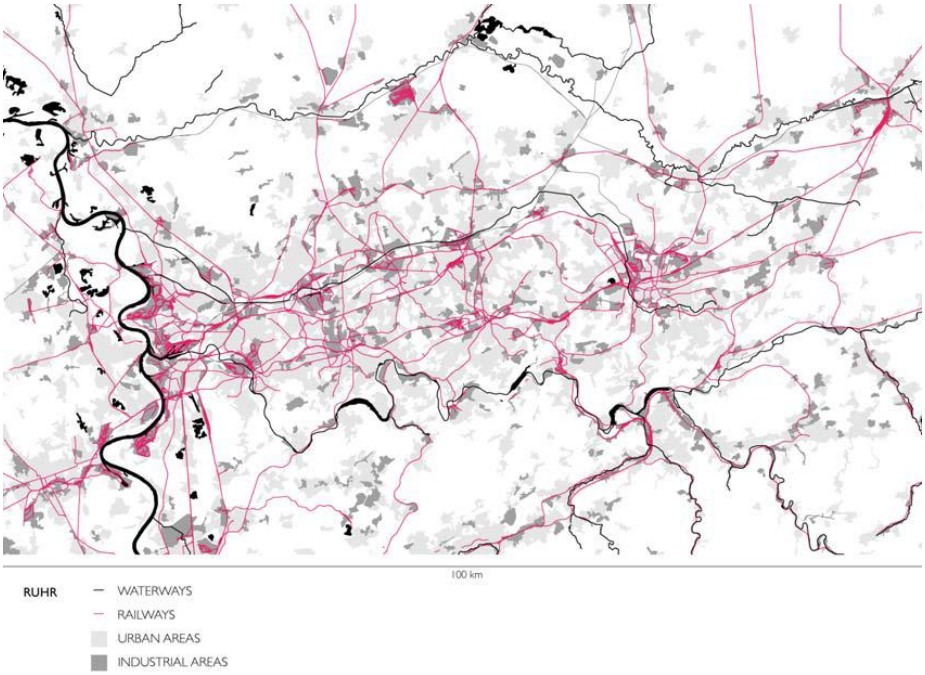

Figure 3 – The railway infrastructures of the Ruhr region
(elaborated by the author, source: DIVA-GIS metadata)

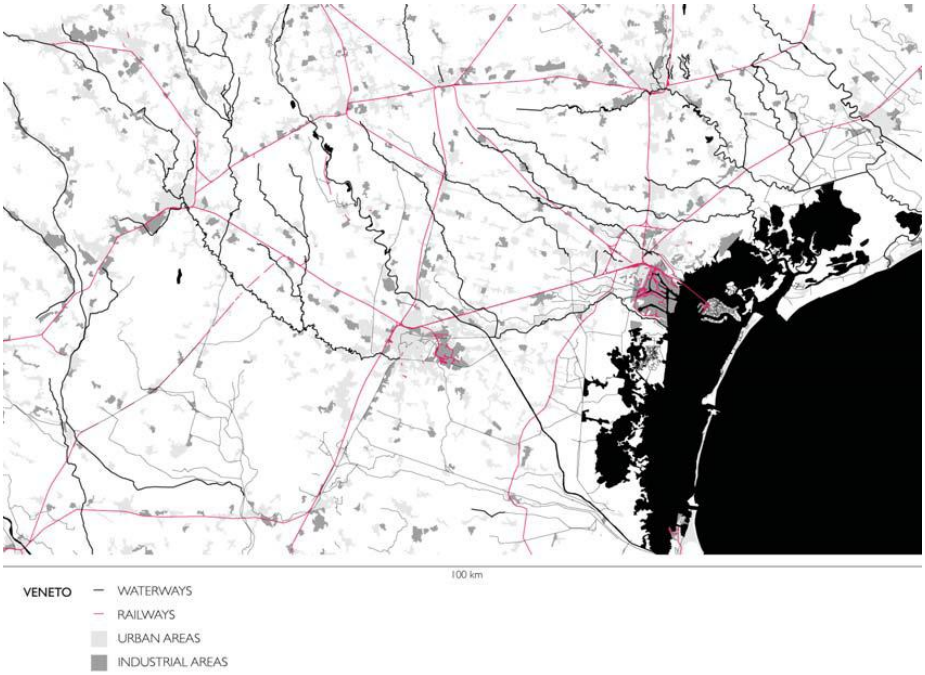

Figure 4 – The railway infrastructures of the central Veneto region
(elaborated by the author, source: DIVA-GIS metadata)

With the lack of a regional railway infrastructure planning, private company owners built a profit-oriented railway network for goods and raw materials transport purposes, so as to connect coal mining sites to heavy industrial plants or to logistic harbours along the river Rhine (Reulecke, 1984). If during the first regional industrialization period railway infrastructures reinforced the role of the existing urban poles along the Hellweg trading route, during the second one a principal East- West oriented railway axis parallel to river Emscher became the principal backbone along which the sparsely inhabited territories settled up their

urban and industrial growth (fig.3). Only at the beginning of the XX century, with the nationalization of the existing railway network, railways began to be used even for passenger transport (Hötker, 1988). This circumstance contributed in the diffusion of the “garden city” model as the principal miners’ dwellings model, so connecting residential areas with working sites, recreational areas and city centres by public transports. It is remarkable how the tardive industrial development along the river Lippe completely lacks of a dense railway network such as the one in the Southern Ruhr region.

If we look at the central Veneto region, the railway infrastructural development had a completely different course. In fact, the railway network in Northern Italy was implemented at the end of the XX century, and Veneto was far to be interested by any massive and concentrated industrialization process. Thus, the railway mesh that crosses the central Veneto region is completely independent from any industrial relationship, but it is rather the result of a general infrastructural planning for passenger accessibility, goods supplying and even military purposes (fig.4).

1.3 INDUSTRIALIZATION AND ROAD INFRASTRUCTURES

The motorway infrastructural network in the Ruhr region started to be developed since the 1920s, with the proposal of creating an East-West 3-lane motorway connecting Duisburg with Dortmund and with the implementation of the Reich Autobahn, parallel to river Emscher (Reulecke, 1984). Nevertheless, only the tardive industrial development occurred during the 1960s along the river Lippe had a direct relationship with the road network. In terms of regional accessibility, the dense Ruhr agglomeration is well served by 3 national East-West motorway axes, but, on the contrary, North-South connections are insufficient (fig.5).

What is outstanding from a first look at central Veneto region is, on one side, the scarcity in national motorway axis and, on the other one, the fine “isotropy” of the secondary road level, based on the Roman agricultural orthogonal grid (fig.6). The widespread capillarity of the local road network allows low dense territories to be used in an extensive way, being very well connected to decentralized production areas. This very peculiar type of road system, together with the decentralization of the industrial production on a vast territory, created the conditions for the settlement of some mixed commercial and industrial “agglutinations” (Savino, 1998) along important local road axis, the so called “strade mercato” (market roads).

Figure 5 – The road infrastructures of the Ruhr region
(elaborated by the author, source: DIVA-GIS metadata)

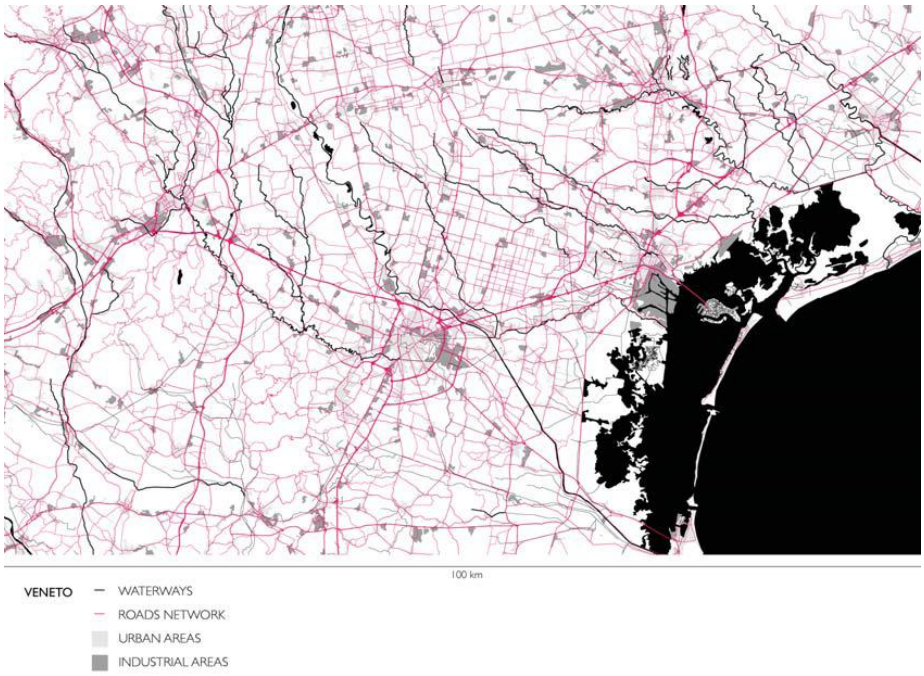

Figure 6 – The road infrastructures of the central Veneto region
(elaborated by the author, source: DIVA-GIS metadata)

1.4 POLYCENTRISM

The comparative analysis of the two case studies under the lens of their polycentric territorial structure reveals how the two models work in a completely different way. The massive industrialization of the Ruhr area led to a significant wave of migration from rural areas. Two main trends characterized urban areas' expansion according to their geographical situation:

- along the Hellweg trading route, the already existing urban centres (Essen, Bochum, Dortmund) had a remarkable radial expansion until industrial boundaries in the outskirts;
- moving North, towards the river Emscher, the lack of former consolidated semi-rural settlements encouraged a linear development of urban areas parallel (Oberhausen) or perpendicular (Gelsenkirchen) to railway infrastructures.

At the beginning of the XX century, the political and territorial fragmentation began to raise the issue about how to manage a regional growth which lacked of a unitary structure and development strategy. The "polycentric" model prevailed over the "metropolitan" one because of the presence of several medium cities presenting similar growth rates, high urban densities and no hierarchical dependences towards only one major urban centre (Reulecke, 1984).

In the following decades up to 1980s, the continuous urban growth of the polycentric urban system made the administrative boundaries no more recognizable. Urban areas merged in a densely builtup area, which enclosed industrial, commercial and administrative clusters together with some fragments of agricultural and natural landscapes (fig.7).

The polycentric territorial development of the central Veneto region is based on completely different assumptions. According to Indovina (1990), at the very beginning of the light and diffuse industrialization process at the end of the XIX century, central Vento was affected by an internal relocation process of local people in the same region thanks to some economic improvements, but no massive migratory phenomenon was registered. This consequent rural settlement model is called "campagna costruita" (built countryside) by Indovina (1990) and is based on the social role of the "family" as the minimal organisational unit, which compensates the lack of public facilities. During the 1970s, in parallel with the crisis of the major productive sites and the affirmation of the industrial decentralization, a process of social substitution in the rural context took place. In fact, the urban middle class started to move towards small rural villages to get closer to the decentralized workplaces and to search for better living conditions which

best corresponded with their imaginary lifestyle. The consistency of population who sought for living in decentralized territories was elevated, so that Indovina (1990) defines this stage as “urbanizzazione diffusa” (diffuse urbanization), a preliminary step towards the “città diffusa” (diffuse city), which is characterized, during the 1990s, by the decentralization of urban, commercial and public facilities.

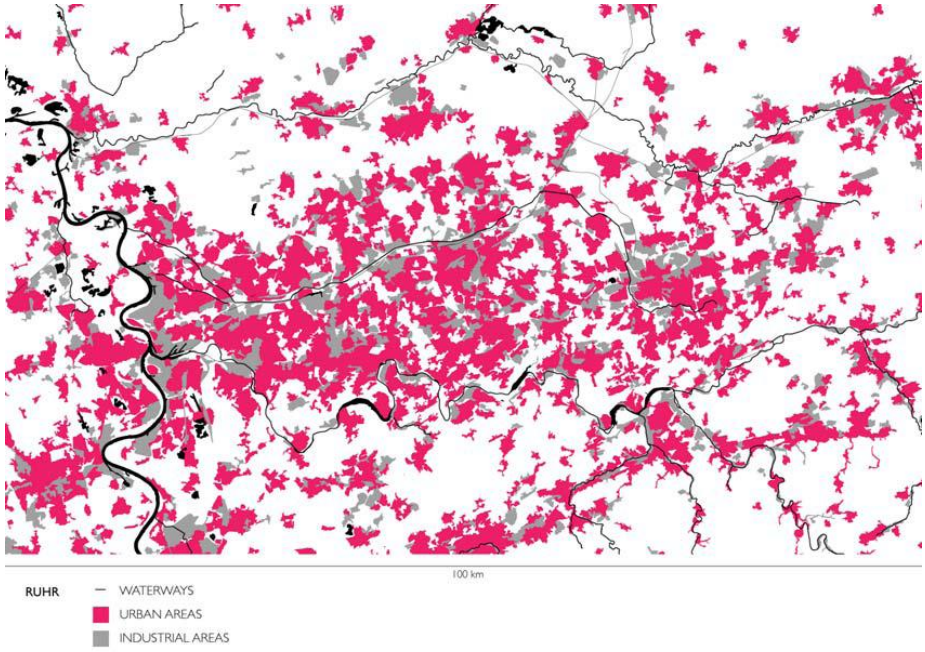

Figure 7 – The polycentric structure of the Ruhr region
(elaborated by the author, according to Corine Land Cover 2012 metadata)

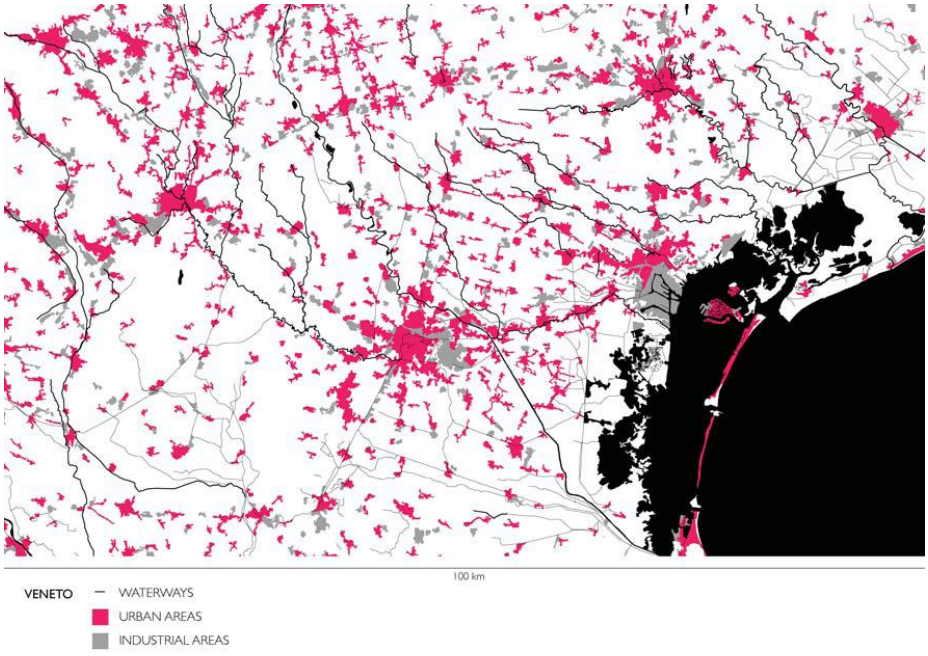

Figure 8 – The polycentric structure of the central Veneto region
(elaborated by the author, according to Corine Land Cover 2012 metadata)

The “città diffusa” looks like a territory constituted by a diffuse polycentric structure of medium and small urban centres immersed in an agricultural continuum where few major cities punctuate the territory, but don’t play the strongly hierarchical role of “metropolitan centres” (fig.8). In other words, spatial interconnections among the distributed urban functions play a key role in the “città diffusa”, because they allow an extensive use of the territory as if it was a “wide mesh” city. In this sense Indovina (1990)

introduces the use of the term “città-territorio” (city-territory) while describing the functioning of the central Veneto polycentrism.

1.5 A WEAK URBANIZATION: THE INSPIRING MODEL OF ANDREA BRANZI FOR THE THIRD INDUSTRIAL REVOLUTION

Between provocation and utopia, since the mid-90s Branzi (2006) prefigures to seek for an ideal urbanization model which loses its tight bond with the historical debate about the correspondence between urban form and function, but which instead lies on the evolving relational flows among society, economy and land uses. Branzi builds its personal “weak urbanization” model around the concept of “uncertainty” which characterizes contemporary dynamics, and substitutes the “rigid certainties” on which classic modernity rooted its philosophical thinking and can be easily exemplified by the dichotomies between city and countryside, industry and nature. According to Branzi (2006) “we have gone from the age of functionalism to the age of functionoids, instruments that do not possess a single function, but as many functions as the operator’s needs”. In this sense, architecture has to lose the figurative code of its “cathedrals of the modernity”, and acts more like a “personal computer”, being adaptive to evolving societal needs, and like “agriculture”, integrating time as a design element. A weak urbanization model should even include agricultural and energetic production as necessary design challenges. It is interesting to notice that if Branzi takes as reference the resilient “favelas” model as an adaptive aggregative process to respond to contemporary liquid society’s needs, some decades before him even Yona Friedman (1978) speculated on the survival architecture of “bidonvillages” as a possible response to industrialization simulacra, focusing on their self-sufficient and synergic organisational model to provide water, food and weather protection to their inhabitants.

In this sense, the non-figurative architecture of a diffuse energy production model should blur the rigid limits between industry and nature. Those “energetic territories” which could produce renewable energies valorising the hidden energetic potential coming from the metropolisation of territories’ process will power the boundless and adaptive “weak urbanization”.

The physical interrelationship of “fossil fuels meshes” becomes a suitable territorial feature to propose their conversion as “energy backbones” for a diffuse energetic production.

The original interdependence of fossil fuels infrastructures turns out to be the main criterion to define the boundaries of our 150x150 km territorial case study in the North-Eastern Po Valley that we are going to analyse in the second part of the paper.

2 THE SCENARIO BUILDING OF THE “ENERGETIC TERRITORIES” OF THE NORTH-EASTERN PO VALLEY

The case study of the North-eastern Po valley is one of the richest in terms of presence of fossil fuels infrastructures in the whole Italian territory. Indeed, the three processing sectors of the fossil fuels industry are present at the same time on the territory, that is to say upstream (extraction), midstream (transport) and downstream (processing) activities. Some of the fossil fuels infrastructures are also interrelated by underground oil pipelines: storage oil tanks in Ravenna industrial harbour fed the power plant in Polesine Camerini (70 km) and the refinery in Porto Marghera is connected via underground pipelines with the one in Mantua (120 km). In addition, some underground gas pipelines connect some depleted gas fields in Emilia-Romagna to the national gas grid.

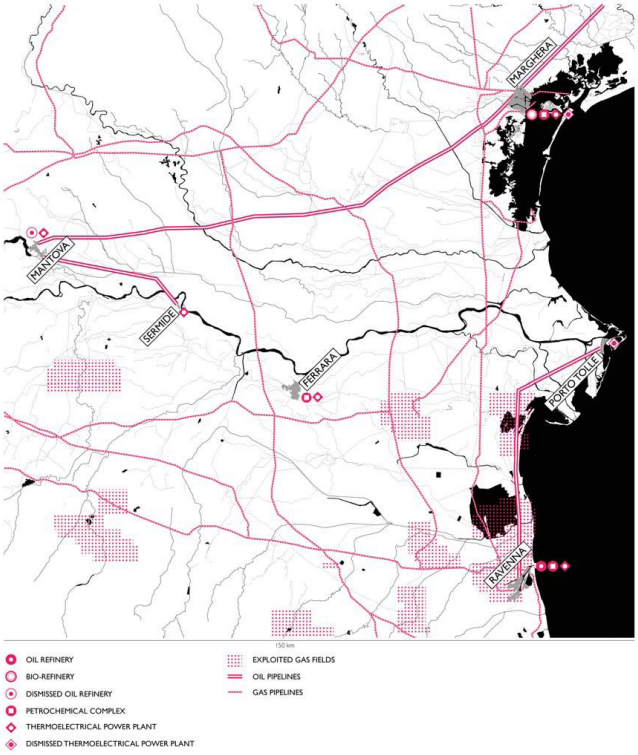

Figure 9 – The fossil fuels mesh of the North-Eastern Po valley
(elaborated by the author)

The potential of fossil fuels meshes for a territorial restructuring of the Third Industrial Revolution resides in their physical and functional connections, which run through far and different territories. In this sense they could be imagined to be converted into “green energy backbones” for CO2 recovery and H2 storage, to which other diffuse energy production networks could hook up. In particular, CO2 recovery network could use the existing oil infrastructures, while the intermittent electric energy storage under the form of hydrogen could principally function around the existing gas infrastructures.

The recovery of CO2 needs to be boosted by activities that produce a huge amount of CO2 emissions, as refineries, petrochemical sites and heavy industries are. Considering our territorial case study, the state of use of downstream sites is very diversified and this condition suggests a further step in the construction of our scenario: the still functioning refineries and petrochemical sites could temporarily keep the role of “CO2 feeders”, while the dismissed oil infrastructures could be reconverted in “CO2 eaters”. As even mentioned by landscape architect Dirk Sijmons in his interesting research about the dimensional relation between landscape and energy (2014), the necessary technological improvement consists of the application of the “Carbon Capture and Storage” (CCS) technology so as to intercept CO2 from exhausted fumes. Carbon dioxide will be stabilized in a liquid state and then conveyed through the former oil pipelines. In this way, it will be necessary to set up an activity capable to absorb and digest huge quantities of CO2 on the receiving site. Plants are the best devourers of carbon dioxide through the chlorophylline photosynthesis process, and in particular are algae.

Hydrogen economy is considered a necessary step to implement a massive renewable energetic transition (Rifkin, 2011). In fact, one of the critical problems concerning renewable energies is that electricity is produced intermittently and it is difficult to stock peaks of production. Hydrogen technology could solve the electric energy storage problem because, through hydrolysis process, electricity can be transformed in oxygen and hydrogen. Nevertheless, hydrogen is unstable and explosive and has to be stored in safe places. Some EU funded researches deepened these matters and one in particular, NaturalHY project (European Union, 2009), focused on the feasibility to transfer hydrogen through the existing gas pipelines network, mixing a hydrogen quota with the natural gas. The separation of hydrogen from natural gas will be made in apposite processing units, which will convey hydrogen to the storage place. Other researches were conducted to demonstrate that depleted gas fields are suitable storage sites for hydrogen (Mignard et al., 2016 and Basniev et al., 2010). Thus, the depleted natural gas reservoirs in Emilia-Romagna could

become underground hydrogen storage sites and, when needed, processing units will demand for hydrogen through gas pipelines and they will transform it in electricity to be distributed through the national grid.

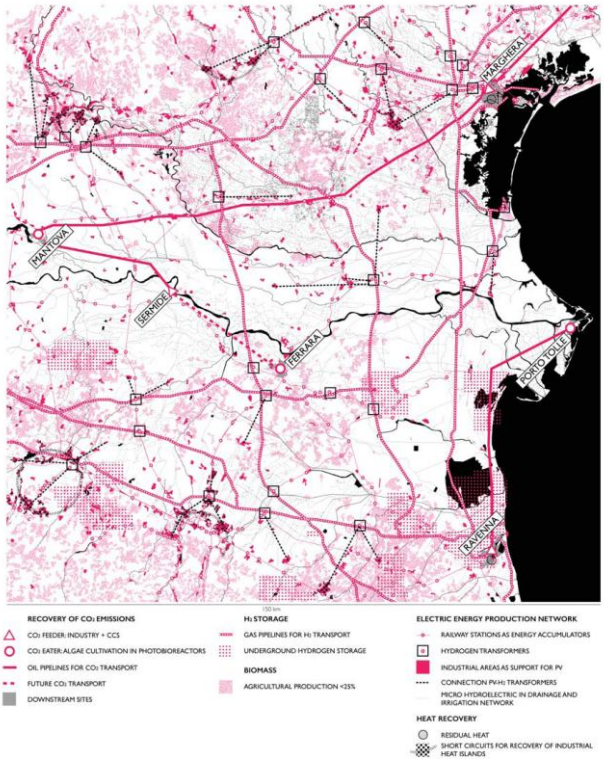

Figure 10 – A possible “energetic territories” scenario
(elaborated by the author)

3 CONCLUSION: GREEN ENERGY BACKBONES AS ARTICULATORS AMONG DIFFERENT SCALES

The renewed role of our former fossil fuels infrastructures as “green energy backbones” does not stop at a supporting responsibility for the supply of territorial distributed renewable energies. As mentioned in the previous paragraphs, new urban and architectural scenarios of reconversion of the “cathedrals of the modernity” are tightly related to the socio-ecological re-signification of existing fossil fuels meshes, thus making our “green energy backbones” as the articulators among different design scales (territorial, urban and architectural one), taking advantage of landscape design tools as the multi-scalar and evolving minimum common denominator.

If we take into consideration the dismissed thermal power plant in Polesine Camerini, in the very middle of the fragile eco-system of the Po Delta, we envisage that its reconversion scenario should probably start from the maintaining of its original productive identity, but converting its previous fossil fuels-based energy production process in a bio-based one. Taking advantage of the CO2 recovery backbone, it is possible to imagine that the site could be converted in a “CO2 digester”, setting up an efficient algae cultivation system in closed translucent photobioreactors to produce biofuels and biomass, pumped with CO2 emissions coming from still functioning downstream oil sites in Ravenna. In this way, we could wonder that the whole site could be transformed in an “Agro-energy park” because the ecological-sensitive energy production would allow to couple social inclusive activities, such as R&D activities in the agro-energetic, agro-food and phytoreclamation domains, so boosting the creation of new green jobs in an economic depressed area. The synergies between the existing agro-food territorial excellences and the agro-energetic industry will arouse a renewed vigour to ecological tourism, thus contributing in the development of new widespread ecologic corridors, which will merge with the Natura2000 protected areas network. Thus, the boundaries between nature, intended as untouchable areas only suitable for recreational purposes and as biodiversity reservoirs, and industry, intended as impenetrable and polluting activities, will

fade, so as those between “oil” and “landscape”, allowing to experience OILANDSCAPES as supportive backbones for a multi-scalar energetic and socio-ecological territorial restructuring.

Figure 11 – Agro-energy park as a reconversion scenario for Polesine Camerini power plant (elaborated by the author)

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T06 | TERRITORIAL COHESION: A MULTISCALE APPROACH

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The objective of territorial cohesion has since the adoption of the EU's Lisbon Treaty set the agenda for policies and activities concerned with 'spatial coordination'. Territorial cohesion has effectively replaced the terminology of 'spatial planning' and 'spatial development' in the EU's discourse. However, at the core of territorial cohesion and European spatial planning lie the same concerns, namely in relation to achieving spatial balance, sustainable development, and socio-economic wellbeing. A better coordination of activities across spatially-relevant policy sectors, across different levels of governance, and across administrative, institutional and cultural boundaries is considered important for territorial cohesion, with spatial planning offering a useful approach to pursue such objectives.

Yet, and in spite of much debate about possible interpretations and applications, the objective of territorial cohesion remains somewhat elusive. Many questions remain over how spatial coordination might best be achieved in different contexts and through which instruments. While attempts have been made to give 'territorial cohesion' a more central role in the EU Cohesion Policy 2014-2020, next to the longstanding objectives of economic and social cohesion, the policy is arguably not yet an integrated 'territorial cohesion policy' but maintains a largely thematic focus in pursuit of the EU's competitiveness and employment agenda. Territorial cohesion is, however, being pursued through experimental initiatives to promote multilevel and multisector governance solutions in transnational spaces (e.g. macro-regional strategies) as well as in regional and urban contexts (e.g. ITI's).

While the focus on this track is on territorial cohesion, papers are also invited that discuss questions of interest to the AESOP Thematic Group on 'Transboundary spaces, policy diffusion and planning cultures' more generally. Topics that could be addressed in this track, among others, are: how the objective of territorial cohesion is being defined and pursued in different contexts, through different policies and across different spaces; the effects of economic or political crises on territorial cohesion; how territorial cooperation initiatives seek to achieve territorial cohesion across collaborative spaces and which (spatial) outcomes are envisaged or have already been achieved; and how territorial cohesion is being pursued through EU Cohesion Policy (or other EU sectoral policies) in different spaces and places and which lessons can be learned from this for the future orientation of EU policies.

ID 1398 | SPATIAL PLANNING ACROSS EUROPEAN PLANNING SYSTEMS AND SOCIAL MODELS: A LOOK THROUGH THE LENS OF PLANNING CULTURES OF SWITZERLAND, GREECE AND SERBIA

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1 INTRODUCTION

Europe today faces many challenges to the principle of integration. Migration crises fuel support for withdrawal from the European Union (EU), which motto 'united in diversity' has proven more deeply contested among a large portion of citizens across the member states. Yet the regional systems that each state relies upon require purposeful coordination and planning. However, these efforts portrayed comically as bureaucratic control build upon established networks that demonstrate how cohesion works to turn spatial interdependence into useful practical collaboration serving places. Further, these collaborations prove invisible because they result from complex spatial interactions that do not fit conventional territorial and jurisdictional sectors. Nevertheless, the multitude of agents making plans has never been greater. These networks focus on shared spatial projects and local purposes that search for deliberate practical compromises resolving differences that in principle remain unresolved. Identifying and fostering these networks for spatial planning may offer pathways to regional cohesion currently overlooked (Zielonka in Faludi, 2016: 76).

Collaborative spatial planning in Europe did not follow the European Spatial Development Perspective (CEC, 1999) or the principles laid out in the Territorial Agendas (EU, 2007, 2011). The Europeanization of planning (Dühr et al., 2007, 2016; Faludi, 2014, 2016) embraced a variety of approaches each linked to distinct combinations of political, social, administrative and legal systems (Newman and Thornley, 1996; CEC, 1997; Farinós Dasi, 2006; Reimer et al., 2014). We believe that what binds these approaches together is not a singular authority or purpose, but an evolving culture for spatial planning (Knieling and Othengrafen, 2009; During and van Dam, 2007; COMMIN, 2009). Planning practice is 'strongly rooted in and restricted to the specific cultural context of a society' (Othengrafen, 2010: 83). Understanding the how people use institutions to plan for places provides hopeful insight about system interactions that might govern uncertainty with shared rather than singular responsibility (Reimer, 2013).

Studying specific planning approaches within the context of time and place (Healey, 2011) focusing on 'how things are done' (Faludi, 2005) is crucial. We believe that examples of successful spatial planning will exhibit qualities of democratic involvement necessary for taking practical collaborative actions able to grasp spatial complexity, even as plenty or perhaps even most forms of spatial planning pay little head to the efficacy of such collaboration. The literature on planning culture tends to conflate many post plan making activities as 'planning' included as elements of a 'process'. The range and complexity of the relationships becomes too vast to comprehend. Analysts create imaginative scaffoldings to encompass and classify these relations, but in so doing become social scientists seeking out patterns of order for a place that lose touch with the contributions a plan may have offered the actors involved. In this paper, a functional pragmatist conception of planning is adopted, focusing on the human cognitive capacity for imagining and assessing the effects of future actions before taking one (Hoch, 2011, 2012, 2016). How do we identify and analyse instances of systemic spatial planning? What should we look for as we investigate functional plan making undertaken within a specific cultural context? The advantage of our constrained approach is that we focus attention on how differences in culture shape spatial plan making. Following this argument, the paper tries to elucidate: 1) a methodological tool for the analysis and comparison of planning practices, and 2) the ways on how culture influences planning practice in various contexts (observed through three case examples).

The paper is structured as follows. After a succinct overview, three planning models across Europe are illustrated: the comprehensive integrated approach of Central/Northern European nations, the urbanism of Southern Europe and a hybrid style among Eastern European countries. Nevertheless, as the planning context assumes not only the planning system, but also the planning culture, a methodological tool

(comprising the parameters of social setting, planning process, and planning environment) is breifly desribed in a second step. Then, we focus on elucidating the planning culture in Switzerland, Greece, and Serbia, through illustrating the planning practice in Solothurn, Patras, and Belgrade, respectively. Such an analysis clearly shows the 'cultural embeddedness' of planning and development. The paper concludes with the identification of similarities and differences in the planning approaches from different settings.

2 PLANNING TRADITIONS IN EUROPE

Before we proceed to elucidate the notion of planning culture and its manifestations in different case examples (as the central part of the paper), it is important to have a brief overview of the main comparative studies of planning systems and processes. One reason for doing so is to show the current collections of planning characteristics of European states as the background information which will make the central analysis more profound and local planning procedures more understandable, as well. On the other hand, it is important to actually highlight major drawbacks of the comparative studies, thus, making room for introducing the concept of planning culture.

The comparative study of spatial planning in Europe (Newman and Thornley, 1996) presented the comparison of sectoral state characteristics (political and administrative structure) emphasizing distinct national planning systems. The approach focuses on differences in formal legal authorization and administrative segmentation of that authority between central and local government. Spatial planning was sorted into five types: British, Napoleonic, Germanic, Scandinavian and Eastern European. Later analysis sponsored by the European Commission (CEC, 1997) added more dimensions, but exhibited a similar dualistic approach (public vs. private, central vs. local, goal vs. implementation). The typology in this case exhibited a functional organisation: land use management, regional economic planning, comprehensive integrated approach, and urbanism tradition. Since the analysis encompassed only 15 EU member states at that time, there has been a need for an update of this typology, provided by Knieling and Othengrafen (2009: 46) who introduced the Eastern European transformation processes as the fifth group of planning styles in Europe. National spatial planning system is usually a combination of several models, however this overview successfully serves for a better understanding on comparative issues among various planning traditions.

Although the studies provided useful comparisons of planning systems, their main drawback refers to their emphasis placed only on formal structures of planning. More precisely, by highlighting the legal and administrative features, it was practically impossible to take into account 'the role of cultural traditions, values, habits, and semantics' (Othengrafen, 2010: 88) and therefore try to explain various spatial developments in Europe. Nevertheless, it is important to gain an overview of the main planning typologies in regard with the case studies analysed in the third section. A brief review of the comprehensive integrated approach, urbanism tradition, and the hybrid planning style of Eastern European countries is provided in the following lines.

2.1 COMPREHENSIVE INTEGRATED APPROACH

Comprehensive integrated planning approach is experienced in the Scandinavian countries and Belgium, as well as in the most of Central Europe: Germany, Switzerland, and Austria. According to this planning style, spatial planning is conducted through a very systematic and formal hierarchy of plans, be these on the national, regional or local level. In most of the states belonging to this planning model, the regional level of planning authorities plays a key role in directing the spatial development. It actually represents a strong link between the local initiatives, on the one hand, and the national guidelines on the other. Therefore, spatial planning is understood as spatial coordination, i.e. systemic preparation and coordination of spatial policies of relevant bodies and authorities at various levels, rather than a tool for balanced economic development, i.e. spatial equity, as highlighted in other planning models. In terms of the planning scope, it is very wide, providing horizontal, vertical and geographical integration of spatial policies. The role of government is decisive in most of the spatial development issues. In other words, planning is mainly understood as the public sector activity, with major investment in planning stemming from various governmental structures, depending on the scope and complexity of the planning task. The planning system itself is considered mature – planning institutions are responsive, planning mechanisms

are developed and transparent, there is political commitment to the planning activities, and, finally, public trust in planning is a norm (CEC, 1997: 36-37).

2.2 URBANISM TRADITION

Southern European countries of Spain, Italy and Greece belong to the states with dominant urbanism tradition. This planning model is centred on structural planning and urban design through rigid building regulations, zoning and codes. Such a focus on building control and townscape shows a clear affiliation to the domain of architecture, i.e. planning as an independent discipline is still not properly established. Briefly put, it is mainly about design and creation of places, without taking into account the strategic dimension of planning. Therefore, it is logical that the spatial level mainly responsible for the planning issue is the local one, whereas the main instrument is building regulations. Despite the fact that within the mentioned states there is a plenty of planning laws and regulations, they are not well coordinated and therefore they miss a clear strategic vision for further development. As a result, the mentioned states usually suffer from an uncontrolled development and ad-hoc planning solutions. Additionally, planning activity is not recognised as a political priority, nor it has general public support. Finally, there are only limited mechanisms for citizens' involvement in the plan-making procedure. Therefore, it is very difficult to manage the ever-growing conflicts among different sectors, usually at the expense of the public interest. Nevertheless, there is on-going intention to improve building control, on the one hand, and to broaden the spectre of spatial planning and its influence on the other (CEC, 1997: 37).

2.3 HYBRID PLANNING STYLE

Transformative planning is today experienced within a great area of the post-socialist states in Europe. In the past, these countries were faced with the centralised hierarchical social model, while nowadays they are muddling through the transition period in order to achieve stable future based on completely different social norms than those previously implemented. Due to such a tremendous change in political and social context, the planning is also still considered to be in the process of transition from the top-down state planning towards the market-driven development, posed by neoliberal paradigm premises, introduced overnight. In terms of its spatial focus (national planning vs. local regulations) and the competences of government, in the past this planning style could be compared with the comprehensive integrated model – a strong role of the public sector, however with the advantage of the national government contrary to the decentralised planning system. In terms of planning laws and spatial division of the state, the cases of ex-Czechoslovakia and ex-Yugoslavia could be easily compared to Austria (Newman and Thornley, 1996). However, the fall of the Berlin Wall designated great changes in the broader social and thus in the planning context, too. The scope of the planning became narrowed and limited only to the activities related to the economic sector, while the main investments came from the private sector – in the beginning, from domestic investors, and recently, more foreign. Planning institutions are clearly immature, with planning experts still seeking to find their position in between strong governmental demands and the private sector initiatives. Therefore, spatial decisions are made without previous prioritisation and taking into account the citizens' voices, thus leaving no room for public trust in planning (Tsenkova and Nedovic-Budic, 2006). Due to the various pace that different post-socialist countries followed in recent three decades, there can be certain variations in the extent of the planning transformation. However, one is true: the post-socialist nation states still strongly attempt to catch up with European standards – the spatial planning field cannot be neglected in such a transition.

3 PLANNING CULTURE: A METHODOLOGICAL TOOL

To better understand specific spatial development across Europe, it is not enough to consider only the planning system characteristics – institutional, legal and regulative framework of planning policies. On the contrary, 'everyday planning practice', deeply rooted in the values, norms, belief systems, visions and behaviour of the actors involved in the planning process – planning culture – must be taken into account (Fürst, 2009; Getimis, 2012). Moreover, different socio-economic patterns as well as various perceptions of planning tasks and responsibilities strongly influence spatial planning (Sanyal, 2005). Furthermore, Friedmann (2005) places an emphasis on both the formal and informal ways of understanding, formalizing

and implementing the spatial planning tasks. Finally, Faludi (2005: 285-6) stresses the roles and attitudes of planners regarding the appropriate role of the state, market forces, and civil society in influencing social outcome. Therefore, we agree that the planning culture concept is a complex one, comprising several 'culture segments' or 'culture layers'. Two dimensions of planning culture are certain: 1) horizontal (e.g. planning process, decision-making arrangements), which is directly 'perceivable', but still fuzzy, easily affected and in a constant change, and 2) vertical (e.g. social structures/governance model, planning system), which is underlying and difficult to perceive, but pretty stable and deep-rooted (Gullestrup in Dühr et al., 2010).

Although the notion of planning culture entered both the planning theory and research field ambitiously trying to go beyond the classical 'planning system' concept, many of these studies are still at the level of general statements on institutional structures and far from an operational framework for analysis of the concrete planning cultures in different localities (Fürst, 2009). However, some research findings try to complement it with a certain 'planning culture' approach (Knieling and Othengrafen, 2009; Getimis, 2012). In fact, they provide an idea how to understand the notion of culture and its effect on spatial planning. More precisely, Knieling and Othengrafen (2009) provide the 'culturised planning model', while Getimis (2012) points out the aspects of the 'planning culture framework'. The main characteristics of both models are briefly described in Table 1.

Source	Aspects		
Culturised planning model (Knieling and Othengrafen, 2009)	**Societal environment** Underlying and unconscious; taken-for-granted beliefs; thoughts and feelings which are affecting planning	**Planning artefacts** Visible planning products; structures and processes	**Planning environment** Shared assumptions; values and cognitive frames that are taken for granted by members of the planning profession
Planning culture framework (Getimis, 2012)	**Policy styles** Values, perceptions and mentalities of the representatives of collective actions	**Actor constellation and power** Agenda setting; the problems/challenges to be addressed; the scale of planning practices that are initiated to resolve the problems	**Knowledge forms** Scientific (planning expertise); institutional (logic of institutions, managerial capacities); everyday (individual act in common-sense situations)
PLANNING CULTURE: A PRAGMATIST APPROACH	**SOCIAL SETTING** System conditions; institutional and organisational action; agents' beliefs; social learning	**PLANNING PROCESS** Deliberative plan making	**PLANNING ENVIRONMENT** Cultural awareness of planners

Table 1 – Interrelated aspects of the planning culture approach

In Europe, the reality of the many successful spatial planning efforts coping with different problems testifies to the usefulness of plan making. Therefore, we consider how certain spatial problems flow from the interactions of purposeful systems whose agents are unable to anticipate and comprehend how their own efforts contribute to the spatial problem at hand. The institutional context varies along with the vocabularies of complaint; but the familiar elements of spatial interaction and competing belief offer an opportunity for deliberate plan making efforts among the relevant parties. People responsible for the collective welfare or public good of each place face a problem generated by unexpected changes in economic and political relationships that extend beyond the local place. Following a pragmatist approach, we ask three questions: What conditions and beliefs shaped the problem situation generating plan making? How did the relevant actors or agents (people) make spatial plans for the place? How well did the plans inform the intentions of the actors whose choices and actions could influence future outcomes? More specifically, our approach includes the parameters of social setting, planning process and planning environment, which are at the core of the methodological tool for empirical analysis.

Social setting depends on the systemic factors, whereas these differ from the political forces to the economic incentives, both affecting the planning practice in a particular spatial context. The systemic interdependence of the varieties of interacting systems cannot be comprehended by any one person, but

requires forms of social learning across diverse webs of institutional and organisational action. Therefore, it is not only the expertise, but also 'experiential' knowledge and skills what counts. Involving people in making plans for places while introducing relevant impacts informed by scientific and moral assessment requires deliberation. The varieties of such deliberate learning provide examples of innovative planning practice that contribute to the judgments people take making and altering the places they inhabit and use. Finally, the profession of spatial planning for places proves culturally useful by helping those who make plans for a place better anticipate and prepare for current and plausible problems. Cultural awareness makes the planners: acquainted with the context where they operate, capable of constant capacity-building, able of conducting socially justified activities and, thus, producing sustainable spatial solutions.

Briefly put, the 'cultural embeddedness' (Alexander in Reimer and Blotevogel, 2012) or as Healey (2006) puts it 'spatial consciousness' – the extent to which concepts of place, spatial organisation and territorial identity are built in policy cultures, deeply affects the spatial development patterns within certain territories. Do these cultural differences in the plan making craft fail to address the basic functional questions? We study the plan making in Solothurn (Switzerland), Patras (Greece), and Belgrade (Serbia) to find out how the projects responded to system demands, changes to planning approach and the planning professionals' expectations.

3.1 PLANNING CULTURE IN SOLOTHURN, SWITZERLAND

The Borregaard AG (Norwegian lumber company) shut down a 107 ha wood industry plant in 2008 located in Solothurn. The site went from a revenue producing employer to an environmental brownfield posing a risk to public health. The canton elected officials did not ignore the problem, blame it on industry or turn for assistance to the national government. They coordinated purchase of the site together with three private employers. This extraordinary act reflected recognition of the scarcity of flat land in Switzerland and the promise of continued economic prosperity. The structural plan for the canton had anticipated this departure as early as 2005 setting in motion the idea that this site deserved attention as a resource for future redevelopment (Scholl et al., 2013). The plan was created as part of an already well established tradition of plan making that the people involved all understood and accepted.

3.1.1 SOCIAL SETTING

Switzerland is famous for its decentralized way of decision-making and informal planning procedures when tackling complex spatial problems. The concept of pluralism is anchored in the Swiss conception of the political state, with its direct-democratic institutions, while citizen participation is natural planning practice (Keller et al., 1996). Thus, the main goal of Swiss comprehensive spatial planning is to achieve consensus among the interests of spatially relevant stakeholders. Moreover, public voting on planning issues is deeply rooted in Switzerland due to its territorial limitation of available land reserves (Swiss Federal Council, 2012). Collaboration between various institutional levels during the policy-making process (in a 'bottom-up' manner), as well as the cooperation between different sectors (public, private and civil) is the major feature of Swiss spatial planning culture. Collaborative planning procedure in the brownfield redevelopment process in Solothurn caused the changes in the cantonal structural plan (as the official spatial development instrument), proving that cooperation finds a fertile ground within a consensus-based direct democracy (Staub, 2011).

Moreover, stable economic situation of the cantonal government makes the planning procedures easier. Since in case of Solothurn there was no interest from private sector to invest in land development, the cantonal representatives, having in mind that the site is of great cantonal importance, bought the land and thus saved it from further degradation (Staub, 2011). Such an action clearly demonstrates the power relations among various sectors in Switzerland, with a central role of cantons – both in terms of economic independence, and hence no need to sacrifice the land reserves through the compromising planning solutions, as well as in institutional capacity to coordinate the future actions horizontally (various sectors of cantonal representatives participated in creating new spatial solution), and vertically, with continuous interaction with both the municipalities and federal spatial planning office. Clearly, democratic cooperative 'steering style' – the power decentralization combined with the network-building among the participants with different roles – makes an optimal setting for collaborative planning procedures (Scholl et al., 2013).

3.1.2 PLANNING PROCESS

Swiss planning practice is not grounded on standardized procedures; the focus is on the 'tailor-made' solutions, pragmatism and action-orientation (Keller et al., 1996; Scholl et al., 2013). In case of Solothurn, the stakeholders' participation was organised in a transparent manner with considering different interests of various parties – citizens, private companies, authorities at various levels, and independent experts. Although differing in power, there was no restriction to the needs and demands of the less powerful stakeholders. Imposing the decision by the canton was not chosen as a proper solution. More precisely, cantonal representatives influenced the planning procedure in two ways: indirectly – by defining the guidelines in the structural cantonal plan, and directly – through initiation of and participation in the planning process and the selection of expert committee members (a body responsible for structuring the action plan, i.e. major milestones and deliverables throughout entire planning process). The possible misuse of such a superior position was prevented by a highly transparent planning process management, containing the following parameters: 1) role differentiation, 2) several consultation meetings, 3) at least three competing project teams, and, 4) joint development of the final strategy (based on the combination of different proposals, i.e. there are no winners). Those rules are part of 'test-planning' – informal planning procedure not regulated by the law, but surely contributing to an efficient and meaningful planning process (Scholl et al., 2013). The described procedure provides the opportunity for the stakeholders to "be smarter when working together" (Staub, 2011). Also, only "jointly recognized problems are the motives for cooperation" (Grams, 2011). Planner, as an expert, does not insist on his own opinion. On the contrary, the consensus building is the main prerequisite for the success of the 'test-planning' procedure.

3.1.3 PLANNING ENVIRONMENT

With a combination of direct democracy and the need for sustainable spatial development, Swiss planners have a high level of autonomy – they are pursued to create original planning concepts and individual approaches (Scholl, 2008). Finding a creative solution for the brownfield site in Solothurn was made possible due to involvement of specific expert group and a specific organisation of the planning process. Namely, in addition to the main sectors involved (cantonal officials, private investors, local community), the particular significance was assigned to the independent experts, i.e. the experts outside the cantonal office. Also, despite a large number of stakeholders, the whole process ran smoothly due to its efficient organisational structure divided into two levels – strategic and operational. At the strategic level, the main role of decision-making was assigned to the executive board (consisted of cantonal representatives). At the operational level, the most important body was the expert committee (composed of both cantonal and external representatives), whose role was: 1) the definition of goals, vision and strategy, and, 2) the evaluation of the proposals made by different project teams (based on previously defined criteria) (Scholl et al., 2013). The key negotiator in the entire process was the expert committee – a multidisciplinary team of experts with both technical knowledge and mediation and facilitation skills, with two main tasks: advising the executive committee and selecting the best planning solutions (Grams, 2011; Staub, 2011). Such a position of planning expertise that goes beyond its expected performance was the core of the successful planning approach.

3.2 PLANNING CULTURE IN PATRAS, GREECE

A reliable and direct railway connection between Athens and Patras, the largest city in Pelopponese, is a strategic project of high priority aimed at bridging the East-West division of high-performance transport infrastructure that exists in Greece for a long time. However, in recent two decades, an endless discussion and unsustainable studies about the integration of the rail tracks into the urban pattern have been developed without concrete results. This stems mainly from an administrative fragmentation of the waterfront areas along the existing railway line leading to inconsistent decision-making, which makes the local government, the OSE (Hellenic Railways Organisation) and the ERGOSE (the OSE subsidiary company in charge of real estate) reluctant to collaborate (Papamichail and Peric, 2017).

3.2.1 SOCIAL SETTING

Greek administrative planning framework was modelled after the Napoleonic structure, characterized by the 'fused system' – a system with a dominant national planning level, while there also laws for municipal plans (Newman and Thornley, 1996). Due to the institutional transformation during the 1990s, the decentralization of the planning responsibilities toward the regional administrations and local authorities was enforced. However, nowadays all the planning decisions still have to be in line with the national spatial planning guidelines. More precisely, national ministry has formal competences and responsibility for preparation of urban (municipal) plans, while cities mainly decide on building permits, in line with the planning tradition of urbanism. Briefly put, planning is translated into the design and creation of places and is mainly carried out at the local level, while there is evident lack of a strategic approach of the national government (Papaioannou and Nikolakopoulou, 2016). Together, this makes the spatial planning in Greece highly ineffective.

Moreover, due the current economic crisis, the financial framework is unstable and limited, which unconditionally leads to the fragmented decision-making processes taking place between different planning levels and actors, and thus ad-hoc developments (Pappas et al., 2013). Firstly, spatial planning lacks a vision because of the recent privatization of planning powers and services, outsourcing, and the pro-growth planning (Reimer et al., 2014). The HRADF (Hellenic Republic Asset Development Fund) illustrates the privatization phenomenon that transfers the responsibility of many services and public agencies into private entities. This affects directly the development and planning in Greece with the constant legalization of illegal constructions and/or stretching the scope of territories covered by the city master plans. Secondly, there is no a cooperation model among state, different administrative bodies and public organisations towards a common strategic spatial planning, thus causing the conflicts and delays for the vital strategic projects (Papamichail, 2015). Such an example is the attempt of introducing the railway line into the central city core of Patras.

3.2.2 PLANNING PROCESS

As assumed from above, the final decisions and approval of various plans and programmes are based on a top-down approach, thus creating a non-flexible environment for participation and collaboration. Although since the 1990s, there has been an effort for the new mechanisms of actor involvement toward the Europeanization of the Greek planning (Giannakourou, 2011), the development of planning policies and instruments has been proved as non-intersectoral and non-interdisciplinary, while overlapping responsibilities and interests at all administrative levels prevent any collaborative approach. The limited mechanisms for citizens' involvement as well as poor managing the conflict among different planning levels and actors are also the norm in the Greek spatial planning (Knieling and Othengrafen, 2016).

In the case of Patras, the prolonged conflicts are persistent mainly due to the administrative fragmentation of the waterfront area and consequently due to a lack of cooperation between the responsible authorities (Papamichail and Peric, 2017). Moreover, the local level does not have any competence in making plans on future railway development. Namely, the Greek Ministry of Transportation started a discussion about three scenarios of railway development in Patras, in an effort to meet the political interests of the municipality. The proposal included the by-pass, the underground and the ground-level solution. The discussion about the best scenario has recently continued with the presence of different actors, including the port authorities, ecologists, other political parties, the University of Patras and local organisations of neighbourhoods excluding the OSE, the ERGOSE, and planning experts, as well. Hence, the debate turned out to be pure political verbalism that insisted on the pharaonic plans, e.g. the by-pass solution, an unsustainable project of € 700 million with no proposals for the integrated model of city development. Once again, the fragmented decision-making and a top-down approach were implemented, excluding any collaborative attitude. Therefore, spatial planning is generally understood to be product-oriented, e.g. it is concentrated on the production of individual plans rather than on pursuing a continuous planning process, with a lack of coordination among the actors about institutional boundaries and a lack of effective monitoring mechanisms (Pappas et al., 2013).

3.2.3 PLANNING ENVIRONMENT

In Patras, planning experts were not involved in the discussion about the railway solution that greatly affect future urban development (Papamichail and Peric, 2017). This is a clear sign of an underestimated professional planning position. There are two main reasons behind such a situation. Firstly, local spatial planners are not formally competent to provide proposals that include even a pinpoint of strategic vision, i.e. strategic reasoning is reserved for the national planning offices within the relevant ministry, although it is highly ineffective. Local planners are in charge of providing building permits, thus supporting various decision-makers, mainly national government or private sector representatives (Othengrafen, 2010). Moreover, since each urban plan has to be in line with the national guidelines (and practically the plan is prepared by ministry), there is no room for local planners to show their possibly innovative approaches and a certain degree of independence. Briefly put, it is very hard to find a way for introducing integrated spatial and transport models (as truly strategic approach) within the highly centralised structure (Papamichail, 2015).

Another reason for a weak position of spatial planners lies in the specificity of their education. Only in the last 15 years, it has been possible for students to attend specific degrees in spatial planning (Othengrafen, 2010). Majority of spatial planning tasks today are undertaken by architects, whose focus is a bit different than this of strategic planning and creation of spatial visions for future. On the contrary, they deal mainly with urban design aspect of the built environment, without an idea on comprehensive planning approach. Finally, the skills immanent to planners in the Western world (negotiation, mediation, facilitation) are not experienced in the Greek context (Papaioannou and Nikolakopoulou, 2016). On the one hand, citizens' voices are not heard, except in case of threat to the self-interest, while, on the other, planners are mostly excluded from debate where other, powerful actors, have the leading role.

3.3 PLANNING CULTURE IN BELGRADE, SERBIA

Three years after initiating the idea on the Belgrade Waterfront project (during the political campaign of then-largest opposition party), the cornerstone for a 90 ha land on the river bank was set in October 2015, thus marking the beginning of the 30-year long development period. Moreover, due to its position (close to the confluence of two rivers and the historical city core), this brownfield site redevelopment is not only of city, but also of regional and even national importance, thus attracting mainly foreign investors (Maruna, 2015). The current construction work is financed by the investor from the United Arab Emirates (UAE).

3.3.1 SOCIAL SETTING

As other post-socialist countries, Serbia is faced with the decentralisation of power, reflected also in the decentralisation of responsibilities in the spatial planning domain, on one hand, and the adaptation to the neo-liberal paradigm on the other (Vujosevic, 2010; Vujosevic et al., 2012). However, the Belgrade Waterfront project clearly shows that spatial planning power decentralisation in Serbia is not real: although the city authorities should have the major role in defining the priorities for further development of the riverfront area, their role is marginalised; in fact, when it comes to the mega-projects, the tight cooperation between the city and national governance – in the way that all decisions made at the national level are simply imposed on the local/city level – appears as a necessary condition for any further spatially relevant action; finally, the illusion that the city mayor's voice is heard when debating about the future project lies in the fact that both the city mayor and the prime minister belong to the same political party (Maruna, 2015).

Although the success of the economic system's transition within the ex-central economy-driven post-communist states can be debated (Vujosevic et al., 2012), the Belgrade Waterfront is an example of a strong glorification of the neo-liberal principles without taking into account the public interest demand. More precisely, all negotiations during the preparation of the agreement with the foreign investor were subordinate to the developer's requests, while the national interests were masked under the veil of new workplaces and the assignment of the construction work to Serbian subcontractors. Concretely, according to the agreement between Eagle Hills, a company from the UAE, and the national government of Serbia, the state is obliged to remove the old railway tracks (currently at the site since this is the broader area of railway station still in use), invest in constructing the new railway station, provide all the infrastructural equipment to and on the site and even lease the land to the UAE investor for 99 years. Unfortunately, this

is a paradigm of the current spatial planning approach in Serbia: ad hoc solutions are today the only way of attracting investments for large redevelopment projects (Zekovic et al., 2015).

3.3.2 PLANNING PROCESS

In contrast to the former Yugoslav planning professionals who were acting in concert with the authorities, highly appreciating multidisciplinarity in the planning process and being recognised as the bearers of public interest, Serbian planners are today completely side-lined for public interest lost its privileged position as the 'higher' reason that cannot be brought into the question (Vujosevic and Nedovic-Budic, 2006). Planners cannot cope effectively with the private interest requests expressed in the Belgrade Waterfront project for their expertise did not evolve through time: they do not know how to swim in the whirlpool of multiple interests, i.e. they did not adapt to the pluralistic society and still try to keep their exclusive position.

The global shift of the planning paradigm addressed the raising awareness of the stakeholders' collaboration in creating the spatial development policies (Vujosevic et al., 2012). Nevertheless, in the case of the Belgrade Waterfront project, strategic decisions were made at the political level (with the key role of prime minister!), hence, avoiding any kind of a public debate with a range of interested parties. The professional planners' society was completely ignored by the political power structures: on the one hand, they were the advocates of public interest, but what is worse, they never showed any understanding of a contemporary society's demands and the need of adjusting their own profile to it. Persistent adherence to the outdated position made them players without power in a stakeholder arena, thus easily disregarded by the powerful political structures. The civil sector, i.e. several non-governmental organisations, also raised its voice pointing to the irregularity of the legal basis of the Belgrade Waterfront project, thus trying to address the broader public audience. They were underlining the importance of safeguarding public interest and compliance with planning and construction legislation (Maruna, 2015). However, the exclusion of both the planning profession and the public in such an important project is a clear sign of an elementary ignorance of democratic decision-making.

3.3.3 PLANNING ENVIRONMENT

The previous paragraphs tackled the issues of planners' relationship to other stakeholders. However, here we want to draw attention to the professional expertise – their skills and knowledge needed when dealing with complex spatial problems. Briefly put, Serbian planning professionals place their expertise only on their technical knowledge (of producing the plans), without taking into account 1) the planning process itself (and hence the need to use the skills of facilitation, mediation, and negotiation while communicating with other interested parties), on the one hand, and 2) a broader social context in which the stakeholders' collaboration should take place on the other (Vujosevic et al., 2012). The clear example of the Serbian expertise position was the complaint of the National Association of Architects (NAA) to the spatial concept proposed by foreign architects and designers. To avoid possible confusion, most of the urban planning professionals come from the Faculty of Architecture, University of Belgrade or similar technical faculties of the other Serbian universities. The NAA president stressed the unfair domestic exclusion of experts in the project: the comment was mainly on the quality and design of the project, and not on the strategic decision-making procedure that caused such a design. In this way, the experts confirmed that they only reckon on their own technical experience with no understanding that a strategic decision-making process in spatial planning should include knowledge and skills from other disciplines, as well (Maruna, 2015).

4 CONCLUSIONS

As the empirical analysis shows, diversity in planning is constant in Europe and this can be hardly changed. The quality of the planning approach and further success in its implementation strongly depends on broader social context; the setting which do not pay enough attention on the planning as a powerful tool for directing future spatial development seems to be confused in providing proper answers to the challenging situations.

Looking through the lens of the social environment, Switzerland, famous for its decentralized way of decision-making, is also a clear example of reflecting its collaborative approach during the policy-making process (experienced at federal level) into the deliberative plan making. Moreover, within the Swiss Spatial Planning Law (revised in 2013), there is a clear demand for informal planning procedures when tackling complex spatial problems. On the contrary, Greece is highly influenced by a fragmented decision-making and a clientelism approach, thus remaining attached to rules and adopting a politics of resentment. Under the umbrella of the market-oriented pluralist society, the Serbian national governance is highly confused in a controversial attempt to re-decentralize the state administrative structure, and thus make some other levels more powerful in the spatial planning decision-making process, on the one hand, and to strive to achieve as tight as possible feedback with foreign private investors on the other.

Deliberative planning through the democratic actor constellations is a norm in the Swiss plan making. Mutual trust, joint actions and transparent decision-making procedures among the representatives of public, private and civil sector makes the culture of Swiss plan making highly collaborative. In Greece, plans cannot work because the problem is not recognized as a kind of uncertainty susceptible to resolution, but a conflict of injustice or identity. This hence results in unconventional and ad-hoc developments. In Serbia, there is a high disproportion in power between the national government, thus reaching a dominant position in negotiation with private sector about future spatial development, and other parties, be these the authorities at lower levels, citizens or experts, which are totally marginalised.

Swiss planners, as public administration representatives, have a high level of autonomy, which offers them an opportunity for creating the original planning concepts and individual approaches. In Greece, planning/planners are considered a 'supportive actor' (Othengrafen, 2010), sometimes only providing technical instrument for the decision-making to be done by politicians or private investors. Similarly to this, professional expertise in Serbia is highly behind the contemporary demands of the planning vocation; planning is deeply subject to politics.

To conclude, the illustrated differences flow from the variations shaping the cultural conceptions of the problems and the relevance of spatial plan making as a source of practical judgment for meaningful joint action. The Swiss plan offers such a good example of effective collaborative planning not because the plan making was significantly better than the plan making for the transport corridor in Greece or the brownfield in Serbia; but because the attachment to institutional patronage in Greece and political favouritism in Serbia undermined the relevance for spatial planning. However, analysts go astray as they imagine planners or plans responsible for relations of social mistrust and cynical detachment. The plans can provide important testimony to the kind of purposeful deliberation that may anticipate and avoid the social and economic damage of urban developments that wilfully ignore future consequences for others. Nevertheless, bureaucratic indifference and patronage along with political favouritism and corruption cannot be remedied by planning. Changing these conditions requires a host of social, political and economic changes that extend well beyond what plans can do.

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ID 1453 | INTRODUCING BUSINESS REGIONS IN DENMARK: TOWARDS A NEW PLANNING CULTURE?

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1 INRODUCTION

Significant attention has recently been paid to the new forms of territorial governance emerging at the scale of urban regions in Western Europe (Allmendinger et al., 2015; Janssen-Jansen and Hutton, 2011). In the planning literature, these new spaces of governance have been conceptualised as ‘soft spaces’ with ‘fuzzy boundaries’, as they are often located in between formal levels of governance, and are not necessarily univocally bounded (Haughton et al., 2010). It is claimed, that the new spaces of territorial governance do not as much replace formal levels of governance, as they seek to supplement existing

governance structures in strategic ways, e.g. around specific policy agendas, thus adding extra layers to an increasingly complex and fragmented governance landscape (Allmendinger and Haughton, 2009a).

As in many other European countries, Denmark has experienced an explosion in the number of informal governance networks working across formal boundaries in recent years. As part of this general trend, a number of city region networks have emerged around the biggest Danish cities. Drawing on experiences mainly from other Nordic countries, several of the networks identify themselves as 'business regions', and have formulated goals and visions revolving primarily around attracting businesses and a highly educated workforce to the region. In the Danish debate the concepts of 'business regions' and 'city regions' are often used interchangeably, as the networks, regardless of the self-proclaimed label, seek to address similar challenges. For convenience, we adopt the terminology of 'business regions' in this paper to describe the new governance networks at the scale of city regions.

In this paper, we explore the rationalities behind the emergence of business regions in and around the four biggest cities in Denmark. In order to get a sense of the nature of the strategic spatial planning that is practised in such spaces, we examine the spatial strategy-making initiatives that takes place in the auspices of those regions. We built our analysis on document analysis of strategies, visions, policy documents, official webpages etc., together with semi-structured interviews carried out with the key actors involved in the business regions.

2 SOFT SPACES AND A NEW PLANNING CULTURE

In this section, we discuss the driving forces behind the proliferation of new soft spaces in Western Europe, and elaborate our understanding of soft spaces as spaces of neoliberal experimentation promoting a new planning culture rooted in neoliberal ideology.

2.1 THE DRIVING FORCES BEHIND SOFT SPACES

The driving forces behind experimentation with soft spaces of territorial governance are many (Allmendinger et al., 2015). We can understand soft spaces as i) new state spaces emerging from continuous processes of state restructuring in the face of economic globalisation (Brenner, 2004a, 2004b); ii) spaces for experimentation with new approaches to strategic spatial planning in the context of urban entrepreneurialism (Olesen, 2012); iii) functional planning spaces reflecting a need to move beyond an absolute understanding of space inspired by relational geography (Davoudi and Strange, 2009; Haughton et al., 2010); and iv) networked forms of governance seeking to work outside the rigidities of statutory planning as a response to neoliberal policy agendas of policy delivery and effectiveness (Haughton et al., 2010).

According to state theorists, the production of new spaces of governance can be understood as the result of nation states searching for new 'scalar fixes' (Brenner, 2004a) or 'spatiotemporal fixes' (Jessop, 2000) in the face of economic globalisation. Since the 1960s, Western European nation states have experienced multiple rounds of spatial restructuring (Brenner, 2004a). Each round is characterised by reterritorialisations and rescalings of statehood, in which new scales and spaces are targeted for concentration of economic activity and experimentation with new forms of urban governance (Brenner, 1999, 2004b). In the most recent rounds of spatial restructuring, what Brenner (2004b) identifies as the rounds of glocalisation strategies, the experimentations with new forms of urban governance are customised to a few privileged 'new state spaces'. These spaces are argued to constitute the new key scales on which nation states compete.

As part of these processes of state restructuring, the form of urban governance changed from urban managerialism rooted in Spatial Keynesianism to urban entrepreneurialism rooted in a neoliberal ideology (Brenner, 2004a, 2004b; Harvey, 1989). Major European cities and urban regions regained the interest in strategic spatial planning and prepared spatial strategies, positioning cities and regions strategically within the global and European circuits of capital (Albrechts et al., 2003; Brenner, 2004a). Many of these (glocalisation) strategies were also concerned with developing new spatial imaginaries and identities for the new state spaces emerging in Western Europe at the time, such as the Flemish Diamond (Albrechts, 1998; Olesen and Albrechts, 2017) and the Øresund Region (Olesen and Metzger, 2017). We can thus

also understand soft spaces as “exercises 2 of re-branding, of shifting perceptions of a struggling economy for instance with a new, more positive imaginary” (Allmendinger et al., 2015: 219). The turn towards urban entrepreneurialism can in this context be understood as having paved the way for experimentations with strategic spatial planning in new soft planning spaces (Olesen, 2012, 2014).

The proliferation of experiments with soft spaces should also be understood as a result of an increasing concern with mismatches between administrative boundaries and the ‘realities’ of functional urban regions (Davoudi and Strange, 2009; Haughton et al., 2010). In many cases these mismatches have been deepened as a consequence of planning reforms driven by policy agendas of devolution and decentralisation, leaving behind gaps to be filled in by informal forms of governance (Haughton et al., 2010; Olesen, 2012). Soft spaces have also been conceptualised as more pragmatic approaches to spatial planning, focusing on ‘what works’ in terms of implementation and policy delivery (Allmendinger, 2011; Allmendinger and Haughton, 2009b). Here, soft spaces constitute deliberate neoliberal strategies to short-circuit formal planning requirements and move beyond the rigidities of statutory planning, in order to facilitate development and create a competitive advantage (Haughton et al., 2010). It has been noted that soft spaces are often constructed around highly selective policy agendas (Allmendinger et al., 2015), and that strategy-making in soft spaces tends to prioritise policy agendas of promoting economic development, whilst sidestepping formal planning responsibilities related to social justice and environmental sustainability (Haughton et al., 2010; Olesen, 2012). Furthermore, Olesen (2012) has suggested that soft spaces add to the increasing pressure on statutory spatial planning, and can act as vehicles for a neoliberal transformation of spatial planning.

2.2 THE POLITICS OF SOFT SPACES

As indicated above, soft spaces should not only be understood as functional planning spaces, but also as expressions of politics in the context of neoliberalisation and postpolitics (Allmendinger and Haughton, 2012; Haughton et al., 2013). We argue that soft spaces should not only be understood as products of the continuous neoliberalisation of spatial planning, but also as key spaces for “destabilising existing governance practices and planning cultures” (Olesen, 2012: 911).

Recent theorisations on neoliberalism suggest that processes of neoliberalisation have moved beyond the phase of ‘roll-out neoliberalisation’, in which the state supports market logics and competition through strategic investments in urban development and infrastructure projects (Peck and Tickell, 2002). According to Keil (2009), we have now entered the phase of ‘roll-with-it neoliberalisation’, characterised by an increasing normalisation of neoliberal practices and concepts. Several authors have suggested that contemporary strategic spatial planning experiments are struggling to live up to progressive planning aims in the face of roll-with-it neoliberalisation (Cerreta et al., 2010, Haughton et al., 2010; Olesen, 2014). Olesen (2012) has illustrated how soft spaces in Denmark were turned into spaces for promotion of economic growth and transport infrastructure lobbying, whilst discrediting traditional regulatory planning approaches. This suggests that soft spaces have become important political spaces for promoting neoliberal agendas of stimulating competitiveness, generating economic growth and attracting investments in transport infrastructures.

In fact, soft spaces seem to constitute important strategic spaces for promoting particular neoliberal versions of strategic spatial planning (Olesen, 2012), rooted in what Peck and Tickell (2002) have labelled ‘the growth-first-principle’. Olesen (2014: 296) highlights how strategic spatial planning processes rarely allow for “a critique of economic growth and competitiveness as the prime virtues of strategic spatial planning”. Along the same lines, Haughton et al. (2013: 22) have noted how soft spaces only seem to allow for demands to be voiced, which “do not question and disrupt the overarching framework of marketled development”. Spatial planning in soft spaces become depoliticised strategy-making processes, in which conflicting or political sensitive issues are removed or superficially glanced over in the name of promoting economic development (Allmendinger and Haughton, 2012). In this way, soft spaces are governed by a strong neoliberal governmentality of what is considered ‘relevant’ and ‘possible’ policy agendas. This post-political planning condition is nicely captured by Haughton et al. (2013: 232) stressing that “this new form of neoliberal governmentality has reworked the nature of planning itself”. Allmendinger and Haughton (2009a) argue that soft spaces have contributed to an opening up of the professional boundaries of spatial planning, which in term have become more fuzzy. Spatial planning has developed into a discipline of (much) more than merely land use regulation and managerial approaches. However, at

the same time the policy repertoire of spatial planning has become more narrow, focused primarily on promoting economic growth.

Contemporary reworkings of the planning cultures in Western Europe seem to be characterised by two dialectic processes of opening up and blurring the professional boundaries of spatial planning, whilst spatial planning at same the time is subjected to neoliberal governmentalities promoting a narrow set of policy agendas. It is these dialectic processes, we explore in the case of the Danish business regions, in order to develop an understanding of how these spaces contribute to transforming the Danish planning culture.

3 THE EMERGENCE OF SOFT SPACES AND A NEW PLANNING CULTURE IN DENMARK

In this section, we outline the context within which the emergence of business regions in Denmark must be understood. Adopting the terminology from Brenner (2004a, 2004b), we argue that Denmark has experienced three rounds of spatial restructuring in the last three decades, and that the emergence of business regions can be understood as a result of the most recent process of spatial restructuring, in which third generation glocalisation strategies have been prepared at the scale of city regions.

The emergence of urban entrepreneurialism in Danish spatial planning is often associated with the implementation of the Danish Planning Act in 1992, in which the aim of spatial planning was changed from promoting equal development to 'appropriate' development. In Harvey's (1989) terms, the 1992 Planning Act marked a shift from urban managerialism to urban entrepreneurialism. As part of the shift, the national government began to promote the capital city of Copenhagen and the Øresund Region as the new privileged spaces for urban development, investments in infrastructures, and concentration of economic activities. This reterritorialisation became the government's answer to the economic challenges that Copenhagen (and south Sweden) was facing at the time (Olesen and Metzger, 2017). We interpret the Øresund Region as a product of what Brenner (2004a) identifies as glocalisation strategies round I, and the first soft space in Denmark rooted in policies of promoting economic development and competitiveness.

The second round of spatial restructuring in Denmark rooted in glocalisation strategies, we associate with the implementation of the Governance Reform in 2007, and the wide range of spatial strategies that emerged as a consequence of the reform. The reform was implemented to introduce a more efficient governance structure, in particular within the public healthcare sector. However, the reform also led to significant reterritorialisations in terms of spatial planning, as the middle-tier of the planning system was abandoned and regional statutory land use planning decentralised to the municipalities (Galland, 2012; Hansen, 2009, forthcoming). In order to support regional development, various governance networks (public and private) were established at the regional scale, including regional growth forums and cross-municipal platforms for representation of municipal interests (Hansen, forthcoming). The explosion in the number of networks and platforms for representation of regional interests has in a Danish context been interpreted as a turn towards a pluricentric governance model (Pedersen et al., 2011; Sørensen, 2014). Many of the new networks were constructed with a point of departure in the formal regional administrative boundaries established in 2007. They were therefore not always considered appropriate platforms for strategic spatial planning. This led to a national interest, already from the initial phases of the implementation of the 2007 reform, in promoting functional urban regions for strategic spatial planning, in an attempt to 'fill-in' gaps in the Danish governance landscape (Olesen, 2011, 2012). The Danish government was in particular keen to promote Eastern Jutland as Denmark's second metropolitan area. This was partly a response to the rather one-sided focus of promoting growth in Copenhagen for more than a decade, and partly as a result of the realisation that the newly formed regional boundaries did not correspond well to the 'functional urban region' in this part of Denmark. As regional planning was under strong attack at the time, the process of preparing a spatial strategy for the Eastern Jutland urban region developed into a contested affair, played out between conflicting planning rationalities rooted in regulation and growth promotion, respectively Introducing Business Regions in Denmark: Towards a new Planning Culture? 5 (Olesen and Richardson, 2011, 2012). At the time, it was already evident that strategic planning in the soft space of Eastern Jutland was driven by a strong neoliberal agenda, actively seeking to redefine what it meant to prepare spatial strategies at the regional scale (Olesen, 2011, 2012).

We argue that Danish spatial planning has recently entered a third round of glocalisation strategies, which include city regions around second-tier Danish cities. This round of spatial restructuring is not the result of reterritorialisations promoted through planning reforms or in other ways inspired by the national level. We interpret the current round of reterritorialisation as the manifestation of a wider growth-oriented planning culture, which has been underway since the early 1990s. Danish spatial planning has now entered the phase of roll-with-it neoliberalisation (Keil, 2009), in which the promotion of growth, competitiveness and economic development have developed into taken-for-granted (if in practice not the only) goals of regional planning in Denmark. As a result, the second, third and fourth biggest cities in Denmark have upscaled their strategies to the city region scale, and created 'business regions' in collaboration with surrounding municipalities. Copenhagen has followed suit and rebranded the Øresund Region as Greater Copenhagen. On the contrary to earlier rounds of spatial restructuring, the promotion of business regions is primarily a municipal project, with limited national and regional interference, although the regional level has been accepted as a member of the business region in several cases. Table 1 summarises the three rounds of spatial restructurings rooted in glocalisation strategies in Danish spatial planning.

	Time	Soft space	Rationality
Glocalisation strategies round I	Early 1990s	The Øresund Region	Promoting the competitiveness of Copenhagen and the Øresund Region in the context of increasing European competition
Glocalisation strategies round II	Mid-2000s	Eastern Jutland	Promoting a second growth area in Denmark and functional urban region for strategic spatial planning.
Glocalisation strategies round III	Mid-2010s	Aarhus Business Region, Business Region North Denmark, City Region Funen, Greater Copenhagen	Promoting competitiveness and economic growth in and around the four biggest Danish cities.

Table 1: Spatial restructurings in Denmark from 1990-2016

4 THE EMERGENCE OF BUSINESS REGIONS IN DENMARK

In the third round of glocalisation strategies, a number of cross-municipal networks have emerged at the scale of city regions in Denmark. These networks identify themselves as 'business regions' or 'city regions', inspired by similar regional networks in the other European cities. The label of 'business regions' (in English) has specifically been adopted with inspiration from city-regional governance networks in other Nordic countries. In the general, the processes of constructing the Danish business regions seem to have been driven by an outward looking perspective, where inspiration has been taken from a range of city regions, including Amsterdam, Gothenburg, Hamburg, Manchester, Stavanger, Stockholm and Tampara. In this section, we examine the driving forces behind the construction of business regions around the four biggest cities in Denmark, as well as the nature of the strategy-making that take place in the auspices of these regions.

4.1 BUSINESS REGION AARHUS

Cross-municipal collaboration in the Aarhus city region has a longer genealogy. Since 1994, several municipalities, with the second largest Danish city Aarhus at the centre, have formally cooperated on business development activities. In 2010 Business Region Aarhus was formed, as it was recognised that there was limited local political support for the national government's initiative to facilitate cross-municipal cooperation at the scale of the larger urban region of Eastern Jutland (Olesen, 2011, Olesen and Richardson, 2011, 2012). Hence, the creation of Business Region Aarhus marked a significant shift in Danish spatial politics, in the sense that the new region was constructed from below with a point of departure in local political agendas (rather than national spatial strategies). Since, the business region has expanded significantly. Today, it is made up of 12 municipalities, amounting to a population of around 960,000 inhabitants (Business Region Aarhus, 2016b).

Business Region Aarhus defines itself as "a political community of interests" (Business Region Aarhus, 2016a: 3), and is perhaps best understood as a cross-municipal network organisation working for

promoting growth and economic development in the Aarhus city region. More specific the aim of the organisation is to improve the conditions for business development in the region, and increase the region's competitiveness and visibility in a national and international context. This is also the focal point in the region's most recent strategy from 2016, entitled 'Eastern Jutland is working for Denmark' (Business Region Aarhus, 2016a). In the strategy, the business region outlines a number of goals that it seeks to realise towards 2018. First and foremost, the region wants to strengthen its position as the main growth area in Denmark outside Greater Copenhagen. One of the key issues addressed in the strategy is the need to expand the region's existing motorway corridor from four to six lanes. The business region has in recent years acted as the main lobby platform for attracting national investments in transport infrastructure to the city region.

Furthermore, a substantial part of the strategy is dedicated to marketing and branding efforts in order to attract businesses, residents and tourists to the region. In addition, an English webpage (www.businessregionaarhus.com) has been set up, targeting international businesses, expats and a highly educated workforce seeking to relocate to the region.

4.2 BUSINESS REGION NORTH DENMARK

Business Region North Denmark was formally launched in 2015 and is made up of 11 municipalities and the North Denmark Region. The region has a total population of around 600,000 inhabitants and is based around the city of Aalborg, the fourth largest city in Denmark. A key motivation for establishing the business region was an analysis in 2014, by all municipalities in the region, showing that municipal expenses would increase significantly until 2020. This led the mayors and heads of municipal administrations, as well as the North Denmark Region, to agree that joint action had to be taken to increase the income of municipalities, primarily through attention to business life, attracting investments and talents, and job creation.

The main goal for Business Region North Denmark is to stimulate economic growth and attract jobs to the region. The region has identified five focus areas: tourism, infrastructure, international collaboration, business development and job creation, and qualified workforce. In comparison to the other business regions, greater emphasis is put on the tourism industry, as the region is more rural and its economy more dependent on tourism than the other business regions. Strategy-making in Business Region North Denmark has materialised in the document 'Strategy – and action plan 2015-2016' (Business Region North Denmark, 2015). The strategy sets out the main goals for the business region within the five focus areas outlined above. In addition, the document highlights the importance of promoting synergies between the municipalities' independent growth strategies and Region North Denmark's Growth and Development Strategy (the RGDS). The business region considers it to be of significant importance to function as a shared political platform for the public authorities in North Denmark, the municipalities and the region, and to attempt to lobby and influence national level policy-making with a unified voice, in particular concerning transport and IT infrastructures.

An important aspect related directly to spatial planning is the up-front attention to coordination between the business region, the region and its RGDS activity, and municipal spatial strategies. This was initiated in 2014, even before the official opening of the business region, and has already resulted in a first effort to produce a shared chapter on development in North Denmark, in both the first RGDS proposal and in all municipal spatial strategies (Hansen, forthcoming).

4.3 CITY REGION FUNEN

City Region Funen has a population of around 450,000 inhabitants and was established in 2013. It consists of 9 municipalities, including Odense, the third largest city in Denmark. Geographically, the region consists of the island of Funen, except the municipality of Middelfart, which for 8 historical reasons have been part of the cross-municipal organisation the Triangle Area for many years. City Region Funen was established on the background of Project Funen (2011-12) with the ambition to strengthen the position of the region in national spatial planning. Funen, and especially the city of Odense, claimed that it was largely ignored in national spatial policies, in particular in the 2006 and 2010 national planning reports. The aim of creating City Region Funen was to articulate Funen as a functional city region and to articulate Funen's

strategic position on Denmark's 'growthmap'. City Region Funen has therefore not adopted the business region label.

In City Region Funen's 'Strategy Funen 2014-2017', the overall focus is to create and strengthen the spatial frameworks necessary for growth (City Region Funen, 2014). Furthermore, the strategy explicitly mentions an ambition to create a coherent urban region, which has to be developed as an active part of the Greater Copenhagen region as well as becoming more tightly connected with West Denmark. More specifically, the region focusses on transport and digital infrastructures and on becoming a test laboratory for new green technologies and solutions for future global challenges (City Region Funen, 2014).

As was partly the case in North Denmark and Aarhus, City Region Funen has the objective to produce a shared plan strategy. However, the region is more ambitious and intends to let this strategy function above the municipal strategies. This special attention to spatial strategies is also made clear through the intention to focus on "principles for interaction and development between cities. Including development of a common strategy for a coherent development of the cities" (City Region Funen, 2014: 3). This is remarkable in a Danish context of business and city regions, as it seems to reinvoke, into regional policy, some of the planning mechanisms that were removed from the formal regions in 2007.

4.4 GREATER COPENHAGEN

'Greater Copenhagen' is perhaps best understood as the new marketing brand for the Øresund Region. Greater Copenhagen was launched in 2014 as a marketing platform for municipalities and regions on the Danish side of the Øresund Strait, who increasingly had become disappointed with the stagnating development of the Øresund Region. The brand of the Øresund Region was no longer perceived as adequate for promoting the region internationally (Olesen and Metzger, 2017). The Swedish partners were included in January 2016 and the organisation was formally renamed as 'the Greater Copenhagen and Skåne Committee' - in everyday speech 'Greater Copenhagen'.

In many ways, Greater Copenhagen has adopted the Øresund Region's vision of creating a friction-less cross-border region, in particular in terms of overcoming institutional and national borders. In comparison to the Øresund Region, less emphasis is put on region building and cultural integration. Instead, Greater Copenhagen has developed a more narrow policy agenda, focusing on generation of economic growth and attracting international businesses and talents to the region. In the first years of its existence, a particular effort has been dedicated to building up the brand of 9 'Greater Copenhagen'. The marketing efforts have been highly professional and streamlined both internally and externally. The Greater Copenhagen's webpage features for example a 'tool box' (in Danish only), where municipalities can download the logo, a design manual, photos and templates for marketing purposes. In terms of strategy-making, Greater Copenhagen is still in an early phase. Its vision towards 2020 'We are Greater Copenhagen' is a two-page flyer setting out the region's overall goal of being "an international node for investments and knowledge on the level as the most successful metropoles in Europe" in 2020 (Greater Copenhagen, 2016a: 1). Furthermore, the vision identifies internationalisation, attracting international businesses, investments, tourists and highly educated workforce as its main goals, alongside creating a coherent labour market and an attractive business climate. As part of its aspiration of becoming an international node, Greater Copenhagen has also prepared a transport charter, a policy document advocating for the need for substantial investments in transport infrastructure in the region, including the ongoing expansion of Copenhagen International Airport, high speed train connections via the future Fehmarn Belt link, and additional links across the Øresund Strait (Greater Copenhagen, 2016b). Table 2 summarises the main characteristcs of the four business and city regions.

	Business Region Aarhus	Business Region North Denmark	City Region Funen	Greater Copenhagen
Established	2010	2015	2013	2014
Number of municipalities	12	11 + Region North Jutland	9	46 (DK) and 33 (SE) + the Capital Region, Region Zealand and Region Skåne
Population	960,000	600,000	450,000	3,900,000
Key priorities / goals	- Main growth area outside Greater Copenhagen - Attracting businesses and residents in knowledge based industries - Investments in transport infrastructure - Tourism	- Tourism - Infrastructure - International collaboration - Business development and job creation - Qualified workforce	- Economic development and growth creation - Attracting residents - Transport infrastructure - Digital infrastructure - Green technologies and energy planning	- Marketing and branding - International node for investments and knowledge - Attracting investors, tourists, businesses and talents - Integrated labour market - Creating an attractive business environment
Strategic documents	Strategy 2016-2018	Strategy and action plan 2015-2016	Strategy Funen 2014-2017	'We are Greater Copenhagen' (vision 2020)

Table 2: The main characteristics of the four business and city regions

5 CONCLUSIONS

We interpret the emergence of business regions and city regions as the result of recent spatial restructurings and reterritorialisations associated with the institutionalisation of roll-with-it neoliberalisation in Danish spatial planning. The business regions can be understood as third generation glocalisation strategies involving rescalings of local-regional growth ambitions. The business regions are perhaps best understood as hybrids or assemblages, fusing municipal practices of business development and job creation, branding and marketing, transport infrastructure lobbying, and spatial development, and upscaling these practices to new regional soft spaces, with the aim of adding more political weight to local-regional growth agendas.

At the same time, we interpret the new business regions as important political spaces for representation of municipal interests in the continuous scalar struggle with the state and the formal regions about who has the power (and authority) to dictate regional development agendas. In this sense, the business regions represent municipal glocalisation strategies aiming at filling-in gaps at the regional scale, resulting from the Governance Reform in 2007. The business regions' cry for recognition in national spatial policy-making represent in this context an important symbolic milestone for the municipalities in the process of region building.

Following Allmendinger and Haughton (2009a), we interpret the business regions as important spaces for reworking the nature of Danish spatial planning. We understand these reworkings as being shaped by two dialectic processes of opening up and blurring the professional boundaries of planning, whilst at the same time narrowing the scope of planning to a few policy agendas centred around the creation of economic growth. The business regions constitute in many ways the institutionalisation of growth-oriented regional spatial planning, which has been in the making since the 2007 Governance Reform. In this sense, the business regions are symptomatic of a new Danish planning culture at the regional scale, centred around policy agendas of economic growth, job creation and business development (Hansen, forthcoming).

However, at the same time, the business regions also constitute important political spaces for transforming the Danish planning culture more widely, as spatial policy-making at the auspices of the business regions is intended to influence and structure spatial strategy-making at both national and local scales. In this sense, we can understand the business regions as vehicles for a neoliberalisation of strategic spatial planning across scales of governance (Olesen, 2012).

The struggles between contested planning rationalities reported from previous strategymaking experiments in soft spaces in Denmark (Olesen and Richardson, 2012) have been superseded by a new market based logic installing business development and job creation as 'sensible' and the 'necessary'

policy agendas (Haughton et al., 2013). We interpret this 'businessification' of spatial planning in Denmark as part of a wider development trend in society, in which spatial planning increasingly is being streamlined in the context of neoliberalisation and post-politics (Allmendinger and Haughton, 2012; Haughton et al., 2013).

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ID 1478 | THE ECONOMIC CRISIS MODELLING THE TERRITORIAL COHESION. THE FRENCH CASE

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1 INTRODUCTION

The economic and financial crisis since 2007 was a brake on economic growth, accompanied by a reduction in public and private investment. In addition, the European Union lost weight in a globalized economy. The development and application of the principle of competitiveness seeks to counteract the negative effects of the crisis. To this end, it moves not only to the economic and business sphere, but also to the territorial context. Competitive and synergistic territories are now the focus of numerous development and investment policies. However, other territories with characteristics that do not favour investment run the risk of falling behind in a process marked, above all, by innovation.

The Eighth Progress Report on economic, social, and territorial cohesion. The regional and urban dimension of the crisis was published in 2013, although it offers information only up to 2011. Its analysis covers aspects such as poverty, social exclusion, the labour market, migration, and regional convergence. From the main conclusions drawn from the study, we will highlight the following. First, the increase in regional divergence after a long period of convergence. They re-emphasize the central pentagon in front of the peripheries, and the urban versus the rural areas. Secondly, the cities present heterogeneous situations, better resisting the large capital cities, even though poverty and social exclusion rates increase within them. About EU Member States, between 2007 and 2011 the countries most affected by the crisis in terms of GDP and the labour market were Latvia, Greece, Ireland, Lithuania, Estonia, and Spain. Portugal, Denmark, Bulgaria, Hungary, Italy, and Slovenia also suffered a high impact of the crisis.

The crisis exacerbated some existing problems such as aging, unemployment or obsolete economies. The result has been the appearance of territories with little chance of being competitive. Nor should we forget

that the economic crisis is a brake on the cohesion process. Not only do differences between Member States increase, but there are strong divergences within Member States.

One possible solution is the real development of territorial cohesion, linking it to the creation of functional territories . This, according to Walsh (2016), should respond to the following objectives: 1. Favour And d) large metropolitan areas (1.5 million inhabitants and more). OECD (2013): Definition of functional urban areas (FUA) for the OECD metropolitan database. On this issue can also be seen Dijkstra L., Poelman H (2014). A harmonised definition of cities and rural areas: the new degree of urbanisation. Working papers, 01/2014, European Commission, economic development by strengthening vertical and horizontal (economic) relations; 2. Achieve efficiency in the provision of public services. Territorial planning would contribute to this by favouring the necessary synergies; 3. Reduce environmental impact; 4. Improve understanding of functional relationships, i.e., develop multilevel governance. In this case, a certain degree of economic autonomy would also be needed in the distribution of aid, and policy in decision-making. In all this, decentralization will play a fundamental role. In addition to management and decision-making capacity, sub-central levels of government, especially regions, will have to observe the principle of responsibility for designing the regional development of their territories.

This paper is structured as follows after this introduction: Section 2 reviews the principles governing the concept of territorial cohesion, not to mention the context of the current programming period (2014-2020) and the Europe 2020 strategy; Section 3 analyses the territorial distribution of competitiveness based on the Regional Competitiveness Index in its latest version of 2016; Section 4 includes the study of the French case and the third stage of the decentralization process, analysing the positive and negative aspects of it. The final section provides briefs conclusions, in addition to bibliographical references.

2 TERRITORIAL COHESION AND THE EUROPE 2020 STRATEGY

When we talk about territorial cohesion, it is necessary to consider a series of concepts that overlap and interrelate: polycentrism, territorial cooperation, multilevel governance, and an integrated approach to territorial fact. Territorial cohesion could be understood as the balanced distribution of human activities in the territory. It entails the transfer in terms of territory of the aim of sustainable and balanced development, assigned to the Union in Article 3 of the Lisbon Treaty:

> *The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance.*

Included after the reform promoted for the 2007-2013 programming period, the territorial dimension had been gradually gaining institutional recognition since the first mention in the Second Cohesion Report (2001). The amendment of the Treaty at the Lisbon Summit of 2007 - signed on 13 December - retains the previous references to territorial cohesion and incorporates new ones in Title XVII which becomes "Economic, social and territorial cohesion", as well as to include in Article , and within the objectives of the European Union, the promotion of social, economic, and territorial cohesion and solidarity between Member States. The territorial dimension is fundamental if cohesion is really to be achieved, and more in the context of an increasingly wide and diverse geographical area, as indicated by the Council in 2006: "it will help to develop sustainable communities and to prevent uneven regional development from reducing overall growth potential".

This incorporation of the territory into regional development strategies has had two main pillars: spatial development, which involves planning, cooperation and combating regional divergences through the Structural Funds; and a specific attention to cities on Urban (both the pilot project and the later Community Initiative). The incorporation of the territorial dimension into the cohesion process marked the start of the 2007-2013 programming period, reinforced by two key texts: The Territorial Agenda and the Leipzig Charter on Sustainable European Cities.

Territorial cohesion involves equal access for citizens and economic agents to services of general economic interest (SGEI), irrespective of the territory to which they belong (Article 16 of the Treaty).

However, the realization of territorial cohesion needs a new concept of governance that simplifies "the processes of regulation and intervention of the public powers and facilitates the decision-making of the other social agents, especially the economic ones" (eg Farinós, 2008: 12). The main objective will be, then, the effectiveness and efficiency of the public policies on the territory and its development. We are, therefore, also referring to the concept of planning (economic) or land-use planning. It has different characteristics both at Member State and Community level. In the French case, 'Aménagement du Territoire' would imply a social and fundamentally economic construction on the territory, linked to the idea of nation, while the concept at the community level would be more linked to cooperation of different actors - public and private - in all sectors, which would imply a decentralized and multilevel understanding (eg Faludi, 2005).

Apart from the differences mentioned, territorial planning has two good points of support: the principle of subsidiarity - that is, ensuring that a decision is taken at the closest level to the citizen - and political-economic decentralization, because it is imperative that subnational or sub-central governments, whether regional or local, have a certain normative and decision-making capacity.

About the current programming period, the territorial dimension of the Structural and Investment Funds is much more pronounced than in the previous period. The Common Strategic Framework (CSF) includes a section dealing with the main territorial problems. States are required to carry out an analysis of the potential and development capacity of the Territories. Likewise, it is expected that States will ensure the complementarity of European territorial cooperation programs with country-specific programs within the investment objective for growth and employment.

The latter relates to the Territorial Agency of the European Union 2020 which, in turn, takes into account both the V Report on economic, social and territorial cohesion and the Europe 2020 Strategy (E2020S). The achievement of the E2020S is linked to the "policy-making in the territories" (§1). Eurostat's report on socio-economic indicators3 shows that some of the objectives related to competitiveness factors are far from being achieved. Employment, expenditure on R&D, greenhouse gas emissions, early leavers from education

3 THE TERRITORIAL DISTRIBUTION OF COMPETITIVENESS

The concept of competitiveness is, basically, linked to urban areas. However, the economic and financial crisis of 2008 has shown that it is not the urban areas that have best behaved during and after the crisis. Dijskstra et al. (2015) have divided into four types of regions: rural, urban, intermediate, and rural urban near cities. It is these last two that have shown a better performance in the rate of economic growth and employment. Depending on their geographical location, the behaviour of these territories has also been different (see Table 1). In EU-15 economic growth followed the urban hierarchy during the first period of the crisis. Nonetheless, capital cities and non-metropolitan regions were the hardest hit. By contrast, in the EU-13 the medium and small metropolitan areas were the best performers, maintaining the growth rate and curbing the loss of jobs (Dijskstra et al., 2015).

Average annual real change in %	2000-2008			2008-2011		
	GDP per head growth =	Productivity growth +	Employment per head growth	GDP per head growth =	Productivity growth +	Employment per head growth
EU-15						
Capital metro	1.44	0.88	0.56	-0.79	0.34	-1.13
Second-tier metro	1.29	0.70	0.59	-0.76	0.15	-0.91
Smaller metro	1.20	0.67	0.53	-0.59	0.24	-0.83
Non-metro	1.15	0.75	0.40	-0.77	0.20	-0.98
Total	1.27	0.76	0.51	-0.70	0.24	-0.94
EU-13						
Capital metro	5.49	3.64	1.85	-0.26	1.04	-1.30
Second-tier metro	4.85	4.08	0.78	1.43	1.30	0.14
Smaller metro	3.66	3.56	0.09	1.38	1.17	0.21
Non-metro	4.47	4.45	0.02	0.57	1.70	-1.13
Total	4.88	4.31	0.56	0.66	1.44	-0.78

Table 1. GDP per head growth in EU metro regions 2000-2008 and 2008-2011
Source: Dijskstra *et al*. (2015: 946).

Figure 1 summarizes all the constituent elements of regional competitiveness in a pyramid scheme that is based on eight fundamental elements (environment, decision centres, social structure, regional culture, economic structure, innovative activity, regional accessibility, and skills of workforce. On this basis are the five axes that will show the competitiveness of a territory: research and technological development, SME development, FDI activity, infrastructure and human capital, and institutions and social capital. The goal, at the top of the pyramid, is to maintain standards of quality of life, namely the welfare state.

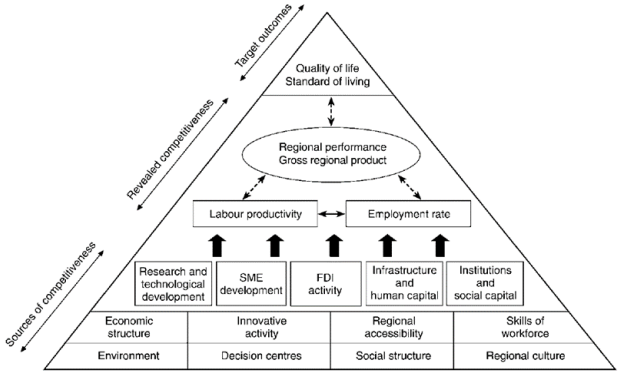


Figure 1. Pyramid model of regional competitiveness
Source: Gardiner *et al.* (2004: 1048).

This section is based on the regional competitiveness indices carried out in 2010, 2013 and above all in the last edition of 2016, which include 262 regions. As we have already mentioned, competitiveness has become a fundamental objective of cohesion policy. It is also part of the Europe 2020 Strategy. The underlying idea behind the competitiveness value is that this factor can reduce interterritorial differences. Thus, after the existence of the "blue banana" in the 90's of the last century, the RCI seem to confirm the configuration of networks of cities that contribute to organize the territory around them. We would be facing competitive territories that distribute population and resources to those who are not. However, on the Map 3 showing the evolution of the index over the three reports made, the existence of centres and peripheries is clear.

The development of the Regional Competitiveness Index (RCI) raises two important questions about the territory: one is the unit on which to work, being the most practical option to resort to NUTS (Nomenclature of Statistical Territorial Units); And the other is the choice of regions, since in several notable cases such as Greater London, administrative regions − linked to statistical units and sub-central levels − are intertwined with functional regions, more linked to the very concept of competitiveness. Another aspect to consider is territorial diversity in urban and rural areas, as well as intermediate areas, in the sense that creativity linked to innovation and therefore to competitiveness seems to be related to urban areas, be they cities or the so-called region-cities. The following figure (Figure 2) shows the key elements of territorial development, showing how the economic development policy − supported by a strong emergence of the city-region − is one of the cornerstones of the triangle that revolves around the territory and is completed by economic competitiveness and creativity, all elements interrelated.

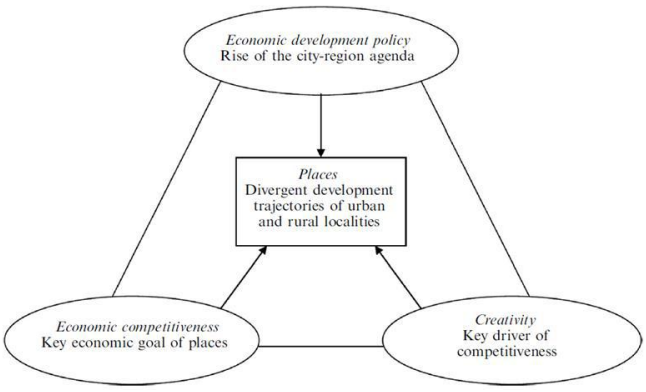


Figure 2. Conceptual framework for territorial development
Source: Huggins and Clifton (2011: 1343).

If we review the pillars of each of the factors at the regional level in the case of France, we will obtain an image of the development of each of them in the configuration of competitiveness. Thus, with regard to institutions, while France is in 11th place, when descending to the regional scope Brittany is the best situated territory followed by Aquitaine. In the case of macroeconomic stability, only the state level is possible, with France occupying the 16th position. Infrastructure Île de France ranks first, followed by Nord-Pas-de-Calais and Alsace. At the other end are Corse, Limousin and Brittany. In the pillar of health, Île de France returns to occupy the first place, followed at distance by Rhône-Alpes. Finally, basic education is analysed only at the state level and France ranks 16th.

Region	Institutions	Infrastructures	Health
Île de France	120	14	29
Champagne-Ardenne	143	71	187
Picardie	121	35	196
Haute-Normandie	155	81	182
Centre	118	83	172
Basse-Normandie	129	148	180
Bourgogne	132	93	183
Nord-Pas-de-Calais	131	23	197
Lorraine	145	88	167
Alsace	133	46	121
Franche-Comté	128	98	173
Pays de la Loire	139	116	162
Bretagne	48	175	193
Poitou-Charantes	91	150	164
Aquitaine	75	158	155
Midi-Pyrénées	136	155	36
Limousin	117	203	179
Rhône-Alpes	89	86	81
Auvergne	125	172	170
Languedoc-Roussillon	134	142	184
Provence-Alpes-Côte d'Azur	149	106	140
Corse	164	240	166

Table 1. Basic dimension. Regional ranking, 2013

With regard to efficient factors, higher education and lifelong learning have a better situation in Île de France and Alsace, while Corse and Bourgogne occupy the last positions of metropolitan France. Île de France, Limousin and Aquitaine are at the top of the ranking in terms of labour market efficiency, while Languedoc-Roussillon, Picardie and Provence-Alpes-Côte d'Azur are last. In the case of market size, the best situated region is Île de France, followed at considerable distance by Picardie and Alsace.

Region	Higher education and lifelong learning	Labour market efficiency	Market size
Île de France	49	66	2
Champagne-Ardenne	162	141	135
Picardie	146	153	58
Haute-Normandie	151	143	82
Centre	188	109	107
Basse-Normandie	199	107	144
Bourgogne	217	132	136
Nord-Pas-de-Calais	123	187	81
Lorraine	137	144	112
Alsace	82	111	69
Franche-Comté	155	119	129
Pays de la Loire	141	118	127
Bretagne	117	62	142
Poitou-Charantes	206	100	147
Aquitaine	184	98	139
Midi-Pyrénées	145	110	148
Limousin	181	76	163
Rhône-Alpes	144	117	95
Auvergne	200	126	145
Languedoc-Roussillon	167	174	149
Provence-Alpes-Côte d'Azur	153	149	116
Corse	247	133	215

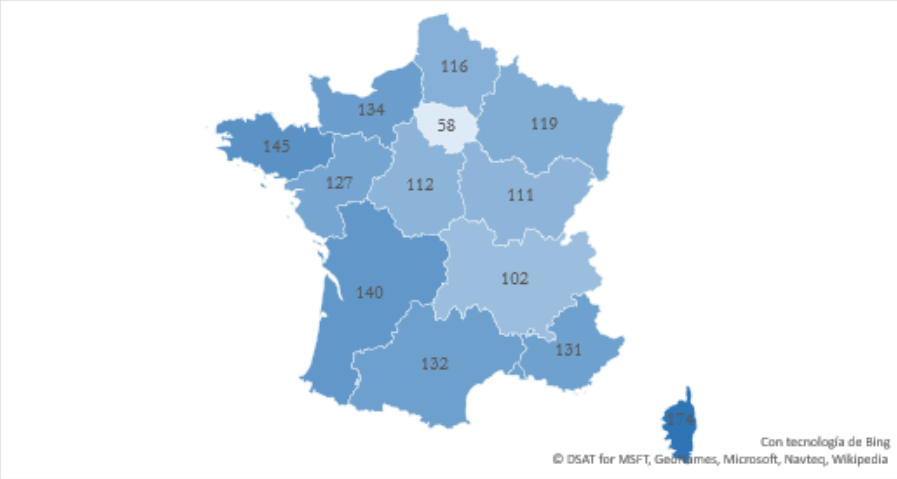
Table 2. Efficiency dimension. Regional ranking, 2013

In the last group of factors, technological readiness has two sub-pillars corresponding to the national and regional levels. The first one covers the business environment, while the second deals with variables related to personal use (individuals and households) of new technologies. While at the national level France is at an intermediate level, at regional level the differences between Île de France - followed in this case by Aquitaine, Midi-Pyrenees and Limousin - and the rest of the regions, with Nord-Pas-de-Calais in the worst place. The pillar of business sophistication highlights the situation of Île de France, Rhône-Alpes and Provence-Alpes-Côte d'Azur are the best located, while Picardie, Basse-Normandie and Auvergne occupy the last positions. Finally, the pillar of innovation has three key centres: Île de France, Midi-Pyrenées and Rhône-Alpes. In this case at the other end is Corse, Poitou-Charantes and Bourgogne.

Region	Technological readiness	Bussiness sophistication	Innovation
Île de France	103	3	13
Champagne-Ardenne	127	164	201
Picardie	127	132	158
Haute-Normandie	127	101	100
Centre	127	75	121
Basse-Normandie	127	126	146
Bourgogne	127	140	173
Nord-Pas-de-Calais	142	63	154
Lorraine	123	115	149
Alsace	123	87	70
Franche-Comté	123	136	116
Pays de la Loire	133	67	131
Bretagne	133	90	80
Poitou-Charantes	133	95	174
Aquitaine	109	70	92
Midi-Pyrénées	109	55	16
Limousin	109	138	162
Rhône-Alpes	137	40	41
Auvergne	137	125	127
Languedoc-Roussillon	118	69	124
Provence-Alpes-Côte d'Azur	118	44	51
Corse	118	180	227

Table 3. Innovation dimension. Regional ranking, 2013

The following map shows the 2016 competitiveness index applied to the new regions. The data of Île-de-France make a marked difference with respect to the averages of the metropolitan territory. The indicated indices respond to the average of the metropolitan territory. The indicated indices respond to the average of the old regions .



Map 1. Distribution of the Regional Competitiveness Index. France, 2016
Source: Annoni, *et al.* (2017). Annexes.
http://ec.europa.eu/regional_policy/en/information/maps/regional_competitiveness

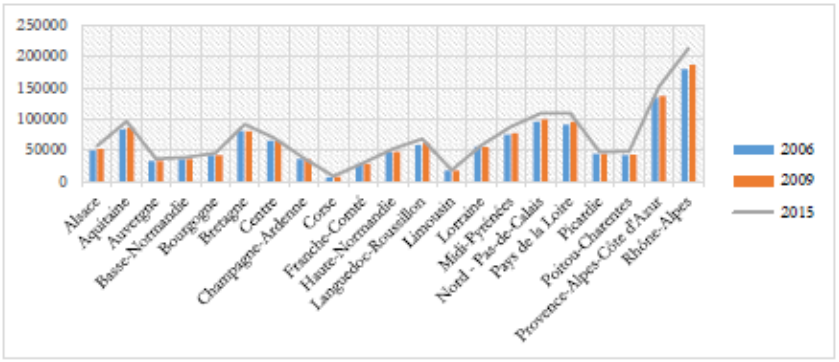
The diverse levels of development that the factors analysed show us their relationship with the French decentralization process. Territorial disparities respond to several factors, including population, employment, 'metropolization' policy, and innovation and competitiveness clusters, among others.

4 FRANCE AND THE DECENTRALIZATION PROCESS

In a broad legislative framework, Law No. 2015-991 of August 7, 2015 on a new territorial organization of the Republic (NOTRe) has consolidated the region as a territorial collectivity (Constitutional reform 2003) with broad powers: to promote economic, social, sanitary, cultural and scientific development of the region, support access to housing and improve housing conditions, support municipal policy and urban renewal, and promote education and management policies and equality of their territories, as well as ensure the preservation of their identity and the promotion of regional languages while respecting the integrity, autonomy and powers of departments and municipalities.

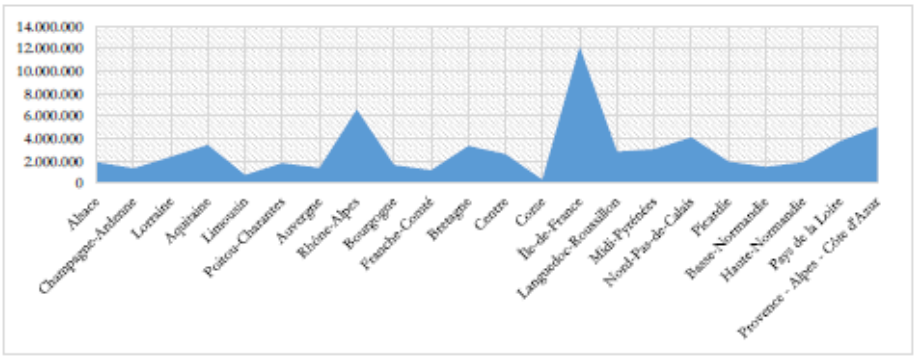
In addition, a process of fusion of municipalities, started in the 90's of last century, has accelerated, which has changed the map of the country at the local level. At present, the following groups are distinguished: a) 196 agglomeration communities including 4,610 municipalities and accommodating 21,813,717 inhabitants. b) 11 urban communities that group to 359 municipalities, and total 2,534,713 inhabitants. c) 13 metropoli that include 676 municipalities and a population that ascends to 15,275,673 inhabitants.

The reduction of 22 to 13 regions in metropolitan France is a consequence of the entry into force - in January 2016 following the election of the regional councils - of the Law of 16 January 2015. The modification of the regional map has resulted in the apparent reduction of interregional differences in both demographic and economic terms from the statistical point of view. However, GDP data (Graph 1) show the regional differences as well as the territories with the highest economic growth. Île-de-France, not included in the graph, is a third of the national total.



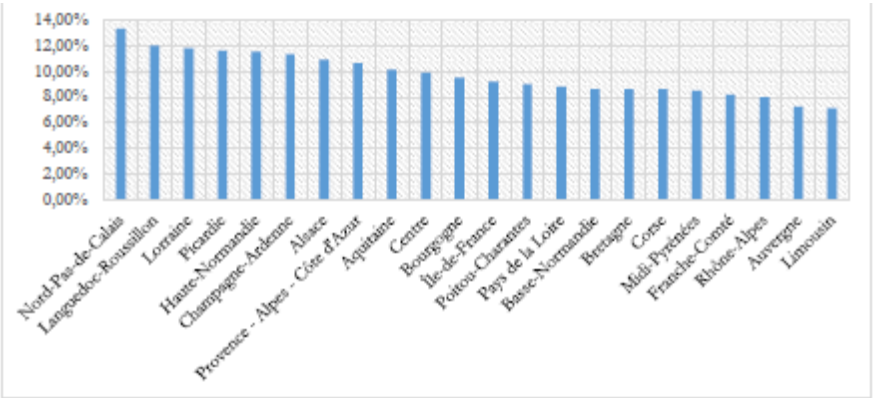
Graph 1. Gross domestic product at current market prices by region, 2006-2015
Source: Eurostat

Brière and Koumarians (2015) argue that the new regions are more homogeneous in demographic terms, since they combine territories aged with others that maintain their dynamic of natural growth or by migratory flows. However, there is also an unequal distribution of this population (Graph 2) favoured both by a process of 'metropolization' - which implies the increase of the weight of large cities by increasing population, the density of communications networks and the concentration of organisms of all kinds - as well as by the attraction of employment poles that include agglomerations and urban areas.



Graph 2. Population at regional level, 2016
Fuente: Insee.

We have already mentioned that one of the main elements of territorial inequality is the unemployment rate. The latest data published by Eurostat in April 2017 indicate a national total of 10.1% for 2016 (Graph 3). Above this average are the following regions: Champagne-Ardenne, Picardie, Haute-Normandie, Nord-Pas de Calais, Lorraine, Alsace, Languedoc-Roussillon, and Provence-Alpes-Côte d'Azur. The causes include obsolete economic sectors, the absence of skilled labour or the lack of innovative sectors that create jobs.



Graph 3. Regional Unemployment Rate, 2016
Source: Eurostat.

Given the attraction of urban areas, the enlargement of the regions' perimeter implies – as Lajudie (2014) points out - that each one has a metropolis (M) or an urban community (UC) , reinforcing its competences, especially in terms of transport and economic development, by strengthening relations between the metropolises and their regions, adapting infrastructures, allowing mobility and, in general, favouring the diffusion of growth from dynamic urban centres, is a way of ensuring the prosperity of all the territories. This also contributes the existing 68 competitiveness clusters (April 2017). Its main objective is to develop the competitiveness of the French economy by combining firms, training centres and public and private research units in a given territory (eg Hussler et al., 2013). However, their mapping on the regional level shows an uneven distribution of the metropolis , as shown in the following map. Even so, it should not be forgotten that some of these clusters include secondary areas besides the main one, contributing to the dynamization of a wider territory.

Map 2. Distribution of competitiveness clusters
Source: Commissariat général à l'égalité des territoires (CGET) et Direction générale des entreprises (DGE).

5 CONCLUSIONS

The question is whether the economic crisis has shaped new territories that not only favour sustainable economic development but also have a long-term continuity. That is, we are not facing a basically functional restructuring that ceases to be if the socio-economic circumstances change.

The creation of the 13 regions in France, following the principles of spatial planning that contributes to the reduction of territorial disparities, demonstrates the need to be accompanied by a decentralization process. If, as Pasquier and Kernalegenn (2017) argue, the main element of legitimization of the reforms carried out is good governance, it will be necessary for the regions to be able to decide on incomes and expenses that meet the needs of their territories.

Despite the positive effects of a supposed greater economic coherence and a better decision-making response, Amabile et al. (2015) emphasize in their conclusions the following aspects: firstly, the possibility that some departments may remain in a similar situation, i.e. isolated without strong economic relations neither within their new region nor with their neighbours; Secondly, no matter what the new regional capital, new imbalances will be created; And, finally, it may be the case that the functional area of some territories change region, increasing relations with external spaces to the new region.

The analysis of the factors that have been considered for the elaboration of the competitiveness index shows a great divergence between the old French regions, being above the average Parisian region in most of the factors. However, it is a good guide to design regional policies that respond to the needs of each territory. These policies based on horizontal transfers or fiscal measures should ensure redistribution. We are talking about ensuring a fairer distribution of economic, social, and territorial character. The main problem in the French case is that, so far, has not been able to speak of effective fiscal decentralization, since reliance on state transfers is very high.

As Faludi (2013: 1304) states, "Territorial cohesion is thus said to promote a better balance between competitiveness and equity by 'spatialising' the European model of society." This may well be the aim of the newly stablished (May 2017) 'Ministère de la cohésion des territorires', whose subjects of work include the city and territorial planning.

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ID 1544 | PLANNING FOR A SUSTAINABLE SHORELINE DEVELOPMENT PERSPECTIVES ON NORWEGIAN COASTAL PLANNING

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1 INTRODUCTION

Norway has a long coastline, around 103.000 kilometers. With a population of 5,2 millions, this leaves every Norwegian – young and old – with an average of 20 meter coastline. Still, the competition over space along the shoreline is becoming more severe every day (see for instance Hersoug 2013:159). In Norway, the coastal shoreline constitutes – as in most other countries – a very valuable and important, but at the same time a vulnerable area, and a large number of stakeholder groups and actors live, work and interact in the coastal shoreline areas.

Over the past decades, significant changes have emerged in terms of development opportunities and perspectives and regarding the management of the coastal area. While shoreline planning traditionally had a focus on preservation and adjustment to traditional economic activities, mainly fishing, the situation has changed drastically. Today, the shoreline planning also has to incorporate and integrate a number of new opportunities and challenges, such as aquaculture, the tourist industry, the construction of new recreational houses, etc. However, a considerable part of the developmental changes along the coast are not only a result of presented or approved plans, but are to a large extent a result of incremental local changes and adjustments. In a large number of municipalities, developmental changes in accordance with approved plans appear to be overruled by approval by exemption clauses (or dispensations – in Norwegian: dispensasjoner). In a sense, one may talk about this as an exemption based development of the coastal shoreline, and not as a plan-oriented development approach.

Even in the face of rapid changing demographic, social, environmental and economic realities, where the need for (long-term, medium-term and short-term) planning becomes more urgent and important, the planning focus appears to continue this practice, where exemptions (dispensations) often tend to overrule existing plans.

The municipality is the principal planning authority in Norway. However, the local level has to accommodate to national signals and guidelines. Regional and state authorities can also interfere or object to elements in the local plan if they feel that it violates national regulations or intentions. In section 2, we make a brief presentation of the Norwegian planning system.

Our study draws upon case studies from municipalities at the west coast of Norway, in the county of Hordaland (presented in section 3 in this paper).

The national legislation and the planning system is in many ways challenged by local actors, who often want to have more room and opportunities for development initiatives, and thus want a more flexible system based on local preferences and decisions. In section 4, we discuss the different approaches from a discourse analytical perspective. In section 5, we present local attitudes and viewpoints within the discourse perspective.

At the end of the paper (section 6), we argue that, in order to improve the Norwegian coastal shoreline planning, there is a need for a stronger coupling of, or interconnection between, the nationally stated objectives and goals, on the one hand, and the local level perceptions and practices, on the other.

2 THE NORWEGIAN PLANNING SYSTEM AND MANAGEMENT OF THE COASTAL ZONE

The building and planning regulations for the coastal zone of Norway date back to the 1950s. In 1954, a temporary act was passed in Parliament, and here building development in certain coastal areas were prohibited. About a decade later, in 1965, a new act introduced the principle of banning of building along the coastal shoreline for the whole country. A new significant change came in 1986, when the regulations for the coastal zone were integrated in the Planning and Building Act (PBA), and this came into force nationwide.

Finally, the PBA was further modernized in the first decade of the 21 century, and a new PBA came into force in 2009. The first paragraph (1-1) in the new PBA states that the act shall promote sustainable development for the benefit of all individuals, for the society and for future generations. Somewhat later in the same paragraph (1-8) the significance of the coastal zone is emphasized. According to paragraph 1-8, development in the coastal zone – defined as the area within the first 100 meters from the shoreline – is prohibited. In this zone, closest to the sea, special concern shall be given to nature, culture and outdoor activities, as well as to other public interests.

The 2009-Act in many ways marks a milestone in the management of the coastal zone: In opposition to the "old" act, from 1986, the coastal zone regulations are now presented already in the opening paragraph. Furthermore, the regulations are stricter than in the previous acts: Possibilities for exemptions (or dispensations) are, for instance, reduced (Harvold et al 2015:15).

At the same time, however, the authorities have opened up for some differentiation regarding the planning regulations and development along the coast. A specific National Policy Guideline (NPG) came into force in 2011. The NPG "for a differentiated management for the shoreline along the sea" divides the Norwegian shoreline into three management zones. Zone 1, around the Oslo fjord (with the highest population density in Norway and the strongest development pressure), allows for very limited development. In Zone 2, primarily along the southern tip of Norway (Sørlandet) as well as around some of the larger urban areas in other parts of the country, there are some options for some activity. Whereas in Zone 3, the rest of the country, there are some openings for a somewhat more liberal practice.

Still, however, the principle of a building ban along the coastal shoreline, linked to § 1-8 in the Planning and Building Act, applies for the whole country. However, the message of the National Policy Guidelines appears to be that exemptions (dispensations) from the law regulations may to a certain extent be more acceptable in zone 2 and 3, compared to within zone 1. Moreover, some kind of economic activities (tourism, fishery etc.) might face less obstacles in establishing and developing in zone 2, and not least in zone 3.

3 METHOD AND CASE STUDIES

This paper is based on a four-year (2016-19) research project funded by the Norwegian Research Council. A key element in the project is to study the development in the coastal zone in two different parts (counties) of Norway; Vestfold in the Oslofjord region (in the south-eastern part of Norway) and Hordaland on the western coast of the country. In this paper, we focus on the development in the coastal zone of Hordaland.

Our study is based on analyzes of official documents, like plans, papers to local and county councils and not least interviews with public officers at the local and regional level. At the regional level, we have interviewed representatives of the County Council and the County Governor's office. The County Council represents the municipalities at the county level and is a political body. The County Council Office provides guidance to the municipalities, i.a. on planning issues. The County Council is also responsible for preparing the regional plan. Of particular interest in this context is a draft of a regional coastal plan made for parts of Hordaland county, prepared by the County Council ("Regional kystsoneplan for Sunnhordaland og Ytre Hardanger"). The County Governor is the state representative at regional level, and it is the duty of this office to ensure implementation of national policy objectives.

The municipality is the formal planning authority for the entire territory, including the coastline and out to one nautical mile from the shoreline. All local councils are responsible for preparing a municipal plan, and it is compulsory that they include a spatial part. These plans have to be revised every four years. Furthermore, the local councils are responsible for preparing legally binding regulatory plans. One of the four municipalities in our study is located on the mainland, but with a considerable coastline. The three other municipalities are island communities. All four municipalities consider the management of the coastal zone area, as a very important local issue. In terms of population, the municipalities are small or medium in size. They have a mixture of primary, secondary and tertiary industry, but are more reliant on the fishing (and related) industry than the average Norwegian community.

Hordaland is in many respects an interesting county when it comes to the management of the coastal zone. According to the National Policy Guideline described in section 2 in this paper, The municipalities in Hordaland have partly been defined as belonging to zone 2 (marked with orange colour in the map) and partly in zone 3 (yellow in the map

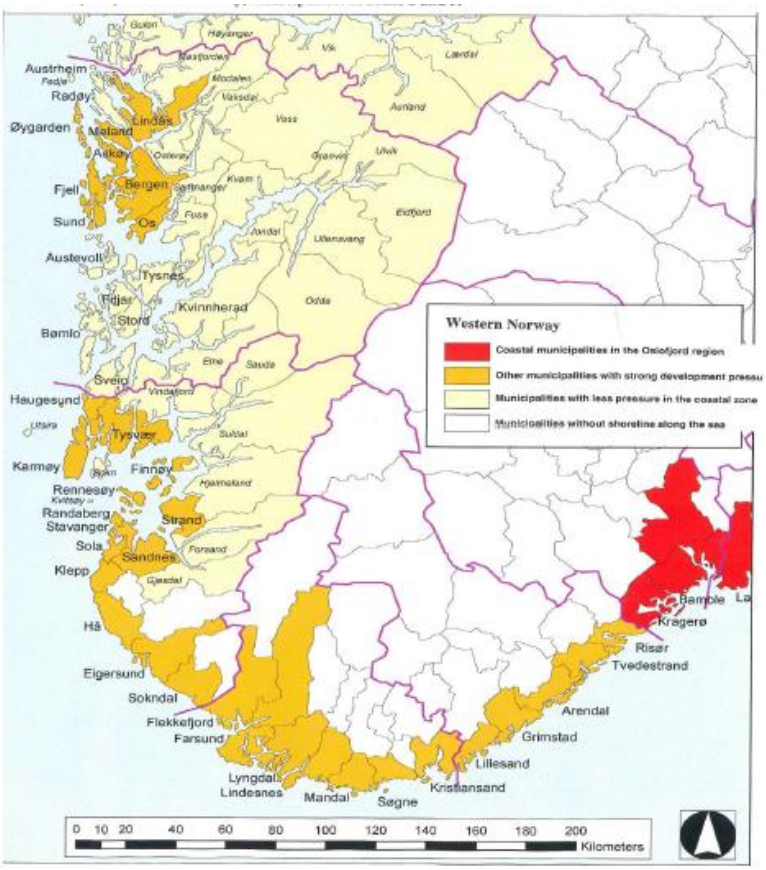

Figure 1: Map of Western (and Southern) Norway, with zones for shoreline management indicated.

The map (Figure 1), illustrates the situation. Hordaland is situated in the northern part of the map, covering the coastline from the municipality of Sveio (south in Hordaland) to the municipality of Austrheim (to the north of Hordaland). Our interviews include conversations with planners both in zone 2 and 3 municipalities in Hordaland.

As depicted in the map, the southern tip of Norway (Sørlandet) belongs to zone 2 of the NPG system. We can also see part of eastern Norway, where the coastal communities are marked read (zone 1, with the strictest practice). White coloured municipalities are communities without coastline towards the sea.

4 DISCOURSE ANALYSIS AND COASTAL PLANNING

4.1 DISCOURSE ANALYSIS

Knowledge can be generated and expressed in different verbal discourses and ways: Verbal discourses – what people talk about and how they are talking about it – are culturally and socially constructed. At the same time, it can be argued that the discourse practice refers to something outside itself, to some kind of objects (see for instance Gotaas 1999:9). A much-referred Foucault quotation summarizes this position. Discourse practices may be defined as:

> *"…practices that systematically form the objects of which they speak" (Foucault 1972:49, quoted from Gotaas ibid).*

This approach has been used to analyze different understandings of a problem or an interaction. Basically, one may find different discourses in all kind of discussions or debates. The perspective on environmental problems or challenges may differ from country to country (Kaarhus 1999), just as approaches for, for example traffic and communication, can differ from city to city (Koglin 2015).

In planning processes, there is a strong discourse pluralism, and in these processes there is often very much at stake for the participants. In a Norwegian study, Stokke and Skogheim (2007) found that different discourses were clearly apparent in the coastal zone. When local communities took a strong standing on either development or protection of the coastline, Stokke and Skogheim found a high degree of "discourse pluralism" (ibid:34).

In the Norwegian coastal planning, we observe at least two "dominant" and different discourses. One can be said to be the one inspired by the ideology and the intention of the Planning and Building Act. The way national authorities present the message of this approaches in planning is in many ways "top-down". We describe the ideas of the national Planning and Building Act in the next paragraph (4.2). But there is also, at least, one other way to look at the planning system, namely a "bottom up" approach. In section 5, we will present how local actors in Hordaland look upon the coastal management and development.

4.2 MANAGEMENT OF THE COASTAL ZONE, ACCORDING TO THE PLANNING AND BUILDING ACT

The planning in the coastal zone has to operate within the framework provided by the Planning and Building Act (PBA), depicted in section 2 of this paper. As mentioned, paragraph 1-8 in the act, states that the area within the 100-meter belt from the shoreline is not to be touched: It is a clear prohibition of development that in principle applies for the whole 100-meter area:

"Within the 100 meter belt along the shoreline special considerations shall be given to nature and culture environment, outdoor activities landscape and other public interests" (as the first part of paragraph 1-8 in PBA states).

However, there are some exemptions: for example for the development of transport needs; boathouses; communication lines along the coast, etc. Still, in general, there is a ban when it comes to development of built environment in the 100-meter coastline belt. In a planning perspective, the coastline is not to be touched: Primarily it is an area for recreation and outdoor activities, as well as for the traditional fishing industry.

The coastal shoreline should thus be planned and regulated through the Planning and Building Act. Plans should be made at the local level. If there is a need for exemptions (or dispensations), this ought to be regulated through a hierarchical system of dispensations. The main philosophy is to preserve the coastline as it is. The key elements in the management of the coastal zone embedded in the Planning and Building Act is summarized in Table 1 below.

Key elements	Management approach
General view of coastal zone	Area left for recreation and/or activities clearly defined to the coastline according to tradition (such as fishing, etc.)
Means of control	National legislation and law for planning: Applications for exemptions (or dispensations) will have to be considered and handled within a hierarchical system
Goals	Preserve the coastline as it is. When exemptions (dispensations) is considered, certain criteria and standards should be applied and given priority (impacts or consequences for the public, accessibility to the shoreline, etc.).

Table 1: Management of the coastal zone, according to the Planning and building act

In the next paragraph, we present local perceptions and perspectives on the management and the development of the coastal zone.

5 LOCAL PERSPECTIVE ON COASTAL MANAGEMENT

5.1 GENERAL VIEW ON COASTAL ZONE

In daily life we see that actors at the local level often have a perspective that challenges the views described in the national formed planning and building act. Many politicians and private developers and business enterprises located at – or close to – the coastal zone want to explore and utilize the possibilities and opportunities that can be found in this area. This relates to a number of sectors and industries. It can be traditional industries as well as new types of business enterprises: housing; cabins; tourism; transport; agriculture; fishing; aquaculture; a series of other types of industries; etc.

One actor from a relatively small island municipality in Hordaland pointed out:

> *"In general I would say that the state, both nationally and regionally, are too concerned about protection. Here, in our municipality, we have strong private enterprises who want to develop the local community. For them it appears as if the state primarily want to make plans for protection – and not plans for development."*

A public officer in another municipality was somewhat more positive to the role of the regional state:

> *"The regional level follow our local planning, fairly "tight". Still, we have a good dialogue. Regional state often have very specific points of view, regarding where development may – or may not – take place. Therefore, the reactions from the County Governor's office seldom come as a surprise, even though they do not concur with our views."*

The last quotation indicates that the dialogue between the state representatives and the municipality can function fairly well. At the same time, both quotations indicate that the state authorities have a somewhat different perspective on what the focus should be, when it comes to coastal management. Whereas state authorities appear to embrace a protection perspective, the local interest groups and stakeholders talk about natural resources and values in terms of how these resources can be utilized for employment, income and further development of the local community. In this perspective, the relevant local actors predominantly look for possibilities. The coastal zone is an arena for new activities, both in terms of tourism and new forms of industry that takes advantage of the possibilities along the coastline.

5.2 WHO SHALL DECIDE?

In principle, the municipality is the key formal actor in local planning in Norway. At the same time, the state authorities can interfere or object to a plan, and thus stop the local process. Our interviews with local actors, indicate that there is a strong local interest and awareness related to the coastal zone. One informant stated that:

> *"Our culture is based on life in the coastal zone. Even farmers, who primarily is concerned with agriculture, has a boathouse and a boat. This is what we have grown up with in generations – back to the Viking age. In this tradition, it is self-evident that everyone should have access to the sea."*

Several of our informants emphasized that local knowledge should be very important in the management of the coastal zone. At the same time, one planner pointed out that things were about to change:

> *"We have to realize that the coastal zone is a limited resource. If everybody shall have access to the sea, then a new planning approach is necessary, especially in the urban areas. In urban areas it is necessary to accommodate for public access to the sea."*

Even though many of our informants observed a society under considerable stress and change, the main message appears to be that the local actors have the best understanding of the local challenges, and that they therefore are best qualified to assess what should be done along the local coastline. There also seemed to be differences between different communities. Municipalities with a small population and little pressure for new building activities, had other perspectives than larger communities with significant developments. In a large municipality with considerable growth, the interviewed planner stated that:

> *"In our municipality we have quite a different perspective on new developments compared with smaller communities: We focus much more on high density developments than smaller municipalities. Therefore, the development of apartment complexes is here considered as an alternative to detached houses."*

In other words, there are differences between the local communities. At the same time there appears to be a consensus among our local informants that there should be a stronger emphasis on local autonomy when it comes to the management of the coastal shoreline. As one of our informants pointed out:

> *"Local developers sometimes react very strongly to state authorities decisions. In the developer's eye, state authorities only focus on protection, not on local development."*

5.3 WHAT SHOULD BE THE MAIN GOAL WITH COASTAL MANAGEMENT?

The main goal for a local coastal management is hard to summarize based upon the interviews we have performed. Still, a main argument appears to be that local actors are better judges of what should be a "good" local development, than central authorities.

Certainly, the problem appears not to be a lack of plans, as seen in the local perspective. As one planner pointed out:

> *"In our region we both have a regional plan and an inter-municipal plan, that both have been sent on hearing. I very much doubt that the plans ever will be adopted. Especially, I see problems with the inter-municipal plan. Still, some ideas from the plans may be useful, like some basic data and information presented in the plans and some of the thoughts about common guidelines for management of the coastal zone, suggested in the plans."*

A common denominator between the local actors appears to be that local analysis should be given more weight. This analysis is not always easy to put into a conventional plan. Still, local focus is both on development and protection. But, as one of our informants pointed out:

> *"Protection and development must be seen in a local context."*

The main philosophy behind this approach seems to be to encourage new activities and new employment and development in rural areas along the coastline, by giving more emphasis and focus to the needs at the local level. Therefore, local development, initiated locally, should be given predominance over formal rules and regulations initiated at the national level.

5.4 A LETTER TO THE MINISTER

The whole idea behind shoreline development in a multifunctional local context, is well summarized in a letter written by nine mayors in southern Hordaland (Sunnhordaland) to the Minister of internal affairs in 2014. The nine mayors see problems with the present management of the coastal shoreline in their municipalities. They point out that national statistics are inadequate for southern Hordaland: part of their coastline is available for the public, despite of what the national statistics indicate. They also point out that the national prohibition on building in the first hundred meter from the shoreline (based on § 1-8 in the planning and building act, see also section 2 in this paper) is not suited for the situation in their local communities. They therefore asked the minister to repeal the building prohibition for their region. As they point out in the letter:

> *"If one really would like to do a groundbreaking work, when it comes to development of democracy – and create motivation for local electorates – an approach should be to let the local coastal zone be management by local democracy."*

In the letter, the majors ask the minister to develop a local pilot project where the region – with all nine municipalities – should be given right to manage the coastal zone independent from national control. However, in a letter from the minister, the suggestion was turned down. Still, the letter from the mayors illustrate the difference between local and national perspective on coastal zone management.

5.5 A MULTIFUNCTIONAL LOCAL COASTAL MANAGEMENT

The key elements in this local perspective is a multifunctional approach embedded in the management of the coastal zone area is summarized in Table 2, below.

Key elements	Management approach
General view of the coastal zone	Area available for new activities: New forms for recreation, new housing (both recreational and residential) activities and new types of enterprises
Means of control	Decisions should be taken at the LOCAL level. The local level is most important, and the coastal zone should be regarded as a local resource
Goals	Encourage new activities and new development and employment in rural areas, by focusing on the needs at the local level. Local development is more important than formal and hierarchical rules initiated at national level

Table 2: Management of the coastal zone, according to multipurpose politics

As Table 2 indicates, the coastal zone should – in a local perspective – not only be a multipurpose area. Some of it can be protected and used for recreational purposes only. However, at the same time there are a lot of other purposes that may be relevant, like the establishment of areas for new residential homes, and areas for development of new types of enterprises, that are relevant along the coastline. A key element is that decisions regarding the shoreline should be taken at the local level. If local actors think that one should encourage new activities along the shoreline, no central regulations should hinder such developments.

6 CONCLUSION

We see two quite distinct discourses in Norwegian shoreline management, one inspired by the Planning and building act, and one inspired by a more local multipurpose perspective (see also Table 3).

Key elements	"Central": Planning and building act	"Local": Multipurpose approach
General view of coastal zone	Area left for recreation and/or activities clearly defined to the coastline according to tradition (fishing etc.)	Area available for new activities: New forms for recreation, new housing (both recreational and residential) activities and new types of enterprises
Means of control	The law-system and planning: A system of hierarchy will have to consider applications for dispensations	Decision should be taken locally, and the coastal zone should be regarded as a local resource
Goals	Preserve the coastline as it is. When dispensations is under considerations, certain standards should be given priority (like consequences for the public, accessibility for the public etc.).	Encourage to new activities and new employment in rural areas, by focusing on the needs at the local level. Local development is more important than formal and hierarchical rules set up on the national level

Table 3: Management of the coastal zone, two approaches

The actual adjustments in the coastal zone management today are inspired by both perspectives: on the one hand, there is an acceptance of the significance of protections of – at least – some parts of the coastal shoreline. On the other hand, there is a perception and understanding of the necessity of local co-determination and involvement in the land use planning. As others have pointed out, there is thus a flowing transition between politics and law (Schultz and Myklebust 2014). In the coastal zone planning and management in Hordaland, we see that different interests are played out in local discussions and decision-making. The results in each case are not always given beforehand.

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ID 1553 | SPATIAL PLANNING POLICIES AND THE INTEGRATION MODELS AS A MEAN FOR A BETTER DELIVERY OF SERVICES OF GENERAL INTEREST

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ABSTRACT: The provision of services of general interest (SGI) is a competence of authorities at different governance levels. Until now, public administrations and the service providers, tend to have a strictly sectorial approach to the SGI delivery, leading to incomprehensive, isolated solutions. This causes a mismatch between the people's needs and the services provision. Furthermore, it contradicts the EU efforts for a territorial and social cohesion. Additionally, in the times of austerity, the public funds limitation especially affects the remote mountain territories and border areas. Harsh (local) economic conditions (fewer jobs), population ageing, dispersed settlement, and the geomorphology hinder the provision and supply of the SGI in these territories. To overcome this deficiency, new approaches of the SGI provision should be sought and identified. Therefore, hereby spatial planning and sectorial policies and the related models of integration (sectors, actors, funds, services, policies etc.) are investigated. The paper builds on the research done in the transnational project INTESI (Integrated Territorial Strategies for Services of General Interest). The analysis of the coverage of SGI in the spatial planning, and other (space related) sectoral policies documents (regulations, strategies, plans, guidelines, etc.) was done in five Alpine countries (Italy, Switzerland, Austria, France, and Slovenia). The aim was to find out if the integration of the policies (or measures) for the SGI provision is already present in these documents, to what extent, and what the problems that need to be addressed are. In addition to the seven sectors (regional development, transport, telecommunication, basic goods, health care, social care, and education), relevant "umbrella" regulations (e.g. the constitutions, state laws on delivery of SGI, etc.) have been inspected for each

country. The integration models and their elements have been investigated considering the authorities, administrative levels, actors, funds, etc. Altogether, 257 documents have been reviewed. The analysis revealed the level of integration in the Alpine Space is moderate. The integrated solutions mostly occur between the following sectors: health and telecommunication, health and social care, and basic goods and telecommunication (e.g. post offices in grocery shops). The analysis also showed that to some extent countries secure the SGI by the same means, according to the EU common marker regulations. However, looking into more details, there are differences among them. For example, in comparison to the other Alpine countries, the SGI provision in Switzerland is, in terms of the time and distance accessibility, very strictly and in detail regulated. In relation to the identified gaps, the study reveals these could be solved by adapting the existing spatial (national, regional) strategies and plans, as some of the examined documents (e.g. transport and telecommunication policies) do not even address the SGI provision as a topic of spatial planning. To enable a better SGI supply and delivery, the implementation of the integration models should urgently be considered to link the following sectors and services: (public) transport with all the other inspected sectors, and the telecommunication with the health/social care, basic goods and education.

1 INTRODUCTION

Lately, several reports are showing that member states (shorter MS) will struggle to implement the European Union's (EU) policy ambitions (e.g. Territorial Agenda of the European Union 2020 and Commission White Paper on SGI) to provide quality SGI everywhere within the union (ESPON, 2013a). According to the ESPON (2013a) report, the provision of SGI is mainly a domain of member states at national, regional and local level, since aspects such as a minimum level of availability, accessibility, affordability, quality and variety of a specific SGI are mainly not determined by the EU legislation. Therefore, the impact of EU's policies on the implementation and delivery of SGI is fairly weak. The management and the administration of services is an issue to be dealt with foremost by providers of SGI, and new concepts like integration have been sought for. The integrated approach to the SGI provision is important for the Alpine areas due to their characteristics, such as dispersed settlements, dynamic and steep terrain, decreasing and ageing population, and a challenging infrastructure construction (e.g. transport, telecommunication), which make the supply difficult and often economically unviable. The analysis of the INTESI regional reports shows that there is a need for the integration of policies and services in all participating countries. Foremost, the transport sector should be better linked to all the other inspected sectors (telecommunication, education, health, social care and basic goods). Furthermore, the services within the sector itself need to be connected (e.g. coherent timetables of different modes of transport- train, bus, metro, etc.). In the times of the "digital society", the integration of the telecommunication services with other sectors (health, social care, education, transport, and basic goods) is also recognized as important. It is considered that the information communication technology (ICT) represents an opportunity for the (economic, social, etc.) development of Alpine areas, as it could bridge the challenges related to "physical" remoteness and the hindered accessibility, by enabling the SGI services on-line. The integration of social and healthcare policies and services is also in demand.

The terms "services of general interest (SGI)", "integration", and the "models of integration" are within the context of the INTESI analysis understood as follows. The SGI definition is adopted by Gløersen et al. (2016), who divided SGI into services of general economic interest (SGEI), non-economic services (NSGI), and social services of general interest (SSGI), according to the nature of their provision. This is determined by who is the provider of the service (public/private/NGOs & social enterprises) and how is the service deliver to the users (are the prices market or state regulated, is the service free or subsidised, etc.).

The understanding of the integration was based on the interpretations by Healy (2006), and Lloyd & Peel (2005). Healy (2006) explains it as a concept of four overlapping dimensions: (1) the (co)aligning of strategies and policy, (2) policy (re)framing, (3) connection between policy and action (policy and implementation), and (4) co-operation among actors. Lloyd & Peel (2005) provide a more detailed explanation and connect integration with different governance elements such as linking actors, sharing knowledge etc.:

> *"Integration can imply co-ordinating strategy-making to avoid conflicting policies and to generate win-win situations. It might also imply broadening a policy frame to encompass a new issue. It can also suggest closing implementation deficits that can arise between policy and action. Finally, it implies linking actors together, sharing and developing*

knowledge for mutual benefit, often to overcome a fragmentation of institutional environments or a need to enter partnerships to achieve common goals. It is recognized that in pursuing integration, the ways in which it works in practice will be determined by local cultural practices and path-dependent factors (Lloyd & Peel, 2005)."

Based on these interpretations, the INTESI project group formed a definition of the integrated territorial strategy, which is: "a strategy for the SGI provision based on the 4 main principles: quality, availability, affordability, and accessibility, which takes into account peoples' actual and future needs in a given territory, territorial dimension, and the benefits of the synergies between the different SGI sectors (Report on Transnational Workshop, 2016, p. 21.)."

The literature review shows there is no commonly accepted definition of the integration models. Different studies, mostly performed in the frame of ESPON (2013a, 2013b) have formulated individual definitions. Gløersen et al. (2016) describe the two single-element models (a- horizontal integration of actors during policy and programme preparation, and b- the integration of the financial instruments), and one combined model (c-integrating finance and policies) of integartion, which lately occur in relation to the SGI provision. The INTESI study understands the integration models as the integration of (1) actors, (2) policies, (3) administrative levels, (4) financial sources, and (5) other integration (e.g. of services, measures, sectors, etc.). Within the context of this study, the integration model can include only one of these five integration models (a singular model), or it combines at least two (a combined model).

2 METHODOLOGY

The information included in this paper results from the INTESI analysis, comparing 5 participating countries and their regions (Austrian Tyrol and Carinthia, Italian Lombardy and South Tyrol, French Auvergne Rhône-Alpes, Slovenia, and Swiss Canton du Jura), and the 8 examined sectors (general, regional development, transport, telecommunication, basic goods, health, social care, and education). The data for the comparison analysis was retrieved from: (a) the Database of the Existing Strategies, (b) 7 Regional Reports: Tyrol (AT), Carinthia (AT), Lombardy (IT), South Tyrol (IT), Auvergne Rhône-Alpes (FRA), Slovenia, and Canton du Jura (CH), and (c) the Transnational Workshop, which were all prepared or conducted within the INTESI project.

Problems related to the SGI delivery, were identified mainly through the information gathered through the interviews of the relevant stakeholders, which were conducted by PPs and summarised in the regional reports. To study the integration models in the inspected documents mainly the database was used to perform the numerical analysis (presence of the integration models in numbers by countries and sectors, number of combinations, the most common models and their complexity). The identification of the integration models used in practise was done comparing the regional reports.

A) DATABASE OF THE EXISTING STRATEGIES

The database includes 257 documents altogether, from which Austria participated 36 documents, France 59, Italy 59, Slovenia 45, and Switzerland 58. The documents are described with 18 basic categories (e.g. name of the country, sector, name of the document (original), name of the document (English), administrative level, type, year of adoption, duration, major objectives). The profiles of some documents additionally include information on governance models, measures, type/source of finance, stakeholders and their comments. When making the selection, the countries aimed for a balanced representation of the documents at all the administrative levels (national, regional, local), and in all the sectors. Although, the overview of the submitted documents (Figure 1) shows a rather equal division of around 30 per sector (12-15%), the regional development is with 49 (19%) better represented, opposite to the less represented basic goods sector with only 9 documents (3%) (Regional Collection of the Strategies, 2016). The reason for that is, the countries either have a small number of regulations targeting the basic goods supply (Slovenia, Austria, and Italy), or do not even have any (Switzerland and France).

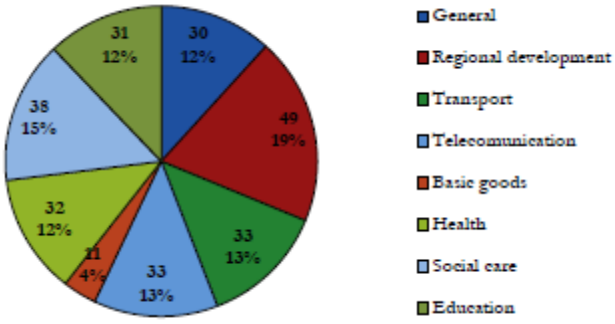


Figure 1: Overall number and share of the documents by sectors

As shown in Figure 2, legislations prevail as a document type (127%), followed by strategies (25%), guidelines (6%), programmes (5%) and plans (5%). A more detailed division of the collected documents by regions is presented in Figures 4 and 5.

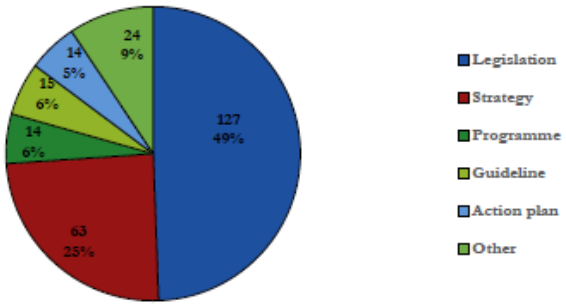


Figure 2: Overall number and share of the documents by type

The information from the database was mainly used to conduct the numerical analysis (Excel), e.g. to find out the number of the documents including the integration (overall, by sectors), the occurrence of the integration models (actors, administrative levels, finances, policies, and other) in the documents (by sectors, by countries), and the occurrence of the sources and types of finances in the documents (by sectors, by countries).

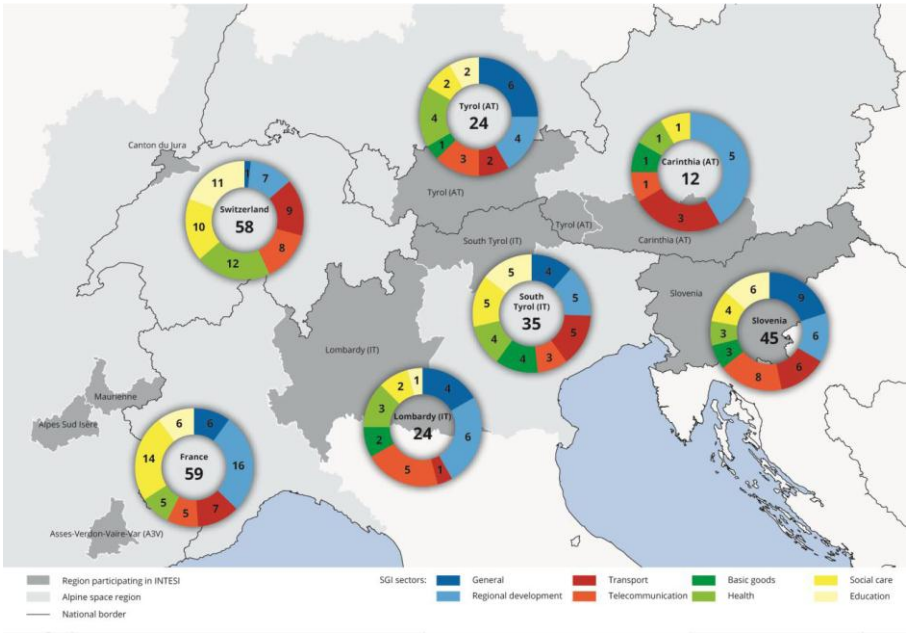


Figure 3: Number of the documents submitted in the database per region by sectors

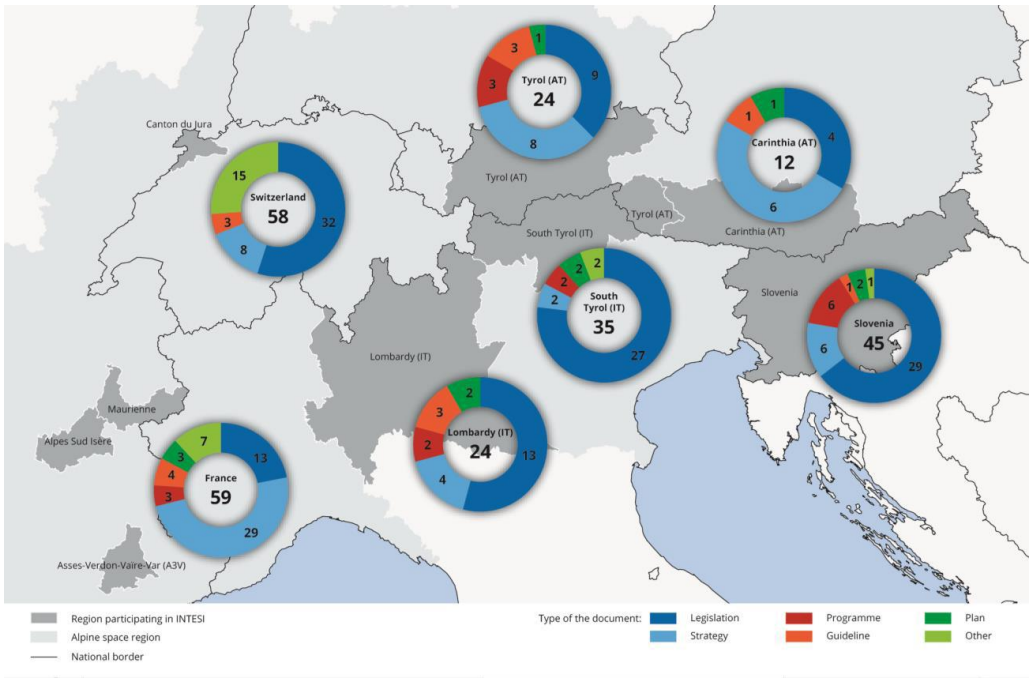


Figure 4: Types of the documents submited in the database in numbers by regions

B) REGIONAL REPORTS

The analysis is based on 7 regional reports for Tyrol (AT), Carinthia (AT), Lombardy (IT), South Tyrol (IT), Auvergne Rhône-Alpes (FRA), Slovenia, and Canton du Jura (CH). To collect the information on the selected strategies for the SGI provision (e.g. their implementation process, measures, efficiency, the ways of financing, the related governance models, and responsible stakeholders), in addition to a detailed review of the documents, the PPs also conducted interviews. UL had prepared the questionnaire for the interviews with 12 questions which the PPs then translated into their national languages. The PPs also had the liberty to add/remove some of the questions depending on what information they needed from a particular interviewee. Altogether, 70 interviews were conducted in all the participating regions: 8 interviewees in Tyrol (AT), 12 in Carinthia (AT), 13 in Lombardy (IT), 8 in South Tyrol (IT), 9 in Auvergne Rhône-Alpes (FRA), 10 in Slovenia, and 10 in Canton du Jura (CH). The interviewees were the stakeholders (e.g. mayors, public officials, services providers) from various governance levels (state, regional, provincial, local), who the PPs have identified as important for the SGI provision and the making of the related policies in their TAs or broadly. The information gathered was later summarised in the regional reports.

C) TRANSNATIONAL WORKSHOP

The Transnational Workshop was conducted on 29th June 2016, and included 19 participants who were divided according to the countries into five groups: Austria - 5 people, France – 4, Italy – 4, Slovenia - 5 and Switzerland – 1. The aim of the workshop was to provide an input for the comparison among the countries. A special focus of the workshop was on the understanding of the SGI definition, the integration concept, and (the presence of) the integrated strategies in the participating countries. Additionally, the existing governance models were identified that support the SGI delivery in the integrated aspect.

3 RESULTS

3.1 PROBLEMS OF THE SGI DELIVERY

The study shows, general problems such as a dynamic and steep terrain, dispersed settlements, scares, decreasing and ageing population, are common to all (7) of the analysed regions. The only region not

tackling the difficulties of the over ageing and furthermore, reporting a population increase is Swiss canton du Jura (Regional Report Canton du Jura- Switzerland, 2016). Reviewing the regional reports, 14 problems were identified altogether in relation to the SGI delivery in the remote alpine regions. If the PPs did not specify in their reports to which specific sector the problem that they have identified and listed refers to, it was considered that the issue is present in all the inspected sectors. When selecting the ones present in at least 3 of the analysed regions, 5 problems stand out (Table 1): (1) Accessibility of SGIs in mountainous regions highly depends on the spatial location and the quality of public transport, (2) Underdevelopment of the infrastructure and services in terms of poor quality and/or supply, (3) Costs (expensive delivery, austerity, no allocated funds, no investments, etc.) of the services in Alpine areas, (4) Unresponsiveness of the governance system to the actual (changing) needs of the local communities, (5) The strategies are too broad and often lack the specification of measures (how to do something), responsibilities (who should do it), and monitoring mechanisms. The challenges related to the accessibility, clearly demand the integration of individual services with the transportation. In relation to the high cost (problem 3), the integration of services would enable a more efficient use of financial sources. The last problem is of governance nature. The lacking specification of measures, responsibilities, and monitoring mechanisms could be addressed by a better integration of actors, administrative levels and policies.

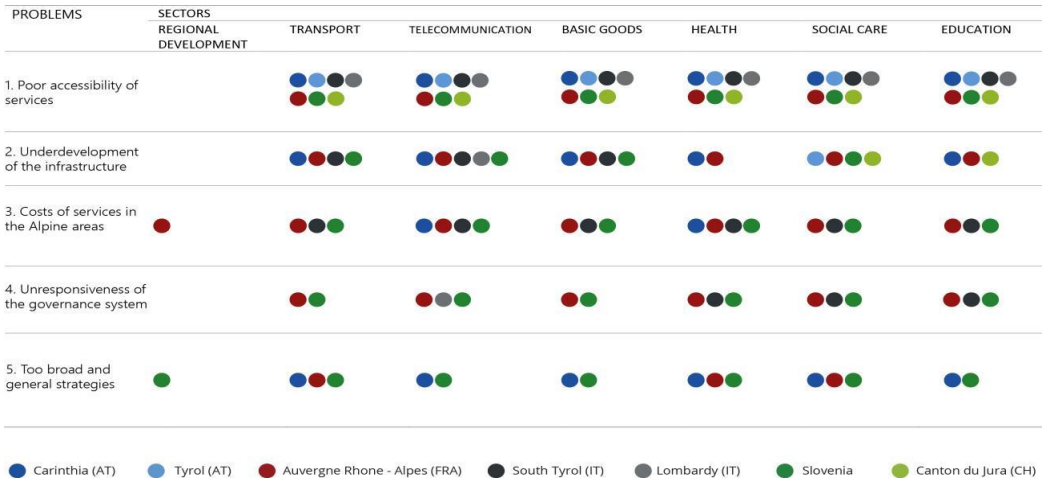


Table 1: Problems of the SGI delivery in the Alpine regions

3.2 THE PRESENCE OF INTEGRATION

Using the information in the database, the analysis of all the 257 documents shows, more than a half (64%) include the integration as a concept. However, looking at the number and percentage of the analysed documents that include the integration by countries shows, there are differences among them (Figure 5). Italy and France evaluate, 90% of their documents include the integration, whereas, in Swiss documents the integration is not present at all. The Austrian documents comprise the integration in 78%, and the Slovenian in 67%, which is the lowest among all the participating countries, except for Switzerland.

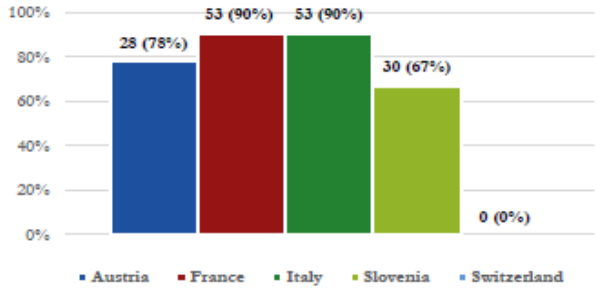


Figure 5: The numbers and percentage of the analysed documents including the integration by counties

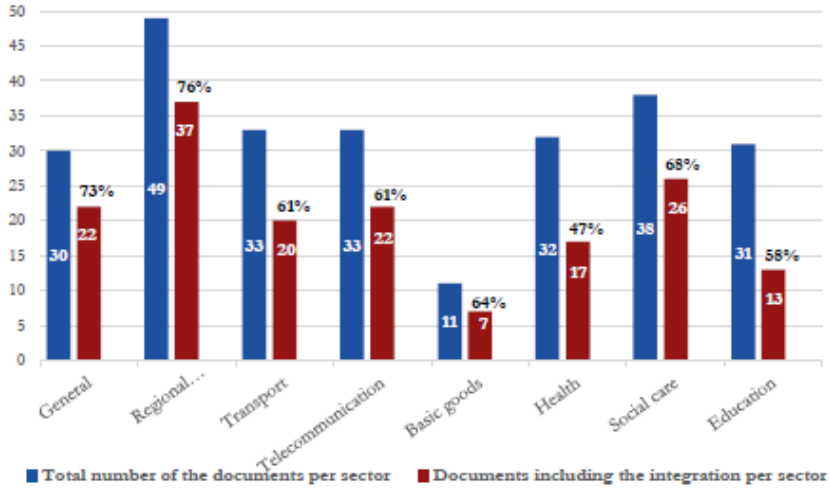


Figure 6: The number and percentage of the analysed documents including the integration by sectors, in relation to the total number of the documents per sector

As shown in Figure 6, the analysis reveals the highest percentage of the documents that comprise the integration belongs to the regional development sector (76%), closely followed by the documents referred as “general”. The basic goods, transport, telecommunication, and education sectors all include the integration in roughly 60%, whereas the health care documents include it in 47%. The integration as a concept is at least present in the social care sector (32%). However, these results should be considered in relation to the total number of documents per specific sector as shown in the figure. Concerning the distribution of the integration in the sectoral documents, the results of the INTESI transnational workshop (Report on Transnational Workshop, 2016) show a very similar picture. According to the participants, integration is mostly present in the strategic regional development documents, followed by the telecommunication, transport, general sector and health sector. Similarly, to the database analysis, the results of the workshop indicate a lack of integration in the social care sector. The workshop’s participants also stated the integration is missing in the sector of basic goods, whereas the database analysis shows the concept is present in 64% (7 out of 11 documents). However, in all the countries together, only 11 documents have been selected for this sector, which implies that the provision of basic goods is not managed by the strategic SGI policies, but is mainly a subject to the market conditions.

3.3 EXISTING INTEGRATION MODELS

Looking at the models of integration (actors, policies, administrative levels, financial sources, and others) a more detailed analysis of the documents, which include the integration shows, the cooperation among various actors (e.g. national authorities, regions, municipalities, interested public, service providers, etc.) is prevailing in all sectors (Figure 7).

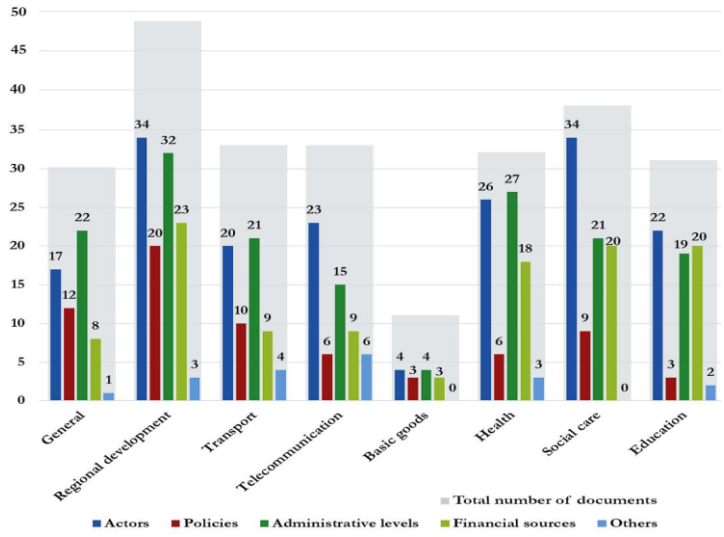
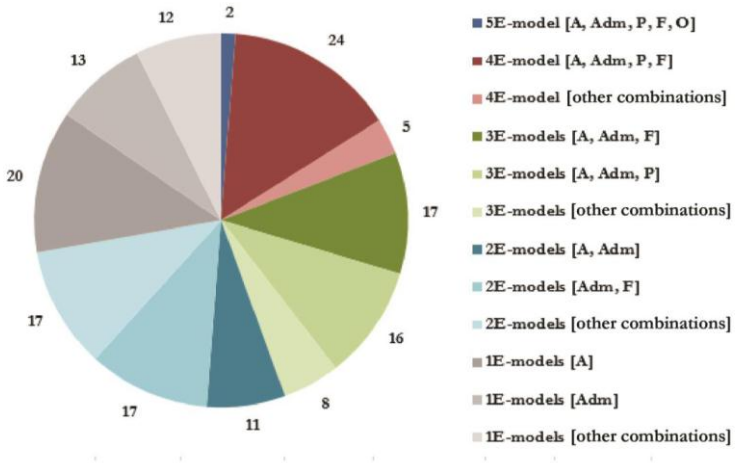


Figure 7: The number of the occurrences of the integration models in the documents by sectors

The integration among the administrative levels (e.g. national, regional, municipal, local, etc.), best represented in the general, transport, and health related documents, is also one of the more often occurring models. The integration of financial sources is more common in the health, social care, education, and regional development sectors. However, as further confirmed by the interviewees, in most cases the "declared" integration of actors, administrative levels, or finances, presented in the documents, does not indicate an integrative and "intersectoral" approach to the SGI delivery in practice. That is also supported by the fact that the policy and other (e.g. services or sectors) integration models are the least common in all the sectors (Figure 7). Therefore, the results the "declared" rather than the actual "implemented" integration.

As one document can predict two or more integration models (e.g. actors, finances, and policies), a more detailed analysis looked at the combinations of the recognised integration models in the analysed documents. Altogether, 162 combinations of the 5 integration models or elements (actors, policies, administrative levels, financial sources, and other) were identified. The analysis revealed, the documents comprise 117 different "combined" (when at least two integration models are predicted- e.g. actors and finances) models, which largely prevail over the 45 "singular" (when only one integration model is predicted- e.g. integration of actors) models of integration. However, looking at the various combinations, Figure 8 shows the singular models (comprising 1 element) are next to the models combining two elements (45), the most common, followed by the once combining three (41).

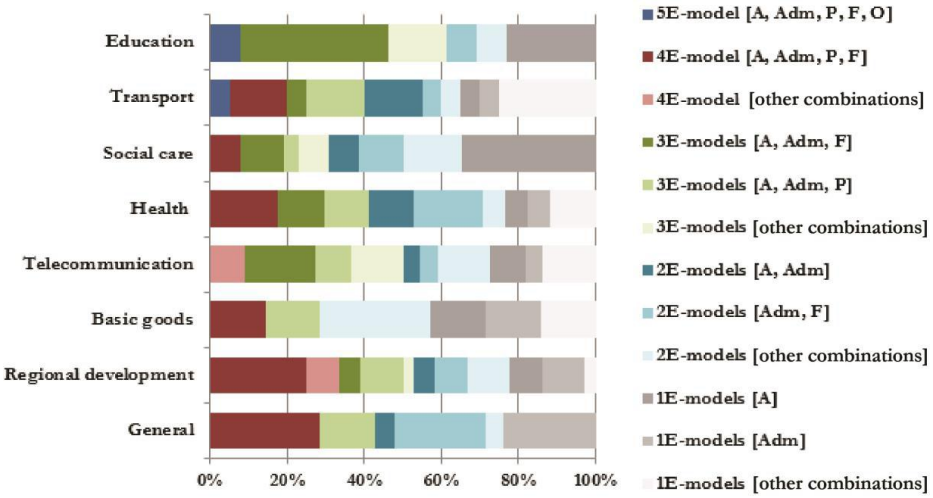


Elements key: A - actors, Adm - administration level, P - policies, F - financial sources, O - others
Models key: e. g. 5E-model - 5 (number of elements) E (abbreviation for element)

Figure 8: The combinations of the integration models identified in the documents in numbers

The combination of all the five models (5E models) was noted twice, once in the transportation and once in education sector. In the models with four elements (4E models), the combination of actors, policies, administrative levels and finances is the most common (altogether 24 examples present in all the sectors except of general and basic goods). In the models comprising three elements (3E models), two combinations stand out. One combines actors, administrative levels, and finance (17 cases in all sectors, apart from the general and basic goods), and the other actors, policies, and administrative levels (16 examples, all sectors, apart from education). In the two-element (2E) models, the two obvious combinations are of the actors and administrative levels, and the administrative levels and finances. The most common among the singular models is the one integrating actors (20 examples, most in the social care sector), followed by the integration of the administrative levels (13 examples, mostly in the general and regional development sector).

Figure 9 illustrates that the most complex models of integration are present in the general and regional development sectors. These two sectors are overarching, guiding and connecting different policies, actors etc. More simple integration solutions are present in the sectors of social care, health, basic goods and telecommunication, in which actors and administrative levels, or administrative levels and finances are joined. In the education, the 3E-model connecting actors, administrative levels and finance stands out. In the social care sector, the integration of actors is predominant.



Elements key: A - actors, Adm - administration level, P - policies, F - financial sources, O - others
Models key: e. g. 5E-model - 5 (number of elements) E (abbreviation for element)

Figure 9: Division of the combined and singular models of integration by sectors

3.4 EXAMPLES OF THE INTEGRATION MODELS IN PRACTICE

The descriptions below are summarised from the regional reports in which the authors sometimes referred to the “integration models” and sometimes to the “cases” or “examples of integration”. As shown in Table 2, most of the existing integration models linking the governance elements (actors and administrative levels) do not mention the sector integration. An exception to that is the Tyrolian exploitation of synergies among the ongoing civil engineering projects, when expanding broadband. The governance elements the model applies to are in Table 2 marked with X.

Examples	Type of the integration model		
	Actors	Administrative levels	Policies
STRALE!K (Carinthia, AT): is a strategic rural development programme. It addresses all topics of the SGI, and defines individual solution approaches for their maintenance. It provides of guidelines and objectives of the SGI delivery. It is a base for various department strategies. There is a special governmental office dedicated to the implementation of this programme			X
Establishment of regional management (Tyrol, AT): established for the implementation of regional strategies/concept/programmes. Members are the municipalities, tourism associations, district chambers and interested companies from the region. The aim is to pursue a target-oriented cooperation of the regions with the provincial government, federal government, and the EU, and promote the strategic regional development	X	X	
Synergies among civil engineering projects (Tyrol, AT) Broadband infrastructure expansion is conducted at the local level by exploiting synergies in the course of civil engineering projects conducted by public or public-owned carriers (gas network, district heating network, sanitary engineering, road construction, etc.)	X		
Social entrepreneurship (Slovenia) a promising future model for integration and provision of mostly social services (child care, elderly acre, social inclusion, etc.), funds and stakeholders.	X		X
Service plans (Auvergne Rhône-Alpes, FRA) is an integrated territorial approach model to SGI delivery. By law French departments (administrative level similar to municipalities) must have their Departmental Plan of Improved Accessibility to Services of General Interest (SDAASP), which calls for shared services governance, and to coordination and innovation in the provision of services, taking into account the specificities of each territory.			

Table 2: Examples of the existing governance integration models in the participating regions

The overview of the integration examples in practice was made using a cross-sectoral table of the integration examples. As seen from Table 3 the services integrate two or more sectors (e.g. provision of meals for school children and elderly in cooperation with local producers). The most often combined are the transportation sector with either education, health or social care, and the telecommunication sector with health and social care. At the most, 4 different sectors are integrated in one service. Examples of such services are: the Regional Card for Services (RCCS), introduced by the Region of Lombardy (integrating administrative, telecommunication, health and social care sectors and services; Regional Report Lombardy- Italy, 2016), Roaming Services which are in use in France (including transport, education, social care, and basic goods; Regional Report Auvergne Rhône-Alpes- France, 2016), and the Provision of meals for school children and elderly in cooperation with local producers- a model implemented in the Italian South Tyrol (Regional Report South Tyrol- Italy, 2016).

INTEGRATION MODELS EXAMPLES	GENERAL	TRANSPORT	TELECOMM.	EDUCATION	HEALTH	SOCIAL CARE	BASIC GOODS
Regional card for services (RCS) – multi function smart card (access to public administration, health, social services)	X		X		X	X	
Integrated ticket for different modes of transport for users and pupils		X		X			
TravelPlanner webportal aiming at gathering train, bus, metro timetables and routes		X	X				
Roaming services: libraries, cinema, basic goods, pedicure...		X		X		X	X
Mobility card: young & museums		X		X			
Transport services for extra activities by students and youth		X		X		X	
A postbus (Auto-postale) integrating transport of people, medicines, goods		X			X		X
Healthcare card enabling management of medical services			X		X		
Provision of meals for school children and the elderly in cooperation with local producers				X	X	X	X
Multidisciplinary health houses/ territorial hospital groups					X		
Mobile health & social services for elderly people		X			X	X	
Social concept of Ausserfern – mobile care givers		X				X	
Regional Health Care Structure Plan - Outpatient Module – transition care after the acute care at the hospital					X	X	
Info points for tourists at small retailers	X						X
Consumer cooperative KonsuMoos for basic goods (municipality/inhabitants)	X						X
Wanderhandel - mobile bakery, dairy products		X					X
Tourist or guest card - card allowing access to a variety of services	X		X			X	
Mountain Virtual Hospital (MVH), experimental model of Mountain Hospital using innovative services and technologies			X		X		
Digital ecosystem E015 enabling IT communication among multiple public and private actors and sectors: transport, hospitality, tourism, culture, etc.		X	X			X	

Carinthia (AT) · Tyrol (AT) · Auvergne Rhone - Alpes (FRA)
South Tyrol (IT) · Lombardy (IT) · Slovenia

Table 3: Existing examples of services integration in the participating regions

The services integrating 3 sectors are: the Transport services for the out of school activities by students and youth (South Tyrol-IT), the Mobile health and social services for elderly (both present in South Tyrol-IT; RR South Tyrol- Italy, 2016), and a Postbus (it. Auto-postale), integrating transport of people, medicines and goods, which is in place in Lombardy. A Digital ecosystem E015 is a service also introduced by Lombardy, which allows for the communication among the IT services of public and private actors operating in multiple sectors: transport, hospitality, tourism, culture, etc. (Regional Report Lombardy- Italy, 2016). There are other integration models such as a Mountain Virtual Hospital (MVH), an experimental model of mountain hospital (introduced by the region of Lombardy within Valchiavenna Area Strategy), which uses innovative services and new technologies, such as tele-medicine, home-based tele-radiology, points of care, de-localised diagnostic treatment-rooms (Regional Report Lombardy- Italy, 2016)

4 CONCLUSION

The analysis of the 257 sectoral (regional development, transport, telecommunication, basic goods, health care, social care, and education) and "umbrella" (e.g. constitutions, national regulations) policy documents concerning the SGI provision in the Alpine regions revealed several problems of the services delivery (e.g. services accessibility, high supply costs, failure to meet the actual needs for services, poor specification of the responsibilities and measures in the strategies), which could be addressed with the implementation of the integration of services, actors, administrative levels, finances, policies etc. The study shows, the integration concept is present in more than a half of the inspected documents, majority of which are sectoral laws and regulations. However, there are significant differences among the participating countries. Whilst the Swizz documents do not address the integration all, the concept is introduced by 90% of the documents in Italy and France, 78% in Austria, and 67 % Slovenia. Looking at the sectors, most (roughly 70%) of the regional development (laws, strategies, plans, or programmes) and umbrella regulations include it, whereas it is only present in 32% of the social care documents, which is the least among all.

The analysis of the integration models (in this study understood as the integration among actors, polices, administrative levels, financial sources, and others) reveals, the cooperation among actors is prevailing in all sectors. The integration among the administrative levels (e.g. national, regional, municipal, local, etc.), best represented in the general, transport, and health related documents, is also one of the more often occurring models. The integration of financial sources is more common in the health, social care, education, and regional development sectors. The combinations of the integration models occurring in the individual documents were also studied. Altogether, 162 combinations of the 5 integration models or elements (actors, policies, administrative levels, financial sources, and other) were identified. The analysis revealed, the documents comprise 117 different "combined" (when at least two integration models are predicted- e.g. actors and finances) models, which largely prevail over the 45 "singular" (when only one integration model is predicted- e.g. integration of actors) models of integration. Next to the singular, models combining two elements (45), followed by the once combining three are most common. The most complex (combining more elements) models of integration are present in the general and regional development documents, as these sectors are overarching, guiding and connecting different policies, actors, sectors etc. More simple integration solutions are present in the sectors of social care, health, basic goods and telecommunication. Furthermore, various existing examples of the governance (e.g. STARLE!K in Carinthia, regional management in Tyrol, social entrepreneurship in Slovenia, etc.) and sectoral integrations (e.g. Regional card for services in Lombardy, provision of meals for elderly in cooperation with local producers in Italian South Tyrol, mobile services like groceries, pharmacies, etc.) in the SGI provision have been identified in all the participating countries.

Although, the study shows the integration models are present in all the inspected sectors, and all the countries except Switzerland, the interviewees explain the "declared" integration of actors, administrative levels, or finances, recognised in the documents, is not transferred into an integrative approach to the SGI delivery in practice. That is further confirmed by the analysis showing, the integration of policies and other elements (e.g. sectors, services, measures) is seldom. Thus, to improve the accessibility and supply of SGI in the Alpine regions, above all transportation and telecommunication services need to be linked with other sectors. Therefore, the policy makers should ensure, the new spatial planning policies will offer comprehensive solutions and reflect these needs by encouraging and enabling the integration models. However, their success largely depends on the far-reaching power of the planning policies in the inspected regions. As shown, the general and regional policies already present a good base for the integration, which they at the moment fail to deliver. An interesting observation of the analysis is also that the stakeholders fear to use new ways and models of the SGI delivery (e.g. the available digital tools), which might also explain the difference between the declared and actual integration to some extent.

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ID 1560 | RETHINKING PLANNING CULTURES: FROM EVIDENCE-BASED RESEARCH TO CONCEPTUAL IMPLICATIONS

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1 INTRODUCTION

Planning cultures was for a long period of time perceived as merely an academic concept. However, in recent years, scholars have turned to evidence based research to provide a more profound understanding of the notion of planning cultures (Othengrafen et al, 2015). Notwithstanding, planning offers a plethora of topics potentially serving as windows of investigation for planning cultures. The aim of this paper is to synthesize insight from two different angles of investigating planning cultures: shrinking cities and border regions. Starting out with own research on shrinking cities and planning cultures (Pallagst et al 2013; 2016), and border regions and planning cultures (Pallagst, forthcoming), this paper introduces results and methodological frames from both realms. In particular, the author's previous research on shrinking cities made clear that planning cultures can be investigated by evidence based research utilizing the shrinking cities phenomenon. In the second part of the paper the author will make an attempt to derive preconditions from this evidence based research for a critical reflection of planning cultures, which might necessitate a rethinking of the notion of planning cultures.

2. FRAMING EVIDENCE BASED RESEARCH FOR SHRINKING CITIES AND PLANNING CULTURES

2.1 THE CONTEXT OF PLANNING CULTURES

Different institutional and cultural conditions have brought about spatial planning systems that display basic features that are essentially comparable; however, these planning systems are tailored to meet specific cultural, normative and spatial situations. Despite the growing demand for an international viewpoint in urban and regional planning discussion, 'planning cultures' is not (yet) an established research topic in the sphere of urban and regional development. However, the topic has recently seemed to be on the rise in planning debate. As demonstrated by papers and tracks at several recent congresses of the Association of European Schools of Planning (AESOP), a considerable informal discourse about planning cultures already exists. Nevertheless, there is – on a global scale – no clear definition of the topic (Fuerst 2009).

The term 'planning cultures' is not new – it can be traced back to Selle's work about collaborative planning (Selle, 1999). Interest in the topic of planning cultures may also be fuelled by the so-called 'cultural turn in planning' (Soja, 1999; Knieling and Othengrafen, 2009b), emphasising the role of culture in spatial planning, and thus recognising the impact of culture on spatial planning's international comparative research component. In particular, the growing demand for comparative research projects in the framework established by the EU's Community Initiatives, such as INTERREG, makes clear that planning culture is a component which is deeply embedded in a nation's planning system and thus needs to be considered in comparative spatial research (Fuerst, 2009).

In recent years, two major projects have investigated planning cultures further: MIT has been at the forefront of research in this respect with the publication of an edited volume (Sanyal (ed.), 2005). In this book, Comparative planning cultures, John Friedmann (2005), who has published extensively about the changing notions of planning, sets out basic claims for dealing with planning cultures in discourse and in teaching, while at the same time acknowledging plurality. The second notable research work is the EU funded project CULTPLAN, which addresses planning cultures in the European realm, and takes the research work further in particular for discussing theoretical approaches, and suggesting a 'culturalised planning model' (see Knieling and Othengrafen, 2009a; Othengrafen, 2010). It thus becomes clear, that planning cultures is a multilayered subject facing continuing changes, some of them induced by factors such as Europeanisation, and internationalisation.

2.2 THE CONTEXT OF SHRINKING CITIES

Current debates in urban and regional studies display a rising awareness that several cities in Europe and the US have to deal with challenges of long-term demographic and economic changes leading to urban shrinkage associated with housing vacancies, underused infrastructure and other negative impacts. The issues of shrinking cities were often predominantly interpreted as effects of the 'hollowing out' processes of the urban centres, triggered by suburbanisation and urban sprawl. In contrast to such internal process assumptions, overarching globalisation pressures initiated decline in many American and European regions. Urban shrinkage and economic downsizing in structurally weak areas – e.g. in old industrialised 'rust belts' or in peripheral rural areas – are most commonly symptoms of societal transformations, that can be widely observed in Europe and in the US (Pallagst and Wiechmann, 2005).

Shrinking cities has been a stigmatised topic in planning research for a long time. The discourse in planning in Europe, in particular in Germany, has meanwhile actively taken on the issue of shrinking cities and a multitude of literature has been written on the topic (e.g. Haeussermann and Siebel, 1988; Bontje 2004; Gestring et al., 2005; Siedentop and Wiechmann 2007). In the United States, however, academic discussion has lagged behind, with only a few scholars spelling out urban shrinkage (Beauregard, 2003; Hollander et al., 2009). In view of the reality of shrinking cities on the planning agenda, one has to ask if the one-sided focus on growth in planning is over. Pallagst and Wiechmann (2005) have hypothesised that planning for shrinking cities does not work under the preconditions of urban growth, but requires a shift to a somewhat different paradigm. The challenge of shrinking cities seems to have the potential to trigger change in planning cultures.

With the active embrace of urban shrinkage in the German planning discussion, one might speculate whether growth has come to an end as a dominant paradigm in planning – at least in this country. This aspect is striking when considering changing planning cultures; for international comparative research it is important whether this change will be a general trend, or, an aspect that is driven by local or national specifics. In the US, for instance, there is speculation that the political consensus for urban growth is diminishing (Purcell, 2000) and the author has called for a shift in paradigm when it comes to US planning for shrinking cities (Pallagst, 2007). The shrinking cities phenomenon thus offers an opportunity to investigate the principles upon which spatial planning has traditionally been based and, by this means, it may help shed light on changing planning cultures.

2.3 EVIDENCE BASED RESEARCH ON PLANNING CULTURES AND SHRINKING CITIES

In current planning debates the term 'shrinking city' usually describes a densely populated urban area that has on the one hand faced a considerable population loss, and is, on the other hand, currently undergoing a profound economic transformation, with some symptoms of a structural crisis (Pallagst, 2008). According to Oswalt (2006) more than a quarter of the world's metropolises shrank in the 1990s and, notwithstanding ongoing urbanisation processes, this number will continue to increase. With growing interconnectedness both on a European and on a global scale, a significant emerging task for planning researchers is to facilitate a wide-ranging exchange on economic, social, and environmental developments. Hypothesis of the research was that the dynamics of urban shrinkage most likely trigger changes in planning paradigms, planning systems, planning strategies and planning cultures in the respective countries.

Pallagst et al investigated shrinking cities as a window for possible changes in planning cultures in the frame of the EU project PlanShrinking (2010-2015).

In order to derive a typology of planning cultures applicable for the context of shrinking cities, the authors modified Othengrafen's culturized planning model (Othengrafen 2010) describing the general context of planning cultures towards shrinkage (see figure 1). Figure 1 demonstrates general criteria of planning culture, supported by a specific criterion for shrinking cities: shrinkage context. 'Societal context' displays the 'backbone' of a planning culture with a range of more general understandings, 'planning context' describes the beliefs of the planning profession, and 'planning toolset' refers to the methods at hand. The category, 'shrinking context', comprises those aspects which might trigger change in planning cultures due to shrinkage and its implications on urban development and planning reactions.

Figure 1: Facets and layers of planning culture with reference to shrinking cities
Source: Pallagst et al 2013.

In addition, the PlanShrinking research traced several preconditions for the joint research of planning cultures and shrinking cities:

1. Both topics -- planning cultures and shrinking cities -- can be labelled emerging topics in spatial planning. Just like planning cultures, shrinking cities has been widely underrepresented in international comparative urban and regional research.

2. The shrinking city phenomenon is a multi-dimensional process, comprising cities, parts of cities or metropolitan areas that have experienced dramatic decline in their economic and social bases. Urban decline and the loss of employment opportunities are closely linked in a downwards spiral, leading to an out-migration of population (Pallagst, 2008). However, despite the fact that globalisation is a trigger for urban shrinkage, economic transformations do not affect all cities in the same way; on the contrary, shrinkage can show very different characteristics depending on national, regional and local contexts (Cuningham-Sabot and Fol, 2007). Research on planning cultures is usually attributed to a national context of a planning system – however, this also involved different levels of planning (from national to local).

3. Planning cultures serves as an academic concept which is lacking an evidence base, whereas shrinking cities is a planning challenge vividly engaging practitioners and academics likewise in search of urban or regional solutions.

When for example examining the US and the German planning realms, it becomes apparent that they offer very specific yet different planning cultural settings (most different systems). While the US planning culture has been labelled 'market oriented' (Pallagst, 2007), the German one offers a more elaborate multi-level planning system, often criticised as being inflexible (Heemeyer, 2006). In an earlier publication on planning in the US, the author argued that a paradigm shift is taking place in planning from 'growth-centred planning' to 'shrinking smart' (Pallagst, 2009).

Case-study analyses carried out by the author and her team focused on exploring documentation, archival records, and planning documents regarding planning and rebuilding activities in selected case study cities. A stakeholder-based analysis (by means of 6 qualitative interviews in each city with e.g. city government staff, land bank staff, housing companies, and NGOs, on site investigations, and a workshop with select interviewees in the year 2012) aimed at gathering in-depth knowledge about experiences with applying strategies to steer the development of shrinking cities. These investigations were looking into the process of shrinkage, and possible changes in planning strategies and thus planning cultures. In addition, the authors further investigated the case of Flint in the year 2014 with specific focus on aspects of the new master plan of the city. The reason for the choice of Flint was – among other aspects – the new place type category 'green innovation area' introduced in the master plan. This investigation was facilitated by an on-site visit and qualitative interviews with 8 stakeholders (land bank staff, city government staff from various departments, the Charles Stewart Mott Foundation, NGOs).

The following research questions were investigated:

- Which are the trajectories of shrinkage in the case study cities?
- Which actions were taken in terms of planning for decline?
- How is the implementation of these measures taking place?

2.4 LESSONS LEARNED FOR PLANNING CULTURES FROM INVESTIGATING SHRINKING CITIES

It turns out that shrinkage is indeed challenging existing planning cultures in a way that planning paradigms are shifting from growth centered planning towards more realistic and sustainable development paths.

The cases investigated demonstrate that industrial transformation affects manufacturing towns to a large extent, inducing unemployment, housing vacancies, and population losses – the usual downward spiral. What is striking is that the attitude towards shrinkage seems to change: when looked at the types of strategies to cope with shrinkage, most cities found their way past the phase of ignoring shrinkage and are is in an intermediate state of maintaining the urban fabric and actively planning for a smaller and more sustainable type of urban development, where greening and right-sizing play a role. The downward spiral

could potentially be turned into new perspectives for the cities. Among these are new visions and possibly also employment perspectives, mostly in the frame of right-sizing, greening, or leveraging substitute industries.

For many shrinking cities it is a fact that planning has changed to a dramatic extent from growth as the main focus to reusing abandoned land and managing vacancies. Redeveloping vacant land is probably the main opportunity for shrinking cities to adapt to past and future challenges. This might be facilitated by right-sizing, strengthening the urban core, green infrastructure, and substitute industries.

All in all, the PlanShrinking research suggests that due to the large amount of economic, social and urban fabric related problems, shrinking cities seem like the new labs for experimenting with planning under crises and changing conditions.

3 INVESTIGATING PLANNING CULTURES AND BORDER REGIONS – A FIRST ATTEMPT

3.1 SHIFTING THE EVIDENCE BASE: WHY INVESTIGATE BORDER REGIONS IN TERMS OF PLANNING CULTURES?

The author's previous research on shrinking cities made clear that planning cultures can be investigated by evidence based research utilizing the shrinking cities phenomenon. Nonetheless, planning offers a plethora of topics potentially serving as windows of investigation for planning cultures – one of them being border regions. Research by Sorensen (2015) further underpins this argumentation: He suggests that planning cultures might change when faced with as he calls it "critical junctures of institutional change and innovation in planning systems" (Sorensen, 2015: 33). One of these critical junctures might be the context of border regions.

Tus the aim of the following part is to shift the window of investigating planning cultures from the evidence base of shrinking cities towards the realm of border regions. The following paragraphs will make a first attempt in order to derive preconditions from shrinking cities research for the field of border regions.

3.2 SOME THOUGHTS ON THE CHARACTERISTICS OF PLANNING FOR BORDER REGIONS

Border regions are areas of high spatial relevance for many European countries like e.g. Germany with borders facing nine neighboring countries. In general, planning conditions and planning requirements are in flux due to new spatial challenges like demographic change, migration flows, and EU requirements in line with territorial cohesion. The situation is growing in complexity in a cross border setting as different planning systems and different planning styles come together in border regions.

Planning as a discipline has been shaped – among others - by the Association of European Schools of Planning (AESOP) representing topical discourses among planning scholars throughout Europe. On its website, AESOP declares:

'To us planning is a tool to promote and manage change with a spatial approach. It is also a tool for the preservation of the environment and our cultural heritage. The core of this task is to conduct planning activities in such a way that society benefits and that economic, environmental, social and other goals are met' (Association of European Schools of Planning, 2014).

This definition shows that planning today is deeply embedded in society and culture. When looking at the specific realm of border regions, planning in this particular setting is facing additional challenges arising from the cross-border situation, which are:

1. Different planning traditions and planning cultures: planning cultures are assumed to be congruent with nation states, but even within nations there might be various planning

cultures. In turn, border regions are accommodating multiple planning cultures which have brought about different planning styles and different planning tools.

2. A lack of cross-border knowledge on planning processes and planning tools: planning practitioners are operating in their specific administrative setting, be it a local entity (planning office of a community or district,) or a regional body. As planning across the border is operating under different conditions and is bringing about new legal or operational changes on an infrequent basis, keeping up with the evolvement of planning is a challenge in itself, and this is often not at the heart of the planners' day-to-day work.

3. Different governance styles: Operating and implementing planning is in line with national governance styles, and usually on a formal basis planning is intertwined with existing legal frameworks entrusting planning competencies to governmental bodies. This means that for some planning tasks there is no matching counterpart on the other side of the border.

But even when there are wide-ranging challenges, usually at the same account opportunities come up. For the specific situation of planning for border regions these are:

- In terms of the fact that planning has the potential to adapt: The opportunity of bridging cultural gaps by reaching out across planning cultural boundaries.
- In terms of conceptualizing planning: The chance of creating (although not always implementing) joint territorial visions for parts of or the entire border region.
- In terms of governance: The possibility of building strong partnerships and networks which in turn help to enhance the flow of knowledge between cross-border planning realms.
- In terms of planning's implementation: The ability to create, explore and apply new tools specifically tailored to the situation of border regions.
- In terms of the supranational (EU) level: The prospect of becoming testing labs for the grand European scheme of territorial cohesion

The ability and the willingness to collaborate across borders can be seen as a specific European learning process (Platzer, 1993). Growing economic interdependencies trigger the creation of new inter- and supranational levels of cooperation. In line with the proclaimed Europe of the regions, which has been a European paradigm since the 1990s (Irmen, 1992), the role of the nation state might become less relevant in border areas, however, the border region as a territorial entity becomes a prominent feature of territorial development.

Nevertheless, in terms of their spatiality, border areas are not necessarily realms of homogeneous conditions, but they might display spatial bottlenecks and challenges such as: polarized economic, social and demographic development, gaps in traffic and transportation (in particular transit), social requirements and infrastructure needs in terms of education and health care.

These challenges might be severe, putting the quality of life in border regions to a test, which might in turn lower the regions' attractiveness in economic, social and environmental terms. This is where planning comes into play as a discipline with the potential to steer, guide, and collaborate in terms of and actors in terms more livable development paths.

However, based on their distinctive planning traditions, countries involved in cross border planning have their very own planning systems. These usually operate on different administrative levels, and specific actors operating on these levels have the competency to fulfil planning tasks and deliver planning artefacts, be it actual plans, zoning codes, strategic documents, or visions (Pallagst, forthcoming).

Planning operates in quite different administrative systems, with a mismatch in institutions and formal planning documents. Based on planning cultural characteristics we encounter the following:

- Different local and societal conditions.
- Different legal framework.
- Different planning and administrative levels.
- Different graphics.
- Different scope.
- Different actors.

- Different plan content.

Some of these differences in planning tools will be demonstrated in this thematic issue by the article for the greater region by Bechtold et al, showcasing relevant topical examples of planning documents of the Greater Region.

Yet, all over Europe the complexity of planning for border regions is aggravated by planning tools which are supplied in a cross border mode, such as project funding tools (e.g. INTERREG), governance tools (e.g. EGTCs), monitoring tools (e.g. GIS in border regions), policy tools (e.g. ESPON), and visioning and development tools (e.g. regional development concepts). This compilation shows that in border regions, several planning tools exist, covering a wide range of planning activities. At this respect the question might come up, if border regions display a planning system, maybe even a planning culture of their own? But, as long as there is no formal competency for planning which reaches out across existing national borders, all planning activities remain in the sphere of informality.

An in-depth comparative analysis of planning tools cannot be delivered at this point, as this paper's purpose is addressing research requirements rather than investigating cross-border planning styles. In this respect, a research frame will be suggested in the following part.

3.3 PRECONDITIONS FOR A RESEARCH FRAME FOR PLANNING CULTURES IN A CROSS-BORDER CONTEXT

In a first attempt to conceptualize planning cultures and border regions, the author suggests a research frame (see figure 2) derived from the facets and layers of planning culture in terms of shrinking cities (see figure 1). This research frame (figure 2) adds the border context as a new component to the planning cultural context.

Aspects to be considered within the border context touch base on three levels related to time, offering potential for further research are the following

1. Historical traces:

How do path dependencies manifest themselves in planning in a border context, in particular in terms of the question in how far planning in border regions has already adapted. This ties in with Sorensen's (2015) plea for historical institutionalist analyses of comparative planning contexts.

2. Status quo:

Which challenges in terms of space and governance do border regions have to face in their respective setting? Which planning instruments/tools/strategies are applied and implemented, and what is their spatial impact?

3. Future development:

In how far is the border context contributing to a knowledge transfer or exchange among planning professionals in the border context? How can we effectively leverage potentials of policy diffusion?

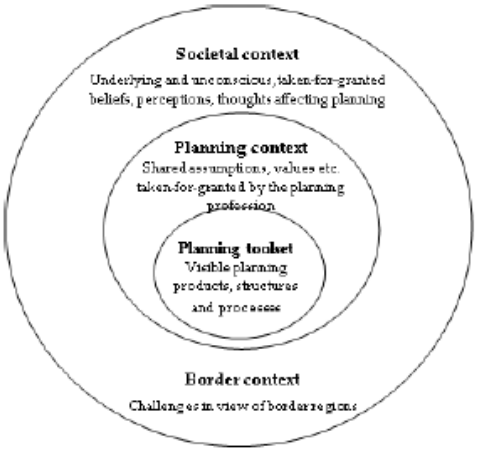

Figure 2: Facets and layers of planning culture with reference to border regions
Source: Own design based on Pallagst et al., 2013.

4 CONCLUSIONS

What can we learn for planning cultures in the context of border regions? Compared to the shrinking cities research, which usually draws on comparative approaches between cities not necessarily in close proximity to each other, the border context is different. Here, areas from at least two countries form a regional setting, which enhances complexities for the realm of planning cultures to a wide extent. Moreover, not only different planning cultures, but also different planning systems, and a multitude of different planning tools and different stakeholders collide.

This has most likely implications for existing planning tools, but additional challenges arise from the fact that in the particular realm of border regions, new cross border planning tools are cropping up, almost shaping a planning system of their own. In this particular context, the question arises, what the status of these tools will be, and what kind of interdependencies arise between them and the set of national planning tools. And, more pronouncedly, if there is potential to shape a border regional planning culture of its own. With many border regions existing along Europe's regions, the evidence base is there, now research on planning cultures needs to follow.

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ID 1572 | REVISITING THE CONCEPTS OF SCALE AND RESCALING IN RELATION TO THE EU MACRO-REGIONAL STRATEGIES

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ABSTRACT : Seeking to contribute to a more nuanced understanding of the processes of rescaling in European macro-regional strategies, this paper aims to develop and test a conceptual framework to explain the underlying processes of rescaling. In an attempt to draw on the conceptual gateways in the main debates of scale and rescaling, we observe a mismatch with empirical observations on how stakeholders construct scale. As a result of a structured literature review, and based on empirical observations in the Danube region, we suggest that the key to understanding rescaling processes is the conceptualization of scale as a construct, constantly contested through multiple dimensions. Drawing upon recent developments within planning literature arguing for a co-existence between relational and territorial spaces and our empirical information, the paper suggests a multidimensional conceptualization of scale of four dimensions: (i) regulatory/jurisdictional; (ii) funding/resources; (iii) knowledge/values and (iv) network. We argue that scales consist of four co-existing dimensions which have impacts on social and economic relations as well as policy-making. Through the analysis of the Danube Region example the paper concludes that processes of rescaling often occur indirectly. We observe that case stakeholders make use of networks and knowledge at the macro-regional level in order to influence decisions in the funding and regulatory dimensions of the national and EU level.

KEYWORDS: scale, territoriality, rescaling, EU macro-regions, Danube Region, transport, navigation

1 INTRODUCTION

European macro-regional strategies aim to address common "functional challenges" and coordinate policy responses across multiple countries (EC 2013). Starting with the development of macro-regional strategies for the Baltic Sea (2009) and the Danube Region (2011), they have subsequently evolved to form a key aspect of European cooperation. Situated between the EU and the nation states, writings from several scholars in human geography, planning and political studies have started to discuss the rescaling of spatial policies in the wake of ongoing European integration (FALUDI 2010, STEAD 2011). Macro-regions have not generally extended political decision-making competences, despite their influence and role in recent policy-making. As macro-regional activities affect existing governance arrangements in more complex ways than representing a new political scale, the paper examines which processes of rescaling in EU policy making can be identified in the case of European macro-regions. Second, the paper questions how scalar constructions influenced by macro-regional activities can be explained. In analysing the various processes of rescaling and the ways stakeholders shape scalar structuration, we faced the challenge to

explain our empirical observations based on the existing theorization of scale. Hence, we third consider what we can learn for the theorization of 'scale' from these findings.

Starting in the 1980s, academic literature witnessed a considerable growth in debate around conceptualizations of 'scale' and processes of 'rescaling'. We summarize these academic debates in four phases. In the first phase social theorists and human geographers such as TAYLOR (1981, 1987) and SMITH (1981, 1984, 1990) engaged in theorization of scale and scalar organization of society. In the second phase in the 1990s and the early 2000s, contributions disputed the changing role of nation states in the context of globalization and European Integration. In seeking to overcome the notion of scale as 'taken-for-granted' most contributions were affiliated with forms of neo-Marxist (e.g. SMITH 1995; BRENNER 1999 A/B) or regulation theory (e.g. SWYNGEDOUW 1997A/B, JESSOP 1997, COLLINGE 1999,). The third phase was marked by poststructuralist writing challenging these political-economic approaches by disputing the use of the concept of scale as such (MARSTON 2001, MARSTON ET AL. 2005). More recently, scalar literature has turned to highlighting the overlaps of both strands in following a constructivist perspective, albeit their opposing philosophical roots (MacKinnon 2012).

These debates have helped to understand the nature of 'scale' and develop different perceptions. Nevertheless, the translations of these conceptualizations for analysis remains complex and challenging. More concretely, we argue that this theorization elucidates a processual understanding of scale but does not offer gateways to explain how scale is contested in a structured way. Seeking to contribute to a more nuanced understanding of the processes of rescaling, we argue that scalar theorization now needs to go a step further and explain how scale is constructed.

Most studies of rescaling either focus on the reasons and major developments triggering rescaling (e.g. globalisation), the different objects of rescaling processes, and/or the direction of processes of rescaling and the involvement of different groups of stakeholders. Many definitions of rescaling exist. Some follow a narrow understanding of the reallocation of state power. Others encompass modes of governance, policy relationships, agendas, networks or ideas (GUALINI 2006, STEAD ET AL. 2015). Interestingly however, many recent empirical studies of spatial rescaling in environmental and planning studies often consider 'scale' from the perspective of changes to jurisdictional arrangements and competence-shifts (KERN & LÖFFELSEND 2004, MC CARTHY & COHEN 2015; see also contributions in EPS Special Issue 2006 14:7).

As a result of empirical observations in the Danube region, we suggest that the key to understanding rescaling processes is an alternative conceptualization of scale as a construct, constantly contested through multiple dimensions alongside different fluidities. Hence, the paper aims to develop and test an alternative conceptual framework that reflects on the rationales of scalar activities in policymaking. This then enables us to explain the reasons and processes behind rescaling and the implications for scalar structuration. We approach the development of a framework by means of a structured literature review of existing conceptualizations of scale and rescaling and by drawing on our empirical observations research. The paper aims to contribute to the broader debate of 'scale' conceptualisations in support of theorizing and empirically analyzing rescaling.

The paper presents a multidimensional conceptualization of scale and suggests four dimensions: (i) regulatory/jurisdictional; (ii) funding/resources; (iii) knowledge/values; and (iv) network These dimensions are explicitly and implicitly recognized in literature, most prominently the administrative and network spaces and scales. One point of departure on the theorization of 'scale' is a paper by MACKINNON from 2012 who presents the conceptual overlaps between political-economic approaches and post-structural writing. A second starting point are current developments around the co-existence of relational and administrative spaces within the territoriality debate. We explicitly take up the dimensions of access to funding and resources, existing values and knowledge basis, as well functional spaces, which are acknowledged in scale literature as rationales or parameters for stakeholder's activities. Based on our empirical evidence in the Danube region in the specific policy issue of navigation, we suggest that looking at these explicitly as own dimensions offers explanatory force as two how scalar construction come into being. Examining the recent activities in the thematic cooperation of developing the Danube Waterway under the EU macro-regional strategy for the Danube Region, we illustrate that all of these dimensions are essential within processes of scalar restructuration.

The paper is divided into four main parts. We begin by revisiting conceptualisations of scale in order to identify, understand, explain and interpret processes of rescaling in their complexity in EU policymaking based on a structured literature review. Second, we present an analytical framework, which we then test in the third part of the paper examining the case of the European macro-regional strategy for the Danube Region (EUSDR). Fourth, we discuss the implications for the further theorization of scale.

2 DEBATES ON SCALE AND RESCALING – A REVIEW

2.1 CONCEPTUALISATION OF SCALE

The concept of scale has been subject to a very rich academic debate within human geography and, more broadly, social theory. We distinguish between four main phases. The start of the debate around scale is associated with the seminal writings of TAYLOR (1981, 1987) and SMITH (1981, 1984, 1990). In this first phase scholars focused on the theorization of scale as a concept based on different philosophical traditions. In contrast to the materialist views on scale proposed by Taylor and Smith, Hart (1982) drew on the Kantist philosophical tradition and argues that scales are fictive (see Herod (2011) for further exploration).

In the second phase of the debate, mainly in the late 1990s and early 2000s, an important narrative was the changing role of the nation state in times of globalization and European integration alongside debates on new regionalism (KEATING 1997). In general, literature theorizing the 'politics of scale'" (NEUMANN 2009, cf SMITH, 1992; COX, 1998; SWYNGEDOUW, 1997a/b; 2004; MARSTON, 2000; SHEPPARD/MACMASTER 2004) questioned scalar configuration and processes of scaling, rescaling and descaling. The state of the art around 2000 is summarized by a quote from BRENNER (2001, 592):

"[M]any geographers have elaborated processual notions of scale in their efforts to understand the ways in which entrenched scalar configurations are being reorganized […]. Rather than viewing scale as a self-evident or pregiven platform for geographical processes, these scholars have introduced more dynamic conceptualizations in order to investigate the contested, and continually evolving, role of scale as a container, arena, scaffolding and hierarchy of sociospatial practices within contemporary capitalism."

It is in this context that relational thinking became influential in theorizing scale, significantly drawing upon Lefebrvrian ideas that territorial organization, social relations and institutional arrangements occur upon different levels, and that hence a spatial fix necessarily involves a scalar fix (1991). Key scholars shaping this discursive shift from more static to dynamic conceptualisations include BRENNER (2001, 2004), SWYNGEDOUW (1992, 1997a/b, 2004), AMIN (2002) and MASSEY (1999, 2005). Both MASSEY and AMIN have been instrumental in perceptions of new power geometries as a result of globalization. They have advocated the importance of networks, and argued for shifts away from the nation state as the primary domain of organization of world economy, maybe towards "spaces of flows" (CASTELLS 2000). SWYNGEDOUW for example conceives "scalar configurations as the outcome of socio-spatial processes that regulate and organize social power relations, such as the contested making and remaking of the European Union or the process of state devolution or decentralization" (2004, p. 26). This may include the "emergence of new territorial scales of governance and the redefinition of existing scales" and hence may result in changing regulations or social, political and economic organization of the Nation State (SWYNGEDOUW 2004, p. 26).

In the first two phases, most authors in the literature were in some way affiliated with certain brands of neo-Marxist theory (e.g. SMITH 1995; BRENNER 1998, 1999 a/b) or regulation theory (SWYNGEDOUW 1997a/b, JESSOP 1997, COLLINGE 1999, UITERMARK 2002). The main arguments brought forward are the social constructiveness or production of scale through various social actors and the historical contingent process of political contestation (DELANEY and LEITNER, 1997). This constructivist perspectives, according to LEITNER, "involves conflict-laden power struggles" of "individuals, groups and institutions" independent whether played out through material or rhetorical practices (2004, p. 238).

In the third phase, post-structuralist writing challenged the political-economic approaches (MARSTON 2000, MARSTON ET AL. 2005, JONES 1998, MOORE 2008, COLLINGE 2005). These researchers argued that the materialist nature of political-economic approaches grants ontological meaning to scale. In contrast, MARSTON ET AL. (2005) suggest "a flat ontology", arguing to abandon the notion of scale. In

highlighting, the epistemological meaning of scale MOORE (2008) agrees with MARSTON ET AL. denial of an ontological reality of scale, suggesting that “it is not necessary to retain a commitment to the existence of scales in order to analyse the politics of scale“ (2008, p. 213, italics in original). This approach was not uncontroversial (LEITNER/MILLER 2007, COLLINGE 2006).

In the last decade, scalar literature has turned to identifying overlaps between these two major strands, and has offered some interdisciplinary perspectives to scale. The common concern of both POLITICAL ECONOMIC AND POST-STRUCTURALIST WRITING was to overcome the notion of scale as pre-given following the “traditional Euclidian, Cartesian and Westphalian notions” (BRENNER 2001, 592) highlighting the evolutionary components of sociopolitical contestation. MACKINNON emphasised that there is A “shared concern with the construction of scale and how this is shaped by wider social relations and networks providing basis for theoretical providing a basis for theoretical rapprochement and synthesis.” (2011, p. 22). Herod (2011) summarizes the academic debate around scale as presenting opposing views of the nature of scale as static versus evolutionary, epistemological versus ontological, Marxist materialism versus Kantist idealism and the move from topographical to topological conceptions of space and scale.

Most recently, the interdisciplinary perspective has been strengthened by MC COHEN & CARTHY (2015). In the environmental studies there is also a strand of theory-building on the environmental or natural dimensions of scalar configurations (NEUMANN, 2009, MC COHEN & CARTHY 2015, SWYNGEDOUW 2004, 2007, CASH ET AL. 2006). Environmental studies refer to the perimeters of natural resources as scale (e.g. water catchment areas, animal migration corridors) (CASH ET AL. 2006). Serving as a bridging figure between environmental studies and social sciences (SWYNGEDOUW, 2004) notes that “scalar configurations, whether ecological or in terms of regulatory order(s), as well as their discursive and theoretical representation, are […] an outcome of the perpetual movement of the flux of sociospatial and environmental dynamics”. (2004, 132). Meanwhile, COHEN & MC CARTHY (2015) differentiate between a rescaling to jurisdictional or natural space and make a case that the environmental dimension and ecosystem spaces deserves “to be drawn out more explicit in scalar scholarship” (2015, 3).

Based on the review, we perceive a lacuna in scale literature to move beyond questioning the use of the concept itself towards a deeper understanding as to how scales are contested. Poststructural literature has claimed to expurgate the existence of scales. We however retain the notion of scale for two reasons. First, based on our empirical observation it is a concept that underpins general views of the world and subsequently produces some kind of ‘scalar fixed’ rationales. Secondly, adopting the evolutionary and processual understanding of scale, we perceive scale as a dynamic construct constituted of different horizontal dimensions alongside which stakeholders action radiuses are detectable. This is influenced by recent developments in planning literature.

2.2 LEARNING FROM THE TERRITORIALITY DEBATE

Theorisation of scale coincided with close engagement with social theories within human geography, which lead to “a re-thinking of many of the core concepts of the discipline, including space, place, landscape, region and scale” (PAINTER, 2010, p. 1091) under the rise of relational thinking. The vast amount of literature approached scale “in similar fashion to the region” (MACKINNON, 2012) and approaches to ‘territory and territoriality’. Both concepts have undergone substantial transformation through the movement away from the perception of fixed entities according towards a constructivist view.

In the last decade in the human geographic literature, and more explicitly in planning literature, various academics have sought to overcome the dialectic between relational and territorial approaches towards territoriality (HAUGHTON ET AL. 2010, PAINTER 2010, AGNEW 2015, PAASI 2004). For example, PAASI AND ZIMMERBAUER (2015, 2) highlight that “[e]specially researchers studying the links between regional and urban planning, governance and policymaking have stressed the need to balance the relational and territorial views.” Processes of planning often remain situated in their jurisdictional boundaries and competence fields in need of coping with these overlapping developments, networks and so on (COCHRANE and WARD 2012). With regard to spatial configurations, the introduction of the concept of “soft spaces” by ALLMENDINGER ET AL. (2009) was perceived as a cornerstone. The concept reflects the mutually constitutive ‘hard’ and ‘soft’ spaces of governance. It is not surprising, that planning scholars welcomed this framework to think with, and it rapidly found basis for explaining many regional configurations in Europe and worldwide (e.g. FALUDI 2011, PETTERSON/FRISK 2016, SIELKER 2016).

The concepts of scale and territoriality are closely intertwined with a scale describing its relation to other spaces. The overlapping notion of different types of spaces is closely connected to somehow scaled networks and frameworks that are increasingly porous and malleable. Recently JESSOP (2016) presented a modified territory, scale, place and network (TSPN) scheme to explain the relations between these core concepts. Here he conceives the notion of 'soft spaces' as "networks of differently scaled places" (p. 24). The seemingly insurmountable opposing understanding of constructivist views as opposed to the Westphalian notion of scale is increasingly dismissed. The persistence of state structures and some elements of territoriality for state structuration have lately been perceived as contingent, but subject to change as well. Hence, some constructivist thinking, and even poststructuralist thinking, has made its peace with the idea that territorial spaces are as well never fixed, though they are more resistant to change (HEROD, 2011).

In line with these arguments, we perceive both the existence of networks as well as administrative or state spaces as elements of scalar structuration. Before embarking on the presentation of our multidimensional framework, we now turn to the literature focusing on the processes of rescaling.

2.3 CONCEPTUALISATION OF RESCALING

Following McCann rescaling can refer to "the process in which policies and politics that formerly took place at one scale are shifted to others in ways that reshape the practices themselves, redefine the scales to and from which they are shifted, and reorganize interactions between scales" (2003, p. 162). Narrow and broader definitions of rescaling can be found (GUALINI 2006). A narrow understanding of rescaling describes the reallocation of power and competences, particularly over resources and regulations (FÜRST 2006). A broader understanding of rescaling encompasses the restructuring of all kinds of governance, cooperation and social power relations. Most academic writing with a conceptual interest in rescaling is to be found in critical geographic literature thereby disapproving perceptions, which are conceived to have an underlying rationale of a purely state-centring rescaling of power (Brenner, 1999). The introduction of relational thinking and the post-structuralist argumentation were important contributors to a broader notion of rescaling, in which the social construction of all forms of interaction served as an explanatory background. In the context of European integration KEATING (2013), writing on the issue of new regionalism, captures rescaling as "the process by which systems of social regulative, collective action, representation and legitimation are migrating to new territorial levels" KEATING 2013, ix).

The various understandings of the processes of rescaling reflect a divide between relational and some kind of 'territorial' thinking. UITERMARK (2002, p. 748) notes that "usually, the re-scaling literature leaves the 'softer' issues aside and focusses on the 'hard' issue of power". His view is that "both of these issues are equally important with regard to regulation". However, there is often a gap between empirical studies and these theoretical debates. The theoretical debate has advanced and begun to acknowledge the importance of these 'soft' issues. Somewhat detached from the conceptualisations in most empirical studies particularly within environmental or planning studies the question of re-scaling remains largely associated with questions of changes in authority, power, legitimacy or more broadly speaking increasing influence in processes, on decision-making (KERN & LÖFFELSEND 2008, see as well EPS Special Issue 2006 14:7).

The rescaling literature has generally focused on one or more of the four realms (or questions): (i) the directions of scaling processes (from where to where?); (ii) the reasons for changes and contestations leading to 'scalar jumping' (why?); (iii) the objects of rescaling (what?); and (iv) the involvement of different interest groups, agents, networks or actors involved and the implications for governance and influences of different groups (who?).

Much of the scaling literature in empirical studies focus on the first realm, although not always explicitly. The question of directions of rescaling is part of the discussion on hierarchically nested scales. An important element of scale theorization was to show the entangledness of the different scales, most importantly the relation between the local and the global scale (SMITH 1993, BRENNER 1999, COX 1998b, SWYNGEDOUW 1997). In times of globalization, the 'hollowing out' of the nation state was an important narrative, giving more importance to regionalism and global cooperation (BRENNER 1999). In an empirical case study in the context of transnational cooperation for sustainable development in the Baltic Sea region KERN & LÖFFELSEND (2004) describe the outcome of new governance arrangements

as a transfer of national authority in three directions: (i) upwards to the level of international and supranational institutions; (ii) sideways to civil society actors; and (iii) downwards to subnational actors. This distinction is helpful in explaining the directions of rescaling for example in the context of environmental governance (STEAD, 2014).

The reasons for rescaling are sometimes presented in relation to large societal phenomena and economic forces such as capitalist influences on economic systems and structures (e.g. COX, 2013, BRENNER 2004) or the agendas of particularly influential stakeholders (e.g .SMITH A. 2013, Special Issue in Political Geography 17 (1) 1998, MARSTON 2000).

In accordance with the narrow definition of rescaling, the issues of authority, power or legitimacy can be affected. For example, FÜRST (2006, p.9) argues that "a shift in political agendas, problem-solving and policy-legitimization" can be seen as rescaling. Meanwhile, in the context of European cooperation STEAD ET AL. (2015) argue that rescaling can include "policy making agendas, processes, networks or power, or alternatively […] ideas, argumentation or identities related to policy" (p. 105-106).

Another realm identified in rescaling literature concerns the question 'who' is involved in scale making. For example, MEADOWCROFT (2002) links scalar construction to the involvement of different interest groups, arguing that rescaling leads to broader and more inclusive processes, but at the same time contributes to more fragmented and differentiated approaches as different groups participate in different contexts, according to their interests (MEADOWCROFT, 2002). In his early writings, Neil Smith develops the idea of 'scale jumping', describing the "ability of certain social groups and organizations to move to higher levels of activity" (MACKINNON, 2011). The notion of 'scale bending' (SMITH 2004) describes that ties between certain scales can be undermined by social groups and individuals mostly in the context of "fragmentation of pre-existing scales" (SMITH 2004, 205).

Many empirical studies adopt rather narrow definitions of rescaling (see above). Given the rich debate on scale and scalar configurations, it is surprising how little empirical work has been presented from these perspectives.

3 TOWARDS A NEW FRAMEWORK FOR ANALYZING RESCALING PROCESSES

3.1 BRINGING THE SCALE AND RESCALING DEBATES AND EMPIRICAL OBSERVATIONS TO THE DEVELOPMENT OF AN ANALYTICAL FRAMEWORK

The conceptual framework set out below has been developed with the aim of explaining processes of rescaling in policy-making processes in EU macro-regions, which contain large networks involving a great variety of actors. The framework specifically addresses how processes, ideas and competences move across different scales and are transferred between them, and by whom. The case of the macro-regional strategies serves to highlight rescaling in the context of a multiplicity of 'layers' of policy and scales.

The initial development of macro-regions questioned the development of a new scale of policy intervention (Stead 2011). Applying PERKMAN'S (2007) framework for the construction of new scales in three steps (political mobilization, governance building, strategic unification), macro-regions can be considered as a new scale. However, we do not limit ourselves to describing institutionalization processes, we also identify the interlinkages and the entangledness with other scales. In line with McCann's observations on the "reorganization of interactions between scales" (2003), we suggest that new forms of cooperation lead to changes at other scales.

We identify a variety of processes of rescaling, the objects of which are not a priori known. While the results of the various attempts for scalar reorganization can be clearly identified, the underlying processes remain largely 'behind the scenes'. Explaining the processes of rescaling is complex but the rescaling literature has a tendency for the oversimplification of analytical schemes for the analysis of competence shifts (e.g. sideways, upwards or downwards).

Our framework is influenced by arguments around contested rather than static theorization of scale. The two most helpful starting points for the framework are related to the construction of scale and the co-existence of networks and statehood scaling in scalar configurations. We agree with the concern of

political-economic and poststructuralist scholars on a social and political constructivist view towards scalar configuration. In line with the above, we perceive scale as constantly contested arenas and networks, which are not an a priori given. Generally, our framework connects with ideas from HEROD (2011, xvi) who argues that “there is always a tension between tendencies towards stabilization and those towards destabilization, even if at any one moment one of these appears to have won out”.

Much of the scale literature focusses on the question whether scale is perceived as ontologically or epistemological. In our attempt to analyse the ongoing processes it is secondary to us whether to characterize scale as ontological or epistemological, but are convinced that the effects of ‘scalar politics’ (MACKINNON, 2011) have material effects. However, we follow the post-structuralist claim that it is not ‘scale per se’ as a conceptual given leading to its imposition on aspects of social and political practices. Hence, the conceptual framework focusses on ‘scalar’ practices as a way of identifying processes of stabilization or destabilization of scales, or ‘in-between spaces’ given the non-fixity.

We are influenced by recent developments in planning literature with its concept of soft spaces and fuzzy boundaries and the idea to overcome the simplistic dichotomy between scale as purely hierarchical elements of statehood levels and the idea of overlapping arenas. We believe that scalar configurations, be it in the frame of statehood scales or network scales, are always contested. More specifically, we perceive the construction of scale as mutually constitutive of the ‘hard’ as well as the ‘soft’ elements overlapping networks with state actors as one important impulse. In order to understand scalar structuration and the underlying social relations we see both the ‘softer’ and the ‘harder’ issues of rescaling as those which manifest the contestation processes. Furthermore, we argue that there are multiple dimensions of scale (or arenas) in which policy-making is taking place. This leads to a position, where apart from the jurisdictionally scales, commonly organized in the layers global, European, national, regional and local, numerous ‘in-between-spaces’ (PAINTER 2010) develop that come to form their own scales, often transgressing these layers.

As a result, and based on empirical observations in practice, we suggest that the key to understanding rescaling processes is an alternative conceptualization of scale as a construct, constantly contested through multiple dimensions alongside different fluidities. Hence, we theorise scale in differentiating how and through which means and elements, or as we call it dimensions, scalar production comes into effect.

3.2 THE NATURE OF THE ANALYTICAL FRAMEWORK

We suggest that scale can be conceptualized through four dimensions with different fluidities: (i) regulatory/jurisdictional; (ii) funding/resources; (iii) knowledge/value; and (iv) network. These dimensions are derived from explicit and implicit recognition in literature, as well as from our experiences in practice. Most obvious from the literature are the dimensions concerning regulatory/jurisdictional and network. We concur with COX’S approach (1998 a/b) that scales reflect the overlapping nature of different dimensions of scalar configurations, including legitimacy questions and network elements. This academic debates mirrors our experiences in the EU macro-regions. Stakeholders are well aware of their networks as well as the administrative spaces that serve as a parameter to their activities. Stakeholders recognize both relational and administrative spaces, and both influence their scalar activities. In addition, arguments around knowledge and values as well as resources and access to funding provide explanatory factors when looking at how and why stakeholders influence scalar politics. These two elements have implicitly been regarded both in post-structural and political economic literature as regards to stakeholders motivations and reasons for scalar politics (see for example MARSTON 2000 on the resources of middle class women or SMITH 2004 on scale bending). In our approach, we attribute these elements a more explicit role. Before applying the framework, we first offer a brief characterization of each dimension.

The first dimension refers to the regulatory or jurisdictional dimension of scalar construction. In policy-making processes, as in the case we will illustrate later, the jurisdictional and legitimate dimension remains an important notion of political action. All types of regulatory frameworks ranging from jurisdictional or legislative frameworks to all kinds of regulations, provisions or formalized procedures are one part of scalar construction. Depending on the phenomena analyzed, this can on the one hand involve regulations in form of jurisdictional means as for example represented by the state scales. On the other hand, this dimension describes as well different types regulatory framework at all scales (such as agreed rules on the household level).

The second dimension ascribes funding and resources as one element to scale construction. The examples we choose to illustrate our approach towards scalar construction and phenomena are from policy related processes rather than social phenomena. However, we see resources such as human resources, and financial means as one element allowing, restricting or facilitating all kind of activities. As regards to the question of what is either rescaled or influenced by developments at other scales, many scholars are concerned with changes in budgets or the (re)allocation of (human) resources from one scale to another (e.g. PERKMANN 2007, MARSTON 2000).

The third dimension we term as 'knowledge/value dimension'. With this dimension, we draw attention to the somewhat intangible parts of scalar construction reflected in 'common knowledge' and even more widely shared or sometimes contradicting societal values. All human activities are influenced by underlying values and knowledge. Coinciding with the definitions presented above, the narrow definition reflects on processes that come into effect through the jurisdictional and the resource dimension (e.g. budgets or human resources). The broader definition as well includes processes that come into effect through the knowledge and the network dimension (e.g. policy agendas or ideas). This dimension hence allows to reflect on who has what knowledge and what is discussed at what level, as well as on the values and identities involved. In the diversity of scalar related phenomena transfer of knowledge to different levels or the changing nature of discourses and hegemonic relations is important. Whereas some phenomena relate to knowledge in terms of information (such as problems of implementation in transport project) others relate to values and knowledge which are also moving across scales. Some scholars build their arguments explicitly or implicitly on examples where knowledge, values or identities persists (see for example MOORE (2008) on the Bosnian-Serbian identity and overlaps with traditional state boundaries). Knowledge and values can spread and transgress scales through public interactions and sometimes enter into the narrative of 'common sense' or the predominant 'canon of values'. The resulting scales here are to be considered as more fluid and porous and not necessarily geographically locatable.

Fourth, we see the network dimension as an important, fluid part of scalar construction. This dimension closely reflects relational and post-structural thinking as it refers to all kinds of networks, formally or informally construed. Networks transgress around different dimensions and layers at the same time.

Networks reflect the notion of 'spaces of flows' (CASTELLS, 2000) and the increasing role of informal, formal, temporary and institutionalised networks through which scales are buildt.

We reason that this multidimensional approach to scale offers a way to understand how scales are contested, formed or reoriented. Through these four dimensions scalar configurations come into effect. At the same time actors and stakeholders construct scale moving alongside these dimensions. Because of these interactions the different dimensions are constantly contested, triggered by social, economic and political changes. However, these dimensions differ in their fluidities to change, with jurisdictional levels to be on a general level rather resistant compared to networks that might be loosely organized (see Fig. 1).

Below, we apply this framework to analyse the case study of EU Strategy for the Danube Region strategy (EUSDR) and examine the extent to which this framework can provide useful starting points to conceptualize scale as a combination of co-existing arenas of these four dimensions.

4 TESTING THE ANALYTICAL FRAMEWORK WITH AN EU MACRO-REGIONAL STRATEGY

The first European macro-regional strategy was launched in 2009 for the Baltic Sea Region. This was soon followed by the development of the Danube Region Strategy (2011), and later the Adriatic-Ionian Strategy (2014) and the Alpine Region (2015). One key idea of macro-regional cooperation is to tackle common challenges through the development of a joint strategy by countries in the same geographic area. The geophysical characteristics are the building blocks for various areas of cooperation (e.g. navigation or environment). The EUSDR is organized in priority areas, representing the thematic foci for cooperation. The EUSDR addresses a total of eleven policy fields ranging from transport, environment towards education or security matters. Starting from this general prioritization in support of joint activities, the EUSDR sets the goal to make the Danube a better navigable river (EC 2011). For each priority area a governance structure is defined in order to coordinate implementation activities.

In this section, we seek to illustrate the dynamics of rescaling in the case of transport policies contained in the EUSDR. This issue has been chosen for two reasons. First, the use of the Danube river as an important transport corridor has been impetus for Danube cooperation. Second, this policy theme has received relatively high-level political attention and has become one of the most active fields of cooperation.

Methodologically, the case study is based on a textual analysis of meeting minutes, progress reports of the navigation/waterway priority area and official EUSDR documents. In addition, it is based on interviews with representatives from the Steering Committees, the European Commission as well as from the Shipping Associations in the Danube Region.

4.1 SETTING THE SCENE – TRANSPORT POLICIES AND PROJECTS IN THE DANUBE MACRO-REGION

The EUSDR involves the cooperation of 14 Danubian countries on the issue of transport along the Danube River corridor. The issue of navigation was very central to the development of a macro-regional strategy, not least since Commissioner Hahn called on national transport ministers to increase transport volumes on the Danube River by 20% between 2011 and 2020. The development of joint projects to achieve this goal is summarized below.

Soon after adoption of the macro-regional strategy, work began on implementing Priority Area 1a ("Mobility – Inland Waterways") under the lead of Austrian and Romanian Coordinators with support of the Technical Secretariat at the ViaDonau GmbH, the Austrian waterway operator. A governance structure was set up for the implementation of the Priority Areas with a Steering Group as the central governance element. The group was formed of representatives from the 14 countries including representatives from public authorities, such as Ministries or Waterways and Shipping Offices. Several governmental and non-governmental organisation such as the Danube Commission, the International Commission for the Protection of the Danube River organisations or ProDanube International are observers to this committee. The committee is responsible for decision-making on joint goals and strategies. The decisions have, however, neither a formal character nor do they represent binding agreements.

In a second step, this Steering Group prepared the "Luxemburg Declaration" (Danube Ministers, 2012), signed by most of the Danube Transport Ministers, which provides political commitment to the development of a more effective waterway. In a third step, the Steering Group developed the "Fairway Rehabilitation and Maintenance Master Plan" based on a NEWADA project (FRMMP, 2014). This project included waterway companies. It covers the navigable tributaries in each country and the critical sectors. In addition, public authorities defined so-called common minimum Levels of Service as goals as well as different waterway maintenance activities. In a fourth step, the Master Plan was presented to the Danube Ministers, who subsequently gave it their endorsement (DANUBE MINISTERS 2014). Fifth, the Master Plan built the basis for National Roadmaps (2015) and the development of specific implementation activities. One example is the FAIRway Project whose scope is to procure the necessary equipment to carry out pilot activities for hydrological serves and to allow the identification of innovative approaches for fairway rehabilitation and upgrade. The eight beneficiaries from six countries (Austria, Bulgaria, Croatia, Czech Republic, Romania and Slovakia) obtained funding through the Connecting Europe Facilities. In February 2016 the FAIRway Project was launched with a total budget of ca. €22 million with ca. €19 million from EU contributions.

The development of joint waterway development policies for the Danube from 2011 to 2016 was triggered by discussions in the new macro-regional committees, which in return sought the necessary political support. The primary stakeholder triangle in its development are public authorities and observers in the steering group, transport ministers and waterway companies. The European Commission served an advisory role in the Steering committee meetings where the Master Plan development and the Project development were high on the agenda.

In sum, the macro-regional level represents a new cooperation arena, which over the last 5 years has led to project development and funding allocations at different levels. Below, we seek to illustrate how the ESUDR influenced scalar politics, and to what extent these developments represent processes of rescaling.

4.2 APPLYING THE MULTIDIMENSIONAL FRAMEWORK

Drawing on the four dimensions presented above, we elaborate on the ways in which the primary stakeholder groups explored and influenced these dimensions in the EUSDR generally as well as the FAIRway Project more specifically.

NETWORK DIMENSION

The interest to initiate and join new networks across the Danube countries was high during the early phases of developing the EUSDR (Blanked Name 2012, Blanked Name 2016). The Danube Cooperation is largely led by existing networks with different degrees of institutionalization. The networks created by this cooperation are manifold and reflect the overlapping hard and new soft spaces (Blanked Name 2014). These occur through the new informal, consultative governance structure of the EUSDR itself as well as in projects and wide range of activities and new institutionalized networks (such as the Danube-INCOnet, see website danube-region.eu). The networks cover different territories and show different constructions as regards to those four dimensions. Some build on informal arrangements, whereas others have been created in response to changes in the funding or legislative dimensions of scale.

The example of the FAIRway project illustrates how the new networks are closely shaped by the Piority Areas set out in the EUSDR. The implementation of activities in view of navigation improvements are supported and induced by the steering group, a new network itself. This committee offered the opportunity for the representatives of the public authorities to provide guidelines for joint activities through the decision on joint goals. The different interest groups and observers were able to raise concerns and bring needs to the attention of representatives. The Priority Area Coordinators based in Austria and Romania involved a technical secretariat with the viaDonau GmbH, a company founded to tackle difficulties of Danube shipping. The official framing of an EU strategy helped this network to make its voice heard at the group of the Transport Ministers. Through this ‘upscaled’ network of interest groups and public authorities in cooperation with the waterway associations and shipping companies, stakeholders were able to seek political support of the national transport ministers as a first step. This high-level political support than serves as basis to argue for changes in the legal and the funding framing. For the stakeholders involved and this new network the next step was to create an elementary and coherent knowledge.

KNOWLEDGE/VALUE DIMENSION

In the primary stages of macro-regional cooperation, the Priority Area Coordinators provided an overview of existing activities. The naming of the cooperation after the Danube river initiated broader debates as to whether there is a Danube identity. According to statements by different interviewees, cooperation and coordination between the different ministries and associations on the issue of navigability led to a revived feeling of being focused towards a common goal.

ViaDonau initiated and coordinated the development of the Fairway Rehabilitation and Maintenance Master Plan following the Newada and Newada DUO project. The goal was to identify in more detail joint activities around quantitative data. The Masterplan named the challenges of the navigable tribunes and summarized data from the 11 riparian states. This includes country reports laying out how many days in a year the Danube was navigable (e.g. the daily draught or dredging activities). Based on this, the Steering Group identified the sections in which the joint goals of 2.5 m of draught and 5.25 m minimum height under bridges 365 days per year are not fulfilled. These discussions subsequently shaped the discourse along the upper and lower Danube. Through the EUSDR process, information was made accessible to all stakeholders in the region. On the one hand, the knowledge itself was enhanced, then ‘upscaled’ and finally, led to new ‘knowledge arenas’. On the other hand, these developments and the coordinated project was used to inform policy-makers and impact funding decisions on other levels, namely national and EU-wide funding.

RESOURCES/CAPACITIES DIMENSION

The dimensions of resources and capacities is a crucial dimension in scalar politics, often being the object of activities. In the Danube Region, the immense numbers of stakeholders involved (e.g. more than a 1000 participants at the Annual Forum in Ulm in 2015) reflects the allocation of human resources to activities related to the relatively new cooperation. However, one of the main important rationales of macro-regional cooperation are the three NO's: no new legislation, no new institutions and no new budgets. At first instance, macro-regional cooperation seems not to imply rescaling of allocation of funds.

The FAIRway project, however, reveals that stakeholders used the knowledge and network dimension of scale to influence funding decisions in the Connecting Europe Facility. Based on discussions in the Steering Group, the FAIRway project was developed in close cooperation by the Steering Group members with consultation for example from representatives of the European Commission (DG-Move). In addition, the results of the process were regularly directed towards political stakeholders by the Steering Committee members. An example of this is the political leverage triggered by the Transport Ministers endorsement of the FRMMP. As the EU funds aim to implement MRS, the respective funding decision by the CEF is directly linked to the EUDRS. Though not implying new funds the EUSDR has had an impact on the allocation of existing funds at the EU level. At the same time, the perimeter of the different projects is connected to the territorial coverage of the Danube Region. Therefore, this level has gained importance in terms of the use of resources and capacities, which in return necessarily implies changes at other scales.

REGULATORY/JURISDICTIONAL DIMENSION

The macro-regional cooperation builds on informal documents which are not binding (e.g. the Strategy Document and the Action Plan). Whilst the MRS in itself does not imply new legislation, it does offer a new framework which changes regulatory arrangements at other levels. One consequence is that the modus operandi for the development of projects has changed and the decision on funding is coupled to the support of the macro-regional Steering Groups.

The case presented here provides an example on how the macro-regional discourse shapes the political framing. The Transport Ministers did not provide new legislation with the Luxemburg Declaration. Nevertheless, this document has shaped ensuing decisions in the national and EU-wide context. National ministries are now more likely to take action that coincides with the priorities contained in the macro-regional strategy. In addition, the development of the FRMMP has provided a basis for joint goals, which are being introduced into national discussions and regulatory frameworks. These frameworks provide the building blocks for national funding decisions.

5 SUMMARY AND DISCUSSION

One of the goals of the paper was to analyse processes of rescaling in EU policy making in the example of macro-regional strategies. Based on a structured literature review around scale and rescaling as well as the empirical insights from the case study we developed a framework for analysis. In this paper, we argue for a multidimensional understanding of scale, where scalar (re)structuration can be explained through stakeholders interactions alongside four dimensions: regulatory/jurisdictional, funding/resources, knowledge/values, and network. This four-dimensional framework was tested in the Danube macro-region and the FAIRway project. We contend that processes of both stabilization and destabilization can be observed in rescaling processes.

5.1 DISCUSSION: HOW DO PROCESSES OF RESCALING OCCURE IN THE EUSDR?

The example of the EU Danube Region reveals the complexity of scalar structuration, configuration and production. The example shows how the macro-region and its strategy are composed and constructed by different overlapping 'in between scales'. The macro-regional developments indirectly influence those at other scales. These depend on the topics addressed, as in the case of navigation.

The example presented in this paper shows how stakeholders crossed over different scales and made use of the different dimensions of scale as a way to influence political priorities and decision-making at the EU and national level. The Steering Group is a new network through which public authorities can enhance their position in respect to the national context. In the case presented above, the knowledge and the network dimension were essential for stakeholders to gain political support. This, in turn, led to allocations of resources. Just looking at the example of the Steering Group, essentially driven by some active public authorities and the Technical Secretariat of the Via Donau GmbH, shows how this new network influenced the political decision-making and funding at the national and EU level. In order to achieve this goal they used the knowledge dimension in providing a new information base and directed this development towards the network dimension at the macro-regional level. The transport ministers draw on the regulatory framework, whereas the shipping companies draw on the network and knowledge dimension to influence the other dimensions. Clearly, different stakeholders use different dimensions to influence developments and change political priorities.

The multidimensional framework appears to be a useful tool to detect how scalar restructuration occurs. One example presented here was the development of the FAIRway project, which is a direct result of the macro-region and the politicization of Danube River related activities. The example illustrates that all processes and their outcomes are connected by the developments within the four dimensions, and that all of these dimensions are essential within processes of restructuration, albeit depending on the phenomena and actors involved with diverging weight. For example, the use of the knowledge dimension on the macro-regional level influences the funding dimension on the EU level.

5.2 DISCUSSION: IMPETUS FOR FURTHER THEORIZATION OF SCALE?

We argue that following the developments of scale literature over the last few decades, theory now needs to enter into a new phase focusing on how scale is contested and the process behind rescaling. This next step can help to overcome the mismatch between theory and empirical complexity. In providing a conceptual framework, we aim to offer one approach as to how scalar construction can be theorized.

In our framework development we were guided by the idea to overcome the dialectic of scale as a purely hierarchical element of statehood levels and the idea of overlapping network-arenas. Inspired by the recent developments in the planning literature, arguing for a co-existence of relational and territorial approaches to space, we assume the co-existence of more resistant dimensions of scale as well as more fluid dimensions of scale. When analyzing territorial policies, such as transport, we are hesitant to expurgate the role of the statehood levels too fast and reduce it to a purely network notion. On the contrary, we argue that scales consist of four co-existing dimensions through which scales become apparent and through which effect is taken on the social relations and policy-making. Agents make use of these different dimensions according to their means, and hence construct “scale”.. At the same time, stakeholders move across different dimensions and different levels, where scale may be somewhat difficult to detect.

6 CONCLUSIONS AND FURTHER RESEARCH

The paper started from the claim that, despite the richness of literature in theorizing scale, many conceptualisations of scale and rescaling do not offer very adequate gateways to explain the multiplicity of ‘layers’ of policy and scales that we observed empirically. Based on a structured literature review and the empirical evidence we have developed an analytical framework to scrutinize processes of rescaling in the Danube region, focusing on the specific policy issue of transport and navigation. We have then tested this multidimensional framework.

We conclude that the framework offers a helpful starting point to better illustrate how macro-regional cooperation can both destabilize and restabilize existing scalar structuration and leads to the construction of new ‘scales’. Further, we conclude that looking at scalar politics explicitly through these dimensions offers explanatory force as two how scalar construction come into being.

More generally, the framework provides a more nuanced way of illustrating which agents and actors are operating within what type of scales and, through which means they become active in influencing

processes. Looking at scale through these dimension helps to identify the interplays between the dimensions and across scales, and hence the ways scales are constructed socially, politically as well as economically. Using this approach, we have identified how scalar politics are entangled through the rationales alongside these dimensions. In the macro-regional case we have illustrated the use of the knowledge and network dimension, as a means to indirectly implicate changes at funding decision at other scales (e.g. national or EU). This not only helps to identify the processes of hardening of soft spaces (METZGER & SCHMITT, 2012) through the scalar dimensions, but also to discover the "relative softening of hard spaces", a phenomenon which PAASI & ZIMMERBAUER (2015, 14) highlight as underrepresented in literature.

Further testing of this framework is needed in order to verify whether it is applicable to a range of different contexts. In our research, we sought to link the conceptual debate with the empirical evidence through the development of a framework for analysis. More research is needed to better understand the processes of scalar construction, and how changes in scalar politics are coming into force. A key here is to understand how these different dimensions affect each other. Theoretically, the paper has outlined the interlinkages between the scale debate and recent debates around territoriality. Moving away from a simple juxtaposition of philosophically differently informed writings (e.g. neo-Marxist as opposed to poststructuralist writing) as a way to explain the empirical demands more in-depth investigations. Indirect rescaling and cross-dimensional influences are essential to understanding the sociopolitical processes in scalar construction.

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ID 1597 | TOWARD TERRITORIAL COHESION WITH THE NATIONAL SPATIAL PLAN FOR ALBANIA 2030

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ABSTRACT: In late 2013 the National Territorial Planning Agency (NTPA) in collaboration with the Ministry of Urban Development (MUD) of Albania took the initiative of drafting the First National Spatial Plan for Albania 2030(NSPA). The strong need of the country to jump to a new way of sustainable development was backed up by the political will and a new legal planning reform, paving the ground for new integrated planning instruments. Although this is not the first time plans are drafted in Albania this is the first national spatial plan for the country. The methodology for drafting the NSPA was based on three complementary steps: At first the metabolic analysis of the territory was performed for five main systems of the territory: water, food, infrastructure, urban and natural system. Secondly, the Declaration of Vision was drafted through a wide participatory process from different stakeholder form the government administration but also independent experts and academia. Third, the strategic proposals through flexible tools that allow for further exploration for best collaboration between national developing sectors and local governance. The plan followed an open and democratic approach reflected not only in the participatory drafting process but also on the strategic proposals that were offered. It was not the aim of the working group to have a restrictive plan with rigid land use maps but to provide a tool for the national and local administration and also private sector that would guide and advise on the best possible uses of the territory. The plan gives alternatives and describes possibilities for best cross-sector and inter-regional cooperation and proposes strategic projects of national importance for the sustainable development of the territory in the next 15 years. Major public hearing were held across the country, so people could have the chance to express ideas, to be informed but above all to be part of a national plan that would guide the territorial development for the next 15 years. The participation process resulted to a new increased level of awareness of the importance of territorial planning as a cohesive process to different governance sector of the administration. Strengthen institutional capacity for cross-cutting issues of territorial planning resulted essential to achieve a plan that aimed spatial balance, sustainable development, and socio-economic

wellbeing. Even though the NSPA is approved at the highest instances foreseen by the law, for the actual administration it is an ongoing process and its success depends on a large scale on continuous research of contextual planning issues and for every stage of its implementation or upgrade to assure an open transparent inclusive process with democratic participation.

KEYWORDS: National Spatial plan, territorial cohesion, participatory planning, governance policy

1 INTRODUCTION

Even though Territorial Cohesion concept is not new as such(Faludi 2006) first mentioned more than two decades ago in the Treaty of Amsterdam 1994 (Faludi 2004 citing Husson 1999, Husson2002) (Vogelij 2010) than introduced in the European Spatial Development Perspective (ESDP – EC, 1999) as a decisive milestone presenting the 'territory' as a 'new dimension of the European Policy' , while it only gain the attention for elaboration into an applicable concept in 2004 in the Rotterdam Acquis. It was then launched as one of the three main pillars of the EU (European Union) Cohesion Policy with the Green Paper on Territorial Cohesion (EC, 2008), and it was included in the Lisbon Treaty, in 2009, (Medeiros, 2016)(Vogelij 2010)

Also, the debate in recent years has shown that a strict definition of territorial cohesion is impossible.(Böhme and Gløersen, 2011). Although "Territorial cohesion is merely said to augment existing policies with a greater focus on development opportunities, to encourage co-operation and net- working, to pay greater attention to strengths of areas and by a better targeting of policy instruments" .....Rather than giving a definition, the message seems to be that nothing radically new is being proposed... (Faludi 2004) As main stakeholders emphasize different dimensions of the territorial cohesion idea, and because the concept has to be fluid enough to accommodate temporal change, any attempt to define it precisely will unavoidably result in excluding certain senses or aspects and thus lead to a poorer result. (Böhme and Gløersen, 2011)

When it comes to Albania we can say with conviction that it is about a totally novel concept and uncharted field.

While it is not the aim of this paper to explore the origin, meaning and importance of territorial cohesion as these are largely argued and previously explored. It is in the focus of this paper It is important to explore how this concept, fundamentally created as an instrument for territorial management in the member states, still further to formalize the role of the European Union in the competence of planning, guides and is absorbed in the highest levels of policy documents even for the states outside The Union such as Albania.

The paper presents an analysis of the National Territorial Plan of Albania 2030 with main reference on the Territorial Cohesion main characteristics. The focus is placed on planning practice, by analysing the case of the National Territorial Plan. The analysis is based on a literature review of the terminology and features of Territorial Cohesion and on participatory observations as the author has been involved in the process of drafting the National Territorial Plan of Albania2030 as the team leader.

In the end, the importance of the test case stands in showing how European-level territorial cohesion policies can be adopted and downscaled on a national level of a country. And above all, when talking about territorial cohesion in Europe, "integration is a state of mind". Spreading knowledge and advancing with new concepts within the common interest of sustainable development overcomes borders.

2 THE CONTEXT OF DRAFTING A NATIONAL TERRITORIAL PLAN AND THE RELATION TO TERRITORIAL COHESION

It is understandable that Albania's long-term aspiration to join the EU since long has adopted a large number of European legal directives, but while the ESDP and Territorial Cohesion Policy are not even a requirement for European member countries, in Albania it has found a broad implementation that starts from the reformed legal planning framework, to the planning documents.

Of course, there are a lot of challenges in Albania when looked from the perspective of catching up with the rest of Europe. On the other hand, it is good to consider that many European countries and more are facing the same challenges as Albania in terms of overcoming spatial disparities, securing sustainable development and conservation of environmental sensitive areas, as well as fair access to services, and achieving territorial resilience, at a national level also at the European level.

As territorial cohesion is about place based policy making, paying particular attention to local development conditions, going below the regional level. (Böhme, and Gløersen, 2011), the policies of member states on territorial cohesion that address the spatial disparities issues are useful and make sense when applying their actions and measures even at a level state. If the country is a member of the EU or not, it is not a limitation to their implementation, because when it comes to environment issues, climate change effects but also on an everyday growing virtual market economy, have no physical boundaries.

In this background it is important to deepen the research on clearly identify those territorial cohesion policies that when downscaled at a state level planning documents can contribute to the main goals of territorial cohesion. Furthermore, as a policy that is nonbinding on EU member states, how it still can influence and be adopted to the main planning documents of non-member countries. In the text a subtle feature comes out that accompanies or in some cases even conditioned the implementation of cohesive of territorial policies: it is the Political support. Then, this raises the question: How can a non-member country strengthen the role of planning institutions and authorities so that principles of territorial cohesion lead the policy making and be more resilient to it? Or how do the documents based on territorial cohesion affect the strengthening of this feature? Could the acquisition of the Cohesion Policy incentivise stronger, competent and conscientious institutions that formulate and guide political decisions? The above questions are seen in the case of drafting and empowerment of the National Plan for Albania 2030, as the highest planning instrument in the country.

Below are described, the three main contextual elements that have enabled this approach in the NSP of Albania 2030 (NTPA 2016): the legal framework of the territorial planning reform, accountable and responsible planning authorities and the administrative reform, developed at a same time frame 2013-2016.

Legal context: Although the evolution of the planning system in Albania from urbanism to territorial planning has been analysed before (MUD, 2014), it should be noted that by 2013 the planning reform process initiated from 2006 was not yet completed. Although in force, the innovative law that introduced and paved the way for the application of new territorial planning instruments, it could not be fully implemented in the absence of detailed regulations and planning documents. In this way, at the end of 2013, initiated as a top down incentive of the political force at that moment, a comprehensive realization of the legal reform in the area of territorial planning. This meant not only completing the law with by laws bat also delivering manuals for better implementation and understanding the new planning concepts, for experts and local administration. Within the same years several initiatives were taken regarding the completition of planning documents as the NSP 2030, Integrated Coastal Plan for Albania, and Integrated Cross Sectorial Plan for the area of Tirana - Durres. This was a very decisive moment since the design of the NSP was directly linked to the law enforcement.

Administrative reform: The drafting of the NSP came at a decisive moment of when Two other key reforms on territorial development were launched : the Administrative Territorial Reform, that reorganized the territorial administration at the local level from 365 municipalities and communes to 61 municipalities and the Territorial Regionalization Reform, which defined the middle level of territorial organization for cohesive development into four main regions.

The NSP is of primary importance to the success of these reforms, because its approval ensures a coherent planning from the national level to the regional and local level. However, analysis of the way these processes were accomplished are not subject to this paper. Here is stressed the importance and the relation of this favourable legal and political context for the drafting of a national spatial plan, where the demand for a unified vision of national sectoral policies was imminent. It should be noted that the process of drafting and co-ordination of the NSP by involving all the actors on all levels of administration and academia, also the public participation on public hearings in thirteen main cities of the country, was by no means a simple and unobtrusive process. The new context described above and the well-prepared working team positively influenced for its realization.

Institutional reform. In 2013 a new Ministry dedicated exclusively to territorial management(while formerly the territory was an issue under public work ministry) was established Ministry of Urban Development (MUD), dedicating its work on the main problems that impact the national territory facing: informal settlements, social housing and of course territorial planning. Also the role of National Territorial Planning Agency (NTPA) was enforced as the main institution that would assure the horizontal and vertical coordination of national and local authorities that had a say on territory planning and development (ministries, national agencies and municipalities).having a holistic approach on territorial management of the territory from the main perspectives legal, territory administration and governmental authorities goes in line with the main territorial cohesion policies aims and objectives.

The approximation of Albanian NSP with the territorial cohesion objectives can be further identified when compared to actions promoted under the heading “territorial cohesion”:

	Actions promoted under the heading “territorial cohesion”	**NSP actions and Territorial Cohesion relation**
1.	Smart growth in a competitive and polycentric Europe	To reach the level of polycentrism at the national level is proposed the hierarchization of urban centres and the identification of regional development poles. For purposes of this plan, urban centres and their hierarchies is based on central place theory, but is enriched with reflections that derive from additional dynamic functions such are related with: - Existing and proposed national infrastructure; - Concentration and the characteristic of deployment in relation to natural resources; - Balancing pressures and demands for urban development mainly in the western part; - Mitigating the tendencies of depopulation and poverty mainly in the peripheral eastern regions, orienting the spatial dimension of economic development policies on economies of agglomeration …. evolving from central places to regional development poles.
2.	Inclusive, balanced development and fair access to services	NSP is about balanced development, focusing on providing inclusive growth, fair access to infrastructure services and the reduction of spatial disparities. This dimension of NSP is embodied in the entire document but it appears more clearly when presenting projects that promote growth and access on underdeveloped areas (North, north- east and south east), with the east corridor and transversal corridors that assures accessibility and permeability to the territory and the urban settlements. Add public services on balanced distributed primary urban centres, and draws attention on providing appropriate connections of these centres with the areas and urban settlements around them.

3.	Territorial diversity and the importance of local development conditions	Territorial cohesion is about place-based policy making, paying particular attention to local Development conditions ()Particular attention in the NSP is given to the specificities of places and their comparative advantages in chapter 4 when exploring potentials and proposing for developing Regional Growth Poles and the specialised ones, according to territorial specifies.
4.	Geographical specificities	The NSP organizes the territory based on five territorial systems: urban, natural, agricultural, water and infrastructural. Approaching in base of territorial systems implies the recognition and organization of the territory through networks, corridors, spaces and nodes, interdependently linked by flows. These systems are organized in relationships between centres, corridors and areas on the basis of which the planning documents of the lower hierarchies will be detailed. They do not define the territory in rigid land use proposals, but describe and present different ways and possibilities of developing economic activities that go in line with the primary characteristics of the territories and by mutual way of cooperation.
5.	Environmental dimension and sustainable development	Environment and nature, because of their largely interaction character, consist in a network that do not belong exclusively to one territory or a group of population, they are part of a wider system. The concept of using resources that we do not own, but share it in time and space is essential in territorial development policies. The most typical example of this interaction is the impact on climate change experienced by different countries and peoples due to the inadequate exploitation of non-renewable resources and environmental pollution. The NSP is associated with the drafting of Environmental Impact Assessment that addresses measures and actions that define the way of NSPs policies implementation to assure environmental protection.
6.	Governance, coordination of policies and territorial impacts	Territorial cohesion is about the need to maintain dialogue with other sectors to strengthen the territorial dimension in various policy fields. This coordination is ensured not only during the process of drafting the plan through public consultations and institutional coordination but also through the functions of a central government institution such as the NTPA, whose primary legal task is to ensure a coordinated process vertically and horizontally, transparently and in compliance with the applicable legal framework (Article 4 Law 107/2014)Broadly speaking, the topic focus on governance and cooperation processes – as a key aspect of territorial cohesion – rather than actual territorial development features.

Table 1 NSP Albania 2030 actions and Territorial Cohesion relation

NSP can relate more to territorial cohesion. Firstly, it established an inter-institutional communication network and linked experts and technicians of public administration in a dialogue and collaboration beyond formal communication. It established the territorial planning issues in a real and objective relationship with the environmental, economic and social issues affecting long-term development. It brought all of the

sectorial policies under one single framework and designed a model for sustainable spatial development for the next 15 years for the country to follow. It served as a school for capacity building and increased knowledge related to territory management issues for many ministries and government agencies that until then were operating under single isolated sector issues, ignoring the bigger picture that spatial planning can provide. Thus NSP the Albania 2030 conveys a vision of the future territory of Albania following the principles of Territorial Cohesion. In its aims and guidelines it provides a general source of reference for actions with a spatial impact, taken by public and private decision-makers so that policy interventions can be better targeted and thus they can support more effectively the development the country and the use of its so far unrecognized or underexploited territorial potentials.

4 PLANNING AS ON GOING CHALLENGE. NEXT STEPS FOR IMPLEMENTING ALBANIAN NSP 2030

The challenge lays on how the NSP can be implemented and better adopt when the concepts where it is based are flexible and fluid? How can principles and policies coordinated with developed concepts of European countries, go down to actions and concrete measures for implementation? For this, the steps being pursued in the implementation of the NSP and the realization of its objectives are:

- Drafting the monitoring platform for the implementation of the NSP. The staff is working by consulting the appropriate indicators used for this purpose at European level (KITSCAP). Also, co-operation with domestic institutions of statistics such as INSTAT and monitoring agencies is the foundation of this venture.
- Meetings with the academy and universities to further explore new and more efficient ways to improve the ongoing territorial management process, but at the same time make territorial cohesion issues part of the local universities research programs related. This not only to address the coherent challenges of spatial development but also to build models of best cases and the forecast the future role of Albania relating territorial cohesion when in EU.
- Meetings with local government focusing on the most disadvantaged municipalities in development, to explore more ways to implement NSP and benefit from the national policies that the document provides for them.
- Meet with all the municipal technical staff for the establishment of a municipal data system that will help to measure the realization of NSP objectives in terms of polycentrism, access to services, economic growth, environmental protection, innovation address spatial disparities and more.
- Continuous communication with ministries for the implementation of national strategic projects that integrate the country's economy with the region.
- As well as communication and cooperation with Regional Agencies to promote balanced regional development.

5 CONCLUSIONS

The NSP Albania 2030 is a fine example showing that territorial cohesion policies and actions can be adopted and implemented with success even when down scaled at national levels.

Interinstitutional collaboration and public communications are the best direct methods to achieve awareness on territorial planning and on sustainable development issues.

The succeed of flexible planning instruments and the application of open methods of communication depends on the consolidation of institutions in charge of planning coordination. In relation to this, NSP remains still a document that seeks to be fully perceived in the heart of its objectives by the policy makers and the government entities that deal with territorial management and development. The enforcement of NTPA role, as governmental institution to achieve the above mentioned objectives is indispensable for Albania, not only for national territorial cohesion achievement but for strengthening the position of the country in the region and implementing a long lasting vison for sustainable spatial development . Last but not least, it was shown that while talking about territory cohesion, "time" which lays between countries and EU integration, is also in planning, relative and a variable that can be stretched and pressed depending on

the results and actions that are taken under the sustainable spatial development process. Therefore, in European studies and platforms related to developing and implementing territorial cohesion and sustainable spatial planning, countries like Albania outside the Union, and even more the Balkans, should not be excluded, on the contrary involved, as the benefits of cohesion overcome formal boundaries.

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ID 1611 | METROPOLITAN GOVERNANCE APPROACHES IN DEVELOPING SUSTAINABLE EUROPEAN CITIES

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1 INTRODUCTION

Metropolitan areas involve several jurisdictions at different levels of authority and different interests. National policies in political and economy systems might influence the distribution of power and resources among territorial authorities in steering the metropolitan area development (Nicholls, 2005; Boudreau et al, 2006). Furthermore, other actors besides the government typically have conflicting interests among them. Consequently, some policies are formulated and implemented without coordination among related actors and without sufficient consideration on sustainability (Nicholls, 2005; Boudreau et al, 2006; Firman, 2008; Islam, 2014).

In dealing with complexity of metropolitan area characteristics, individual actors within metropolitan areas obviously cannot work independently. Coordination among them is required, especially in addressing negative impacts of economic and social activities on environment and the provision of public goods and

services. Institutional improvement of metropolitan areas through examining governance models is inexorable (Firman, 2008). Institutional changes are needed to make urban governance more effective in achieving sustainable city (United Nations Human Settlements Programme, 2009). In addition, transformation through social and political action is required in managing city to be sustainable (Hopwood, et.al, 2005).

Many studies claim that governance has important role in implementing sustainable development in metropolitan area (Davidson, 1996; Haughton, 1997; Firman, 2008; Gleeson and Spiller, 2012). In the metropolitan context, governance is understood as relations between private, civil society, and public sector that require collective action to achieve common goals (Boudreau et al, 2006; Hudalah et al, 2014). As metropolitan development has become global concern, many studies have been conducted to introduce some models of metropolitan governance required to cope with the urgency of sustainable development.

Metropolitan governance issue has often been discussed in planning for sustainable cities in European countries (e.g Bulkeley and Betsill, 2005; Stigt et al, 2016).

Since different actors in metropolitan area have different kinds of interest and degrees of power, sustainability as a development goal is difficult to implement (Nicholls, 2005; Firman, 2008; Hudalah et al, 2014). Accordingly, it is necessary to understand how metropolitan governance would work to promote the sustainable cities within the metropolitan area. Nevertheless, the framework of metropolitan governance for sustainable city development is rarely discussed in urban studies. Hence, this study will offer that framework to analyze which aspects of metropolitan governance largely affect the implementation of sustainable cities.

This article will first address the challenges of metropolitan area development and the application of metropolitan governance approaches. Subsequently, the concept of sustainable cities will be explained. Lastly, metropolitan governance framework for sustainable development will be discussed.

2 METROPOLITAN DEVELOPMENT AND GLOBALIZATION

Urbanization that occurs almost in every part of the world brings positive and negative consequences either on social or physical aspects. It is irrefutable that urbanization promotes the economies of scale, creativity, innovation, and increasing productivity (Dente, 1990; Ambruosi et al, 2010; Gleeson and Spiller, 2012). Nevertheless, uncontrolled urbanization has caused many environmental problems, such as air pollution, the loss of biodiversity, flood risk, drinking water scarcity (Kenworthy, 2006; Ambruosi et al, 2010).

The rapid population growth in the cities has brought pressure in the urbanization processs generating the emergence of metropolitan areas. The core city of metropolitan interacted with its neighboring cities, created linkages with them, and shared the burden of public service provision (Newton, 2012). With regards to the expensive land and deteriorating environmental quality in the main city, sub urban areas has become the options for the new residential development (Sellers and Hoffman-Martinot, 2008; Newton, 2012). The agricultural land in the periphery continues to decrease as the result of escalating demand for affordable housing. Gradually, sub urban areas have been developed as cities that also bolster the function of the main city within metropolitan area as the center of jobs and services (Dente, 1990). Externalities (such as pollution, waste) generated from activities in the core city that have impact on its surrounding cities within metropolitan area are inevitable. Moreover, the division of public good provision has become contentious among jurisdictions in the metropolitan area. For example, most cities are hesitant to provide landfill in their own jurisdictions.

Metropolitan region is characterized by socio-economic, environmental, and political administrative interdependences among local government jurisdictions in the region (Firman, 2008). The main city where business centers or multinational headquarters are mainly located usually provides more job opportunities, variety of amenities, and entertainment facilities compared to the surrounding cities (Newton, 2012). Hence, the main city remains attractive place for people to work or to operate business. Apparently, commuting or mobility from the periphery to the center has become part of metropolitan characteristics.

Globalization has also brought consequences on metropolitan area development regarding the transnational capital flows and public infrastructure provision that persuades competitiveness and imperil the environmental sustainability. As Kearns and Paddison (2000) pointed out, globalization may result in spatial disparity, social segregation, and the loss of power of urban governments to control globalized economic activities. They noted urban governance as political and administrative processes in utilizing resources to get things done. In addition, they argued that quality of urban governance which refers to the quality of public policy making and delivery of public goods and services (Stead, 2015) needs to be improved through the capacity building in dealing with urban complexity and rapidly changing circumstances related to globalization.

Understanding metropolitan characteristics and the problem of metropolitan is essential in achieving effective metropolitan governance which is indicated by development of trust among actors (institutional cohesion) and the achievement of sustainability goals. Dente (1990) argued that metropolitan problem needs to be defined properly in order to provide appropriate solution. He made differentiation about metropolitan types resulting in various definition of metropolitan problems which require synoptic and adaptive approaches to design metropolitan governance models. To determine the suitable institutional design for metropolitan governance is challenging, especially when it comes to accountability, coordination, integration, and sustainability.

3 METROPOLITAN GOVERNANCE APPROACHES

The rapid expansion of urban areas beyond established municipal boundaries and the rising complexity in managing externalities and public service provision has driven the growing concern for metropolitan governance requiring strategic vision, facilitative networks, local leadership, political and community support (Williams, 1999). Metropolitan governance can be defined as the pursuit of collective goals through inclusive and coordinated strategies and institutional arrangements at the metropolitan scale (Pierre, 2005; Hudalah et al, 2014). Gleeson and Spiller (2012) argued that effective metropolitan governance is crucial to human well-being, environmental sustainability, and economic growth. Effective metropolitan governance refers to effective administration and accountable politics in producing responsive decision making and strengthening local democracy (Kearns and Paddison, 2000; Stead, 2015).

Key institutional challenges in metropolitan governance involve the allocation and distribution of authority, capacity development, financial improvement, and social equity (Firman, 2008). Subsidiarity principles in resource and power or function allocation need to be applied in metropolitan governance (Ambruosi, et al, 2010; Gleeson and Spiller, 2012). Moreover, Firman (2008) argued that in managing metropolitan area, key factors that need to be considered are coordination mechanism to ensure the integration between planning and development as well as strong links to the national government system in order to obtain political support.

In Western Europe, the orientation of metropolitan reforms is to promote regional growth, integration, and competition for mobile capital investment in the context of globalization (Brenner, 2012). Considering the globalization of economy and competitiveness, metropolitan areas also need to sustain an attractive quality of life (Rondinelli, 2001). Furthermore, Kearns and Paddison (2000) argued that metropolitan governance needs to seek new ways to be creative, build strengths, and access and utilize resources in the face of growing social complexity and globalization. As stated by United Nations Human Settlement Programme (2009), planning for sustainable cities must be revisited by embracing geographical context and overcoming governance fragmentation.

Transformation in metropolitan governance can be analyzed through developing institutionalist framework and governance processes that require networks, stakeholder selection process, discourse, and practices as Coaffee and Healey suggested (2003). Rules and the roles of interactive processes should be also observed as the implications of dynamic governance (Edelenbos, 2005). In understanding how new institutional capacities get built, interaction between actors needs to be examined (Coaffee and Healey, 2003; Hudalah, 2014). Set of interactions appeared from the need to exchange resources to achieve the collective goals will define which actors are on the center of the network or at the periphery, and who will be excluded (Fawcett and Daugbjerg, 2012).

Uncertainties and complexity embedded in metropolitan area characteristic inherently can be analyzed by using network governance approach (Koppenjan and Klijn, 2004). Network governance is required in complex public decision making process ((Klijn (2005), Koppenjan (2007)). Klijn (2007) pointed out that decision making process from network perspective requires process management that involves content management, participation mobilization, and institutional design. In this perspective, the assessment of outcomes is not simply based on the realization of goals. Therefore, the outcome will be emphasized on the content, process, and institutional arrangement. According to Koppenjan and Klijn (2004), the content refers to the result of interactions of actors such as ex-post satisficing or win-win situations; the process might include the duration, stagnation, reliability, and innovation; lastly, the institutional arrangement is characterized by trust, quality of relations, and rules. In addition, problems are defined within multi-actor setting; thereby the problems are socially constructed based on perceived interests.

In applying network governance approach, several assumptions need to be considered as follows (Koppenjan and Klijn, 2004):

- Interdependencies between actors lead to more or less durable interaction patterns;
- Interaction patterns result in network characteristic, a shared language, shared rules, and mutual trust;
- Institutional factors constitute the behaviour of actors and influence cooperation in the network;
- Institutional characteristics result in a certain closedness of the network in relation to the outside world;
- When problems cut across networks, interaction and cooperation is restrained;
- Institutional factors are shaped, sustained, and adapted under the influence of interactions.

Concerning challenges of governing metropolitan areas, Sellers and Hoffman-Martinot (2008) justified institutional alternatives for governance within metropolitan areas as below:

- Supra community reform

Fragmentation of municipalities limits their ability to deal with important issues that transcend their territories, e.g land use planning, the environment, public transportation, and economic development. Many local governments are perceived as inefficient and disconnected from the expectations of their citizens. Therefore, creating overarching metropolitan governments replacing a multitude of existing local authorities are in favor. However, many scholars argue that the optimum scale for public services are different from one service to another; hence it is difficult to estimate the right scale of metropolitan government (Newton, 2012).

- Territorial polycentrism

Metropolitan governments are criticized for their red tape, high operating costs, and remoteness from their citizens. It is more efficient and democratic for the localities within metropolitan area to compete among themselves for the production or sale of public services than to leave those services to one monolithic government entity to offer inhabitants wider choice of residential areas. Thus, small jurisdictions with multilevel governance are prefereable. In this context, multilevel governance means inter-governmental relations between cities and their surrounding regions at different levels.

- The new regionalism

From new regionalism perspective, metropolitan governance should be understood as inter-municipal cooperation which is characterized by pragmatic responsiveness in execution; the adaptation of existing territorial units and governments above the municipal level to manage emerging challenges of metropolitan regions; strengthening democratic legitimacy; improving management in metropolitan area; and close association with private sector. In this perspective, coordination of strategies, interaction, and institutional support is essential. State governments are expected to focus on harmonizing interests from various stakeholders rather than to compel their own ideas.

Various models of metropolitan governance have been encountered as well. Those models are developed based on some criteria which are related to the key actors and goals. Hudalah et al (2014) distinguished the metropolitan governance models into three categories based on rational, historical, and sociological approach. As a result, metropolitan governance models can be recognized as three main forms including

voluntary cooperation, consolidation, and collaboration. Nevertheless, developing metropolitan governance models specific for sustainable cities by considering the aspects of governance process and institutional design still needs to discuss further.

Furthermore, Pierre (1999) described the models of governance through analyzing different sectors in urban politics and the degree of inclusion of organized interests in urban governance. Based on those analytical aspects, he differentiated urban governance into managerial (output performance oriented), corporatist (emphasis on the role of local government), pro growth (public private action oriented), and welfare (networks of government oriented) models. He also developed urban governance definition into three categories (Pierre 2015, p. 452-453):

> *"Governance as a theory offering analytical framework; governance as normative model showing model of public-private interaction and cooperation at the local level; and governance as an empirical object of study to investigate to what extent different social, political, and economic forces tend to produce different models of urban governance which require comparative approach".*

Feiock (2009) developed tools of regional governance using institutional collective action (ICA) approach. Based on ICA framework, metropolitan governance models can be distinguished into six main categories (Feiock 2009, p.361-374):

> *"Regional authorities offer the rescaling of geographic and functional jurisdiction. Managed or coordinated networks refer to the collaborative relations among local government actors, lead agencies/organizations, and network of private contracts. Regional organization is established based on federal/state laws, non profit organization, government agencies, regional councils, metropolitan planning organization, or regional parnerships. Contract networks link local government in legally binding agreement. Collaborative groups and councils invlove informal associations, multilateral agreements and working group coordination. Policy networks refer to networks interaction, consensus, and flexibility in decision making".*

Digaetano and Strom (2003) constructed modes of governance into clientilistic, corporatist, managerial, pluralist, and populist based on governing relations, governing logics, key decision makers, and political objectives. Governing relations range from dominant client to inclusionary negotiation. Governing logics vary from reciprocity to mobilization of popular support. Key decision makers might involve politicians, clients, powerful civic leaders, civil servants, organized interests, and community movement leaders. Political objectives might be material, purposive, and symbolic.

In the case of Lisbon Metropolitan Area (LMA), the current governance system is based on two tiers of administration which mainly engage central government and local government although the coordination between the two is not intensive. Nevertheless, different institutional forms of cooperation have characterized its institutional arrangements. This situation has contributed to the perplexing administrative responsibilities and boundaries of service delivery in LMA. Silva and Syrett (2006) demonstrated that metropolitan governance in LMA has evolved historically and geographically through specific governance regimes and dynamic interaction of national state systems, local contexts, and broader global forces. Yet, they found out that institutional arrangements in LMA faced challenges in "leadership and strategic vision, coordination and integration of services, democratic legitimacy and accountability" (2006: 114). They also argued that central state apparently showed significant role in promoting structural governance change, primarily through decentralization process and interaction with EU.

Following the study of metropolitan institution in Swiss urban areas, Sager (2004) showed how different metropolitan institutional setting influence the quality of political negotiation process and the decision outputs. In his study, he categorized the coordination based on the policy implementation and formal and substantial rationality. Moreover, analytic dimensions of metropolitan government model have been operationalized according to the degree of centralization, consolidation, professionalization, and political economy. He discovered positive effect of fragmentation on the quality of deliberation since Swiss has applied very strong federalism principles. Furthermore, his findings revealed that "voluntary, positive, and policy driven coordination and substantially rational coordination decisions are found in centralized rather

than in decentralized institutional settings, in fragmented rather than in consolidated metropolitan areas, and in project structures with a strict separation of the political sphere of negotiation from the technical sphere rather than in negotiations without such clear distinction" (2004: 247).

Similar to the characteristics of metropolitan problems, spatial problems have also emerged in regional seas in the European Union (EU) since there is no single authority is responsible for the problems at the regional seas and there are various activities taking place in the marine space (Van Tatenhove, 2013). Consequently, joint actions through integrated marine governance arrangements are needed in dealing with environmental and spatial problems in the coastal areas in the EU. Van Tatenhove (2013: 300-301) mentioned that "the institutional setting of EU marine governance is shaped by different rules, arenas, practices, and locations that guide and shape the political and policy processes." He underlined that through understanding the nature of the swings of the governance pendulum (tension between fragmented arenas) and the institutional ambiguity (gap between institutional setting and specific jurisdiction), institutional capacity (ability to develop shared knowledge and mobilize resources) can be improved.

He further explained that the process of institutional change could be layering and conversion meaning adding new rules to the existing institutions and redirecting the existing arrangements. Finally, legitimacy is required to develop integrated governance arrangements. By legitimacy, Van Tatenhove (2013: 303) referred to "the acceptability of policy and decision making" that can be distinguished as "input legitimacy (representation), output legitimacy (problem solving), throughput legitimacy (the quality of policy making process), and feedback legitimacy (the outcome of the policy process and the quality of the feedback relations)."

4 THE CONCEPT OF SUSTAINABLE CITIES

The city can function as an engine of growth and offer opportunities for inhabitants to increase their well-being. A city is the place where resources and capital are concentrated, to be utilized or transferred. According to Van Pelt (1990), social welfare improvement in the long term, which is not impeded by the degradation of environmental amenities or productivity, can indicate the sustainability of city. However, a trade-off between social welfare and environmental quality typically exists. For example, to decrease poverty, developing countries mostly perform natural resource exploitation, which results in environmental quality degradation. Additionally, city sustainability can also be threatened by internal (e.g social behavior, government corruption) and external factors (e.g global climate change, wars).

For many decades, development approaches has largely accentuated economic growth as the main goal of development which eventually resulted in income inequality and environmental degradation. Gross National Product (GNP) has been widely used as the main indicator to measure the well-being and the progress

of development. However, as social and environmental issues are rising, policy makers need to consider other well-being indicators for the sustainability of human race, such as happiness (Hak et al, 2012).

Sustainable development was initiated to add new goals to the traditional approaches of development by showing concern on the shrinking capacities of ecosystems in the global context and the environmental impact of economic development. The notion of sustainability itself has been introduced since 1970s (Whitehead, 2003; Shaharir, 2012) and it became globally acknowledged after Bruntland Commission formulated the definition of sustainable development. The concept of sustainable development intrinsically put emphasis on how to control the development by recognizing that the environment has limited capacity to equally fulfill the needs of present and future generation.

The implementation of sustainability concept has different impications on different scales concerning that environmental risk has been transferred across space. Nevertheless, as the number of people living in the cities has been growing very rapidly, cities are considered to play a significant role in dealing with global environmental problems (Opp and Saunders, 2012; Nijkamp and Pepping, 1998). Cities have been suffered from environmental problems; however cities are also suspected as the major cause of the intensifying ecological problems. For example, lack of green open space and high level of carbondioxide emissions generated from automobile dependence in cities have created urban heat islands. Moreover, city expansion also leads to changes in biodiversity, soil, and natural landscape.

Numerous frameworks of sustainable cities have been developed. According to Davidson (1996), a sustainable city can be achieved by applying sustainable development principles within urban planning, which emphasises the importance of capacity building in planning processes. Moreover, an advanced understanding of social and technical changes needs to be embedded in urban planning practices, in order to overcome sustainable development challenges (Williams, 2010). Consequently, a transformation through social and political action is required, to achieve urban sustainability (Hopwood, et al, 2005).

Extensive definitions of sustainability have also generated various conceptualizations in the field of urban sustainability research. Chiesura (2004) stated that the quality of life has become the main variable in defining a sustainable city; e.g. urban parks which provide social services and hence promote urban sustainability. Kenworthy (2006) argued that urban form and transportation are essential elements in creating an eco-city. Meanwhile, Nijkamp and Pepping (1998) clarified that urban sustainability is largely affected by energy policies. Camagni (et al, 1998) revealed that a sustainable city can be created through the integration of socio-economic, environmental, and cultural developments, within interconnected spatial systems. Haughton (1997) developed models of sustainable urban development which adopts reforms in governance, markets, and regulatory aspects, in cities and their hinterlands. Whitehead (2003) viewed a sustainable city as an object of political contestation and socio-ecological regulation. Accordingly, sustainable cities are created through regulatory processes and political discourses, within specific geographical and historical context of urban spaces.

5 METROPOLITAN GOVERNANCE FRAMEWORK FOR SUSTAINABLE CITIES

Many debates over metropolitan governance only address the structure or the form of metropolitan governance whether it is derived from public choice or consolidation model (Visser, 2002). However, there is no clear evidence if certain model is more effective than the other model in dealing with transboundary issues in a metropolitan region. Furthermore, Visser (2002) emphasized that interlocal behavior of actors influenced by political and organizational culture dynamics should be taken into account to offer deeper understanding about what factors or motives that tend to trigger or hinder the interjurisdictional cooperation in solving metropolitan issues. Accordingly, it is important to understand the values and perceptions of the actors that drive their behavior in having interaction, framing the issues or formulating the policy options. By understanding this, more effective strategies on how to promote cooperation, reduce the conflict, and diminish the isolation can be offered.

Meanwhile, some scholars still argue that flexible structure, such as coordinating board or ad hoc metropolitan agency, can be an alternative to a rigid structure in facilitating the interaction between city managers or administrators and functional specialists (Leroux and Karr, 2007; Termeer et al, 2010). Affiliation structure or informal interaction through networks is assumed to have brokering capacity in enabling local governments to enter the collaboration, providing opportunities for more contact between actors, and increasing trust among actors. More attention needs to put on the network scale in improving metropolitan governance systems and sustainability policy arrangements (Termeer at al, 2010).

Concerning the complexity of governance and sustainability integrated approach should be applied in providing conceptual framework of metropolitan governance in developing sustainable cities. As it is understood that governance is a process instead of the means or ends, the process of governance itself should be clearly examined. Yet, many scholars only focus on offering alternatives of institutional arrangements from a single approach.

This study adopted the dimensions of governance process stated by Coaffee and Healey (2003) that entail networks and coalitions, stakeholder selection processes, discourses, and practices. Eventually, these dimensions of governance process affect the outcome of preferred institutional design or arrangements on one side. On the other side, institutional design which is envisaged through positions and rules also influence the process of governance in the metropolitan area. Integrated approach is applied in this study; thereby considering the social and economic relations in political processes, systems of cultural values, and the role of self-interest in collective action. Sustainability itself is a goals that requires common perceptions or shared languages from involved stakeholders. In this study, sustainable cities are conceptualized as the outcome of socio-ecological policies as previously expressed.

Nicholls (2005) argued that the mayor of central city recently does not have enough power to mobilize resources in implementing the policy agenda for the metropolitan area as the surrounding territorial actors are increasingly empowered. As a result, interdependency among actors promoting the emergence of network in dealing with metropolitan issues is inevitable. Furthermore, Nicholls (2005) justified the relation between hierarchy and interdependency which underlie the outcome of metropolitan governance ranging from highly integrated to highly fragmented.

Networks and coalitions refer to the process of network building and expansion as well as how the actors interact in formulating and implementing the sustainability plan. In analyzing networks, several key indicators need to be formulated; for example, the frequency of interaction, reciprocity in interaction, attributes of the nodes of interaction, and the structure of the nodes of interaction. Social network analysis method can be applied in revealing the patterns of relationships or interactions among actors.

Stakeholder selection processes include the informal and formal methods in determining which stakeholders will be involved in the policy making and coordination. In analyzing the process in stakeholder selection, how certain individuals or groups are included or excluded from the governance process needs to be identified. In addition, the type of influence that the selected stakeholders bring during the process is important to be examined.

Discourses refer to the process of framing issues, problems, solutions, and interests through the mobilization of public opinion or distributing knowledge. Since sustainability concept is still obscure to some actors, discourse about sustainable city is essential in order to achieve common language and effective strategies of sustainable development. Conflicting interests should be diminished through narratives or communication strategy and commitment of the actors in stressing the sustainability issues need to be strengthened.

Practices refer to recurring actions or customs which are mostly influenced by cultural aspect. Informal gathering coould be another example of practices besides routine meetings. Through frequent informal gathering, actors can feel less tension and less self-centered (Hudalah et al, 2014). Cultural aspect, such as cooperative endeavour in the case of Indonesia metropollitan, could also strengthen the democratic decision making process.

Positions indicates the competence of actors and what actions that actors should take. In defining roles, responsibility of each individual actors should be clear. Besides, the capacity of actors in making decision regarding sustainability policies as well as mobilizing resources to implement the policies should be improved. Rules imply the procedures that have been produced at a certain time and applied for a certain period (Edelenbos, 2005). Important elements in procedures are transparency, accountability, and implementability.

Coordination, integration, and cooperation will be maintained by the network of actors if certain principles are fulfilled. Those principles are the need to cooperate to achieve the goal of individual actors, the benefits of cooperation outweigh the cost, and strong leadership in convincing individual actors to gain long-term benefit of cooperation and distributing material incentives to sustain the cooperation (Nicholls, 2005). Stakeholders from private sector and civil society need to be involved from the early stage of sustainability plan to promote interactive governance (Edelenbos, 2005).

6 CONCLUSION

Formulating and implementing policies in order to achieve sustainability are quite challenging in European cities, particularly at the bigger scale like metropolitan region. Policies formulated by each jurisdiction usually have impacts on other jurisdictions within the metropolitan area. It is undeniable that government from different level cannot work alone without involving the private sector and civil society in managing and distributing resources and space for the sustainability of the well-being of metropolitan residents. Therefore, the government together with other stakeholders needs to take collective actions and strategies to attain their common goals. This argument has become the fundamental concept of metropolitan governance. Nonetheless, numerous stakeholders from different jurisdictions have different interests and capacity resulting in dynamic interactions that could also lead to uncertainties or conflicts in the decision-making process. As a result, network approach is required to understand how the actors interact when

they involve in the metropolitan governance process. The process of interaction and decision making eventually will have implications on the institutional design of the metropolitan region.

Many models of metropolitan governance has been developed; nevertheless, none of them fits all. Each model brings different advantages and disadvantages in relation to endorse sustainable development of cities within the metropolitan area. Inter-local government cooperation should be pursued through network buildings. Nonetheless, conflict arised from unequal distribution of power regarding hierarchy in institutional arrangements needs to be managed through interactive mechanism of governance and strong leadership.

In determining which governance model fits the situation of the metropolitan, some principles need to be considered. The clarity of positions/roles and rules are required. Actors who hold important roles in mobilizing resources and networks need to be competent in formulating strategies of sustainable development. Moreover, the more transparent, communicative, and simple the procedures, the more likely sustainability to achieve because each individual actors can track the progress of sustainability, correct the misconduct, and evaluate the ineffective strategies more easily.

Apparently, the institutional design is not the only factor that affect the realization of sustainable development. Consequently, it should also be understood that governance process largely affect the implementation of sustainable cities. How often actors interact and how strong ties of relation have been built predominantly influence the quality of governance process in dealing with sustainability issues. Inclusive stakeholder selection process and intensive discourse on sustainable cities could be essential factors as well in promoting sustainable metropolitan development.

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ID 1656 | BRAIN TRAIN OR BRAIN DRAIN? EFFECTS OF HIGH SPEED RAIL ON THE SPATIAL STRUCTURE IN THE AGE OF THE KNOWLEDGE ECONOMY

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ABSTRACT: Transport infrastructures facilitate access to people, knowledge, and markets, thus increase the "potential of opportunities for interaction" (Van Geenhuizen et al., 2007: 7) of a place and stimulating economic activity, leading to urban development. Particularly in Europe, High Speed Rail (HSR) has been of growing importance in providing passenger mobility on medium distances. During the last three decades, HSR has connected more and more cores of metropolitan regions, airports, and sometimes also previously unserved peripheral places nationally and later internationally. Its spread occasionally also led to a reduction in rail accessibility when conventional rail services were subsequently reduced. At the same time, globalisation means that the 'knowledge economy' (KE) is becoming a key driver of development especially in highly developed countries. The performance of firms depends more and more on knowledge as production factor, and the input of highly skilled workers. Locational factors of knowledge-intensive firms differ from those of 'conventional' firms. They seek a combination of 'global pipelines' and 'local buzz' (Bathelt et al., 2004), i.e. global connectivity together with a stimulating local environment of face-to-face contacts. Under these conditions, HSR stations come into focus as potential new nodes for future economic development, since the immediate surroundings of HSR stations profit most from a gain in accessibility and provide 'spaces for dialogue', which are of particular relevance for KE firms. There have been several studies on the structural effects of HSR lines, especially in the cases of the French TGV and Spanish AVE networks. Despite the strong growth of ridership, hopes of a dispersion of economic development away from the metropolitan centres did not always materialise. Instead, some cases suggest that HSR access leads to 'brain drain' effects, upscaling on Mega-Regional levels, and residential 'super-suburbanisation' instead. Other studies argue that positive economic effects exist, but are merely of a redistributive nature. In each instance, the influencing factors augmenting economic development in the

individual case, such as integration with the conventional network, and local absorptive capacity, must be more thoroughly discerned in research on transport effects. In this study, we present the results of a gravitational accessibility analysis of the German rail network in 1990, before the opening of the first HSR line, and its comparison with the 2017 values to quantify gains and losses in accessibility generated by HSR. The German case differs somewhat from most other European cases due to its federal, more dispersed spatial structure and the lack of a clear dominant centre. Furthermore we project accessibility changes by two ongoing HSR projects such as the new Berlin-Munich mainline via Erfurt and Nuremberg. We find that, besides obviously boosting accessibility in previously poorly connected areas, even stations which lose access to the intercity train network profit from HSR through greater overall network effects. However, the upgrading of the conventional rail network in East Germany after 1990 improved accessibility levels more than HSR projects. The results of the accessibility analysis can then be used for a range of 'quasi-experiments' for difference-in-difference analyses (cf. Ahlfeldt and Feddersen, 2010) of firm locations, especially in situations of high accessibility differentials, e.g. 'external shock' conditions in peripheral areas. As an outlook, we propose such a methodology to test the effects of accessibility changes on the development of knowledge-intensive firms, both in the immediate surroundings of new or upgraded HSR stations, as well as their regions.

KEYWORDS: High Speed Rail, Knowledge Economy, Accessibility, Urban Economics, Transport Planning, Spatial Planning

1 OVERVIEW

The last decades have seen the rise of High-Speed Rail (HSR) as a new type of transport infrastructure. Within and between many developed countries, especially in Europe, HSR has seen strong growth and has reduced rail travel times between metropolitan core cities in some cases drastically, while new lines continue to be developed. It has also occasionally improved the connection of previously peripheral areas if these were not just crossed by new lines but also received a station, while on the other hand, some regions have lost their connection to the higher order train network when they were bypassed by new HSR lines. Altogether HSR has greatly influenced the 'accessibility landscape' in Europe.

Due to their function as multi-scalar gateways, HSR stations gathered the interest of urban economists, planners, and economic development professionals as potential locations for new poles of development. This particularly applies in the context of knowledge intensive firms, which are of growing relevance, and which particularly value accessibility (Thierstein et al., 2008), i.e. the possibility to reach a high number of other people and firms quickly. Also, rail based public transport is among the more sustainable transport modes with growing importance for future planning strategies (UN Habitat, 2009). In planning, this nexus is known as transit-oriented development (Bertolini, 1999).

In this paper, we want to briefly review the rationale behind the premise that HSR access leads to economic development through the resettling of knowledge intensive firms, before we present the methodology and empirical results of an accessibility analysis of the German HSR network between 1991, the year of the opening of the first HSR line in Germany, and 2017. We also project further accessibility changes induced by two currently planned HSR lines. Based on this, we propose a methodology to explore the effects that HSR access has on locational decisions of knowledge intensive firms.

1.1 THE ROLE OF ACCESSIBILITY FOR REGIONAL DEVELOPMENT

Cities can be conceived as systems emerging from individual decisions by firms and households regarding their business or residential location and their mode of travel, among others (Parr, 2015). These decisions are mutually interdependent, resulting in a complex 'landscape' of push and pull-factors, path dependencies, and interlockings, between demand and supply of locations, reflected by land markets (Alonso, 1964). Usually, such urban systems develop only gradually over time, depending for example on demographic or social changes, or altered preferences. Only few events are strong enough to induce an 'exogenous shock' to the system, potentially resulting in sudden and sometimes dramatic shifts of demand, value, and ultimately use of land. Large public infrastructure investments can represent such shocks, since the sudden compression of time and space based on distances in (Euclidian-geometric) space (Plassard 1990 in Garmendia et al., 2012) simplifies access to people, knowledge, and markets

(Tierney, 2012) and thus leads to the redistribution of accessibility, i.e. “the potential of opportunities for interaction“ (Rietveld and Bruinsma, 1998). Accessibility improvements hence form a potential tool to foster urban and regional development, and better a knowledge base could help urban and regional planning professionals in assessing and harnessing the potentials of accessibility improvements for their constituencies. Even though it is recognised that accessibility plays a major role in shaping urban development, it is important to note here that it is of course not the only influencing factor. ‘Soft’ locational factors, such as the image of a city or its landscape and cultural amenities have been of growing importance as cities increasingly become ‘consumer cities’ (Glaeser et al., 2001).

Research has been inconclusive, however, whether improvements in accessibility can really benefit peripheral regions. Uncertainty persists on three questions. First, whether increased economic activities can be observed in general, or whether they are dependent on additional local, case-specific factors or thresholds, and if so, which (Feitelson and Rotem-Mindali, 2015: 297-298). Second, whether increased economic activities – should they exist – are generative, or only of a redistributive kind (Holvad and Leleur, 2015). And thirdly and most importantly, whether a redistribution of economic activity is directed away from the cores to the newly connected peripheral areas, representing a potential for regional and transport planning to induce local growth, or, fuelled by the transformation to the knowledge economy, to the opposite, i.e. a ‘brain drain’ effect and even stronger concentration in the cores (Vickerman, 1997). What is assumed here also depends on the theoretical framework used.

1.2 SPILLOVERS OR CONCENTRATION?

On the one hand, neoclassical economic theory assumes automatic convergence between regions. Inequalities regarding wages, rents, and interest rates are expected to dissolve as labour and capital is redistributed among the regions according to the greatest profit. Persistent inequalities are, in this view, the result of differences in productivity or barriers to the free movement of production factors (Barro and Sala-i-Martin, 1992; Solow, 1956). Location theory, which incorporates transport costs, also describes quasi-automatic sorting of activities in space under equilibrium conditions according to accessibility (Alonso, 1964). Different land user groups showed varying willingness to pay for proximity to economic centres, with commercial users bidding highest, followed by residential users, leading to a bid-rent gradient in a monocentric environment. Weber (1909) developed a locational theory for industrial firms, describing their locational choice based on minimal transport costs, which depend on distance and weight of the transported good.

Under the neoclassical framework, reductions of travel times must lead to increased economic activity through the exploitation of reduced (time) costs, increased economies of scale and competition.

On the other hand, since 1990, a body of theories under the label “new economic geography” (NEG) (Krugman, 1998) has emerged. NEG theories encompass path dependencies, transaction costs, and localised agglomeration economies, which can result in persistent regional differences and further agglomeration of firms and workers in successful regions.

Despite shortcomings (Storper, 2010), both approaches provide useful theoretical underpinnings for the analyses of accessibility change effects, since the predictions they allow are fundamentally different, requiring varying strategies for regional and transport planning. On the one hand, in neoclassical models, improvements in accessibility in a certain area will in turn lead to a re-sorting of land uses and a redistribution of optimal equilibrium locations, particularly when considering isolated but interlinked nodes like railway stations. In this case, areas close to stations can be better connected with each other than with their respective hinterland. The lower land prices in the newly connected areas, together with now sufficient proximity to other actors – mediated via transport links – , will lead some firms and individuals to relocate, especially start-ups in their initial phase when cost sensitivity is high. On the other hand, improved accessibility might destroy ‘niches’ of firms when barriers to stronger cores are removed under a self-reinforcing NEG framework.

1.3 THE KNOWLEDGE ECONOMY

Agglomeration economies become particularly important in light of the shift of European economies away from traditional industrial production towards 'knowledge economies' (OECD, 1996). Knowledge as a production factor is constantly becoming more important in developed economies, both as input and output in the production process (Kiese, 2013), and consequently attracting a focus of research (Lüthi et al., 2011). Industrial production is subject to technologisation, and demands a highly skilled labour force, or is shifted to locations with lower labour costs as part of a globalisation of value chains (Sassen, 1994). Under these conditions, cities and regions are successful when they manage not only to attract innovative, 'knowledge-intensive firms', but also highly skilled 'knowledge workers' as part of the 'creative class' (Florida, 2003).

Knowledge-intensive firms depend more than enterprises in other sectors on spatial proximity to customers, (potential) employees, and even competitors from the same field, since knowledge, especially symbolic and analytic knowledge, is often 'tacit', i.e. related to a certain local or personal context and cannot easily be codified or transferred across space (Asheim and Hansen, 2009). Since innovation is nonlinear and usually interpersonal, it makes frequent, even random, face-to-face contacts of actors necessary to create 'spillovers'. This gives rise to substantial agglomeration economies on behalf of the firms. But also employees tend to concentrate in cities with a high number of knowledge-intensive firms, since the larger labour market gives them a greater variety in employment opportunities. This particularly applies to cultural and creative industries, which are a partial subgroup of knowledge-intensive industries. They are assumed to have the highest propensity to settle in a diverse urban surrounding, profiting from ‚urbanisation economies'.

However, literature on spatial aspects of innovation also points to the fact that in order to avoid a „lock-in" of actors within their local knowledge context, interregional or even global contacts alongside the local milieu are indispensable (Bathelt et al., 2004). Despite the progress in IT and communications technology (Castells, 1996), at least temporal proximity of actors in this context is still necessary as well. Hence, network economies must complement agglomeration economies for knowledge intensive firms.

The knowledge economy is however relevant to this research for another reason. Knowledge workers usually have an above-average propensity to use public transport for medium and long distances as it allows using travel time for work, which becomes more important with increasing valuation of time.

1.4 THE DEVELOPMENT OF HIGH-SPEED RAIL

Besides airports and highway infrastructure, in recent years especially High-Speed Rail (HSR) construction has attracted the attention of planning researchers and economic geographers.

The European Union Directive 96/48 (European Council, 1996) defines in Art. 5 (3c) as HSR "specially built high-speed lines equipped for speeds generally equal to or greater than 250 km/h, specially upgraded high-speed lines equipped for speeds of the order of 200 km/h" and, in exceptional cases, upgraded lines with lower speeds in the case of "topographical, relief or town-planning constraints". For this paper, we focus on specially-built high speed lines only, since these create stronger disruptions to the economic framework and are thus better suited for significant pre-post comparisons.

HSR lines started to complement and replace 'conventional' rail starting in the 1960s with the Shinkansen in Japan (Tokyo-Osaka), and from the 1970s on in several European countries, such as Italy (1977, Rome-Ponticelli), France (1981, Lyon-Paris), Germany (1991, Hannover-Würzburg), and Spain (1992, Madrid-Seville). After decades of losing shares in the passenger market to individual motorised transport and airlines, HSR was seen by railway administrations as a chance to regain competitiveness on medium distances up to 800km. The number of HSR lines and stations as well as passenger figures in Europe have been growing constantly since (UIC, 2009), also as part of the Trans-European Networks (TEN) initiative of the European Union. HSR has taken foothold in other countries outside of Europe as well, while the relation to air transport has shifted from competition to a more mixed form that recognises the need for symbiosis for longer distances (Lijesen and Terpstra, 2011).

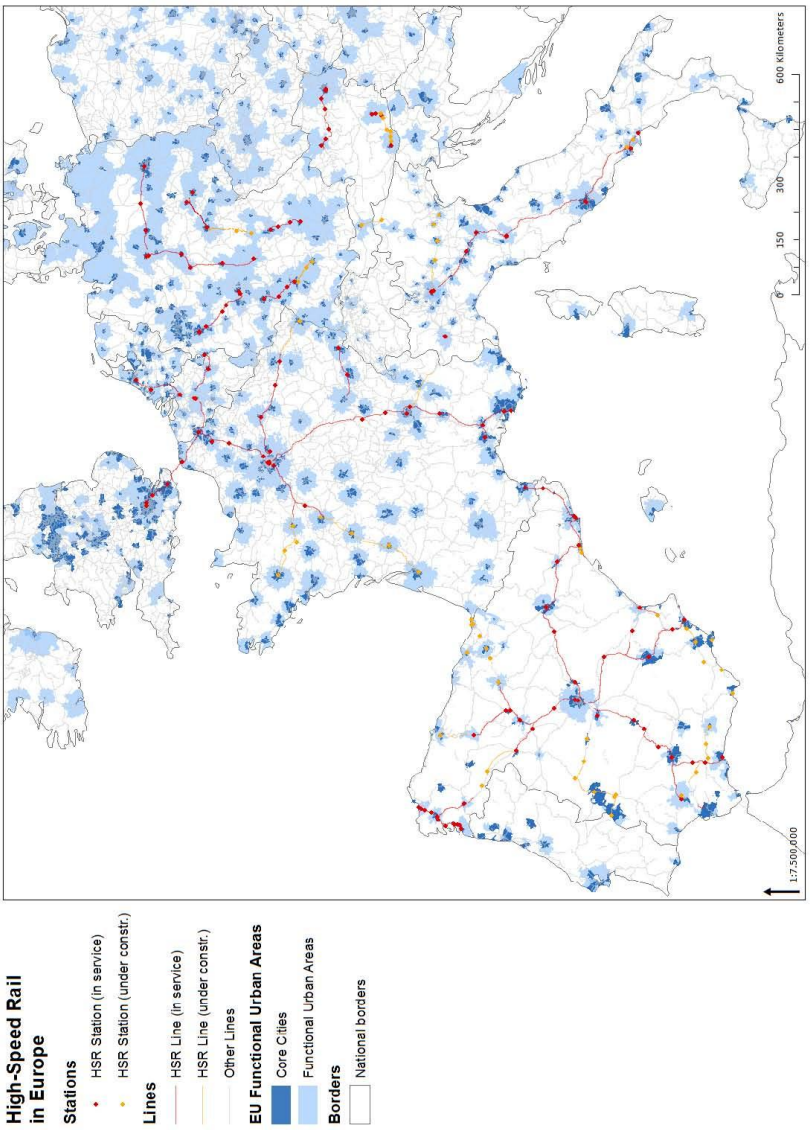

Figure 1: High Speed Rail in Europe. Source: own illustration using Eurostat, 2014; OpenStreetMap, 2016

Figure 1 shows that HSR strategies differ between countries: Networks in unitary countries and countries with a strong national capital city feature more direct links between the capital and secondary cities, while those of federal countries, often with a more balanced settlement structure, show more tangential links. While most networks were initially developed nationally, the European dimension of the network was strengthened during the last decade with the planning and opening of several international links such as the Paris-Brussels-Cologne/Amsterdam corridor. While network operators in Italy have almost completely refrained from constructing stations outside of larger cities, the Spanish network operator strongly invested in new stations on the countryside. Germany takes a middle position here, while France saw a strategy change from ‘gares de betteraves’ to more centrally located stations. Despite three decades of HSR research, the effects of these differences remain under-investigated in ex-post analyses (Preston, 2012). Regarding Germany there is no comprehensive review of scientific literature yet.

1.5 REGIONAL ECONOMIC EFFECTS OF HIGH SPEED RAIL

Three main approaches to specifying the regional economic effects of HSR are used in literature: Aggregate measures, e.g. the comparison of overall regional transport investment with unemployment measures or GDP growth (Aschauer, 1989), more detailed spatial computable general equilibrium (SCGE) models, and project-specific calculations such as CBA and hedonic price approaches (Iacono and Levinson, 2015: 244). While most of the approaches are suitable to arrive at approximate cost-benefit

ratios for planned HSR projects based on the utility for current users, they have difficulties in capturing catalytic effects and induced urban development, which is especially relevant to planners. We will concentrate on the latter for this paper, since we propose a methodology based on this method that potentially takes into account catalytic effects using firm location data.

Firstly, difference-in-differences analyses of pre- and post-intervention land values in both a treatment and control area have been used to estimate the economic benefit for a location that received an accessibility increase by disentangling the influencing factors (Ahlfeldt, 2011). The difference-in-differences analysis establishes a clear link between accessibility changes – positive and negative – and land prices. However, it is important to realise the limitations of this approach, based on the imperfections of land markets and value estimation methods. Studies using the difference-in-difference approach on house prices found only minor effects of HSR access so far, for example in the case of Taiwan (Andersson et al., 2010). Rather, several authors point to the fact that HSR stations also come with negative externalities that impact land values, such as noise and crime (Gargiulo and de Ciutiis, 2010; Armstrong and Rodriguez, 2006; Bowes and Ihlanfeldt, 2001), accidents and impacts on landscape appearance (Chang et al., 2014).

Using land values in a difference-in-differences approach also makes it possible to analyse the assumptions of market participants regarding future effects, since land values are determined by expected future earnings. However, they cannot inform us about the long-term, catalytic effects of improved accessibility, since an increase in land values is not automatically followed by urban development. Hence, a difference-in-differences approach using firm location data seems to be a promising method.

On the regional scale, the role of the size of newly connected municipalities on the actual effects of HSR is often highlighted (Ureña et al., 2009). If two cities or airports are connected by HSR, a number of studies found that the line will work in favour of the already stronger one of the two, and to the detriment of the weaker counterpart, as well as the countryside (Terpstra and Lijesen, 2015; Plassard, 1992 in Garmendia et al., 2012). Accordingly, HSR has been found to support upscaling on Mega-City level in Europe (Morris et al., 2003) and in the case of the Pearl River Delta area in China (Hou and Li, 2011). There is a danger of increased peripheralisation of unconnected smaller localities within the region and rising spatial imbalance (Monzón et al., 2013), which requires “careful planning and policy intervention to effect necessary ancillary investment” (Vickerman, 1997: 36). When following cohesion and regional development goals with mega transport infrastructures such as HSR, integration with conventional and regional rail is also important to maintain a polycentric structure (González-González and Nogués, 2016). Some authors doubt the usefulness of HSR for regional dispersion of economic activity altogether, as in the case of the Japanese Shinkansen network (Sasaki et al., 1997).

On the other hand, Mohino et al. (2014) find significant growth effects in Spain, depending on “the context, the physical, economic, and locational circumstances, and the HSR network/services characteristics” among them distance from other centres, land availability, intermodality, station location, plans, and other station assets. A polycentric and well-integrated Mega City Region, helped by HSR connections, is a strong catalyst for economic development in the age of the knowledge economy: “A flourishing knowledge economy hinges on more intense social interactions, which means a more intelligent allocation of resources across the landscape” (Tierney, 2012). However, in the case of rural stations close to strong metropolitan centres, HSR stations can contribute to unwanted suburbanisation (Demuth, 2004).

Finally, HSR research has also focussed on the stations themselves and their immediate surroundings: How can cities turn the accessibility gain into concrete advantages, manifest in urban design (Bertolini and Spit, 1998; Trip, 2008; Thierstein, 2014)? Researchers have studied the ‘Bilbao effect’ of star architecture on its surroundings creating spillover effects for the entire city (Alaily-Mattar et al., 2017, forthcoming) which is also employed for HSR station buildings, especially in Belgium and Italy. Even if the station itself is not redeveloped, an increase in accessibility can lead to an induced form of ‘gentrification’, when landowners are incentivised to refurbish or sell their real estate due to rising land values, sometimes not unintended. Municipal planning administrations often try to support such developments by financing the reconstruction of public spaces and disused rail land around the station. How this process occurs in practice needs contextual review in each single case.

To sum up, most studies indeed find evidence for increased economic activity around nodes of improved accessibility, but assess that it is redistributive in nature, and depending on further influencing factors (de

Rus, 2008). However, no studies looked at firm locations in particular, and ex-post studies over longer timespans remain rare.

2 RESEARCH QUESTION AND HYPOTHESES

Following from the previous paragraphs, the research question behind this paper is how the introduction of HSR in Germany between 1991 and 2017 has changed the public transport accessibility landscape. The premise is that an induced change in public transport accessibility through High-Speed Rail can spread knowledge-intensive firms from metropolitan cores to smaller centres in the region and so help to promote regional economic development.

- Our hypotheses are that
- Accessibility improvements at HSR stations have been significant
- Some regions have significantly lost accessibility due to new, bypassing HSR lines
- Due to its federal, more dispersed spatial structure, HSR effects in Germany differ to some extent from those of more centralised countries such as France and the UK

After presenting our empirical results for this first step of research, we propose a way forward how to apply the gathered data on firm location choices.

Figure 2 shows these hypotheses, together with some implicit assumptions of our research.

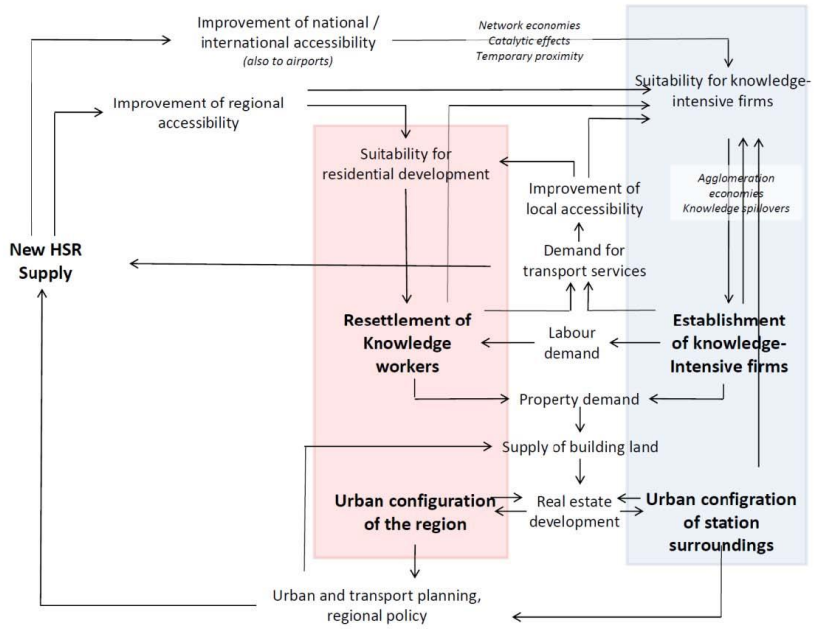

Figure 2: Impact model showing implicit and explicit hypotheses. Source: own illustration

3 METHODOLOGY FOR ACCESSIBILITY ANALYSIS

Accessibility can be measured in different ways. There are simple supply indicators (e.g. length of road network per spatial unit) or more complex indicators, such as gravitation models (Neumeier, 2016), which describe the number of opportunities (e.g. people or firms) that can be reached from a point in a network, weighted by distance. The farther away other opportunities are in the network, the lower the attached weight, until it becomes zero after a certain threshold. We employ a model of the latter type, weighted by population, for our analysis of accessibility levels and changes induced by HSR in Germany.

The model firstly contains a list of the timetable travel times of all regular long-distance train connections in Germany in spring 1991 (DB, 1990; DR, 1990) and spring 2017 (DB, 2017) between any stations served. These connections form the core network. Regular in this case means that there had to be at least one

train connection in each 2-hour timespan over a period of eight consecutive hours on a working day. In case of differing travel times for these connections, the slowest available time was chosen. We selected 1991 as reference year since 1990/1991 was the last timetable year before the inauguration of the first HSR line, Hannover-Würzburg, and the first after reunification between West and East Germany.

To assign weights to the stations, we used the population of functional travel-to-work regions ("Stadt-Land-Regionen" developed by the BBSR (2014)). The 266 travel-to-work regions in Germany are comprehensive, non-overlapping and contingent spatial units based on commuter flows representing functional spatial relationships. The weighing factor of a station was defined as the population of the containing travel-to-work region in the applicable year, divided by the numbers of long-distance-train stations in that region, excluding airport stations.

Not all regions are served by regular long-distance trains. However, accessibility changes through HSR introduction may also affect these regions indirectly through regional train connections to the HSR nodes. Hence for all travel-to-work regions not served by long-distance rail (1991: 132; 2017: 154), a 'central station' was defined, based on its importance in the regional context. In most cases, this was the main station of the dominant municipality within the region. In case the chief city did not have any railway connection (1991: 9; 2017: 8), the most central station within the rail network in that region was chosen as 'central station' instead (e.g. Bad Bentheim instead of Nordhorn, Gerolstein instead of Daun). There was no travel-to-work region without railway access in either 1991 or 2017. The 'central stations' receive the full weighing factor of the containing region. This avoids a 'disconnection bias' (regions no longer served do not feature in the calculation anymore, hence overall accessibility might be increased even though less regions are connected).

Additionally, 64 interchange stations were considered that provide links between 'central stations', but are not in regional centres themselves. These stations receive no weighing factor. Subsequently all regular regional train connections between these regional centres, the interchange stations and those of the core network were added to the list of connections. In a few number of cases this meant that also connections with a lower frequency than 2-hourly had to be considered. These form the supplementary network.

A potential accessibility underestimation bias in gravitational analyses can arise in border areas, when metropolitan centres just across the border are not counted in. Hence we added a buffer around the country of 90 minutes rail travel time. As spatial base units in this zone we used 64 NUTS3 regions and their most important urban centres, which are spatially comparable to the functional travel-to-work regions used within Germany. All train connections to and within these regions were also added to the list.

This resulted in a list of 444 stations with 1300 connections in 1991 and 501 stations with 1353 connections in 2017, respectively.

Based on this connection dataset, we calculated gravitational accessibility measures for all included stations, using the formula in Figure 3. Each main station j was assigned a weighing factor W. The gravitational accessibility of a municipality i is then defined as the number of people that can be reached, applying a distance decay factor β on travel time. This way, nearby municipalities are weighted more than municipalities far away. We applied a decay factor of β = 0.015, which translates into a 'half-life' of approximately 45 minutes, meaning that a person in a municipality 45 minutes away is weighted half as much as a local inhabitant. This reflects the assumed strong agglomeration effects for knowledge-intensive firms, but also takes into account that we're looking at day-long business trips and not commuting relations, for which a higher decay factor would be applicable.

$$Gravity[i]^r = \sum_{j \in G - \{i\}, d[i,j] \leq r} \frac{W[j]}{e^{\beta \cdot d[i,j]}}$$

Figure 3: Formula to calculate gravitational accessibility. Source: Sevtsuk and Mekonnen (2011)

For interchanges at stations, a changing time of two minutes was assumed. If the change was between travel modes (e.g. train and bus), the assumed changing time was 10 minutes. No hierarchy of train service levels was applied – for each station-pair connection, the fastest route was chosen. We used a

cutoff threshold at 270 minutes travel time, since we assumed passengers to prefer air transport for longer journeys, but distance decay for these travel times is already very high anyways.

To model the changes in accessibility induced by the two planned HSR lines between Nuremberg and Erfurt, which is due to open in late 2017, and Stuttgart to Ulm, which is planned to be completed in 2022, the analysis was repeated with a manually adapted timetable dataset with the expected future travel times.

Our chosen approach necessarily entails a number of shortcomings due to reasons of simplicity. Firstly, the dataset is timetable-based, i.e. does not take into account delays but assumes an ideal traffic situation. Secondly, we used the travel-to-work regions as spatial units for both 1991 and 2017 even though real functional spatial relations shortly after reunification differed significantly from the potential, especially in border areas. Thirdly, it was assumed that the entire population of the regions can reach the central stations with no further spatial drag, though this potentially introduces a slight bias in favour of larger metropolitan regions.

4 RESULTS

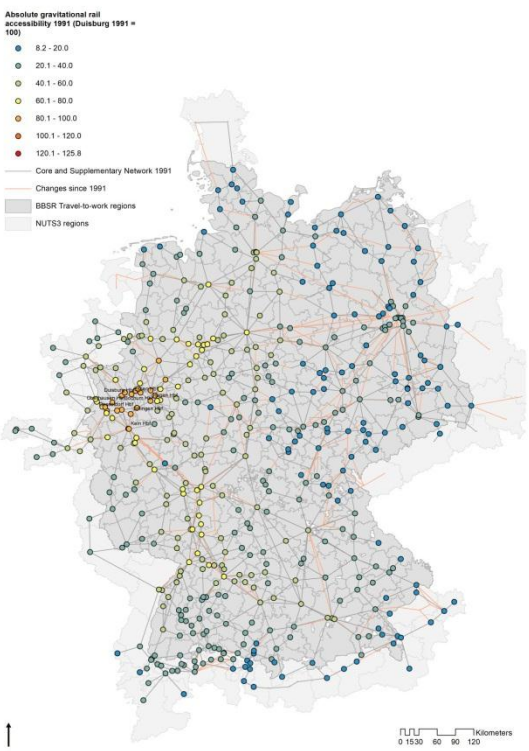

Figure 4: Absolute gravitational rail accessibility 1991 (Duisburg 1991 = 100).
Source: own illustration using BBSR (2014)

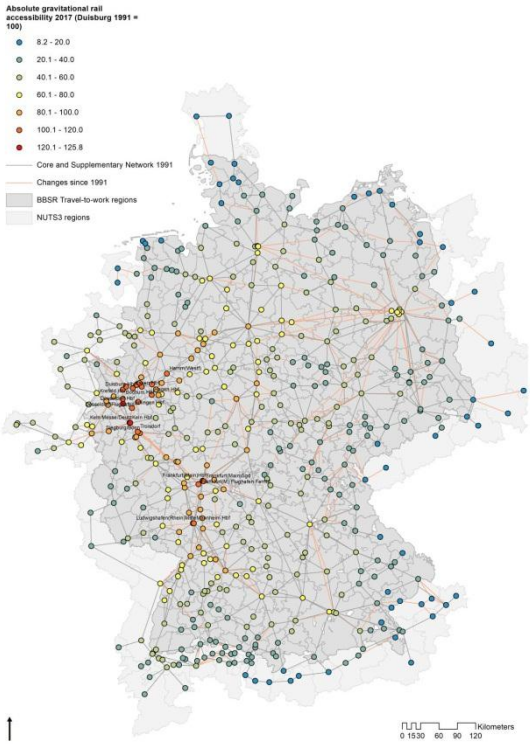

Figure 5: Absolute gravitational rail accessibility 2017 (Dusiburg 1991 = 100)
Source: own illustration using BBSR (2014)

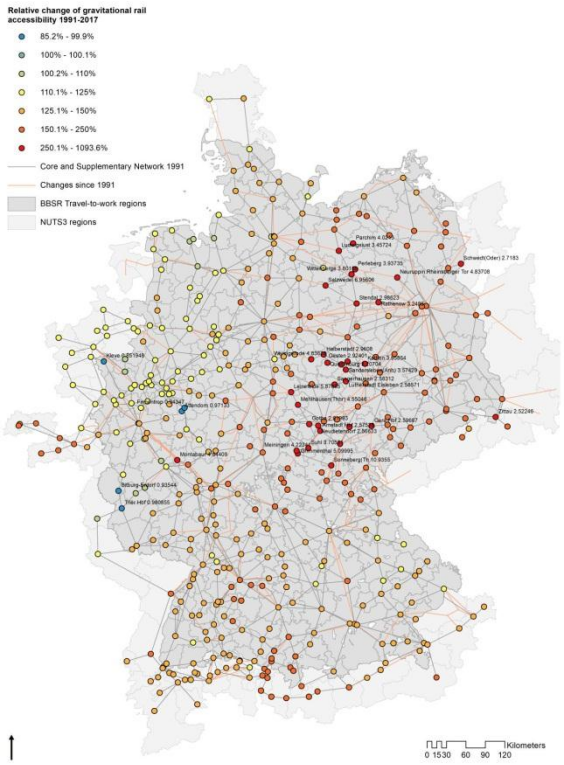

Figure 6: Relative change of gravitational accessibility 1991-2017 Source: own illustration using BBSR (2014)

Figure 4 shows the absolute accessibility of population by rail for 1991, using a 45 minutes half-life threshold. The values are normalised on the highest value, which is Duisburg Hbf (cf. Table 1). This result may be surprising given Duisburg's status today as a post-industrial city with below-average economic performance, compared to its neighbours in the south, but this has not always been the case, and can be explained by its central location in the largest urban agglomeration in Germany. The ten stations with the highest accessibility in 1991 are all located in the Rhine-Ruhr region.

	Station	Accessibility (Duisburg Hbf 1991 = 100)
1	Duisburg Hbf	100
2	Essen Hbf	98,71
3	Düsseldorf Hbf	98,34
4	Dortmund Hbf	96,73
5	Bochum Hbf	95,60
6	Köln Hbf	94,20
7	Wuppertal Hbf	92,66
8	Hagen Hbf	92,14
9	Oberhausen Hbf	90,57
10	Solingen Hbf	90,42

Table 1: The ten most accessible rail stations in Germany 1991

If we compare the absolute values with those of 2017 in Figure 5 and Table 2, we can see that the centre of gravity has somewhat shifted to the south. The most accessible station is now Cologne, and several stations from the Rhein-Main area, such as Frankfurt Main Station and Frankfurt Airport have made it to the list. With Mannheim a city even further south is on 7th position. Smaller towns of the Ruhr area do not feature anymore in the top 10, even though it must be noted that total accessibility improved for all stations in the area. This coincides with the economic stagnation the Ruhr has experienced in the analysed timeframe, compared to the economically more successful south.

This effect is clearly due to the opening of a new high speed rail link between Cologne and Frankfurt in 2002, which reduced the travel time between the two cities from 2.5 hours to one hour. The line has been

well used since and led to further economic integration of the two metropolitan regions (Ahlfeldt and Feddersen, 2010).

	Station	Accessibility (Duisburg Hbf 1991 = 100)
1	Köln Hbf	125,78
2	Köln Messe/Deutz	122,54
3	Düsseldorf Hbf	121,8
4	Frankfurt(M) Flughafen Fernbf	119,72
5	Duisburg Hbf	118,21
6	Frankfurt(Main)Hbf	113,78
7	Mannheim Hbf	113,09
8	Wuppertal Hbf	112,85
9	Düsseldorf Flughafen	112,75
10	Essen Hbf	112,67

Table 2: The ten most accessible rail stations in Germany 2017

A look at the relative gains and losses in accessibility between 1991 and 2017 in Figure 6 and Table 3 shows a completely different picture, however. It becomes clear that the strongest gains in relative terms did mainly not occur in regions with high speed rail investment, but in East Germany, which saw substantial and comprehensive improvement of its dilapidated rail infrastructure in the two decades after German reunification. An almost tenfold relative increase of accessibility was estimated for the small town of Sonneberg in Thuringia, which had a peripheral boundary location within the former GDR rail network, adding to the longer travel times. Only one station among the ten stations with the strongest positive relative changes is not located in East Germany: Montabaur, an intermediate stop on the Frankfurt-Cologne HSR line that was added due to regional political pressure. While this shows that HSR can induce substantial accessibility improvements, the upgrading of conventional rail in East Germany has proven to be more effective in rising accessibility levels, though from a low initial state.

The comparison of timetables for West Germany has revealed that on many conventional rail lines, travel times have not changed at all between 1991 and 2017, and in some cases even increased by a few minutes. While this may be due to increased margins to offset delays, some stations show a substantial relative reduction in accessibility, which is in some cases due to both a shrinking regional population as well as deteriorating supply of rail connections. This particularly affects the ‘inner periphery’ regions of Eifel and Sauerland. Kleve, with a reduction of 14.8% is a specific case since the former local transboundary railway connection to the Netherlands has been cut, despite EU initiatives to (re)connect transport infrastructures internationally.

	Station	Accessibility change
1	Sonneberg(Thür)	+993.6%
2	Salzwedel	+595.6%
3	Leinefelde	+487.7%
4	Grimmenthal	+410.0%
5	Montabaur	+384.4%
6	Neuruppin Rheinsberger Tor	+383.7%
7	Wernigerode	+383.6%
8	Mühlhausen(Thür)	+355.0%
9	Meiningen	+322.3%
10	Parchim	+302.1%
	...	
440	Trier Hbf	-1.9%
441	Attendorn	-2.9%
442	Finnentrop	-5.7%
443	Bitburg-Erdorf	-6.5%
444	Kleve	-14.8%

Table 3: Strongest relative changes in gravitational accessibility

	Station	Accessibility change (Duisburg Hbf 1991 = 100)
1	Limburg Süd	+106,06
2	Vaihingen(Enz)	+82,63
3	Montabaur	+75,95
4	Frankfurt(M) Flughafen Fernbf	+53,44
5	Limburg(Lahn)	+45,12
6	Leinefelde	+44,46
7	Salzwedel	+41,57
8	Wolfsburg Hbf	+41,48
9	Siegburg/Bonn	+40,18
10	Hanau Hbf	+39,44

Table 4: Strongest absolute changes in gravitational accessibility

Table 4 shows absolute changes in accessibility between 1991 and 2017. It also contains the completely new stations Limburg Süd on the Cologne-Frankfurt HSR line and Vaihingen(Enz) on the Mannheim-Stuttgart HSR line, of which there are relatively few in Germany compared to other European countries. These achieved extremely high accessibility levels from the start and should offer highly attractive location conditions for knowledge-intensive firms. In terms of absolute gains, also other new HSR lines feature prominently, e.g. Wolfsburg Hbf on the Berlin-Hannover line. Interestingly, the first and longest new HSR link opened since 1991 between Hannover and Würzburg seems to have had less influence.

	Station	Accessibility change
1	Coburg	+66.02%
2	Sonneberg(Thür)	+59.12%
3	Bamberg	+20.23%
4	Lichtenfels	+20.05%
5	Erfurt Hbf	+19.03%
6	Kulmbach	+17.98%
7	Weimar	+15.98%
8	Neudietendorf	+15.03%
9	Kronach	+14.62%
10	Arnstadt Hbf	+12.01%
	...	
498	Mehltheuer	-0.05%
499	Plauen(Vogtl) ob Bf	-0.04%
500	Jena Paradies	-1.35%
501	Saalfeld(Saale)	-7.40%

Table 5: Strongest relative changes in gravitational accessibility after the opening of the Nuremberg-Erfurt HSR line in December 2017

With the available data we next modelled probable future changes in accessibility after the opening of two HSR lines currently under construction, the lines between Nuremberg and Erfurt, which will be opened in 2017 and is expected to reduce travel times between Berlin and Munich to about 4 hours, and the line between Stuttgart and Ulm, which is part of the Trans-European corridor from Paris to Bratislava. We show in this paper the expected accessibility changes resulting from the Nuremberg-Erfurt line in Figure 7 and Table 5.

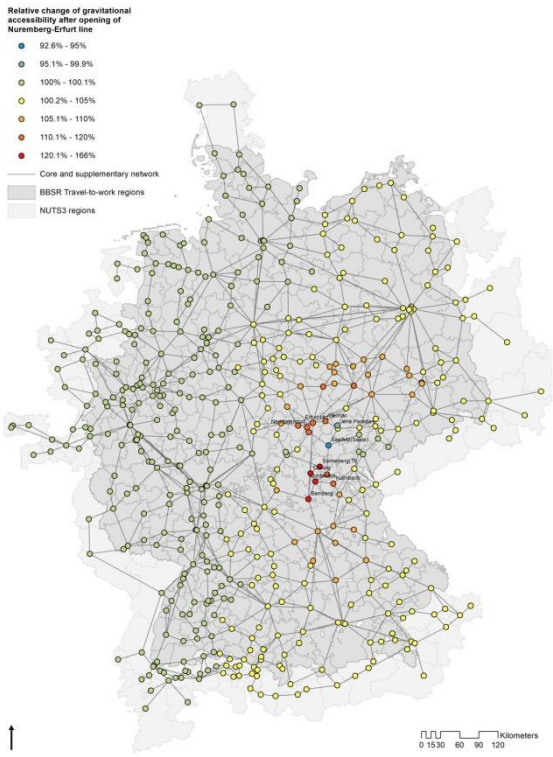

Figure 7: Relative change of gravitational accessibility after opening of Nuremberg-Erfurt line Source: own illustration using BBSR (2014)

The Nuremberg-Erfurt line will be the one of the first in the German context that leads to a substantial reduction of conventional long-distance rail on the existing main line between Nuremberg and Leipzig. Hence, the project creates winners and losers regarding accessibility. The towns of Jena, Saalfeld, and Lichtenfels, located on the existing line, will lose their frequent direct connections to Berlin and Munich, and will be relegated to regional trains to connect to the new HSR line in nearby Erfurt. However, the relative and absolute accessibility differences are small compared to the gains realised at other locations, among them once again the formerly peripheral Sonneberg and Coburg. In terms of rail accessibility, Sonneberg is clearly the region profiting most from German reunification. Lichtenfels even realises a relative gain, since the connection to the HSR with interchange in Coburg is still faster than the existing direct connections. However, the benefits for peripheral regions depend a lot on the stop frequency, which is still unclear in the case of Coburg but will likely be not more than a few stops a day.

To conclude, we can confirm our hypothesis that accessibility improvements of HSR stations have been significant, but with the major qualification that in relative terms, the upgrading of the East German rail network has had even stronger effects on gravitational accessibility. This is despite the replacement of long distance rail with regional trains in many parts of East Germany since 1991, which led to a reduction of the number of people living in travel-to-work regions directly served by long-distance rail (1991: 61.3 Mio.; 2017: 56.6 Mio.).

HSR effects in Germany have been more evenly spread, due to the more dispersed settlement structure and patchy implementation of HSR. This contrasts with the experiences of more spatially hierarchized countries like France and the UK, where effects are often directly dependent on realised travel time to the capital city (Chen and Hall, 2015).

5 INTERPRETATION AND OUTLOOK

What was treated as a premise for this paper we want to investigate in more depth in the future: The assumption that an induced change in public transport accessibility through High-Speed Rail can spread knowledge-intensive firms from metropolitan cores to smaller centres in the region and so help to promote regional economic development, and whether there are location-speific, temporal, or rail-service related

factors that can influence this effect, particularly the local centrality of the station and the interconnectedness with other modes of transport. The accessibility analysis has revealed that there are a number of stations that received significant positive shocks in terms connectivity, such as Limburg Süd and Montabaur on the Cologne-Frankfurt line, Vaihingen(Enz) on the Mannheim-Stuttgart line, and Bamberg and Coburg on the future Nuremberg-Erfurt line, which should allow KI firms to settle.

In order to do this we propose a difference-in-differences approach, comparing the number of firms in knowledge-intensive branches, the number of their employees, and their revenues immediately around 'treated' stations as well as their city-regions with those in comparable regions that have not received HSR investment. Such firms datasets are readily available and present a rarely used source for regional economic analyses so far.

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ID 1675 | COORDINATION OF TERRITORIAL COHESION BY EUROPEAN TERRITORIAL COOPERATION AND TRANS-EUROPEAN TRANSPORT NETWORKS – THE CASE OF CROSS-BORDER TRANSPORT

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1 INTRODUCTION

Territorial cohesion aims at fostering a more balanced and harmonious development of the European regions, making use of individual regional strengths for an overall EU benefit and linking them effectively to ensure a higher territorial integration of the Member States among others. Furthermore, cooperation across administrative borders is to be promoted actively (Commission of the European Communities 2008).

The two policies European Territorial Cooperation (ETC) and Trans-European Transport Networks (TEN-T) are intended to contribute to several aspects of territorial cohesion: the ETC Policy focuses on the support of European border regions, contributing to a European integrated territorial development and promoting the exchange of experiences across borders (European Union 2006). Therewith, the effects of the administrative borders shall be minimized and territorial cohesion shall be increased (European Commission 2005). The TEN-T Policy shall efficiently link the national transport networks of the Member States and make them interoperable in order to contribute to a borderless European territory. Additionally, remote regions are to be integrated to the residual territory (European Union 2012), bottlenecks in the European transport system are to be removed and missing-links to be constructed (European Parliament

and Council of the European Union 2013d). Thus the two policies can be seen as promoters of territorial cohesion.

The aim of this paper is to analyse the contribution of the two above named policies to an important element of territorial cohesion: cross-border transport connections including infrastructures and services. The findings are based on field research in the cross-border region Greater Region Saar-Lor-Lux+.

After a description of the objectives of the TEN-T and ETC policies and their related funds in a first step, the influence of the policies is analysed. This is done by comparing the original EU objectives with the involved Member States' national transport policies, the regional and sub-regional policies and the cross-border policy documents. Additionally, the implementation of these objectives in the form of projects in the cross-border regional transport reality is evaluated. Finally the contribution of the two policies to territorial cohesion is evaluated.

2 EUROPEAN TERRITORIAL COOPERATION (ETC) AND TRANS-EUROPEAN TRANSPORT NETWORKS (TEN-T)

This chapter shortly presents the two policies European Territorial Cooperation (ETC) and Trans-European Transport Networks (TEN-T) including their objectives concerning cross-border transport and their implementation incentives.

2.1 OBJECTIVES

The TEN-T and the ETC policy both aim at supporting cross-border transport. Between 2007 and 2013 the ETC policy aimed at supporting cross-border TEN-T projects and the linkage of secondary networks to the TEN-T. Furthermore, the cross-border transport development across borders was to be coordinated. The European regions were to be connected better with each others (Council of the European Union 2006; European Parliament and Council of the European Union 2006). The TEN-T policy strongly promoted the removal of bottlenecks and the creation of missing links in cross-border sections because being of high European added value. Furthermore, it was aimed at improving the linkage to new Member States. The TEN-T priority projects were to focus the funds on border crossings (European Commission 2001; European Parliament and Council of the European Union 2004). Between 2014 and 2020 the ETC policy has aimed at removing bottlenecks in important cross-border transport infrastructures and at making transport mobility more sustainable. Secondary and tertiary networks are to be developed and linked to the TEN-T corridors in order to improve the access to the TEN-T. Additionally, transport planning across borders shall be facilitated (European Parliament and Council of the European Union 2013c, 2013a). Between 2014 and 2020 the TEN-T policy has aimed at supporting cross-border sections between the closest urban nodes including the reduction of CO2 emissions. Again, bottlenecks are to be removed and missing-links are to be established (European Parliament and Council of the European Union 2013d, 2013e).

Besides that, the EU transport related policies defined general transport development objectives. 15 EU policy documents were analysed that had influenced the two funding periods (see figure 1). Objectives printed in bold font have been named by a high number of these policies. One of them is the improvement of cross-border infrastructures. This shows the high relevance of cross-border transport in the EU policies.

Aims	%	Aims	%
Transport Infrastructure network	93	**Transport Services**	87
Remove barriers, improving efficiency	100	(Urban) public and soft mobility	47
Linking TEN-T and secondary networks	40	**Transport Safety**	73
Relieve routes/ Fighting congestion	40	Cross-border services	47
Intermodality/ Interoperability	80	**Environmental and sustainable issues**	100
Intelligent transport systems	33	**Alternative modes of transport**	80
Freight corridors	27	Alternative fuels/ Climate Change	67
New technologies/innovations (research)	60	**Minimizing environmental harm**	93
Improving mobility of freight	60	**Sustainable Transport**	93
Improving the mobility of citizens	93	Exchange of practices/ better coordination	47
Accessibility of remote areas	100	n=15	
Connecting neighbouring/ new Member States	60		
Improving cross-border infrastructures	87		
Improving user-friendliness	33		

Figure 1 – Transport related objectives of the EU Transport and Cohesion Policies
Source: Own depiction, Kaiserslautern, 2017.

The implementation of these aims in the Member States and cross-border transport reality will be tested in the course of the paper.

2.2 IMPLEMENTATION AND INCENTIVES

The TEN-T and ETC policies are redistributive policies. They are not legally binding but their voluntary implementation shall be secured by financial incentives (so-called 'ideational transfer') (Stone 2004, 562f.).

Until 2013 the TEN-T Programme funded cross-border transport projects being part of the TEN-T network (European Parliament and Council of the European Union 2010). Economically lagging behind regions were additionally supported by the Cohesion Funds (Commission of the European Communities 2009). Since 2014 the TEN-T have been funded by the Connecting Europe Facility (CEF). It is additionally supported by the Cohesion Fund (European Parliament 2014; European Parliament and Council of the European Union 2013e). The funds are distributed in annual and multiannual work programmes (European Commission 2014). The ETC has been funded between 2007 and 2013 as well as between 2014 and 2020 by the European Regional Development Fund (ERDF) which was distributed in multi-annual programmes. Eligible cross-border (INTERREG A) and transnational cooperation spaces (INTERREG B) have been defined (European Parliament and Council of the European Union 2006, 2013b).

According to Knill (2006) and Smith (1973) the implementation of policies strongly depends on the political, administrative and cultural structures of the Member States which implement the policy. Different responsibilities and attitudes towards the aims of the policies are factors which can lead to varying policy outcomes in different Member States. The ETC itself is often described as a platform of exchange and learning for the implementation of sectoral EU policies (Timms 2011, 521).

The findings of a top-down outcome analysis which is based on a comparison of the two policies' aims with the cross-border transport reality will be presented in the following. Additionally, intermediate stages of the policy implementation process are analysed: in a case study the EU policy aims are compared with the domestic and cross-border transport related policy documents and the aims of conducted cross-border transport projects will be explored. This shall allow an evaluation of the TEN-T and ETC influence on cross-border transport.

3 INFLUENCE OF THE TEN-T AND ETC POLICY ON CROSS-BORDER TRANSPORT IN THE GREATER REGION SAAR-LOR-LUX+

This empirical section of the paper seeks to analyse the influence of the two EU policies on cross-border transport within a cross-border region: the Greater Region Saar-Lor-Lux+. The findings were drawn from a recently conducted case study research. The research is based on a policy document analysis whose results were complemented with findings of face-to-face or phone elite interviews conducted with stakeholders working in the different administrative levels of the Member States involved in the cross-border region as well as in cross-border cooperation bodies.

3.1 CROSS-BORDER TRANSPORT IN THE GREATER REGION SAAR-LOR-LUX+

The Greater Region Saar-Lor-Lux+ (in the following abbreviated as Greater Region) is a cross-border region in Western Europe comprising the regions Wallonia, Rhineland-Palatinate, Saarland, Lorraine and the country Luxemburg. Several cross-border bodies exist in the region as can be seen in figure 2.

Figure 2 – Location of the Greater Region Saar-Lor-Lux+, Source: Mission Opérationnelle Transfrontalière 2015

The Greater Region is characterized by strong cross-border commuter flows. Almost 213.000 commuters crossed the national borders within the Greater Region on a daily basis in 2015 with an upward trend (Interreg Großregion 2015).

How the cross-border transport topic is addressed in the domestic policies of the Member States and the cross-border policies of the Greater Region will be explored in the next section.

3.2 DOMESTIC AND CROSS-BORDER POLICY DOCUMENTS

The analysis of domestic and cross-border policy documents includes the 15 EU policies, mentioned above, 102 domestic transport policies from Belgium, France, Germany and Luxemburg and 24 cross-border policies which relate to transport.

The relation of the domestic and cross-border policies to cross-border transport is depicted in figure 3. It is differentiated in three objectives relevant for cross-border transport. Each bar shows the percentage of policies which mentioned the objectives in the different policy frames. The linkage of the TEN-T network to secondary networks is mentioned rarely, this objective is supported most by the German policies. More policies aim at improving cross-border infrastructures and services: The cross-border policies promote these two aims most, followed by the Luxemburgish policies. The German policies promote these aims

least. Cross-border services are not promoted that much in the EU policies. It appears to be rather an issue promoted on domestic and cross-border level.

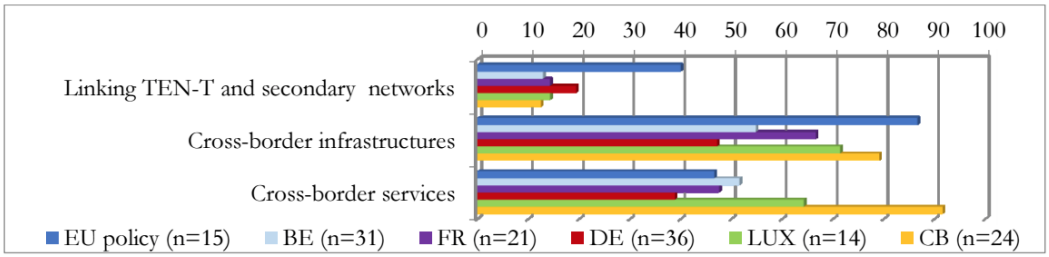

Figure 3 – Contribution of the domestic and cross-border policies to cross-border transport, Source: Own depiction, Kaiserslautern, 2017.

In Germany, the improvement of cross-border transport infrastructures and services is promoted most frequently by the subregional planning policies. Also the French inter-municipal planning documents consider these objectives more important than the regional and national policy documents. In Belgium cross-border infrastructures and services are promoted most by the regional policies. With the exception of France, the regional levels of the residual countries consider these two objectives much more important than the national levels. With the exception of Germany the regional levels' policies consider the linkage of TEN-T and secondary networks most important. In Luxemburg only the national level develops transport related policies. Several domestic policy documents name prioritized cross-border projects. In Belgium the regional level policies do so most, whereas in Germany and France, most policies which define concrete cross-border projects are produced on subregional respectively inter-municipal level. The comparison of the countries shows that cross-border transport is preferably dealt with on different administrative levels which can hamper the coordination across borders.

When comparing the relevance of the residual EU transport objectives - depicted in figure 1 - in the EU, the domestic, and the cross-border policies, the national policies are most similar to the EU aims. This is not the case in Belgium. Here the regional policies of Wallonia are more similar to the objectives' relevance in the EU policies. The subregional levels show stronger deviations than the higher levels which speaks for a lower influence of the EU policies. According to interviewed stakeholders the subregional levels i.e. the Planungsregionen in Germany and the départements in France as well as the provinces in Belgium are influenced more by the domestic than the EU policies. The cross-border policies deviate most from the EU policies. They focus more on the individual needs of the cross-border region.

Several challenges have been named by the interviewed stakeholders which hamper the direct influence of the EU policies on the domestic policies. These are among others missing obligations from the EU policies, missing motivations of the Member States and missing financial means to fulfil the objectives. Furthermore, the different transport planning cultures and systems hamper a similar implementation of the EU aims. Also in the case of cross-border transport the motivations of the Member States and their administrative levels, expressed in the policy documents, differ.

This section presented a first attempt of tracing the EU policies' influence on the domestic and cross-border transport policy documents and illustrated first patterns. Still it needs to be taken into account that only the definition of objectives has been analysed which does not automatically ensure their implementation. Several interviewed stakeholders have criticized the low contribution of certain administrative levels to cross-border transport although their policy documents' aims promoted it. Thus there might be a mismatch between the promotion of aims and their final implementation.

3.3 CROSS-BORDER TRANSPORT PROJECTS

According to the interviewed stakeholders the cooperation in the cross-border transport development of the Greater Region is aggravated by several challenges such as missing financial means, technical barriers, a high variety of individual needs and objectives, different transport planning approaches and cultures, hampered communication because of different languages, missing political support and motivations as well as internal competitions which make it very time intensive.

This chapter presents some cooperation attempts in the Greater Region with concrete project outputs and evaluates the relevance of EU support in the cross- border transport reality.

3.3.1 EU SUPPORTED CROSS-BORDER TRANSPORT PROJECTS

Three types of EU supported cross-border transport projects were analysed in the last (2007-2013) and current (2014-2020) funding period: INTERREG A, INTERREG B and TEN-T projects.

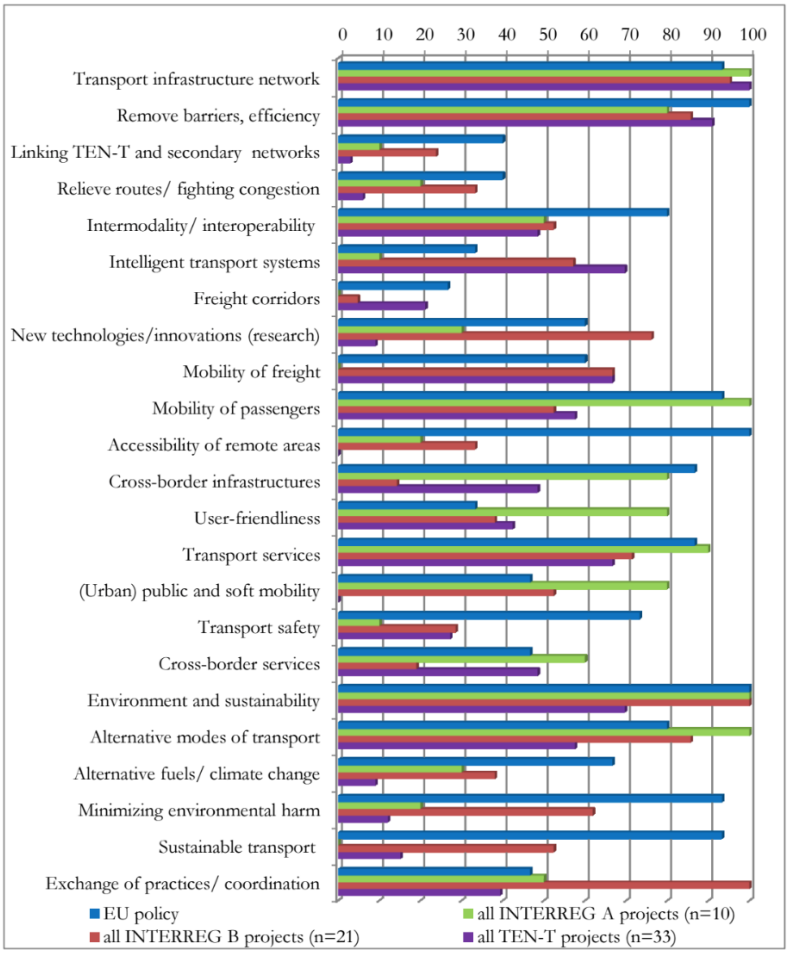

Figure 4 – Contribution of the EU funded projects to the EU policy aims, Source: Own depiction, Kaiserslautern, 2017.

As can be seen in figure 4 the projects of the three different funding programmes focus on different aims. INTERREG B projects contribute most to the linkage of TEN-T and secondary networks, cross-border infrastructures and services are supported most by INTERREG A projects. From these three categories the TEN-T projects support cross-border services and infrastructures more than the linkage of TEN-T and secondary networks. As more TEN-T projects have been funded than INTERREG A projects, the contribution to cross-border transport was the highest of the funds of the TEN-T policy. The INTERREG A and B projects have also been influenced by the objectives of their Operational and Cooperation Programmes which were developed by the regional administrations involved in the Greater Region. All projects were not been entirely financed by the EU but were co-financed together with the Member States. The funding programmes INTERREG A and B cannot afford to support large infrastructure investments because of restricted funds. Still they complement investments here and there. The TEN-T projects mostly focus on the improvement of high speed and primary infrastructures, often relate to freight transport and the overall improvement of technical standards. INTERREG A projects mostly focus on smaller scale transport infrastructures and services. Only one project of the last funding period conducted a study on a part of a TEN-T corridor. INTERREG B projects contribute to both categories, but mostly focus on the smaller scale, even urban transport themes are supported.

When comparing the EU transport objectives' relevance in the EU policy documents and in the EU supported projects, the INTERREG B projects on average seem to be aligned most to the EU policies with a deviation of 25%. INTERREG A and TEN-T project deviate slightly more (32 and 34%). The highest mismatches exist in the promotion of the accessibility of remote areas, transport safety and sustainable transport. These objectives have not been mentioned often by the EU funded projects.

The aims of the INTERREG A projects do not cover all EU aims like the INTERREG B projects do, instead they are more focused on certain categories. Because of their thematic orientation, the TEN-T projects have not contributed to the objectives urban transport development and the accessibility of remote areas but besides that to most categories.

Overall the EU funded projects are considered to have motivated stakeholders from different countries to approach cross-border transport challenges because of the financial incentives. These allow further investments in times of empty coffers. Especially the INTERREG projects facilitate the exchange of local and regional stakeholders and are said to deepen contacts for future cooperations. Furthermore, because of the multiannual definition of objectives the EU policies can steer the focuses of projects. The TEN-T projects are approved on EU level. In the case of INTERREG projects the final decision about the project acceptance is decentralized to the regional levels of the involved Member States which might contribute to a higher consideration of the local transport needs in the decision-making.

3.3.2 NATIONALLY FUNDED CROSS-BORDER TRANSPORT PROJECTS

Besides the EU funded projects, there is a high number of initiatives and projects which have been implemented without EU incentives. Some of them were developed for the whole cross-border region. These, however, dealt with a better coordination of the transport development instead of cross-border infrastructures or services. Most projects have been developed bilaterally between neighbouring countries. In most projects Luxemburg was actively involved. Besides a high cooperation between Germany and France, only a low number of cooperation attempts have been created between Germany and Belgium as well as Belgium and France. Luxemburg itself developed own projects with relevance for cross-border commuters.

Most cross-border initiatives which were promoted without EU support focused on the provision of public transport services across borders. Several also promoted cross-border infrastructures including the construction of park and ride infrastructures, the expansion of rail tracks and motorways. The residual projects conducted studies or facilitated the coordination of the transport development across borders.

The projects show a high motivation of the Member States, respectively regions, – especially in those with strong commuter flows – to improve the current transport services and infrastructures. However, some projects were discontinued because of missing political support. Besides the Member States, cross-border bodies have coordinated several cross-border initiatives on lower cross-border scale. As one of the most frequently named challenges of these projects were the high investment costs, several of these running projects aimed at being supported or were supported with EU funds in the past.

The cross-border projects also refer to several EU policy objectives such as the promotion of alternative transport modes, the reduction of congestions, and an increased user-friendliness of public transport, but not all. These objectives have also been promoted by the domestic and cross-border policy documents. Therefore it is difficult to prove a direct EU policy influence. The individual objectives of the projects are considered to reflect the local needs in the cross-border transport system of the Greater Region and its binational cross-border relations.

3.4 EVALUATION OF THE INFLUENCE OF ETC AND TEN-T POLICY ON CROSS-BORDER TRANSPORT IN THE GREATER REGION SAAR-LOR-LUX +

According to the project and document analysis and the stakeholders interviewed certain trends can be perceived. Both policies aim at contributing to better cross-border transport and strongly lobby the relevance of this objective. Besides that they promote further transport related aims. The Member States have included several of the EU aims in their domestic policies especially the national levels strongly

promote these aims in most countries. The relation of the domestic policies on cross-border transport increases on the lower administrative levels. In France and Germany the subregional levels strongly promote cross-border transport, however, the direct influence of the EU policy objectives is reduced at the same time. This might indicate the disengagement of the promotion of cross-border transport by EU policies and the relevance on the domestic levels. Instead the concernment of the respective level seems to be more decisive. On the regional Belgian level, Wallonia, however, the policies are most similar to the EU objectives and cross-border transport is promoted most. However, stakeholders from the subregional level criticize the low engagement of Wallonia in the cross-border transport reality. Still, a certain influence of the EU transport related aims seems to exist in the policy documents.

All cross-border transport projects reflect several transport related aims and thus seem to be influenced by the EU policies at least to a certain extent. The contribution of the EU funded projects to the EU aims can be traced back easier as they have to relate to at least some EU aims in order to be approved. The different funding programmes show different focuses and thus can complement each other quite well. All of them offer an important financial support. In order to receive these funds, the EU funded projects need to achieve their defined objectives. Therewith the implementation might be ensured to a higher degree than in non-EU funded cooperations. In terms of the projects' quantity the TEN-T projects contribute most to cross-border transport. However, they focus mainly on the improvement of long-distance connections.

Still as long as they contain more than one stopping point in the Greater Region, this can be of added value for the internal accessibility, especially as the Greater Region covers a relatively large territory. INTERREG A and B projects focus less on large scale infrastructures; they however, strongly promote the mutual comprehension and bring stakeholders from the different countries together which might be of added value for future projects. The non-EU funded projects illustrate the high relevance of concernment, needs and pressure for the development and implementation of cross-border initiatives: Many projects have been developed around Luxemburg because of the high commuter flows. These factors strongly facilitate investments in cross-border transport and might be more decisive for the expansion than the EU policies.

4 CONCLUSION: CONTRIBUTION OF ETC AND TEN-T POLICY TO TERRITORIAL COHESION

The missing obligatory nature of the European transport policies which would be needed to effectively harmonize the transport standards of the Member States and minimize a decisive cross-border transport barrier was often criticized by the interviewed stakeholders. Additionally, the EU transport related policy aims are very broad and not targeted to the individual needs of cross-border regions as they shall be valid for the whole EU. Still the financial incentives which are aligned to the implementation of EU objectives are a high motivation and opportunity to implement cross-border projects and EU objectives.

In order to efficiently improve cross-border transport additional domestic investments are necessary as the EU funds are scarce and can only support a small number of projects. As the domestic policies show similarities to the EU transport objectives it is likely that also the non-EU funded cross-border transport projects will implement the EU policies' aims to some extent. However, the influence of these projects is less direct and cannot be easily traced back. Especially the non-EU funded projects are strongly shaped by the domestic political will and implemented due to urgent local needs.

Although not always a direct EU influence of the ETC and TEN-T policy could be determined in the transport policies and projects of the Greater Region some of the two policies' broad aims could be detected on all transport related levels which shows a certain level of harmonization. As the two policies are not obligatory the provision of funds is of high relevance for the implementation of their aims and a possibility to improve cross-border transport and contribute to territorial cohesion. However, compared to the perceived cross-border transport challenges the number of EU funded transport projects has been low and could improve the situation only to a small degree.

The findings of this paper are based on the analysis of the cross-border transport in one case study, the Greater Region Saar-Lor-Lux+. In order to find out if the perceived trends can be generalized for the whole

EU, a second case study will be conducted in the Polish-German border region Brandenburg-Lubuskie which has a different initial situation than the Greater Region.

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ID 1715 | PARTICIPATORY APPROACH TO REGENERATION PROCESSES IN POLISH CITIES AND REGIONS

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1 INTRODUCTION – METHODOLOGY AND DEFINITIONS

Cities are changing day by day - they are in the constant circle of life - arising, decaying, reviving. However, their changes are mostly connected with its users - nowadays we can observe increasing participation of inhabitants, local activists and non-governmental organizations in the urban regeneration processes (Żylski, 2014). Authors present the impact of EU Cohesion Policy 2014-2020 on regeneration processes which are implemented in Polish towns, cities and metropolis when emphasizing general formal and legal framework including examination of the possible distribution of EU funds for regeneration projects within the regional operational programs. Authors focus on different approaches to the implementation of Cohesion Policy in Polish regions - and researched into Pomeranian province and Mazovian Voivodship as study cases.

First, there is a need to establish definition needed to the research. The definition of the regeneration process used in the research comes from the Polish legislation (Act on regeneration, 2015). The regeneration process is defined as 'a process of counteracting crisis situation in the degraded areas, lead in complex approach due to integrated actions in favor of local community, space and economy, concentrated territorial, conducted by regeneration stakeholders, basing on local regeneration program'. Moreover, it is important that the groups of stakeholders are also listed there. Among them, inhabitants of the area, owners, perpetual users, administrators, other inhabitants, local entrepreneurs, units of local government are mentioned. The importance of various stakeholders' participation is also mentioned in The Guidelines for regeneration actions in operational programs 2014-2020 prepared by Polish Ministry of Economic Development (2016). Participatory approach is important for the social dimension of the regeneration. Participation of the local communities and multiple stakeholders in reimagining and reinventing public spaces. Moreover, it strengthens the connection between the place and its users (Placemaking and the future of city – draft, 2012). The pioneer in the placemaking – community-based approach to the regeneration process - is U.S. nongovernmental organization Project for Public Spaces which has helped numerous communities in creatina public spaces together. Basing on the polish

legislation, the participatory approach consists of preparation, leading and evaluation the regeneration process ensuring the active participation of stakeholders during consultations and works of The Regeneration Committee (JL, 2015). In that part of the research, more important than the definition of participation method is the methodology of it. There is a growing need for authorities but especially for communities to understand that the consultation of the regeneration process is not the only activity for various actors to participate the whole process. Creighton James L. (2005) in his publication mentioned 4 steps of Continuum of participation: 1. Inform the public, 2. Listen to the public, 3. Engage in problem solving, 4. Develop agreements. However, the step: 'Engage in problem solving' is the most extensive in tools for co-operation between various actors. Moreover, Sherry Arnstein (1969) evolved eight-rung Ladder of Citizen where the highest rungs are 'Delegated Power' and 'Citizen control' what shows how much citizen are able to do. The rightness of choosing the participatory approach for the urban planning involves Jane Jacobs' philosophy - 'Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody' (Jacobs, 2014).

2 REGENARATION PROCESSES IN THE CONTEXT OF EU COHESION POLICY

The fundamental, overarching document regulating regeneration processes in Poland is partnership agreement between the Poland and the European Union signed in May 2014 (Polish Ministry of Infrastructure and Development, Programming Financial Perspective 2014 -2020 - the Partnership Agreement). Both the Assumptions of the Partnership Agreement and the resulting draft of this document were prepared in cooperation with key stakeholders - ministries and regions. Into account have also been taken the opinions of the social and economic partners. Objectives of the Agreement are identical to the objectives of the Poland National Development Strategy 2020 while maintaining synergy with the Strategy Europa 2020, ie. increase competitiveness, social and territorial cohesion and improving the efficiency of the administration. The instruments for implementation of the Partnership Agreement are national operational programs, including the National Regeneration Plan, and in consequence also voivodship development strategies, regional strategic programs and regional operational programs decisive for the allocation of funds from the European Union. The intervention of regeneration processes within the Regional Operational Programs 2014-2020 is based on funding from the two European funds: the European Social Fund (axis 6 Education) and the European Regional Development Fund (axis 8 Conversion). Financial support for regeneration activities from EU Funds through ROP's (Regional Operation Programs) is possible only through an integrated regeneration project involving interventions both the social (Axis 6 ESF) and spatial (Axis 8 ERDF) aspect. The implementation of the two-fund project formula is a conclusion drawn from the 2007-13 mechanism in which various actors involved in degraded areas often failed to coordinate the work of the joint vision set out in the strategic document. More on the impact of ROP's in regeneration processes on the example of Pomeranian voivodship (below).

3 REGENERATION IN POLAND

Over the past quarter century, the socio-economic transformation in Poland, triggered primarily by the transformation of the political system and the challenges of pioneering free market economy, has revealed the progressive process of urban degradation. In recent years, unfavorable demographic and spatial processes have also contributed to this, among them: the depopulation and aging of the inhabitants of the centers, the uncontrolled dissipation of urban development and the dominance of individual motorized transport in urban areas. Based on the results of 2010 research, which identified in total at least 120,000 ha of areas that require regeneration in Poland – it's almost 22% of all urbanized land in polish towns and cities, of which 11 percent are historical inner cities, 4,2% post-industrial lands, 2,6% large-panel building estates and 3.3% post military, post railway lands. About 2.2 million people lived in the city center's requiring regeneration (Ziobrowski and Jarczewski, 2010).

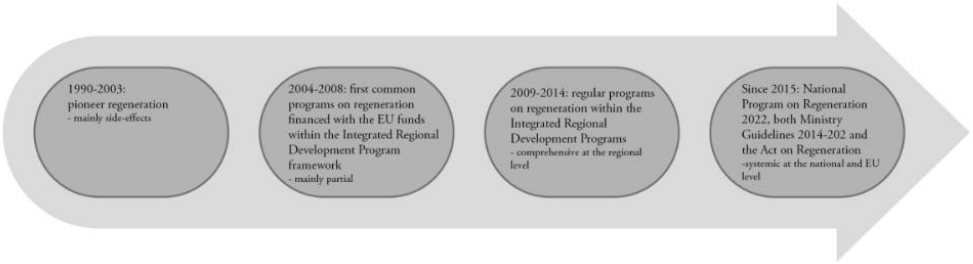

Figure 1 - Evolution of regeneration processes in Poland
Source: own study based on Musial-Węcławowicz (2007).

Regeneration in Poland, over the last twenty years, is gaining in importance and intensification (figure 1). It is now regarded as a factor in the development and improvement of living conditions. It is also clearly highlighted in the government documents defining the country's development directions: National Strategy for Regional Development, National Spatial Development Concept 2030, National Development Strategy.

3.1 INSTITUTIONAL AND LEGAL FRAMEWORK OF REGENERATION IN POLAND

Regeneration requires as much holistic approach as possible. This means that many legal acts have to be respected when implementing regeneration projects. The process is a unique conglomeration of various activities, so each change in a statutory should facilitate the comprehensive measures, while no legislative change should not hinder and complicate them (PMID, 2014).

Since 2015 the regeneration processes in Poland are being conducted out within the legal framework set by the dedicated basic act of Polish law - Act on Regeneration (JL, 2015). For the first time Polish legal system, presents an issue of regeneration as a multilevel, complex approach within multi-unit co-operation. The act anchors the implementation of regeneration processes within the competence of Gminas (eng. basic land administrative units/municipal offices) by introducing a definition on regeneration and its stakeholders, adding regeneration processes to Gminas own tasks (by the amendment of the Act of 8 march 1990 on municipal self-government (JL, 2016) and public purpose within the meaning of the Act on real estate management (JL, 2016), enhance local participation, equip municipalities with dedicated planning tools - special zone of regeneration and local regeneration plan.

The enrollments of the Act on Regeneration obliges Gminas to prepare a complex Municipal Regeneration Program (pl. Gminny Program Rewitalizacji) fulfilling the guidelines set by the experts representing Marshals' Offices (polish provincial offices). It is a strategic document which includes diagnoses, plans and coordinates actions to achieve the expected changes after regeneration. It also coordinates the regeneration activities with a number of other municipal documents, resulting in extensive effects. Moreover, according to the provisions of the Act, the Regeneration Committee is set up for mediation and advisory purposes and to ensure the participation of all interested stakeholders. What is important, the act emphasizes the importance of participation of local inhabitants by introducing this concept regardless the notion of consultation existing in the earlier legal framework. Municipal regeneration program which is a resolution of the municipality council, does not constitute a local law - it is therefore not a source of common law provisions, it does not bind the addresses of legal norms. It is an internal document binding its principal leader (and the project promoter) - the mayor of the municipality. Even though ESF and ERDF support is dedicated to the areas where there is the worst socioeconomic situation, it is important to remember that the municipal regeneration program – similarly to any economic program - refers to the whole area of the town over a longer period of time. The mandatory components of the Program referred to in the Act are shown at figure 2.

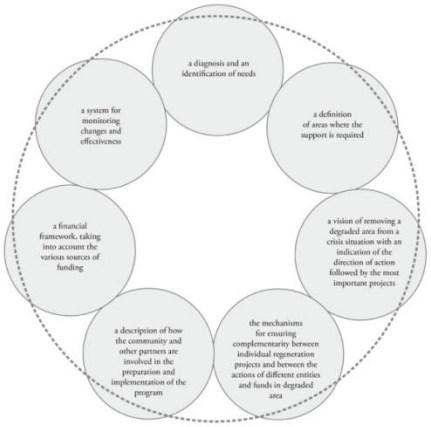

Figure 2 - Mandatory components of Municipal Regeneration Program in accordance with the Act onregeneration (2015) Source: Own study based on the Act of 9 October 2015 on regeneration (2016)

Even though the Act contains a number of general principles for conducting this process, such as a mandate for participation or a duty to rely on analysis, there are no rigid premises for the designation of regenerated areas and detailed rules for its conduct. This remains the competence of municipalities, which should shape this process adequately to their needs. Support is provided by the Marshal's Office as a leading institution of the ROP, and is based on the Ministry of Economic Development's guidelines (2016). The ministry guidelines are only a part of larger regeneration thematic module, led by the mentioned above National Regeneration Plan 2022 (2014). The Plan is an extended interpretation of the conduct of regeneration processes as a comprehensive and integrated action. It defines regeneration programs as the operational framework and coordinating platform for regeneration activities, formulating the principles for their creation and implementation.

3.2 REGENERATION AT THE REGIONAL LEVEL

The European Union has allocated to Poland 82.5 billion EUR over the 2014–2020 period, which makes Poland the largest beneficiary of Union assistance. The new EU Funds perspective, as well as new polish law, have definitely changed the way of regenerations programs realization. Firstly, the delimitation of regenerations area is more districted. This is the field of cooperation between Municipals' and Marshals' Offices. Compared to the previous billing period, the role of an adequate, in-depth diagnosis, based on multifaceted socio-economic analysis has increased. Nowadays it is necessary to fulfill the restrictions of regeneration areas delimitation worked out by Marshals office experts.

	Mazovian Voivodship	Pomeranian Voivodship
Organizer	Mazovian Unit of Implementation EU Programs	Voivodship Regeneration Work Group (representative of Marshall's Office)
Participants	Gminas of Mazovian Voivodship.	Two groups of participants: - 9 municipals belonging to Metropolitan Area of TriCity negotiating within framework of metropolitan development strategy - 22 municipals outside the metropolitan area competing in the competition for implementation of ROP integrated projects
Objective	Helping Gminas to initiate processes leading to the regeneration of degraded areas thanks to preparing programs of the regeneration processes.	Negotiate a best solution for sustainable development of the region with respecting local conditions and needs.
Funding	Contest for Gminas for co-financing the process of preparing or actualization of the programs on regeneration.	Funding for Municipatory Regeneration Program comes from PO POWER; the integrated regeneration projects are funded by ROP's funds: part of it determinated by ITI Strategy of Metropolitan Area of TriCity, rest have a contest for co-financing.

Table 1 - Compering approaches in the Mazovian and Pomeranian Voivodship. *Source: Own study.*

4 MAZ3OVIAN VOIVEDOSHIP

Regional Operational Program for Mazovian Voivodship 2014-20 (ROP MV) is based on The Guidelines for The Regeneration Process in Operational Programs 2014-20 (Polish Ministry of Economic Development, 2016). ROP MV provides funds for complex regeneration process of crisis areas.

Funding is possible only if regeneration project of particular Gmina is listed in the List of Mazovian Voivodeship regeneration program, There are two ways to register the program on the list. One is to take part in Contest for Gminas for supporting the process of preparing the regeneration programs. The other is to take part in the recruitment. Gminas which apply to fund their projects have to fulfill such requirements as: following the rules from the Regeneration Program, being at the List of Marshall;'s Office mentioned before, meet basic criteria of particular elements and features (complexity, concentration, complementarity – of space and problems, procedures, finances etc.).

In the Instruction for preparing regeneration programs for ROP prepared by Mazovian Marshall's Office there is underline the importance of social participation and structural changes in crisis area in those programs. In the regeneration program there should be the description of participation of diverse groups of stakeholders in the way enabling to check the level of the participation. Moreover, the stakeholders' contribution is defined as the foundation of each part of the process. Despite the obligation of incorporation of various stakeholders, there are any imposed tools of participation, what gives Gminas opportunity to individual choice (Instruction…, 2016).

5 POMERANIAN VOIVODSHIP

In the Pomeranian Voivodship the regeneration is determined by the assumption of two strategic documents

- the POMERANIAN 2020 Strategy and the Regional Strategic Program ACTIVE POMERANIANS 2020, whose provisions are the main basis of the Pomeranian ROP for the years 2014-2020. ROP Pomeranian includes thematic objectives such as inclusion in the labor market (ESF funds), social services (European Social Funds), and support for physical, economic and social regeneration of the poor – comprehensive regenerative actions (European Regions Development Funds). Funding for the integrated regeneration projects is implemented in the Pomeranian Voivodship in two ways:

- the towns within the Metropolitan Area of the TriCity are supported by the mechanism of the Integrated Territorial Investments,
- the towns outside Metropolitan Area can be supported within competition. Different funding conditions results with different conditions for implementing the regeneration processes(figure 3).

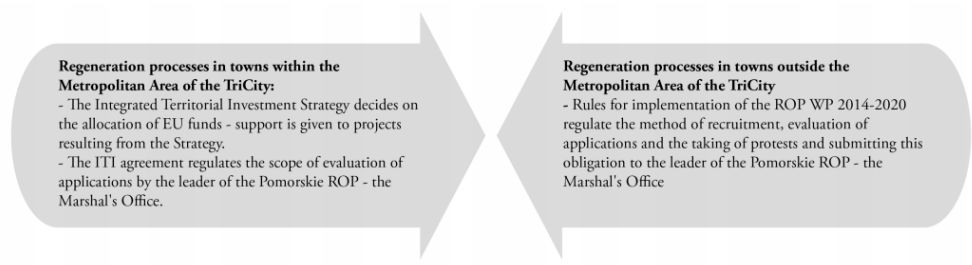

Figure 3 - The differences in conducting revitalization processes in Pomeranian towns
Source: Own study based on Wieczerzak (2017).

Regeneration, which is based on the funds of the new financial perspective in the Pomeranian Voivodship, started with a series of trainings for urban self-governments. The result of the meetings was the declaration of accession signed by the local self-governments. Both the rules of who and how should be involved in the Regeneration Working Group were discussed during the meetings. The team assess the merits of the submitted applications by Gmina's, both in terms of giving feedback on the projects of regeneration programs as well as the delimitation of regeneration areas themselves. The working group consists of 12 people from different departments of the Marshal's Office of the Pomeranian Voivodship

(regional programs, regional and spatial development, European funds, education and sport, Pomeranian Office for Regional Planning and Regional Center for Social Policy). Such a group of experts guarantees comprehensive care of the process, with particular emphasis on competences in social services, socio-occupational activation, NGO' specificity, spatial planning and community management.

In the meantime, the legal framework for regeneration processes has been changed (2015 – National Regeneration Plan, Act of Regeneration) as well as the ministry guidelines have been updated. Under whichthe Ministry of Development has shown willingness to co-organize the competition for the preparation of regeneration programs. The self-government of the Pomeranian Voivodship, in cooperation with the Ministry of Development, has used the support from the POWER program to equip local governments with funds and tools to develop their own principles for the implementation of comprehensive regeneration activities within the Municipal Regeneration Program.

After signing the agreement between the Ministry and the government of the Pomeranian voivodship, the task of formal and substantive evaluation of programs was officially entrusted to working team for the voivodship the Regeneration Working Group. It was the group that had consulted and approved the municipal regeneration programs of Pomeranian towns and cities. It also decides on the range of Integrated Regeneration Projects. This process follows the successful model of negotiation developed during the initiation of ITI and Integrated Territorial Agreements (ITA – ITI based model of negotiations between regional and local government. Described in details in 5.3.). At present (May, 2017) the competition forIntegrated Regeneration Projects has started. 31 cities of the Pomeranian Voivodship joined the contest: 9 out of 13 cities metropolitan area and 22 out of 27 cities outside the metropolitan area. In this financial perspective, as in the financial perspective of ROP 2007-2013, the biggest beneficiary will be the capital of the Pomeranian Voivodship - Gdansk. In all of the Pomeranian Voivodship the total area designated for regeneration is 2,485 ha (0.1% of the total area of the voivodship). All in all, over 143,000 people live here (6% of the voivodship's population) (Marshal's Office of the Pomeranian Voivodship, 2016).

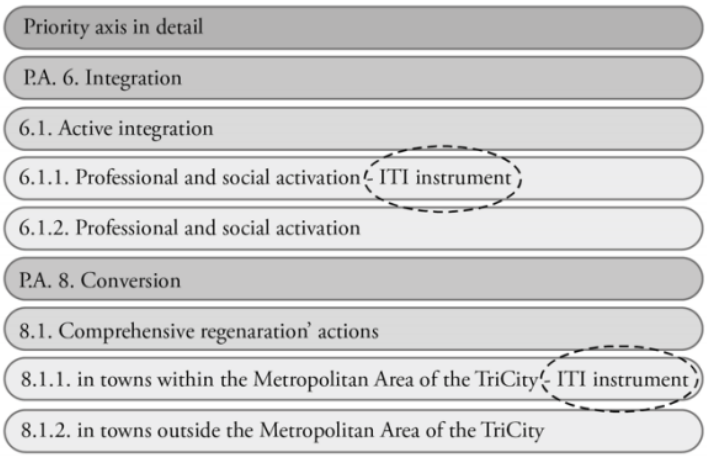

Figure 4 - Priority axes within ROP 2014-2020 dedicated for comprehensive regeneration of degraded areas
Source: Own study based on ROP 2014-2020

5.1 NEGOTATIONS BETWEEN LOCAL AND REGIONAL GOVERNMENT

The process of negotiating both public and EU funds for regeneration processes is derived from the practices of ITI - refer to the Metropolitan Area of the TriCity, and ITA - for the remaining eight Functional Urban Areas. The negotiations within the framework of ITI and ITA was primarily to provide preferential access to EU funds under the ROP 2014-2020 for investments in favor of development of the region, at the same time corresponding with the local needs. In this way financing from the ROP is accomplished by prioritizing projects that are diagnosed within the framework of agreements of local government units affiliated by the ITI and the ITA, and then negotiated with the managing authority of ROP WP 2014-2020 (the Pomeranian Voivodship Board).

The first stage of cooperation with local governments was the consultation on the delimitation of regeneration areas aimed at identifying the part of the city which is in the relatively worst socio-economic situation. This is based on an analysis of the internal potential, depicting the differentiation and general condition of the city, in line with the Guidelines for the programming of regeneration projects under the ROP WP for 2014-2020. The methodology of in-depth socio-economic analysis indicated by the experts of the team assumes the use of various sources of spatial information as well as analyzes of the contents of literature and others. The indicators chosen for the analysis focused on two groups: the mandatory indicators, referred to the average values in the region and optional, referred to the average values in the analyzed town in the indicated subsystems, with the latter are chosen during the consultation. The reports resulting from the delimitation of regeneration areas were the starting point for further work on municipal regeneration programs and for reconciling the scope of the integrated regeneration project.

As a director of the Regional Program Department of the Marshal Office of the Pomeranian Voivodship, Jan Szymański, said “The admission of the formula for an integrated regeneration project within the framework of the Regional Operational Program for the Pomeranian Voivodship 2014-2020 aims to ensure the coherence, efficiency and sustainability of the regeneration programs for degraded areas” (Attractive cities for active residents. Preparation of regeneration programs for integrated operations in the Pomeranian Voivodship (2016) Gdansk: Marshal's Office of the Pomeranian Voivodship, 2016)

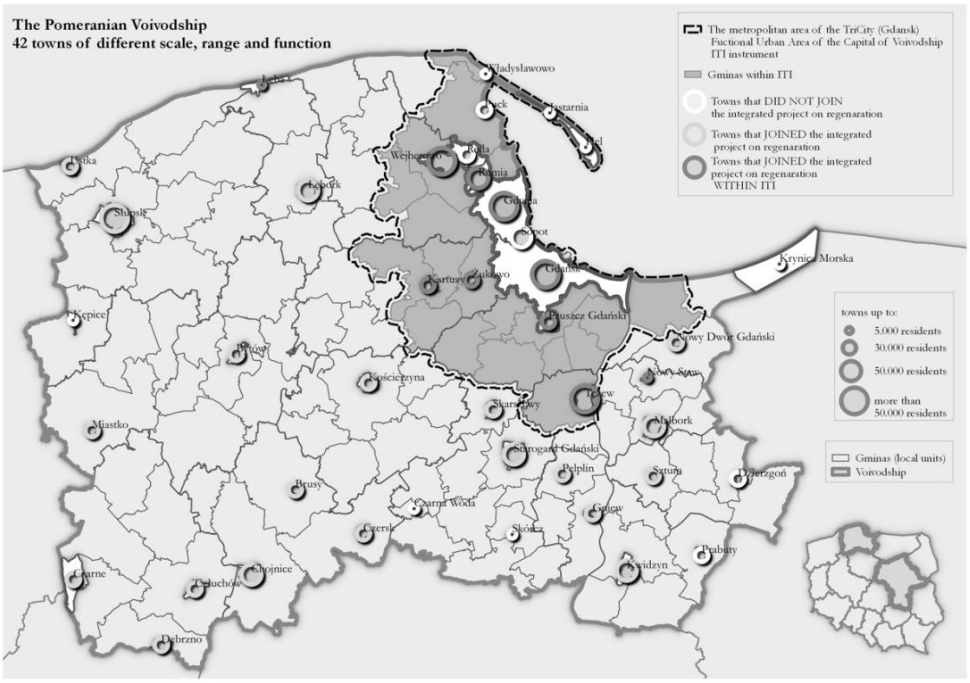

Figure 5 - An integrated project on regeneration within ROP WP 2014-2020
Source: Own study based on ROP WP 2014-2020.

5.2 THE CASE STUDY OF THE CITY OF GDANSK

Gdansk is a city in the north of Poland, one of the main academic centers and the most important port city in Poland. It currently lives in about 430 thousand inhabitants. The city is particularly important for the identity of the Poles, due to the over-thousand-year tradition of the city -port, the Free City of Gdansk, and, above all, the birthplace of the Solidarity movement, which in the 1980s liberated Poles from Communism. Urban tissue, drastically destroyed after the Second World War and then hastily rebuilt and consolidated by modernist prefabricated blocks of flats, has suffered a severe degradation in the face of unfavorable social and economic trends. Degradation progresses both in terms of technical consumption and aging of functional infrastructure and residential development as well as erosion of social relations and the emergence of numerous economic problems. Regeneration in the full sense has been taken related to the Local Regeneration Program in the years 2009-2015.

5.2.1 LOCAL PROGRAM ON REGENERATION IN GDANSK (AN OLD APPROACH)

The municipality of Gdansk in the years 2009-2015 carried out 4 revitalization projects in the following districts: Dolne Miasto, Dolny Wrzeszcz, Nowy Port and Letnica. All projects were co-financed by the ERDF under the Pomeranian ROP 2007-2013 axis 3 Urban and metropolitan functions. City of Gdansk completed projects for approximately 104 million PLN (around 24 million EUR) with ERDF co-financing of 56% of the value of the projects.

5.2.2 MUNICIPAL REGENERATION PROGRAM OF GDAŃSK (A NEW APPROACH)

In the financial perspective for the years 2014-2020, the aim is to implement projects that will respond to the challenges of socio-economic activation of inhabitants of regeneration areas.

The area of regeneration	Approximate number of inhabitants of the area in 2016	Approximate area in hectares
Bishop Hill-Old Chelm	2 484	126
Down Town-Rampart Square	6 129	69
New Port-Letnica-Wisloujście Fortress	10 111	178
Orunia	6 933	102

Table 2 - Basic characteristic of the regeneration areas in Gdansk
Source: Own study based on: Municipal Regeneration Program of Gdansk

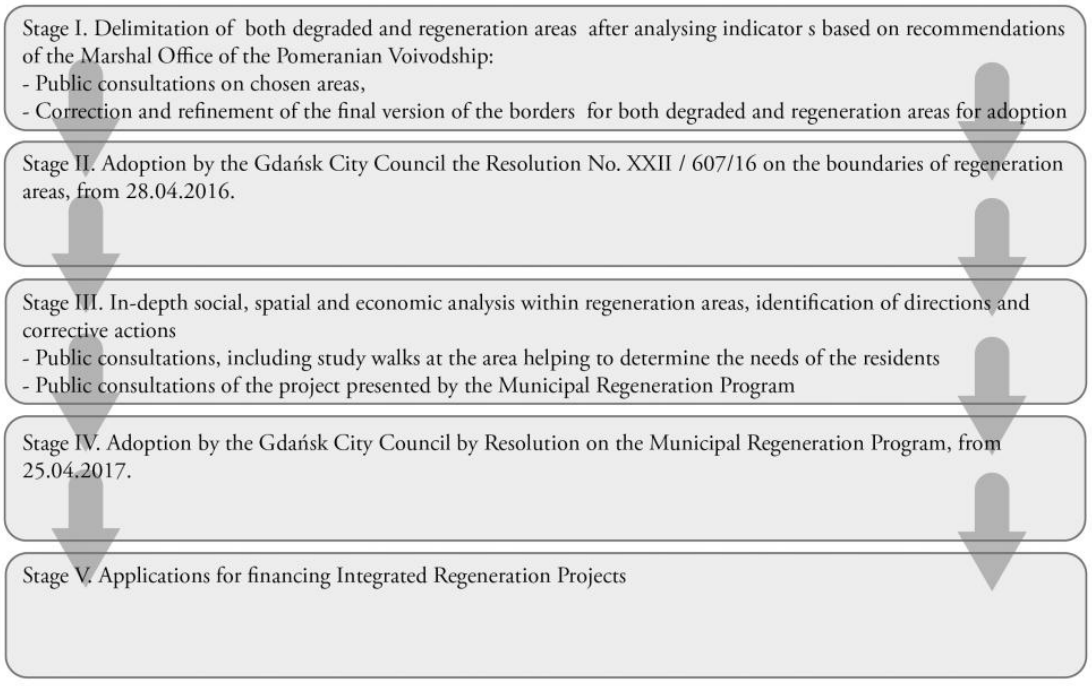

Figure 6 - The chronology of the process of regeneration of the new financial perspective in the city of Gdansk Source: Own study based on Municipal Regeneration Program of Gdansk.

Before joining the negotiations on Integrated Regeneration Projects, the municipality of Gdansk consulted with voivodeship regeneration working group about selecting and delimiting of the regeneration areas. Based on the indicators developed in the consultation, an in-depth socio-economic analysis of urban space was undertaken to identify 12 areas requiring intervention. As a result of further analysis, 4 regeneration areas were selected from the above: Biskupia Górka with Stary Chelm, Orunia, and once again as a continuation, Nowy Port with Wisłoujście Fortress and Dolne Miasto with Wałowy Square. Selected areas represent a small percentage of both the area and the number of inhabitants of the city

(table 2). Every effort has been made to ensure that the revitalization program is integrated, multi-faceted, including a crisis area identified on the basis of the diagnosis.

5.3 LOCAL PROGRAM ON REGENERATION IN BYTOW (OUTSIDE THE METROPOLITAN AREA OF TRICITY AND THE ITI INSTRUMENT)

The authorities of the town of Bytów (located in the central part of the Pomeranian Voivodship) chose an „old approach" which was practiced before the act on regeneration has been adopted and is still accepted within polish framework. The new Local Regeneration Program will be a required instrument for applying for funds within ROP 2014-2020. It is worth noting that the process of working on the document took place in parallel with negotiations between Pomeranian towns and the voivodship regeneration working group (explained above). This an important element of integrating both regional and local policy concerning regeneration processes.

At the beginning of the work on the document mentioned above, there was a series of workshops and information meetings organized where, a result, the delimitation of the degraded areas of the town of Bytów was established. This was a summary of the important first stage of the planning of regeneration process because shortly thereafter, the Management Board of the Pomeranian voivodship with the Resolution No. 1325/101/15 approved the list of recommended areas to support them with the integrated regeneration projects within ROP 2014-2020.

An important stage within the work on the Local Regeneration Program was a survey conducted among residents. The main aim of the study was to get acquainted with the opinion on the attractiveness of the area of "Miła Street" (delimitated degraded area), the problems noticed there, its strengths and weaknesses, and possible directions of development. The survey form was available on the website of the town and in paper version available at the the Municipal Office in Bytów. In addition, the questionnaires were distributed to students and teachers of local schools, housing managers, members of the consultative team, NGOs, entrepreneurs working in the delimitated area, councilors, representatives of Bytów municipality councils and residents. As part of the questions, the respondents indicated the most attractive investments which should be implemented in the first place.

The detailed range of the regeneration process has been worked out within the meetings addressed to the group mentioned above and related with the area of "Miła" (ie. streets: Gdańska, Słoneczna, Miła, Działkowa, Pogodna, Wery, Sikorskiego, Górna, Pochyła, 1 Maja, Staszica, Mierosławskiego i Sychty) conducted by an external company.

Completion of the preparation of the document coincided with the Pomeranian Voivodship Board' Resolution No. 1374/201/16 reconciling the range of integrated regeneration projects that were negotiated by the Regeneration Team of the Marshal's Office of the Pomeranian Voivodship with the Towns entitled to support within ROP 2014 - 2020 located outside the Metropolitan Area of the Tri-City.

The document is finished and its partial financing was negotiated. Now it the time to observe the process of implementation of agreed projects and applying for funds from other sources, which will enable to complete planned regeneration process.

6. LESSON LEARNT

The role of regeneration processes in the regional policy implemented in Poland after 2020 is bound to increase. At the same time, in a new financial perspective, one can expect a significant reduction in the scale of the EU intervention or at least a change of its structure, as different priorities and areas will be supported when the category of some Polish regions, probably including Pomerania, will change from Less-Developed to Transition regions. There is a need to create more independent systems of the EU funding schemes and could carry out the regeneration processes supported in institutional, organizational and financial manner. In order to achieve this goal, the greater involvement of national funding sources – managed by central, regional and local authorities, is required. There is also a need for a new type of development projects – multithreaded, based on partnership and creating a competitive advantage, which

also needs to be based on the improved thematic and spatial concentration of intervention. The 2014-2020 perspective shows new, better approach to the regeneration projects - not only the renovation of public space will be taken into consideration, but also activities increasing social development. Instructions and guidelines prepared by the government for Gminas encourage to incorporate various stakeholders into the regeneration process and do not show the preferable tools of participation what gives Gminas the opportunity for individual choice. A question may be asked: is the participatory approach useful in the improvement of inter-communal cooperation? They surely show an innovative approach to the bottom-up development programming at supra-local level. When the projects within regeneration programs are negotiated, the shape and range of various investments, crucial for the development of the territories in question, is decided. When all parties involved sit down together, they are able to reach a compromise allowing for the implementation of the most important projects for improving the life quality on polish cities and towns.

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ID 1722 | MIND THE GAP: TERRITORIAL GOVERNANCE AND SPATIAL PLANNING SYSTEMS IN THE WESTERN BALKAN REGION

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ABSTRACT: Starting from the 1990s, an increasing number of studies and reports focussed on the heterogeneous landscape for territorial governance and spatial planning in Europe. The geographical coverage of these comparative analyses broadened over time, paralleling the progression of the EU integration process. However, until now the Western Balkan countries have been ignored by the majority of the studies, mostly due to their fragmentation and geopolitical instability. As the pre-accession negotiation proceeds, such analytical gap should be overcome through the collection of evidence that may support the EU in developing a more sound and effective cohesion policy. This paper makes a first step in sketching out and comparing the evolution of the territorial governance and spatial planning in the Western Balkan Region since the late 1980s. More specifically, it first presents a general overview of the geographical and socio-economic situation, to then explore the evolution of the administrative and legal frameworks for spatial planning as well as of the tools that characterise each national context. Highlighting similarities and differences between the countries at stake, our work exposes the complexity of the subject and sets the stage for further research on the matter.

KEYWORDS: Spatial planning system, Territorial governance, Western Balkan Region, European integration, Transition.

1 INTRODUCTION

Modern spatial planning systems rose as a consequence of the Industrial Revolution, when increasing urbanisation rates, and the movement of population away from agriculture towards the industrial and services sectors created substantial development pressures across countries. In response, most government established procedures to channel these pressures and resolve conflicts between competing

land uses. Over time legislations was introduced in each country to establish the principle that public authorities are empowered to monitor and control territorial development and prepare plans, identifying what types of development would be permitted and where. In this light, territorial governance and spatial planning system may be defined as the system of institutions allowing and determining the spatial organization of social and economic life within a particular national context, through multiple processes of vertical (between policy levels) and horizontal (between policy sectors and between public and private subjects) coordination (Janin Rivolin, 2012).

The evolution and consolidation of territorial governance and spatial planning systems occurred at different times in different European countries from the late nineteenth century onwards, depending on political attitudes towards the acceptability of public powers over land regulation and development (which may be regarded as infringing on individual rights to exploit private property) and varying perceptions of the value of planning in different contexts. Hence, the specific histories and geographies of particular places, and the way these interlocked with national institutional structures, cultures and economic opportunities contributed to generate a highly heterogeneous set of territorial governance and spatial planning systems in Europe.

The fascination of taking an international view of planning lies exactly in the great diversity to be found within spatial planning systems and approaches that have evolved in the countries, as demonstrated by the proliferation of comparative research on territorial governance and spatial planning systems in the European Union (EU), since the late 1980s (Davies et al. 1989, Newman & Thornley, 1996; CEC, 1997; Nedović-Budić, 2001; ESPON, 2006; COMMIN, 2007; Reimer et al., 2014; ESPON & TU Delft, 2017). Over time, these analyses have broadened their geographic scope to include the new countries joining the enlarging EU (Table 1). However, despite their central geographical position and the advancement of pre-accession negotiations for most of them, the countries of the Western Balkan Region (WBR) have been left out from almost all comparative attempts, mostly due to their geopolitical instability as well as to the fragmentation that characterizes this area. With many of these countries soon to become full EU member states, their exclusion creates a gap in the empirical analysis and theoretical understanding of spatial planning in Europe. This gap must be overcome, if the EU aims to promote an economic, social and territorial cohesion policy to the benefit of all its citizens (ESPON, 2015).

This paper reflects on the evidence collected by the authors in more than a decade of comparative spatial planning research in Europe and, in particular, on the polymorphic territorial governance and spatial planning environment that characterizes the WBR (Figure 1). In doing so, it sketches out and compares the evolution of the territorial governance and spatial planning systems of six countries in WBR from the fall of the communist regimes until the present day. Such evolution is understood as a consequence of various driving forces: on the one hand, the transition of the countries under scrutiny from centrally planned to market oriented economic models and their progressive embedding within the broader globalization and EU integration processes (Cotella & Janin Rivolin, 2010, 2015; Stead & Cotella, 2011); on the other hand, the complex path-dependency deriving from the specific national historical, geographical and socio-economic contexts which determine the actual direction of transformation as a reaction to external and internal stimuli (one hand, the transition of the countries under scrutiny from centrally planned to market oriented economic models and their progressive embedding within the broader globalization and EU integration processes (Cotella & Janin Rivolin, 2010, 2015; Stead & Cotella, 2011); on the other hand, the complex path-dependency deriving from the specific national historical, geographical and socio-economic contexts which determine the actual direction of transformation as a reaction to external and internal stimuli (one hand, the transition of the countries under scrutiny from centrally planned to market oriented economic models and their progressive embedding within the broader globalization and EU integration processes (Cotella & Janin Rivolin, 2010, 2015; Stead & Cotella, 2011); on the other hand, the complex path-dependency deriving from the specific national historical, geographical and socio-economic contexts which determine the actual direction of transformation as a reaction to external and internal stimuli (Table 2; Figure 2,3).

Study	Geographical coverage
Davies et al, 1989	DE, DK, FR, NL, UK (England)
Newman & Thornley, 1996	AT, BE, DE, DK, FR, IE, IT, LUX, N, NL, PT, SE, UK, Eastern Europe
CEC, 1997	AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LUX, NL, PT, SE, UK
Nedović-Budić, 2001	CZ, HU, SL
ESPON, 2006	AT, BG, BE, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IT, LT, LUX, LV, MT, NL, PL, PT, RO, SE, SK, SL, UK
COMMIN, 2007	BY, DE, DK, EE, FI, LT, LV, NO, PL, RU, SE
Reimer et al., 2014	BE (Flanders), CZ, DE, DK, FI, FR, GR, IT, NL, PL, TR, UK,
ESPON & TU Delft, 2017	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FL, FR, GR, HR, HU, ICE, IE, IT, LT, LUX, LV, MT, N, NL, PL, PT, RO, SE, SK, SL, UK

Source: Authors' Elaboration

Table 1 - The geographical coverage of comparative analyses of spatial planning systems in Europe. Source: Authors' Elaboration

Figure 1 - Western Balkan Countries included in the analyses

After defining what the study considers as territorial governance and spatial planning systems, and deriving from the latter the main variables for the comparative analysis, the paper provides an overview of the development of spatial planning in the WBR during the socialist period and introduces the main drivers that have shaped the current development and consolidation of the territorial governance and spatial planning systems in the six countries under study. Section four constitutes the core of the work, and explores and compares the countries on several variables: (i) the administrative and legal framework for spatial planning; (ii) the main planning authorities involved; (iii) the spatial planning instruments produced at each territorial level; (iv) the main spatial planning issues and (v) the future challenges.

Overall, the paper produces an initial comparative overview of the territorial governance and spatial planning systems of the Western Balkan countries, that highlights the heterogeneity and the fluidity of this complex landscape. In so doing, it allows a formulation of a preliminary conclusions and considerations for further more extensive analysis.

DATA	AL	BIH[6]	KO	FYROM	MNE	SRB
Territorial Surface (km^2)	28 748	51 210	10887	25 713	13 812	88 361
Population (2015)	2 88 9167	3 810 416	1 801 800	2 078 453	622 159	7 095 383
Population Change 1990-2015 (%)	- 12,0	- 15,8	- 3,2	0,4	2,6	- 6,5
Urban Population (%) 2015	57	39.7	49	57	64	55
Total GDP (Billion US$) 2015	13,2	18,3	6,8	10,1	4,5	40,2
GDP per Capita (USD) 2015	4543	4801	3785	5093	7268	5663
GDP growth 2014 - 2015 (%)	2,8	3	3,9	3,6	3,1	0,7

Table 2 - Geographical and Economic Information
Source: World Bank Data[1]

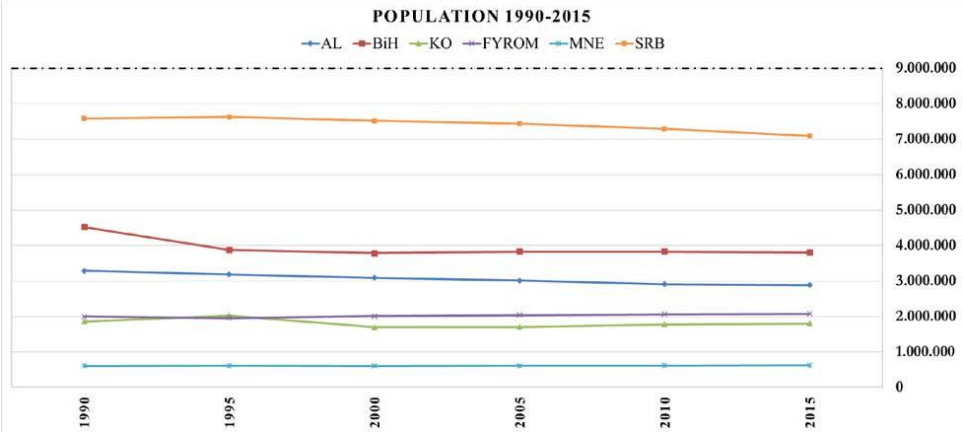
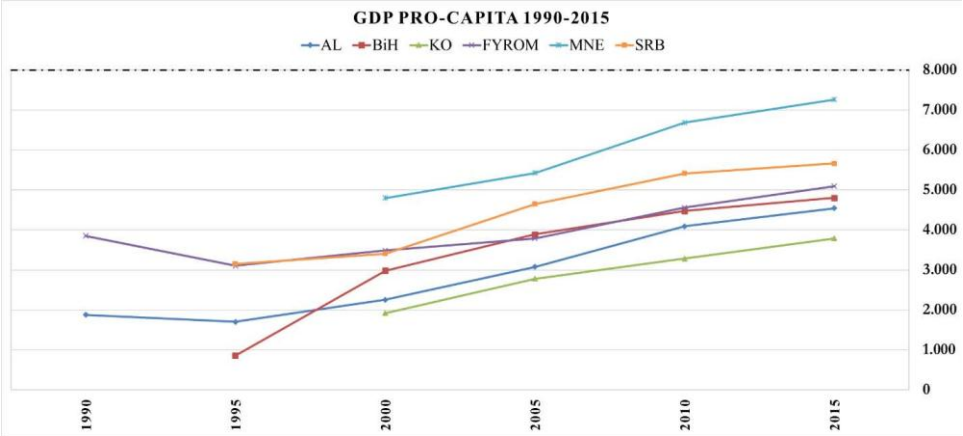


Figure 2 - Population trend in the Western Balkan Region



2 SPATIAL PLANNING IN THE WESTERN BALKAN REGION: TRADITIONAL ARRANGEMENTS AND MAIN DRIVERS OF CHANGE

Spatial planning after WWII in the countries of WBR was often referred to as a subordinate to centralized economic planning, which represented a key function of a communist state. Albania was characterized by a strong top-down communist model with centrally-controlled spatial planning, where local urban authorities had responsibility for development coordination but lacked decision-making power. On the other hand, Yugoslavia detached itself from the Soviet centralised planning model during the 1950s and developed 'a participatory system of integral (i.e. comprehensive or integrated) planning' (Nedović-Budić et

al., 2011:430) that had a partially decentralized system within each of the individual republics (Hirt & Stanilov, 2009). The regime that operated in the former Yugoslavia was a form of 'market-socialism' operating through 'societal self-management' and decentralized decision-making processes, with the municipality being the basic local government unit holding considerable executive power (Nedović-Budić et al., 2011). Still, until the late 1960s, some of the main issues of planning practice in Yugoslavia were seen as bureaucracy, political compliancy of planning organizations, technocracy of their employees and the lack of wide and transparent public participation (Petovar, 2012). Internally, the main driver of socialist development in this early post-WWII period, was described as the 'renewal strategy', with the mission to restore the function of the urban tissue destroyed in the war and to provide housing for new workers and their families who migrated from rural to urban areas under the state-sponsored industrialization.

The Albanian State continued to play a dominant role in planning and plan approval throughout the 1970s (Eskinasi, 1995), when the 1976 Constitution banned private property completely (including private plots in rural areas) and reduced public engagement to a symbolic role (Mele, 2011). By this time in former Yugoslavia urban land was in societal (public) ownership, while most of land in rural areas was privately owned. However, both Albania and former Yugoslavia witnessed processes of land nationalization under the communist government (Turnock, 1989). In both contexts, land ownership allowed the State to act as the main pillar of the urbanization process, 'central investor' and initiator of urban development (Petovar, 2012).

In post-WWII former Yugoslavia planning professionals were educated mainly in the field of engineering and architecture and operated in a technocratic mode that excluded any economic justification of planning proposals. Nevertheless, the profession evolved rapidly with the successful introduction of spatial planning degrees and an integrated approach to planning from late 1970s (Cavrić, 2002). This coincided with the establishment of planning as an interdisciplinary field on its own (i.e., separate from architecture, economics or engineering) in both the realms of education and practice. In parallel to the innovation in planning practice, the later era of the 1970s and 1980s saw the institutionalization of extensive public participation that became a legally mandated element of the planning process (Law on Planning and Construction, 1961; 1974). The decentralized system that promoted 'cross acceptance' in the decision-making process was practiced in Yugoslavia for more than a decade ahead of some of the traditional market-economy societies (Cullingworth, 1997), with most scholars referring to this period as a 'golden age' of planning and development (Vujošević & Petovar, 2006). Similar, although less radical transformations of the planning system were by mid 1980s evident in Albania as well (Nientied, 1998).

At the beginning of the 1990s, systematic regime changes, political pluralization and socio-economic reforms were initiated in the WBR, as a consequence of the collapse of the Soviet Union and the subsequent dismantling of communist institutions in all satellite countries (Mojović et al., 2009). Post-communist Europe saw a multi-dimensional process of transition to democracy, market and decentralized governance, as it became increasingly influenced by globalization and Europeanization processes (Tsenkova & Nedović-Budić, 2006; Faludi, 2014; Cotella & Berisha, 2016a, 2016b). The introduction of market economic principles occurred through a series of macroeconomic reforms that entailed rapid privatization and the almost complete withdrawal of State aid, in turn leading to the shutting down of numerous production plants, growing unemployment and increasing social costs (Brada, 1993). The already existing heterogeneity of WBR countries was reinforced by these processes and the new economic systems that worsened the situation of the weakest countries and widened the regional disparities. At the same time, the disintegration of former Yugoslavia during the 1990s and the Albanian civil war in 1997 (as a consequence of the financial crises, the so-called pyramid schemes) emerged as major destructive and disruptive forces with regard to the ongoing transition.

As it will be argued in the following section, the transformation of territorial governance and spatial planning in each context depended on the system's capability to follow and adapt to each of those transition processes. The influence of each countries' distinctive pre-socialist, socialist and post-socialist past affected its capability to transform through a concurrence of path-dependent logics that contributed to a variety of outcomes in terms of both territorial governance and spatial planning (Tosics, 2004; Tsenkova & Nedović-Budić, 2006; Cavrić & Nedović-Budić, 2007; Szelenyi, 1996; Enyedi, 1998; Petrović, 2005).

3 TERRITORIAL GOVERNANCE AND SPATIAL PLANNING AFTER 1989

The initial period of the post-socialist transition of 1990s in most countries of the WBR was characterized by a fluid, unregulated institutional framework. According to Hirt and Stanilov (2009), this 'institutional vacuum' was dominated by private economic interests close to the political establishment. Various authors claim that the transition was mostly characterized by extreme 'battles for capital' manifested in the form of accumulation and grab for resources and 'investors' urbanism', with urban land being a major target in this process (Vujošević, 2003). Within the complex framework of political and economic transition, the privatization of land and housing in Albania and almost all public housing stock in the former Yugoslavia took place (Hirt & Stanilov, 2009). At the same time, encroachment on public space and illegal construction rose to a major scale. In Yugoslavia this phenomenon worsened due the social consequences of the wars and in particular the increasing demand for housing by refugees and internally displaced persons (Žegarac, 1999), with spatial planning abandoning the mentioned 'golden age' and losing 'the ground beneath its feet' (Vujošević & Petovar 2006). At the same time, Albania remained stuck with socialist perplexed procedure of obtaining building permits and intensified rural-urban migration, that overwhelmed the capital city of Tirana with 25 per cent of informal housing developed during the 1990s (Deda & Tsenkova, 2006).

The turn of the millennium brought forward a renewed enthusiasm for the transition to democracy, economic liberalization, marketization and political decentralization, also as a consequence of the normalization of the geopolitical tensions that had characterised the previous decade. Most of the countries reformed and/or amended their legislative frameworks for spatial planning multiple times (Figure 4), as a consequence of growing influence of globalization and EU integration, and in the attempt to accelerate the procedures of obtaining construction permits, to adapt to the administrative and institutional re-organization, to legalize informal development, and to include public participation.

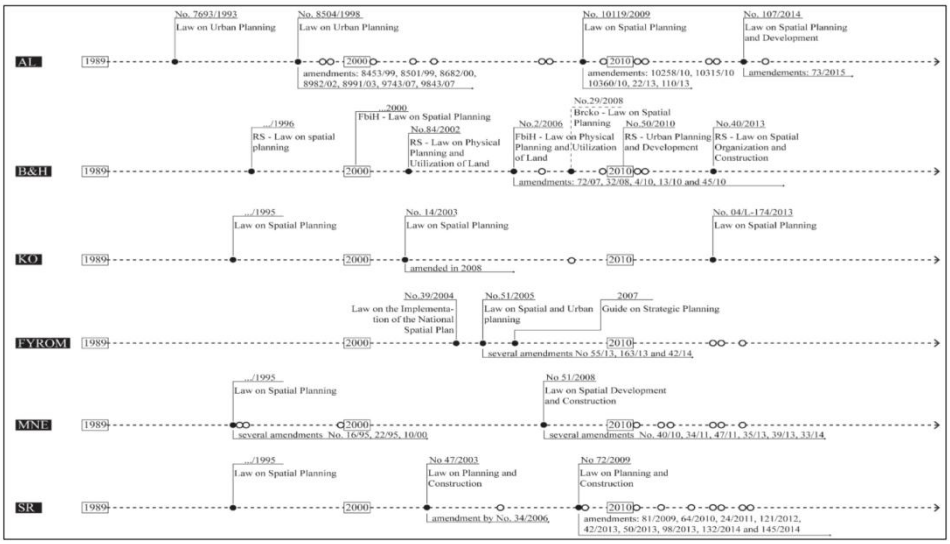


Figure 4 – The main Spatial Planning reforms since 1990 until 2016.

Within these evolving circumstances, planning professionals are required to possess new types of knowledge and skills with respect to market forces, while aiming to recognize and balance a variety of interests of new stakeholders within the decision-making process (Vujošević & Nedović-Budić, 2006). Post-socialist transformation of Western Balkan region countries also means that spatial planning practice should be able to recognize and meet the specific needs of the local context in which it is carried out. Thus, it should be able to confirm the prevailing political culture and adapt to the institutional framework, acknowledge the resources and constraints of local development, and, deal with the variety of interests, as well as traditions, at both national and local level (Friedmann, 2004). This means that the countries are to direct their spatial planning systems in line with a variety of internal and external factors. In order to understand current tendencies and possible future trends related to spatial planning, the following subsections presents and compares the key characteristics of current spatial planning systems in the countries under study.

3.1 ADMINISTRATIVE SUBDIVISION AND MAIN SPATIAL PLANNING AUTHORITIES AT EACH TERRITORIAL LEVEL

The current administrative organization of the countries included in this research is the result of a major process of restructuring that started in the early 1990s. The process of a post-socialist (de)centralization contributed to a different configurations of administrative hierarch in each country (Table 3). Indeed, in most of them, the administrative restructuring process was driven by new internal process (above all political, geographical, functional, economic and historical and contingent factors), with the exception of BiH and KO where a prominent role, in state restructuring, was played by the international community.

In this regard, the Albanian system represents an outcome of the recent administrative and territorial reform implemented from 2014 . The reform is based on the law which reduced the number of local administrative units from 373 to 61 with the aim to improve coordination at the local level and to reduce the existing territorial differences (primarily the economic and demographic regional disparities). In line with this perspective, the government is engaged on reforming the number and role of Qarku (districts), reducing the present 12 Qarku (districts) to only three or four administrative regions. In the case of BIH, the existing administrative subdivision is the result of the Dayton Peace Agreement signed in 1995. The agreement structured the BiH system in four levels: the central government, two independent Entities - the Federation of Bosnia and Herzegovina (FBiH) and Republic of Srpska (RS). While the Brčko District has been introduced few years later in 1999 , the cantonal level that further subdivide FBiH in cantons and the local level represented by the municipality and large cities such are Sarajevo and Banja Luka. The territorial administration system of KO includes only two levels of government, the national and the local, both instituted for the first time in the 2000 by the UNMIK mission and later ratified by the Republic's Parliament in 2008. This subdivision aimed at reducing the internal ethnic conflicts recognizing that 27 municipalities have Albanian majority, 10 Serb and 1 Turkish (Mamusha). Similarly, also the FYROM and MNE administrative systems are characterised by two levels: the central and the local. However, FYORM also introduced 8 statistical regions that include the all rural and urban municipalities, while the Special Law on the Territorial organization of MNE organized the territory in municipalities and the capital. Finally, the territory of SRB includes one autonomous province Vojvodina, cities, municipalities and the capital city of Belgrade as special territorial unit .

	AL	BIH	KO	FYROM	MNE	SRB
Central	Albanian Government	Government of Bosnia Herzegovina	Government of KO	Government of Macedonia	Government of MNE	Government of SRB
Meso Level 1	12 Qarku/District	Entities (FBiH and RS) District of Brčko	-	-	-	Authonomous Province Vojvodina + 3 other NUTS-2 regions
Meso Level 2	-	FBiH – 10 Cantons	-	-	-	-
Local	61 Municipalities including the city of Tirana	FBiH - 79 Municipalities, including the city of Sarajevo RS – 62 Municipalities including the city of Banja Luka	38 Municipalities including the city of Prishtina	80 Municipalities including the City of Skopje	21 Municipalities including the city of Podgorica	150 Municipalities, 23 cities and the city of Belgrade

Source: Authors' Elaboration

Table 3 - Administrative Subdivision of the countries of the Western Balkan Region.

As shown in the Table 3, the territorial administration system is different from one country to another. Adopting an historical perspective, the process of decentralization contributed at introducing new administrative levels, reorganizing the existing one or open up new statistic regions, while, simultaneously, at the local level has been reduced the number of local unites given more importance to the important cities as the capitals. It is interesting to note that in many cases the process of decentralization remains on

the paper while the central level has a considerable power. Differently from the other countries, in BiH the state level institutions remain fundamentally weak while the entities are largely autonomous.

The reasons behind these differences vary, ranging from the consequence of settlement of the war consequences in the case of BiH and KO to historical and geographical reasons. Be that as it may, the unique territorial subdivision of each country had important implications on the subsequent adjustments of the legislative frameworks for spatial planning and led to the introduction of a variable bodies responsible for spatial planning and territorial development, and to a differential distribution of spatial planning competences among administrative levels (Table 4).

	AL	BIH	KO	FYROM	MNE	SRB
Central	Council of Minister National Territorial Council Ministry of Urban Development National Territorial Planning and Development Agencies Other Ministries competent	No Planning Authorities at the national level	Ministry of Environment and Spatial Planning Institute for Spatial Planning	Ministry of Environment and Spatial Planning Ministry of Transport and Communications Agency for Spatial Planning	Ministry of Sustainable Development and Tourism Republic Institute for Urban Planning	Ministry of Construction, Traffic and Infrastructure
Meso 1	Qarku Council	Entities' Ministries and Departments	-	-	-	Ministry of Construction, Traffic and Infrastructure Province Secretariat for Urbanism and Environmental Protection for Vojvodina
Meso 2	-	FBiH - Cantonal ministries in charge of physical planning	-	-	-	-
Local	Municipal Administration (Council, Mayor, Department for Urban Planning) Private local planning agencies	Municipal Administration (Council, Planning Departments) Private local planning agencies	Municipal Administration (authority responsible for spatial planning and management)	Municipal Administration Local Planning Agency, local planning enterprises public and private	Municipal Administration Local Development Agency, local planning enterprises public and private	City/Municipal Administration (Department for Urban Planning) Local Planning Agency / Institute public and private

Source: Authors' Elaboration

Table 4 - Main bodies responsible for spatial planning within each country

While in the majority of countries the national level authorities hold relevant responsibilities, in case of BiH they do not have any spatial planning competencies due to the specific political sub-division of the country. Additionally, in all countries except in BiH, the ministries are in charge of decision-making at national level in the field of urban development, environment and spatial planning. Some differences are present within MNE Ministry which focuses its responsibilities on sustainable development and tourism, and SRB Ministry which positions spatial planning under the field of construction, traffic and infrastructure. However, it

should be mentioned that the name of Serbian Ministry changed several times since 1989. Albanian spatial planning system also allows for specific competences in the hands of the Council of Minister and of the Territorial Council at national level. In addition, AL and FYROM have an Agency for Spatial Planning, While KO and MNE feature Institutes for Urban Planning which operate at the national level and is specifically responsible for the development of spatial planning tools. A similar agency existed in Serbia until it was revoked in 2014.

When it comes to the meso level, KO, FYROM and MNE have no spatial planning authorities. On the contrary, in AL the Qarku councils hold specific planning competences in relation to each district. Moreover, the case of SRB represents a particular case in relation to other countries of the WBR. Although the country has no official regional administrative subdivision except for the Autonomous Province of Vojvodina, it adopted a Nomenclature of Territorial Units for Statistics (NUTS) which are recognized as units of planning, but not as administrative units. National government and Ministry are responsible for adoption of Regional Spatial plans (based on NUTS division) and Spatial Plans of Special Purpose. Moreover, there is a Province Secretariat for Urbanism and Environmental Protection which is in charge of the territory of Autonomous Province Vojvodina.

Unlike other countries, BiH meso level represents the highest level of decision-making in the field of spatial planning. In Bosnia and Herzegovina both the FBiH and the RS features Ministries in charge of spatial planning. In particular, in the FBiH spatial planning lies within the competence of the Federal Ministry for Physical Planning, while in the RS are shared by the Government, the National Assembly and the Ministry for Spatial Planning, Civil Engineering and Ecology. In Brčko District, the main authority is the Department for Spatial Planning and Property Legal Affairs. In addition to this, each Canton of the FBiH (meso-level 2) features a Cantonal Ministry that share spatial planning responsibilities with municipal authorities and planning departments at the local level.

When it comes to the local level, local authorities are in charge of spatial planning in all countries, with SRB that further articulates different competences for municipalities and cities. In AL, KO and BIH competences are shared between the municipality council, the mayor and the department for urban/spatial planning. In FYROM, MNE and SRB, the municipal/city administration consists of local council, assembly, mayor, departments for urban planning and other public administration bodies that provide norms and standards for development. Additionally, these countries feature Local Planning Agencies and enterprises which can be public or private. What is important to notice is that in AL, KO and BIH spatial planning is under authority jurisdiction of local administration, while in FYROM, MNE and SRB besides administration there are also public and private enterprises in charge of spatial planning (mainly dealing with drafting of plans). Nevertheless, local public enterprises are not fully autonomous bodies - they closely cooperate with local administration and are often partly financed from the budget. However, the existence of these enterprises can still be observed as a sign of decentralization of planning activity, where most of the existing planning enterprises in ex-Yugoslav countries are established in 1960s.

3.2 SPATIAL PLANNING INSTRUMENTS AND ALLOCATION OF DEVELOPMENT RIGHTS

The administrative heterogeneity that characterises the WBR and the number of bodies responsible for spatial planning contribute the existence of number of instruments developed and implemented within each context, their character, and the coordination and integration within the various levels. Hence, this section will aim to present and explain the system of plans at national, regional and local level in the countries of the WBR. Moreover, it will aim to address the common trends as well as differences in the process of allocation of development rights, which is usually addressed as the main goal of each spatial planning system (Janin Rivolin, 2012).

Most of the countries included in this research (with the exception of BiH) assign spatial planning competences of the significance for the country development to the bodies at the national level, while the development of binding and more detailed spatial plans and instruments lies under the authority of the local government units, and local planning agencies in some cases. Although more strategic and less detailed in nature, spatial plans at national level in WBR are still considered as ‘zoning’ plans, if observed in relation to planning instruments in Western Europe which tend to move away from spatial and resort to strategic planning (Knapp et al, 2015). A common feature between all of the countries in this research is that they should follow a hierarchy of plans. This means that the local level plans should be in line with the

regional level plans, which should be in line with the national level plans (Table 5). Although the terminology of planning instruments varies between the countries, they show similarities when it comes to their scope and role, and it is possible to distinguish between three groups. First of all, there are national spatial plans that cover the entire territory of a country and are visionary, future-oriented and have 'strategic' elements. Their scope, content and coverage of these tools are wider than city-level urban plans, but less detailed. Second group features sectoral/spatial plans that usually focus on determined sectors/areas, for example, the National Sectoral Plans of AL. The third category includes those spatial plans which are adopted for particular projects of national and/or public interest. In AL these are called Detailed plans for areas of national importance, while in most other Western Balkan countries there exist plans of 'special purpose' (SRB, MNE) 'special zones' (KO) or 'special interest' (FYROM). Overall, it can be argued that in most of the WBR planning activity at national level aims at influencing the future strategic distribution of activities, environmental protection, planning and development of projects of national interest, indicating the regional and national priorities for economic and social development, amongst other things. National level plans are more strategic and less oriented towards defining norms and standards or land-use. Nevertheless, they still have a strong spatial and regulatory character (see for example the Zoning Map of KO introduced in 2013). Their main role is the coordination of local spatial plans, the organization of networks of settlements and infrastructures, and often also the horizontal and vertical coordination of decision-making.

	AL	BIH	KO	FYROM	MNE	SRB
National Level	General National Plan (GNP)	-	Spatial Plan of KO	Spatial Plan of the Republic of Macedonia	Spatial Plan of the Republic of MNE	Spatial Plan of the Republic of SRB
	National Sectoral Plans (NSPs)	-	Spatial Plans for Special Zones	Spatial plan of special interest for the country	Spatial Plan of Special Purpose	
	Detailed plans for areas of national importance	-	Zoning Map of KO		Detailed Spatial Plan State Location Study	Spatial Plan of the area of Special Purpose (SPSP)
Meso Level 1	Sectoral Plans at Qarku Level (SPQL)	**FBiH** - Spatial Plan of the Federation of BiH, Spatial Plan of areas with special features **RS** - Spatial Plan of Republika Srpska, Spatial plan for an area with special purpose **Brčko** - Spatial Development Strategy	-	-	-	Regional Spatial Plan
Meso Level 2	-	**FBiH** - Spatial Plan of cantons Cantonal Spatial Plan of areas with special features	-	-	-	Spatial Plan for the Territory of the Province of Vojvodina
Local Level	General Local Plan (GLP) Sectoral Local Plans (SLPs) Detailed Local Plans (DLPs)	**FBiH** - Municipal Spatial Plan, Urban Development plan, and Detailed planning documents[13] **RS** - Municipal Spatial Plan or Spatial plan of a self-government unit, Urban Development Plan, Zoning Plan, and Detailed Plans[14] **BD** - Spatial Plan of the District, Urban Development Plan and Detailed Implementation Documents[15]	Municipal Development Plan Municipal Zoning Map Detailed Regulatory Plan	General Urban Plan (GUP) Regulation plan for GUP Detailed Regulation Plan (DUP) Urban Plan for Villages Urban Plan Outside of Populated Spaces Urban-technical documentation	Spatial-Urban Development Plan (SUDP) Detailed Regulation Plan (DUP) Urban Development Project Local location study	Spatial Plan of the Unit of Local Administration General Urban Plan (GUP) General Regulation Plan (PGR) Detailed Regulation Plan (DUP) Urban Project (UP)

Source: Author's Elaboration

Table 5 - Planning Instruments for each Administrative Level
Source: Author's Elaboration

13 The law in power of the Federation foreseen two kind of Detailed Plans, the Regulation Plan and the Urban Planning Projects.
14 The law currently into force in Republika Srpska identified three kind of Detailed plans, the Regulatory Plan, Urban Planning Projects and Parcellation Plan.
15 The DIP - Detailed Implementation Plan is constituted by several planning tools at the local level such as: (i) the Zoning Plan, the Regulation Plan, the Urban Planning Projects and the Parcellation Plan.

Differently from the national level, not all of the countries of the WBR contain planning instruments at regional level (Table 5). In AL the only plans produced at the Qarku level is of sectoral nature, and aim at enhancing vertical coordination within the various sectors. On the other hand, SRB produces Regional Spatial Plans for the NUTS regions (explained in the section 4.1) at national level. These spatial plans still have more strategic and less regulatory character and serve for coordination of balanced territorial development, although SRB does not recognize regional administrative subdivision with the exception of the province of Vojvodina which has its own Spatial Plan for the Territory of the Province of Vojvodina.

The main exception to this trend is BiH, which features numerous planning documents at the meso level of the Entities FBiH and RS as well as of the FBiH cantons. Is interesting to note that in both Entities FBiH and RS, planning documents have similar characteristics; the spatial plan focuses on defining a shared long-term vision and strategy for the entire territory of respectively FBiH and RS, while the spatial plan of areas with special features/purpose establishes measures for planning implementation, hence, are considered more regulative and less strategic. On the other hand, the Brčko District produces a Spatial

Development Strategy that defines the long term goals of spatial planning (for 20 years), by establishing principles and goals of spatial planning area development, selecting priorities and instituting protection measures. When it comes to the FBiH Cantonal planning documents, these are of two kinds: the Spatial plans of Cantons of more strategic character, and the Cantonal Spatial Plans for areas with special features, that are of regulatory nature. Countries such are KO, FYROM and MNE do not have planning instruments at the meso level.

Finally, in order to direct spatial development, planning instruments at local level play a crucial rule in balancing national and regional priorities, and local interests. In this regard, each country structured its planning system in line with its spatial, economic, social, political and environmental needs and perspectives. While national and meso level plans are usually described as spatial and more strategic in their nature, local plans in most WBR countries are characterized as urban/regulatory plans which provide substantive guidance, define norms and standards for spatial development.

Most of the countries of the Western Balkan Region included in this research vary in relation to terminology of local level plans, but also in their scope and possibilities to ensure development rights on the location. This section will aim to outline some general trends – similarities and differences between these spatial planning instruments within each country context.

Countries of the WBR usually recognize two types of planning instruments at the local level. These are legally defined as spatial (BiH, MNE and SRB) and general urban plans (all WBR countries) and are developed for cities and/or municipalities. As mentioned in the beginning of this section, local plans are to be aligned with the regional and national level plans. This kind of hierarchy of planning instruments is present at the local level as well, where detailed plans are to be in line with the general and spatial plans for cities/municipalities.

Spatial plans in BiH, MNE and SRB are developed for the purpose of defining main urban and rural land-use zones, natural areas under protection, infrastructural corridors, as well as other priorities of the local development. What is common for these plans is that they are adopted at the level of local municipality and contain rather strategic, but also to some extent regulative guidelines for future development. In BiH there are Municipal Spatial Plans which represent a strategic long-term plans with the main purpose is to harmonize the strategy of the Entities level (and Cantonal, in case of FBiH) to the local strategic priorities; In MNE there is a Spatial-Urban Development Plan which defines strategic objectives of spatial and urban development of the local government unit (municipality), in line with the planned economic, social, ecological and cultural-historical development.

Besides spatial plans in these three countries, all of the countries of the WBR have some form of general/regulatory urban plans at the local level. It can be argued that these local planning instruments have less strategic and more regulatory nature. Urban planning is considered to be the key instrument of land-use planning at local level. In international terms, it is often described as ‘zoning’. General urban planning dates back to the socialist era. It has been under the authority of local communities for over 50 years, satisfying very important decentralization criterion within the sector of urban planning and construction.

These plans are usually separated in three groups based on their level of details. Firstly, there are general (AL, SRB, FYROM) or development plans (BiH, KO, MNE) which propose long-term strategic priorities of city/municipality development, land-use, intensity of development, borders of urban areas, and more. Secondly, there are city/municipality general and development plans which are more detailed than the first group. Although differently labeled (table 5), these plans are present in most of the WBR countries. In the Albanian case there are also Sectoral Local Plans which aim to enhance implementation of national and local sectoral strategies and programs. In KO, Municipal Zoning Map represents a regulatory document that determines the land-use and action measures for public and private investment for all the territory of the municipality. The lowest level of general planning instruments in WBR countries are so-called detailed plans. These plans define land-use and specific norms and standards for construction. In all of the mentioned countries these plans are obligatory for issuing of a construction permit, as further elaborated. Besides these, some planning systems include additional local planning instruments which work ‘in concert’ with the formal planning system and have similar, or even more detailed content than detailed plans. In the case of MNE these are Local Location Studies, in FYROM it is urban-technical documentation, while in SRB these are characterized as Urban Projects. These planning instruments can

serve for obtaining of the construction permit, and in some cases can even affect changes of the higher-level plan.

Allocation of the development rights, as well as the procedure for issuing building and construction permits represent some of the key points in relation to each planning system (Table 6). In all of the countries included in this research, the development rights are established by plans, both at the national and local level. In all of the countries of the Western Balkan Region, the process of allocation of development rights is operationalized in two main steps: (i) obtaining the urban/technical conditions which establish the land-use, norms and standards of development, and (ii) obtaining the construction permit, which allows for initiation of development process. Nevertheless, in order to complete the process of development and allow for its actual use, the developer needs to obtain an additional 'Use permit' in all of the countries mentioned in this research.

There is a general trend of accelerating the planning process in order to enhance issuance of development rights in WBR countries. For example, in SRB the construction permit can be obtained based on four different plans, while in most other countries based on three different plans (Table 6). Moreover, it should be mentioned that in all countries national-level plans can allow for issuance of development rights. For example, plans of special purpose (available in all WBR countries) can work as 'parallel' planning instruments that can allow for issuance of construction permit, besides the local level plan. In most WBR counties, these developments are proclaimed as 'in the public and national interest'. It is interesting to note that the legal framework of MNE recognizes this kind practice through Spatial Plan of Special Purpose where the 'national and public interest' is mostly concerned with the coastal/tourist development. Nevertheless, planning practice which enables national level documents to allow issuance of construction permits are not unusual when developing projects of national interest (for example infrastructural corridors) even in other Western European counties.

Besides the possibility to allocate development rights through national level planning instruments, in all of the WBR countries the detailed plans are the ones which provide sufficient guidance to allow issuance of construction permits. Nevertheless, additional planning documents which are not part of the formal system of plans can also enable issuance of construction permit in cases such are FYROM, SRB or MNE. For example, the planning system of FYROM recognizes this kind of practice through so-called urban-technical documentation where development rights are issued for the zones of 'the special interest'.

	Planning Instruments that may allocate development rights			Development rights Procedure (main steps)
	National	Meso	Local	
AL	Detailed plans for areas of national importance	-	General Local Plan and Detailed Local Plan	Development permit, construction permit and Use permit
BIH	-	**FBiH** - Spatial Plan of areas with special features **RS** - Spatial plan for an area with special purpose	**FBiH –** Detailed Spatial Plan **RS** – Zoning Plan and Detailed Plans **BD** – Detailed Implementation Documents	Development Permit, Construction Permit and Use permit
KO	Zoning Map of KO	-	Municipal Zoning Plan and Detailed Regulatory Plan	Terms of Construction and Construction Permit and Use permit
FYROM		-	Detailed Urban Plan (DUP), Urban Plan for Villages, Urban Plan Outside of Populated Spaces, Urban-Technical Documentation	Urban/technical conditions and Construction Permit and Use permit
MNE	Spatial Plan of Special Purpose (SPSP)	-	Detailed Urban Plan (DUP), Urban Development Project, Local Location Study	Urban/technical conditions and Construction Permit and Use permit
SRB	Spatial Plan of the area of Special Purpose (SPSP)	-	Spatial Plan of the Unit of Local Administration, General Regulation Plan (PGR) and	Urban/technical conditions and Construction Permit and Use permit

	Detailed Regulation Plan (DUP) Urban Project (UP)

Source: Authors' Elaboration

Table 6 - Planning instruments responsible of allocation development rights and procedures

4 MAIN FINDINGS

This section will aim to highlight some of the main findings which were derived from previous analysis on the characteristics of the administrative subdivision and spatial planning instruments in WBR countries. It can be argued that a particular nature of spatial planning systems in the WBR countries is reflected through a variety of administrative levels and bodies which hold responsibilities in relation to spatial planning practice, as well as a number of planning instruments for the implementation of development goals. Nevertheless, this particular nature of planning systems seems to be influenced by both path dependency as well as adjustment to market economy. These affect the specific pace of changes and challenges on the spatial planning agenda of WBR countries.

The territorial administration system is different from one country to another, where KO, FYROM and MNE have two levels of administration - the central (national) level, and the local level (municipalities and cities). On the other hand, countries such as AL, BiH and SRB have additional regional level of planning. This particular administrative subdivision of the WBR countries can be related to the path dependent nature of each system. On the other hand, if looking at the institutional setting in all of the WBR countries, it is important to note a tendency for (de)centralization of spatial planning by abolishing the role of public planning enterprises and assigning spatial planning activity solely under the jurisdiction of local administration. These public planning enterprises date since the socialist era and served to satisfy the criterion of decentralization of planning activity, where each municipality in Yugoslavia had its own institute (larger cities) or directorate (municipalities). Today AL, KO and BIH do not fully recognize such planning institutions, while in other countries of the WBR there is a strong tendency for their abolishment as well.

When it comes to the system of plans, WBR countries apply a variety of planning instruments at each level. It is common for all counties that they follow a hierarchy of plans, where national, regional and some local plans have a strategic rather than a strong regulatory dimension. Nevertheless, spatial planning in WBR countries is often characterized as 'zoning' within international terminology, and due to their spatial, besides strategic elements (maps). Hence, although national planning instruments do not have a strong regulatory nature, an exception from this practice are plans for the area of special purpose which are prepared for the areas of national interest of the country and contain land-use, norms and standards for development.

Differently from the national level, only AL, BiH and SRB contain planning instruments at regional level. These spatial plans still have more strategic and less regulatory character and serve for coordination of balanced territorial development. While regional spatial plans in AL aim at enhancing vertical coordination within the various sectors, SRB produces Regional Spatial Plans for the NUTS-2 regions (4.1) at national level, with the exception of the province of Vojvodina which has its own regional spatial plan. It should be highlighted that the highest level of planning in BiH is the meso level of the Entities FBiH and RS, as well as of the FBiH cantons, where plans for both Entities have similar characteristics.

While national and meso level plans are usually described as spatial and more strategic in their nature, local plans in most WBR countries are characterized as urban/regulatory plans which provide substantive guidance, define norms and standards for spatial development. These plans are legally defined as spatial (BiH, MNE and SRB) and general/detailed urban plans (all WBR countries) and are developed for cities and/or municipalities. Hence, urban planning is considered to be the key instrument of land-use planning at local level, and it serves to satisfy the decentralization criterion of urban planning practice which dates back to the socialist era.

Comparing each planning system in terms of allocation development rights, it is interesting to note that in each country the development rights are issued in coherence to plans provision both at the central (or entity level) and the local level. Here there are two observations to underline, the fact that all systems are

similarly framed in terms of allocation development rights, and, that not only local plans may allocate the right to develop. Across all cases, local urban plans are considered as the ones that provide sufficient data on the possibilities and constraints for development, and as such can allow for allocation of construction permits. Nevertheless, all of the countries in this research show that plans at the central and entities level are also able to allocate development rights within specific site and condition. Secondly, in some cases even planning documentation which is not part of the formal planning system can serve for allocation of construction permits.

This kind of practice points out at 'dual nature' of national level planning instruments which contain regulatory as well as strategic elements. Moreover, it points out at potential (re)centralization of planning systems, where national planning instruments can bypass the local, regulatory ones. On the other hand, the fact that at least three different planning documents in each WBR country can allocate development rights, point out at the tendency for acceleration of planning process in line with the requirements of market economy which may cause ambiguities in coherent implementation of plans.

5 CONCLUSION

Due to their complex past, fragmentation and geopolitical instability, the WBR countries have been excluded from the majority of studies on spatial planning and territorial governance. Hence, this paper represents a step towards overcoming such analytical gap, and through collection of evidence that may support the EU in developing a more sound and effective cohesion policy. The main aim of this paper is to sketch out and compare the evolution of territorial governance and spatial planning in the Western Balkan Region. More specifically, it analysed geographical and socio-economic tendencies, administrative and legal framework, as well as spatial planning instruments in the countries of the WBR.

Based on the evidence presented in this research, it can be argued that spatial planning systems of the WBR are complex systems with path dependent nature in relation to socialist/communist era and later transitional stages, but also face a variety of challenges in adjustment to the requirements of market economy and EU perspective. In that light, contribution of such comparative analysis is to highlight similarities and differences between the development processes of the WBR countries, explore their development path and hence provide basis tackling future challenges.

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ID 1746 | SYDNEY IS NOT AUSTRALIA: WHAT CAN AUSTRALIAN TRANSPORTATION PLANNING POLICY MAKERS LEARN FROM THE EUROPEAN DIMENSION OF PLANNING?

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ABSTRACT: There is much that Australian policy-makers could (and should) learn from their European cousins. Vettoretto (2009) identifies “good governance” as one of the central strengths of Europe’s planning and policy-making practice, noting that policy-making should support, among other things, regulation through sense-making, strategic representation and advocacy. These tenets make the European approach to planning attractive to communities that feel isolated or left out of broader strategies for economic development that inform transportation planning. However, the transfer of European planning concepts to the Australian context, particularly for transportation, faces an uphill battle (as per Pojani & Stead, 2015). Australia’s major transportation planning agendas appear more interested on increasing mobility and urban densities in capital cities at the expense of improving regional community sustainability and connectivity. This has the effect of making busy transport systems busier, and promotes a classist system for promoting economic growth – not just between cities and regional areas, but between biggest city and next biggest cities, and so on. The density of international flights to Sydney and Melbourne make it commonplace, and often a pragmatic requirement, for residents who live anywhere other than the South East of the Australian continent to fly first to one of these two cities to access connecting international flights. This is the equivalent of having to fly from New York to Miami to fly to Lisbon, or from Lisbon to Istanbul to fly to South Africa. The inconvenience of having to fly South to fly North (intercontinentally) is only exacerbated for regional communities that first have to fly to a capital city, then on to Sydney or Melbourne, then on to their international destination. This makes international mobility the most inaccessible for the communities already provided with the least infrastructure, and struggling to maintain

sustainable communities due to the attraction of the populace away from regional agricultural communities and into the coastal cities. Furthermore, this inequity in accessibility works against the Australian Government's aspirations for promoting new (migrating) Australians to settle in regional areas. To provide strategic representation and advocacy for regional communities, Australia's transportation planning, and the planning and governance of its aviation network, can and should learn from a more balanced, more European dimension of planning. By reviewing the current state of the country's aviation network (airports, tourism assets, passenger routes, supporting infrastructure and supporting governance mechanisms), the authors have identified the policy-making opportunities for the Australian State of Queensland to learn from European planning approaches. By taking the European perspective of developing regulation through sense-making, this research identifies a range of aviation network design and regulation principles that promote the interests of regional mobility and inclusion, sustainable communities, and advocating equitable access to international transport and economic growth opportunities for the State of Queensland.

1 INTRODUCTION

It is a fascinating concept that for a country the size of Europe, flying from Australia's third largest city to the AESOP 2017 conference requires the presenting author to fly 733km south from Brisbane to the nation's busiest hub of Sydney, to then fly 18166km to the northeast to Lisbon (particularly when the route is 17930km if flown from Brisbane). Much of Australia's aviation growth has centered on Sydney, as both the country's primary financial hub and internationally marketed tourist destination. Sydney-centered aviation growth has been supported by Federal government initiatives to boost tourism to Australia, and a succession of Federal grants to boost the capacity of Sydney Airport via the development of the airport's third runway in the early 1990's. Much of Sydney Airport's airside expansion has taken place during a previous era of government, when major airports were still owned and operated by the Federal government, prior to the privatization of most of Australia's major airports in the late 1990's and early 2000's under the Airports Act 1996. The Federally funded infrastructure and international tourism initiatives has, in effect, created a self-fulfilling prophecy that favours international airline routes to Sydney over others. Other major airports around the country have successfully attracted and developed international routes over time, but the legacy of Sydney as the primary entry point for the country continues to act as a thorn in other states, particularly for regional and remote communities trying to access international air travel in an "as convenient as practical" way.

For those unfamiliar with the geography of Australia, Sydney sits at the southeast of the country in the state of New South Wales. While Sydney is the most well-known of Australia's cities, it is not the nation's capital (which is Canberra, 250km southwest of Sydney in the Australian Capital Territory). As an example of just how great an importance is placed on Sydney for representing other parts of Australia to an international audience, when the countdown to the 2018 Commonwealth Games was formally announced to the world stage by the event organisers, the announcement was made in Sydney, 680km south of the venue which is to be held at Queensland's Gold Coast. The Queensland state capital of Brisbane (>$100 billion metropolitan economy, as per Clark, 2015), which is less than 70km from the Gold Coast, wasn't deemed a sufficient platform for announcing the news – it would appear that if news doesn't come from Sydney, it doesn't come from Australia.

This insight might seem overly harsh or too direct at first glance (and may indeed be a jaded view from a Queensland author), but it's important to note that the example above is an artefact of how Australian organisations see the branding of Australia as being firmly centred on the identity of Sydney. It is not too large a jump of imagination to expect that other nations around the world perceive Australia's identity as being that displayed by the Sydney image. Unsurprisingly, if passengers (and by extension, airlines) consider travelling to Australia, Sydney is the logical default port of entry. However, with aircraft movements capped for Sydney airport, and a strict curfew in place to limit the impact of aircraft noise on Sydney's residents, the ability of Sydney to serve as the central hub to Australia's domestic and international aviation network has an expiry date.

Melbourne, which sits at the south-east corner of Australia's mainland in the state of Victoria, 713km south of Sydney, hosts the country's second busiest international airport. The Victorian government has been developing an international and domestic branding strategy that aligns the promotion of the region's tourist attractions to Melbourne's primary port of entry – Tullamarine Airport – as a means of competing with Sydney's ability to attract and retain key international and intercontinental air routes. This strategy has had

its successes, with growth in international air movements outstripping Australia's other largest international airports, including Sydney. The outcomes of supernormal international air movement growth in Melbourne, coupled with the legacy of international air movements coupled to Sydney, has created a veritable gravitational pull of domestic travel to the south east of the country to access international, and especially intercontinental, air routes.

The development of a second airport for the Sydney area, Badgery's Creek Airport, has been announced but will likely take a decade to be built and become fully operational. This interim period, as Sydney Airport gets closer to its operational limits and before the new Badgery's Creek Airport comes online, presents an opportunity for rethinking the structural design of Australia's aviation network for connecting domestic and international routes to the country's population and tourist destinations. Reframed, there is an opportunity to leverage the impact of aviation network design to support a fundamental change in the ways in which the world perceives and accesses Australia, and shift the focus of Australia's international brand from the current Sydney-centric (and increasingly south east-centric) narrative to a richer picture of the country's culture and regional diversity. This paper critiques Australia's existing governance mechanisms for influencing aviation network design against some of the tenets of European approaches to planning. This allows the identification, exploration and advocating of some of the structural design features that would allow Australia's aviation network to support current Federal and State government agendas for regional mobility and inclusion, sustainable communities, and migrant employment, while also making a clear statement that Sydney is only a small part of a much bigger Australian tapestry, and so should be treated as such in policy interventions and national marketing agendas.

2 THE STRUCTURE OF AUSTRALIA'S AVIATION NETWORK

Europe is orders of magnitude greater in population size and density, when compared with Australia, and entertains an array of intercontinental connecting airports (Amsterdam, Paris, Frankfurt, Munich, Istanbul, Barcelona, Madrid, Rome, Zurich, Lisbon, etc.) to connect the diverse regions of Europe to the world. Domestic travel within Europe is supported by well-developed rail networks, and longer intra-European travel is made simple and cost effective by the abundance of major and regional airports serviced by a highly competitive market of airlines. This makes travel from one region within Europe to another relatively convenient and cost effective, and travel from one region within Europe to another continent quite direct.

In a similar way to Europe's diverse regionality and attractions, Australia hosts an enviable list of tourist destinations and regions that range from the urban shopping drawcard of Melbourne and the vineyards of the Barossa Valley in the south to the natural wonder of the Great Barrier Reef in the north, from the glistening shores of Surfers Paradise to the east to the more exclusive red dusty center of Uluru, and onwards to the horizontal waterfalls adjoining the Kimberley Ranges in the west. Australia has a diversity of destinations that attract international and domestic visitors en masse, yet as a country almost 4000km square, travel from one region to the next is almost exclusively by air – the difficulties in travelling between Australia's population centers is often referred to as the tyranny of distance (Dhakal, Mahmood, Wiewiora, Brown and Keast, 2015). Travelling from one region to the next, domestically, is therefore largely subject to the routes offered by airlines (of which there are few). The sparse population density of regional centers away from the coastline also means that the routes that do exist, often require government assistance to remain profitable enough for airlines to continue servicing them. Given the distances between population centers and the country's population density is not going to change any time soon, it would be logical to assume that a government agency considering the long-term economic and community development for the country would make attempts to improve the accessibility of regional and remote communities.

Australia has 138 airports (BITRE, 2009) that service the nation's capitals and regional centers, however there are far more small airports scattered throughout rural and remote areas that serve as important access points for mining operations and otherwise difficult to access communities. For example, there are 141 airports servicing remote and rural communities in the state of Queensland alone (compared to 40 airports servicing the state's capital and regional centers) yet these account, collectively, for less than 10.4% of the state's passenger volume (Donnet, Ryley, Lohmann & Spasojevic, 2017). Australia's domestic aviation network currently (as at March 2017) carries 59 million passengers per year with annual growth at 1.6% (BITRE, 2017a). This compares to the country's international connections at 37.94 million passengers with annual growth at 1.7% (BITRE, 2017b). While growth for the national's aviation network

appears, at face value, to be reasonable, the data tells a different story for Australia's rural and remote communities.

Donnet and Baker (2012) discussed the stress faced by rural and remote communities with respect to declining access to aviation services. Data for regional passenger and aircraft movements is currently only available for the period up to 2012 on the Australian Department of Infrastructure and Regional Development's publicly available database (BITRE, 2017c) as the government stopped tracking regional volumes compared to national totals, so remains a relevant point of reference for this discussion. Within the BITRE (2017c) data, it is apparent that while domestic airlines were able to increase movements to major airports by 59% from 2000 to 2012 (an increase of 293422 aircraft movements) and international aircraft movements increased by 49% (an increase of 55244 aircraft movements), regional airline movements decreased by 34% in the same period (a decrease of 242870 aircraft movements). This decline versus growth demonstrates there has been a considerable shift towards centralising aviation growth to Australia's capital cities. When comparing more recent international aircraft movements between the three busiest airports in the country (see Figure 1 below), it becomes apparent that Sydney's ability to continue attracting the lion's share of new routes has dissipated in recent years as it gets closer to its operational capacity, yet calls from government reviews state that "Sydney Airport will continue to be the most important airport for the Sydney region and for Australia, both for passengers and freight" (Mrdak, Haddad, Wielinga, Smith, Westacott, Mundy and Brown, 2012, p. 6). The recent announcement for approving Sydney's second major airport, Badgery's Creek, reaffirms the Sydney-centric approach to air transport in Australia, which appears at odds with Federal government initiatives calling for improved employment and economic growth in rural and regional areas of the country, which by definition, require improved access to air transport to make sustainable.

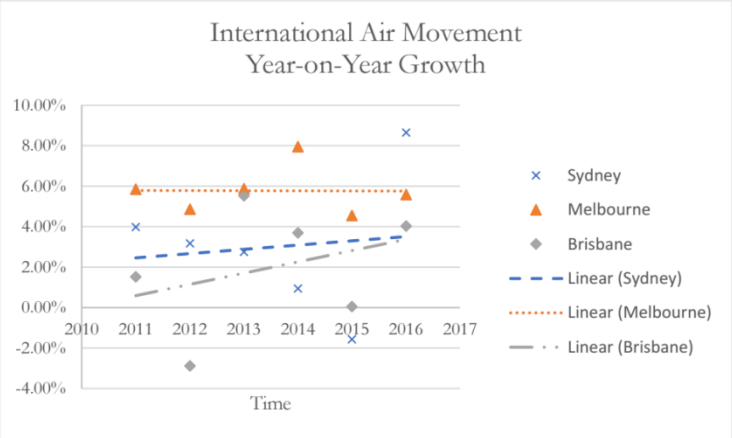

Figure 1 – Evidence of Sydney's decline in attracting new international routes.

Federal government regional economic growth initiatives are limited to a $220 million Regional Jobs and Investment Package (RJIP) program, which provide support funding for businesses that adhere to assessment criteria, defined in a Local Investment Plan tailored to each individual region (business.gov.au, 2017). The approach taken by the government to stimulate regional growth appears an attempt to drive business creation and job demand in regional areas, in the hope that increased business attraction will lead to more diverse and sustainable revenue streams for regional communities. However, this approach places the cart before the horse; concessions supporting employment only attend to one aspect of business – availability of labor. Businesses require sufficient economic infrastructure (including accessibility) to develop a coherent and sustainable business strategy, and without access to adequate air transport, the available funding may only have a short-term impact on regional economies. That is, an integrated approach that places fundamental economic infrastructure development first, in regional Australia's case air-transport accessibility, is far more logical an approach for the long-term development and sustainability of regional economies and their communities. To do this, placing investment in a more distributed air transport network makes sense at a time that the country's incumbent international hub is reaching capacity.

2.1 QUEENSLAND: A MORE DISTRIBUTED AVIATION NETWORK

Looking within the Australian aviation network for a fractal that may provide learnings for a national approach to aviation network design, Queensland presents interesting network architecture. Queensland has two major population centers on its coastline, often referred to as South East Queensland, which includes the state's capital, Brisbane, and the beach tourist focused Gold Coast; and North Queensland, which includes the military and mining focused Townsville and the gateway to the Great Barrier Reef, Cairns. Each of the cities mentioned above have international airports, with the vast distances to travel from one end of the state to the other requiring two hubs (Brisbane in the south and Cairns in the north) within the state's domestic aviation network. For reference, the state of Queensland is seven times the size of Great Britain, so airline routes must span considerable distances between the state's population centers. The Queensland aviation network is illustrated in Figure 2, and demonstrates the practicalities of linking regional destinations (i.e. Weipa, Mount Isa, and Horn Island) to the north via Cairns and Townsville.

The practicalities of having a more local hub for North Queensland's regional communities makes sense, as it is inefficient to pour government funding into long concrete or bitumen runways for communities that could not sustain passenger volumes required for cost effective operation of aircraft capable of flying from Brisbane of even further interstate. Smaller communities with smaller runways create a physical hurdle for airline operations, where small aircraft can only travel shorter distances. While this appears common sense, the difficulty in expanding this network design and operating reality to the context of the Australian continent is for providing equitable access for regional communities to international transport. For example, in New South Wales, regional communities are often serviced by smaller aircraft operating on a "mail-run" route, which appears on a map as a single spoke extending from Sydney with multiple stops in regional areas before returning to Sydney. This creates a lengthy transit for passengers in the more remote areas of the state wishing to access international services from Sydney.

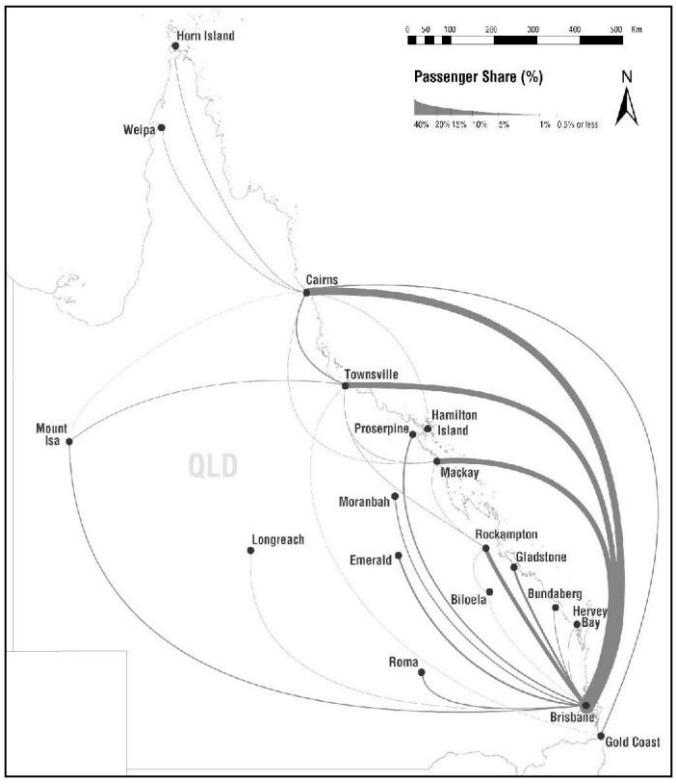

Figure 2 – Intrastate aviation routes for Queensland (from Donnet et al., 2017, p.6)

Figures 2 and 3 (sourced from Donnet et al., 2017, pp.8-9) provide insight to the nature of Queensland's aviation network connectivity to the rest of Australia, as well as to the world, respectively.

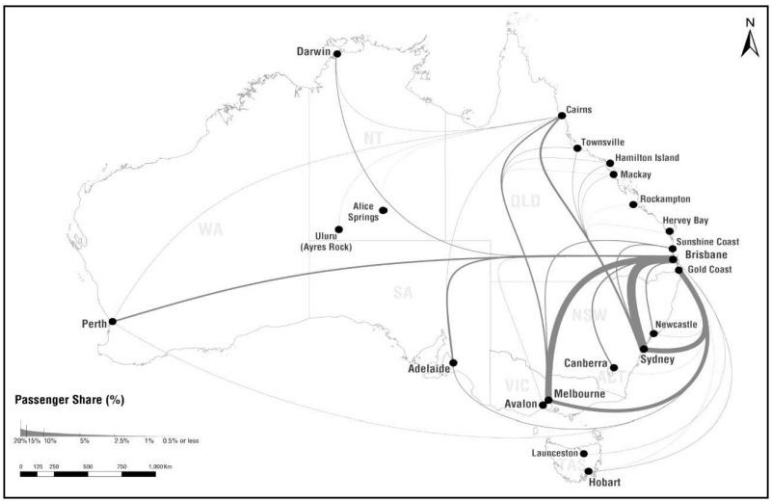

Figure 3 – Interstate routes between Queensland and other Australian states

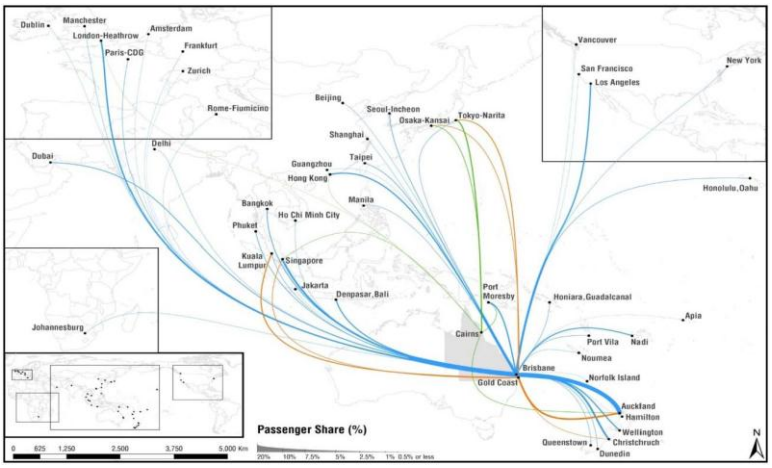

Figure 4 – International routes connecting Queensland to the world

The diseconomy of time and convenience is particularly relevant for regional communities that are often framed by lower socio-economic statistics and, with the support of current migration agendas supported by migrant peak bodies and the Federal government (see FECCA, 2015), become increasingly populated by residents with relatives overseas. Having a state or national aviation network that requires regional residents to commute hundreds, even thousands of kilometers south, only to hop on an international flight to the north, imposes additional costs and environmental burden to those already underprivileged by an imbalance in employment opportunities and economic infrastructure. In sum, there has to be a better way.

3 WHAT CAN AUSTRALIAN TRANSPORT POLICY MAKERS LEARN FROM EXAMPLES FROM EUROPE?

In comparison to Australia, Europe is advantaged by higher population densities and mature regional economies that deliver goods and services domestically and abroad, and destinations for international and intercontinental tourist travel. This has not been an accident, and is the product of each individual nation's long-term vision for meeting internal job and productivity demands as well as investing in fundamental infrastructures that support economic growth. As Vettoretto (2009) aptly states, good governance is a central strength to planning and policy-making practice in Europe, with a keen focus to robust decisions for investment and infrastructure development that are designed to work in the long-term against many variable scenarios. A technical report by Appold et al. (2008) identified an array of different governance structures used by jurisdictions around Europe (including Estonia, Spain, Germany, and Finland) that, at their core, demonstrate a robust focus towards progressing regional and national economic growth (i.e.

arbitration processes for airport development in Germany) while at the same time appreciating local contexts (i.e. tailoring airport expansion to protect local public values in Spain). Governance mechanisms that champion public engagement, be it by arbitration or by up-front negotiation, allow for greater buy-in by stakeholders but more importantly allow policy makers to critique the very nature of the vehicle of value creation (i.e. building a new airport) in the first place (as per Healey, et al., 2003).

In Australia, the more deliberative planning process is an element of policy-making that underdeveloped, and the political will to look towards the long term has been sorely missing in more recent times. Having had six different Prime Ministers since 2000, and what is essentially a two-party government system (by definition, Government and Opposition), policy making in Australia is often highly politicised, which means decisions for significant investment in regional infrastructure or changes to existing economic systems is typically met with fierce opposition in press and in Parliament (as discussed by Wegrich, Hammerschmid and Kostka, 2017). A decision to invest in one sector by the government of the time can easily be overturned or withdrawn in the following three-year term of government, which undermines the long-term vision and ongoing support required for nation building exercises – such as transitioning a transport network from one system of network structure to another. Creating an appetite for long-term agendas that are developed through a more deliberative consensus approach (i.e. similar to the slow but robust approach utilized in the Netherlands) presents an opportunity for critically rethinking some of the fundamental design principles that underpin the structure of Australia's current aviation network. For example, Australia's policies and initiatives place emphasis on market forces to meet demands as a means of ensuring efficient use of government funds. That is, the Australian government has shrunk its direct involvement in the provision of air transport to Australia through its privatisation of major airports and divestment from the national air carrier, Qantas. In doing so, the government attempts to steer businesses at arm's length through tax (dis)incentives and concessions for providing air services for regional communities, trusting that the market will provide services when revenue is available. However, as economically rational organisations, airlines provide lean services for regional communities, which does little for the attractiveness of regional communities to those outside of them.

Looking at past planning interventions in Europe for stimulating regional growth, fiscal strategies for decentralising economies have drawn criticisms for sub-national governments taxing businesses in ways that diminish their effectiveness in generating a positive economic impact (Thornton, 2007). However, Crescenzi and Rodriguez-Pose (2011) introduce the notion that successful regional growth is stimulated via innovation, rather than subsidising for increased density of existing industries, which requires investment in social infrastructures alongside economic infrastructure. This aligns with more seminal insights posed by Scott (1998) for flexible production systems in Western Europe that leveraged urban and rural assets and labor to improve value creation and stimulate regional development. From this European perspective, treating rural and regional areas as integrated parts of a broader value chain for the production of value traditionally nested in more metropolitan areas in presents an important opportunity for rethinking how the government approaches economic development initiatives for regional Australia.

Rather than aiming to improve economic development through financial support to businesses in a particular region, placing a focus on joining up businesses that are vertically linked within a supply chain (from city to rural/remote region) presents a far more attractive approach that explicitly places value in the role of regional Australia contributing to the broader economic performance of the country. That is, in advancing the major population centers the remainder of the country is not left behind in investment or in cultural spirit.

4 CONCLUSION

This paper set out to drive critical discussion for how to rethink Australia's aviation network structure to improve outcomes for regional and remote communities, and identify the inequities in current air transport routes connecting Australia's non-Sydney communities with the rest of the world. Current approaches by the Australian government that try to create self-sustaining regional communities may be enhanced by appreciating some of the more hands-on strategies that characterise trends of European spatial governance, and not leaving economic development to market forces alone. By shifting focus from self-sufficient (but still isolated) communities to more integrated, connected communities with direct economic ties to their value-chain-affiliated coastal economic centers, a more equitable platform for supporting and including regional Australia into economic and social growth can be founded. To do this, we propose that

rethinking, and more importantly championing (via policy as opposed to concessions), a formal network approach for Australia's domestic and international networks is required as a starting point for change. This is particularly relevant as the tyranny of distance remains a continual thorn in Australia's regional mobility, access to services, and business growth. This task is a formidable political minefield that could only eventuate from bipartisan support across all levels of government – the very European tenet of democracy via consensus is required for success. But at its core, the task is to answer a very straightforward question: How could Australia best organise its aviation network to deliver efficient, equitable air transport for its communities? The challenge has been set, and we look forward to hearing the debate that ensues from this beginning of a much larger discussion.

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ID (1285) | SHAPING REGIONAL FUTURES: PERFORMANCE OF REGIONAL DESIGN IN EUROPEAN REGIONS

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1 INTRODUCTION

In metropolitan regions, municipal borders and other administrative boundaries have long since been transcended by spatial patterns of interaction and land use. In the emergence of spatial patterns, multiple spatial scales intertwine – from the neighbourhood up to the functional region and beyond. Governments and their administrations often experience statutory limitations when trying to address these developments. Their territories are fragments of regions; they have difficulties detecting problems that are caused by factors outside of their spheres of influence and feel that addressing them is beyond their competence and political mandate. Planning instruments available to them, along with specific rules and regulations, are often too generic, rigid and defensive to address the specific development potentialities that are the product of intertwined issues and scales. Simultaneously, analytical information about regional spatial development is increasing, thanks to new technologies that can handle (big) data. More information and knowledge on what is going on beyond the horizon of a single city is not unproblematic, though. There is little experience about how to transform the insights and activities of single individuals and organizations into collective knowledge and action on a regional scale.

In response to these deficiencies of statutory planning, politicians, planning authorities and also civil and private organizations in numerous European regions are participating in informal, network typed governance arrangements, in order to coordinate sector issues and issues that play at different levels of scale (see for instance Allmendinger et alia, 2015). They seek, for instance, to integrate economic, transport and housing development, and water management stretching across multiple and multi scalar boundaries. Being voluntary associations with few formal planning instruments available to them, the resulting partnerships collaboratively engage in jointly creating inspiring and encouraging spatial agendas with the help of regional design.

Design is a creative practice, orientated towards finding solutions to problems in the built (and unbuilt) environment. It is a ‘conversation with the situation’ (Schön, 1983), driven by normative, desirable futures, and also by a wish to understand the ‘holistic’ wholes of a region and dependencies among its parts. The use of such creative and comprehensive design led approaches in planning often raises high expectations, usually associated with the intense use of spatial representation such as maps, models, and other geographic imagery (see for instance Thierstein & Förster, 2008). Such representations are expected to ‘explain’ the region: to increase understanding of interdependencies across scales and issues, and to focus attention on the places and locations that are affected. They are also expected to be persuasive as visualised ‘storytelling about the future’ (Throgmorton, 2003); they provoke thoughts and feelings, and therefore function as a kind of invitation to individuals and organizations to get involved in regional politics and planning. In the context of interactive design processes, visualizations and spatial representations are seen to be platforms or dialogues, malleable collections of spatial information that expose conflict, facilitate learning, and mediate in the context of complex governance settings. However, despite an increase of use

and high expectation, there is little understanding of how design performs in planning: what are the interrelations between design and planning in this relatively unexplored field?

This paper investigates aspects of design practice: the performances of regional design in collaborative planning decision making based on a comparative case study research. The 'evidence' comes from a joint conference of Munich University of Technology and Delft University of Technology[1]. This was an occasion to compare regional design strategies that are used in different European regions, to discuss the different facets and dimensions of these practices and to assess their performance. On the occasion of this conference an analytical framework was developed to distinguish settings, practices and performances of design led approaches. The framework is applied to three case studies. The results in our view give insights into aspects of institutional settings and design strategies and processes that have influenced performances of design practice. A main aim of this paper is to present results from analysis. It identifies aspects of regional settings, performances, design strategies and processes that have influenced design led approaches in these areas decisively. This is about the identification of lessons on how design contributes to planning and governance capacity in a multiactor setting of regions which do not have a clear match with administrative boundaries. The second objective is methodological: how to analyse practice from a theory based methodology?

The paper is structured as follows. The next section introduces an analytical framework to identify interrelated aspects of design practice. The section thereafter briefly present the three regions on which we base our analysis. The next main section of the paper presents results from the actual analysis. The final concluding section reviews implications of the results for further research.

2 THEORETICAL FRAMEWORK

Few scholarly writings are dedicated to regional design and many of these build upon the seminal work of a small number of authors from the fields of architecture and urban design (Hillier & Leaman, 1974: Rittel 1987; Schön, 1983; Schön, 1988). These authors describe design as a reflective and argumentative practice, oriented towards the improvement of the built environment. Design has a holistic orientation also. It is an attempt at a comprehensive understanding of spatial development, a search for integral solutions that consider dependencies among parts. Since the built environment is a complex system, the act of designing is unlikely to evolve in a linear manner from problem definition to solution. It is more likely to be explorative, evolving during multiple synthesis evaluation iterations and steps in which problems and solutions are explicated, comprehended, reflected upon and adapted[2].

Writing on the use of design led approaches indicate that there are strong interrelations among planning decision making and design (Balz, forthcoming; Van Dijk, 2011; De Jonge, 2009; Balz & Zonneveld, 2015). A basic foundation of interrelations between design and planning is their common interest in plan-making, usually (not always) resulting in planning imagery. In the realm of design such imagery serves reflection and processes of abstraction as well as detailing. In the realm of planning: the use of imagery serves communicative ends and also has broader agency. In this realm imagery turns into spatial representation through which plan actors intentionally generating meaning by drawing on repertoires of existing symbols for the purpose of politics and planning[3]. Using notions from design theory (the iterative circles) and planning theory (planning cycles) a distinction can be made between (1) the setting as the specific planning context any design endeavour is embedded in, (2) the impact (performance) of design on decision making processes and (3) the characteristics of the design strategy and process. In this view: continuous rounds

The setting has been briefly touched upon in the introductory section: regional design takes place in a setting where a whole range of boundaries are becoming less distinct. 'Fuzziness' is probably an appropriate term here: It can be connected to spatial boundaries, but also boundaries between actors and

[1] This conferencen was entitled 'Shaping regional futures Mapping, designing, transforming!' and took place in October 2015. See: https://www.events.tum.de/frontend/index.php?folder_id=165. A follow¬up conference took place in May 2017 at the University of Florence. See: http://www.dida.unifi.it/upload/sub/pdf/eventi/shaping¬regional¬futures/shaping-regional¬futures_programme.pdf. Both links accessed June 2017.

[2] This section is based on: Balz (forthcoming).

3 A systemic view on these interrelations, has been developed by Schönwandt and Grunau, 2003.

different kinds of knowledge. Spatially, it is virtually impossible to demarcate 'the' region. Places have multiple characteristics and are connected in many different ways, leading to complex, multi scalar interrelations. Governance involves the continuous identification of planning problems and search for solutions, resulting in temporary and shifting relationships between public and private actors, political agendas, and territorial interests. What constitutes valid knowledge in such context is not self evident or even contested. Important questions are: do settings influence regional design? Can we identify aspects of regional design settings that are more decisive than others?

Performance in the context of this paper can be defined as the impact that design has on decision-making. If indeed regional design is about planning change and creating institutional capacity, what does this entail? Does it relate to a shared framing of territories; the formation of actor networks; the bringing together of different types of knowledge; the operationalization of planning in trajectories of concrete spatial transformation; or is it all of the above? Can we develop criteria to asses the transformative power of regional design? Where, why, and when does the impact of regional design depart from the impact of (formal) planning?

Also in relation to strategy and process the often highly complex spatial and institutional environment at regional level is of overriding importance as issues and actors are strongly interconnected. As a consequence, regional design evolves in a context of multiple and interrelated choices. It is about preparing and making such choices: During design processes, planning solutions emerge. But how to select relevant sub-spaces, activities, themes, and projects? Are there specific methods that are more apt than others? How to apply such methods in complex multi actor and multi scalar settings? How to bring the different language domains – verbal, visual, emotional – of regional design together?

3 THE THREE METROPOLITAN REGIONS

The above analytical framework and questions have been developed for the 2015 conference 'Shaping Regional Futures' in Munich (for more information see Förster et al., 2016). During the conference these were used for an analysis of regional design practices in three European regions. Representatives of three regions did receive the questions beforehand. In the next three paragraphs we give an impression ot their responses.

For the Amsterdam Metropolitan Region (the Dutch acronym is MRA[1]) the invited practitioners (one former senior planner from the Amsterdam municipality working for the MRA while the second one represented a major player in the region) reflected on how several regional design initiatives have influenced the formation of a vision of the so called Amsterdam Metropolitan Region. The city of Amsterdam with its 820,000 inhabitants (2015 figure) is surrounded by several small and medium sized cities and towns. Greater Amsterdam has 1.5 million inhabitants. The Amsterdam region is part of the Randstad Holland, the western and economically most vital part of the Netherlands. Spatial development of the Amsterdam region is the policy objective of several authorities and partnerships, each with its own vision of the future of the area, the MRA partnership among them. MRA is an informal co operation among 33 municipalities, two provinces, and one city region in the area. Its aim is to foster economic development and accessibility. It is rather common for sub national governments and coalitions among them to use regional design in the Netherlands. It is expected that design led approaches help ot identify guiding principles for planning and also to clarify relations among governments.

The three representative from Zürich (two from administration and one from a consultancy) contemplated the making and use of the Metrobild Zürich[2]. The Zürich Metropolitan Area is Switzerland's leading economic region with 2,3 million inhabitants and 500 municipalities in 8 cantons. The region boasts a high quality of life, significant spatial diversity in a relatively small area, and a strong position as an international economic hub. Major challenges are its dynamic growth, social disparity, strain on environment and resources, and cooperation and competition among municipalities and cantons. In 2010, the Zürich Metropolitan Area started the Metrobild process to visualise the area from the perspective of three different

1 On the MRA see: https://www.metropoolregioamsterdam.nl/pagina/20170515-mra-agenda-english (accessed June 2017).

2 See the (German language) website: http://www.metropolitanraumzuerich.ch/themen/lebensraum/metrobild.html (accessed June 2017).

design teams. The goal was to create a common understanding of the functionalities, qualities, and potentialities of the Zürich Metropolitan Area.

The Ruhr Region is a region with a long albeit complex history of cooperation. The present cooperation is known – in English – as Ruhr Regional Association[1]. Two representatives – one from academia and one from the Association – reflected on the Ideenwettbewerb Zukunft Metropole Ruhr (an English proxy is Ideas Competition)[2]. With 53 communities and 5.2 mio inhabitants in an area of 4,435 km2, the Ruhr region is the 5th largest conurbation in Europe. The very polycentric region has been experiencing ongoing structural chance since the 1960s, and managing decline and conversion will continue to form a major challenge in the coming decades. The Ruhr Regional Association is a municipally founded association, which has had its own legislative and regional planning powers since 2009. In order to create a statutory regional plan for the whole area, the association started a regional dialogue in 2011 – including an international (ideas) design competition which was seen as a new planning approach. Expectations were high: inspiring views from outside, outlines for new directions, enabling participation, creating transparency and openness, and initiate discussion and dialogue.

4 EMPIRICAL ANALYSIS

4.1 SETTING

The parallel workshops on the cases Amsterdam, the Ruhr, and Zürich raised a number of critical issues concerning the regional design setting. Probably the prime one can be phrased as: Fragmentation and fuzzy boundaries everywhere! The experts from all three case studies stressed the administrative fragmentation of their region, and the multiple overlapping sets of boundaries and 'regionalisations'. First seen as an anomaly and barrier, this condition turned out to be the 'normal' context within which regional design operates, i.e., a context of ambiguity. Institutional fragmentation and fuzzy spatial boundaries are a structural characteristic of the setting within which regional design evolves.

Cultures and traditions in cooperation and consensus finding matter a lot. Within a fragmented governance landscape, and against a background of multiple perceptions of what a region is and constitutes, regional actors and organisations nonetheless showed a capacity for joint discussion and consensus finding, albeit in various degrees. This capacity was associated with differing characteristics of the institutional context within which regional design initiatives evolve. The policy culture in the Zürich case is strongly influenced by the general, Swiss tradition of direct democracy and a culture of finding consensus and agreement, stretching out to intellectual discourse as well. In the Ruhr case, the 'Regionalverband Ruhr' is the umbrella organization of a spatially highly complex region. In spite of a long tradition of political struggles between individual cities, there is now a regional association – established in 2009 equipped with legislative and regional planning power – the result of structural change since the 1960s and continuing attempts to manage decline and conversions since then, for instance, through the International Exhibition (IBA: Internationale Bauausstellung) Emscher Park.

Compared with the Ruhr Area the Amsterdam Metropolitan Region is a relatively small region. With the informal co operation among 33 (number at the time of writing; 32 at the time of the conference) municipalities, two provinces, and one city region, over the course of ten to fifteen years it has become a rather intimate club – a dense social network of actors who are all familiar with each other. They started to gather to respond to what was felt as institutional fragmentation.

Looking at these three case studies, regional design takes different forms and organizational settings, and also effects and impacts vary greatly. Important incentives for regional design are making funds available for the design as such and the presences of mechanisms to connect and embedding in formal planning. Cultures and traditions in decision making matter for regional co operation but are not sufficient to stitch a region together. There is a need for additional incentives and benefits for regional cooperation and design, which together can be labelled as formal planning conditions. In the Amsterdam case, the prospect of external money from central government unified actors and has become a major incentive for regional

[1] See: http://www.metropoleruhr.de/en/home/the-ruhr-regional-association.html (accessed June 2017).
[2] See: http://ideenwettbewerb.metropoleruhr.de/startseite.html (accessed June 2017)

design initiatives exploring the future. The Dutch state maintains control over the largest part (over 95% of all taxes) of tax revenues. The planning system requires effective regional governance arrangements to claim financial support by means of argumentation. In the Ruhr region, the regional design competition 'Future of the Metropolis Ruhr' was the prelude to the revision of the formal regional plan. The ambitious regional design endeavour was also associated with the urgency of addressing economic structural change, and the need to take politically binding planning decisions which require sound argumentation.

In Switzerland, central government provides funding for its 'agglomeration programs', and the second tier level of the cantons has to provide matching funds. The Metrobild Zürich project was financed by the various cantons and municipalities which together form the 'Metropolitankonfernz Zürich' – the Zürich metropolitan association. The Metrobild initiative was meant to provide a common ground for developing a subsequent 'strategic spatial concept', which was eventually approved in November 2015.

In all cases, former experience with urban and regional design matters greatly. Such experience is an important resource for the regional design practices. The regional design endeavour in the Ruhr region built upon experiences in the 'IBA Emscher Park'. This was the first international building exhibition in Germany with a deliberate and distinct regional focus, which took place over an entire decade, from 1990 to 2000. The aim of this exhibition – mainly financed by North Rhine Westfalia – was to bundle public and private funding in strategic projects. This approach of steering structural economic and spatial change by means of small, locally motivated interventions came to be internationally known as 'perspective incrementalism' (see for instance: Lane 2000): a 'cloud' of local interventions held together by a perspective on the region's future. In 2010, another lighthouse project was started: 'RUHR.2010 – European Capital of Culture'. This mega event was expected to contribute to a stronger identity for the region, and to foster culture and creative industries as an economic base. Both events prepared the way for regional design reflecting on a common future for the region.

In the Zürich case, different regional design approaches from inside and outside public administration served as references: the 2005 'Urban Design Portrait' of Switzerland by ETH Zürich Studio Basel; the 2011 study 'Glattal – an Emerging City!' by the architects group 'Krokodil'; and the 2012 'Spatial Concept of Switzerland', meant as an informal planning and policy guideline at the federal level. These initiatives were not seen to have a direct influence on the 'Metrobild Zürich' process. It was, however, argued that images and narratives from these projects stayed in the minds of actors: they enhanced imagination, and also informed expectations concerning a new regional design initiative.

In the Netherlands design led approaches in planning are frequently used – a tradition that can be traced back to the emergence of urban planning at the turn of the 20th century. No one at the conference mentioned a link to specific design projects such as in the cases discussed above: It seems that it is quite natural to design for the purpose of planning.

There was agreement among experts that initiating a regional design endeavour within the fragmentated landscape of governance – 'Setting the Stage' – is already an achievement in itself. Regional actors and institutions are generally quite hesitant to invest money and time in endeavours that have no predetermined result. For instance, in the Zürich case there was a remarkable consideration of the role that perceptions of regions play in setting up the stage for regional design. Here dominant perceptions and the focus on planning issues were identified from the outset and monitored via processes. Looking across the cases, there was agreement that regional design marks neither the beginning nor the end of a regional dialogue and cooperation process. Setting the stage for regional design seems to be half the battle in the sense of shaping mindsets about the present and future state of the region.

4.2 PERFORMANCE

When it comes to the performance issue, the regional design processes in Amsterdam, the Ruhr and Zürich could not be assessed on their long term impact yet as all discussed cases were relatively recent. However, the discussion allowed comparison of expectations on the performance of regional design. In all three case studies the experts stressed that regional design is a way to initiate and facilitate joint discussion and to provide a 'designerly' context for discussions and negotiations between administrations, societal actors, and civil society at large. They emphasized that regional design practices are not meant to define and identify a 'product': a concrete planning solution. This was summarized as 'Regional design as

a catalyst to qualify the region'. Design initiatives take place to improve deliberative processes. In fact, regional design proposals may disappear after having contributed to decision making. This does not mean that the actual content of regional design does not matter, on the contrary: insights into particular spatial environments, what constitutes these, how they develop, and how they might look in the future are crucial to initiate and steer discussion and dialogue. Insights into the qualities, strengths, and threats that spatial development holds and can hold in the future are a crucial factor in changing the minds of actors.

Experts in all cases agreed that regional design – the products as well as the processes – is highly instrumental in the identification of joint planning issues. Spatial representations and discussions about these focus attention, often on intricate 'soft' spatial qualities, strengths, and future potentials. The selection and detailing of these issues and bringing them to the attention of local and regional actors was regarded as a crucial design activity in all three case areas. The Zürich experts stressed the importance of design in 'framing', constructing a basic agreement on relevant planning issues in the region, agreement on outline challenges, problems and tasks that regional planning should deal with. One Zürich expert noted that the design process was shaped by a search for "public goods" in the Zürich Metropolitan Area: Once they were 'discovered', they continued to play an important role throughout the entire regional design process.

4.3 DESIGN STRATEGIES AND PROCESSES

The experts at the conference agreed that the performance of regional design can partially be attributed to the use of imagery: 'A picture is worth a thousand words'. Images allow for new readings and understanding of the region. Design imagery may be provocative but on the whole the performance of maps, models, and other spatial representations is not easy to predict. Is it possible nevertheless to 'plan' the impact and performance of imagery? Experts from the Zürich and Ruhr cases noted that competition settings foster the emergence of surprising and new imaginings and imageries. Some even favour a 'guerillia tactic' in the production and use of imagery. They argue that new and therefore influential representations always comes from outside public administration – from design initiatives at universities or in the context of private or civil initiatives, for instance.

A reoccurring issue in discussions on images is their narrative nature. The actual performance of imagery is closely connected with the storylines they imply. New reasoning in and through imagery broadens the horizon in discussions. In this respect, images of regional structures can have a unifying force. An example is the ring of 19th century fortifications at a distance of about 25 kilometers from Amsterdam, which is regarded as part of the identity of the Amsterdam Metropolitan Region and imaged on local maps of Amsterdam as well as regional imagery. As already explained above, the regional design practices in the three case regions are rather novel, making the impact rather difficult to detect.

In all cases, particularities of the region were an essential ingredient in design proposals. These particularities are often formed by numerous highly 'typical' smaller spatial entities within the region. They were regarded as building blocks. Identifying similarities across local, municipal levels turned out to be an important step in the representation of regions, but also in identifying 'fields of action'. In the regional design propositions for the Ruhr region, comparable neighbourhoods within municipalities became more important than administrative units themselves, for instance. A crucial design step in the Zürich case was the identification of differences among smaller entities or subregions as major constituent parts of regional diversity. Also in the Amsterdam case, the recognition that the region is highly diverse contributed strongly to a shared image of the region.

Mapping was an integral part of all three regional design cases. Mapping was seen as a process of joint fact finding, supporting a search for evidence of what connects the various parts of a region, and what constitutes interdependences between issues and places. Mapping was also regarded as an important tool in portraying possible and desirable futures. Several tools and instruments in mapping were discussed. Design experts in the Zürich case argued that Geographic Information Systems (GIS) turned out to be a powerful tool in both the analysis of regional data and the creation of imagery of regional futures. As noted above, the development of a common visual language was an explicit aim of regional design processes. Graphic designers who are skilled in moving between two and three dimensional images are particularly in demand on regional design teams.

As was noted above, regional design processes are processes of identifying planning issues and bringing these to the minds of actors. In this sense, they were engaged with the naming of issues and in this way creating a vocabulary for regional planning. That does not mean that the (new) vocabulary necessarily lead to a joint understanding of the region. Planning experts in the Zürich as well as the Ruhr case noted that the results of regional design competitions tend to be rather complex: designers often suggest multiple layers, issues, subregions, actors, and time horizons. This complexity in content, form and language may appeal to experienced urban and regional designers, architects, and academics, but threatens and repels politicians and planners that are responsible for letting these complicated constructs fall 'on the ground'. 'Make it simple' could be a strategy connect design to the realm of planning and politics. Design experts responded that simplicity can be extracted from complexity: an act of translation. In the Zürich case, a basic rulebook relying on a simple distinction between stable and dynamic spaces within the region was based on rather in depth analyses, for instance. Another comment on a design vocabulary concerned text and image: Crystal clear textual naming and labelling as well as mapping and drawing are equally important instruments in clarifying issues. Through this, regional design may help to establish narratives of the region, and these can become important drivers for regional discourse. It was argued that the multiplicity of notions in design proposals functioned as a fertile breeding ground for storytelling in the Zürich and the Ruhr cases. Designers proposed what was generally regarded as a a full and rich image of the region, a repertoire of notions that inspired planners.

Discussions on design products and processes addressed the issue of how to connect design with planning processes. It was argued that from the outset designers should be sensitive towards the planning setting in which they work while at the same time claim a kind of free space in order to remain innovative. Potential commitment of local and regional actors should be carefully and continuously considered, specifically when regional design strategies aim at implementation. In the Amsterdam case, the importance of the embedding of design in formal planning was heavily emphasized. This means, for instance, that it is critical to take notice of existing plans. In general, designers should be skilled in working in an often contentious political context. They should also be aware of pragmatic or even opportunistic behavior that occurs in the context of complex social networks.

In all parallel workshops, it became evident that regional design is not a straightforward process, but often requires different steps and stages. In all cases, there was not one 'final' design product, but many in-between products that were presented, discussed, modified, and then presented again. Usually a broad range of different actors joined in, which turned regional design into a dialogue on planning. Such design processes resemble joint decision making processes. The difference is that the decisions are not about concrete projects or interventions but about understanding and the content of the design 'story'. To synthesize and link the diverse and often conflicting requirements and expectations of a broad range of different actors and institutions in one design process was seen to be a critical design activity. It is about informing others and being informed in a multi actor, collaborative setting.

Initiators, audiences and design commissions. Although in all three cases regional design evolved as a collaborative process, the concrete design practices differed in the organizations that initiated the design. Also, the design 'audiences' and the 'openness' of commissions differed to some degree. In the Ruhr and Zürich cases, designers had an open brief. Designers (and also the jury of the Zukunft Metropole Ruhr design entries) appreciated this freedom. The Metrobild Zürich process was carefully placed outside the daily routines of public administration. The temporary architects group 'Krokodil' designed a regional strategy without having an official mandate to do precisely this. They used the freedom given to turn towards a public audience and acquire public attention for their proposal, an effort that they called a 'guerrilla strategy'. In contrast, the Amsterdam case design processes had, through their thorough embedding in planning, a much more pragmatic orientation. They followed the negotiation patterns in the domain of planning and policy making. On an abstract level, one could say that all three design pro cesses run parallel to political processes but that the connections are different, resulting in different degrees of freedom in relation to design content.

5 CONCLUDING REMARKS

In this paper we has set ourselves two objectives: 1) how to analyse regional design in planning context from a theory based methodology; 2) to identify lessons on how regional design contributes to planning

and governance capacity in a multi actor setting of regions which do not have a clear match with administrative boundaries.

In relation to the first objective we think this paper addresses a gap in the literature. There is an abundance of theoretical literature on design especially in relation to cognition but fewer literature on the relation between design and planning, let alone literature on the level of metropolitan regions (some major exceptions are mentioned in section 2; interestingly quite a number from Dutch authors). Our contribution to the literature is an analytical frameworks which in our view contains three critical issues about the relationship between design at the one hand and regional planning and governance on the other: 1) the setting, which is about spatial and multi actor characteristics of metropolitan region; 2) the performance, which is about the various kinds of impacts design can have on planning and governance which in our view are mostly in the 'soft' domain of thinking about a region; 3) the actual set up of the design strategy and design process.

This framework has been developed on the occasion of a dedicated conference on regional design. It was developed at forehand and used during the discussions which involved academics as well as participants in three major examples of design exercises in metropolitan regions. It should not come as a surprise to the reader that such discussions can be very lively (sometimes even frenetic) addressing a wide range of topics and experiences. Nevertheless our analytical framework proved to be very useful in streamlining the discussion in the stage of: what have we (=the attendants of the conference) learned? On performance the results of the conference are relatively limited. Performance research is notoriously difficult especially when the main question is not about implementation – meaning in this context: physical manifestation of design on the ground – but the effects of design on thinking about a region. To make further steps fieldwork is needed with interviews and questionnaires as major research tools.

The analytical framework which we developed and sketched out in this paper needs to be refined. The authors of this paper intend to do that through a variety of follow up activities. One of the intentions is the organisation of small, dedicated conferences on regional design in various metropolitan regions. One of these already took place in Florence, May 2017 leading to an extension of the network of interested scholars and practitioners. There are more to come. The lessons which can be learned from the practices in the three regions addressed in this paper form a good starting points to be tested, amended and elaborated.

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T07 | DIALOGUES IN DIVERSE, INCLUSIVE, AND MULTICULTURAL CITIES

CO-CHAIRS: WILLEM BUUNK; INÊS SANCHEZ DE MADARIAGA; ISABEL RAPOSO

The track welcomes papers that offer case studies, research methods and theoretical approaches that reflect, from a variety of perspectives, on dialogues in planning on inclusive and multicultural cities. European cities are shaped in era of rapid growth and urbanisation post WWII, now face vast challenges of major social, economic, political and migratory change.

Diversity within cities calls for cohesion, as promoted by the ECTP 'New Athens Charter' for inclusive and just cities, including gender dimensions. As there is great diversity between cities, there is diversity in approaches to deal with these complex challenges. Diversity in size, landscape, social structure, religion and wealth, and diversity in political culture, governance and adoption of technology produces a variety of strategies.

The track wishes to focus on the contribution of urban policies and planning on local and regional dialogue between stakeholders with different interests, different rationalities, different cultures (both traditional and alternative), and different moral points of view. The track also welcomes papers on the contribution of planning to national and transnational dialogues, as well as contribution to the discourse on values and ethics in planning and on justice.

ID 1309 | PLANNING FOR DIVERSITY AND SUSTAINABLE SPATIAL PLANNING RELIGION SPACE GENDER AND ETHNICITY

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ABSTRACT: Sustainability objectives are central to modern urban planning, shaping all aspects of. Originally, sustainability had three components, environmental sustainability, economic well-being and social equality: - Planet, Prosperity and People. But, the environmental aspects of sustainability have tended to predominate. This leaves little space for social issues, and aspatial (non-physical) factors such as belief and religion. It is argued, with reference to UK-related research, religion has major spatial planning implications for all aspects and levels of urban policy. Neglecting religion's existence results in an incomplete planning agenda which undermines equality, especially ethnicity-related policies. The implications of this gap are discussed with reference to the environmental, economic and social components of sustainability policy. There is little recognition of the contribution of religion to cities: rather a negative mentality predominates amongst planners. Ways of changing the planners' understanding, and mainstreaming religion into planning are discussed, drawing on methods used to integrate gender into planning.

1 INTRODUCTION

The urban planning policy agenda is strongly influenced by sustainability objectives with particular emphasis upon environmental issues. But, the original definition was much broader and included economic well-being and social equality as well as environmental balance. But it is environmental sustainability, as illustrated in this paper with reference to the UK, that has become the ersatz religion and zeitgeist of politicians, urban policy makers and academics (Boot, 2014: 186). However worthy and admirable it might sound to be concerned about 'saving the Planet', in reality this agenda provides little space for social policy (Dempsey et al, 2011), or for taking into account the wider value base of the policy makers, or the beliefs and religions of the planned. There is little consideration given to the ways in which particular sustainability policies might impact upon different groups of human beings in society, in terms of their class, gender, lifestyle and religion and so forth. Likewise there is little linkage between sustainability policy and social issues such as poverty, social exclusion, disability, unemployment, and homelessness. A strict application of sustainability policy, which puts environmental concerns above human considerations, may actually exacerbate the situation by creating a people-less approach to planning (Greed, 2011). In the UK, the 2010 Equality Act lists seven protected categories that should be taken into account in all aspects of government policy making, including (in theory at least) urban planning. These are Age; Disability; Gender Reassignment; Pregnancy and Maternity; Race; Sex (gender) and Sexual Orientation; and Religion and Belief. However, overall equality issues tend to be given low priority compared with environmental considerations (Greed, 2005; 2017). Religion is on the list but it does not follow that it will get as much attention as the other categories. Some issues are higher up the pecking order than others, and nowadays sexuality tends to be given primary attention as the factor defining a person's identity (Habermas and Ratzinger, 2007). Social class (which does not even appear on the list) used to be the primary social factor, arguably because planners could justify their unpopular policies by claiming they were planning for the working class and knew what was best for society. Religion, faith and belief, as will be explained, are very low on the pecking order.

But does it matter? Surely religion is only of interest to a few people in these secular times? For many years pundits have declared that we are now living in a secular society (Cox,1965) and that the church is in decline. But there are still significant groups of people who need the time, respect, space, and building accommodation to exercise their faith. Firstly, there has been a major influx of immigrant groups and many give great importance to religion, as they come from countries which have never been secularised. Both Asian-origin Moslems and African Pentecostals have challenged the planning system in seeking planning permission for large buildings for worship and related community use. Demand has been generally been concentrated in ethnic minority areas particularly within the inner city. In many inner London boroughs over 60% of the population are now so-called 'ethnic minority' (in fact the majority) and they have set up scores

of small churches and meeting places (Onuoha and Greed, 2003). According to www.brierleyconsultancy.com, there are 500,00 Christians in black majority churches, and 1 million other Christians in Britain from Black, Asian and other minority groups, who are to be found in majority churches. Around 7,000 new churches have been started since 1980, and in the last ten years more new ones have started than old ones closed down.

Secondly contrary to the assumptions of Marx and other secularists (Tawney 1966; Cox,1965), religion has not withered away but is also growing within the white indigenous population too in the suburbs especially in charismatic and evangelical congregations in both traditional and independent churches (Cox, 1995; Davie, 2015). Goodhew (2012) found that that adult membership of the Anglican churches in the diocese of London has increased 70% between 1990-2010, and much of this growth is due to immigration. Thirdly, demand for church expansion has also come from East European immigrants swelling UK Roman Catholic congregations. All these new groups do not want the sort of cold, cramped, inflexible accommodation offered by buildings vacated by traditional dying denominations, but are demanding the right to create their own worship spaces and related facilities. As will be explained all these religious changes do have a spatial impact which planners need to acknowledge.

2 CONTENTS

This paper seeks to explore and illustrate the relationship between spatial planning and religion. The implications of these requirements planning policy and regulation are discussed. Examples, throughout the paper, will be related to the UK situation but there are parallels with what is happening in other countries too. The methodological and conceptual approach will be summarised. The ways in which religion itself and faith groups are treated in the planning system at the local authority level will be discussed, not least how the pursuit of sustainability policy marginalises such 'social' policy areas. The paper will take into account the two main components of the UK planning system, namely the development plans prepared by each local planning authority which set out planning policy for the area in question, and secondly detailed development control and regulatory requirements, regarding applications for new development and changes to existing buildings. It is at this detailed level of interpretation and application of regulations that the faith groups have the most problems with the planning system, and where local planners have the most discretion as to how to apply planning regulations. Examples are drawn from the environmental, economic and social fields of planning policy and practice. In the final section I set out some recommendations on how to change the system, and will include a 'toolkit' on how to mainstream religion into planning.

3 METHODOLOGY AND CONCEPTUALISATION

Since material on 'religion' was often absent within planning policy and regulations, I adopted an approach similar to when I was researching 'women and planning' policies because in both cases I was looking for something that was often missing or invisible (Greed, 1994, 2005). When I had investigated the values, world view and characteristics of the planning subculture I found a male-dominated, secular, technically-minded profession (Greed, 2013). One can observe, what Doreen Massey identified as 'the reproduction of social relations over space' in this case the transmission of the planner's personal experiences and world view onto the built environment, through the vehicle of professional decision-making (Massey, 1984). In this process some policy areas are majored upon and others are marginalised, and religion, along with gender and ethnicity, is a major blind spot (Mc Clymont, 2015).

I sought information both on development plan policy and planning control regulations related to religion. I undertook a web search of all planning applications, appeals and case law that related to 'places of worship' including using key words such as church, gospel, mosque, faith, and the names of the various denominations. I used www.compasssearch.co.uk which, in association with the Royal Town Planning Institute, provides frequently updated reports on current cases and appeals. I also searched using DCS (Development Control Services Limited) which is a password-only professional planning law site. I looked for relevant articles in the planning press, such as in 'Planning' which can be accessed at www.planningresource.co.uk . Since many of the key cases are related to London, I also consulted the GLA (Greater London Authority) and Planning Aid for London (a voluntary advocacy group). I combined,

and triangulated this approach, with a more informal and anecdotal approach of simply talking to people from a range of churches and other faith groups on their experiences and views on the situation.

There are only a few other existing research studies, for example by CAG a planning consultancy which has undertaken four key studies on the attitudes and policies of planners towards the needs of faith groups (CAG, 2008 a and b, 2009, and 2013), related to the situation in London and in the Midlands, focusing on Pentecostal and Moslem faith groups respectively. Doing a web search for the words church, religion, belief, faith in development plans, I found, brought up the obligatory equalities statement mantra at the start of every policy document. But hardly any local planning authorities actually follow on by referring to these matters in their policy statements, and very few have a separate chapter or section just on religious land-use matters. But the word 'church' came up hundreds of times, but only because the documents are referring to geographical locations such as 'Church Street', and every town seems to have at least one, reflecting our more religious past when religion did shape city form and structure (Greed,2017).

4 PLANNING POLICY

At an international level the sustainability agenda has dominated for many years. Environmentalism is a foundation of much government policy, However, the original definition of sustainability, as set out at the 1992 UN Rio Earth Summit by Mrs Gro Harlam Brundtland, (the first female Prime Minister of Norway) included (as stated) economic well-being and social equality as well as environmental sustainability. Through processes of subsidiarity, UN directive implementation, and the rolling out of the Agenda 21 programme, sustainability policy and regulations were transferred down to each nation state, in the UK's case through the intermediator of the European Union (EU) and into the UK, where the concept of sustainability had to be fitted into existing planning structures and cultures (Greed and Johnson,2016: chapter 10). The planning profession appears more at ease with physical, land-use matters and has particular affection for issues that can be quantified and counted. Therefore planners were happy to undertake Environmental Impact Assessments which measured mathematically the environmental effects of development. But they shied away from the more qualitative and less controllable non-spatial aspects of sustainability. In particular, anything to do with gender and 'women and planning' has always been a challenge to the planning profession (Greed, 1994). In fact in the environmental movement women have often been seen as the cause of the problems for 'having too many children' so from the start it was not particularly friendly to women, and was rather judgemental towards ordinary people too (Greed, 2011).

In contrast to the emphasis upon environmental issues, there have been very few requirements to 'count' or assess the social and cultural impact of planning policy and development proposals, either within the sustainability context or in relation to the social aspects of planning. Indeed planners may imagine that the impact of so-called social types of development cannot be 'counted', be they childcare, worship, community development (Greed, 2005; 2016). But places of worship, such as churches and mosques, like factories, do have a tangible physical building and fixed location, and, as will be explained they do have an impact in a variety of ways upon the surrounding urban area, in terms of transport needs, community development and employment opportunities. Whilst the planning system surveys and keeps records of details of many different land-uses, including housing, industry, commerce, recreational land and so forth, religion remains 'beneath the planners' radar' (Mc Clymont, 2015). Since there is no survey of religious building requirements, it is very hard to say how much land is needed and whether there is an over or under-supply of building space that might be used for religious purposes, and how or whether the situation is affected by sustainability requirements. And there is no high-level policy guidance to judge planning applications by.

However, there have been attempts to introduce Equality Impact Assessment, to parallel Environmental Impact Assessment. The current system (Equality and Human Rights Commission, 2010) seeks to integrate equality assessment into all aspects of policy making for all government departments in all departments, including planning. This builds on previous individual requirements in respect of gender, disability and ethnicity inter alia, and a PSED Public Sector Equality Duty exists to ensure this happens. However, as we found when undertaking research on mainstreaming gender into planning policy and practice, take up has been very limited in planning departments and many planners do not seem to think it is anything to do with them, owing to the technical and environmental nature of their work. In contrast it was found such measures are more acceptable in more women-related departments such as social services, health, education and personnel departments. There was little concept that gender might have

implications for apparently people-less, or male-dominated policy areas such as sport, industry and transport planning: although all these do really have major gender implications. Likewise religion was not seen as an issue to consider within mainstream policy making and it seemed to be a minor matter that would only relate to specific church building applications.

Furthermore there are no detailed standards as to how much land or what size of buildings should be provided for particular religions, relative to numbers in the congregation or catchment area. But Mulkeen (2014) notes that in past there were some attempts to come up with some guidance especially when building the post war New Towns, when in more religious times it was considered essential that every neighbourhood unit should have space set aside for its own church. But as CAG (2009) notes nowadays there is no attempt to quantify the need for land for religious use, nor for local authorities to specify standards for levels of provision. If one compares the lack of reference to religion in development plan policy, with the situation regarding retail development one can see how discriminatory the situation has become. Entire chapters in development plans are devoted to establishing how many shops are needed, using sophisticated techniques, such as retail gravity models, to establish hierarchies of need and the extent of catchment area at national, urban, local and even international levels, ranging from the enormous pulling capacity of major, out of town, shopping malls, to the role of traditional city centres, and down to the provision of local corner shops. If the same principles were applied to places of worship, there would be surveys of the needs of the different religions and denominations, the extent of their respective catchment areas, the times of opening, and consideration of all the ancillary issues such as parking, public transport and community accessibility. For example, the new Pentecostal mega churches and large mosques attract national, if not international congregations, and are bigger than most traditional cathedrals, and may be compared to major sports arena and football grounds in terms of pulling power. But planning policy would also need to take into account the more local levels of provision, such as smaller scale city-centre churches, and small chapels and Gospel halls serving local neighbourhoods. So, many churches and other faith groups find there is no recognition of their needs in development plan policy and thus no guidance on where they should locate when they approach their local planning office for permission to develop.

5 CONTROL OF DEVELOPMENT

Planners tend to shunt religion ‘down’ , out of the strategic policy making level, and into the local level of building control, confusion and ignorance seems to reign at this level too. There are many examples of churches trying to obtain premises in inner city locations, near to where their congregation lives (which would reduce the carbon footprint in terms of travel and contribute to the social strength of the area) and being refused. In desperation churches have been pushed further and further out and end up applying to use vacant industrial units, where they are likely to fall foul of antiquated planning laws. The Use Classes Order (UCO) sets out a series of categories of land use, such as shops (class A1) and cafés (A3), businesses (B1) industry (B2) , dwelling houses (C3), and non-residential institutions (D1) and places of assembly and leisure (D2) (Greed and Johnson,2014: 49). Churches, mosques and other religious building come within D1 alongside community centres, museums, exhibition halls and so forth, whereas some ancillary religious uses would come under D2 which is concerned with public halls, cinemas, sports facilities etc. So there is no separate Use Class just for religious buildings and they have mixed up with all sorts of other social and community uses.

But, this was not always so. Andrea Mulkeen (2014, page 23) found that between 1948-1987 religious buildings were separated out into their own Use Class, under the post war planning legislation that was the basis of the modern planning system under the 1947 Town and Country Planning Act. But they were amalgamated with other uses following the ‘streamlining’ of the system in 1988. One of the biggest problems caused by religion not having its own proper use class and being put in with leisure and places of public assembly is that it is seen as an economically non-productive commodity which actually detracts from employment and urban regeneration. There are many examples of churches trying to obtain premises in inner city locations, near to where their congregation lives (which would reduce the carbon footprint in terms of travel and contribute to the social strength of the area) and being refused (Greed, 2016). Robert Wickham a planning consultant specialising in representing religious groups has produced statistics that show there is a greater level of refusal of planning applications from religious buildings (Wickham, 2014). The high level of refusals and other planning problems faith groups encounter when seeking planning

permission will now be illustrated with reference to examples related to the three component policy areas of environmental, economic and social sustainability.

6 REASONS FOR REFUSAL

In summary the reasons for refusal that seem to come up again and again are as follows:

1. Economic and employment factors: 'taking' buildings and land allocated for employment and urban regeneration (even when they are empty and churches generate employment opportunities) for 'non-productive' religious uses.
2. Urban conservation, design, and external appearance issues: concerns about the overall character of an area, Advertising and signage, impact of minarets and foreign architecture (even in predominantly Moslem or ethnic minority areas).
3. Social issues around social cohesion and destroying the character of the area, issues about 'outsiders' disrupting the community and upsetting diversity balance.
4. Transport and parking issues seem to be applied particularly harshly, even when people tend to walk to church, or use minibuses or public transport.
5. Technical issues around building control, public health regulations and noise, pollution and disturbance, amenity, which seem to be especially harshly applied.

In the next subsections the environmental, economic and social implications of these attitudes will be discussed with reference to planning policy and sustainability, using examples, particularly from the ongoing saga of The Kingsway International Christian Centre (KICC) which encapsulates so many of the issues. Transport and technical considerations will also come into the discussion.

6.1 ENVIRONMENTAL FACTORS

The highest priority is given to the environmental aspects of sustainability within the UK planning system, and this is manifested strongly in transport policy and control over the use of the private car to reduce people's carbon footprint, (regardless of whether any public transport exists outside of London). Because this branch of sustainability practice is linked to transport planning it has inherited all the quantitative, people-less characteristics of previous generations of transportation planners, a silo of planning which has never been famed for concern with human beings (Greed, 2012). For years all the necessary social journeys to service the family in terms of doctors, post offices, government departments, and childcare were seen as merely social leisure journeys (Greed,2004). So there was no place in this arrangement for church journeys which were seen as individual mainly taking place on at the weekend and so were of little importance to transport planners mainly concerned with the journey to work. Many small churches have had problems with restrictive controls on car parking spaces, with little allowance for the fact that elderly and disabled people may need to travel by car and some people come from quite a distance with no Sunday bus service available. On the other hand some Jewish and Moslem congregants will only travel by foot to worship and so requiring parking spaces to be provided, in often tight cramped inner city sites is equally unrealistic.

But when it comes to church-related planning appeals, curious decisions can be made that do suggest a level of discrimination that results in some planners putting aside their environmental credentials, as in the case of KICC (Kingsway International Christian Centre) . This is a huge church of over 12,000 members from 46 different nationalities, which has been seeking to build a mega church which would seat more people than any existing cathedral in Western Europe. The church had to move from its previous premises to make way for the London Olympics with the promise from the planners that any alternative site would be looked upon favourably. But not so! Since then the church has tried to get planning permission on several different buildings and new sites, whilst its congregation remains fragmented and reduced to holding multiple services in a range of scattered venues. Back in 2009 KICC's application for an 8,000 seater mega-church in Rainham Essex (on the outskirts of London), on an industrial estate was refused. They partly chose this site because there were no near neighbours so they could not be accused of causing a disturbance and being too noisy. This application was refused on the grounds that the site was already allocated for industry, although most of the units remained empty.

The Planning Inspector dealing with the Rainham actually stated that the church would put too much demand on local bus services (isn't that was buses are for?). This is extraordinary in that nowadays transportation planners are obsessed with getting people out of their cars and on to public transport for 'green' environmental sustainability reasons. In the cinema case too, the [new] planning inspector also raised concerns about too many pedestrians being generated, because many of the congregation would walk to church, as well making as a range of curious comments about the use of bicycles, local taxis and public transport all being overwhelming for the area (DCLG,2009). The KICC Christians meant to fly to church on angels' wings? Planners would not apply the same mentality to office or retail development, where (for another set of confused reasoning) they are encouraging people to use public transport and leave their cars at home. As a result of all these problems the KICC saga has been solved to some extent by the church 'leapfrogging the green belt' and moving into more rural premises has now moved to Buckmore Park, Maidstone Road, Chatham, east of London, as well as still retaining churches in Walthamstowe and other satellite locations, http://www. kicc.org.uk. People are ferried to and from the new Chatham site by minibus or commute by car, as public transport is not direct, and arguably this has had more impact on the environment than just letting them stay in London.

More broadly, secularised environmental attitudes often disregard the environmental principles already found in many religions, and do not work with faith groups. Both Christians and Moslems have emphasis on being guardians of the earth and caring for it, and Creation stories, so should be encouraged in instilling the young with a care for the environment. Much more so Hindu and to some extent Buddhist religions have very strong emphasis upon protecting the natural world. So it is ironic indeed that faith group members are often picked on for lacking environmental awareness, particularly when many are relatively poor immigrant groups and not part of the mainstream consumer society (Narayanan, (ed) (2015).

6.2 ECONOMIC REASONS

Many churches and other faith groups have been forced to look for accommodation on the outskirts of cities, and have applied for planning permission to use industrial units on business parks. In many cases they have been refused permission because they are seen as taking up space needed for employment even when they have remained vacant for several years. Overall faith groups are seen negatively as having no economic contribution to make to society. But such faith groups often supply social infrastructure and social capital that enables people to work in the first place, especially childcare facilities, local advice and training on employment opportunities and a voice in the community. Larger churches may also provide in-church employment in running bookshops, websites, cafés and food banks and all sorts. In fact The provision of childcare and home support for the workers has been seen as a key ingredient in ensuring that urban regeneration programmes can actually work . More broadly, anthropologists investigating the role of factors that generate economic development in South Asia and Africa, have found that Pentecostal and Evangelical churches can have a positive role, in generating employment, education, local business growth and even health and community wellbeing. This is partly of adherence to scriptural principles regarding saving not spending, reductions in crime, more stable family life and an overall more aspirational approach to life. Because church leaders are local and not part of the ex-pat expert advisor brigade they are likely to have more influence and understand what really works locally. Granted such changes may open local communities to western-style consumerism and rejection of traditional indigenous values, but it is generally found that with time people can reflect on their lives and retain what is good from the past as well as the present (Freeman,2012).

Likewise inner city faith groups can have a major role in urban regeneration and renewal which is going to be more sustainable in the long term than being dependent on bringing in footloose multi-national companies attracted by the grants, whilst national retail outlet chains often put locally run shops and traders out of business (Brownill, 2000). Patrick Anderson a Christian working with Planning Aid for London, told me sadly, that 'church is not seen as the engine of the economy' by the planners. He also commented that globalisation of production, is the reason that so many reason industrial units remain empty because industry has gone elsewhere where labour is cheaper, and the same global forces have increased immigration to the UK. So it is foolish for the planners to hold on to the industrial units and wistfully wait for traditional industry and business to pick up, and rather they should be encouraging and supporting faith groups, and immigrant groups as a whole, as the new sources of economic growth and urban regeneration.

6.3 SOCIAL FACTORS

As can be seen faith groups can provide a whole range of social goods and social and religious capital which supports and regenerates communities. Pentecostal churches have an emphasis upon the full Gospel of healing, healthy living, prosperity and wellbeing. So one would imagine they would be ideal partners in Healthy city programmes which are often closely aligned to sustainability objectives and World Health Organisation initiatives (Guise et al,2010). Even if the planners take a purely secular view of the value of religion, as Katie Mc Clymont explains (2015) churches have always made a major practical contribution through what she calls 'municipal spirituality' by providing church halls, and other ancillary buildings for use by the community, for crèches, community meeting places, food banks, support groups, emergency accommodation for the homeless and refugees, and also simply quiet spaces in busy cities where people can contemplate and even worship, such as in graveyards, cemeteries and church gardens. But much of this seems to be 'under the radar' of the planners, not least because some of this provision is mainly used by women, those with small children and also the elderly.

Previous research on 'gender and planning' issues (Greed, 2005) found that many essential services and activities essential to women did not register as being relevant to land-use planning. For example childcare requirements generates the need for crèches, day care facilities and nurseries, although they require buildings and have a substantial impact on journey to work patterns therefore should be a major consideration in formulating land use, transportation and locational policies. But planning applications for such facilities have often been refused, and on appeal it has been deemed that such uses are social and therefore ultra vires that is outside of planning law's remit because they are not to be 'a land use matter' (Greed,2004). In contrast Sport, has always been seen as a valid physical land use, especially playing fields for male ball games , for which large areas of land is provided, although arguably sport is also just a social matter. In the same way, religion and all the so-called social facilities it provides have often been unrecognised and therefore rendered ultra vires in the planning process, even when this neglect has major environmental sustainability implications in reducing the availability of local facilities resulting in more journeys outside the area in question.

In addition to planning control, building inspectors seem to have problems with multi-use buildings where maybe there are worship and meeting places, but also offices, communal areas, catering, educational facilities and maybe even cafes and retail outlets. Strict application of rules and controls, never designed for such multi-use buildings, will result in refusal, or in increased costs and lengthy delays. Building control operates separately from planning control with additional sets of rules. An application may be passed around to all the relevant departments such as to the fire department, licensing authorities regarding 'live music', public health and sanitation, and even the police and magistrates. One also needs to consider under environmental issues, policies and controls regarding, noise, disturbance, cooking smells loss of amenity and so forth. For example, there are all sorts cultural issues around whether people accept or complain about religious noises such church bells, Moslem calls to prayer, gospel singing and street evangelism accompanied by music. Noise is a frequent reason (excuse) for refusal, and there are many examples of 'non-traditional' (black) churches being required to install treble glazing.

However, paradoxically, when it suits their needs, governments actually like faith groups when they take some of the burden off the welfare state by providing housing, health, education and social care for free. But this is not translated into acknowledging the need for buildings in which to undertake this work. Whilst they like this 'religious capital' (social capital) that faith groups provide, they are much more wary of their 'religious capital' that is their beliefs, because of fears of fundamentalism and social division (Baker, 2012). As stated although religion is one of the seven categories under equality legislation, it is low on the pecking order and often viewed negatively and as incompatible with other equalities issues, such as gay rights and the need for social cohesion. Yet, many churches and mosques contain people who themselves suffer high levels of discrimination because of their race and yet they are powerless to fight back and find themselves cast as promoters of discrimination, rather than being discriminated against themselves.

Faith groups may receive opposition to their presence in local areas from both progressive groups concerned with equalities (as above) and from more traditional, reactionary groups in society. For example, returning to the KICC saga, in their search for large buildings (before moving out altogether to Chatham), the church put in applications on a range of sites and buildings within London. For example they bought a redundant cinema in Bromley, inner London, near to Crystal Palace, and started using it as a church, in the hope of receiving retrospective planning permission. They were subject to the threat of enforcement proceedings on a whole series of technicalities. As the local press attests, local residents

expressed objections on a much wider range of criteria. In particular they have expressed concern about 'outsiders' taking over the building, thus apparently depriving existing residents of its use, in spite of the cinema being derelict and unwanted for years. Fears were expressed by some local residents about noise, disturbance, increased crime and anti-social behaviour taking place, and overcrowding on the pavement (sidewalk) outside (www.crystal-palace-mag.co.uk). In reality nobody has wanted the building for years, the locality has a substantial and long-established ethnic minority population and members of the KICC church are known for their holiness and good works, and are hardly part of the perceived criminal fringe.

More broadly, this example raises questions as to quite 'who' comprises 'community' and 'local culture' in the minds of the planners. It also raises issues as to what local planning authorities see as valid leisure, entertainment and cultural uses. Many local councils are keen to promote the 'night-time economy' and the 24 hour city. Such policies usually results in over-provision of licensed drinking premises, with attendant noise, public drunkenness and street urination. There is clearly a double standard as many churches are refused permission on the basis of noise and disturbance, although many congregations are likely to be tee total and careful not to disturb the peace. In the end the cinema building was turned into an arts complex, a use which arguably does not reflect the needs of the majority of the local population but that of the metropolitan elite. But culture, media and the arts are far more likely to be seen by the planners as drivers of urban regeneration and the local economy, than religion as attested by many other examples from my research, circus school (SOAS, 2014). Because there is no survey of the actual need for church premises, planners base their decisions on the assumption that there is a drop in church attendance, and thus decline in the need for church premises, and so it is argued that more redundant church buildings should be returned to community use (Branson, 2009). For example, St Paul's Church Bristol, built in 1790 and restored through the Heritage Lottery Fund, which was adapted in 2005 to make space for a circus arts academy. Note this is a majority ethnic minority area where just up the road one can find Black churches precariously holding on to tenancy of industrial units who would have jumped at the chance to be offered such redundant church buildings in the area.

7 CONCLUSION

The planning system does not value religion or the role of faith groups to increasing economic, social and environmental sustainability. Planners either ignore the spatial implications of religion, or relegate it to the wrong planning law categories (Rogers and Gale, 2015; Wickham, 2014) Both ethnic minority groups and women feel particularly discriminated against in this respect. Women ministers of Pentecostal churches felt they were not taken as seriously by the planners than white male vicars (Onuoha and Greed, 2003).

Both attitudinal and procedural measures are required to change the current situation. Both sides: planners and faith groups need to understand each other's viewpoint and goals. Congregations, through the auspices of advocacy and planning-education groups such as Planning Aid, need to learn about how planning operates, and how policy statements and legal parameters delineate what planning can and cannot achieve. Planning, architecture and local politics need to be promoted as careers for young people from faith groups which can reshape the future, as is already being done at the KICC church (Beckford,2000; NCLF, 2015).

But, it is the planners, not the planned, who hold the most power and responsibility. So all development plan-making should include surveys and analysis of the numbers of religious buildings and spaces There should be a calculation of how much need there is, in terms of numbers of existing, vacant, suitable buildings and levels of existing and future demand. A hierarchical model of the different sizes and types, of catchment areas and levels of attraction of different sorts of religious development should be created (along the lines of what is done already through retail gravity models of attraction, catchment area and demand) (Greed,2016).

The implications of religious land-use and development should be related to employment, transport and housing policy. Likewise sustainability policy, economic development policy, and equalities assessments should all take into account the value of religious development which would thus be integrated into high-level, city-wide policy and not treated as an isolated, local-level afterthought. Considerable attention should be given to public consultation and participation, involving faith groups from the start.

At the national level, there need to be changes in planning law, especially in the UCO to ensure that religious development is not lumped in with other competing uses, and that it is given full value and respect. At the local planning level, there should be a more tolerant, less negative, and less judgmental approach to development control, and a more sensitive approach towards applying building regulations and rules which were designed mainly for commercial buildings, not worship spaces. It is to be noted that the Greater London Authority has taken some of these issues on board, including some more positive references to religion both in its main development plan document and its related Supplementary Planning Guidance (GLA,2007; GLA, 2009, pages 22,62,86,91, 264). If we do all this it will help create sustainable, functional towns and cities, whose populations benefit from a more equal, peaceful and understanding way of life.

In order to integrate religious considerations into the planning process, I have been adapting the 'Women and Planning' principles of the Gender Mainstreaming Toolkit for planning officers (RTPI,2003; Reeves,2005) in order to apply it to religion in Figure 1. A fuller version is presented in my research report (Greed, 2017).

FIGURE 1: TOOLKIT TO MAINSTREAM RELIGION INTO PLANNING POLICY

To integrate religious issues into the planning process one must ask the following questions:

1. What organisational resources and expertise is available to the planners on faith and religion?
2. Does the policy-making team include those knowledgeable on religious issues?
3. Who are perceived to be the planned?
4. Who is consulted in terms of ethnicity, class, gender, and religion?
5. Are both leaders and laity included? Both Clergy and community members?
1. 4. How are statistics gathered, are they disaggregated by religion?
6. Is there adequate funding to carry out the work?
7. What are the key values, priorities and objectives of the plan?
8. How is it evaluated? By whom?
9. How is the policy implemented, managed, monitored and managed?

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ID 1325 | THE RIGHT TO THE CITY FOR REFUGEES AMID A EUROPEAN CRISIS: AN EXPLORATORY PERSPECTIVE

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1 INTRODUCTION

My presentation for the AESOP annual congress falls within the scope of a wider exploratory approach embraced at the launching of the post-doctoral research project INSEHRE 21, focusing on the process of socio-spatial and housing inclusion of African and Middle Eastern refugees and asylum seekers in contemporary Europe, with reference to the reception of Portuguese-speaking African communities in Portugal, from 1975 until today, i.e., after the liberation of most of its former colonies. The aim of this presentation is twofold: to introduce some theoretical authors selected for structuring the INSEHRE 21 investigation; and to confront the key concept of inclusion with the European possibility of constructing responses directed (or not) to the access of these needy immigrants to the Right to the City (Lefebvre, [1968] 2009), both purposes with reference to the current neoliberal crisis in the Western countries, particularly in Europe.

This presentation is organised into three interconnected parts, the first one concerning the theoretical-methodological structuring notion of inclusion starting from the thoughts of four important scholars, such as Michel Foucault, Slavoj Žižek, Henri Lefebvre and David Harvey, seeking to identify the broader meaning of belonging, and its paradoxical significances, and of “spaces of inclusion”, namely its materialisation. The second part refers to the project INSEHRE 21 itself, its principal objectives, description (theme, object of study, questions, methodology and structure) and state of the art, addressing social (self-) production and official production of housing (and urban) space in Portugal and other European countries. The third part discusses the theoretical premises of the project in light of its principal intentions aiming to frame spatial (and intersectoral) inclusion processes in future reflections and to identify new avenues of theoretical and empirical research.

2 THEORETICAL FRAMEWORK

In the late 1970s, the French philosopher and social theorist Foucault ([1977/1978] 2008) defended that, in general terms, the government seeks to include all citizens, according to several levels of partaking in the building of society, so they best meet its policies. In short, for the author, inclusion equals normalisation within the framework of “governmentality”. It means preserving all individuals inside of the capitalist neoliberal system involving them in activities targeting the maintenance and reproduction of its segregating market logics. This contradictory process – inclusion as a path for rejection – implies larger surveillance and state control over the behaviour and wealth of communities. Nevertheless, referring to the crisis of the global system, Foucault (ibid.) also stressed its symptoms, outbreaks and/or forms, e.g., the resistances and counteractions that seek to encourage society as the legitimate holder of its knowledge whilst protecting collective needs.

For the Slovenian sociologist and theorist Žižek (1997: 44), the hegemonic neoliberal globalisation that emerged during the 1990s already had its strings attached to the fiction and/or ideal of multiculturalism tolerance, that is, a condescending ethnocentric approach based on a respectful form of "racism with distance" that asserts one's own superiority, all the while founding propitious grounds for the emergence of fundamentalism ideologies and xenophobia. The decoding of such a paradoxical process – acceptance as form of rejection – forced Europe to transfer the focus once centred on the clash between cultures to the conflict between opposing viewpoints regarding the coexistence of different cultures (Žižek, 2016). Therefore, targeting "real inclusion", Žižek (ibid.) advocates the commitment on the quasi-utopia of global solidarity (nearly) as a path for collective redemption and finding.

Regarding the physical expression of conflicting processes in neoliberal context, the French philosopher and sociologist of space Lefebvre ([1974] 2000) discussed, in the mid-1970s, the exclusioninclusion present both in the spatial practices and in practical spaces, i.e., central to interventions and their material effects, while differentiating public and/or public-private (official) production of political spaces, namely representational spaces with exchange value (commodities), from the (social) production of social spaces, also known as spaces of representation, i.e., spaces of social inclusion regarding their use value. Furthermore, Lefebvre ([1968] 2009) developed the guiding concept of Right to the City advocating one's complete access to a myriad of rights (housing, infrastructures, urban benefits, etc.) and the construction of citizenship.

Recently, as throughout the peak of the global neoliberal dominant system, the British urban geographer Harvey (2008: 23) reinforced the importance of this fundamental notion by sustaining that this Right to the City is "moreover, a collective rather than an individual right since changing the city inevitably depends upon the exercise of a collective power over the processes of urbanization." As such, regarding the production of what I designate as "spaces of inclusion", the author reclaims some vital questioning: ""what kind of humanity [do] we wish to create amongst ourselves," and "how do we [really] want to create it?"" (Park apud Harvey, 2007: 2). Hence, embracing a hopeful vision, Harvey (2000) also advocates the collective use of the cracks in the system (its inconsistencies) so as to build an alternative, emancipatory and socially just society.

3 RESEARCH PROJECT INSEHRE 21

3.1 OBJECTIVES

The purpose of the study is to identify the strategic guidelines being drawn up by the European Union (after 2015, being a year of pronounced influx of refugees) for the socio-spatial and housing inclusion of these vulnerable and heterogeneous social groups, as well as the more significant consequences of the interventions of certain States, in view of their different border pressures. Moreover, I intend to deepen current policies and instruments in Portugal, being considered a semiperipheral European country with experience regarding the inclusion/exclusion of Portuguese speaking African communities after 1975, where the shortterm arrival of refugees (until 2018) is expected to be of small-scale, as opposed to Germany, the leading European hoster during 2015. Consequently, I propose to follow the interventions programmed by the central government, articulated with local administrations, civil society (more or less organised) and the private sector, seeking to identify contributions for the rise and consolidation of a new paradigm of socio-spatial and housing inclusion of refugees coming from Africa and the Middle East.

On the other hand, considering the ideological-economic division between Member States of the European Union and the most excluding effects of certain (inter)national policies, I also seek to understand if these macro strategies have induced local, complementary or alternative, visions to the current dominant global policies and practices, developed by grassroots communities encouraged by better access to housing, urbanisation and full citizenship. I also want to identify whether the involvement of these immigrants in the production and/or transformation of (their) urban and housing space can contribute to fostering and invigorating European networks of solidarity and transnational support with positive effects regarding their socio-spatial inclusion. At the same time, I intend to identify convergent practices within this network as a starting point for the drafting of an international manifesto aimed at improving the quality of urban and housing life of refugees and their host societies as well, reinforcing Portugal's strategic importance on the topic of the European response.

3.2 DESCRIPTION

The theme of this research is the inclusion of African and Middle Eastern refugees in contemporary Europe from a socio-spatial and housing perspective, with Portugal as a case study as opposed to Germany.

The critical reading of the past, namely the reception of Africans from Portuguese-speaking countries after the independences (1973-75), synchronous with the onset of political and social instabilities, particularly in Angola, Mozambique and Guinea-Bissau, is a case-control. This allusion helps to understand, on the one hand, the complex processes of self-production of housing space in everyday life as a strategy of access to housing within a specific context of reduced state response regarding the promotion of massive housing. On the other hand, it helps to comprehend the recent public and private-public interventions of (re)housing aimed at controlling the access of these communities to space and accommodation, including the consequences of these different scenarios concerning the inclusion/exclusion of these populations in Portugal.

The research has, as object of study, the access of the most vulnerable immigrants, refugees or asylum seekers, to space and housing in Europe, either through the government of the Member States that follow the strategic directives of a discordant European Union, or through the participation of local agents in the process of production and transformation of the urban and housing space. I refer, in particular, to (1) government policies and practices with greater openness to the participation of these immigrants in the production of space, including in regard to the design of (their) urban and housing solutions, granting greater room for manoeuvre in a more inclusive scenario, and (2) organised civil society (local associations, NGOs, religious congregations, etc.) that, within this flexible governance, articulated with refugees and/or other co-citizens residing in Europe – considering and respecting their origins, rhythms and own experiences –, adopts innovative and (vitally) emancipatory responses, complementary or alternative to the globally advocated.

The main questions that guide this study are:

1. is the European Union promoting the economic, political, socio-spatial and housing inclusion of refugees from Africa and the Middle East in Europe today?;
2. how can Member States, conditioned by the dominant political and economic environment, through a critical analysis of their past experiences on this subject or similar ones, contribute to the establishment of more inclusive national (socio-spatial, urban and housing) policies?;
3. can local communities, together with governments and other players, including immigrants and/or refugees, contribute to identifying practices that point to larger access to urban space, infrastructured housing, and complete citizenship?;
4. are these national and/or local learnings able to revert politically and operationally in favour of the socio-spatial, urban and housing inclusion of refugees on a transnational scale, thus contributing to the building of an inclusive Europe?

Methodologically, I opted for a qualitative approach. Starting from architecture and urbanism as nuclear disciplines, I will make an interdisciplinary bibliographical review on the scientific, theoretical and empirical knowledge, referring to the two identified models of access to space and housing (via global or local responses), that are the object of study, including synergies, permeabilities and consequences. Then I will seek additional empirical information on the subject, case study (from a historical perspective) and cases for counterpointing in present-day Europe, through fieldwork. This includes conducting semi-structured interviews with privileged speakers, namely members of governments (including of the European Union), grassroots communities and representatives of immigrants from the Middle East and African (including Portuguese-speakers in Portugal), and direct observation in European contexts that represent the problem that I address. The restitution of knowledge will take place through communications in scientific meetings, publications in specialised journals and a colloquium with the participation of the agents that were interviewed, adopting a reflexivity logic. The recommendations will be included in the final report and book, also being disseminated on the project website.

The written record of the oral discourse and of the informed observation of the living space will contribute to illuminate the complex processes of access to space and housing for masses and their effects, such as the role of the various players involved in this dynamic. The construction of an iconographic roadmap, consisting of photographs, drawings and maps, based on interviews and observation, besides illustrating

morphologies, typologies and types of housing, among other indicators, constitutes an additional tool for analysing these processes and their materiality. Thus, I intend to decode the logics of appropriation and selfproduction of the urban and housing space (re)produced by these immigrants under study, as well as the physical expression of some governmental solutions (policies, instruments and practices) aimed at the access of these groups to housing, according to different phases (initial reception, support for installation and inclusion), endeavouring to identify points of contact between different practices (global, national and local) and between these practices and the drawing of responses leading to greater inclusion. This cross-cutting approach will be a positive differentiator in broader international projects-to-be about refugees' inclusion in Europe today, reinforcing North-South research partnerships.

The research is structured in two parts, the first referring to collected experiences namely in Portugal and the second to the problematic, both starting from a theoretical essay on “spaces of inclusion” in contemporary Europe. The first part contemplates two chapters alluding to the lessons of the African diaspora including: (I. 1) the study of self-produced neighbourhoods in other people's soil and/or on private nonbuildable land, and (I. 2) areas of rehousing with low costs, especially in the Lisbon Metropolitan Area. The two points of the second part are about: (II. 1) the present materialisation in space of the refugee crisis in Europe, noteworthy in impasse areas that are part of the most covered routes, such as refugee camps in Greece and/or Hungary; and (II. 2) on (inter)sectoral public discourses and responses being outlined in Europe, aimed at the access of these refugees to space and housing, including its contradictions, taking into account different past experiences. These interventions will be analysed in light of the economic-political and social structures of the countries. I refer, in a comprehensive approach, to Greece and/or Hungary, among other Member States, and, in an in-depth look, to Portugal, being a non-wanted peripheral country that is coming out of a financial recession but that wishes to collaborate on this matter, as opposed to Germany, a central and preferred European destination in economic growth that proclaims great capacity for inclusion. This study finishes with a critical analysis that articulates the initial theoretical framework with its empirical parts, preparing the research for its final conclusions.

3.3 STATE OF THE ART

The current refugee crisis became highly visible in 2015 when over one million people from Africa and the Middle East crossed the European borders seeking to survive (UNHCR, 2015). Besides enhancing the image of the Mediterranean as a geographical and cultural barrier, European structural imbalances have become evident due to the financial-ideological rupture between northern and southern countries (Varoufakis, 2016) and, lastly, between the United Kingdom and the other 27 Member States of the European Union, under the Brexit. Furthermore, the pressure of terrorism and nationalist xenophobia in a continent unprepared to receive these populations and habits have deeply increased (Žižek, 2016). By the end of 2015, Portugal had welcomed 699 refugees from 1354 asylum seekers (i.e. population of concern), contrasting with 316,115 individuals of the 749,309 requests addressed to Germany (UNHCR, 2016: 58-59), the European country with “the proacceptance political flag”, having great expression through that year. In a considerably reduced scale and with no border pressure, by 2018, Portugal intends to receive 10,000 refugees, approximately 13% of its present-day Portuguese-speaking African immigrants (SEF, 2015: 65-69).

The urban and housing effects of this complex scenario are yet unexplored. On a macro scale, space produced in the refugee camps of Europe, as identified by Flinders (2016) in line with Lefebvre ([1974] 2000), illustrates the individual (often survival) strategies of everyday life. Concerning Portugal, the urban areas of illegal genesis (AUGI) and the self-produced neighbourhoods located in occupied lands, in both cases inhabited by Africans since the 1970s, illustrate daily processes as well (Raposo, 2012; Cardoso and Perista, 1994). In the long-term, national governments face many local challenges mostly related to the access of housing, urbanisation and the building of citizenship, as encouraged by Lefebvre ([1968] 2009) and Harvey (2008).

Although the MIPEX (2015) indicates an integration of 75% in Portugal and of 61% in Germany, the OECD/EU (2015) declares that 14% and 6% of their immigrants have reduced living conditions. Past governmental responses fall short of immigrants' needs and of the alleged intentions to overcome them. Regarding Portugal, once the SAAL was concluded in 1976 (Bandeirinha, 2007), only after 1990 did the administration conceive new significant public instruments so as to promote housing space. There is the Law of AUGI (1995), whose reconversions were studied by Raposo (2011), and the PER (1993), with 32%

of its segregating rehousing practices targeting Portuguese speaking African immigrants (Malheiros and Mendes, 2007; Malheiros and Fonseca, 2011: 54), followed by some other unsustainable versions (Amilcar et al., 2011). In some countries of origin, as recognised by Melo and Viegas (2014) and Viegas (2015), massive resettlement and rehousing practices are even more segregating.

The Portuguese government wants to contribute towards the inclusion of refugees in Europe: (1) the Working Group for the European Migration Agenda (2015) anticipates a National Action Plan, (2) the State Budget (2016), despite the weak economic growth, provides for the co-financing of European mechanisms up to € 24M, and (3) the Major Options of the Plan (2016-2019) recommend innovative housing policy, stimulating the public reflection (Pereira et al., 2016; Matias, 2016). Germany, meanwhile, intends to maintain economic development by employing immigrant workers, also by providing the construction of 400,000 homes/year for these refugees (Deutsche Bank, 2015, Reuters, 2016). However, Somerville and Steele (2001) reveal how the limited housing options for minorities favour exclusion. Thus, local responses from civil society have emerged all across European countries whilst trying to accommodate these communities inclusively.

4 BRIEF REFLECTION

The cross-checking of theoretical and empirical issues concerning the strategic guidelines being drawn up by the European countries for the socio-spatial and housing inclusion of refugees (and asylum seekers) must take into account, as underlined by the nominated scholars – Foucault, Žižek, Lefebvre and Harvey – , the hegemonic global neoliberal system we live in, as initiated in the late twentieth century having increased at full steam to these days. Regarding the corresponding policies, following Foucault's thoughts ([1977/1978] 2008), this means that the European governments, either from central (Germany) or peripheral (Portugal) countries, may be inclined to create mechanisms of seeming inclusion for the needy immigrants that, in fact, in the long run, contribute instead to the preservation and/or enhancement of a predatory system that will necessarily neglect them. Žižek (1997) addresses a corresponding deception when unveiling the hidden intentions and consequences of the multiculturalism tolerance in Europe, by defending that separation between different cultures results from taking a discriminatory position towards these immigrants. Of interest for my quest of production of "spaces of inclusion", i.e., spaces where these poor immigrants may really belong to, Lefebvre ([1974] 2000) identifies that most public and/or public-private spaces are being forged so as to create more value, thus to nourish the market logics of capitalism. In such context, access to housing, infrastructures and urban benefits may be taken into account. Nonetheless, the inclusion of refugees (and asylum seekers) in the production of their space – as a legitimate path for the collective construction of a complete form of citizenship – is lost due to the nature of the process. Harvey (2007; 2008) would surely reject this restrictive approach, also, whereas advocating the Right to the City both as a path and effect of the forging of an emancipated and a much more just mankind. This problem is far more relevant as we are confronted with the necessity to create both inclusive living (housing and urban) conditions for (and/or by) these migrants, in need, and their hosting societies. Countries with less border pressure (e.g. Portugal) and that are deprived of flourishing economies may constitute privileged ground for implementing new experiences and practices.

Perchance lesser controlling local governments articulated with grassroots communities and immigrants are now in a more favourable position to identify and implement more inclusive actions than European and/or national satellite administrations. If so, resistances and counteractions wouldn't have to happen in order to defend society and its vital collective needs, this being an indicator of systemic crisis as identified by Foucault ([1977/1978] 2008). Immigrants and civil society would, rather, participate in the constructing of an innovative European global culture having their necessities as priority. Žižek (2016) corroborates this thought by calling to all our human solidarity as opposed to the indifference of the capitalist system. Following an interrelated philosophy, Lefebvre ([1968] 2009; [1974] 2000) refers to spatial practices of inclusion that point to the production of inclusive spaces taking into consideration its use value. For its part, Harvey (2000) finds in the paradoxes and contradictions of the capitalist system the encouragement to overcome it, materialised in Spaces of Hope, these spaces also being what I would classify as "the right to the inclusion".

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ID 1358 | SPATIAL INJUSTICE OF CENTRAL AREA PUBLIC SPACES AND ITS PRODUCTION MECHANISM: A CASE STUDY IN NANJING, CHINA

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ABSTRACT: Like many other large cities in China, Nanjing central area has experienced a large scale urban regeneration since twenty-first Century, mega-retail-Led regeneration, which transforms the original residential land to commercial land, dominates the process. Large scale and huge volume flagship stores emerge on the regenerated land affected by the commercial building model coming from the developed countries. The emerging space form is also supported by the local government, because it can quickly make the image of the city catch up with the international standard, significantly enhance the level of physical space environment and bring considerable economic income. Nevertheless, more and more attention has been paid to the negative social effects brought by this space form. Taking the central area of Nanjing as the research object, based on 2000-2015 historical topographic maps, this paper reveals the

transformation characteristics of central area space form in Nanjing, it shows that the space form has been transformed from the dispersed, high density and low plot ratio to the concentrated, low density and high plot ratio, in the meantime, it has produced many so-called “public spaces”. According to the authors’ first-hand survey data, this paper finds that the so-called "public spaces" are just the outdoor spaces separately belong to different commercial flagship stores, and in which there exist obvious spatial injustice. The injustice embodies in two aspects: one is the function simplification, the “public spaces” only bear the commercial and transportation functions, which can not meet the requirements of the central area public spaces to carry a variety of social activities; the other is the environment exclusiveness, the “public spaces” just designed to attract the young middle class with a consumption orientation, which can hardly be used conveniently, comfortably and with dignity by all regardless of age or economic circumstances. This paper also analyzes the production mechanism of space injustice from the aspect of China’s land regeneration system, and the local government entrepreneurialism and the capitalization of space production are defines as the root cause. In accordance with the analysis result, this paper suggests the public policy attributes of urban regeneration should be strengthened through the reformation of the land regeneration system and planning-making system, and the improvement of public participation, so as to obtain the realization of spatial justice.

KEYWORDS: Spatial Injustice; Mega-retail-led regeneration; Production mechanism; Central area public spaces; Nanjing, China

1 INTRODUCTION

Public space in central area is an important carrier of urban public social activities, it can promote the social sustainable development better with higher inclusiveness. The experiences of construction in Europe and America in the latter half of the last century demonstrated that, property-led regeneration would lead to privatization of the public space in the central area, and losing the true “Publicness” (He and Wu, 2005; Steel and Symes, 2005; Low and Smith, 2006; Minton, 2006; Madanipour, 2013; Tallen, 2013). At the end of the last century, western scholars combined social justice and space, and put forward the concept of “Spatial Justice” (Lefebvre, 1991; Harvey, 2008; Harvey, 2010; Soja, 2010), which raised the reexamination of the social attributes of public space, such issues as accessibility, privacy of the public space and the right to develop and use of different populations had increasingly become the focus (Mitchell, 2003; Pasaogullari and Doratli, 2004; Varna and Tiesdell, 2010; Gehl, 2011; Németh and Schmidt, 2011; Mehta, 2014).

China's modernization and urbanization are similar to those of European and American countries in the 1970s and 1980s, property-led regeneration dominates the process (He and Liu, 2008), and the central area often has the most frequent urban regeneration activities. Under the regeneration, the quantity, shape, environmental quality and function content of public space in central area have changed remarkably. Nevertheless, like the western countries, the transformation of public space under the economic-oriented regeneration always focuses the improvement of the environment quality so as to attract the consumer groups, and neglect the essential attributes of undertaking social public activities (Yang and Xu, 2011; Zhang and Hu, 2013).

In recent years, with the promulgation of the national planning documents, New Urbanization Plan of the State (2014-2020) and Opinions on Further Strengthening the Administration of Urban Planning and Construction (2016), and the convening of the “Central City Working Conference (2015)”, the concept of seeking social equity has been emphasized. Simultaneously, the thoughts of “Space Justice” and “Inclusive City” are introduced to China, and also the “New Urban Agenda”, which was issued at the Third United Nations Conference on Housing and Urban Sustainable Development held in Ecuador in 2016, appealing to all the countries to promote the construction of “Inclusive City” and “Shared City”, particularly emphasizing the importance of public space (Shi, 2017). Under the influence of these global planning concepts, Chinese scholars begin to pay attention to the social benefits of public goods such as public space, from qualitative point of view, some scholars criticize the lack of public justice in China's public space (Yang, 2006 ; Chen and Ye, 2009a; Yang and Xu, 2011; Zhang and Hu,2013), discuss the definition of publicness in public space (Yu, 2005; Xu and Semsroth, 2013), social attribute characteristics (Yang, 2013) and responsive solution of privatization of public space (Dai and Xing, 2010; Zhang and Yu, 2010), but lack the quantitative research. Hence, this paper hence takes Nanjing Xinjiekou city centre as the research object, based on the 2000-2015 year history maps and one-hand survey data, and

quantitatively analyses the change of public space form and function, and the social injustice of the current public space and its production mechanism.

2 CONCEPT DEFINITION AND STUDY OBJECT

2.1 CONCEPT DEFINITION

2.1.1 PUBLIC SPACE

Public space, as a technical terminology, first appeared in sociology and Political Philosophy, in the early 1960s, it gradually was introduced to the subject area of urban planning, and appeared in architectural academic works written by Mumford and Jacobs. It has different definitions according to different angles (such as social research, political philosophy, and spatial design, etc.), but they also has something in common (such as accessibility) (Chen and Ye, 2009b). This paper uses the most generalized definition of the concept that public space is the space all the people have the right to approach and visit freely.

2.1.2 SPATIAL JUSTICE

Lefebvre and Foucault first expanded the social attribute of space, from a static perspective to a dynamic perspective, and from "Containers" of social activities to “Space Production” under the impact of social relations (Lefebvre, 1991; Elden, 2016). Under their influence, Harvey, soya and others continue to deepen the theory of “Spatial Justice”, and argue that, under the condition of capital operation and political power, there are social injustice phenomena such as unfair distribution and possession of space resources (Harvey, 2008; Harvey, 2010; Soja, 2010). As far as public space is concerned, as social public goods, its spatial justice should be reflected on the fairness of the public space production process and fairness of use right (Madanipour, 2013).

2.2 STUDY OBJECT

Nanjing, the capital of Jiangsu Province, is an important regional central city of the Yangtze River Delta, with a population of 8 million. Nanjing Xinjiekou district is located in the heart of the inner city, because of its important traffic location and commercial foundation, it has been the location of the old city centre of Nanjing since the foundation of the People's Republic of China, taking Zhongshan Road, Zhongshan East Road, Zhongshan South Road and Hanzhong road as the main framework, its general scope is the area extending around the intersection. Since the reform and opening-up, especially after entering the new century, it has a rapid development and has gradually become the most concentrated area of public facilities in the inner city, and also the most densely populated and the most crowded area. The new Nanjing Plan (2013) clearly pointed out that Xinjiekou area will continue to be the city centre bearing the important public activities, therefore this paper selects the most central 1.56 square kilometer area of Xinjiekou as the study object (Fig.1).

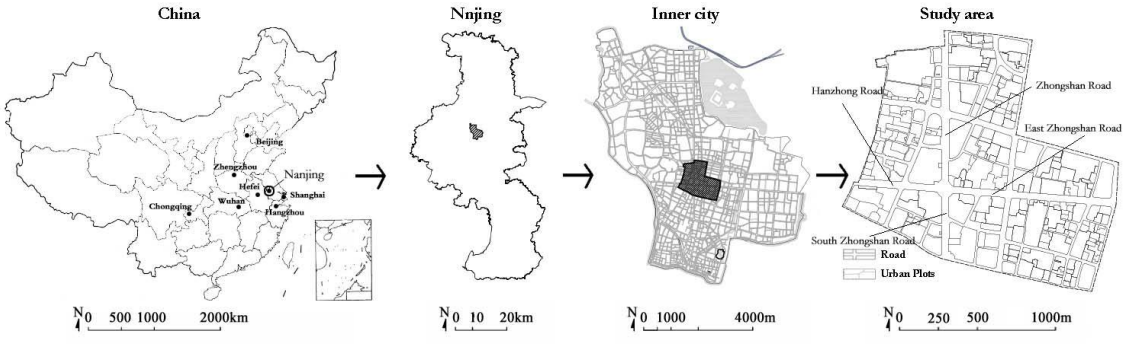

Figure 1 - Study Erea Location. (Source: Created by the author)

3 EVOLUTION OF PUBLIC SPACE

3.1 OVERALL SPATIAL EVOLUTION

In order to clarify the process of public space production, we first need to analyze the characteristics of the overall spatial evolution of the central area. This paper divides it into two aspects of land use and spatial morphology.

3.1.1 LAND USE EVOLUTION

Since the reform and opening-up, China's major cities have rapidly changed their development goals from “Productive City” to “Living City”, the central area has become the major region for promoting urban economic development, improving people's living standards and improving the quality and image of urban environment, and commercial-office use buildings full of modern international flavor just cater to this demand (Wu et al., 1999; Geng, 1999). Because of the limited financial resources, the property-led regeneration has been perceived as a “panacea” of the local governments (He and Wu, 2005; He and Liu, 2008; Huang and Cao, 2011).

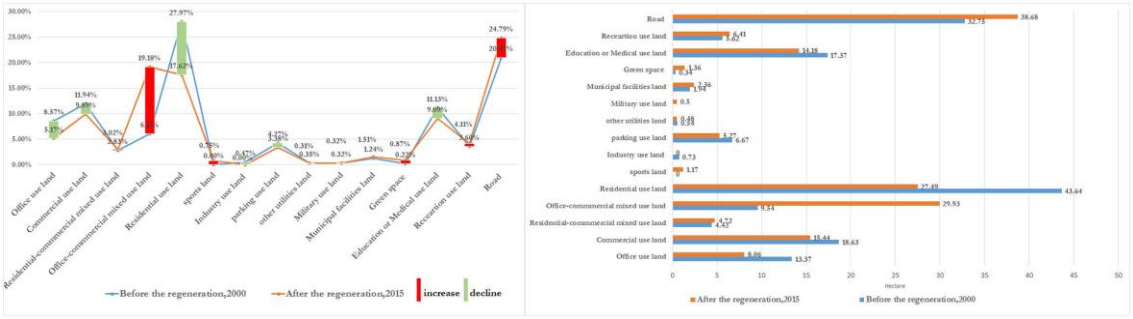

Figure 2 - The Proportion and Area of Land Function Changes. (Source: Created by the author)

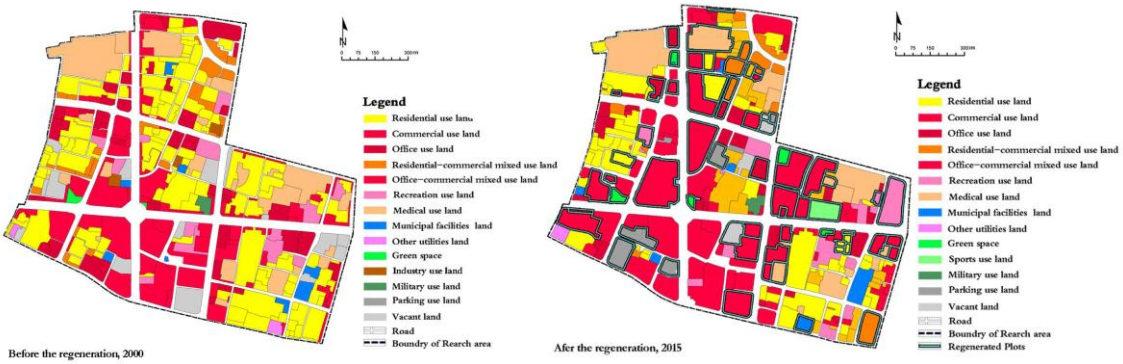

Figure 3 - Changes in the Functional Layout of the Land.
(Source: Based on historical topographic maps)

In research area, from 2000 to 2015, the former 0.73 hectares of industrial land is completely cancelled, and the total amount of residential land decreases from 43.64 hectares to 27.49 hectares, and the proportion of residential land drops from 27.97% to 17.62%, the proportion of commercial-office mixed use land increased from 6.11% to 19.18% (Fig.2). Comparing the changes in the past 15 years, we can find that 60 plots are regenerated, accounting for about 32% of the total land area, of which 37 plots have become commercial and office related use after the regeneration (Fig.3).

3.1.2 SPATIAL MORPHOLOGY EVOLUTION

In the study area, the overall plot ratio in 2015 is 3.52 compared with 2.47 in 2000, the plot ratio of new regenerated plots is generally over 4 (Fig.4). The increase in the volume rate will inevitably lead to the

elevation of the building height or the promotion of the building density. Through the model contrast analysis, the overall height in 2015 has obviously improved, the new commercial-office building height is generally above 100m, buildings higher than 100m has increased from 22 in 2000 to 202. In the aspect of building density, most former plots demolished stands houses with higher density and lower height, due to flow distribution needs and urban image considerations, the regenerated commercial buildings need to have enough outdoor space. Through comparison, we can find that the overall building density decreased significantly (the overall building density was 0.44 in 2000, and that was 0.37 in 2015)(Fig.5). This indicates that total amount of outdoor space increased after regenerated, excluding the area increased by the road widening, the actual increase in external space area is 5.8 hectares.

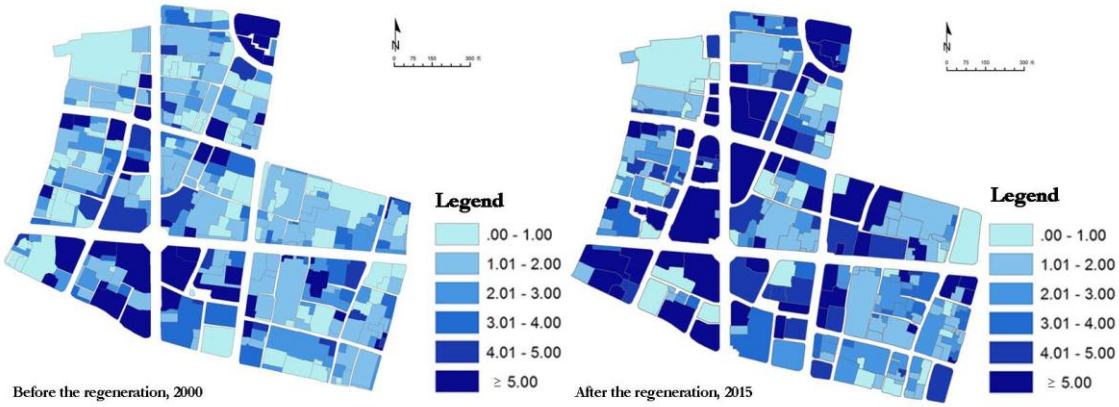

Figure 4 - Plot Ratio Change. (Source: Created by the Author Based on historical maps)

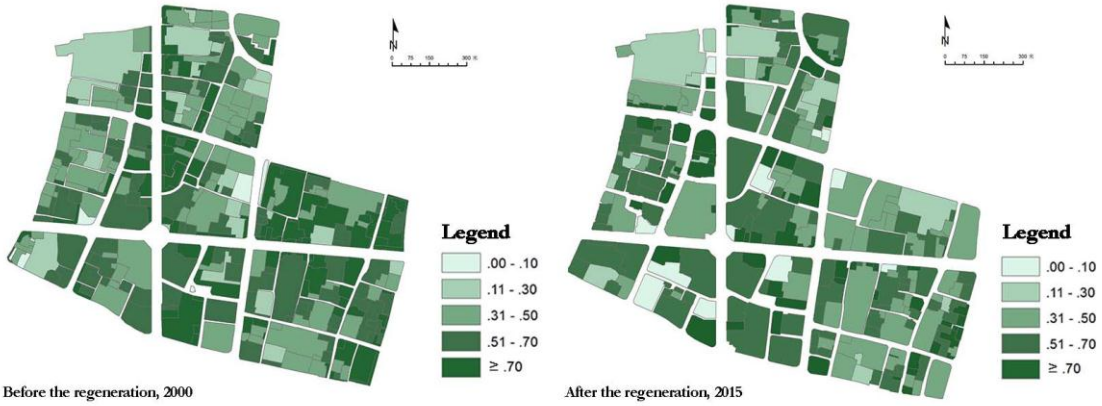

Figure 5 - Building Density Change. (Source: Created by the Author Based on historical maps)

Through the analysis above, we can conclude that the overall spatial morphology variation trend of the central area is from high density and low plot ratio to the low density and high plot ratio. Under this trend, the quantity of outdoor space has been improved obviously, which provides the basic condition for the increase of public space.

3.2 PUBLIC SPACE EVOLUTION

3.2.1 QUANTITATIVE CHANGE IN PUBLIC SPACE

Whether the increase of outdoor space means the increase of public space, we need to judge it according to the definition of public space. Through comparative analysis of regenerated plots accessibility before and after (Fig.6), the new residential areas, hotels, administrative offices and educational facilities are all under closed management, which means that a large amount of the public space has been privatized. As a result, although the outdoor space has increased by 5.8 hectares, but actually inaccessible outdoor space has increased by 3.5 hectares, and accessible outdoor space only has an increase of 2.3 hectares.

Compared with the land use map it can be found that, the new public spaces with high accessibility are all the additional products of public facilities such as commercial, business, office, culture and entertainment use land, especially internal and peripheral areas of office -commercial mixed use land.

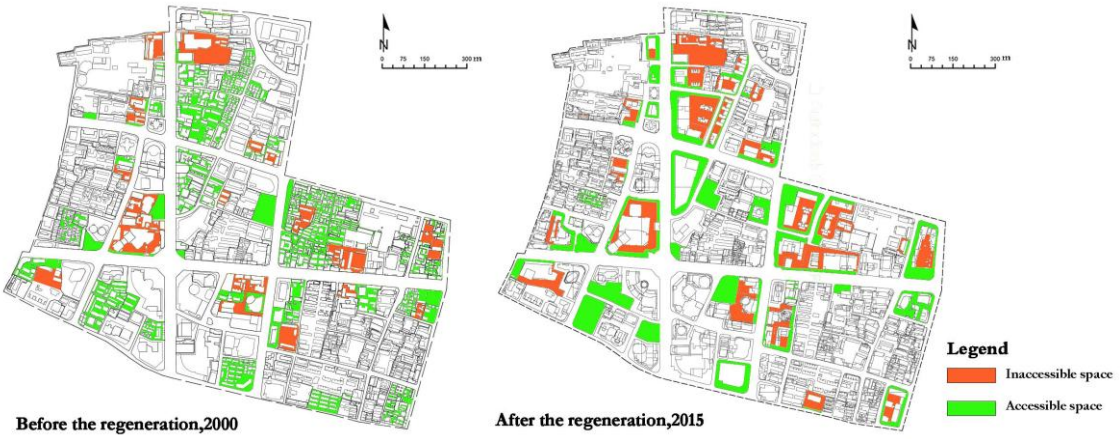

Figure 6 - Comparative Analysis on the Accessibility of Regenerated Plots Public Space.
(Source: Based on Author's Survey)

3.2.2 PUBLIC SPACE MORPHOLOGY EVOLUTION

Comparing the plots texture before and after the regeneration, the public space form has changed remarkably (Fig.7). In aspect of form, the public space shows a change trend from decentralization to agglomeration, from complexity to simplicity, some plots are even completely demolished. In aspect of location, the public space is characterized by the change from the center of the plot to the edge and from the interior to the exterior. Morphological changes, to some extent, will make space loose attraction, and be not conducive to the set the space for stay. The transformation in location, as a result of accessibility, seems to be conducive to enhancing the publicness.

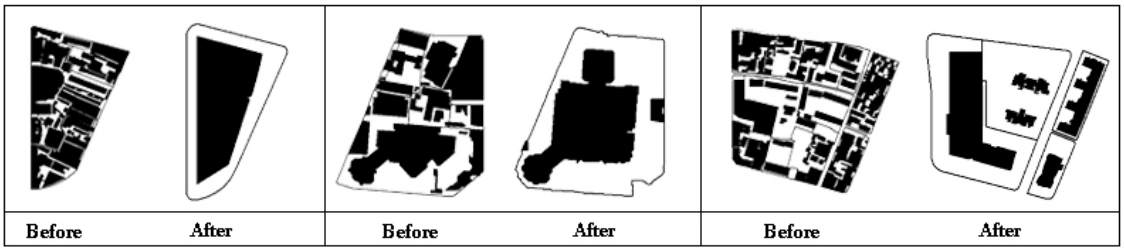

Figure 7 - Typical Plots Texture Analysis Before and After Regeneration.
(Source: Based on historical topographic maps)

4 THE SOCIAL PERFORMANCE OF PUBLIC SPACE

Whether the new public space is more public, and can it embody wider social justice? In May 2016, we conducted on-site observation and questionnaire survey of the new public spaces on the day and night of the working days, the day and night during the holidays, so as to analyze the gender, age, income and occupation of the population and the types of their activities to evaluate the social performance.

4.1 TYPES OF ACTIVITIES IN PUBLIC SPACE

Based on investigation result, it can be found the main types of activities in new public spaces are traffic and business, and there is 6.85 hectares public space only having traffic function, 5.57 hectares of public space is only with business and traffic functions. There are only 2.78 hectares of public space for daily activities such as rest, recreation, sports, landscape and public welfare activities, and these spaces are fragmented and immethodical (Fig.8).

Figure 8 - Spatial Distribution of Actitivies. (Source: Based on Author's Survey)

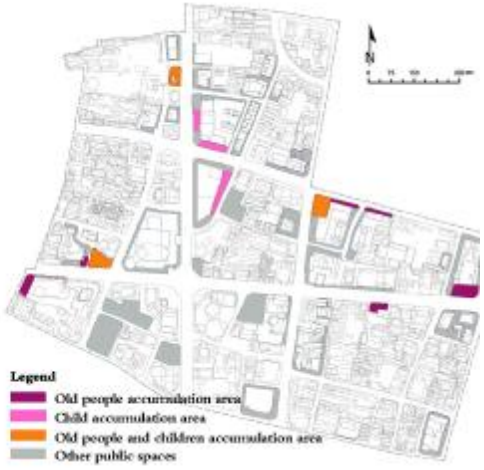

Figure9 - Spatial Distribution of Children and the Old. (Source: Based on Author's Survey)

4.2 PEOPLE WHO USE THE PUBLIC SPACE

4.2.1 GENDER

Overall, the proportion of female in the public space use population in the central area is about 64%, higher than that of male. At night and on weekends, this tendency is more pronounced due to the increase of business activities (especially shopping). Spatially, the public space that female use mainly concentrated in the surrounding area of commercial facilities, and the male ratio is higher around the office, hotel, parking facilities, the sex ratio is basically equal in the periphery of culture and tourism facilities. According to the census data of the population sampling survey of Nanjing in 2015, males in Nanjing's permanent population is 4.24 million, accounting for 51.52% of the total, higher than that of female (Table.1).

Therefore, this paper argues that, because of the increase of commercial use land, the public space in the central area becomes more attractive to the female population.

Sex	Working days		Weekend & Holidays		Overall result of the survey	Nanjing population census data
	Daytime	Night	Daytime	Night		
Male	35.95%	33.91%	34.65%	31.67%	35.88%	51.52%
Female	64.05%	66.09%	65.35%	68.33%	64.12%	48.48%

Table 1 – Gender distribution in Public Space. (Source: Based on Author's Survey)

4.2.2 AGE

The population of Nanjing has shown an aging trend since 2000, in the light of the census data of the population sampling survey of Nanjing in 2015, compared with the sixth national census in 2010, 0-14 years old population proportion increases by 0.71 percent, the proportion of the population aged 15-64 decreases 2.27 percent, the proportion of the population aged 65 and over rises 1.56 percentage points. The age distribution of the population using public space in the central area does not agree with that of the city, the age of the population is 15-40 years old, accounting for about 78%, and the population under 15 years old accounts for about 4%, and the population aged 65 and above is only about 6% (Table.2). The spatial distribution of children under 15 years of age is more concentrated in the place around commercial buildings where people are less crowded, they mostly engage in simple recreational activities under the supervision of their parents during waiting for the other relatives. People over 65 years old are distributed in parks, green spaces and the places where is less crowded and there are seats, around business and

commercial buildings, mainly engaged in activities such as fitness, conversation and waiting. So we can find that, spatial distribution of the two age group shows a trend of marginalization (Fig.9).

	0-14years old proportion	15-40years old proportion	41-64years old proportion	Above 65 years old proportion
Nanjing population census data	10.21%	79.10%		10.69%
Research area data	4.12%	78.26%	11.35%	6.27%

Table 2 – Age distribution in Public Space. (Source: Based on Author's Survey)

4.2.3 INCOME AND OCCUPATION

The survey result does not indicate the spatial injustice in public space caused by income, but the vocational differentiation phenomenon is obvious. According to research statistics, population whose monthly income less than 6000RMB accounts for the main proportion (about 68%), that below 2000RMB accounts for 34.12%, and that over 20000RMB only accounts for 4.56% (Fig.10). The results of the occupation survey indicates that students are the main users (30.56%), while the proportion of migrant workers and retirees is low, accounting for 3.12% and 7.89% respectively (Fig.11). Income conditions does not show spatial injustice for two reasons, first of all, student belongs to the group of which monthly income is less than 2000RMB, but their annual consumption is far more than China's annual per capita disposable income, the main reason is that, under the family's indulgence, the only children have abnormal consumer behavior such as blind consumption, excessive consumption, comparison consumption and hedonic consumption (Zeng, 2012); secondly, that is related to the consumption characteristics of high-income group, according to the research of Hu Xiaochun et al. (2010), China's high-consumption group's survival consumption (food and clothing) and public consumption (public entertainment and shopping) gradually reduced, and their development consumption (education, health care) and minority consumption (consumption that seeking privacy and novelty, non-localized consumption) gradually increased. Therefore, they prefer the quiet, natural, healthy and novel places, so the central area public space, dominated by mass and inward consumption, loses its attraction to the high-income group, and it also can not provide fitness, natural health and leisure functions, which results in lower high-income group proportion. The imbalance of occupational categories shows the nature that the public space in the central area lacks the attention to the rural migrant workers and the elderly groups with lower consumption ability.

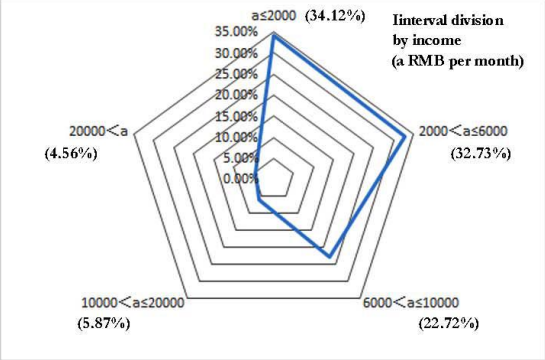

Figure 10 - Income Distribution in Public Space.(Source: Based on Author's Survey)

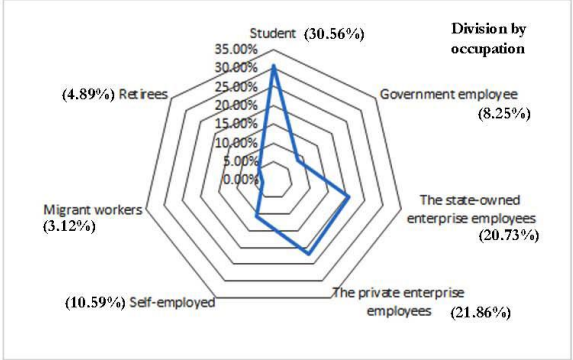

Figure 11 - Occupation Distribution in Public Space. (Source: Based on Author's Survey)

5 THE PRODUCTION MECHANISM OF SPATIAL INJUSTICE

The theory of Spatial Justice shows that, the imbalance of social performance is due to the imbalance of space production and governance power. Therefore, this paper analyzes the mechanism of injustice in public space from two aspects: the development mechanism and management ownership.

5.1 THE DEVELOPMENT MECHANISM

5.1.1 THE PROCESS OF PUBLIC SPACE PRODUCTION

China is a country with public ownership of land, and the land belongs to the state or collectives.

After the reform and opening up, the state breaks the original land allocation system, and gradually allows the local government to transfer the use right of land, separating the land ownership and use rights stripped. So the central area land of inner city has become the focus of land transfer because of its significant asset value. In order to regulate and control the transfer market, to achieve the planning objectives of government better, use the land resources rationally and improve land use efficiency (Wang and Yong, 2011), at the end of the 1990s, China began to establish land banking system to manage the regeneration and new development. In this system, the urban regeneration process is divided into three stages: formulating controlling plan, land transfer and formulating constructive plan, so public space construction has the corresponding task in different stages (Table.3).

Stage	Task and related content
Formulating controlling plan	1. In the event of public space under independent construction, determine its location, size, greening rate and specific facilities 2. In the event of public space under non-independent construction, only determine its approximate size by building density, offer construction proposals through flexible design guidelines
Land transfer	The content determined by controlling plan should be embodied as indicators and transfer conditions
Formulating constructive plan	The construction entities carry out specific spatial design according to the transfer conditions, and determine the specific forms, layout and styles of greening, paving, furniture and water

Table 3 –The Task of Public Space Construction in Different Stages. (Source: Created by the Author)

5.1.2 THE ROLE OF LOCAL GOVERNMENT

The government has absolute control power of three stages, its nature should be to protect the public interest, however, under the background of decentralization, marketization and Globalization, the pursuit of economic interests and political interests has become the core of the local government's concern, it presents a significant state of entrepreneurialism (Zhang et al., 2006; Huang and Cao, 2011). Urban spatial resources, as the competitive capital directly controlled by local governments, become the main guarantee for their interests (Fig.12). When the government gets rid of the representative of the public interests and has its own interests, it will inevitably reduce its input and attention to the public interest (Huang and Cao, 2011), so it impute the construction responsibility of public space to the developer and lower the construction standards (Table.4).

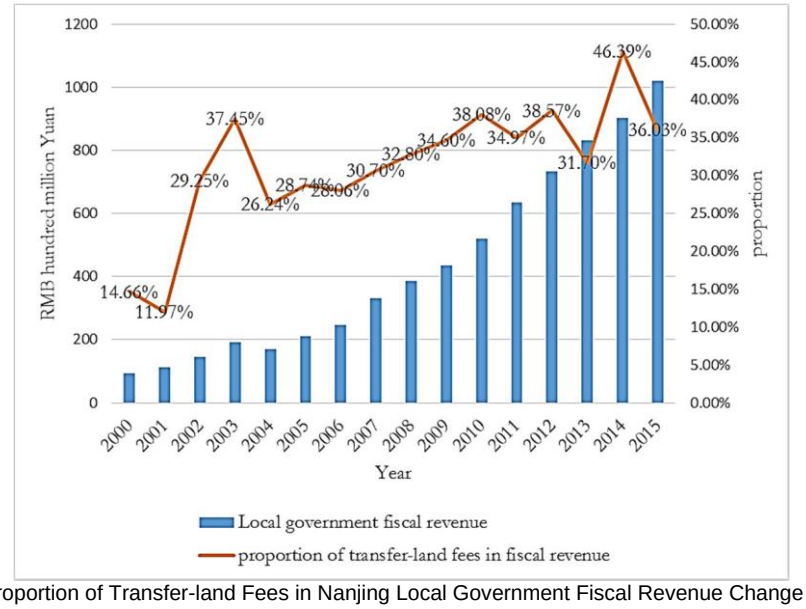

Figure 12 - Proportion of Transfer-land Fees in Nanjing Local Government Fiscal Revenue Change Trend, 2000-2015.(Source: Nanjing City Statistical Yearbook, 2001-2016. Available at: http://221.226.86.104/file/nj2004/njtjnj.htm)

5.1.3 THE ROLE OF THE DEVELOPERS

As the main body of market capital, developers are seeking maximum benefit as much as possible. Therefore, how to reduce costs and how to create and use conditions for value output is the main consideration. Its role should only be limited to the organizers and implementers of constructive planning, for obtaining more profits, because of capital advantages and the local government's desire for revenues, some large developers can participate in the controlling plan phase, negotiate or exchange conditional with the government to modify design standards and reduce input on public facilities (including all aspects of public space) (Wang, 2014). In the constructive plan stage, taking advantage of the power of the organizer and executor, the developers control the designers and the constructors to make the outdoor space as "socalled public space" to attract the consumers and exclude the other people who belong to "ineffective-use" group. Hence, the public space in the plots constructed by developers is entirely the production under the guidance of the capital, and it will often only have commercial and traffic functions.

Stages	The government shows a disregard for public interests of public space
Formulating controlling plan	Impute the construction responsibility of public space; The indicators of each plot is conducive to commercial profitable, only setting rigid requirements through the building density index
Land transfer	Raise the price of land as much as possible, thus to force developers to do everything to reduce public facilities construction
Formulating constructive plan	Have close supervision on the rigid design conditions, be in a muddle over the elastic demand for the greening, paving, furniture and water

Table 4 –The Role of Local Government in Different Stages. (Source: Created by the Author)

5.1.4 THE ROLE OF THE PLANNERS

Planners are the executors and proponents of controlling plan and constructive plan, and they have the dual identities of the public and the professionals (Zhang, 2004; Wang, 2014). As the public, they have the social morality of pursuing social equity, but they also have the pressure of life, and must to obtain economic benefits by selling their own skills. In fact, planners always have nothing to do with the plots they design, because of the government and developers' monopoly power, in order to gain economic benefits faster, higher and longer, they become "service staff" to meet all the needs of employers (Zhou and Sun, 2006; Wei et al., 2012), as far as public space is concerned, they lose the attention to its publicness. As the professionals, planners should have the ability to provide professional technical advice to realize the public attribute of public space. Nevertheless, under the influence of the government and developers' behavior of concerning the image of public space and the consumption service level only, their professional skills also emphasize the aspects of physical economic attribute, ignoring the social attribute.

5.1.5 THE ROLE OF THE PUBLIC

The public is the largest beneficiary of public interest, so the pursuit of public interest maximization is the only goal of the public, they should have been important participants, supervisors, advocates and stakeholders at all stages, but in fact they have been marginalized. There are two reasons, firstly, because the public interest is made up of different personal interests, in the period of economic rapid development, the public usually pays more attention to their own individual interests and economic interest, but ignores the public interest and social interest (Wang, 2014), residents in the original plots of central area are almost all moved to the other places (Yuan et al., 2010), therefore, the public space in the central area, which is supposed be completely public, has become the matter has something to do with everyone, but no one cares about it; secondly, because of the monopoly of power and the pursuit of economic efficiency, local governments have neglected the importance of public participation for a long time, which leads to the limitation of the public participation in the three stages. At present, public participation is divided into two forms: elite participation and general public participation. Elite participation means that, in the planning process, experts and scholars are invited to offer consulting, but the local government control the invitation right, in the meantime, experts and scholars are also planners, so to some extent they are dependent on the local authorities (Wang, 2014), and they show mercy at consultative meeting, with care only about the hard bottom line and neglect of the elastic requirements. The general public participation in the planning stage is currently limited to questionnaires, forums, notice of planning results and public comment, although the state has promulgated the policy to emphasize the status of public participation, but that only

enrich the methods of notification, information and consultation (such as media and network), not changing the participation level (Yang, 2011). Since the public does not have the right to make decisions and veto, the true public space can not be realized.

5.2 THE MANAGEMENT OF PUBLIC SPACE

After the construction of public space, to some extent, its management also determines the use of public space (Mitchell, 2003; Low and Smith, 2006; Madanipour, 2013). In accordance with the regulations of “Nanjing Urban Governance Regulations”, “Regulations on the Administration of Nanjing City Appearance” and “Measures for the Administration of the Area in Front of the Buildings in Nanjing”, each operator have the responsibility to keep the ground and the façade clean and facilities neat and orderly within the scope of land that they have the use right, including trees, lawns, furniture and pools. If they are contaminated, damaged or missing, the operator should clean and repair them in time, otherwise the administrative penalty will be imposed. Therefore, in order to avoid unnecessary investment and maintenance costs, the operators often set barriers to keep visitors away from the trees, lawns, water and sculptures, and they also try their best to reduce the seats and the place where activities other than consumption may be carried out. In research area, only the independent-construction public space is managed by the government, in which there are more diverse social activities and population, but of the 60 regenerated plots, only 5 are under independent construction with a total area of 1.3 hectares.

Figure 13 – Public Spcae Management. (Source: Created by the Author Based on the Map of Land Right in Nanjing

6 CONCLUSION

Through historical evolution analysis and current situation investigation, this paper conduces the qualitative and quantitative analysis of spatial injustice in public space of Nanjing Xinjiekou city centre, and from the aspect of regeneration system and management ownership, the internal mechanism causing injustice is discussed.

In the context of overall spatial evolution, the outdoor space in the central area has increased significantly, but the increase in public space accounts only half of the increase in outdoor space, and most is located at the commercial and office use plots. The public space form shows a change trend from decentralization to agglomeration, from complexity to simplicity, and the location changes from the center of the plot to the edge and from the interior to the exterior. Through the research on the social performance of new public space, this paper finds that new public space has spatial injustice such as function injustice (ignoring social function), gender injustice (ignoring male), age injustice (ignoring children and the elderly) and hierarchy injustice (ignoring migrant workers and retirees).

Based on the analysis of the regeneration system, we find that, the government holds the absolute power of public space development, but its entrepreneurial behavior make it get rid of the role of public interests guardian, and to turn public space a subsidiary product of the pursuit of profit, with no guarantee of its publicness. As for the planners and the public, the former have become the echo of government decisions because of their own income interests, and the latter cannot play a decisive role because of the limited degree of participation.

From the aspect of management ownership, after the construction, most public spaces are managed by the business operator. Under the restriction of the city management regulations, business operators try their best to reduce the social function of public space in order to minimize the investment and maintenance costs.

Through the analysis of injustice and internal mechanism, if we want to improve the publicness of public space and pursue the real spatial justice, we may proceed from four aspects. First of all, the fundamental change in the current injustice is to get the local government out of the shackle of the land economy, making it move back from the enterprising government to the public government; Secondly, we can set up the statutory design guideline of public space, and bring it into the transfer condition of the land; Thirdly, we should reclaim the management right of the existing public space, improve the public space environment and increase social space and facilities; Finally, the degree of public participation in the design and construction should be promoted, and the public should be ensured the decision-making power.

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ID 1400|- INTEREST AT STAKE: A NON-SUBSTANTIAL READING OF COMMUNITY

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1 INTRODUCTION

Talking about community is becoming more and more dangerous, and the reason for this danger is quite simple: the concept of community seems to resonate with the post-political warning emerging from our times (Ziziek, 2003). In a post-political perspective, a community is an assemble of individuals who share – more or less explicitly and overtly – a so called "commonality" which can be variously stated: a place, a purpose, a cultural feature, a context, a practice. Thanks to this commonality we can find a certain degree of homogeneity among those individuals, and thanks to this homogeneity we can find a certain degree of compliance through which we can define, or even predict, their actions. What we lose in this frame is the political dimension of community as «the unavoidable challenge of negotiating a here-and-now» (Massey 2014: 140), washed away and reduced to a mere contractual dispute on supply services and management. The (non-obvious) happy end is widely known: government becomes governance, politics becomes administration, class struggle becomes a neighbours' scuffle and, consequently, the space of resistance leaves room for the end of history to unfold (Fukuyama, 2003). The underlying utopia is the emergence of self-regulating subjects who are able to recognize, despite their different interests and needs, the best of all possible worlds: a world where efficiency is simply more advisable. Following this path, it is worth to wonder how we can regain a proper political dimension of the concept of community.

In planning theory, we can find two main ways which can lead to this regainment. On one hand, we have the deliberative tradition of the communicative turn: from this point of view, the community is first and foremost a community of speakers who are able to recognize, through argumentation, the greatest good (though a context-grounded one) translatable in a normative rationality. In this case, the judgement about what is good is no longer emerging from the individual conscience of each subject but rather from dialogue, the means through which the political is unearthed according to the Aristotle's quotation of human beings as "social animals", who can become proper citizens only in the context of a discursive arena (the agorà).

On the other, we have the radical tradition of critical theorists: here the community is not the ontological place of rationality but the proper milieu of multiple conflicts. Thanks to thinkers like Ernesto Laclau, Chantal Mouffe and Jaques Rancière, just to mention a few, the Marxist class struggle overflows the limits of the economic field to reach the many overlaps of intersectionality (race, gender, social class, age etc.). The community becomes the perfect place of variously articulated struggles for hegemony, that outline different and transversal political subjects through likewise different and transversal logics of equivalence (Laclau, 2008): what we lose in this case is the chance to indicate a unique fundament (e.g. rationality) through which we can describe the core of a proper political action (e.g. a shared purpose reached through

rational dialogues). Rather, and however paradoxical this may appear, the political of the community is the very impossibility of finding a definite and univocal fundament (Rancière, 2007).

Given this frame, many researchers and academics have indicated potentialities and limits for both these attempts to regain the political dimension of the concept of community in planning theory. Even though the deliberative tradition proved a convenient answer as both theory of planning and procedural tool, it is nonetheless susceptible of harsh criticism due to a rationalist naivety in considering the possibility of creating a neutral place where each subject can dismiss his/her relations and positions of power, and just act as a rational subject. At worst, this naivety becomes a real manipulation perfectly fitted with the neoliberal paradigm. Besides, although the radical tradition has inherited from Post-structuralism and Post-modernism a disenchanted gaze, along with a fruitful and incisive ability to read reality as theory about planning, it shows procedural and operational weaknesses in translating its critical interpretation in practical processes of transformation (Roskamm, 2015). So far and for distinct reasons, both these attempts risk a dead end or, at least, a double bind: through their lenses, planning looks like a transformative discipline that is struggling against its own inability to transform reality. On one hand, planning simplifies and reduces this reality to a community of rational beings disconnected from power geometries (Massey, 1994); on the other, it just limits itself to describe phenomenologically those intricated power geometries restraining the concept of community to its ungrounded and everchanging conflictual becomings.

What is the reason to keep talking about (and researching on) community? How can we redress (assuming we need to do so) the post-political tendency which seems to characterize this concept? How can we reframe and represent its political dimension, as well as try to use its transformative potential in the context of a planning practice? What does this use mean to us as researchers?

My assumption is that this kind of questions allows us to consider the community as a dimension of challenge, pleasure and responsibility of co-existing with others, as well as to defy dominant narratives and try to unveil their contextual circumstances and consequences. But, and this is my point, we should do that in order to re-functionalize the semantic field of the concept of community and to make this re-functionalization more than a simple theoretical exercise, rather a praxis which can convey and handle issues, themes and motives to engage with the very political project expressed by the question: and now how are we going to live together (Massey, 2014)?

2 A NON-SUBSTANTIAL CONCEPT OF COMMUNITY

Two starting conditions – closely interdependent – are indispensable for the political dimension of community to emerge. First, we need to renounce any substantialist interpretation through which searching for a “correct” and “authentic” understanding of this concept, as well as its (alleged) factual equivalent. From this point of view, I think it would be much more interesting to put into question the reasons why a specific theory appears more effective and explanatory than others (e.g. for what purpose is this idea of community widely recognized?), in place of wondering whether a theory could provide the best interpretation of a fact (e.g. is this idea of community true?).

Second, this implies an implementation of our work as researchers with a sort of meta-analysis of our position to indicate the conditions of possibility of our speech (e,g, where are we talking from? whom are we talking to? by what means?) (Porter, 2010). Indeed, the need to renounce any substantialist interpretation of community is not only about concepts and theoretical tools, rather it encompasses the very speech of researchers: wondering why a research question and its specific formulation appear more urgent than others is exactly to opt for a clear epistemological position with respect to both the way we consider facts around us and the way we consider ourselves among them.

In this respect, if we want to put aside substantial readings of the concept of community, we should turn down the idea of community as a group of people who share akin features, similar backgrounds and typical behaviors and, if anything, we should look at this concept as a dispositif (Foucault, 2004; Agamben, 2006), on both theoretical and operative levels, which reactivate – in different ways and with different consequences – what we can indicate as a general disposition to live together. The term dispositif (translated as “apparatus” or “device”) means whatever can guide, orient, determine, shape and control behaviors, opinions, thoughts and speeches. Indeed, this does not only include institutions, laws, norms,

scientific statements and moral principles (including the networks of relationships those elements established among each other), but also tools, physical conditions, methods, languages and practices in which we are constantly immersed (as researchers too). For this reason, the attempt to formulate a non-substantialist concept of community cannot culminate in a positive and conclusive definition of it. Rather, we should try to point more toward a field than a proper object of analysis. In other words, we need to define as best we can its coordinates and strategies of autopoiesis, and even more so, we need to understand what is at stake given a specific context. At this juncture, the importance of the context is not only determined by social, political and economic trajectories which crisscross it, but from the conceptual (symbolic, narrative, representational and so forth) products that a specific context has been able to create and put into practice. Ultimately, we should be aware that this conceptual archipelago is not safe by the only virtue of its possible moral merits and standings, especially if what is at stake is still unclear and underestimated.

The consequence of this non-substantial reading of community as dispositif and field, rather than as object and natural fact, is to shift our attention from the concern about the creation of an “us” to the ways in which this “us” has been challenging time after time, becoming the field for new joints, fractures and belongings as always never-end contested processes (Desmond, 2014). In view of this, the research aim will no longer be to define “who we [they] are”, but all those minimum breakpoints which questioned this very definition. By themselves, these breakpoints do not exclude the creation of an “us”. However, in the process of this creation, the focus will be to point to the negotiating aspects of the matter, which are understood as the symbolic, discursive and relational adjustments, deviations and adaptations which express the tension between the production of a collective identity and the production of an interest at stake: in other words, all those different techniques of subjectivation (Foucault, 2016) through which learning to be affected as processes of stakeholderization (Marres, 2005; Metzger, 2013).

At this point, I assume that the political dimension of the concept of community emerges precisely from refusing the idea of community in a traditional and essentialist sense and, specifically, when the very idea of community is being questioned through processes which reframe and redefine the field of legitimacy of this term as well as the use people have made of it in a specific context and under specific circumstances. However counterintuitive this formulation might appear, it has the purpose to rethink (and to operationalize) the concept of community putting aside a series of categories and attributions (such as identities, cultures and traditions) which tend to reduce its meaning to a purely positivistic interpretation, as such univocally definable and traceable, and which can let it fall into the binary logic of inclusion/exclusion. Rather, the attempt is to treat those categories and attributions from an exquisitely relational point of view, trying to understand not only how these elements change by hybridizing themselves with others, but rather trying to highlight the ways in which – in the hybridization – they are questioned trying to “keep the conversation going” (Greenwood, 2007).

So, when I chose Riace as field of my research and moved there in January 2017, the main questions were: could the transformations occurred in this town during the past 20 years have taken place as a process of questioning the traditional meaning of community and redefining its legitimacy? And if so, what are the repercussions of this process on local government and governance? Is this producing an effective link between the satisfaction of human needs and the socio-political capacity and access to resources, especially with regard to both inhabitants and refugees, as well as the precarious socio-economic equilibrium of the area?

3 OVERVIEW ON RIACE

Riace is a small town of the Ionian Calabrian coast, called Locride, in the metropolitan area of Reggio Calabria, south of Italy. As many other towns in southern Italy, Riace has experienced a process of constant depopulation, particularly during the ‘50s with flows to northern Europe, Canada and Australia, and around the ‘70s and ‘80s with flows to the north of Italy. Corruption and mafia influence has brought economy and social tissue to a near standstill, and a massive lack in public services and infrastructures is the main cause of a deep marginalization. Nevertheless, since 1998 Riace has been addressing both the refugee issues and the inland depopulation challenges in Italy, enough to be recognized – by national and international media, as well as leading Italian and European institutional figures – as a “role model” to open up a better future for crisis-struck areas by an integrated practice of refugee hosting.

Like other towns in Calabria, Riace is split into two settlements, with 7km between them: Borgo Superiore (High Borough), located in the mountains, and the so-called Marina (Marine), located on the Ionian coast. Marina is a spontaneous and informal settlement built during the late '70s, and it is generally considered – verbatim – as the "refined area" whose inhabitants have emancipated themselves from the former rural condition finding employment in public administration sectors or leading small building firms mainly. Currently, Riace counts about 2,000 inhabitants, 1,000 of which dwell in Marina and 1,000 in Borgo Superiore. Among them, and more or less equally distributed between the two settlements, 500 are refugees included in CAS (Centro di accoglienza straordinaria, Extra-ordinary Welcome Center) and SPRAR (Sistema di protezione per richiedenti asilo e rifugiati, Protection System for Asylum Seekers and Refugees) projects. CASs are facilities providing for the overcrowded ordinary "first reception" centers in the event of considerable and close arrivals by sea – the so-called Hubs, a kind of "regional sorting centers" where refugees are identified and can formalize their request of residence permit. After this formalization, they enter the SPRAR project, a network of local institutions, in cooperation with voluntary sector organizations, managed by the Ministry of Interior and designed to undertake an integrated "second reception" system. SPRAR provides, in addition to first assistance (as food and housing), complementary services such as legal and social guidance and support, as well as the development of individual programmes to promote socioeconomic inclusion and integration.

The "Riace model" started taking shape in 1998, when almost 200 people, mainly from Iraqi Kurdistan and the Kurdish region of Turkey, were rescued from a precarious barge landed at the coast of Marina. This barge will become a more noble and evocative sailing ship (veliero in Italian) in the narrative construction of Riace's story, especially in its mediatic representation. This particular shift will be quite meaningful as a paradigmatic example of a certain rhetoric which will characterize the semantic field of this case, as well as the ways in which institutional representatives, writers, directors, voluntary organizations and activists still approach it. Faced with this landing – neither the first nor the last – a small group of Riace's inhabitants, including current mayor Domenico Lucano, decided to give hospitality to those strangers and to open the door of the Pilgrim House (Casa del Pellegrino) near to the Shrine of Saints Cosma and Damiano, they also strangers who came from the sea. After a short period of time, all the Kurds but one left Riace for northern Europe. However, that experience changed something in the perception of Riace: the idea of a history which could be trace backwards, as the chance of an ill-gotten restitution, unfolds. In 1999, Domenico Lucano became member of the Local Council and the refugee welcome system took the first steps: in 2000 Città Futura (Future City, whose name evokes Tommaso Campanella's utopian work City of the Sun) was founded as the first organization in Riace whose aim was – and still is – to host refugees, and in 2001 the town joined the PNA (National Asylum Program) which will be renamed SPRAR in 2002. Since then, about 6,000 people have been welcomed in Riace and about 70 of them still live in the town as residents: a very small number – almost insignificant – compared to 6,000, but with a different weight compared to the number of inhabitants. Since 2004, Domenico Lucano has been mayor of Riace (he is currently serving his last mandate) and during these years has received a substantial number of national and international tributes and awards: he was listed as one of 50 most influential leaders by Fortune Magazine and he received the Bern's Foundation for Freedom and Human Rights Prize in 2015 and the Dresden Peace Prize in 2016, just to mention a few.

There are three main characteristics which make Riace's hosting refugee system a "role model". First of all, the so-called "diffused hosting" practice (accoglienza diffusa), through which some of the abandoned houses of Borgo Superiore are rented out by emigrant owners to voluntary organizations which cooperate with SPRAR (and are therefore funded by the Italian Ministry of Interior and EU), refurbished by these organizations and then dwelled by refugees. The "diffuse hosting" practice has been used since 1998 thanks to a bank loan granted by Banca Etica (Italian ethical bank), also thinking about the possibility of employing those houses as facilities for solidarity tourism. At present, this type of activity is not working due both to the considerable number of hosted refugees and the lack of additional habitable houses. In addition to the revitalization of the village, the "diffused hosting" (also practiced in Marina) responds to the need to avoid the creation of ghettos and give refugees the opportunity to live independently in real homes.

The second element of innovation is the use of SPRAR's funds to create handcrafted workshops for responding to multiple needs: the restoration of antique handcrafted traditions; the creation of job opportunities for riacese people; the creation of exchange and integration possibilities between inhabitants and refugees, since one riacese and one refugee work together in each workshop. In both cases, most of them are women in demanding situations, especially because they are single women with children.

Indeed, these workshops do not have a good production capacity: those who work receive a salary thanks to SPRAR's funds and earnings from the handcraft products, which are not of high quality, are sufficient to cover raw materials and bills expenses. Nevertheless, as pointed out during an interview with a Città Futura's operator, an important feature of the workshops is the curative impact of employment, which affects both refugee and riacese women, especially in terms of confidence, social dignity, and – thanks to the relationship that is being created – ability to recreate a "normal" situation, through which they can share their daily home life (relationship with children, housekeeping advice, etc).

Lastly, the third feature of the hosting refugee system is the establishment of a local currency to cover funding delays of SPRAR project. Also in this case, this tactic meets several needs: this currency allows refugees to independently manage their financial resources, buy their own food and clothes without intermediaries and interact with the social and economic tissue of the town. In addition, with regard to voluntary organizations (which are 7 by now, including Città Futura, for a total of about 70 jobs), local currency eliminates temptations to profit from essential goods for refugees. This tactic should have also increased sales in the small shops of Borgo Superiore but, at the moment, almost all of Borgo's shop keepers have much more trouble in accepting this form of payment due to debts contracted with suppliers. Moreover, Ministry of Interior recently expressed strong criticism on the local currency, considering it unacceptable from a legal point of view. In this regard, and as I will examine, it is worthwhile to note that Riace has a low ranking in SPRAR's evaluation reports drawn by Ministry of Interior because of an excessively anarchistic and not fully-conformed management and conduct.

4 RIACE-DISPOSITIF

After this overview, some questions arise: why has all this happened in Riace? What are the reasons why a small town in Calabria, depopulated and isolated, becomes a reference point for a hosting refugee practice? And yet, although this practice is being spread (not without resistance) in Calabria and Italy, why does Riace continue to be perceived as an exception and guiding light? In other words: what are the elements which create Riace-dispositif, and for what reasons does Riace work as a dispositif? I argue that, to answer these questions, we need to consider at least three levels of analysis: firstly, we need to identify causes closely related to context; secondly, we should understand in which ways media relevance contributed and still contributes to maintain the "Riace model" alive; lastly, we need to understand the relationship between Riace and institutions, especially those involved in SPRAR projects.

As for the causes related to context, it is important to remember that the history of Riace has a repressed origin, so that I have often read articles and listened to verbal reconstructions in which stories mingle with each other and overlap in their details and timings. In fact, in early 1997 (about a year before Riace), a barge carrying refugees landed at Badolato, a town nearby. In this case, municipality – and not a scant group of inhabitants as in Riace - decided to give hospitality to these people. Within a few months, a strong media attention arose on Bandolato (Sasso, 2012). The Town Council proposed the idea of "diffuse hosting" and the Municipality asked for a loan to a local bank in order to put in practice the idea and refurbish houses of the old town. However, after a while, the bank was investigated for mafia collusion, a circumstance which threw the whole project into crisis; moreover, most of refugees left the town and Italy, as happened in Riace after the first landing in 1998. Badolato's experience ended in the worst way, but the underlying idea would have been inherited.

Interviewing both locals and some of the protagonists (social workers, researchers and activists) involved in this experience, it emerged that, unlike Badolato, in Riace they were able to create consensus around the topic of hospitality. Consensus can depend on several factors. A first group of factors can be identified by putting together, on one hand, the small size of the town and the depopulation process which over the years has reduced Riace's social tissue and its relationship's network to minimum; on the other, the symbolic value of the stranger linked in particular to the deeply felt celebration of Saints Cosma and Damiano. Indeed, the patrons of Riace emphasize - through the symbols of the double and the stranger – the transformative and diagnostic function of encounters between communities: in the specific case, the community of Riace and the Calabrian Roma community who, through dances, ritualization of conflicts and barters, test the "state of health" of intra- and inter-community ties. Moreover, a second group of factors can be traced back to the social and environmental policies promoted and implemented in Riace; to the strong personal assumption of responsibility about transparency and honesty in the management of SPRAR funding; to the will to involve the inhabitants of Riace as much as possible in the practice of

hosting refugee, especially in terms of employment. Compared to these second group of consensus-building causes, the figure of the mayor of Riace plays a crucial and, I would say, personalistic and charismatic role. However, the centrality of this figure does not seem to have only positive effect.

Putting aside the first group of factors, it is worthy to focus on these second elements of consensus-building, especially on the social and environmental policies promoted over the years by mayor Lucano. In the account of Riace, these political choices are lived and described as battles promoted by ideals and "questions of principle", specifically ideals and principles literally embodied in the mayor's figure. In this regard, we can see in action a concept of "justice" that overcomes differences between social justice and environmental justice, and shapes the idea that every person, regardless of race, income, culture, and gender has the right to a decent quality of life (Anguelovski, 2015). Among the most important actions promoted and implemented by the mayor, a few should be remembered: the development of a door-to-door separate collection system of domestic waste and the creation of a recycling area, both managed by a local cooperative; the renewal of green areas; the creation of community gardens for inhabitants and refugees; the reduction of water-service costs thanks to an aquifer which makes the town self-sufficient in terms of water supply, and relatively autonomous from private water companies; free school bus and nursery services; free occupation of public land; elimination of first home tax (even when expressed by state laws). Each of these actions must be read and weighted referring both to the context of southern Italy, where waste, water and land policies are strongly mortified (to use an euphemism) by mafia-style management, and to the Italian context in general, where municipalities have inadequate availability of economic resources and use municipal taxes to rebalance this lack of funds. With regard to these policies, the mayor acted personally and almost at the limit of standard procedures, in order to demonstrate the nonsense of slow and intricate bureaucratic iter, which hold back any action of effective change and improvement of living conditions, rather than support it. At the same time, there is a strong symbolic value in support of each of these political choices, a value we can glimpse in Lucano's words (repeated as a mantra during our encounters): «I am not a perfect mayor, because if I were a perfect mayor I would not do the interests of my community, but those of government» (emphasis added). In other words: if I want to be a good mayor, I do not have to behave like a mayor. These words define one of the key elements of dipositif-Riace: an idea of the political dimension of community that could radically put into question a "traditional" model of territorial governance, showing a breakpoint through which meanings and practices can be re-negotiated and foster processes of democratization. However, we should wonder how the symbolic value of policies implemented in Riace is interpreted and operationalized by its inhabitants.

4.1 ELUSIVE OBJECT

More generally, the construction of the symbolic value of Riace has seen engaged over the years, on one hand, some activists and organizations at regional, national and international levels; on the other, mass media which have contributed – through newspapers, reportages and documentaries – to the creation and dissemination of an order of discourse on Riace. As for activists and organizations, their actions developed in the frame of the Italian radical and non-governmental left, particularly committed – especially in the South of Italy – fighting against mafia, helping the "poor", caring for territorial and environmental heritage, and promoting a concept of development far from capitalist logic. In this case, commitment to the cause was shown mainly through supporting actions, networking and joint initiatives and events. Their strategies would deserve a long discussion, especially with regard to the way they intertwine with the political, economic and social history of the country and the region. For the moment, however, I will examine the media aspects and how Riace-dispositif was created for public opinion.

There are two moments in which the history of this town had peaks of popularity: the first one, between 2009 and 2010, during the production and release of The Flight, a movie on Riace by German director Wim Wenders; the second one, in 2016, when the American magazine Fortune put Domenico Lucano among the 50 most influential leaders in the world. In both cases, Riace stands on an Italian media landscape where migration issues are strongly influenced by an increased number of landings by sea, a securitarian institutional and political reaction, and a growing perception that migration and terrorism are intertwined phenomena. Faced with this narrative environment, Riace shows features of "another possible world" (the utopia of normality, the slogan of Riace) able to keep alive the dreams of those who believe that hospitality, abolition of borders and equality are imperatives. However, there is a perspective that, more than any other, is encouraged by the media narrative: the refugee's shift from "emergency and problem" to "resource and rebirth". Although only now the Italian inland depopulation issue is becoming a

trend in public debate, the idea that a small Calabrian town – marginalized and “endangered” – is finding ways to change through “migrant force” appears as a key to understand the migratory phenomenon and to circumscribe two main streams in public opinion: on one hand, the deployment of those who want to feel protected from foreign invasion; on the other, the deployment of those who - in matters of realpolitik, common sense or historical courses and recourses - see in migrants one of the ways to secure a future.

Therefore, the rhetoric on Riace focuses mainly on the following elements: the rebirth of Borgo Superiore, otherwise destined to neglect; the rebirth of a local economy, whose dramatic decline had been the cause of depopulation; the rebalancing between an old-aged local population and young migrant families with children. The migrant-resource becomes the last chance to have access to the former rural past - that of land values, handicraft traditions, a more environmentally friendly life and conviviality. Somehow, Riace opens to the possibility that a lost world may find a chance to rebirth thanks to a bucolic dimension of community where time seems to be magically suspended. However, this understanding contributes to evoke the idea of a traditionalist community, whose sole consequence is to emphasize the false opposition between the two main streams above mentioned. In fact, this idea of community - with its symbolic and nostalgic result - leaves behind any kind of critical understandings of how national policies deal with the issue of migration in general, and the consequences that these policies have on small local realities, as well as on their ability to promote an effective improvement in living conditions thanks to a repopulation process. Indeed, we might wonder: if Riace is a role model, is it therefore the best possible application of the SPRAR project? The answer is no: “Riace model” is perhaps one of the most critical experiences evaluated through the SPRAR project criteria.

Even though the “best practice” of Riace was the main source of inspiration for both the 2001 PNA (Programma nazionale asilo, National Asylum Program) and the 2009 Regional Refugees Act of Calabria Region, at first glance it seems to be an exception to the rule that the law tries to re-absorb and normalize. This normalization is achieved by ambiguous strategies: on one hand, using Riace as a borderline entity to which asking for “breaking the rule” in case of emergency, such as speeding up procedures for giving immediate hospitality to a dozen refugee families (an emergency dictated by the overcrowding of other SPRAR or CAS centers); on the other, criticizing Riace for disregarding rules, such as failing to properly provide required certificates and supporting material for aforementioned procedures. In this game of roles, however, Riace does not have the power to impose itself as an effective alternative to the rhetorical construction of the law, and as a breakpoint that seriously can put into question the securitarian language and perspective through which the phenomenon of migration is treated. Yet, Riace’s significance remains stuck in a mechanism in which the more it shows the flexibility of its “absence of law”, the more the law is strengthened and re-affirmed (Agamben, 2003). The institutional formal accuracy and the anomie of Riace, both entwined with the symbolic value of mayor's political choices, do not merely contradict (and conflict) with each other, but rather interweave in the frame of a “coherent non-coherence”, undecided and uncertain, in which the truth value of a fact – “the Riace model” – emerges in all respects as an elusive object.

To conclude, according to what John Law writes in his book After Method (Law, 2004), when Riace is presented as an alternative model for addressing both the refugee issues and the inland depopulation challenges in Italy, it is simultaneously possible to see how this dispositif creates both a manifest absence and a hidden otherness. In the first case, with regard to the migrant-resource interpretation, manifest absences are refugees in their singularity, with expectations, plans, migratory paths, potentialities and skills, each of them being considered case by case, person by person; in the second case, with regard to securitarian migration policies, what is othered are both the interest at stake of the territory, its transformative potential and future improvement, and the possibility to address its relational baggage into an effective process of democratization of knowledge, learning, and self-managed approach to social change (Greenwood, 2007).

5 CONCLUSION

Has the dipositif-Riace activated a process of questioning the traditional meaning of community and redefining its legitimacy? Has it had the ability to trigger democratization processes involving inhabitants (including refugees) in order to negotiate one or more interests at stake? In the game of roles and concerns that converges on “Riace model” – which shows Domenico Lucano, the mass media which in-form public opinion, and institutions as its main protagonists – two actors fail to respond: refugees and

inhabitants, with convergent and divergent potentialities and needs, who daily experience how difficult it is "to be integrated" into the challenge of negotiating a here-and-now. Indeed, although breakpoints and re-negotiation tactics, highlighted through public policies, certainly go towards that direction and contribute to "raise the scale" of citizens' expectations regarding the actions of municipality, they have not reached an effective critical point to trigger local initiatives able to complement those policies. One of the most obvious consequences is that Riace is likely to shift from a "welcome town" to a "SPRAR town", a place where the dominant perception – according to both its inhabitants and refugees, and partially supported by material evidences – remains that of the inevitable need to leave after a while. The question is: as planning researchers, is it possible to identify practices by which putting into question this perception and furthering interests at stake to reach a critical point and trigger "a process whereby self-articulated or solicited statements of interest, attachments and points-of-views are translated into stake within a specific process of stakeholderization" (Metzger, 2013: 781-796)? In this specific case, I believe it is essential that this process had the purpose to explicitly define and correlate, even in conflictual ways, different definitions and dimensions of need, trying to go beyond the cumbersome vagueness of the only answer formulated so far: employment.

At present, a spontaneous group of researchers, social entrepreneurs and Riace's inhabitants (including members of two organizations involved in refugees hosting) has been working on this purpose, trying to operationalize and improve the considerable agropastoral and environmental assets of the area. The group, which I belong to in the frame of my PhD research, is working on re-functionalizing the concept of "productivity" as a much deeper holistic process than its current merely economic equivalent, keeping in mind that talking about agropastoral and environmental assets is far from nostalgically thinking about a past that no longer exists. This means, in both cases, to follow the path outlined by public policies put in place by mayor Lucano and find strategic research paths that can bring together environmental and social justice (Anguelovski, 2014), in order to comprehensively hold together different but strongly interdependent issues, such as land use, workers' conditions and rights, intra- and inter-specific mutualism, food sovereignty and biodiversity. The creation of this working group, a sort of task force, aims at implementing methodologies of co-production of knowledge which are envisioned to be, as we argue, the most appropriate in order to redefine and put into use the transformative potential of the political dimension of the concept of community as expressed in the context of this article. In fact, co-production of knowledge responds perfectly to the need to move from a substantial approach (eg what is community? who are we as "community?") to a non-substantial approach (eg what does this concept of community mean? what are its consequences and potentialities?) in framing research, highlighting those processes of subjectivation and stakeholderization through which the matter of fact is put into question. Besides, those processes involve also the academic researcher, equally engaged in a reflexive process in which she can understand her position with respect to both the way she considers facts around her and how she considers herself among them.

In this regard, the most challenging aspect observed so far is to communicate - and translate - the importance of shared knowledge – and envisage methods for this purpose – in order to identify research questions, tools of analysis, actions and criteria to evaluate their impact. Although the circular link between them might appear obvious and automatic, it involves a twofold awareness: first, to acknowledge the importance of recognizing the actual range of possibilities grounded to the context and its resources; second, to acknowledge the importance of shared knowledge with respect to processes of democratization, not only in terms of sharing purposes and results, but specifically in terms of ownership of social change and its impact (Campbell & Vanderhoven, 2016).

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ID 1401| CHALLENGING COMMUNITY DIVERSITY THROUGH DIVERSE NEIGHBORHOOD DESIGN PRINCIPLE: A CASE STUDY OF WAT-KET, CHIANG MAI, THAILAND

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1 THAILAND IN AN ERA OF SUPER-DIVERSITY

The borders of the world seem to diminish, as we are moving into the era of diversity or one would consider it to be an era of super-diversity. Against the backdrop of immigrant issues, various countries have to rely on the movement of people for the decades to come. The members of South East Asian are among those countries. In the year 2015, in the aim for stronger economic development in the whole region, they initiated the ASEAN Economic Community to encourage the flow of skilled migrants in the territory. Several national and regional policies were nominated for smoother integration. Thailand who is ranked among the top 15 countries of migrant destination in the world will remain as the major destination in AEC. Unfortunately, the local neighbourhoods that are the area where the host and the newcomer interact were overlooked. They are the places, which have to cope with the impact of immigrant first-hand including more housing and services demands, social tension, diversified needs, etc. To make it worse, immigration studies in Thailand have only been focusing on the issue of illegal immigrant, labour regulation and immigrant health problem related to HIV and infectious diseases. However, few scholars have touched the aspects of socioeconomic development and urban development context as Haguet and Chamratrithirong (2012) stated that "Analyses of the effects of migration on the Thai economy have for the most part narrowly focused on the wages earned by migrant workers and have only recently begun to consider migration's impact on the broader structure of the economy.". Researchers in the field of

immigrant integration have been proposing that the diversity in the local community should be adopted as the main solution for immigrant integration. (Bosswick et al., 2007; Dixon et al., 2011; MPI, 2014; Kesten et al., 2015) It is the realm that promote “commonplace diversity” (Wessendorf, 2011). Various studies support that the good-quality physical environments are significant stimulators for diversity, including space for interaction, cultural spaces, public infrastructure. (Jacobs, 1961; Penninx, 2009; Legeby, 2010; Lelévrier et al., 2015) We anticipate that with the proper neighbourhood environment, there will be numerous types of positive interaction that eventually result in better integration.

1.1 CASE STUDY OF WAT-KET, CHIANG MAI, THAILAND

At present, Chiang Mai is the second largest city of Thailand with the area of 20,107 km2 and the capital city of the northern province with approximately 1.67 million people populate in the city (170,000 are living in the in city area). It has one international airport, the CNX with 140 flights per week. For the land transportation there are 7 round-trip trains from Bangkok and Chiang Mai per day and dozens of public and private buses and minivans wherewith. Chiang Mai is 720 years old, one of the oldest cities in Thailand with hundreds of temple and cultural heritages. Chiang Mai is already home of 17 consulates including USA, Japan and Italy, etc. Moreover, there are 7 major universities that provide international courses, just merely in Chiang Mai University (CMU) alone, there are almost 400 international students. There are 34,341 foreign license-workers and 263 developers (as of 2011) in the city. Thereupon, Chiang Mai is somewhat dynamic and diverse already. Due to that it is famous not only as a touristic destination but also as the second home for a considerable number of foreigners. Furthermore, there are around 65,000 residences who are from 8 main hill-tribe populations that reside in the city as well as the so-called alien residents from neighbour countries (Myanmar, Lao, Cambodia). And it is certainly possible that Chiang Mai will become even more diverse after the open of AEC 2015 as she is the primary transportation hub of Thailand, and the city will need to accommodate the massive influx of immigrant, likewise the impacts that come along with this phenomenon. Wat-ket neighbourhood locates in one of the special land use area in Chiang Mai (Preserved residential area). It is the area which designated for the preservation of traditional architecture as well as the socio-cultural heritage of Chiang Mai through the primary land use for residential usage. Nevertheless, due to the regulated year of the article (2012), a considerable number of the vernacular buildings are disappearing as it was either consumed by private developer or abandoned by the owners.

Vividly, as illustrated below, the existing building use map displays us the reality that the commercial buildings take up imminently all of the waterfront spaces. The only green space is also in a defective condition. The smaller green spaces are owned by the hotel and are utilized primary for parking spaces. In the inner residential area, there is no public spaces neither. Regrettably, there is extremely limited choice and type of accommodation in this neighbourhood (single family house, row house and condominium). Similar to the whole city, the public transport is not efficient and comfortable (the only bus stop is located at the bridge in the southern direction). Thus the majority need to rely on the private vehicle or taxi (red truck).

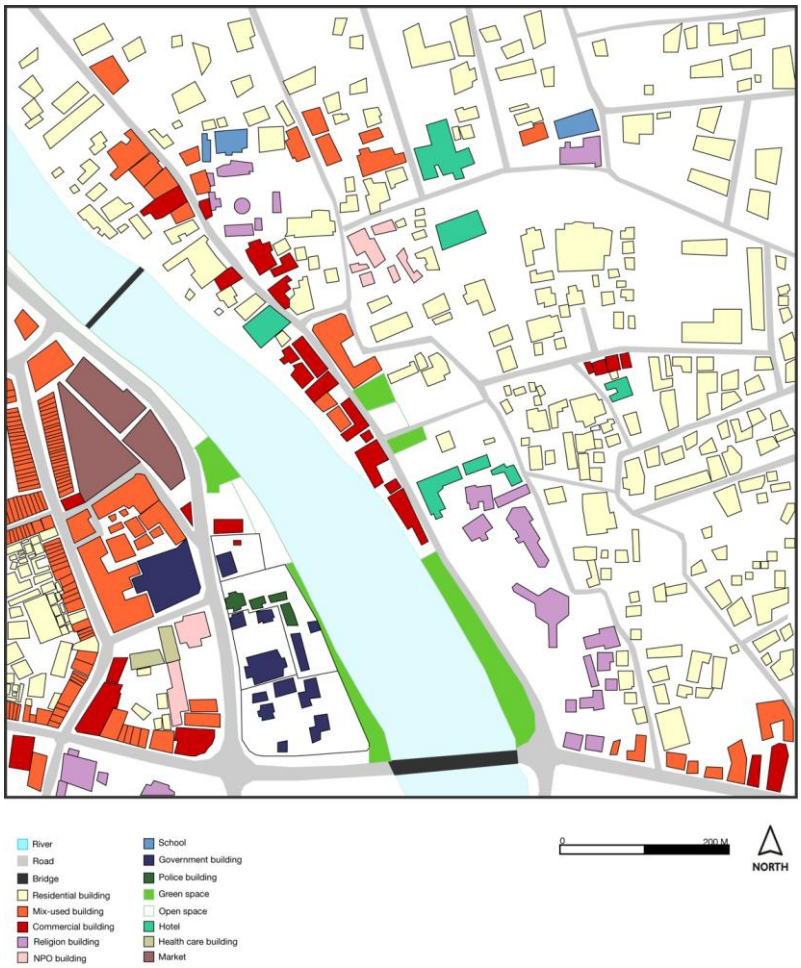

Figure 1 - Wat-ket neighbourhood building use map

1.2 DIVERSE NEIGHBOURHOOD DESIGN PRINCIPLE

Ambitiously, the Diverse Neighbourhood Design Principle (DNDP) has been accumulated through the comparative case study of Milan, Italy, Singapore and Kyoto, Japan. In order to extract the key factors that contribute to neighbourhood diversity, we did the Immigrant Citizen Survey (Huddleston and Tjaden, 2012), in-depth interviews and questionnaires with more than 400 participants. Our participants were from more than 15 countries of origin, including China, Thailand, USA, UK, Brazil, etc. Even though there are difference compositions and interpretations because the three cases define their own “diversity” as blended environment, global city and multiculturalism. The empirical evidences indicated that DNDP is integral for all the case study areas. Consequently from the comparative case study, we have proposed 20 factors that are imperative for neighbourhood diversity. For instance, free/ safe/ open public spaces, access to diverse choice of housing, more mixed use cultural spaces (see Table 1). More essentially, we have discovered that in all three cases there are at least 15 to 17 DNDP factors. Therewithal, this DNDP can be utilized at the preliminary of neighbourhood planning process to comprehend with an existing situation and afterward address for all the crucial factor to encourage the concept of diversity and integration in the neighbourhood.

DNDP FACTOR	
PHYSICAL CONTEXT	NON-PHYSICAL CONTEXT
Affordable connection	Appropriate activity promotion
Free/ safe/ open public spaces	Advocator/ mediator
Access to diverse housing choice	Local association
More mixed use	Local stakeholder partnership
Cultural spaces	Civic participation
Local institution	Economic opportunity
Public infrastructure	Flexible permit of stay
Facility for children	Rightly defined diversity
Neighbourhood amenities	Language assistance
Community hub/ centre	Commonplace diversity

Table 1 - Diverse Neighbourhood Design Principle

1.3 EXPERIMENTAL DESIGN

For the research experiment, to begin with, we implemented the DNDP to seek out potential factors as well as missing factors, this was possible through the in-depth interview with 100 immigrants in the neighbourhood and 5 experts from Chiang Mai. Nevertheless, as strongly advocated by several scholars that integration is a two-way process that must include both the local and the newcomer, therefore, we need an implementation method which assist us in participatory planning process. For us to investigate further on the novel method that would encourage both parties to cumulatively plan for their neighbourhood masterplan. A number of studies suggested that the interaction among two counterparts (resident and immigrant), the public-private partnership and the way in which the immigrant integration is initiated in the bottom up manner are crucial for the neighbourhood diversity. While we touch upon this delicate issue of immigration, we came upon the tool of Gaming Simulation (GS) that we believe it has the potential to be implemented as the experimental tool for this research. Particularly, GS can make complex information into more understandable. GS shows higher potential to consider different perspectives on the problem at hand than several other types of media. As stated by Duke “the multilogue, variety of interpersonal interactions (such as persuasion and negotiation) occur quite naturally among game players”. (Duke, 1975) Nature of gaming was extremely helpful when we are trying to create mutual partnerships among a wider variety of stakeholders or participatory activity. Subsequently, using the DNDP as the starting point we implemented role-play gaming simulation to introduce the neighbourhood diversity notion and design workshop game as the medium that bring together 100 participants (50 locals and 50 immigrants) to collaborate in neighbourhood planning activity and henceforward propose the DNDP Wat-ket neighbourhood master plan.

2 APPLICATION OF DNDP IN REAL NEIGHBOURHOOD

Through the application of DNDP and the interviews with our respondents, we comprehended that in Wat-ket there are 10 potential factor including; More mixed use, Cultural spaces, Local institution, Public infrastructures, Neighbourhood amenities, Appropriate activity promotion, Advocator/ mediator, Local association, Civic participation, and Rightly defined diversity. Unfortunately, the rest of the factors are perceived to be either lacking or missing from this neighbourhood. To be more precise, the majority of the expert have cited the cultural spaces of Wat-ket to be somewhat potent as well as the local institutions which several experts believe to be positive asset of the neighbourhood. The lessor ones that our expert spoke of were the “more mixed use” and “rightly defined diversity” contexts of the area. Withal, on the negative side, in the context of the absent DNDP factors, there were 3 factors that three different experts adverted that they are in urgent situation comprise 1. Affordable connection, 2. Access to diverse choice of housing and 3.

Local stakeholder partnership. Following by the issue of free/ safe open public spaces that few of them think that it is lacking. It seems that they generally pointed to the inferior physical aspects in the neighbourhood. Tangibly, according to our research, the DNDP factors in Wat-ket are fragmented, as there are missing a half of them. While they obviously lack the physical factors that relate to basic needs (i.e. diverse choice of housing, affordable connection, economic opportunity). The immigrant in Wat-ket neighbourhood seems to make do with the strong nonphysical factors include, unique advocator which is an elder who is local museum caretaker (he acts as tour guide, educator and advisor for the visitors,

tourists and migrants wherewith) and other three advocators that are the university students, specifically those from CMU that have been exposed to familiar international environment, as well as local associations and local institutions instead. For instance, with the narrow choice of housing they asked for the help from the advocator to find an acceptable one, the participation particular in religion association. Therewith, we have to concede that in Chiang Mai the immigrant would not genuinely need to assimilate themselves to Thai culture, however they do not reach the level of diversity neither. Two parties mutually respect each other. But there are evidences which reflected that there is limited connection and interaction between the two (i.e. lack of place for everyday encounter, limited access to certain places, missing stakeholder partnership).

Generally, on the surface Wat-ket seems to be physically diverse area. Yet underneath that diverse environment there are voids of crucial DNDP factors (specifically, public spaces, affordable connection, community centre) that promote diversity. And this reality has been limiting the interaction among them. Fortunately, these negative narratives at lease gave us the opportunity to learn that several of DNDP factors are related to each other, theses relations include two-way connection (i.e. affordable connection and public infrastructure), one-way connection (i.e. free/ safe/ open public spaces and commonplace diversity), interrelate, a number of them can be substituted by the other (local association and local institution). The best case scenario is that we need the entire set of the DNDP, if we cannot do that the essential needs of the immigrant, interactive spaces, local stakeholder partnership & civic participation and advocator must be fulfilled at the least, in order for the local community to live without massive tension.

More on the factor correlation, traditionally, temple (cultural spaces) used to be the centre of Thai neighbourhood. Unfortunately, nowadays it is not the same as it used to be in Wat-ket. Obviously, community hub/ centre is also an integral part of neighbourhood-level integration, we need to reinterpret the meaning of community centre. The centre should be able to accommodate diverse ranges of people as well as stimulate them to visit and actively participate. And it should have multi-function facility. The absence of community hub/ centre might also be one of the cause of weak local stakeholder partnership within this area and vice versa. Wherewith, we need certain kind of interventions to reignite the space. As we have found out that the temples have high potential to exert and revert as the major community centre; given that there is an appropriate activity to predispose the local stakeholder together. “The most important thing is how to find an appropriate space, tools and/or activities that can be applied to stimulate the people participation, people perception regarding the local cultural heritage. It is apparent to us that it does not need to be a colossal project from the central government; we just need several small local interventions, however, it can improve the identity of the community, preserve the cultural memory, connect the local people, attract the tourist and then incite the local economic as a result.” (Huyakorn et al., 2014)

The investigation might direct us to the perspective that Wat-ket is not such a noble territory for integration. Still, we found out that there are several latent qualities which can be developed, considerable number of them are uniquely discovered only in the area wherewith. There are: 1. the rightly defined diversity that cherish the different character, which blossomed from single socio-cultural route/ aspect of the neighbourhood 2. The robust local religion local associations (4 religion buildings are residing in the same neighbourhood) 3. The complexity of local neighbourhood diversity that otherwise we could not consider of, we have learned that the definition of diversity must be defined by the locals (that must consist of both the host and the newcomer) and the humble definition of diversity; “share of common route or appreciation of the similarity” that is cherished by the general residents 4. Various active local advocators. (such as the local institution which consist of two local universities and T Thailand Creative & Design Center (TCDC), local associations comprise the association for Thai-Muslim, the Sikh institution, the Christian authority and Healing Family Foundation for orphan and disadvantages people) 5. The contribution by external institutions such as universities or government organizations, 6. Several religion spaces have potential to be decent community centre (as it normally is long time ago), it may need a push or an appropriate promoter. 7. Special kind of mixed-use space (Foundation for orphan, art gallery and residential buidling). Nonetheless, we also learned about certain flaws 1. Only strong local associations and willingness for participation is not mean that there will be a quality neighbourhood partnership, sometime without proper stimulation this only leads to bonding relationship within the same socio-cultural group. Wat-ket seems to lack both the spaces and policy to support these two factors 2. The commonplace diversity and neighbourhood diversity strongly associate with physical aspect of DNDP, for example good quality public spaces, well-connected and universally designed street, facility for children, etc. Therefore, they should be one of the starting area that require emerging consideration 3. The lack of facility for children could lead to the life outside of the area or life confine within their own house (as the families that have children in our

case study) 4. Various neighbourhood amenities do not always determine that there will be access to economic opportunity for the immigrant, in this aspect curtain soft measures or policies (including tax reduction, skill training, special permit of stay, incentive benefits) should be implemented. At any rate certain facts are universal though. Without free-safe-open public spaces and right activities promotion, the chance for commonplace diversity will not be enough, thus blocking the diversity in the area. Wherewith, local diversity advocator can foster ongoing dialogues of neighbourhood diversity. Inasmuch, these are the three pillars that keep neighbourhood integration process a conceivable reality.

2.1 POSITIVE RESULT OF THE EXPERIMENT

Follow up after we have accumulated the potential and missing factors of DNDP, we conducted the design workshop with the local stakeholder to conjointly develop the neighbourhood masterplan that integrate the diversity notion as the heart of the plan for the neighbourhood of Wat-ket. The workshops were organized three times with at least 100 participants. The local stakeholders who have been joining our activities are including 1. Resident (both native and immigrant residents), 2. Local government authorities, 3. Local businessmen, 4. Representative from religious groups, 5. Chiang Mai university students, 6. NGOs (such as TCDC, Healing family foundation), 7. Experts, 8. Others. In the scope of bottom up and interactive approach. The design workshop gaming simulation seems to produce fruitful results of participatory planning. Together with the local stakeholders we could put DNDP into use with the real community. Accordingly, the developed master plan is illustrated in figure 2, we will elaborate the masterplan from the gaming simulation activities by dividing it into 4 major diversity hubs and 2 minor hubs. The major ones are 1. The Wat-ket community centre at Wat-ket temple, this hub will be the main centre of the neighbourhood through the direct connection with the new transportation connection, existing open spaces and the market on the opposite side of the riverbank. Likewise, they wanted to have new permanent market space next to temple, and the adaptive reuse of several buildings that could provide exceeding housing options for this community. The stakeholder also agreed to put the new bus stop and build a new pedestrian which pass through the temple and link the arterial road with the main street as well as the pedestrian bridge.

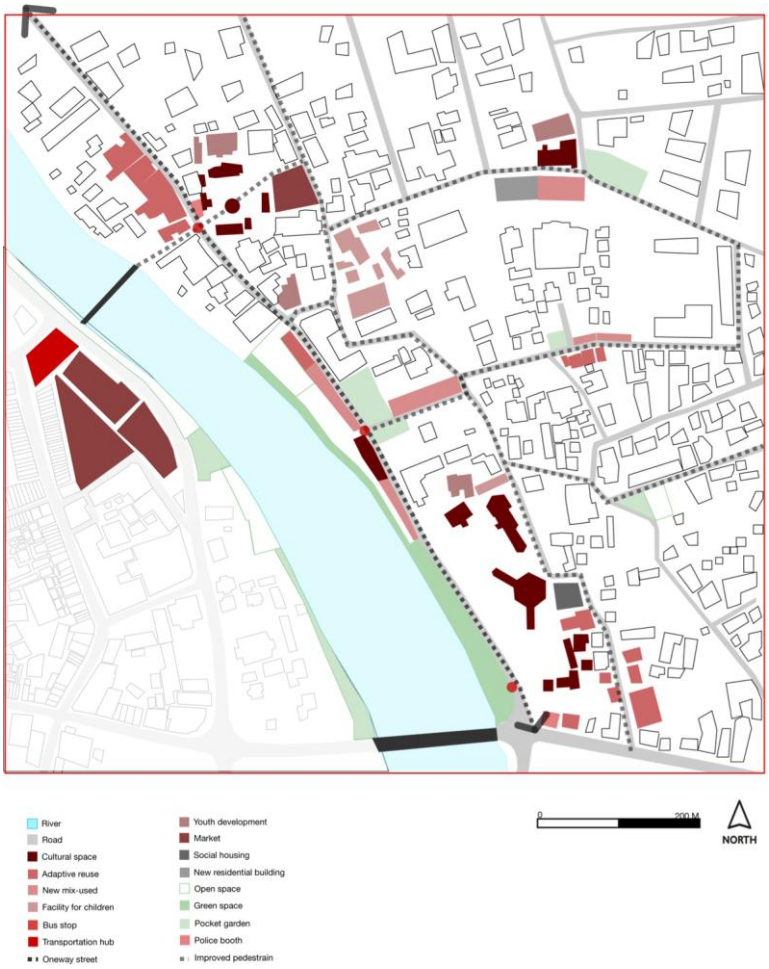

Figure 2 - Masterplan result of the design workshops

Furthermore, they have the vision for Wat-ket school to open for children from all backgrounds and it will act as the youth development space for Wat-ket neighbourhood too. In order to make it truly operate as the community centre, our stakeholder proposed that they should initiate the local committee that involve all of the member from different socio-cultural groups (Muslim, Buddhist, Christian, Laos, etc.) and local stakeholders (businessmen, local school teacher, resident, immigrant, etc.). The older residents remarked that similar kind of local committee used to exist and they appreciate that it could be revived. 2. The readjusted waterfront area, the consensus is to keep the shabby park but redeveloped it to be inclusive space (improved street furniture, lights, universal design utilization, improved vegetation area), with the new public-access waterfront area we proposed two new mixed use buildings, one of them is the novel AEC cultural centre that act as the museum, library, learning centre, training facility for both the local and newcomer. All the stakeholders reached an agreement that this waterfront project should be financed by the government and the private sector, it should also be managed and taken care by the entire neighbourhood. They would like this to be the flagship public-private partnership project of Chiang Mai. The participant also fond of the idea regarding new multipurpose open space that can be used for weekend market, cultural fair, festival, etc. In addition, the adaptive reuse of the rusty commercial building that should include cultural amenities usages like ethnic restaurant, workshop for traditional crafts, bookstore. They also would like to have new bus stop at the AEC cultural centre. Opposite to the centre, there will be development of the park (owned by the hotel) and another mixed use building along with it.

Additionally, 3. The hub at the First church of Chiang Mai. The church authorities are the only one that grant us the property to be developed as the social housing for the area. They also would like to provide one building for youth centre/ library and another for childcare centre. We will add new bus stop at the park opposite of the church too. Ambitiously, they want to add various adaptive-reuse buildings surrounding the arterial road as well. And 4. The development near the Muslim mosque, in this hub there will be new low-rise residential building complex next to new mixed use building. Beside the mosque, the majority were keen on the idea of new urban farming space that will be taken care by the residents. With better openness, the mosque authorities said that they will try their best to be further open for diverse type of student wherewith. For the minor diversity hubs, A) the first is the space near the Healing family foundation that show great potential as a decent dual cultural space, which has art gallery and orphanage. The local stakeholder agreed with our proposal to include children facility to it. This facility can be the place which are missing from the community; the playground and kinder garden. Moreover, B) this research came up with the new Chiang Mai university outreach (the building is owned by the owner who is working at the university) to facilitate diversity and integration through various language courses, vocational training and volunteer centre.

It could be operated to assist smoother various student exchanges and youth activities in the area. There is likewise the consideration for smaller green spaces. One is the area focuses on re-using of the abandoned plot that will be developed as the petite park. Next to this park there will be both new mixed use buildings and the adaptive reuse of vernacular buildings. Not only that, supplement to those proposals, Wat-ket stakeholder want to develop the community garden that has both green space and multifunction open space in the inner residential part of the community. The main street will have traffic adjustment; it will be one-way street that goes downward from 12.01 a.m. to 12.00 p.m. then goes upward from 12.01 p.m. to 12.00 a.m. to reduce the flow of motor traffic. In addition, we add that they also want to improve the streets as much as possible, especially to make it safer to the kids and elders. The new bus stops will be the outposts for volunteer neighbourhood watch accordingly.

In line with the masterplan and our interaction with the local community we have learned the essential factors of DNDP which are appropriate for Chiang Mai, however, with minor adjustment they are possible to be implemented in other city thereafter. Firstly, the mixed use spaces and building, this is due to the limited spaces and high proportion of older architectures. These spaces/ buildings should have dualability or multiple usages that concern with cultural aspect (i.e. art gallery, craft workshop, ethnic shop, bookstore, etc.). Secondly, the religion building with it high potential of socio-cultural context could be the primary community centre that bring people together, nevertheless there ought to be the way to bring these different groups together for more interaction as well. Thirdly, the main mediator in the local neighbourhood seem to be the university student coupled with the respectable elderly in the community. Importantly, we recommended that they are the principal factors for neighbourhood diversity and we should turn to them since the beginning of integration process. Fourthly, Thai people love the local market (both permanent, weekly and special events) and not only them, in several of our case studies illustrated that this is the main venue for neighbourhood diversity and immigrant integration. Consequently, these

kinds of space should be preserved and promoted instead of the colossal department stores that are growing and consuming vast majority spaces of the city. Lastly, even it seems to be the basic issue but there are the needs for better quality and more public open spaces and pedestrian connected street.

2.2 FRAMEWORK FOR NEIGHBOURHOOD DIVERSITY

Thereby, from our exploration in the research case study. With our optimal attempt, this figure is our endeavour on the Diverse Neighbourhood Design Principle to extract and cluster the key factors as well as to conjugate the relating factor for the expedient implementation in other area.

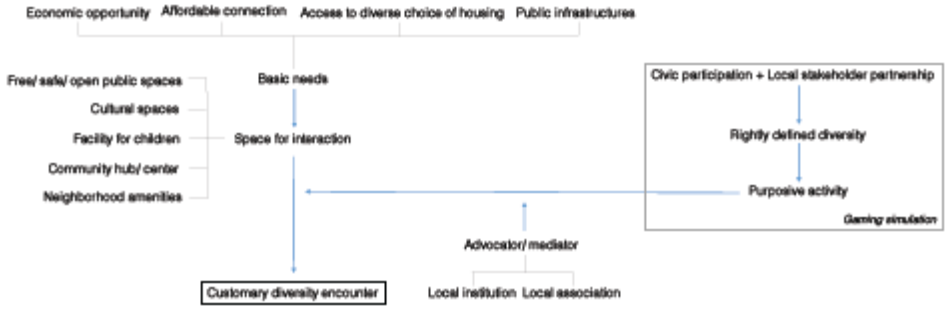

Figure 3 - Framework for neighbourhood diversity

In order to achieve the “customary diversity encounter” in urban neighbourhood area, there are mainly 6 indispensable elements that we need in the local community. Firstly, the basic needs that must be fulfilled including affordable connection (i.e. public transport, well connected pedestrian way), access to diverse choice of housing; from low to high price, several tenure options, building types, the rights for social/ affordable housing etc., universal public infrastructure (in particular, the healthcare facility and educational facility) and accessible economic opportunity, both formal and informal types, protected rights for everyone, fair and transparent job recruitment. Ideally, the neighbourhood should be developed in a mixed use (residential& retail, education & commercial) manner, it could help solving these issues in-one-go.

And while these needs are specifically important, it is generally for individual integration. For preferable integration in the whole community context, the spaces for interaction would be the major stimulator. These spaces will be different according to the socio-cultural aspect, believes, environment factors; climate, topography, availability of free spaces. Nevertheless, there are also diversified spaces from various cases that we found similar to each other. The spaces we are referring to consist of free/ safe/ open public spaces; from tiny pocket garden to massive urban park, from publicly own to semi-private open spaces, multipurpose area to more-specific-function. In addition, we also recommend that cultural spaces, for instance religion building, art gallery, ethnic shop/ grocery are the attractive areas for interaction. Forasmuch, as cited by all the major literatures, the facility for children (i.e. school, playground, kinder garden) can encourage exposure to diversity in an extremely friendly environment. In certain cases, there is also the place where the people deem to be the community centre/ hub such as youth centre, neighbourhood centre or even temple. Lastly, the neighbourhood amenities that are loved by both the locals (native, immigrant residents) and visitor, these amenities include local gastronomies (café, pub, bar), market place and local commercial spaces. Ordinarily, there are not only favourable for integration but also function as the main economic lifeline, economic opportunity provision and attraction for plenty of local communities as well.

In parallel with the upward physical factors, there is also the need for both local initiator and initiation for neighbourhood diversity. Firstly, we require strong local stakeholder partnership (between public and private body, NGO and government or all of them altogether) and civic participation (which all the resident take part in actively and willingly) as the spearhead of nonphysical factor. For the integration policy to work these two notions should be present in the neighbourhood. In accordance with the two, the local community must be the one to arbitrate on their own definition for diversity. With the rightly defined diversity (the definitions we have encountered were “blended environment”, “global city perspective”, “multiculturalism” and “share of common route”), the purposive activity will follow by shortly. The effective activities consist of cultural exchange, local festival, parenting support, free language courses, job related

skill training, gaming simulation activity, university field visit, etc. In this research, we likewise demonstrated that gaming simulation tool can play a colossal part in the stimulation for this nonphysical aspect of DNDP. Finally, local people with the help of local advocator/ mediator; the youth, NGO, elder, local association and local institution can organize these initiations within the space for interaction and simultaneously lead to customary diversity encounter. Substantially, this can be the prominent prototype framework through participatory approach for other community in Thailand and hopefully other nations in AEC accordingly.

2.3 EPITOME

In essence from what we have cultivated from the case of Wat-ket neighbourhood in Chiang Mai, the DNDP factors seemed to be disunited. It is understandable that it is lacking in the factors that relate to government provision and policy, including affordable connection, access to diverse choice of housing, free/ safe/ open public space, facility for children, and much more. Also, the collaborations among different stakeholders are perceived to be lacking. Which is why a certain of older residents are reporting the growing tension and feeling of “otherness” within the area. Against this backdrop, Wat-ket neighbourhood also consists of high potential factors, few of them are uniquely found in this community. Wat-ket are developed more in the mixed building use aspect, that is why there are a few buildings that host various space that to certain-degree contributed to neighbourhood diversity. Theses spaces are including the attractive cultural spaces that are temple, museum, church, art gallery. Wherewith there are several neighbourhood amenities such as café, restaurant, pub and bar. There are wherewith an exceeding number of advocators in the area.

Our respondents likewise pointed out to uniquely defined diversity. The researcher also found one-of-akind diversity advocator who is the museum caretaker/ local educator. Supplement to these advocators there are various cultural festivals and the majority of the residents seem to be truly eager for participation. These two factor also help foster the notion of neighbourhood diversity and everyday positive interaction. In our research setting, DNDP combining with gaming simulation tool is proved to be a reasonable median for neighbourhood immigrant integration, through its key ability to improve the people perception and its flexibility, the significance of the initiation of appropriate integration projects locally. Wherewith, the potent property to encourage bottom-up participatory planning, one of the better communicative tool that can translate difficult and complex information in to easier message. As well as the way it could provide the opportunities for “learning by doing” and “multilogue conversation” for the players, facilitator and observer in such a playful and cordially environment. Hopefully, we can somehow fill the missing link which is preventing the government from developing the successful integration policy and project that varied studies have been advocating.

If we take a look at the resulted neighbourhood masterplan, the decent starting point for Chiang Mai neighbourhood diversity could be the adaptive reuse of vernacular/ historic building that focus on multiple usages (especially cultural amenities), green open spaces and quality pedestrian street that seem to be diminishing in Thai major cities, the religious space as the cultural centre that adopt the notion of neighbourhood diversity, the love for permanent/ seasonal market and importantly the nifty and active diversity mediator in Chiang Mai context are the university students and elder figure in the local community.

2.4 LIMITATION AND WAYFORWARD

This research strives to introduce and illustrate the concept of diversity and its possible implementation in AEC context. For this research, it follows principles of an interrelate-mixed methods study to broaden the concept of diversity from socio-economical disciplines into a broader multidisciplinary research on one aspect. And to strengthen the notion and understanding of diversity and immigrant integration in scope of the urban complexity on the other. By stating this immigrant integration and to certainly respect the notion of diversity we intend to cover as several types of immigrants as possible. Even still this multidisciplinary approach can help the study in accumulating significant relevant factors, we do not plan to extend it to all facets and integrate those aspects into one single research. We neither will not be that ambitious off stating that this research would be comprehensive in all angle of immigrant integration, however our study is mainly considering crucial determinant that related to urban planning/ design for immigrant integration.

Though, we might not be able to comprehend several other issues such as the complex physiological notion of immigrant integration, social security in terms of terrorism may not be an integral part of the study and healthcare/ contagious disease, nor we can cover all the aspect of diversity such as religions, believes and LGBT. Moreover, we do not claim that the result of the diverse neighbourhood design principle will be able to cover all of the different kind of neighbourhoods in AEC. Considering the limited time frame of the research, the study put higher degree of attention on consolidating the urban planning policies and neighbourhood design factors that promote immigrant integration and diversity concept into a diverse neighbourhood design principle that can insure the livelihood improvement both for the local resident and migrant together in same neighbourhood and flourishing the positive urban development by the AEC in the future.

With more time and larger group of sampling, we could project the essential factor of DNDP, by understanding what kind of immigrant (i.e. country of origin, income range, family type) can effect particular needs for housing, services, local association/ activity, etc. which in our research we could find certain patterns. For instance, migrants from the country of Myanmar, Lao, Cambodia tends to prefer to live in more-affordable type of housing (in particular flat/ apartment) and the main activity they love to do in public open space are more inner group activities. As per the people from USA, they are likely to rent a single house or townhouse type of housing, they also incline to interact with other social/ ethnic groups and do active activity such as sport. Thus, the majority of them demand more bicycle mode of transportation. For the group of Japanese, the majority are living in the house that they have purchased, more of the socio-cultural related activities (such as festival, cooking, art) are what they prefer to do in the public open space.

On the other hand, this research result setting left us with numerous issues that oppose to existing study about neighbourhood diversity and immigrant integration. In the majority of the cases (i.e. London, Budapest, Singapore, Milan, etc.), the integral factors that dictate the immigrant's neighbourhood choice for migration are diverse choices of affordable housing and access to decent quality transportation. However, in Wat-ket case as we presented, these two factors were reported missing within the area, and the migrants chose to reside here anyway. The one from more developed countries have enough money to ignore this fact, those who were from the under-developing countries do not have any other choices. Therefore, the thorough study into the different complexity of these immigrants is eminently needed.

Diverse Neighbourhood Design Principle can also be improved and we encourage other study to pick it up and further explore. Given more time and budget we would like to cultivate further factor. For example, we can focus deeply into one single factor of cultural space; its relation with the number of immigrant population and how they feel integrated. Or try to understand how much space of the free/ safe/ open public spaces is needed per one immigrant. It is possible as well to supplement the principle, forasmuch we know for certain that it is not possible for us to cover all of the enormous aspects. DNDP can be integrated with other principle and tool including GIS, Nationwide survey, LEED ND too.

Looking back to the participatory activity, GS (combining with DNDP) is an excellent communication tool due to the mechanism of the game that let the players put themselves in other peoples' shoes, and in our case the role of immigrant and resident. Likewise, the sessions produced the environment of the interaction in relaxing and friendly atmosphere. With decent mechanism, it cans make the majority of Thai native residents understand the difficulty of being immigrants themselves, subsequently they started to consider more about the immigrant. And as stated by numerous literatures that immigrant integration is a two-way process and need to be done mutually by both the migrants and the receiving local entities.

Therefore, with it efficacy in positive communication stimulator, immigrant integration policy in other scope should keep this expedient tool in mind ditto.

As strongly value by Duke (1974) and Rizzi (2011), gaming simulation cans possibly be an alternative language for urban planner/ design, which in the case of this research the communication has not stopped after the game session but it has been continuing and growing. A group of the residents even chose games as the way to communicate about diversity in the neighbourhood, specifically with the kids and younger generations. This impact of gaming simulation requires to be deeply studied further, in order for us to clarify and understand the phenomenon of these non-direct impacts of gaming simulation better.

Hopefully in the near future, the dynamic of gaming simulation could be put into better use, our research expands the understanding of it application and it seems to have an extremely elevated potential for urban

planning and design context wherewith. Regardless, in this new era of diversity, several nations will require collective policy planning in the local community level. Neighbourhood planning is the best arena that urban policymaker and immigrant integration initiator should start implementing this tool. Unconventionally, GS could be an enchanting instrument to achieve neighbourhood diversity and refined integration process concurrently. Due to its diversified potentials as Huyakorn and his colleagues have unearthed that "one of the most notable attributes of gaming simulation as a tool for immigrant integration and co-existing diversity is that it cans stimulate the mutual understanding and concerted respect among the resident. This is one of the ways that we can move beyond the clichéd stigma of dissimilarity, let it be the socio-economic age or sexual difference and truly pursue the notion of diversity." (Huyakorn et al., 2016)

Possibly, with more understanding and less negative stigmas in the local neighbourhood, there will be greater attention and pressure to the government in term of the immigrant (especially, those who are less fortunate) rights protection law, immigrant integration policy and regulation improvement. Aloud what the MPI has advocated that "If integration efforts are to succeed, extensive investments of political, financial, and intellectual capital—and dedicated and prolonged attention from policymakers—will be needed for the foreseeable future." (MPI, 2016) The public should change the perception toward migrants and admit that they are crucial to our urban development today and the future to come therewith. As a number of scholars started to believe that migration can; with proper policy development would benefit the destination country and host country as a whole. Swing believes "Countries with migrant-friendly policies are more likely to prosper." (Swing, 2016) These benefits are such as ethnic shops, revitalization of aged neighbourhood and immigrant entrepreneurship because the migrants are not the substitution but the booster of both local and nation economic as suggested by Nallu "A surprising number of migrants and refugees have been able to cross the city's physical and psychological divisions, breathing new life into its dying neighbourhoods." (Nallu, 2016). Despite that the journey ahead for neighbourhood diversity and immigrant integration might not be downright bright. Conversely, in these negativities we have subsequently found various possibilities for better inclusive community in the era of super-diversity which is approaching.

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ID 1403 | ETHNIC HOUSING SEGREGATION AND THE ROMA/GYPSY POPULATION: A PORTUGUESE PERSPECTIVE

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ABSTRACT: Questions of spatial segregation and over-representation of ethnic minority groups with weak connections to the labour market are central to the political and policy agenda across Europe and academic studies in the fields of housing and urban regeneration. In some countries, the spatial concentration of ethnic minorities is considered in itself an indicator of socio-spatial disadvantage, accentuating pathological discourses related to ethnic communities but in turn providing more resources for these areas. In other countries, where policies have a less preventive character and only intervene during phases of advanced urban decline, the existence of ethnic enclaves and concentrated poverty has led to housing demolition and rehousing, in many cases with controversial results. The relevance of the link between ethnic segregation and integration is known. On the one hand, people create and modify places, on the other hand, spaces in which people live and work affect their social relations, and individual fortunes (eg educational attainment, income levels, reputation). The over-representation of ethnic groups in some areas has been considered a problem where it hinders opportunities of social integration, and when it amplifies processes of stigmatization and the inter-generational transmission of disadvantage. However, it has also been recognized that the concentration of ethnic communities may actually be an advantage for developing relationships of solidarity and the preservation and affirmation of cultural identities. This paper aims to contribute to this debate. It focuses upon the ethnic housing segregation of the Gypsy/ Roma population in Portugal, and asks if ethnic clustering on a number of housing estates is the result of a voluntary impulse towards aggregation (therefore perceived positively by residents), or the result of a lack of choice (thus an 'institutionalized' or deliberate political choice to put the Gypsy/Roma people at distance). In the first part, I review the literature on the factors that underlie the social construction of ethnic segregation; in the second part, I review literature that presents the empirical results of research conducted in different locations of Portugal but has in common processes of rehousing of the Gypsy/Roma population in urban areas. I compare these results with those I obtained in field work in Porto where I interviewed Gypsy/Roma people regarding their preferences given models of concentrated housing relocation or more dispersed neighbourhoods. Focusing upon the Portuguese case, I offer some answers to the following research questions: Is the spatial segregation and concentration of the Gypsy/Roma population on a number of housing estates a voluntary choice or a of lack of choice given institutionalized political decisions taken by local authorities or bureaucrats? How does the Gypsy/Roma population feel about segregation and concentration? Do they wish to live in segregated areas, have they been able to choose between more concentrated or dispersed patterns? What are the consequences? Do they believe that spatial segregation reproduces inequality and separation?

KEYWORDS: housing policy, Gypsy/Roma population, ethnic segregation, Portugal.

1 LITERATURE REVIEW: ETHNIC MINORITIES, HOUSING POLICY, AND ETHNIC SEGREGATION

There is a vast literature on socio-spatial segregation, housing policy, and ethnic minorities that sees ethnic segregation as a socio-spatial product of social relations marked by inequality in power relations.

The increasing concern and debate over ethnic minority concentration and segregation in cities, with heightened attention paid to their perceived, positive and negative, effects (Powell, 2013), has been developed from a socio-spatial perspective, and recognizes that social relations are frequently correlated with the spatial organization of social groups in the residential structure, influencing social interaction and community cohesion (Alves, 2017a).

The degree to which two or more groups live separately from one another, in different parts of the urban environment, along lines of social class and ethnicity, etc. (Andersen et al. 2000), is relevant because social distances can be seen making intercultural dialogue more difficult while the place where we live is likely to influence access to public and private services.

The over-representation of ethnic groups in some areas, and their underrepresentation in other areas, has been discussed from the perspective of their causes and effects. Voluntary or forced causes of ethnic segregation have been at the centre of the debate, with segregation being explained as:

- a deliberate or voluntary choice of aggregation, related to preferences for class, religious or ethnic affiliation, and preservation of networks of social support and aspects of cultural or religious identity (Schnell and Ostendorf, 2002);
- a matter of resource constraints: of financial resources (eg income, security of income, and capital assets), cognitive (education, and knowledge of the housing market); political and social power, related to the contacts people have that might help to influence decisions, for example to access housing in certain areas (Fortuijn et al. 1998);
- a matter of (more or less) subtle forms of racism and discrimination by host society/ institutions towards people perceived as belonging to different racial or ethnic groups (Peral and Ramos, 2014), for example in the private and social rented housing market.

While the first explanation emphasizes the preference for living close to people who are like ourselves, while avoiding other specific groups, the second and third emphasize the lack of choice in housing markets, the latter emphasizing institutional practices and ethnic or cultural discrimination.

Knox and Pinch (2010) claim that segregation is the result of mechanisms involving the market, the state, and civil society: “(patterns) reflect hostility among the wider population, discrimination in employment and housing markets, and clustering for defence, mutual support and cultural preservation” (Knox and Pinch, 2010: 185).

In a paper entitled “Neighbours: determinants of whom Europeans want to keep a distance”, in which Peral and Ramos (2014) examine the individual (eg social values, trust, threat perceptions) and the contextual (eg national economic performance, immigrant flows) determinants of social distance, prejudice – which is defined as an average or hostile attitude towards a person who belongs to a group simply because they belong to that group- is identified as a key reason for the negative social attitudes of host societies towards immigrant or minority groups.

In his analysis of the connections between class, ethno-racial division and state policies (eg police staff, welfare offices, housing authorities etc.), Wacquant claims that in an era of triumphant neoliberalism, in which the structure of social space has been objectified in the built environment, the spatial concentration and stigmatisation of poverty is in itself a factor that reinforces inequality and disadvantage (see Wacquant et al. 2014 and Wacquant, 2014). This argument is further developed by Powell (2013) for the case of Gypsy-Travellers whose spatial confinement in marginal sites (in the UK, as in Portugal and other European countries) has limited everyday social relations and encounters.

The segregation of ethnic minorities and migrant groups has also been explained by the characteristics of housing policies and markets, in terms of the condition of housing tenures, for example in terms of price levels, vacancy rates, and allocation rules. Andersen et al. (2013) identify several specific elements of national housing policies to explain housing patterns of immigrants in four Nordic capital cities. One

important conclusion of this study is that “the ethnic tenure segmentation of these housing markets is only partially explained by their income segmentation, existing elements of policies that have special consequences for immigrants, along with the effect on income groups” (Andersen et al. 2013: 40). The unequal distribution of incomes and processes of discrimination would explain the filtering effects of housing markets.

The context-dependent nature of segregation is also emphasized by Malheiros (1998) who has interpreted the spatial organization of immigrants and ethnic minorities in southern European cities. Regarding the metropolis of Lisbon, his work has shown (Malheiros and Vala, 2004) that, on the one hand, until the 1990s ethnic minorities largely relied upon the informal housing market and, on the other, they showed a strong suburbanization pattern, “comparable to some French metropolises, especially Paris” (ibidem: 130).

Hoekstra (2017) has also shown that: “migrant policies – and other urban policies – are informed by broader and locally specific understandings of the real and imagined city that shape what (and who) is perceived as a policy problem and how it can and should be addressed” (ibidem: 15).

A good illustration of the way in which (explicit and implicit) understandings of urban reality inform policy discourses and practices is how housing and land-use planning policies deal with questions of ethnicity and social class.

In countries where the concentration of less well-resourced families is seen as a factor hindering opportunities for social integration while favouring processes of urban decline (such as Germany or the Netherlands), governments have formulated and implemented strategies of social mix to prevent or reduce spatial segregation. These strategies have varied significantly in their rationales, purposes, modes of implementation and territories of intervention (Rose et al. 2013), inviting different kinds of criticism (Markovich, 2014). In other countries, such as Portugal, where the spatial concentration of immigrants or minority groups is not considered a problem per se, housing policies and urban planning, have not sought to prevent or break up concentrations of poverty, but have reinforced processes of socio-economic and ethnic segmentation of housing tenures and housing estates. A paradigmatic example of this claim is the Special Rehousing Programme (PER) created in 1993 to relocate residents of shanty towns[1] living in the metropolises of Lisbon and Porto. The construction of new housing estates for the rehousing of families, reproducing the socio-economic and ethnic composition of original areas, has led to the concentration of citizens with high economic needs in large suburban social housing estates.

For Mustafa Dikeç (2011), urban politics as has been the case in France, has contributed to the political construction of the periphery as the periphery-as-urban-outskirts. By designating the suburbs as separate territories and their inhabitants as different, French urban policy has consolidated an unjust spatial order and a source of stigmatization.

While Piketty (2014) also emphasizes the importance of the social composition of areas of residence, as regards opportunities of social mobility and dynamics of socio-spatial inequality[2], the empirical investigation conducted by Alves (2017b) in critical urban areas in Porto demonstrates that political discourses and strategies have reinforced processes of social and spatial segregation (or of ghettoization) that are precisely part of the problem of marginalization of these areas and their occupants.

Discrimination against the Gypsy/Roma, also called ‘Romaphobia’, has been discussed in various ways. While Kabachnik (2013), Greenfields (2008) and Greenfields and Smith (2010) criticize the adoption of political discourses and practices that aim to repress the nomadic ways of Gypsy/Roma families, Sigona

[1] The shanty-towns’ expanded dramatically during the 1960s and especially the 1970s following the independence of ex-Portuguese colonies, when the return of thousands of Portuguese families and Portuguese-speaking African immigrants (from Cape Verde, Angola, Guinea Bissau, and Moçambique) led to the construction of slum-like neigbourhoods on the periphery of Lisbon and Porto (Alves 2017b).

[2] Piketty argues that, in addition to the level of education and parental income, the chances of social mobility among children are substantially dependent upon the average income of areas of residency. He also argues that the chances of school success depend more upon the quality of classmate than the quality of teachers, especially at the basic and secondary levels. “Sending a trained teacher to a difficult neighbourhood does not greatly improve the chances of school success. On the other hand, sending pupils from the suburbs of difficult districts to a Parisian school can considerably increase their chances of success” (my translation) (Piketty, 2014: 98).

(2011) and van Baar (2011), address the discriminatory attitudes that have impeded or delayed this population's ability to settle, and Slaev (2007) and Kovács (2015) that have confined them to the least desirable social/public rented housing. Van Baar (2011) claims that the nomad theory, which argues that Gypsy/Roma are `nomads' who can only survive in segregated camps" (van Baar 2011: 207), isolating them from mainstream society, has contributed to marginalize or even dehumanize this population. He points out that they have been the object of centuries of exclusion and mistreatment which has limited opportunities of social integration and social mobility. This is an opinion shared in Portugal by Castro who affirms that nomadism is: "one of the most publicized stereotypes about the gypsy population" (Castro, 2013b: 52). According to Castro (2013b) nomadism serves to support specific options in terms of habitat (eg nomadic shelters) which aim to reject the right of Roma families to housing. The very creation of nomadic shelter parks outside the urban perimeter seeks to avoid conflict and prevent clandestine camps near the city.

2 FINDINGS OF OTHER STUDIES CONDUCTED IN PORTUGAL

Empirical studies carried out in Portugal on the preferences of gypsy families in relation to housing (typologies, social relations in the neighbourhood context etc.) stress that, in general, the living standards of the Roma are well below those of the rest of the population. They often live in dwellings of poor quality in segregated areas, sometimes without basic services (such as indoor toilet, bath, or shower).

Whilst in Portugal there are no official statistics on the numbers of families/individuals of Gypsy/Roma origin, as the Portuguese constitution allegedly does not allow citizens to be accounted for according to race, colour, or religion (therefore census data are not broken down by ethnicity), surveys and studies conducted by Castro (2013b: 41) estimate that the number of Gypsy/Roma in Portugal is around 40,570 individuals, of which about 40% still live in non-classical housing (ibidem: 43).

In 2008, a survey carried out by the municipal housing company of Lisbon (GEBALIS) counted 760 families, composed of 3,296 individuals of Gypsy/Roma origin living in social housing in Lisbon. Whilst this is a relatively small number, accounting for only 4.3% of the total population inhabiting the Gebalis housing stock, which totals 80,000 residents, due to unequal spatial distribution of these families across the housing estates (as they are represented in only 38 out of a total of 66 housing estates), in some neighbourhoods they are considerable over-represented, equivalent to 1/3 of the total population (Santos, et al. 2013, Pereira and Rebelo, 2013).

The main explanation for such uneven distribution, and that "Gypsy/Roma families are often kept in substandard housing and degraded or dispatched to the urban peripheries" (my own translation) (Reis, 2001: 76), are strong, negative prejudices towards Gypsy/Roma (eg claiming that they are asocial, involved in criminal activities, or unwilling to integrate), leading to discriminatory practices towards them:

> *The hypothesis of rehousing the Gypsy/ Roma in a scattered way in the urban fabric is seen as "problematic" [...] because the proximity between Roma and non-Roma is seen as threatening" (my own translation) (Castro, 2013b: 49).*
>
> *Some of the families in my unit of observation were able to live in one of the less stigmatized and stigmatizing social districts of the city of Porto, despite subtle manifestations of displeasure by the population living in the neighbourhood." (my own translation) (Casa-Nova, 2009: 120).*

3 AIMS AND RESEARCH METHODS

The literature review shows that there is a deficit of studies inviting the opinions of Gypsy/Roma concerning their preference to live in more or less segregated areas (Schnell and Ostendorf, 2002), and of studies examining the effect of different patterns of residential segregation on Gypsy/Roma social and economic prospects and well-being.

The aim of this paper is to fill a gap in the international literature on the preferences of Portuguese Gypsy/Roma families regarding more concentrated or dispersed models of rehousing, envisaging that the

findings presented here will be of interest to urban planners, sociologists, public housing managers, and local housing authorities.

The findings presented here are predominantly drawn from a research project conducted between 2007 and 2011 scrutinizing the effects of area-based initiatives that targeted different neighbourhoods (centrally located and peripheral ones) on vulnerable social groups in Porto (Alves 2010). Whilst the initial research did not focus upon families with Gypsy/Roma backgrounds[1], the fact that the São João de Deus neighbourhood (hereby SJD) targeted for demolition was well represented by Portuguese of Gypsy/Roma background and these were object of evictions and forced displacements (Alves 2017a), justifies the focus of this paper.

In terms of data collection, the results here presented are based on 8 semi-structured in-depth interviews, which lasted between one and two hours, with residents, NGOs, and public officials. An additional interview was conducted in March 2017 with a mid-level public administrator who works in Domus Social, the municipal agency responsible for the provision and management of the stock of social housing in Porto[2]. The aim of this additional interview was to inquire if the spatial concentration of the Gypsy/Roma population in some social housing estates (such as Cerco, Lagarteiro, Aldoar), after the forced displacement from SJD, was the result of a voluntary choice by these families or the result of a lack of choice given institutionalized political decisions taken by local authorities or bureaucrats. In short, this interview sought to access stakeholder views regarding the hypothesis of segregation as a result of a range of discriminatory behaviours based on prejudice and negative stereotypes towards the Gypsy/Roma population.

All the interviews were digitally recorded with the permission of each interviewee and subsequently transcribed. The theoretical foundations for the analysis of interviews were generally located within realistic evaluation and social constructivism that sees discourses, as discussed by Manzano (2016), as statements that incorporate judgements, ideologies, and ideas.

4 THE GYPSY/ROMA POPULATION AND THE SJD

> *SJD is a peripheral neighbourhood, which, like other social housing estates built on the outskirts of Porto, "was born poor" in terms of urban planning, social occupation, and location. The neighbourhood was constructed in a marginal area, with an incipient urbanization process and very low or nonexistent economic and social opportunities (such as jobs, social and private services, etc.) (Alves, 2017a: 385)*

In 2000, the population of the SJD was officially estimated at 2,600 inhabitants, 34% of which were of Gypsy/Roma origin. The history of the SJD developed in phases. The first housing blocks were built in the 1940s, while in the 1970s, in a context of housing shortages related to population growth and rural-urban migration, expansion of the neighbourhood occurred with the construction of shacks (barracas). In the 1990s a project funded by the National Programme against Poverty, and funded by national and local resources, enabled the eradication of illegal housing and the construction of 12 new blocks of multi-family housing - in total, 270 dwellings, as well as the construction of equipment and services for youth, the elderly, and the unemployed. At the end of the project, disagreements between the representatives of the municipality's housing department and the person in charge of the project (a local priest), regarding the way the rehousing had been carried out resulted in abandonment of the area.

The residents stopped paying rent and private and public spaces were not managed, leading to increased drug trafficking and abuse, with increasing numbers of people entering the neighbourhood to buy/sell drugs, which in turn led to a spiral of social and physical decline. Relationships once characterized by trust and solidarity gave way to tension and internal division, for example, among the Roma/Gypsy community between: "families who sell drugs and had more financial resources, and those who live from work at fairs,

[1] In 2011, the Gypsy/Roma represented 34% of the total population, while 7% were of African background.
[2] Domus Social manages 12,617 dwellings distributed among 48 social housing neighbourhoods, and where 29,221 individuals live.

which were less profitable than the former" (Mendes, 2005: 59). In December 2001, the election of a new mayor and a right-wing political party in the municipality led to demolition of the neighbourhood. Between 2003 and 2005, and in a context of pronounced police intervention, 25 blocks of multi-family housing were demolished (a total of 562 housing units), leading to 162 forced evictions and the displacement of 430 households to other social housing neighbourhoods.

Alves (2017a) shows that the effects of displacement and relocation were not the same for all sub-groups of the population. Two significantly divergent positions were identified. On the one hand, a group reporting high levels of satisfaction regarding the new housing conditions, in terms of housing quality and dimension, and the state of the neighbourhood, namely in terms of crime and conflict. On the other hand, a group of tenants experienced limited opportunity to negotiate with the housing authority and new housing, like the neighbourhood, worsened in terms of size, quality, and infrastructure. The right to housing was denied to many Roma/Gypsy families, contributing to their further marginalization and impoverishment, and creating new problems such as isolation of the elderly and an increase in the school dropout rate among the Roma community.

5 THE PREFERENCES OF GYPSY/ROMA FAMILIES

To more fully convey the experiences and perspectives of respondents concerning models of concentrated or dispersed rehousing of Gypsy/Roma families, direct quotes from longer verbatim narratives are presented in Table 1. The main aim of presenting direct quotes is to allow respondents to speak in their own words and the reader to get a better idea of the arguments presented by respondents regarding the question above.

The qualitative information collected during interviews revealed the presence of positive aspects in the SJD, such as the presence of networks of reciprocity and friendship between the Gypsy/Roma population and non- gypsies, as well as the resilience shown by residents facing tensions and dilemmas related to the long-term institutional abandonment of the neighbourhood.

In general, the results show a heterogeneous Gypsy/Roma population regarding preferences and discourses related to more concentrated or dispersed models of rehousing. However, there seems to be a general consensus that the concentration of ethnic communities has not been voluntary, as Gypsy/Roma families have been channelled onto the least attractive housing estates, locations refused by others.

Whilst residents, NGOs, and public officials recognize that living in the vicinity of close relatives is a factor influencing the choice of Gypsy/Roma families that seek to provide support to their senior relatives and children, they consider that the patterns of segregation of Gypsy/Roma families is mostly unwelcome, as large concentrations of Gypsy/Roma families in the same area does not favour social integration and may feed the intergenerational transmission of disadvantage and processes of social and territorial stigmatization.

As explained by one respondent, a senior Gypsy/Roma individual, more balanced Gypsy/Roma residential distribution may be an advantage for integration, since it would prevent unwanted social conflicts between opposites while preserving cultural traditions:

> *"My advice is that there should be one, two in each neighbourhood so there is no confusion. For example, one in each block, so that there are not many together, because it is better for integration, for conviviality. If we get together at weddings, I invite my friends and we have eight days of partying, that's ok, but living together every day does not work. We are very united in the gypsy community. We have many positive things like all of us gathering at the door of the hospital when someone is sick, or parties. But when there are clashes between 'contraries', no one should be involved in or be blamed for what others do" (R1).*

Other interviewees commented on the problem of school segregation, as children of Gypsy/Roma families tend to go to schools located near their 'ghettos', the residential concentration of Gypsy/Roma families tends to create school segregation, that is seen as a factor that produces poor school results, reduced

opportunities of social interaction with children from other cultural backgrounds, and therefore, the delay of social integration and opportunities (eg in the employment market) of families of Gypsy/Roma origin.

6 CONCLUSION

One of the key challenges in planning and housing policy today is social polarization and social segregation, with institutional and individual discrimination raising several issues concerning social justice and human rights. While this paper seeks to raise public awareness of these matters, it also attempts to present some empirical findings related to the segregation of Gypsy/Roma families in contexts of rehousing. Some general results emerging from this study are as follows.

Whilst patterns of residential segregation in a city can be attributed to a range of processes, such as individual preferences for certain dwellings and locations, or for certain types of social composition (eg. for social homogeneity vs. heterogeneity), individuals or social groups lacking economic resources are more dependent upon structural conditions, such as those related to prejudicial attitudes and behaviours inscribed in state planning and housing policy towards socially endangered groups.

Considering that systems of housing and urban planning have a remarkable impact on the spatial ordering of social relations in cities, conditioning opportunities for different ethnic and socio- economic groups, the social composition of neighbourhoods, therefore opportunities for everyday social interaction, it is important that deliberative democracy in the form of collaborative planning favours the construction of more harmonious societies, embodying more just principles and outcomes.

When making planning decisions, planning practitioners and housing administrators should bear in mind that large concentrations of Gypsy/Roma families on some social housing estates do not match either this group's preferences and expectations, or scientific knowledge and recommendations for the improvement of policies (Castro 2013a). Also, as pointed out by Le Galès and Therborn (2009), more powerful social classes are the motors of spatial segregation, as they have more resources to oppose the mix of social classes and ethnicities. While the majority tend to be defensive regarding minority groups, namely towards the Roma/Gypsy population, putting pressure on public officials to keep them at a distance, minority groups develop processes of creative adaptation to local living conditions. It is important that public officials and policy-makers work closely with local Roma/Gypsy and non-Roma/Gypsy families, aiming to develop processes of learning, dialogue, and exchange of knowledge, so that policies ameliorate socio-economic and spatial inequality and create healthier, more inclusive spaces that favour the integration of minority groups.

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1.1 TABLES

R1	"The dispersion of the gypsies into various neighbourhoods is bad for the parents and good for the children, and is a form of integration for the children of today because tomorrow they will be divided. This change will be good for the integration of the Roma in the future." (71-year- old, pensioner of Gypsy/ Roma origin).
R2	"I understand this is very beautiful when we are 20, 30, but then we come to 50, 60 we need someone close. I think that the gypsy tradition is to have, at least, the son or the father nearby. With the rest, it is indifferent." (60-year- old, pensioner of Gypsy/ Roma origin).
R3	"The rehousing should be better done, sending the direct family, parents, children, siblings from the same neighbourhood, unless the person says I do not want to. But usually most want, most of them…" (48- year-old, security guard, of Gypsy/ Roma origin)
I1	"There are gypsies who do not like to live near gypsies. However, they all have a conception of life and habitability a bit different from ours. They need ample spaces. Of course, there are some of them who have adapted perfectly to our habitat and like it. I am convinced that the majority like to live in a gypsy community." (resident of the SJD, public official in local parish, of non-Gypsy/ Roma origin).
I2	"There was some cohesion among the gypsy community, but the relationships ended up being very tenuous, the illegal activities of the neighbourhood eventually weakened the relationships - the conflicts were mostly related to the businesses that existed between them, and with power relations." (social worker, ONG in the SJD, Fundação Filos).
I3	"There were many conflicts within the community, fights, gunfire, and misunderstandings among them associated with trafficking. There were even gypsies who said they did not want their children in classes with gypsies. We tried to make them see that things could not be like this, but they are extremely spiteful." (teacher at local primary school, the SJD).
I4	"The city council do not know, did not know, and do not want to know anything about the gypsy community. It creates a discourse that the gypsies are all the same [...] The gypsy community is favourable to the social mix in order to produce cultural interactions, and social integration. Dispersion would not be a problem and would be accepted by the community, but the gypsy population is obliged to submit to poor dwellings, low rents. Gypsies are cantoned in segregated peripheries." (psychologist, researcher at the university of Gypsy/ Roma origin, and representative of the Roma Community in Porto/União Romani).
I5	"There are divergent views on the issue of aggregation or dispersal of Roma (to integrate or separate them?). This is the big debate; should you make neighbourhoods for gypsies? This is considered shameful and discriminatory. There are strong conflicts and contrasts with normal lifestyles, but should we put them apart? Are we creating ghettos of gypsies?" (civil engineering, public official in Porto municipality).
I6	"In general terms, those who obtain access to a dwelling have been on the waiting list for longest, but displaced tenants are given priority over regular house seekers. Based on the match with housing size, income, we make them several offers that they will accept or not. If they turn down three properties in a row, they have their priority status displaced. The stock of social housing in the city of Porto is small when compared to demand. In 2017, the Domus social waiting list comprises 1,050 families. On average, 400 dwellings of social housing are allocated per year, which means that we cannot answer many on waiting lists. […] We are more concerned for the principles of equal treatment and equal responsibilities and rights, irrespective of the ethnic features of the tenants."

Table 1 - Some direct verbatim quotations

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ID 1420 | ANALYZING A GLOBAL SENSE OF PLACE BY USING COGNITIVE MAPS: A STUDY OF AFGHAN IMMIGRANT WOMEN IN AUCKLAND

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1 INTRODUCTION

Sense of place, according to the literature (Hummon, 1986; Lewicka, 2008; Proshansky et al., 1976; Raymond et al., 2010; Relph, 1976; 1997; Tuan, 1980; 1975), is the characteristic and meaning of a place derived from the experiences that people as individuals or within a group have in the place. Places are,

therefore, spatial settings which gain specific characters from people's experiences in a particular time. Places are conceived and sensed "in a chiaroscuro of setting, landscape, ritual, routine, other people, personal experiences, care and concern for home, and in the context of other places" (Relph, 1976, p.29).

Globalization is widely argued as the process of economic, political and socio-cultural change since it has been associated with worldwide flows of migration and mobility (Berner, 1997; Castells, 1991; Massey & Jess, 2003 [1995]; Pile et al., 1999; Pries, 1999; Steger, 2003). Cities are not excluded from this global change. Their meanings and identities constantly change according to the different experiences of different people over time.

This paper explores the meanings of places in the global city of Auckland according to everyday life experiences of Afghan immigrant women who live in Auckland. In order to discuss the meanings of different places for Afghan immigrant women in Auckland, firstly, I provide an overview of the meaning of everyday life experience in relation to the developing sense of place in the era of globalization. Then, along with offering a critique of the essentialist approach to the place and its meaning in the globalization era, this paper suggests cognitive mapping as a method to explore the meanings of the place in the global city. This paper discusses the findings of the fieldwork study that I undertook for my PhD research project in Auckland from 2014 and 2015. This fieldwork study was on eight Afghan immigrant women from two generations of immigration (1st and 1.5 generation) who live in Auckland. By focussing on cognitive maps which were drawn by these women, this paper, finally shows how these Afghan women conceive, perceive, use, and present different places in the global city of Auckland. As a concluding mark, I suggest that cognitive mapping can be applied as a method compatible with the fluidity of everyday life experiences of different groups of people, especially groups of minority, in the place of majority of global cities like Auckland.

2 EVERYDAY LIFE AND A DEVELOPING SENSE OF PLACE FOR IMMIGRANTS IN THE GLOBAL CITY

Researchers, who are interested in the subjective existence of people in place, acknowledge the importance of the everyday life experiences of people in developing a sense of place, belonging and identity in a city (Altman et al., 1980; Buttimer & Seamon, 1980; Lefebvre & Levich, 1987; Marcus, 1992; Perkins & Thorns, 2012; Rapoport, 1976; Relph, 1976; Tuan, 1974). Piotr Sztompka (2008) clarifies the concept of 'everyday life', as the observable manifestation of social existence, the cyclical and rhythmic events over a variety of time periods, the ritualized and habitual engagement with others to participate in activities, as having a certain temporal duration, as the semi-conscious/unconscious event "following habits and routines of which the actors are not fully aware" (Sztompka, 2008, p. 32) and finally as being localized in particular spaces. In his distinguished book The Practice of Everyday Life, Michel de Certeau (1988) considers everyday life as the ordinarily practised activities in the city, most importantly walking. Furthermore, Henri Lefebvre (1996a; 1996b) focuses on everyday life as the opportunity for people to use and participate in decision-making processes as their right to the city. Inevitably, therefore, everyday life involves interactions between people and places.

Everyday life experience in the globalization era, as is argued by a number of thinkers (see Hall, 2003 [1995]; Massey & Jess, 2003 [1995]; Pratt, 1999; Rose, 2003 [1995]; Sibley, 1999; Smith, 1999), influences the shared meanings between people and the (socio-political) context. These thinkers and researchers refer to a global sense of place as a developing sense and conception influenced by different aspects of everyday life experiences of people in the global place. Therefore, in the context of globalization, a sense of place is considered as a system of meanings for immigrants shared between them and the place where they experience their everyday life.

The practice of everyday life in the global city makes different groups of people as locals and immigrants interact with their different and sometimes conflicting conceptions and images of the place. Meanwhile, these people share some of the images and meanings during their everyday life experiences in the city. In the scale of immigrants from different ethnic groups and communities, there is considerable chance of developing a sense of community within ethnic communities if their cultural representations are recognized within the host society. Globalization initially has brought "a geographical imagination of a world without borders" to the real geographical world (Massey, 2002, p.293). Here the importance of 'imaginary

geographies' (Said, 1990) becomes meaningful in that this leads the research to study individual and collective images of the places in the global city which are shaped through everyday life experiences of immigrants.

International immigrants, whether they return to their countries of origin or not, make links between their places of departure and places of arrival (Massey & Jess, 2003 [1995]). Research indicates that these links create a sense of being here and there for immigrants at the same time in one place (Massey & Jess, 2003 [1995]). Doreen Massey (2003 [1995]) suggests that this being here and there is obtained through the process when immigrants (re)build their territories and home environments so as not to feel alienated in their new living places. This process leads to (re)conceptualizing of places in global cities in which immigrants resettle.

Once immigrants, particularly first generations of immigrants, were living in their countries of origin (before migration), they were experiencing their places including all the components of the place such as cultural, socio-economic and environmental aspects of the place. Therefore, each place had a specific character and identity which was the after effect of the elements and features which could be experienced in the place. Continuous experiences of immigrants in the place over time, also, support their sense of attachment to the place. However, when migrants leave their places and resettle in another place, they bring all the memories of past life experiences with them to their new living place. These memories contribute to their perceptions of their new living place and lead them to use this place based on their formed expectations. Since people from different countries with different socio-cultural backgrounds have different memories of their past life experiences and therefore different expectations of future occurrences in the new place, it is inevitable that there will be different ways of appreciating this new place based on different perceptions and conceptions of different groups of immigrants within places in the global city.

Massey (2003 [1995]) argues that immigrants' different appreciations of place change the singular identity of those places in global cities over time. It is in this way that local identity is threatened through the globalization process. David Harvey (1989b) also considers this as an end to the feeling of spatial stability and a sense of coherence in a place. Harvey believes that discourses on the need for settled places are part of exclusive nationalism, regionalism and localism which oppose diversity at any scale (Harvey, 1989a).Therefore, by focussing on Afghan immigrant women as a group of minority in the global context of majority of Auckland, this paper explores the meanings of places for them by investigating their everyday life experiences in the host society of Auckland. The everyday life experiences of those people are sources of their (social, emotional, physical) connections as individual and within communities with their living place.

2.1 CRITIQUE ON ESSENTIALIST APPROACH TO THE PLACE OF IMMIGRANTS IN THE ERA OF GLOBALIZATION

Different perspectives on the concept of place have been reviewed in refugee studies and studies on immigration and displacement (see Brun, 2001; Kibreab, 1999; Malkki, 1992). One perspective considers place as an essential concept for the identification process. From this point of view, which emerged after World War Ⅱ, refugees are looked at as displaced people who are taken away from their roots and morality (Brun, 2001). Therefore, they are people with no culture, no morality, no power and no identity. This attitude to refugees and displaced people brings about particular policies to solve their displacement problem (Brun, 2001; Den Boer, 2015; Kibreab, 1999). By regarding refugees as being 'out of place' and 'uprooted', these policies have set up exclusive strategies which lead to two possibilities for refugees: they either become absorbed into the culture of the new place or return to their place of origin. Another strategy, 'the right to remain at home strategy', is concerned with helping displaced people in their place of origin in order to prevent them from being "uprooted" (Brun, 2001; Kibreab, 1999).

The above-mentioned perspectives in immigration and refugee studies result from an essentialist approach to place which strongly advocates the fixity in the meaning and identity of place. An essentialist approach attempts to solve the problem of identity through looking at place as a unique, unchangeable, independent and fixed entity even over a time period. Therefore, relationships between people and places as well as represented cultures are also fixed and localized. This approach may not be responsive to the co-existence of cultural differences in global cities because the phenomenon of socio-cultural diversity in a

place is not easily understood through this essentialist approach. Critics of this approach argue that mobility is an inevitable fact of the current world and that refugees do not lose their identities through their immigration process (Malkki, 1992).

The critics of the essentialist approach to place present another view through looking at refugees as active agents who are able to develop meanings of their new places. This view is characterized by deterritorialization or reterritorialization (Gupta & Ferguson, 1997; 1992; Malkki, 1992). It is associated with the globalization process in which different trends of mobility and displacement necessitate new ways of conceptualizing space, place and the relationship between people and places. In this view, place must be experienced to obtain meaning. Place is a product of socio-cultural construction, not a fixed entity. This is in accordance with Doreen Massey's understanding of place as the setting for social interrelations (1991; 1994a; 1994b). Massey sees place as a meaningful product of the intersection and interaction of different identities (Massey, 1994b). According to her understanding of place, the place of immigrants and refugees is the intersection of different and even conflictive identities of different communities. From this point of view, different communities with different interests, norms and values coexist in the same place. As a result of the participation of each community in the reterritorialization process, different power relations are expected to govern over the place at the same time. While this may cause conflicts and tensions between different communities, these conflicts create the possibility of negotiation between those communities, which affects the way that each community appropriates the place. Therefore, it can be argued that refugees' conceptions of their new place are not only influenced by their past life experiences, but also by their present experiences and interactions in the place. That is why a specific community develops different identities in different places (Brun, 2001). Interaction is the key in the construction process of identity.

In the following sections of this paper, I will discuss how cognitive maps represent the everyday life experiences of immigrants with focussing on the experiences of Afghan immigrant women in Auckland.

3 COGNITIVE MAPS AS THE REPRESENTATIVES OF THE LIVING ENVIRONMENT

Cognitive mapping has been used by research on people's perception of place in order to simplify the complexities of people-place relationships and interactions (Golledge, 1999; Golledge & Stimson, 1997). Studies in the field of environmental psychology define cognitive maps as abstract representations of people's feelings, beliefs, thoughts, and ideas which are structured on different aspects of (individual and social) identity in the context of their everyday life experiences (Cohen, 1985; Downing, 1992; Kaplan, 1973; Kitchin, 1994; Proshansky et al., 1976; Spencer et al., 1989) and the way they orient themselves within the place (Golledge, 1999; Lynch, 1960). Maps as sources of insight (Jacobs, 1996) illustrate significant forms of representation in the place. Cognitive maps, therefore, generate specific information about daily activities of people in the city which are not necessarily mentioned in their verbal narratives. Maps are able to represent a socio-cultural system that in a global context can be used as a representation of mainstream discourse (Ristock & Pennell, 1996). They show how the power relations in the global context control and define the geographic boundaries which lead to creating social boundaries for people's activities in the city (Harley, 2009). According to the developing sense of place in the era of globalization, I apply cognitive maps of a group of Afghan immigrant women in order to obtain an understanding of the sense of place in the global city of Auckland.

3.1 AFGHAN WOMEN'S COGNITION OF AUCKLAND AS REPRESENTATIVE OF THEIR (PERSONAL) EVERYDAY LIFE EXPERIENCES

This paper uses cognitive maps as representatives of the living context of a group of Afghan immigrant women who live in Auckland supported by a number of quotations from semi-structured interview with these Afghan immigrant women. Founding on the collected data from my PhD project, I asked eight Afghan immigrant women, who were the participants of the study, to draw a map of Auckland representing the city in which they live. In their drawings of Auckland, I asked them to include the places that are important to them during their everyday life experiences such as their living place, their working or studying

places, and places of interests or landmarks of the city. The scale of the details in their maps was not specified, so they were to decide about the scale of their maps, from neighbourhood, suburb or city. They were insured that the scale of their drawing and the area which is shown in their maps do not matter as long as their illustrations of the important places in the city match their daily preferences. The shape of Auckland was another aspect of cognitive maps which were asked to be presented in their drawings.

Participant Afghan women represent their imagination of the city according to the elements of the city to which they have become familiar during their everyday life experiences. Kevin Lynch (1960) defines these elements as elements of legibility, which help people to understand and read the city. They include nodes, pathways, landmarks, districts, and edges. However, interpretation and explanation of all of these elements in cognitive maps of Auckland are beyond the scope of this thesis. Nodes and pathways are two elements that I analyze in cognitive maps of Auckland in order to obtain an understanding of how participant Afghan women spend their daily time in the city, and get access to places in the city and appropriate them. Through analyzing nodes, I inspect the important activity locations that participants refer to in their maps. Also, the pathways in the maps are the ways through which participants visualize the access between their important activity locations in the city.

3.2 DISCUSSION AND ANALYSIS OF COGNITIVE MAPS

In this section, I analyze the ways that participants imagine Auckland as their context of everyday life experiences. I support my analysis of the cognitive maps by the data I collected during the interview meetings with my participants. This analysis assists me to discuss the sense of place for the participants in different places of the global city of Auckland.

I explain everyday life experiences of the participants in different places of Auckland based on an existing classification of activities in public life of the city. This classification helps me in analyzing everyday life experiences of participants according to the type of their activities in different places of the city. Jan Gehl (2011), who has focused on the quality of urban life, discusses types of human activities in public spaces. He distinguishes between necessary (functional) activities, optional (leisure) activities, and social activities. Necessary activities, according to Gehl (2011), are everyday tasks – almost compulsory – which take place regardless of the quality of the place, whereas optional activities highly depend on the quality of the place and the potential that it provides for people to spend more time in it. Social activities can happen spontaneously with other activities and highly depend on the presence of others in public places. Greetings, playing, and collective activities of any kind are known as social activities in public places. I begin the analysis of the cognitive maps with the younger group of participant Afghan women who belong to the 1.5 generation of immigrants and have been in New Zealand for approximately 15 years[1]. In the cognitive maps presented by Zahra and Meena, who are cousins, a technical element concerning their cardinal directions in Auckland[2] appear to be common (Figure 1). This shows that both of them think of the links between their important places in Auckland as links between four cardinal directions through the central part of the city (CBD). These links reflect means of access for them between those places. This is clearly shown in Zahra's cognitive map in which she draws a train and car as means of transport and annotates them with "train" and "motorway" to show her means of transport from the city to those places. She clearly stated this in the interview, when I asked her about her frequent means of transport in the city:

> *"Roja: What is your frequent means of transport in Auckland?*
> *Zahra: Emmm, my car and train, yeah.*
> *Roja: Which one do you use more?*
> *Zahra: I use just train."*

[1] In this research, I studied on 8 Afghan immigrant women as the research participants in Auckland. Participants are introduced based on their generations of migration: first generation and 1.5 generation. According to the official report published by Department of Labour of New Zealand in 2008, the first generation immigrants are "immigrant youth2 who were born overseas and arrived in New Zealand after the age of 12", and the 1.5 generation immigrants are "immigrant youth who were born overseas and arrived in New Zealand by the age of 12"2 (Ward, 2008, p. 4). This categorization, although not a fixed categorization, is based on immigrants' age of arrival2 and their place of birth which are considered influential in the identification process of migrants in the host society (Ward, 2015).

[2] However, this can be explainable by the fact that I interviewed them together in the same place and it was Zahra who first drew her cognitive map while I was interviewing Meena. Therefore, Meena might have had the chance to look at Zahra's drawing copied the pattern in her drawing. However, I asked them to only rely on themselves and the way they imagine Auckland including its important places for them as individuals.

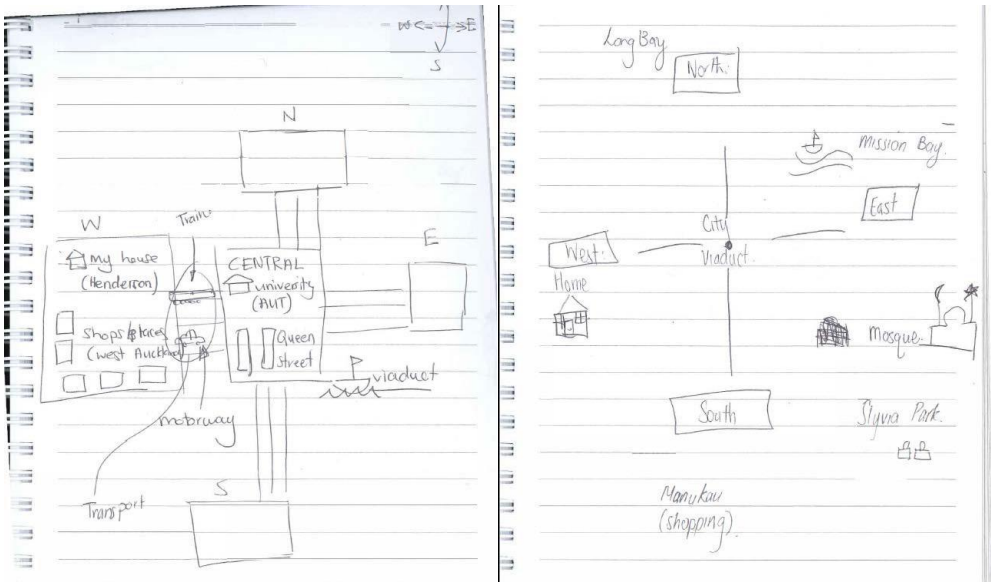

Figure 1. From left to right: Zahra's and Meena's cognitive maps of Auckland

Meena, however, does not clearly show her means of transport in the map. She imagines the city in four cardinal directions. These straight lines between important activity locations are representative of perceptual links between those places since she does not do necessary activities in the central part of Auckland, unlike Zahra who studies in the CBD. Therefore, Auckland is perceived as a whole entity, not as fragmented zones. However, in her interview, Meena noted that she drives her own car as her most frequent means of transport and uses the train as a means of public transport if she wants to go to CBD to do some necessary activities like studying:

> *"Roja: Okay, what is your frequent means of transport?*
> *Meena: Driving.*
> *Roja: Driving?*
> *Meena: Yeah.*
> *Roja: So you have your own car?*
> *Meena: Yeah.*
> *…*
> *Roja: Okay. So you don't usually use public transport. Do you?*

Meena: Emmm, no unless I come to see… you know, for studying like I'm going to study next year in the city, so yeah I'll train. But emmm, other than that no…"

However, her decision not to use public transport is supported by her mother who thinks of the bus as not a "safe" place to be in:

> *"Meena: …When I was younger as well, my mum didn't…, she was not against... she was against public transport, like she… she thought it wasn't safe, so she would hate me going on public transport as well, so it's like, you know, you get your own transport, you know.*
> *Roja: Aha...why did she think that it's not safe?*
> *Meena: She was just like …you… you see all sorts of people, you just never know what they could do, you know?... And so yeah.*
> *Roja: Aha.*
> *Meena: Yeah, and I was younger as well, and you know wearing scarf it was kind of difficult as well.*
> *Roja: Aha.*
> *Meena: So yeah, she... she would just like watching us."*

The perception of Meena's mother about public transport in a global city has made Meena avoid using public transport during her daily life. It is clear from the above quotation that the perception of Meena's mother is based on the unfamiliarity with people of whom "you just never know what they could do".

The above quotation demonstrates the importance of the influence of the family, particularly mothers, in the daily life experiences of young Afghan women like Meena. This influence contributes to Meena's different appreciation of a place, which is based on her experience as a Muslim woman in the global city of Auckland. In this regard, Doreen Massey (2003 [1995]) argues that immigrants' different appreciations of places change the singular identity of those places in global cities over time.

Sadjida, a 26-year-old Afghan woman, refers to her living area as her most preferable place in the city. She shows this in her cognitive map. The following figure is her cognitive map of Auckland (Figure 2). In her cognitive map, Sadjida allocates half of the page to the Lynnfield area and places around her living area. The big circle on the map represents that she imagines important places within the Lynnfield area as connected with each other and she includes access ways within the immediate vicinity of the circle including May Road. There is another circle shaped area that Sadjida annotates as "City" in the map. It includes the University of Auckland, AUT, IMAX and Queen Street. She shows the connection between the former circle and the latter one with connector lines, which resemble streets. While she was drawing those connector lines, she mentioned to me that the longer one is Dominion Road, which according to her is the main link between her living area and the city.

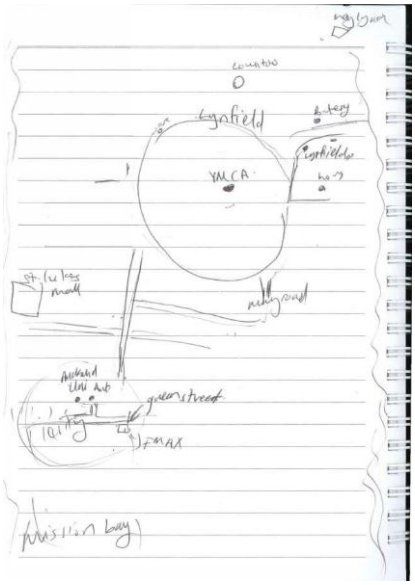

Figure 2. Sadjida's cognitive map of Auckland

However, Sadjida does not acknowledge cardinal directions in her map and this causes confusion in understanding her imagination of the city because Lynfield is located southwest of the city centre area of Auckland, while she locates the Lynnfield area north-east of the city centre in her drawing (Figure 2). This means that she does not imagine the location of different places in relation to each other in a bigger picture of the city. This is reflected in her explanation of choices of preferred places in Auckland. Most of her preferred places are located within the boundary of her living area, including the YMCA gym, the Coffee Club in May Road, and the Countdown shopping area in Mount Roskill, among others. In addition, in her interview, Sadjida stated that the bus is her main means of transport in the city and she relies on this mode of public transport to access places in the city:

> *"Roja: What is your frequent means of transport?*
> *Sadjida: Um, frequent would be bus."*

Sadjida's daily life in Auckland is divided into two main parts of home and university and this division is clearly presented in her cognitive map. However, she illustrates her cognitive map by focusing on each node and the potential activities in each of those places. Hence, for Sadjida, the connection is not as important as places themselves. This shows the importance of activities for her in each of the places she illustrates in her drawing rather than accessibility to these places and the links between them.

Taiba, one of the young participants, represents her cognitive map of Auckland in a rectangular shape, which embraces important activity locations for her as shown in the map below (Figure 3). Her main link between those locations is clearly noted as "Motorway (20)[1]" in the map. It affirms that she is clear about her means of access, which is car.

[1] By Motorway (20), she means State Highway 20 (SH20), which is known as the Southwestern Motorway in Auckland.

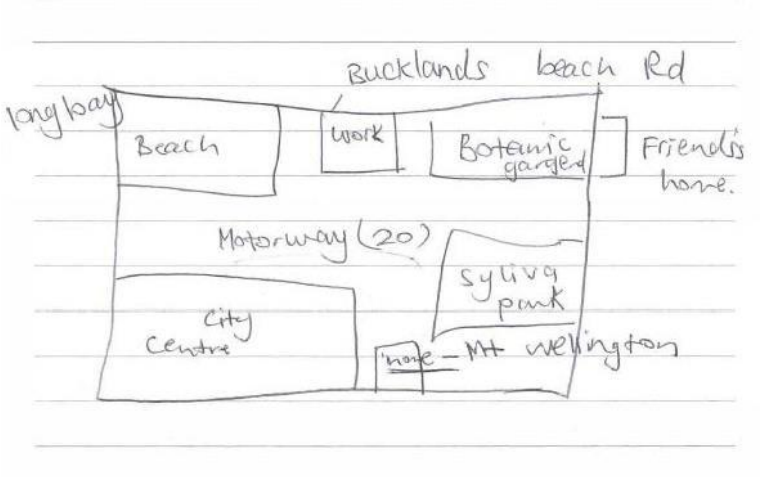

Figure 3. Taiba's cognitive map of Auckland

The following extract of the interview with Taiba highlights this:

> *"Roja: So ...what is you frequent means of transport?*
> *Taiba: I drive.*
> *Roja: Do you drive?*
> *Taiba: Yeah, now I do. Before I used to catch the train and the bus."*

Taiba, also mentioned that having a car is not her preferred choice of transport. However, she has no other choice since public transport is not reliable in Auckland:

> *"Roja: How do you feel about in-city travels and transport in Auckland?*
> *Taiba: You always have to have a car, otherwise (chuckles)… otherwise you can't d epend on public transport, it's hard."*

Henna, who is a university student at Auckland University of Technology (AUT), presents her cognitive map of Auckland as a route map, which shows places in a route between her home and the university. In the following map (Figure 4), Henna draws Auckland in a linear shape that extends from south to north. Congestion of annotated places in the eastern side of Henna's cognitive map is indicative of locations of her main activity zones in East Auckland. However, the locations of places in Henna's cognitive map do not match with their real locations in Auckland. It shows that Auckland, for Henna, is perceived according to her daily life experiences.

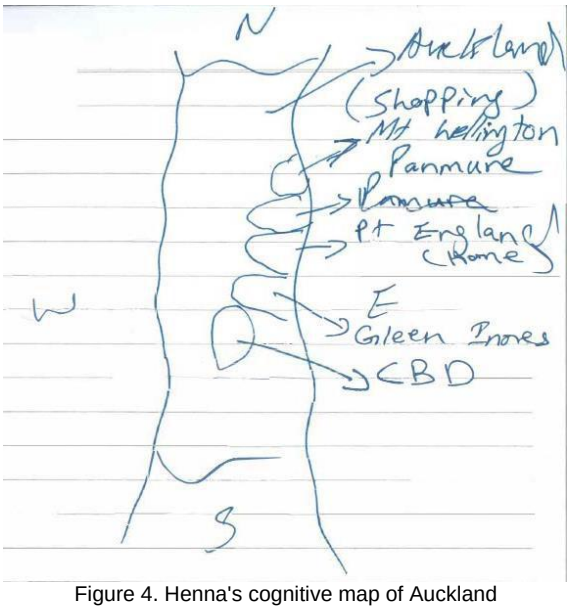

Figure 4. Henna's cognitive map of Auckland

In the interview with Henna, she pointed out that a train is her main means of transport, particularly during her routine daily life on weekdays. In her cognitive map of Auckland, this is clearly confirmed by the way that she defines her route map according to train stops during her journey:

> *"Roja: What is your frequent means of transport?*
> *Henna: Train."*

However, in her interview, Henna mentioned that her preference of using a train is not because of the efficiency of trains or any other public transport in Auckland. She would prefer to drive her own car if she did not have a problem parking in the city.

> *"Roja: Do you feel more comfortable in using public transport or your own car, just generally?*
> *Henna: I would be happy to use my car, but I won't be able to find a parking.*
> *Roja: Aha, so is it just because of the parking?*
> *Henna: Eh yeah.*
> *Roja: If it was enough parking in the city, you would bring your car?*
> *Henna: Yeah, yeah. Because coming by train takes a lot of my time."*

She is also a train person when she wants to go to shopping, as is annotated in the map in the Mount Wellington area. Again, this is highlighted by showing Panmure as a node between her home place (Point England) and shopping place (Mount Wellington).

The following cognitive map belongs to Sophia (Figure 5). She patiently illustrated her cognitive map consisting of symbols, shapes, and annotations. Sophia shows the location of Auckland CBD properly at the centre of the map, which is represented by drawing the landmarks of Sky Tower, and the University of Auckland in the city campus.

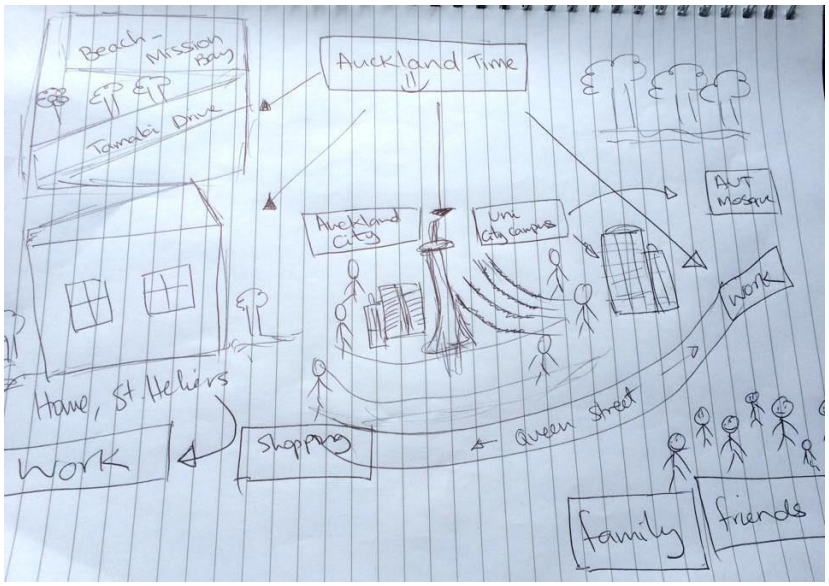

Figure 5. Sophia's cognitive map of Auckland

However, Sophia's cognitive map does not reflect cardinal directions since she does not picture her cognitive map of Auckland from a bird's-eye view. She illustrates her important activity locations with the aid of symbols and shapes such as trees, humans, and buildings. Therefore, connections between these places are not according to reality. Two main access ways, which are distinctly shown on the map, are Queen Street and Tamaki Drive. In Sophia's cognitive map, Queen Street links "Work" to "Shopping" and "Home", while Tamaki Drive is framed with trees on both sides and defined as a connection provider between "beach" and Mission Bay. In the following extract of the interview, Sophia explains her reason for preferring Tamaki Drive in Auckland to other streets and routes:

"Sophia: Probably more like the Mission Bay and Tamaki Drive area. Because it was like close to my area, nothing to worry about, you know, in terms of transport or carpark or whatever… you know? It was more relaxing."

Therefore, the close proximity between her living place and that area gives her a sense of comfort without having to worry about transport and parking. The interpretation and analysis of this type of illustration of access-ways in the cognitive map could be that Sophia is either a bus or a car user. However, her level of details in her cognitive map (e.g. trees and buildings) show that she is more of a bus user that she could captured more details on her way between home and work. This is confirmed by her interview as below:

"Roja: Ohum, eh, what was your frequent means of transport in Auckland?
Sophia: Ehhh if I went to town, it was mainly by bus."

However, Sophia insisted that her daily life and stage of life influences her preferences of means of transport:

"Sophia: It depends on time… like when are we talking about? Like [during] uni time, I was always bus person. Yeah, but after uni, when I got a car and I worked and stuff, I was more a car person, yeah."

The two following maps are the cognitive maps of Banoo and Soraya (Figure 6 from left to right), who are two participant Afghan women from the first generation of immigrants in Auckland.

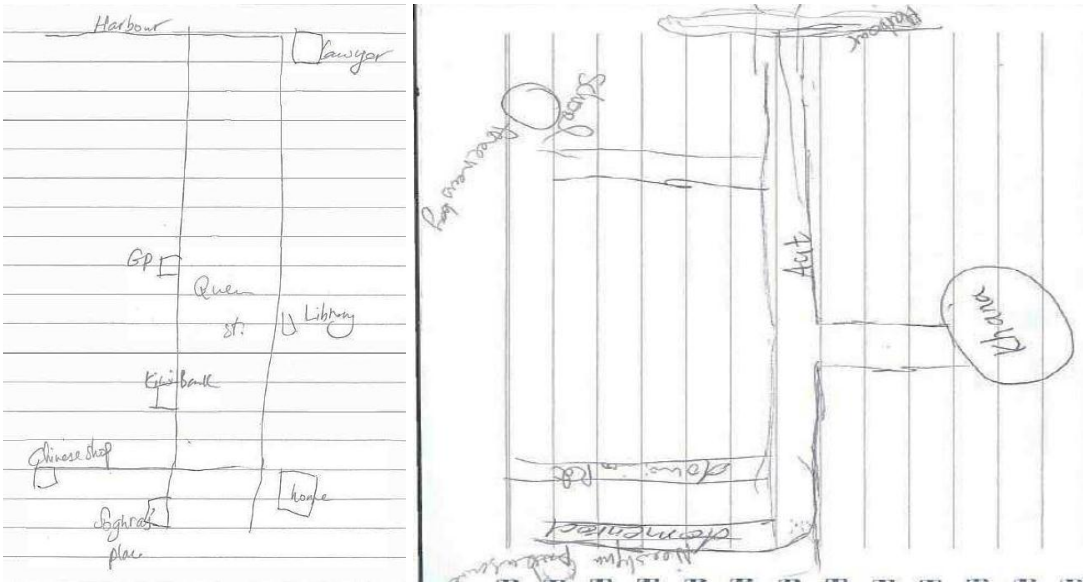

Figure 6.From left to right: Banoo's and Soraya's cognitive maps of Auckland

The generation of immigration results in a notable difference in the illustration of cognitive maps of Auckland. Other studies have also examined and found that length of residence affects the attachment of people to their living environment (Cuba & Hummon, 1993; Hernández et al., 2007). In this study, Banoo and Soraya who have been in Auckland for three years, depict their important activity locations in Auckland in and around Queen Street. This is firstly because they both live in the CBD area and secondly because they have not had many experiences outside of the CBD in Auckland according to their length of residence in Auckland. Their linear maps are indicative of the importance of Queen Street in their minds when thinking of Auckland as their living environment. The role of connection is more important in their maps compared to those of other participants from another generation of immigrants. Indeed, Queen Street is not perceived as a pathway[1]; rather, it is represented as the whole district or zone in which they live and think of Auckland.

[1] According to Kevin Lynch (1960), pathway, district, node, landmark, and border are five elements of legibility with which one imagines his or her living environment. A multitude and variety of these elements in a cognitive map are indicative of a legible living environment.

Since most of the activity locations in Banoo's cognitive map are placed in or around the vicinity of Queen Street, it is expected that she walks to her destinations. This is confirmed by the following extracts from interviews with her:

> *(Translation from Farsi[1])"Roja: What is the most frequent means of transport for you here in Auckland?*
> *Banoo: I mostly walk."*

Additionally, Banoo indicated that proximity of Queen Street to most of her important places in Auckland is the main reason for her to like it. This is quite clear by looking at Banoo's cognitive map and realizing that the importance of Queen Street has made her depict Auckland around Queen Street:

> *(Translation from Farsi)"Roja: What do you like about Queen Street?*
> *Banoo: I like it, coz it's nearby my place. English classes are close, my GP is close to me, the bank is close to me, many things are close and handy in Queen Street. If I don't have things to do, I can wander around the street, and have a walk."*

Studying the cognitive maps of the participant Afghan immigrant women along with their interviews shows that there is a correlation between length of residence in Auckland and the illustrated details of their living environment in their cognitive maps. Participants of the first generation who have been living in Auckland for three years have fewer details with which to annotate their cognitive maps than the others of the 1.5 generation of immigrants who have been living in Auckland for more than 10 years.

The difference between the cognitive maps of the participants is also related to the location of their living places as well as their other activity locations in Auckland. The participants' stages of life, such as their age and their occupation, are highly relevant to the way they illustrate their cognition of Auckland.

4 CONCLUSION

This paper discussed that the meaning and sense of place is not fixed and stable while differences are increasing in the global city. Meanings and sense of place are influenced by multi-layered differences inherent in everyday life experiences of different groups of people in the place. In order to understand the developing and changing sense of place, this paper studied the different everyday life experiences of a group of immigrant women from Afghanistan who live in the global city of Auckland. Application of cognitive mapping as a method provided this study with an opportunity to explore different meanings and functions of places in Auckland for participant Afghan women who live in Auckland. The different meanings and functions of places in Auckland explored in this study are not necessarily mentioned in interview quotations of the participants. In this paper, I used cognitive map as a method for explaining the diversity of appropriation, perception, and presentation of the city of Auckland by a group of Afghan immigrant women who live in Auckland. The results of this study showed that participant Afghan immigrant women imagine Auckland according to their context of everyday life experiences in the city. Similarities and differences between the presentations of their cognitive maps, also, refer to different layers of their identity including gender, ethnicity, religion, age, as well as stage of life and so on. Additionally, the results of this study show that participant Afghan women living in the global city of Auckland are influenced by different power relations of the context of globalization. These influences lead them to imagine and define social boundaries for themselves during their everyday life experiences in the global city.

In conclusion, this study suggests that the study of everyday life experiences of different groups of people in the era of globalization helps academic and practitioner planners to understand different layers of identification in the place. It is beneficial in the process of plan and policy making in terms of the sensitive and subjective approach that it considers in understanding difference in the global city. The application of cognitive mapping, I suggest provides a situation of taking a discursive approach in the research. It recognizes different layers of identification in the place in order to understand different senses of place in the era of globalization.

[1] Interviews with 2 participants were conducted in Farsi according to their preferences. Therefore, the interview transcriptions are translated from Farsi to English.

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ID 1429 | THE ´FOSTER CITY´: THE DIFFERENT STRATA OF URBAN DIVERSITY IN A NEWLY-MIXED TOWN

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ABSTRACT: In the past several decades, an expeditious internal migration process is evident in Israel. Israeli towns which were established during the 1950s and 1960s have attracted Ultra-Orthodox communities and Palestinians who are Israeli citizens. This process stands in contrast to the Nationalist-Zionist ethos, which has aimed to plan and populate new towns in the peripheral areas of the new state, mainly for secular Jews. As a consequence, population groups who are considered as ´others´, share the urban space with the local population. Against this background, tensions between the different population groups arise, turning the city into a contested arena, where struggles over public resources, public services, local identity and urban image proliferate. This paper highlights the different strata of urban diversity in the context of planning, asking how urban management and planning deal with a city that becomes mixed and is characterized by multiple conflicts. Karmiel, a newly-mixed town in Israel, was selected as a case study. This paper is based on a PhD research that focused on three planning events which differ in scale and represent the conflicts within the urban realm, resulting from and intensified by increasing urban diversity in terms of religious inclination (secular vs. ultra-orthodox Jews), ethno-national identity (Jews vs. Palestinians who are Israeli citizens), and socio-economic inequalities (high socio-economic status vs. low socio-economic status). The methodology combines multiple sources of knowledge and information: historical knowledge (archival documentation); planning knowledge (statutory plans, municipal board-meetings' protocols, court verdicts, interviews with municipal officials and planning practitioners); local knowledge (in-depth conversations: local residents, social activists, local NGOs, building contractors, business owners, national and local press, the civic discourse in Facebook groups); quantitative data and information (Israeli central bureau of statistics, The Ministry of Housing publications, Israeli Tax authorities, Israeli Knesset research center). This approach has produced integrative knowledge about contemporary urbanism, stressing the unique urban dynamics within cities that are becoming mixed. This paper offers a new conceptualization- ´the Foster City´. Ultra-Orthodox Jews and Palestinians, who are Israeli citizens, are compared to ´step-inhabitants´- they are not an ideological product of the Nation-Zionist city. The Israeli urban reality is characterized by growing heterogeneity, subverting the Israeli planning policy which strives for absolute social, cultural and spatial separation between Jews and Arabs and between secular and Ultra-Orthodox Jews. This abnormality challenges the existing order, eroding the utopian ideal of the homogeneous Nation-City. The ´Foster City´ highlights the intermediate situation of newly-mixed cities, not only in Israel, but is germane to the European context as well. It emphasizes the complicated conditions of population groups considered as ´others´, in two central aspects: alienation and temporariness. In the ´Foster City´ the struggles over symbolic and spatial demands echo everywhere: at home, in the streets and neighborhoods and in the entire city. Nonetheless, the ´Foster City´ is an enabling space, providing for marginalized groups an opportunity to fulfill their civil rights: it reduces the supremacy of ethnic, religious, and socio-economic status, while allowing civic belonging to sprout.

1 INTRODUCTION

The scope of international immigration is rapidly growing in the last several decades. Many population groups are forced to relocate to other countries, whether as a consequence of war, political insecurity, famine or severe lack of sources of income. However, immigration processes are also derived from a personal choice, in search for better occupation conditions or in order to improve quality of life. The movement of population groups from one country to another has a significant impact on cities worldwide, making them more diverse and heterogenic in terms of religion, social and cultural composition, and economic characteristics (Wood, 2015).

The World Migration Report (IQM, 2015) has asserted that immigration is in its essence an urban matter. By the end of 2015, the amount of immigrants in the world was estimated by 232 million people, 50% of them dwell in Australia, Canada, United-States, France, Germany, United-Kingdom, Russia, Saudi Arabia and United Arab Emirates. In Sidney, London and New-York, immigrants constitute over one-third of the total population, and in Brussels and Dubai immigrants constitute more than half of the total population (ibid). Due to extensive international immigration processes, diversity has become one of the most prominent characteristics of cities. Diversity comes into play in many different ways: status, language, gender, age, sex, race, religion, life-styles, sexual preferences and world-views (Watson, 2006). Media reports all over the world document struggles between different population groups, turning cities into a contested arenas, where struggles over public resources, public services, local identity and urban image proliferate.

Israel is not a popular destination for international migration, mostly because its borders are closed up against foreign immigrants. However, during the 1950s and 1960s, Israel absorbed major international immigration influxes, exclusively of Jews, which have dramatically impacted the urban space. The Israeli case is unique because these massive immigration influxes of Jews to the new state have gained embracing support, both from the officialdom and the public. To date, immigration of Jews is perceived as a legitimate process which the state and its Jewish citizens have encouraged. Bringing Jews from all across the world to Israel has fulfilled a vital role in the establishment of a Jewish state in the land of Israel. For this reason, the immigration process of Jews gained inimitable label: "Aliya". In 1990s, Israel has absorbed over million immigrants from the former Soviet-Union countries, but ever since the Jewish immigration influx is relatively low and slow.

Nevertheless, in the past several decades Israeli towns are facing similar challenges, as other cities in the western-world are experiencing. Recently, in several Israeli towns and cities, urban conflicts between different population groups arise due to an unprecedented internal migration, mainly of Ultra-Orthodox Jews and Palestinians who are Israeli citizens to secular cities. This process stands in contrast to the National-Zionist ethos, which has aimed to plan and populate new towns in the peripheral areas of the new state, mainly for secular Jews. Israeli towns have become more heterogenic, subverting the organizational conception of Israeli space, as can be observed in the absolute spatial and social separation between Jews and Arabs and between secular and Ultra-Orthodox Jews. As a consequence, population groups who are considered as 'others', share the urban space with the local population.

This paper illuminates the different strata of urban diversity in Karmiel, a town in the central Galilee region in Israel, which was chosen as the case study. Karmiel is one of the last two development towns in Israel. Its intended purpose was to break the continuum of Arab settlements in the area and replace them with Jewish settlements (Falah, 1989). Its political agenda of "Judaizing the Galilee" was the reason for expropriating the lands of four Arab villages in 1976. Although officially planned for a secular Jewish population, mainly Jewish immigrants and veteran Israelis, over the years the town has attracted both Arabs from nearby Arab settlements and, recently, a sizable population of Ultra-Orthodox Jews.

An examination of the different strata of urban diversity allows better understanding of contemporary urbanism within towns and cities that are becoming mixed. It sheds light on the different aspects of the ongoing debate within urban planning and urban studies, and challenges the theoretical discourse that deals with mixed-cities, demonstrating how the incorporation of planning perspective illuminates the difference between mixed and newly-mixed cities by offering a new conceptualization: the 'Foster City'.

2 DIVERSITY AND CONFLICTS WITHIN THE URBAN SPACE

The theoretical thinking about urban diversity has evolved in numerous disciplines: Geography (Amin, 2002; Amin & Thrift, 2002; Fincher & Jacobs, 1998; Valentine, 2008), Sociology (Sennett, 2001), Political Science (Boyd, 2006; Putnam, 2007), and Urban Planning (Bollens, 2008; Koutrolikou, 2012; Sandercock, 1998; Soja, 1999; Van Leeuwen, 2014a), with a specific focus on urbanism and relationships between different groups in the urban space. Planning and Urban Studies literature deals mainly with the dynamics between population groups in public spaces. For example, research publications from Europe and U.S focus on the relationships between veterans and immigrants (Askins & Pain, 2011, Bailey, 2011; Besemer, Brameley, & Livingston, 2015; Wilson & Taub, 2011), whereas publications from Canada and Australia focus on the relationships between the local population, which has emigrated from Europe and other western countries as part of imperialism and colonialism, and the native population (Bloch & Dreher, 2009; Gyepi- Gabrah, Walker & Garcea, 2014).

However, two contradicting approaches can be identified. The first includes researchers who opine that urban diversity is one of the most valuable assets of cities (Bollens, 2007; Sandercock, 1998). It is argued that diverse street life enable positive interactions between different groups, which can assist in handling prejudice and even eradicate it (Wessel, 2009). For others, urban diversity is perceived as an instigator of social problems (Koutrolikou, 2007; Van Leeuwen, 2010, 2014b). Putnam (2007) expressed his concern from too close of a social contact, stating that:

"The more we are brought into physical proximity with people of another race or ethnic background, the more we stick to 'our own' and the less we trust the 'other' " (p. 142).

Empirical evidences show that public spaces turn into struggle arenas between groups, hence, aggravating social tensions (Amin, 2002; Van Leeuwen, 2014a). Spatial separation, language differences, mistrust and anxiety result in disrespect and intolerance (Dirksmeier, Helbrect & Mackrodt, 2014). The prime source of conflicts between population groups in cities appears to be a competition over urban resources (Bloch & Dreher, 2009; de Souza Briggs, 2007), for instance: over warship places (Beebeejaun, 2012; Sandercock, 2000), and over religious schools for minority groups (Bugg, 2013).

Empirical reports illustrate that religious and ethno-national diversity constitute a fundamental barrier for perceiving diversity as a potential. Nieuwenhuis, Volker & Flap (2013) found that the more religious diversity exists in cities, neighborly relationship will probably be negative. Similarly, the research of Bloch & Dreher (2009) from Sydney, Australia, indicated that the larger the Muslim population in the area, feelings, such as: fear, anger, and threat, were stronger even amidst people who expressed support in social diversity. Bakker & Dekker (2012), and Gundelach & Frietag (2014), found that as a minority group increases, it is probable that the majority group would feel that their social, cultural and economic privileges are at stake.

The complexity of urban diversity has raised many debates in regard to the ability of planning to balance between different spatial demands, to bridge and reconcile between groups and implement participatory planning processes that include the opposing parties. Theory suggests that the ability of urban planning to properly deal with urban diversity depends upon the recognition of the 'deep differences' between population groups (Watson, 2006), and their 'conflicting rationalities' (Watson, 2003).

3 METHODOLOGY

The research examined three planning events in Karmiel, which differ in scale and represent the conflicts within the urban realm, resulting from and intensified by increasing urban diversity. The first planning event focused on a struggle over elementary school buildings, which had evolved between the secular residents of an old neighborhood and an Ultra-Orthodox voluntary association. It emphasizes urban diversity in terms of religion inclination, and focuses on a conflict between secular veteran residents and newcomers Ultra-Orthodox Jews in one of the oldest neighborhoods of Karmiel. The second planning event followed the daily life of 'the other'- a Palestinian who is an Israeli citizen that has moved recently to Karmiel. The personal narrative opened up a discussion in regard to the dynamics of social relationships between Jews and Arabs in Karmiel, which are characterized on the one hand by discrimination and exclusion, and on the other hand, allow the organization of political-civilian actions which strive for a shared and respectful

city-life. This event emphasizes urban diversity in terms of ethno-national identity, and focus on the overt and often rampant conflicts between the Jewish residents of Karmiel and the town's Palestinians residents. The struggles over local identity, public services and urban image are manifested all over town, impacting the entire region.

The third planning event examined the master plan of a new neighborhood in Karmiel. It focuses on the interplay between physical and social aspects in neighborhood planning, and compared the way in which this interplay was reflected in the town's original planning and how it currently comes into play. Against the social vision raised by the city's leaders, the analysis relates to the spatial coding and the social message conveyed by it. Three spatial components are addressed in specific: housing mix, transportation planning scheme, and land use. This event highlights urban diversity in terms of socio-economic inequalities, and indicates on a potential conflict between the future residents of the neighborhood: those who are characterized by high socio-economic status versus those who are characterized by low socio-economic status. It is expected that the new neighborhood will offer alternative accommodation for the middle-class Arab sector, and like other neighborhoods built earlier, will most likely attract Arab residents from nearby Arab settlements.

The research approach utilized multiple sources of knowledge and information: (1) historical knowledge: books and archival documentation about Karmiel and its planning history; (2) planning knowledge: review of statutory plans, municipal board-meetings protocols, court verdicts, interviews with municipal officials and planning practitioners; (3) local knowledge: in-depth conversations with local residents, social activists, representatives of local NGOs, building contractors, local business owners, review of national and local press, and a follow-up review of civic discourse conducted in Facebook groups. The research tools include: interviews, conversations, observations and documents' review, which were processed by discourse analysis. Quantitative data was another valuable source of information, which was retrieved from the Israeli central bureau of statistics, Policy publications of The Ministry of Housing, documentation of real- estate transactions, as reported to the Tax authorities, and publications of the Israeli Knesset research center. The quantitative data served as a complementary source of information which was analyzed by descriptive statistics. Triangulation of the findings from the three different planning events was also conducted.

4 URBAN DIVERSITY IN ISRAEL

Inter-group tension in Israel’s urban context stems both from global immigration processes and from internal migration. It is commonly discussed in terms of the ethno-national political dispute over national territory and resources (Falah, 1989; Kipnis, 1984; Peled, 2005; Rabinowitz & Monterescu, 2008; Soffer, 1991; Tzfadia, 2008; Yacobi, 2002; Yiftachel, 2009). Struggles between Palestinians and Jews are performed in varied contexts: over housing policy (Chiodelli, 2012), over infrastructure (Nolte & Yacobi, 2015), over holly places (Jabareen, 2006; Shmueli, Collins, Kreiner & Ben Gal, 2014) and over shared urban space (Jabareen, 2009; Kallus & Kolodney, 2010; Yacobi, 2002, 2013). Social dynamics between Jews and Arabs in Karmiel are characterized by extreme fluctuations. On the one hand, callous discrimination in the housing market, excluding institutional actions, and racist expressions in public places are highly prominent. On the other hand, a growing civic organization, representing both political and social actions, seeks to promote shared and respectful city-life.

Israeli scholars have outlined two distinct, yet complementary, theoretical perspectives: the first intends to contribute to the ongoing debate on multiculturalism and the way in which it is implemented in practice (Tzfadia, 2008); the second relates to the existing tension between the representation of the city as enabling space and the representation of the city as preserving and securing socio-national stratification (Marom & Yacobi, 2013; Yacobi & Tzfadia, 2009). Reality in Karmiel reflects the city as a situational place, where social relationships are not stabilized nor fixed, but rather in formation.

Lately, Israeli scholars have indicated on a burgeoning process of which a growing number of young Palestinians move to Jewish towns (Alfasi, 2014; Monterescue, 2011; Rabinowitz & Monterescu, 2008). Three fascinating trends can be identified as the major push and pull forces of such a process. The first trend stems from lack of planning in the Arab settlements in Israel, which has led to a severe housing shortage. The second trend relates to the significant improvements of the Palestinian population in Israel in varied aspects of life: education accomplishments, rise in employment rates, and social mobility,

processes which attest on the growing Palestinian middle-class sector in Israel. The third trend is connected to the second trend, in that mostly young, educated and economically stable Palestinian families in Israel search for a better quality of life than exist in their settlements of origin, combined with a relatively new and overt wish to move away from the nucleolus family and the traditional way of life.

Nevertheless, inter-group urban tensions also exist within the Jewish population. A growing migration of Ultra-Orthodox religious groups to secular urban neighborhoods has lately increased such tensions (Hason & Gonen, 1997, Shevah & Kallus, 2015). Although the secular and Ultra-Orthodox Jewish communities share the same faith and ethnicity, de facto, they are very different in terms of religious commitment and inclinations (Shilav, 1998), as well as in their spatial and social practices (Fenster, 2011). In the past several decades the Ultra-Orthodox population undergoes a salient expansion process. This process is characterized by massive departure from the 3 main Ultra-Orthodox centers: Jerusalem, Beney-Barak and Ashdod (Cahaner & Shilav, 2012), to distant peripheral cities, mostly located in the southern and northern parts of Israel. A combination of sharp increase in housing prices along with demographic pressure in these Ultra-Orthodox centers has caused the Ultra-Orthodox community to search for other accommodation alternatives.

Urban tensions between secular and Ultra-Orthodox Jewish communities are often over urban resources that are increasingly in demand by the fast-growing Ultra-Orthodox population; and this takeover of urban resources is often considered by the secular communities as interfering with their spatial patterns and use, and a threat to daily life. In addition, recent institutional policies aimed to confront and resolve the housing crisis in Israel have led to a contemporary trend of massive construction projects for building new neighborhoods largely distant from the urban core. Modern building standards and profit considerations fall short in addressing the need to enlarge the housing stock of affordable housing, hence raising additional tensions based on socio-economic characteristics.

4.1 CONCEPTUALIZATIONS OF CITIES WITH SIGNIFICANT URBAN DIVERSITY

Cities across the world, remarkably diverse in terms of population composition, have become a major focus of research. Alongside the discourse on how to deal and manage urban conflicts under the circumstances of growing diversity, the literature offers conceptualizations of such cities. The typology of diverse cities suggests three types, differing by character and history of the relationships between different groups in the urban space.

The category 'divided city' addresses the relationships between ethnic-groups in a city in which a spatial separation is most obvious, whether by physical means such as: walls and fences, or by distinct residency areas for each population. This category includes cities, such as: Beirut, Nicosia, Sarajevo, Mostar, Belfast and Jerusalem, which were all divided as a result of national disputes (Allegra, Casagila & Rokem, 2012; Bollens, 2002; Kotek, 1999; Marcuse, 1993; Mitchel & Kelly, 2010; Van Kempen & Murie, 2009). Lately, it is also discussed in other geographical contexts, for example: the Middle-East (Silver, 2010), and China (Madrazo & Van Kempen, 2012).

The 'Dual city' is another conceptualization that describes relationships between different groups in cities, on the basis of economic differences. It was developed during 1990s, in light of the capitalist reality, emphasizing the difficulties arising from extreme economic rifts between wealthy and poor people (Marcuse, 1989). A third type, which is the most germane to the Israeli context, is known as the 'mixed-city'. It describes cities in which two different ethnic groups share the same urban space. The term mixed-city refers to cities which were historically populated mostly by Arabs, however as a consequence of 1948 war, their inhabitants were expelled or escaped. As a result, Arabs who remained have become a minority group within a significant Jewish space. The 5 Israeli mixed-cities are: Acre, Haifa, Jaffa, Lod, and Ramla, which later have been labeled by Rabinowitz & Monterscu (2008) 'depopulated colonized mixed towns'.

Three central aspects differentiate the Israeli case from the international debate in regard to urban diversity. Firstly, whereas the theoretical planning discourse on 'cities of difference' (Fincher & Jacobs, 1998) emphasizes the tensions between different ethnic groups derived mostly from cultural and economic differences, in the Israeli case, it is the regional dispute that produces and exacerbates tensions, therefore the socio-political dimension is substantial. The Israeli mixed-city is part of a historical process in which the Israeli territory, including Arab cities, have been Judaized, first by 1948 war and later through the policy of

population distribution (Yacobi, 2002; Yiftachel & Yacobi, 2003). Secondly, the international literature deals with urban diversity under the conditions of massive immigration from third world countries to western countries, while urban diversity in Israel is currently derived from internal migration processes of Ultra-Orthodox Jews and Palestinians who are Israeli citizens from their hometowns to secular Israeli cities. Thirdly, the international literature stresses a univalent correlation between minority groups and low socio-economic status and political power. Conversely, in the Israeli case, this correlation is not significant. The Ultra-Orthodox population is indeed ascribed as having low socio-economic status, compared to other groups in the Israeli society; however, this group holds a considerable political power, at the national as well as at the local level. Similarly, Palestinians who are Israeli citizens, constitute a significant minority group in the Israeli society, however, those who choose to immigrate to secular Israeli cities, are mostly highly-educated and with high-income, representing the growing Israeli-Palestinian middle class.

Given the above, in order to better understand the current urban reality, it is important to inquire the different strata or urban diversity in cities that become mixed, especially in Israel, in which this trend has recently intensified in Karmiel, Beer-Sheva, Hazor-Haglilit, and Nazarat-Illit, turning them into newly-mixed cities, however not yet recognized as such by the state of by their local municipalities.

5 THE 'FOSTER CITY'

This paper addresses the internal-migration of Ultra-Orthodox and Palestinians who are Israeli citizens, to Karmiel. From a planning perspective, Karmiel challenges the theoretical conceptualizations on cities characterized by significant urban diversity. The 'Foster City' is a new conceptualization, in which the new immigrants are analogous to the city's 'step-inhabitant'. The 'step-inhabitants' are not an ideological product if the nation-city: they were not born nor raised in it. The duality in the 'Foster City' (i.e., on the one hand, conflicts between different population groups; on the other hand subversive actions for promoting shared and respectful urban space) symbolizes the difficulties of adjusting to the new reality and accepting the new order. The 'Foster City' illustrates the complexity of dealing with urban diversity in places that are not in line with liberal-western democracies (Watson, 2014). Its abnormality represents the cracking of the National-Zionist project which aimed for social, cultural, political and spatial separation between different population groups. Therefore, at least in the urban scale, the 'Foster City' undermines the theoretical 'ethnocratic' approach (Yiftachel, 1999; Yacobi & Yiftachel, 2003). The intermediate situation of the 'Foster City' reflects struggles and confrontations against the new reality in two central aspects: alienation and temporariness.

Civic discourse against the internal-migration processes are an evident of the newcomers' strangeness and alienation. The political power and the profound foothold of the Ultra-Orthodox community within the municipality raised a firm objection of the veteran residents against the municipality, but were not directed against the Ultra-Orthodox community. However, the Palestinian internal migration is being perceived as an infiltration into the Jewish urban space. The terminology that is being used as part of the public discourse represents the city as a battle field, distinguishing between the 'threatening group' and the 'threatened group'. Ultra-Orthodox tendency to separation and introversion: dressing codes and separation in the educational institutions are characteristics that emphasize their strangeness and alienation. Unlike the Ultra-Orthodox community, the aloofness of the Palestinian residents in Karmiel is forced upon them. The lack of public services for the Palestinian residents of Karmiel: in education, leisure and religious services, force them to divide their lives between Karmiel and their hometowns. This creates a phenomenon that can be labeled: 'double urban citizenship', which enhances their strangeness and alienation.

Although it seems as if the 'step-inhabitants' are here to stay, it is possible to assume that in case better conditions in terms of housing supply will be created in the future, the Ultra-Orthodox community would prefer to return to the three main Ultra-Orthodox urban centers: Jerusalem, Beney-Barak and Ashdod. It is also possible to assume that a substantial investments in developing Arab settlements in Israel (e.g. suitable housing, public services and open public spaces), that would meet the needs of the growing Palestinian middle-class, they would prefer to return to their hometowns. Yet, this temporariness is far from being certain, since immigration of families is very different from immigration based only on occupational conditions (which characterizes the international migration processes). Therefore, limiting it is highly unlikely (Orgad, 2015).

The 'Foster-City' enables and even encourages heterogeneity processes in Karmiel, making the city's space hybrid and liminal, while at the same time turning it to an object of abandonment. Regardless the awareness of the state and the municipality to the dramatic demographic, social and cultural changes, Karmiel is not officially recognized as a newly-mixed town. Daily life in the 'Foster City' challenge the utopian idea of the homogenous city, and at the same time the 'step-inhabitants' urge the city to redefine itself, demanding the officialdom to recognize the city as a formal newly-mixed town.

6 CONCLUDING REMARKS

Contemporary Israeli urban reality which stems from the different strata of urban diversity intensifies the contestations over urban space and urban identity and urban image. The presence of population groups which are considered as 'others' (e.g. Ultra-Orthodox and Palestinians who are Israeli citizens), and their spatial demands draw the public attention and provoke a profound public discourse. Particularly in towns and cities which were established during 1950s and 1960s as part of the National-Zionist project, urban diversity is most prominent. Increasing internal migration processes of such population groups indicate on a social-mix that is not directed, neither desirable by the officialdom. The 'Foster City' is a fait accompli, but is not yet accompanied by social cohesion between the different groups. Meanwhile, an undermined sense of belonging, lack of trust, disrespect, low recognition for the needs and preferences of the joining groups, and lack of desire for cooperation between them are more dominant than the actions and voices which implore for a shared and respectful city life. At the moment, urban diversity in Israel is not perceived as a potential but rather as an instigator of social problems. The ways in which urban conflicts are currently handled in Karmiel reflect the desire to oppress them or manage them by the law system, by political policy, by the housing market forces or by social movements but not as part of a comprehensive planning process. Such an attitude cannot reduce conflicts or mediate between the different and often contradicting spatial demands, rather, it might increase and even worsen them (Sorensen, 2014). As such, this attitude affects planning practice of which currently runs by default: fragmented and by an 'ad hoc' basis.

Karmiel as a 'Foster City', is an example of what is anticipated in the future, what is obviously ahead, as already happening in other cities across the world and especially in Europe. In the 'Foster City' the struggles over symbolic and spatial demands echo everywhere: at home, in the streets and neighborhoods and in the entire city. Nonetheless, the ´Foster City´ is an enabling space, providing for marginalized groups an opportunity to fulfill their civil rights: it reduces the supremacy of ethnic, religious, and socio-economic status, while allowing civic belonging to sprout. It is most probable, that the 'Foster City' will form the political discourse in Israel. As a consequence of the social interactions that have no explicit boundaries, the next generation will grow and hopefully determine the new 'Israeliness', in the civic dimension as well as in the spatial dimension.

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ID 1437 | PUBLIC SPACES AND URBAN CULTURE IN SAINT-LOUIS OF SENEGAL. DETERIORATION OR DISAPPEARANCE OF AN AFRICA´S UNESCO SITE

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1 INTRODUCTION

This paper collects some of the looks and thoughts arising within the framework of the project "Inter-university cooperation in the management of sustainable tourism between Cape Verde, Mauritania, Senegal and the Canary Islands". It is an activity that took place in the framework of the European project of "University institutional strengthening of the Canary Islands and Africa (Senegal-Mauritania - Cape Verde) space: SEMACA", which belongs to the European programme of cooperation transnational Madeira-Azores-Canary Islands (MAC 2007-2013). We will focus in the case of the city of Saint-Louis in Senegal, at the mouth of the Senegal[1] River, since its planning combines a historical past with strong French influence, with an urban morphology in grid and a building typology that has been awarded the recognition of world heritage of the UNESCO in the year 2000, in contrast to a peripheral urban growth out of the heritage area, where there is little control on its evolution.

The city of Saint-Louis has experienced an exponential growth in its population in recent years, which has generated a rapid urbanisation where the coalescence of buildings is completely uncontrolled. It urban crisis, reflecting an economic crisis and a crisis in the finances of the state, is marked by a decline in socio-economic indicators and a deterioration of living conditions and the health of its inhabitants, in a country where the management of cities is influenced by the predominant role of the State and its leader, standing over local authorities.

Our research is orientated towards the theory and technique of the transformation of the anthropogenic transformation of space based on spatial planning, which includes tourism, sustainability and landscape, understood as necessary elements for achieving social, economic and environmental balance.

[1] Senegal gained internal autonomy within the French West Africa (AOF) in 1958 becoming the Islamic Republic of Mauritania, and achieved independence in 1960.

2 TERRITORIAL ADMINISTRATION

To understand better its development, it is necessary to know some data of this African country, with 706 kilometres of coastline bathed by the Atlantic Ocean and an extension of 196.722 km2 located in coastal West Africa, into the depression known as the basin Senegal-Mauritania, between the parallel 12 ° 30' and 16 ° 40' North and the meridians 11 ° 30' and 17 ° 30' West. It borders to the North with Mauritania, to the South by Guinea and Guinea-Bissau, and to the East by Mali. It has the feature to be flowed through this West State of Gambia supported on the river of the same name.

As for the territorial organization of the State, Senegal has inherited a very centralized structure. Despite this, progressively since the 1970s, and especially following the 1996 Decentralization Act, to avoid that, administrative political measures have been applied. Currently Senegal is organized according to the French model of territorial administration in regions, which are divided into departments, and these in turn are subdivided into districts (called as well if they are urban centres) and communes (called this way if they are rural communities).

The Region of Saint-Louis[1] is one of the eleven administrative regions currently comprising Senegal. It lies to the North of the country, forming the border with Mauritania, and is divided into 3 departments, 7 districts, 20 communes and 18 rural communities[2]. The three departments of the Region of Saint-Louis in Senegal are: Saint Louis, Dagana and Podor. Of these three, the Department of Saint-Louis is the most densely populated, with a density estimated of 310 inhabitants/km², opposite the regional average density of 44 inhabitants/km² And within the Department of Saint - Louis, lies the town of the same name, the city of Saint Louis of Senegal, which we can say that it is the fourth most populated of Senegal, with 172,000 people surveyed in 2013, after Dakar (2,682,000 inhabitant), Thiès (282,000 inhabitant) and Kaolack (182,000 inhabitant).

The city of Saint-Louis in Senegal is located at the mouth of the Senegal River that runs through the city from North to South[3], and its topography is characterized by a coastal plain to the West, bordered by the Atlantic Ocean, which is rising slightly eastward, toward the Mainland. While its strategic position make that Saint-Louis has the characteristics of a sea and River City, the presence of the river and the Ocean has been a constraint to its urbanization, since the place is subject to frequent flooding.

We can say that the city of Saint Louis is fragmented by the presence of the River into three parts: "la Langue Barbarie" westward, constituted by a spit of sand of 300 meters wide that separates the River from the Atlantic Ocean, which takes contact 25 Km more to the South, and it settled districts of fishermen (district of Goxxumbace, Ndar Tout and Guet Ndar); "the island of Ndar in the Centre, it is the current island of Saint-Louis in Senegal[4], a narrow island just 2 kilometres long by 400 meters of width that is formed naturally by sedimentation, it is the heart of the old colonial city, owner of the heritage value of UNESCO; and "island of Sor" to the East, even though it is located in the continental area, receiving the nomination of island because it is surrounded by tidal marshes in times of flooding of the river Senegal.

[1] Currently, 10% of the country's population is concentrated in the Saint-Louis region.
[2] At the head of each Region there is a Governor and a Regional Assembly, and at the head of each Department there is a Prefect. The State maintains the supervision of all levels of the administration. The 1996 Decentralization Act reinforces the responsibilities and competencies of local communities and organizes the Senegalese territory in 11 regions, 60 departments, 43 districts and 320 rural communities.
[3] The Senegal River is about 1,790 kms. long and was born in Guinea, in the Fouta Djalon plateau, with the name of Bafing River. After joining the Bafing with the Baoulé River, it is when already receives the name of Senegal.
[4] She was baptized with this name by the French, in honor of the King of France "Saint Louis" and also, by being his ancestor of the reigning sovereign Luis XIV. 2

Figure 1 - Bird view of Saint Louis fragmented into three parts by the presence of the Senegal River at its mouth

It is in these lands where sits most of the population of Saint-Louis (districts of Sor Nord, Darou, Balacoss, Diamaguere, Leone-HLM, Eaux Claires/Diaminar, Ndioloffene Sud and Pikine) and where the city grows without hardly a planning intervention. New neighbourhoods (barrios of Khor, Bango and Ngallele) that have settled in the Mainland firm, where do not have reach the river floods have also emerged in recent years.

The island of Saint-Louis in Senegal holds an exceptional urban heritage value awarded by the Organization of the United Nations in the year 2000, on the basis of II and IV criterion. And the Langue de Barbarie and the border area with the Island of Sor beside the river are considered protected areas.

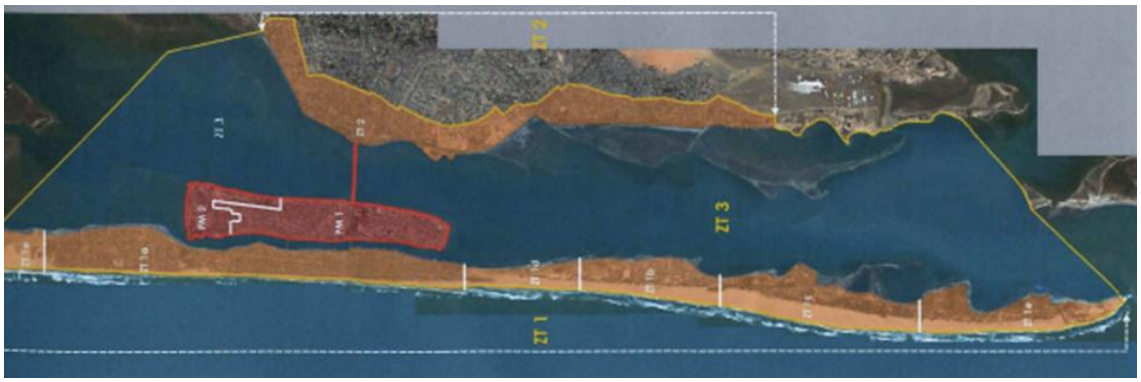

Figure 2 - Delimitation of areas classified by the UNESCO: the red zone is the area of heritage value, and the Orange area is protected area.

The Commission of the UNESCO determined that it deserved inclusion in the World Heritage list because "the historic town of the city of Saint-Louis exhibits an important interchange of values and influences on the development of education and culture, architecture, handicraft and services in much of West Africa" (criterion II), and because "the island of Saint-Louis ancient capital of West Africa, is an excellent example of colonial city, characterized by its particular natural environment, and illustrates the development of the colonial Government in this region"(criterion IV).

But better to understand the growth and the urban transformation of the city of Saint-Louis, it is necessary, as if it were a palimpsest, reveal about the current city, and the evolution from its origins. It is occupation and colonial origins.

3 MATERIALS TO ANALYSE

Its location has always had a great interest for Europeans a logistical point for trade in slaves with Cape Verde. Initially it was occupied by the Portuguese, then by the French, although on several occasions and

temporarily it happens to be occupied by the English, but the island definitely becomes French colony, and the French, who built in 1659, are the first "Fort of Saint Louis". Therefore, that date is regarded as the founding of the city.

A morphological analysis of the city of Saint Louis, following the social events and demographic growths that have driven the rate of urban growth, will allow us to reason about the phenomena that have led to the development of its evolution and landscape and urban entities by stage of growth.

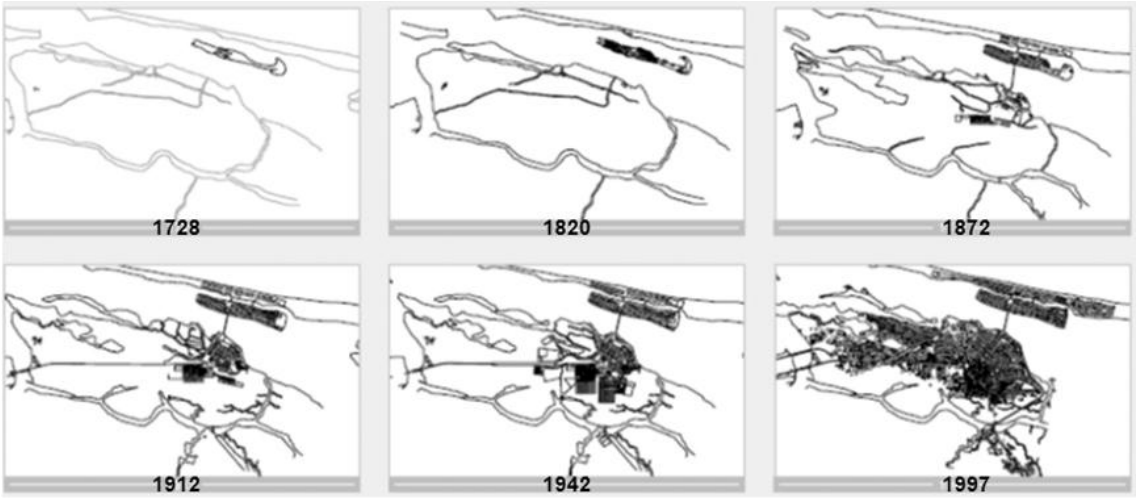

Figure 3 - Evolution of urban growth of city Saint Louis of Senegal. (Source: Inventory of the Architectural and Urban Patrimony of the island of Saint-Louis of Senegal. École d'Architecture de Lille)

Since the mid-17th century to the middle of the 18th century, the island is characterized by urban growth environment to military construction[1], which is the main solid construction of the island, being bordered North and South by domestic buildings organized according to a regular grid and built mostly with straw and reeds, and only some few in masonry. To the East and West of the military construction space will be free of buildings, located to its West, the Plaza de Armas (the current Plaza Faidherbe)[2]. By that time, the city of Saint Louis consists of only a score of houses and it is inhabited by around 5,000 people.

The city of Saint-Louis lives the golden age of the colonial administration during the nineteenth century. After being occupied again by the English, between 1809 and 1817, the island definitely becomes a French colony. The city of Saint Louis is located, in those moments, has not already only military equipment, but also of public and religious facilities, and gradually will occupy a greater extension of stable land on the island of Saint Louis. With the first abolition of the slave trade, in 1815, the island of Saint-Louis changes its initial commercial activity by the trade of arabic gum, which will play an important role, over commercialization of leather, wax, ivory from the islands of Ivory Coast or gold from Galam.

The Senegal River makes this city an important port centre for the Atlantic trade and a natural departure gate. In general, the Senegal River is navigable at all stations in 175 kms. stretch from his contact with the ocean to the small town of Podor[3] and at times of high water, around three months of the year, to Kayes, 975 kms. from the mouth. All this favours an important colonial trade with an increase in the transit of ships. This new commercial activity generated an increase of the local population, while growth is slow and irregular. 5,000 inhabitants in 1790, it passes to the 12,000 in 1848, representing a population increase of only 7,000 people in 58 years (in more than half a century). This slow population growth is due to the epidemics of yellow fever, which often decimate the population.

But already in 1829, the administration consider that is necessary to regulate the growth of the city through the drafting of the first "alignment Plan" of the island of Saint-Louis, although only became partially applied. This fact makes a great wave of urban works with the need to build public services such as the layout of

[1] This military construction will continue to be expanded throughout the eighteenth century.
[2] Louis Faidherbe was formed as a military engineer and served in Algeria and Senegal before becoming the colonial Governor of French Senegal between 1854-1861 and 1863-1865. He is considered the founder of the colonial empire of France in Africa.
[3] It is located 215 km east of Saint Louis, and with 10.173 inhabitants registered in the year 2006

streets and discharge zones. The buildings will begin to run already in solid form, and even many of native dwellings, which were initially built with straw and reeds, are replaced by new constructions executed with masonry.

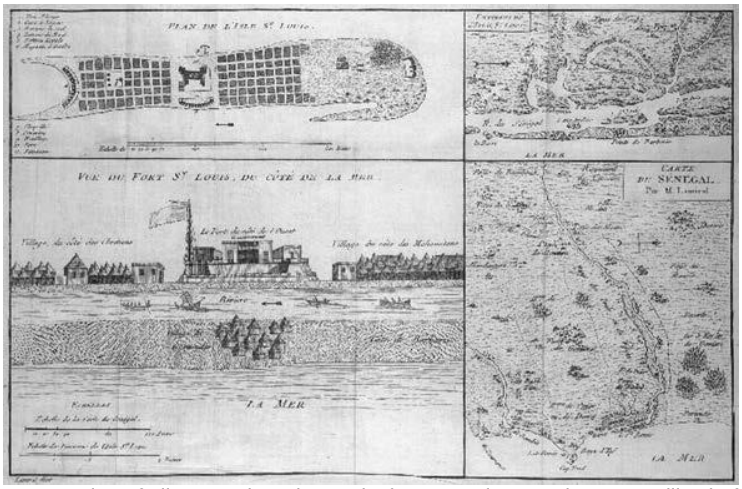

Figure 4 - Plan of alignment in Saint-Louis de Senegal, 1829. (Source:gallica.bnf.fr)

At this time, the small size of the island, 2 km long and 400 meters wide, forced the population to leave their physical limits and to occupy the edges of the Senegal River, thus forming the first suburbs of the city. The suburbs of N'Dar Toute y Guet Ndar in the Langue de Barbarie, where fishermen were settled and the suburbs of Sor Nord y Diamaguène in island of Sor, on the Mainland. All of them were connected with the island of Saint-Louis through three bridges, which were built between 1856 to 1865. The Moustapha Malick Gaye bridge and the Geöle bridge (which currently only support struts) connecting the island of Saint-Louis with the tongue of sand of the Langue de Barbarie, and casting Faidherbe bridge will allow the expansion of the city towards the Mainland. This bridge, built in steel, is also recognized as UNESCO World Heritage. The grounds of the Langue de Barberie were occupied by the fishing community, given that this spit of sand located on the border between the Atlantic Ocean and the River, makes it the ideal place to develop the artisanal fishing, most important economic activity of the city, and that both women and men are engaged. The fishing community of Saint Louis is one of the most important in West Africa and currently comprises more than 4,000 crews. Guet Ndar is the District of fishermen where today more than 36,000 people live in overcrowding on a narrow spit of sand, which develops a dynamic and energetic activity: the fishermen arrive with their catch while dozens of trucks waiting to buy fish and transporting it to inland as to Kaolack, Mali and Tambacounda. Another part of the catches are given to women who are engaged in smoking-drying fish on the shore. Construction and repair of boats and fishing nets, activity also takes place on the beach in Saint Louis, where it is possible to see almost all the stages of construction of the Senegalese fishing boats.

Figure 8 - The typically Senegalese scene in which women engage in dry fish along the shore.
(Source: personal picture)

Another important fact that will have impact on the expansion of the city of Saint Louis and its growth toward the continental zone (sister island), is the construction of a railway station that will connect various parts of the colony, allowing travel and transport materials in much shorter time. This is the way how it has created an infrastructural continuity as strategic point and location for the supply of goods to and from the island of Saint Louis. On the outskirts of this point, Sor-Nord district and station, which is located at the entrance of the Faidherbe bridge, where will focus higher density of population, that constituting the District of Diamaguene[1]. On the other hand, should take into account that, in those moments, the French were doing great works of engineering world in order to expand his empire, such as the opening of the Suez Canal in 1869, promoted by Frenchman Ferdinand de Lesseps.

The installation of large railroads and the expansionist desires of France, led to build in 1885 the railroad which connected Saint Louis with Dakar, and subsequently Dakar with Niger[2]. The construction of this railway subtracted the role of main road of transport and communication, which had been so far to the Senegal River. The city of Saint Louis, well equipped in infrastructure and very well communicated, becomes political, economic and intellectual capital of Senegal and Mauritania. Head of a hierarchical network of military posts and lines of communication, Saint Louis experienced a considerable growth in 1895, becoming the capital of the French Africa-occidental[3].

In the 20th century is produced a demographic expansion and modernization of the city[4]. The progress of medicine involve a population growth which is reflected in the decrease in the infant mortality rate and an improvement in sanitary and food conditions. Between 1930 and 1940, the population has now reached the figure of 36,000 inhabitants, and will continue to growth despite the significant number of men sent to the front during the second world war. In the year 1942, it writes by L.H. Hoyez, "Plan for Expansion, development and improvement of Saint Louis", in which projected paths of the last large areas of the continental zone. However, from 1957, the competence of Dakar as the new capital of Senegal is felt to the detriment of Saint-Louis, who undergoes a small demographic decrease, compared to Dakar, whose population is quadruples.

In 1970 the perimeter of the city has multiplied by three, and the continental zone, given that it has the necessary land, has become the main area of growth of the city, despite the bad conditions of this muddy field. Saint Louis is a city that already has 81.204 inhabitants, in contrast to the 36,000 who had in 1940. This growth is due to migration flows and the strong rural exodus that throughout the 1970s intensifies drought and the limits of the city makes more spontaneous than volunteers.

While the "Plan Director of conditioning and planning" is written in 1975 (Le Schema Directeur d'Amenegement et d'Urbanisme [SDAU]) to manage the development of the city, this will not have any impact on the management and regulation of the territory. This Master Plan proposed an increase of the extension of the communal perimeter of 12,800 hectares and an urban extension to Ngallèle, but the growth of this town is at the moment little accepted.

4 DETERIORATION OR DISAPPEARANCE

In the 21st century the city of Saint Louis will experience an exponential increase of its population growth, bringing together at the edges of the city constructions without any control of their growth, as opposed to the regular tracing inherited from the colonial era.

[1] See the dissertation of Daye Mamadou Sow, "Les transformation urbaines dans les villes du sud;" «L´exemple is Saint Louis du Sénégal». (2005) Université de Toulouse - Le Mirail

[2] The railway network in Senegal, in the beginning very developed, has been deteriorating gradually and there are now only two lines of travelers: the Dakar-Thies autorail and the commuter train, which offers a regular service between the station of Dakar and Rufisque. This train is known as "the little blue train".

[3] Between 1895 and 1958, the French Africa-occidental (A.O.F.) was a Federation of eight French colonies in West Africa, with the aim of coordinating the colonial occupation of France on the African continent under the same authority. It was formed by Mauritania, Senegal, French Sudan (now Mali), Guinea, Côte d'Ivoire, Niger, Alto Volta (now Burkina Faso) and Dahomey (now Benin).

[4] In the 20th century, Africa enters a phase of conquest and Saint-Luís becomes Centre military from all over West Africa, materialized by its main square and bordered by the most important military buildings of the city.

Zones	Equipment and urban facilities
Island of Saint-Louis	52 %
Langue de Barberie	13 %
Continental zone (Sor)	35 %

Table 1 - Equipment and urban facilities. (Source: Plan Directeur d'Urbanisme (PDU) de Saint-Louis 2000-2025)

For a correct analysis, it is necessary to oppose the "urban facilities" look, the existing in each of the area's population burden:

Zones	Population in 2000: Inhabitant	%
Island of Saint-Louis	14,022	9 %
Langue de Barberie	36,652	25 %
Continental zone (Sor)	98,806	66 %

Table 2 - Population in 2000. (Source: Department of Public Safety (DPS) de Saint-Louis)

The low population of the island of Saint-Louis (with only 9%) accompanied by the highest percentage of equipment is explained by the unemployment of many buildings that are dilapidated, and fundamentally, by the fact that in this area the majority of the buildings are administrative buildings or have commercial use, when they are not the second homes of senior officials who have their primary residence in Dakar, and which do not come to be regarded in the population census of Saint-Louis.

Urban growth, combined with poor flooded and swampy terrain, translates into an explosion that fragmented the continental zone in 11 districts (2/3 of the 16 total).

Zones urbaines	Quartiers	Population	Superficie (ha)	Densité
Langue de Barbarie	Goxxumbacc	9680	22,37	434
	Ndar Toute	7576	15,70	482
	Guet Ndar	18685	15,85	1179
	Ensemble	**35.941**	**53,92**	**667**
Ile de Ndar	Nord	8768	39,65	221
	Sud	4115	12,87	320
	Ensemble	**12883**	**52,52**	**245**
	Sor Nord (Diawling/Marméal)	9557	41,97	228
	Darou	6553	22,52	291
	Balacoss	4902	29,21	168
	Diamaguène	8976	27,13	331
	Léona-HLM	12717	60,13	211
	Eaux Claires/Diaminar	6933	39,66	174
	Ndioloffène Sud (Médina-Courses)	12176	136,12	89
	Pikine	30820	184,11	167
	Ensemble	**92634**	**540,85**	**171**
Périphérie	Khor	1996	24,45	82
	Bango	3473	38	91
	Ngallèle	1015	19,46	52
	Ensemble	**6484**	**81,91**	**89**
Ensemble (Saint-Louis)		**147942**	**729,20**	**203**

Table 3 - Population density of Saint Louis City. (Source: Agence de Développement Municipal (ADM) de Saint-Louis)

The density of each neighbourhoods shows the unequal distribution of the population in the urban space. As the urban front moves, the grounds of the continental zone are increasingly more inhabited, complying to the East a peripheral semi-corona on the island of Sor, which is characterized by irregular occupations that are built on areas that are inundated by the flooding regime of the Senegal River, which begins in July and which are greatest in October and November producing floods around 1.35 meters above the sea level.

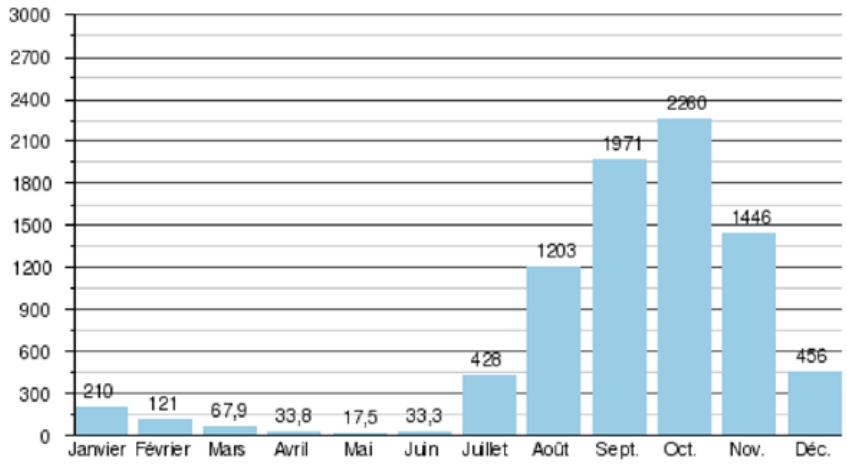

Table 4 - The average monthly flow in m³/s for a basin of 268,000 km2, measured in hydrological station of Dagana. (Data obtained from the periods 1903-1974)

On the contrary, during the great drought, the flow is so low that, sometimes, it may even to wade the river. It is when the population without access to housing, raised in these areas improvised housing units that are destroyed by water when the river returns to its maximum runway. The problem financial and mortgage security prevents access to housing many families without resources, which self- construction their homes on land that just calls them the river. Currently, these floods are partially controlled thanks to the construction of the Maka-Diama dam, built 150 Kms. up and waters at an altitude of 1 meter above the sea level, on the border between Mauritania and Senegal, near the mouth to the sea, which prevents access from saltwater upstream, which caused the sterilization of the agricultural soils when they flooded[1].

5 DISCUSSION AND CONCLUSIONS

The truth is that the urban crisis, a reflection of an economic but also financial crisis of the State, is marked by a decline in socio-economic indicators and a degradation of the conditions of habitability and health of their inhabitants, in a country where the management of cities is marked by the predominant role of the administration of the State, against local authorities.

It is very important to remember that Senegal is a presidential Republic and although it works democratically, being in this regard recognized as one of the countries with more successful and rooted in African culture, the local administrators are appointed and accountable to the President[2], and representatives of the State will continue under responsibility at all levels of the territorial administrations.

It can be said that the territorial organisation of the State has inherited a very centralized configuration, in which there is a high degree of administrative centralization in the management of the public sector, both at the level of financial resources and the realization of all kinds of tax procedures (administrative charges, opening of premises licences or other facilities, etc.) also contributes to what the fact of the spatial concentration of foreign companies in the Dakar-Thies environment.

It is very important to remember that Senegal is a presidential Republic and although it works democratically, being in this regard recognized as one of the countries with more successful and rooted in African culture, local administrators are appointed and accountable to the President, and representatives of the State will continue stewardship at all levels of the territorial administrations. However, gradually, from the 90`s will be to produce a series of institutional reforms in Senegal, which will lead to the decentralization of the State, strengthening the management capacity of local institutions. Although the economic resources of Saint-Louis in Senegal are still based in coastal fisheries, livestock and agriculture, and despite the efforts of modernization, the primary sector remains, today, very little productive.

[1] The river has two large dams along its course: the dam of Manantali in Mali, built on the Bafing River between the years 1981-87 as a reservoir (Lake Manatali, 477 km2 of water surface); and the aforementioned Maka-Diama dam.
[2] In the spring of 2012, there were presidential elections of Macky Sall was then victorious. This election, peaceful and democratic, were greeted by the EU (among others) as a sign of maturity, since its opponent (former President) Wade wanted a continuity of dubious legality.

Coinciding with the 90`s (under the rule of the Socialist Party of Diof) a new era of urban management will start in the city of Saint Louis, propitiated by the new powers which acquire regions (so far only in State hands), and among which is the responsibility of the urban management of its territory, which will foster citizen participation through the new local authorities. In this sense, the "Programme of strengthening and support to the development of these neighbourhoods" initiated the development and implementation underway a "Plan of development of neighbourhood" (PDQ), which marks the priority projects and acts as a pedestal from which, the actions of development are identified, to be subsequently performed.

However, the reality is in the case of Saint Louis, as well as in many other communities, the room for manoeuvre they had on their territory was shoestring, lacking the financial, human and technical resources to deal with new responsibilities, mainly those derived from the management of their territory. It should not be forgotten that one of the basic characteristics of the Senegalese economy is one that is called "informal" with a basic structure which is composed of an average of 2.9 workers, usually within the same family.

According to a survey conducted by the “Directorate of Economic Statistics and Compatibility”, this economy is formed by 48.8% of the active population (working 2,216,617) that supports the 35.8% of all non-agricultural production. Own Saint Louis resources consist of the revenue that it can raise through local rates, which are decreasing due to the impoverishment of the population. But to this fact, it must be added to the absence of a fiscal cadastre allowing measuring the potential benefit of taxable activities and that they could improve municipal revenues, since many taxes are not always collected[1].

On the other hand, we must be aware that while the communes acquired new skills, also assume the costs of its operation. If you look at the investment of your budget, we appreciate how between 70-80% per year goes to the performance of his administration, making it impossible to invest in equipment or basic urban infrastructures, and even has no ability to maintain in good condition the existing. This is due, inter alia, not only a poor management but a weak local financial capacity and remarkable retardation of transfers from the State. The consequence is that, despite programmes of decentralization and the existence of local financial organizations supported by State, competences transferred to the regions in spending are notoriously inadequate and scarce, which, moreover, gradually decrease down between communes and rural communities, who are obliged to tip over towards the informal economy.

What does highlight do, before the concept of "decentralization" of recent years, there has been an awareness citizen participation, and the creation of a "Cell of coordination, information and entertainment for Local development" (CCIADL), which has become the "Agency of communal development" (ADC), and the creation of the “Programme of strengthening and support to the development of neighbourhood"(PRADEQ)[2], and in the "Program of animation Social urban" (PASU), which aims to fight poverty (improving the living conditions of the population of the districts), support the self-promotion initiatives at work in the neighbourhoods of the city and involve all relevant partners and associative movements in the management of this neighbourhoods.

However the reality is that due to its weak economic engine, the commune of Saint-Louis runs out of capacity investment, and needs the help of State investments or foreign partners. Should be noted serious deficiencies in infrastructure, both of a general nature: progressive isolation, poor accessibility, poor conditions on roads, disappearance of the railways and its airport downtime, as in the urban nature: widespread poor health, inadequate sanitation and supply of electricity and water, etc. And, in the aspect of human capital, lack of programs both basic and professional education at all levels, inadequate level of training and lack of development of marketing actions in activities that, like the tourist, could mean an improvement substantive for the population and its own habitat.

Ultimately, there is a lack of State investment as well as lack of local financial autonomy that runs the risk of becoming endemic. Therefore, the fact that "The communes acquired new skills in the management of its territory, favoured by a decentralization", it is nothing but a fallacy, given that it has no power to act.

[1] According to the program of development community (PDC) 1998-2008, "in the absence of a precise knowledge of the available resources, the budget of the commune represents less than 1% of the wealth produced by the local economy, valued around 58 million CFA francs".
[2] Programme de Renforcement et d'Appui au Développement des Quartiers

In this situation, the existence of a heritage of UNESCO, and even a few natural resources likely to regain a significant role of this commune, this city, and even the island of Saint Louis, seems to have a difficult prognosis[1]. The recovery of a historical heritage worth to be taken into account such as the island of Saint Louis, suffer the negative consequences of a very negative economic and social context. In part, as mentioned, by factors exogenous, characteristic of the political and economic organisation of the country and, in part, by endogenous factors, such as the progressive degradation of the urban heritage that sustains a population without resources. Buildings in ruins, streets without the minimum necessary infrastructure, low-income housing and very limited equipment. All this suggests what policies would be necessary apply for the restoration of a heritage of humanity gradually sinking into oblivion, well by the resources of the country and through international cooperation programmes.

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ID 1492 | THE STREET FOOD MARKET, TO BE OR NOT TO BE? A STUDY OF DIFFERENT GROUPS´ INTEREST DIALOG BEHIND INFORMAL URBAN SPACE

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ABSTRACT: Street food market was the major business form in Shanghai, in which food, vegetables and fruits are sold. But by the end of twentieth Century, after the government management is centralized and moved indoors, the street market within urban area mostly disappeared. But before long, street food markets of all sizes came into being again, creating a typical irregular space in Shanghai. Especially in the bustling city center, there are still many street food markets despite of the prohibition. This phenomenon is attracting more and more attention from media and public. Why can the street market exist in a contradictory status messy, traffic impacting but full of vitality and natural livelihood? Why is the street market loved by some on one hand, and is despised by others simultaneously on the other hand? Whether the government should extinct the street market or let it be? This paper selects Taiwan Road food market, located in the East Nanjing Road Commercial District in the city center, as an example, focusing on the interests of the game behind the street food market. First, the market's physical space is surveyed, and the

[1] Another highlight is that Senegal and Mauritania have put their efforts in common and created a Board of protection and conservation of the delta of the Senegal River, in the years 1970 to protect its rich flora and varied fauna, resulted from the many marshes and Islands that make up the mouth, where there are several natural parks which currently form a great refuge for birds. In the area we find the National Park of the birds of the Djoudj, located about 60 kilometers north of Saint-Louis; the Diawling National Park, on the other side of the river and the border with Mauritania; and in the same mouth Senegalese national language of Barber Park is now also.

interrelationship among the location background and surrounding facilities is sorted out; secondly, the social association inside the market is emphasized and analyzed. Through interviews with the four types of people related to the market from interest aspect----customers, vegetable vendors, residents and management, the links between these people and the street market is analyzed. Furthermore, their attitude towards the market and its consequence is analyzed as well, to deduct the source reason for why the street market never extinct. Through combing the benefit gaming between these four types of people, the necessity and positive influence of urban irregular space represented by street market is pointed out. Meanwhile, facing the negative urban influence brought by the street market, suggestions are made for the future development of the city street food market.

KEYWORDS: Street food market; city center; informal space; stakeholders; dialog

1 INTRODUCTION

The street food market in China refers to the outdoor commercial space composed of different vendors along the streets where there are many people living. Because of the variety and flexible price, The street food markets is quite popular. However this kind of informal space also brought some problems to the city, such as the traffic and environment problems.

The street food market in the cities originated very early. Initially, farmers outside the city picked up vegetables and meat into city for sale every day. Different vendors got together along the streets and then the early street food market was formed. With the increase of population in the cities, there was an urgent demand for basic fixed markets. Then the government introduced the municipal management pattern of modern western cities, collecting certain rental fees from the vendors and providing them with fixed booths.The first official food markets appeared with the form of street fairs. However, the place where the vendors gathered was not limited to the trading area set by the government. The vendors would take over and try to expand their territory as soon as there was an open space, even the main roads or the civic center where there are many tourists and residents. As a result, problems such as obstructing traffic and affecting city appearance were becoming more and more serious. The government has issued a decree banning Street farms or transferring indoors to improve road conditions and environmental quality.

The street food market was the mainstream form of Shanghai food market. In the end of twentieth Century, the street markets in the urban areas almost disappeared after two years' rectification movement. But before long, they began to appear again in all kinds of streets, especially in the central city. Today, there are still many street food markets fighting with the prohibition. From the beginning of 2015, Shanghai launched a large-scale movement of streets rectification movement, making the street market concerned again by the media and public attention.

This paper selects Taiwan Road food market, located in the East Nanjing Road Commercial District in the city center, as an example, focusing on the interests of the game behind the street food market. First, the market's physical space is surveyed, and the interrelationship among the location background and surrounding facilities is sorted out; secondly, the social association inside the market is emphasized and analyzed. Through interviews with the four types of people related to the market from interest aspect----customers, vegetable vendors, residents and management, the links between these people and the street market is analyzed. Furthermore, their attitude towards the market and its consequence is analyzed as well, to deduct the source reason for why the street market never extinct. Through combing the benefit gaming between these four types of people, the necessity and positive influence of urban irregular space represented by street market is pointed out. Meanwhile, facing the negative urban influence brought by the street market, suggestions are made for the future development of the city street food market.

2 CASE STUDY

This context selects the Shanghai Taiwan road food market as a case study, which is located in the central commercial area of Shanghai, three minutes walking distance from the famous commercial street,East Nanjing Road, and is also the largest a street food market in the surrounding area. Taiwan road food market is located in the remained old settlements along Taiwan road surrounded by these commercial

areas. Taiwan Road, a total length of no more than 200 meters, has now developed into the most important informal vegetable distribution center in the northeast of Huangpu District.

Figure 1 – The Location (Drawn by Author)

There are several considerations for selecting this case: firstly for the media attention. As a kind of informal economic place, the street food market should be banned according to the regulations, but many of them have not only disappeared, but also become the most closely related places with the people's lives. Secondly, the sharp contradiction, along Taiwan road there is the bustling metropolis and exquisite commercial center on the one side, while the filthy road street markets at the same time, causing a great gap in the environmental quality and landscape image. What's more, the views of different groups of people on the road food market are very contradictory. Consumers are pouring here for the convenience and good price but the nearby residents suffered a lot from the noise and dirty and crowded street. Thirdly for the typical meaning, Taiwan road Market is a typical case of urban village renewal in urban central area in the city center land area, to retain or eliminate the food market, which will affect the interests of the crowd? How to balance the contradiction between the needs of the original residents and the development of the city?

The development of Taiwan road food market has gone through three periods: (1) after liberation period: small commodity market. Before liberation, there were fixed stores on both sides of Taiwan road. After liberation, sporadic mobile traders began to set up stalls on the streets. After the renovation movement around 1959, there were no signs of itinerant traders on the Taiwan road. (2) 1990s period: vegetable street. There is an emergence of mobile vendors, gradually increasing the size, forming a neighborhood vegetable street, which is the prototype of Taiwan Road food market. (3) Latest ten years: the street food market is still repeated. The relevant departments in recent years has carried out several campaigns and raids, the results were obvious but did not last long, the street market emerged again and again.

Figure 2-4 - Three Periods of Taiwan Road Food Market

Taiwan Road food market street is "L" shaped narrow strip space, with a total length of about 135 meters and the width of 6 - 6.5 meters, of which 2 meters on both sides are occupied by stalls. the middle passage is left just about 2 meters for transportation. People are only allowed to walk through the road. There are three entrances and exits. The flow line is single and clear. On the one hand, it is convenient for customers to browse all booths. On the other hand, it is easy to cause traffic congestion because the pathway is so long and narrow. There are 63 stalls totally along the street divided into six categories. Generally speaking, different types of stalls are mixed and arranged, to some extent, avoiding competition from similar stalls.

Figure 5-7 - Three Periods of Taiwan Road Food Market (Drawn by Author)

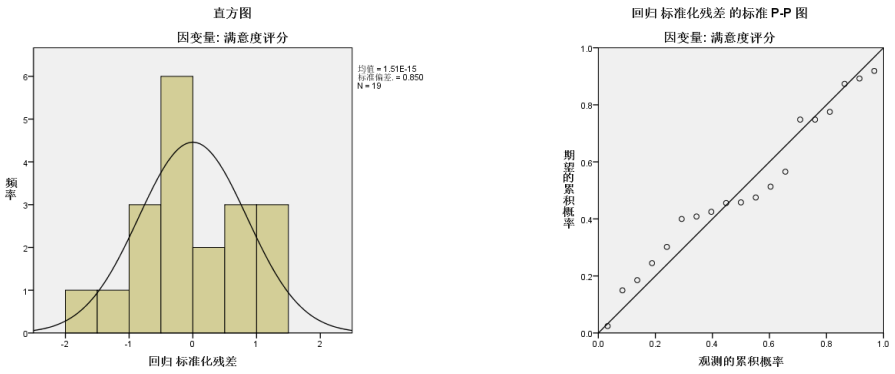
3 ANALYSIS ON FOUR GROUPS OF STAKEHOLDERS

Understanding the spatial distribution of the road food market, this paper began to study the different interests behind that. In such a stage of urban grassroots such as customers, vendors, residents and managers, each of whom have their own necessity and problems. "who benefits, who suffered?" What's the relationship of them? This chapter is divided into the following four parts to analyze the four stakeholders. We hope to understand the positive and negative effects of the food market from the perspective of the four groups, and understand the real needs of people.

3.1 CUSTOMERS

In this study, we recorded the number of customers in Taiwan Road food market in three periods of a day: during 6-7 am, there were 1062 customers; from 10 to 11 o'clock , there were 682 customers; and during 3-4 pm , there were 782 customers. On average, there are a lot of customers and the business is in good condition.

What are the main drivers for consumers to come to this food market? A total of five factors, included the price, distance, freshness, Messy condition and familiarity with vendors, were selected for the attractiveness of a multiple regression analysis. The available survey sample was 136 and the results were as follows(Tab. 1):



Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std.Error	Beta		
1	(Constant)	1.885	1.474		1.279	.22
	Distance	-.140	.066	-.373	-2.123	.05
	Price	.734	.403	.271	1.821	.09
	Messy condition	-.278	.230	-.234	-1.209	.24
	Freshness	.441	.361	.133	1.221	.24
	Familiarity	.207	.141	.182	1.467	.16

a. Dependent Variable: Satisfaction Score

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	更改统计量				
					Adjusted R Square	Adjusted F	df1	df2	Adjusted Sig. F
1	.946[a]	.895	.855	.52896	.895	22.230	5	13	.000

a. Predictors: (Constant), the price, distance, freshness, Messy condition and familiarity with vendors

b. Dependent Variable: Satisfaction Score

Table 1 – Multiple Regression Analysis (Drawn by Author)

R2 =0.855,It shows that the equation has a high degree of fit and a significant coefficient of Sig=0.000, and the correlation is good. We get this equation:

Y=1.885+0.734X1(Price)+0.441X2（Freshness）-0.278X3（Messy condition）+0.207X4（with vendors）-0.14X5（Distance）

According to the equation, the evaluation of the customers on the food market is the most closely related to the price, followed by the freshness, sanitary condition and so on. Among them, the attractiveness of the street market is positively related to the price, freshness and familiarity with the stall holders, while the time required for the food market and Messy condition are negatively related.

Although the customer and the road market is a win-win relationship, there are hidden dangers here as a result of the popularity. Because Taiwan road food market area is limited, with the increasing number of customers, on the one hand it makes people constitute more complex and brings instability to the security; On the other hand, excessive flow will affect the evacuation, when the accident occurred, the emergency evacuation of more difficult to implement, immeasurable l

3.2 VENDORS

Vendors are mostly jobless and unemployed migrant population, concentrated in the age of 40 years old, some young and old, operating time in about 10 years, so they have a certain perennial Shetan sense of belonging.

Where the threshold is low, is one of the few outlets of the vendors, and provides a low threshold for employment marketplace atmosphere, poor supervision of Taiwan Road market just for these unemployed and retired personnel etc.. Taiwan road around the old Chengxiang residential area, population density, low living standards, lack of supporting facilities, roadside stalls commodity prices more in line with the level of consumer spending, so vendors have considerable sources of interest. Huangpu District city center prices high, but the Taiwan Road market stall rent is quite low, especially compared with the surrounding normal farms, low rent and excellent location to attract more vulnerable groups lack of funds to set up here.

An important part of the market, vendors are important service prople but also the problem makers. On the one hand, they bring some positive effects, such as making up for the lack of formal indoor markets, and providing the convenience for residents to buy food, at the same time, improving the Taiwan Road market visibility and competitiveness, some residents or tenants also seize the employment business driven traders joined the camp, activity area. On the other hand, the negative effects are also very obvious: the first is the general vehicle illegal street stalls, with stacking goods everywhere, making the original narrow road more difficult to access. And customers cause serious traffic problems in the market. Secondly, the large amount of garbage, noise and smell produced by the vendors make the environment nearby quite messy, and the behavior of obstructing public facilities and occupying public land can be seen everywhere.

In summary, the positive significance of vendors determines the importance of their existence, while its negative impact also determines the urgency of regulating the street food market.

3.3 NEIGHBORHOOD RESIDENTS

The attitudes of surrounding residents towards the market are complicated. On the one hand they enjoy the convenience, while suffer the negative impact on the other hand. Even some residents often complain and report to the management, which mainly focus on the traffic jam, poor environment and noise etc..（Fig. 8-9）

Residents of the way to buy food is mainly divided into walking and non motorized vehicles. Stalls next to storage batteries, bicycles, motorcycles parked at random, affecting the passage of pedestrians. Some dealers transport tricycles to the goods parked in the trunk, the goods piled up in the residents of the import and export channels, traffic congestion will expand the scope of more. In addition, the key health problem is also plagued residents, we collect three large garbage Taiwan Road market operation of the manufacturing source: 1. vegetable stalls, this kind of garbage left by most vendors, daily life often leaves after withdrawal stalls with the garbage bin nearby. 2. fruit stalls, similar to the former one, the putamina number is larger in need of cleaning. 3. aquatic products stalls, the whole Taiwan Road food market, the sale of aquatic products stalls accounted for the total operating booth 1/6. The stalls for aquatic products are very humid, and the fish floor is the most important cause of flies and mosquitoes. From the business perspective, to solve the problem of aquatic products and health food category is relatively difficul.

Figure 8-9 - Space Occupation And Poor Sanitary Conditions (Photo by Author)

From the attitude of the residents, we can see that the residents living in this neighborhood are the most clear-cut groups on the stand of exclusion from the street food market. They obviously have a lot to complains on the problem, but their ability is not strong enough to change much. Compared with what they lose, the benefits form Taiwan road food market is very limited. In response to the higher authorities repeatedly, the confusion still can not be resolved. The inhabitants were expected to receive the due compensation, but failed to achieve it, which intensifies the contradictions between the residents and the vegetable stalls.

3.4 NEIGHBORHOOD RESIDENTS

The administrators Taiwan Road food market mainly for three departments: (1) Community neighborhood committee - the Bund Street Dongfeng residents committee, responsible for handling the public affairs and public welfare undertakings of residents in their residential areas, mediating civil disputes, assisting in maintaining public order, and reflecting the opinions, requests and suggestions of the residents to the government organs. (2) Urban management brigade -- Huangpu District city administration law enforcement team. They carry out the relevant laws, regulations and regulations on urban management, and have maintained and maintained the order of urban management, and are responsible for the guidance, co-ordination and organization of the administrative law enforcement of urban and administrative supervision. (3) City appearance Bureau - the Bund Street Municipal Administration Joint Meeting Office. They exercise the power of administrative punishment within the limits of the authority of this Municipality, and to supervise and inspect the city's environmental sanitation in accordance with the law.

According to residents, related management action in the treatment usually lags behind and finish with no results and the communication and cooperation between departments is not enough. Every department holds different views of the market problems and it’s hard to reach the common sense. In addition, the management costs are getting higher and higher so that it’s harder to keep remediation and the effect can not last so long. Repeated assault remediation have only achieved temporary achievements. When the managers leave, the vandors comes back. Even worse, Surrounding residents' shopping needs persist and the formal indoor food markets are not enough, street food market becomes a vital supplement. At the same time the interview found that there are interest relationship between vendors and managers, vendors and stores along the street. Some managers even take a laissez faire attitude. The management and fairness is difficult to guarantee.

4 DISCUSSION

4.1 THE POSITIVE INFLUENCE OF THE STREET FOOD MARKET

1. Convenience: Taiwan Road market is in large scale with various vegetables and other goods and located in the old residential area, where there is a large number of residents. The street market makes up the lack of formal markets and fits with the local consumption level.
2. Reputation: after years of operation, Taiwan Road market gain a good reputation around, coupled with the Taiwan small commodity market history, has brought the huge popularity. Even some tourists come here.
3. Employment: The limitation of having a stall here is small, providing good employment opportunities for those unemployed, retired and migrant people and improving the economic development and social stability.

4.2 THE NEGATIVE INFLUENCE OF THE STREET FOOD MARKET

1. Congestion: limited space and narrow roads coupled with the large flow of people make the road become very congested. Traffic will also affect the effect of emergency evacuation.
2. Disturbance: smelly garbage, air pollution as well as a variety of noise pollution have brought a lot of interference to the local residents, which is also part of the main reason for the compalins.
3. Security: the internal management is not, do not pay attention to the security market itself is very poor, people disputes to be resolved in a timely manner, residents not to respond to and deal with market chaos is not timely supervision, the negative impact is not stopped.

Figure 10 – Relationship In The Four Stakeholders of Street Food Market (Drawn by Author)

4.3 REFLECTION ON THE INFORMAL URBAN SPACE

The street food market is one of typical urban informal space, formed naturally in the process of urban development. In the current process of urbanization and urban governance, it is often regarded as a negative object. But the existence of the street market also shows the true need of people, reflecting the living culture from the bottom up and it gathers people together to create the vitality which is poor in big cities. Besides, the street food market also promotes the communication of different parties in the community, which is particularly precious in modern city. Therefore, we should treat this kind of informal space dialectically and allow it to exist and develop within a reasonable range.

5 CONCLUSION AND SUGGESTION

Shanghai Stall Guideline was issued in 2007, making Shanghai the first city in China trying to delegate powers to lower levels on the management street vendors. Compared with the past, urban management is becoming more and more people-oriented. But the street food markets are also completely banned and that's not the best ideas.

Therefore, the recognition of the legitimate status of mobile vendors is the prerequisite and basis for good governance of street food markets.

Through combing the benefit gaming between these four types of people, the necessity and positive influence of urban irregular space represented by street market is pointed out. Because of the necessity, street food market is reasonable to be reserved with a strong supervision and management. We suggest to establish the consultation mechanism in which relevant departments, community representatives, business representatives, consumers and market vendors can participate together to make their voices heard. They can search countermeasures for various negative impacts and disturbances, such as sewage, smell, noise and so on, and carry out effective managements. By improving the environment and broadening the existing space reconstruct Taiwan road to a pedestrian street, with the current market reputation and popularity, it is going to be a good place for daily shopping and leisure.

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ID 1535 | BOUNDARY-MAKING AROUND A “TRANSGENDER GHETTO” IN A NEIGHBORHOOD: A CASE IN ALSANCAK, IZMIR (TURKEY)

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ABSTRACT: This study inquires how a transgender community negotiates and re-identifies its living and working space against the socio-spatial boundaries drawn by urban planning decisions, media images and policing strategies. It develops as a case study in Alsancak, a central-city neighborhood in Izmir, known as "the tolerant city" in Turkey. Alsancak is notorious for housing a transgender community most of whom are sexworkers. In the "sexed city", the sexual codings of the urban spaces and the populations associated with them demonstrate the modern societies´ conflicts and contradictions (Knopp, 1995). This study assumes that social identities and differences are established through constantly negotiated power relations, at which space plays a major role. Identities have spatial dimensions which are "constructed together and constructed through interaction" (Massey, 1994). Urban planning, policing strategies and media images are part of the dominant power relations that draw socio-spatial boundaries around marginalized groups as "others". However, boundary drawing is not only an act of control by the powerful but also an act of resistance by the weak (Pratt, 1999). Through their everyday practices, individuals and communities (here, transgenders) can produce, negotiate, and re-define such socio-spatial boundaries through social interaction, social conflict and social struggles. Despite the prevailing stigmatization, criminalization and policing of transgender people in Turkey, Alsancak neighborhood with its diverse socio-economic, religious and ethnic groups, and commercial and service uses (with a vivid night-life) appears as a safe space for the transgender community. Transgender community lives and works in the inner streets of the neighborhood, which they call the "transgender ghetto". They experience significant social consequences ranging from discrimination to violence, even in this relative "safe space". Through archival research on urban planning decisions and media images about this transgender ghetto and in-depth interviews with local associations (including a LGBTI association), this study compares the socio-spatial acts of boundary drawing by the powerful and the weak. The findings of the study will be interpreted for developing urban planning decisions for an "inclusive city".

1 INTRODUCTION

This study, as part of a discussion about diversity is about how the socio-spatial boundaries are formed around the living space of the transgender community in Alsancak neighborhood in İzmir. The part of the neighborhood where they live and engage in sexwork is referred by the transgendered as their “ghetto”. Transgender ghetto in Alsancak is an appropriated space, formed as the transgender community negotiates and re-identifies its living and working space against the socio-spatial boundaries drawn by urban planning decisions, policing strategies, and media images.

Cities are often described and studied as sites of difference (Young, 1990; Massey, 1994; Eade and Mele, 2002; Valentine, 2008). Coexistence of different cultures and different lifestyles in the cities is deemed to

bear the potential of merging, and creating hybrid cultures, thus difference in the city is often celebrated. However living with difference in the practice is often left undescribed. Contact with difference, instead of changing values and promoting a general respect for others, might result in the hardening of the values and attitudes. Many communities living in close proximity to one other maintain “series of parallel lives” which co-exist without really touching each other(Valentine, 2008). We argue that this is the case in the Alsancak neighborhood, where diverse social groups including some of the city’s transgender sexworkers reside. Transgenders are the common ‘others’ for multiple social groups in Alsancak. The otherness of transgender sexworkers, as gendervariant individuals engaged in the immoral act of prostitution, is likely to produce polarization and division instead of an inclusion. Furthermore, overall process of othering them might result in their further marginalization. In an overly heterosexual ‘masculine’ society (Efe Güney and Demircioğlu, 2015), difference signified by gender identity and sexual orientation is unlikely to be regarded affirmatively.

Massey (1994) argues that “identities have spatial dimensions which are constructed together and constructed through interaction”. Whereas power constitutes both identities and spatialities. Act of drawing boundaries by different groups determine continous processes of inclusion and exclusion as group identities rely on the recognized similarities between members and recognized distinctions with the members of other groups. Normative mechanisms, such as shared understandings of contextual codes and social practices emphasize boundaries between social groups Cohen (1985) (as cited in Jackson and Benson, 2014). Like identities and difference, spatial boundaries are negotiated, defined and produced through social interaction, social conflict and struggles between different groups (Gotham, 2003). In Alsancak, the most significant conflicts and struggles exist between the transgendered sex workers and the ‘decent’ residents of the neighbourhood. Power relations between these groups are exhibited as both claim the neighborhood as their living space. While media images and policing strategies openly take sides against the transgendered, institutions of urban planning concerned with the area disregard their existence completely.

Relating to the studies about the relationship between planning and diversity, as well as gender, sexuality and sexwork, this study examines the processes of boundary making around a transgender ghetto in Alsancak neighborhood. Inquiring into the subject; we intended to find out the role of urban planning, local communities, media images, and policing as well as the transgender community in the formation of these boundaries. Interrogating the existence of the transgendered and the sexwork, as well as the problems and safety concerns in the Alsancak neighborhood, we intended to portray the making of sociospatial boundaries. In the following section, overview of the concepts related to gender variance, sexwork and the place of sex, sexuality and sexwork in the discipline of urban planning is given, followed by the description of the site and the methodology of the study. In the next section, the study findings are discussed on the basis of queerness of the Alsancak neighborhood, the situation of sexwork and the formation of sociospatial boundaries.

2 LITERATURE REVIEW

Sexual diversity and freedom, an urban phenomena arising out of the density and cultural complexity of cities, results in the development of minority sexual subcultures, communities and social movements linked to them in the cities. Nevertheless, concentration of these subcultures and movements in the urban space makes it easier to both stigmatize and control them in an attempt to protect majority cultures. Eventhough, the sexual codings of cities, districts within cities and the populations associated with them are complex, they demonstrate the conflicts and contradictions of the modern societies. Furthermore, these codings are associated with power relations, therefore they are deeply contested (Knopp, 1995).

Hubbard (2000) refers to the spaces dominated by heterosexuality as ‘moral geographies’, and states that judgements on the acceptable types of peoples, behaviours and practices are made daily in different settings. Moral approval of the forms of acceptable heterosexual behavior is sustained by social and legal regulations which discipline those who violate this moral order. Sexual dissidents are excluded from the public spaces which are constructed around particular notions of appropriate sexual comportment due to a citizenship based on heteronormality (Hubbard, 2001b). Civil society is both a heterosexual and a patriarchal concept determining the acceptability in the public realm, making it very difficult for those whose sexualities are considered immoral to enter into the public realm. The rights of the individuals who do not fit into dominant sexual standards are almost erased as they are tagged as ‘sexual others’, who are

denied of proper citizenship. These individuals often experience social stigmatization for being unable to fit into the definition of a 'good citizen' becoming "second-class citizens not only by the state but also by 'decent', 'respectable' sexual subjects" (Hubbard, 2000). Transgenders and sex workers are among the sexual dissidents who experience stigmatization and othering (Knopp, 1995). They are viewed as they need to be spatially contained hence they are excluded through the construction and maintenance of spatial boundaries (Laing and Cook, 2014).

GENDER VARIANCE AND SEXWORK IN SOCIOSPATIAL BOUNDARY MAKING

Transgender as a collective term signifies individuals who do not perform or identify with their assigned gender and have taken some steps to present themselves in another gender (Valentine, 2003, pp.27-28). Hence, transgender describes an individual who cross the boundaries of gender defined by culture (Bockting et al.,1998). The 'transgender community' refers to a broad range of gender variant people not necessarily including information about their sexual orientation or their views on gender reassignment surgery (Salisbury and Michael, 2016). The transgender population is one of the most vulnerable and marginalized populations in the city as they often experience significant social consequences ranging from discrimination to outright violence for transgressing gender norms (Doan, 2007). When trans people look for shelter even within queer urban spaces, they are tolerated but not always welcomed warmly (Doan, 2009). Challenging gender norms can provoke acts of violence, which is called gender bashing. Especially transwomen who live full time as women become potential targets for harassment, abuse, and violence (Namaste, 1996).

Transgender individuals face serious discrimination and lack legal protection when they do. They might be refused as tenants or as employees just because of their gender identity (Doan, 2001a). Unconventional gender presentation makes it difficult for transgender individuals to find or maintain employment. As most transgendered individuals are forced into sexwork, they work at risk of substance abuse, unprotected sexual experiences, and various mental health problems (Cochran et al., 2002). The internalization of the social stigma in the transgender community results in the suicides and attempted suicides (Doan, 2007). Moreover, safety of the transgenders is systematically dismissed from the general legislations, sustaining the violence and crimes of hatred against this group which might result in killings (Doan, 2001b).

Transgendered individuals experience the gendered nature of space as what Doan (2010) refers as "the tyranny of gender" which begins when certain individuals entitle themselves as "heteronormatively constructed gender enforcers in public spaces". The policing behaviors of these individuals are often accompanied and exacarbated by the silent but supportive watchers. Transgendered individuals are regularly profiled and approached by the police in public spaces for the "crime" of being transgender hindering them from moving freely and existing in public spaces (Doan, 2010). Difficulty in finding and maintaining employment forces the transgenders to sexwork (Doan, 2007). They usually choose to work on the streets which comes on the expense of more exposure to violence as well as more pressure from the local communities and the police. Street-based sex workers are exposed to high levels of violence, intimidation and corruption. Instances of extreme violence, including murder are reported frequently on the medi All sex workers experience occupational stigma and discrimination, however the negative effects of sexwork related stigmatization and criminalisation are deepened for sex workers who are members of visible minorities. Because of their visibility and gender identity transgender sex workers face exacarbated stigmatization and violence. Sex work related stigma adds to the stigma of the gender variance in shaping the interactions of the transgendered sex workers with the police and the community. Consequently, they are often displaced both for their marginal gender identity and for being a sex worker. If displaced, transgender sex workers, who usually work in specific locations, where regular and new clients can easily find them, are pushed to the more marginal urban spaces where they potentially face more violence (Krüsi et al., 2016). Furthermore, transgender sex workers, usually experience harassment, abuse, and violence with little protection from police (Nichols, 2010). Studies on transgender sex workers show that they are routinely subjected to violence, public humiliation, and, not infrequently, to murder (Brooks-Gordon, 2008).

SOCIAL CONTROL OF SEXWORK

Sexwork, commonly an urban phenomenon takes place in a variety of indoor and outdoor settings in the city (Laing and Cook, 2014). Street sexwork, mainly in residential areas forms the most visible and

controversial form of sexwork (Hubbard, 1997). Sexwork is frequently referred as a 'nuisance', as something that should be isolated from the 'mainstream' society, moved away from residential neighbourhoods and prime city spaces. It is viewed to disturb neighbours, passers-by, and potential investors. The location, actors, and the outcomes of sexwork cause conflicts. Inherent territoriality of sexwork is influential in setting physical and discursive boundaries which determine what can happen where (Laing and Cook, 2014). Street sexwork has been viewed as inevitable while being simultaneously comdemned as immoral and sickening. Therefore, commercial sex is a contested realm often subjected to the politics of NIMBYism (Hubbard, 2001).

In heterosexually ordered cities, the sight of the sexed body of the sexworker in the public realm disturbs the moral expectations about sexuality. The eroticisation of the public realm they cause by their outlook and behaviour provokes legal and moral response. The state, the law and the 'good' sexual citizens start to police the limits of spaces of sex work in order to hinder prostitution from spoiling the public realm (Hubbard, 1997). The stigmatization of sex workers is central to the constitution of the social order as they are viewed as a risk to the society for threatening family values. Consequently, spatial displacement from the urban landscape by law enforcement or community protesters has been the most common method of the social control of sex work (Krüsi et al., 2016).

As one of the instruments of social control, the role of the media in identifying sex work and sex workers as a threat to the society cannot be ignored. Since sexuality is frequently used to define acceptable social behaviour, the conflicts related to the sexuality are usually presented in the media provoking sensations, thus leading to 'moral panics' about certain individuals and groups. Resultantly, Sex work and sex workers often appear in media causing moral panics (Hubbard, 2000; Hubbard, 2001b). As fears of otherness are a, whereas many unreported lesser physical assaults are also common (Harcourt et al., 2001).

magnified in the context of the city, media becomes instrumental in shaping the daily encounters with those who are considered as potential threats providing support for the exclusionary urban policies (O'Neill, 2008).

LOCATION OF SEXWORK

Moral geographies assume that the visibility of sexworkers is more acceptable in some spaces than others, therefore street sexwork is often only tolerated in the areas reserved for it. Street sexwork is mostly confined in certain, notorious inner city districts where the vice police controls it while simultaneously keeping it away from neighborhoods where it might have caused most controversy and dissent (Hubbard, 1999). The control of sexwork is primarily aimed at reducing the 'nuisance' experienced by people living in areas of street sexwork, justified by the "the right of the normal decent citizen to go about the streets without affront to their sense of decency". Therefore, the judicial system considers sexwork as an offence against standards of public morality and decency when it is visible in the public realm (Hubbard, 1997). Neighbourhood nuisance concerns, closely linked to sex work related stigma and policing, affect the working conditions of the sexworkers as they confront residents, neighbourhood watch groups and security guards. These interactions are determined by an understanding which focuses on the riskiness of the existence of the sexworkers in the neighborhood, not by concerns about their safety (Krüsi et al., 2016).

Spaces of sex work are shaped by continuous struggles between sex workers, neighbourhood residents, businesses, and the police (Hubbard and Sanders, 2003). Imbalanced powers are involved in these struggles since the complaints of the neighborhood residents are prioritized over protecting the working conditions, health and safety of the street-based sex workers (Krüsi et al., 2016). Simultaneously sex workers themselves also actively shape the spaces of sex work as they resist the interventions against them, negotiate the use of space and have private property rights (Laing and Cook, 2014).

POLICING OF SEXWORK

Sex workers and sex work spaces have been targeted by a wide variety of interventions and policies (Laing and Cook, 2014). Dominant policy approach to sex work has been criminalisation and police enforcement, which have increased the risks of violence (Krüsi et al., 2016), and stigmatization for sexworkers (Hubbard, 1997). Policies regarding sex work target repressing the spaces of street sex work

as techniques of governmentality and surveillance are used to contain, exclude or control sexworkers (Hubbard et al., 2008).

Boundary maintenance with regard to sex work and related social problems is seen as a task of the police as well as the courts. As policing controls the sexuality via surveillance and punishment, what public space is, how it should be, and when, where, how and by whom it can be used, is in a way determined by the police. Sexworkers from all segments and their clients have been targeted by police interventions (Laing and Cook, 2014). While the legal regulation of sexwork reinforces the exclusion of the sexworkers, repression and containment are the common strategies used in policing of sexwork which is a spatial process sustaining the marginalization of sexworkers (Hubbard, 1998). The police tolerates, though seldom encourages sexwork in “unofficially designated areas” therefore policing of sexwork determines the creation of sexwork zones by making it impossible for clients and sexworkers to meet somewhere else (Hubbard, 1997).

Stigmatisation, criminalisation, and labour conditions impinge the rights of sex workers for police protection and legal recourse. When sex workers seek police protection, they often face inaction of the police justified by the understanding that their experiences of violence are an inherent part of selling sex. Since sex work is viewed as inherently dangerous and sex workers are seen as victims, blame for sex work related violence is appropriated to sex workers as the police free themselves from the task of protecting sex workers. This process increases the structural vulnerability of sex workers since they are striped off the societal protections that other citizens normally have (Krüsi et al.,2016). Moreover, there are occasions when officials exploit and victimize sex workers by forcing them to sex acts, extorting bribes, and harrassing. Assaults, physical harrassment, being beaten, being arrested without evidence are common forms of police violence, and even incidents of group rape is reported. Furthermore, in fear of further arrests or fines, the negative experiences with the police also might hinder sexworkers from going to police when they are the victims of crime. Consequently, many incidents of harassment, assault, rape, and kidnapping among sexworkers are not reported to the police. Complaints of the sexworkers are often not registered, or when they are registered the perpetrators generally are not convicted (Nichols, 2010).

COMMUNITY RESPONSES TO SEXWORK

The assumed incompatibility of the sex work with the space of the neighborhood community has been used to justify exclusionary actions against sex workers. Media discourses stress that sex work harms the neighborhoods by restricting the accessibility of streets to residents at night. In some instances campaigns to remove sexwork from ‘their’ streets are initiated by the residents using street patrols or pickets (Hubbard, 1998). Often backed by the local press, such campaigns sometimes result in the displacement of sex work (Hubbard and Sanders, 2003). Community responses to street sexwork range from a state of no tolerance to empathy. Some levels of sympathy towards the sexworkers exist, but the tolerance to sexwork tends to be low. While views on sex work and sex workers are usually mixed, some residents stress the impossibility of coexistence and insist that only visible police activity could address the issue and result in their removal from residential spaces. However, moral protesters of sex work often do not represent the whole community. Opinions and attitudes of residents who are more tolerant about sexwork are often not voiced either in Tensions between sex workers and other residents in public spaces present issues related with balancing the needs and interests of different groups. Common complaints linked to street sex work include visible sex acts in public, traffic, noise, littering, clients' harassment of female residents, physical altercations, and the health risks presented by discarded condoms and needles (Hubbard, 1997; Weitzer, 2009). For the majority of the neighborhood residents sex work is an issue related with the overall quality of life. Street sex work in the neighborhood affect the use of public space negatively as some residents feel unsafe walking home especially at night. Many sex workers also indicate concerns about the perceived safety of some areas as they regard certain public spaces as dangerous (Pitcher, et al., 2006). The prevalence of nuisance, its impacts on the reputation of the area, lack of control of street sex workers by authorities, lack of control over public and private spaces, and the emotional impact of living in areas of street sex work are listed by residents as main concerns about the quality of life (O’Neill et al., 2008).

URBAN PLANNING ON SEX, SEXUALITY AND SEXWORK

Sex and sexuality has been inquired geographically since it is accepted that space, fundamentally influenced by the dynamics of human sexuality, exposes how sex is represented, perceived and understood (Knopp, 1995, p.149). Intersections of sexuality with race, gender and class determine how certain populations are targeted for displacement in the neoliberal city. Therefore, city is not a neutral stage for sexual relations, but is an active actor in creating sexualities by promoting heterosexualities while repressing others (Seitz, 2015).

The decisive role of the city in determining sexualities and connected relations, locate issues of sex and sexuality in the field of the planning discipline. Planning has been conventionally viewed as a means for creating an "orderly urban environment" (Fainstein and Fainstein, 1971). On this commonplace objective ascribed to planning, Doan (2011) remarks that definition of the "orderliness" is made in a "narrowly heterosexist" sense, "favoring white, male and heterosexual conceptions of orderliness". Therefore, planning has a significant power to heterosexualize space (Hubbard, 2011). Urban spaces, weaved with moral values encourage and naturalize heteronormativity, in which particular acts and individuals are marginalized as immoral, while the mainstream is often defined on the ideals of family, with the assumed heterosexual orientation and a related gender. Heteronormativity of planning ensures that spaces of commercial sex representing sexual and moral disorder are monitored and controlled by the state and law. Therefore, different sites of commercial sex, including places of street sex work are causes of controversy in planning (Hubbard, 2001).

In theory, planning might be instrumental in mediating controversial views about the place of sexwork, whereas in practice, since sex-related businesses are not recognized as a land use category it is not the campaigns or in the press (O'Neill et al., 2008).

possible for planning to identify places for commercial sex. Nevertheless, the criminal laws along with the policing keep pushing away street sex work from the city. Zoning ordinances prohibit adult entertainment facilities and land uses related to commercial sex near residential areas, schools and religious facilities, confining sex consumption to the industrial districts. In some instances, local authorities designate a rather safe sex work zone away from residential areas, making sure that no annoyance was caused to the public. But these places, which are tolerated and not encouraged, are basically allowed in order to protect the social and economic value of certain land uses which might be effected by the negative impacts and externalities of sex work. Though often misleading, commercial sex in neighborhoods, is often associated with adverse effects such as increases in crime, decreased property values, and neighborhood deterioration (Hubbard, 2001). When planning and licencing bodies work to determine the location of sex work, planning resembles policing as both are instrumental in creating 'moral geographies' by deciding what is permitted where (Laing and Cook, 2014). Furthermore, current planning and licensing practice is inclined to favour the rights of residential property owners over the rights of sex workers, by locating commercial sex in places where it is not safe or profitable. In most situations, it is not clear if planning powers like zoning and licensing respond to the community concerns about sexwork or they serve the interests of profit seeking developers who want to take advantage of ran down areas of sexwork. Since street sexwork does not have a legitimate land use status in terms of planning, it can be subject to displacement by means of urban redevelopment (Hubbard, 2001; Hubbard and Whowell, 2008).

Policies intended to regulate or eradicate places of sexwork may have a negative impact on the livelihoods of the marginalized transgendered individuals, who have limited employment options (Doan, 2001). Though planning is instrumental in the urban governance of sexwork, its capacity to act in a rather 'socially and sexually liberatory manner' is controversial since it is expected to protect dominant, mostly heterosexual, moralities. Whereas, in order to make socially-just decisions, the views of those who are offended by sexwork should be balanced with the views of those who benefit from it. Therefore, the claims and rights of sex workers should be incorporated into the debates on sexwork and given prominence in the planning process (Hubbard, 2001) in order to understand the exclusionary spatial practices they go through as they face abuse, harassment and violence (Hubbard, 1997).

3 STUDY SITE AND METHODOLOGY

Alsancak is a neighborhood in İzmir, the third largest city in Turkey. İzmir is one of the most important metropolitan centers in Turkey with a rapidly increasing population and urban area (İmar ve Şehircilik

Daire Başkanlığı, 2015). The city has a cosmopolitan culture linked to being a port city historically (Gökçen Dündar, 2010; Kaya, 2010). İzmir today is known as the 'tolerant city', probably connected to the influence of its historic cosmopolitanism, which have generated a rather tolerant social environment and an alleviation of the conservative culture of Islam (Efe Güney and Ayhan Selçuk, 2016). Alsancak, situated right between the envisioned new center and the traditional center of the city, is part of a larger district which provisions major commercial and service functions in the city. It is a completely built up, lively center which contains more commercial uses than residential in its intertwined modern and old buildings (İmar ve Şehircilik Daire Başkanlığı, 2015).

Alsancak neighborhood differs from the other parts of the city with the social mix of its residents. Historically, it has been the 'Frank (European) quarter' (Zandi-Sayek, 2012) of the city, so eventhough most have moved out to 'better' neighborhoods, the neighborhood still has remaining local non-muslim residents who are very old. Some middle-class, and upper-middle class households who inhabit flats in better quality apartments still reside in the neighborhood, eventhough they complain about the degeneration and decline in the neighborhood. The neighborhood with its central location and its proximity to many commercial and service jobs as well as major art and culture facilities is a choice of residence for young professionals. It is almost impossible to see children on the streets which imply rare-existence of families with children. Alsancak is also notorious for housing some of the city's sex workers, most of whom are transgenders. As a result, certain inner streets of the neighborhood in certain hours (as the night sets in) are used for sex work mostly by transgender sex workers living in the neighborhood which is a nuisance for other residents.

These presumptions about Alsancak neighborhood are inferences from a pilot study conducted in the area in August-November 2016. This pilot study involved semi-structured indepth interviews directed to the key informants including the headperson of the neighborhood, directors and members of the LGBTI association Black Pink Triangle, and residents of the neighborhood. In addition, short interviews were made with the businesses which contribute to the daily life in the neighborhood. These interviews as well as personal observations and trials of mapping provided general information about the current state of the neighborhood. After the pilot study, media images and reports about the problems, safety concerns, existence of the transgenders and sex work in the neighborhood were searched online and documented. In April-May 2017, a second set of in-depth interviews were conducted. Five interviews were made with transwomen living and/or working in the neighborhood. One of them was an activist in the LGBTI association of Black Pink Triangle, and other four were sexworkers or former sexworkers. The directors of Black Pink Triangle and Alsancak Movement Association, and planners from the planning departments of the Konak District and İzmir Metropolitan Municipalities which are responsible for the spatial plans of the Alsancak neighborhood were also interviewed. The focus of the second set of interviews was the existence of the transgenders and sexwork in the neighborhood, interrogating community and group relations and safety concerns in the neighborhood and prospects of neighborhood change.

4 STUDY FINDINGS

Alsancak neighborhood is referred as 'mixed' as it contained families, singles, businesses, sex workers and transgenders. Despite being affordable, the area was chosen by sex workers due to its proximity to many entertainment facilities. There is a transgender community in the neighborhood, who know, support and watchover each other. They get together especially in cases of significant events like protests, deaths and suicides. Most of the transgenders are sexworkers and they are ghettoized with other social groups who can tolerate living with them (Demet and Erdem from Black Pink Triangle, October 2016).

The neighborhood is associated with sexwork in the local press and other media. The existence of sexwork is a common nuisance for most residents due to morality, safety and the quality of life concerns. Though, most residents have remarked that if sex work did not exist, the transgendered in the neighborhood would not be that much of a problem. The safety and quality of life concerns about the neighborhood were also stated by the trans women sex workers, but trans women sex workers face pressure and threats from the community of residents and the police besides the shared disturbances in the neighborhood. Some have moved out, or thinking about moving from the neighborhood due to the community and the police pressure. There have been numerous neighborhood campaigns voicing the complaints of the neighborhood residents about sex work which were reported in the local and national press.

ALSANCAK NEIGHBORHOOD AS A QUEER SPACE

Many points from the interviews with the members of the LGBTI association Black Pink Triangle and trans women comply with the characters of the queer spaces defined in the literature. According to Yavuz, Erdem and Demet from the LGBTI association Black Pink Triangle (2016); Alsancak, popular for being the center of the city and for being a center of art, culture, entertainment and night life in the city, is a breathing place in İzmir. It is more democratic and more political compared to other districts of the city. Being easily accessible, it is a meeting point, convenient for being organized for political action and activism including LGBTI politics and activism. Alsancak is a place open for performance and presentation of the programmed behavior and exhibition of the existential situation regarding gender. It is an “acquired place” where transgenders have gained considerable visibility and acceptance. It is an entry point for transgenders who come to live in the city of İzmir. It is a “safezone”, a rebel zone for LGBTI individuals and a living space, a habitat, for the “others” of the society. It is a more humanistic, less religious and less conservative relative freedom zone in the city.

Inline with these comments, Alsancak has been identified as the “queer’ neighborhood in İzmir for being the preferred neighborhood of residence by LGBTI individuals where they feel comfortable (Efe Güney et al., 2014). ‘Queer’, once an epithet directed to the people who do not conform to the conventions about gender and sexuality such as gays, lesbians, bisexuals, transgendered people, and others, has been appropriated by these people in order to revise its potential to hurt and to reclaim their identities and to empower themselves (Bell and Valentine, 2008). Reports of the interviewed transwomen (May 2017) also picture Alsancak as a queer neighborhood as they state that their reason to choose Alsancak to live and work was that there was an established transgender community in the neighborhood. They refer to the neighborhood as an entry point to the city and state that there is a circulation of the transgendered individuals in the neighborhood, where newcomers are rented rooms and worked in the bawdyhouses of those who are already settled.

Alsancak has been appropriated by the transgender community for almost three decades. The neighborhood embodies a “transgender ghetto” on streets where bawdyhouses and street sexwork is concentrated. Eventhough it is embraced as a living space by the transgendered, they face continous discrimination, exclusion, harrassment and violence in the neighborhood reminding Doan’s (2007) remark on the controversies about the inclusiveness of the queer spaces when transgendered individuals are concerned. Incidences of transgender murders and suicides in the neighborhood are reported in the media. Transgendered sex workers live and work under surveillance, pressure and occasional threats from the police varying in frequency and intensity. They continously confront the neighborhood complaints and occasionally they become subject to neighborhood campaigns which intend to displace them from the neighborhood (Aylin, Rüya, Fulya, Sezin, personal communication, 2017). Police control is intensified on the occasions when these complaints and campaigns are reported in the local media. Also when the new responsible police chiefs are appointed in the city, police controls get more strict and frequent (Demet from Black Pink Triangle, personal communication, 2017). Media representations of the transgender existence in Alsancak, take sides with the neighborhood campaigns, meanwhile, the voices of the transgendered are only heard in the few publications belonging to the LGBTI associations which have limited followers.

It is also evident from the interviews that Alsancak is not safe either for the transgendered or for other residents especially at nights. While the residents mostly complain about sex work, the sight of sex workers, apparent scenes of bargaining, and noises of the kerb crawlers, both residents and the sex workers complain about the existence of pickpockets, hijackers, drug dealers and users, and gangs of outcasts in the neighborhood. These people, however, mostly target the lone trans women sex workers at night. Events of crime are not rare in the neighborhood, nevertheless residents state that the streets of sex work is unsafe, whereas trans women sex workers think the neighborhood is completely unsafe.

SEXWORK IN ALSANCAK

The situation of trans women sexwork in the Alsancak was reported by local newspapers as the ‘problem of transgenders’ reporting the complaints of the residents and the aggressive reaction they received from the trans women when they voiced their complaints. Residents blamed the use of alcohol and drugs by both transgenders and their clients for behaving aggressively. They stressed the anxiety they felt on the streets at nights and stated that they avoided the streets where sex work took place. Sexworkers are blamed to make disturbing offers to the “normal” citizens who were not interested in buying sex. The

residents added that it was not the existence of the transgendered in Alsancak, but witnessing them soliciting disturbed them. Stressing their frustration by the inaction of the local authorities and inviting them to take action, they complained about the association of 'their' neighborhood, which was once the most decent and the most beautiful neighborhood in the city with sexwork. Neighborhood residents were reported to demand to get back the old 'safe and peaceful' Alsancak. After the local press report about the transgender sex work in the neighborhood the police forces made strict controls on the streets where sexwork is concentrated. This intensified police surveillance and patrolling has also been reported in the same newspaper as "the police gave an end to the transgender occupation in the neighbourhood" (Yeni Asır, 31.10.2016).

In the local press, realtors' comments on the decreasing property values due to sexwork was also reported. They noted that some houses were rented to the transgendered at exorbitant prices to be used as bawdyhouses and some were rented on an hourly or daily basis. Stressing the "moral dimensions" of renting houses to the transgendered, realtors stated that decent residents of the neighborhood were constantly selling out their houses for lesser prices than they worth and moving out because of the "transgender terror".

FORMATION OF SOCIOSPATIAL BOUNDARIES IN ALSANCAK

Transgender community in Alsancak neighborhood can be viewed as a minority sexual subculture. Since majority of them are sex workers they are stigmatized both for their gender identity and for being engaged in sex work. They experience an othering due to the moral panics of the decent residents which are provoked by the media images. In this situation, diversity and difference seems to present a division, polarization, and further marginalization instead of an inclusiveness.

Social boundaries are constructed and maintained through geographical ones that signify distinct ways of life (Pratt and Hanson, 1994). The drawing of socio-spatial boundaries is a political act, it is a demarcation of difference that helps define and label what is 'same' and what is 'other'. The drawing of boundary lines can be either an act of control by the powerful or an act of resistance by the weak (Pratt, 1999). Similarities and distinctions, here gender identity, sexual orientation, and morality determine sameness and otherness precisely. This absolute distinction define social as well as spatial boundaries, where some parts of the neighborhood, particularly some streets are reserved mainly for different groups. But as mentioned by Jackson and Benson (2014), these spaces are not completely segregated enclosed zones but they intersect, traverse and overlap each other, especially at particular times of the day.

According to the local press and interviews, sexwork in Alsancak is concentrated mainly on the 2. Kordon, Şair Eşref Boulevard, Bornova (1469) Street but spreads to 1416, 1454, 1456, 1457, 1460, 1464, 1467, 1469, 1485 streets. These streets are monitored at night by the police with intensified controls especially after the neighborhood campaigns and media reports about the campaigns (Aylin, Rüya, Fulya, Sezin, personal communication, 2017). Neighborhood residents report feeling anxious and uneasy about using these streets at night because of the existence of sexworkers, their outrageous apperance and sights of bargaining. They are mostly concerned for women and children being on these streets (Ahmet from Alsancak Movement Association, personal communication, 2017). Not only these streets, but most other streets in the neighborhood, are viewed as unsafe by the trans women sex workers who face acts of harrassments and violence from the clients as well as from the strolling hijackers and outcasts. Added to this, trans women sex workers confront assaults, threats and pressure from the neighborhood residents and from the police. They report that, eventhough Alsancak is "their territory" they only feel comfortable and safe on the streets in the company of fellow trans women who they refer as "the gang" (Aylin, Rüya, Fulya, Sezin, personal communication, 2017).

Demet from the Black Pink Triangle (2017) reported that she and her trans women friends frequent cafes and bars owned or managed by women or LGBTI individuals, and they avoid cafes and bars owned by male chauvinists where they feel harrassed. A point that came out of the interviews with catering businesses is that the transgendered are not welcome in some cafes and bars on the drawbacks that they might cause trouble by behaving improperly. It is reported that they will only be welcome on the condition that they behave properly. Some residents speak of them in a tone of tolerance as they point out that they greet them, and they treat them kind "eventhough they are not like them" (Berna, personal communication, 2016) reminding Valentine (2008) as he interprets 'tolerance' as a signifier of an unequal relationship.

Trans women sex workers face discrimination and social and spatial exclusion as they are often rejected as tenants. Even when they own flats in the neighborhood they report being unable to inhabit them due to the threats of the neighboring families. Aylin (personal communication, 2017) could only move to her first flat in the neighborhood five years after buying it. Now, as the owner of six flats in the neighborhood, she has a prerogative to choose who will live in her proximity. On occasions, discrimination against the trans women extends to the highest ranks of bureaucracy. As one of the governors of the city of İzmir called for the home owners in Alsancak, not to rent their properties to the trans women sex workers who are bad examples for the society spreading fear and disease (Vali Göksuya Ayrımcılık Uyarısı, 2004).

Urban planning has no involvement in management or regulation of sex work in Alsancak, since sex work is not recognized by any means in Turkish planning system. However, it might be indirectly influential on the transgender existence in Alsancak, as their first noticable visibility in the neighborhood coincided with the implementation of new spatial plans in the area in 1985 (İmar ve Şehircilik Daire Başkanlığı, 2015) which resulted in the degradation of the residential quality of the neighborhood. This implementation plan made it possible to have miscellaneous commercial uses in the neighborhood which led to the opening of many businesses which were not quite compatible with the residential uses. Some of these uses, related with night life and entertainment, attracted new residents to the neighborhood. Consequently, many better off households moved out of the neighborhood as the properties they left became accommodation options for the newcomers, some of whom were trans women (Former Director of the Department Of Development in İzmir, personal communication, October 2016).

5 CONCLUSION

Divisions in urban space marked by boundaries reflect patterns of social difference and inequality, as they reinforce existing social and structural divisions in society (Joseph, 2008). Difference signified by gender identity or sexual orientation is not regarded affirmatively in the masculine society. The otherness of the trans women sex workers in Alsancak, as gendervariant individuals engaged in prostitution, produces a polarization, division and further marginalization instead of an inclusion.

The appropriation of a part of Alsancak Neighborhood and labelling it as ‘Transgender Ghetto’ can be viewed in terms of challenging the straight space as Hubbard (2000) asserts. Nevertheless, Doan’s (2007) remark about queer spaces that they offer only partial protection for gender variant people seems to be true for Alsancak. Though queer spaces are considered as safe spaces for sexual dissidents, they are not free from harassment and violence because of their gendered nature. The inclusiveness of the queer spaces are questionable particularly when transgendered individuals are considered.

The coxistence of the transgendered and others in Alsancak mostly presents a ‘parallel lives’ situation which does not promote any sincere interchange (Valentine, 2008). In Alsancak, spatial proximity has caused defensiveness and the bounding of identities and communities as Young (1990) suggests. In line with Valentine (2008) the close proximity of the transgendered and other residents in Alsancak bears the potential of “reactions out of intolerance” ranging from rudeness, to discrimination, violence and even to hate crimes. Even behaving in a civil or decent way in public does not testify being free from prejudices and judgements, therefore does not lead to respect for the other. Tolerating the other, stresses an unequal relationship, in which a dominant, or more legitimate group may choose whether or not use tolerance (Valentine, 2008). Processes of exclusion, “by which those who claim belonging to the place define themselves against what they are not” (Butler and Robson, 2003) work in the making of Alsancak neighborhood.

After a long period of neglect concerning the needs of the minorities, there has been an acknowledgement that inclusion and diversity should be the among the main concerns of the planning (Healey, 1997; Sandercock, 1998). This is not yet the case for Turkish planning practice which neglects sexual minorities along with the other disadvantaged. Hence, spatial plans in Alsancak are made without any social analysis of the area. On the other hand, the need for voicing the claims and rights of sexworkers (Hubbard, 2001a), as well as LGBTI communities (Doan, 2001b) is stressed in the decisison making for planning in order to have a true understanding of their circumstances in the city, for socially-just, inclusive and safer cities for all.

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ID 1586 | MAPPING INFORMALITY: THE CASE OF STREET FOOD IN THEWET, BANGKOK

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1 BACKGROUND OF STUDY

Street vending are the most primitive form of informal trade which nowadays, continuously playsthe important role in economic and social capital in many countries, especially in the developing world. Street vendingoffers the easy access to get cheap food and commodity as well as job opportunity with low investment. Moreover, street vending vibrates public space and activate urban livelihood through the exchange and trading.

Bangkok is a prime case where street vending play considerable role in many dimensions. According to the previous study on the emergent role of Bangkok street vending in response to the changing urban context due to socio-economic change, technological change, and climate change resulting more frequent and severe urban flood disaster (Sereerat, 2013). The study revealed the informality of street vending is the mechanismdriven by 3 performances: flexibility, mobility, and resilience, in providing access to food and necessity to citizen both in everyday life as well as during crises. Street vendors as a result is a resilient urban element that can meet inclusively the basic needs of all citizen. In social aspect, street vendor's informality and inclusiveness also maintain vitality during critical condition through the reciprocal help. This finding could be apply to the more resilient urban design and planning for the future urban Asia.

While the importance of street vending and its potentials is increasingly widely acknowledged through, development studies, socio-economic studies, architecture, planning, urban design and urban studies, there is considerable disparity on how they should be defined and approached as elements in urban study. As the informality of street vending also have negatively driven both socio-economic and environmental problems such as the chaotic growth, out of law, traffic congestion, dirt, pollution, privatization of public space, image of poverty. Street vendor are considered as an unwanted urban element for Bangkok public sector policy makers, urban designer as well as a part of citizen.

Under the supervision of the Bangkok Municipal Administration (MBA). Bangkok is one city trying to fix chronic problems due to the street vendingactivities for several decades in order to modernization and beatification the city. Which has used several measures such as formalization through licensing, clearance, allocation to new arable, space management, and latest measure was the clearance without correctly public participation process. However, the results in many such cases street vending area in Siam Square, Silom, or Bobea were not successful as expected. Or in some cases the clearance and allocation had done successful only in a short period and not standing still. As can be seen from the return to vending space. Moreover, illegal street vendors are still increase dramatically. The study shows top down management, use of force to suppress or forced allocation without public partition process of understanding together to find solutions together to reflect on the context and the needs of the public, including households with street vendors. The Participatory planning is a tool that has been widely accepted and used in the planning of the development and widespread. Because the process of discussion is important in helping to coordinate incompatibilities, conflicts and work together to find solutions that lead to a common agreement among the stakeholders (government, private and public), however, bringing the discussion to organize street vendors cannot be applied directly. Due to the characteristics of street vendors in Bangkok by a trade system that is linked to the informal network of other related benefits, both directly and indirectly. The structure of the stakeholders are complex and difficult to get cooperation to reveal his identity to contribute to discussions.

2 RESEARCH GOALS AND OBJECTIVES

The goal of this research is to redefine the research framework on street vending aiming to understand how street vending eventually related to urban system. In order to achieve that goal, the empirical study

would be conducted in urban network perspectives. Accordingly, the objective of the research is to examine the relationship between informal and formal activates occurring thoroughly the process of illegal vending on street.

3 RESEARCH FRAMEWORK AND METHODOLOGY

According to reviewing literature on street vending, most of studies usually narrow research framework into some specific dimension such as poverty and labour, public space, informal economy, crimes, urban environment, urban sociology and so on. For public sector as well, street vendor is considerate as problem maker on sidewalk and public space, not traders, or other perspective.

In order to understand how street vending really effect to urban system. It would be re-investigate street vending as a whole process and systems that need time and mobility to operate the trade using supply chain analysis approach as a tool. This study will focus on food street vending that have a cooking process but each of activities were operate not in one place or kitchen, in many location within the city. As a consequence street vending would not be study only on street vending area alone, but also the co-related places such as goods resource place, stock place.

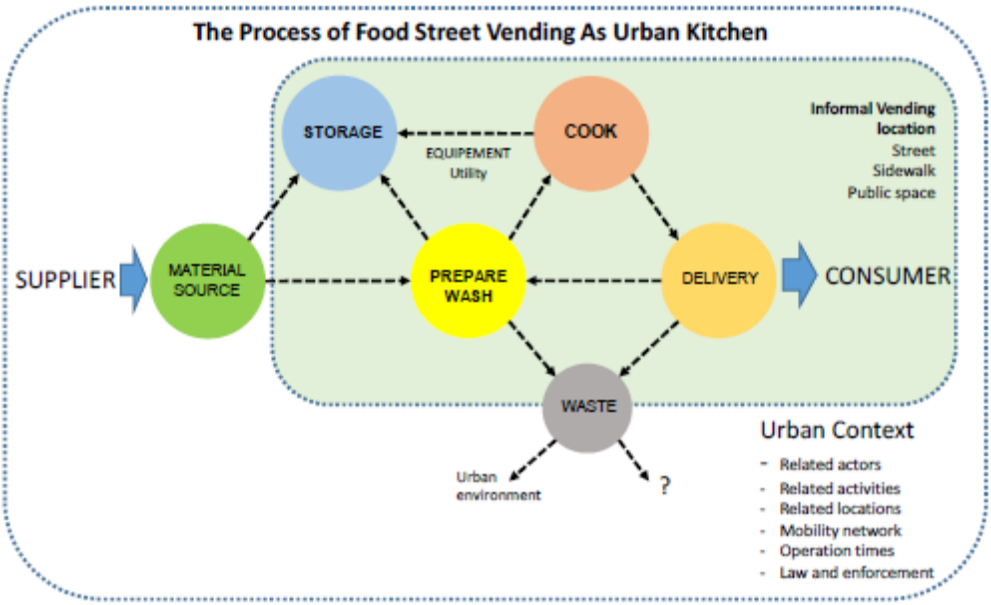

Figure 1 – Research framework

4 FIELDWORK AND MAPPING

This empirical study used food street vending areas around Thewet Market as its case study, and site investigations were conducted in January of 2013 (Sereerat, 2014). Quantitative data was gathered through the spatial surveys and qualitative data was gathered through interviews with street vendors. The data gathered from fieldwork were collected in form of cartography in 2017 presenting the process of street vending in relationship with time and place within urban network.

1. Survey of Street Vendors (previous study)

A preliminary survey was conducted in order to define the nature of street vending activities in this specific context in the time-space dimension. The surveys were conducted at three intervals during the day, according to the uses of the sidewalk by street vendors on weekdays as well as weekends. Notes, drawings, photographs and videos were collected on-site to provide related spatial context data such as the number of street vendors divided by gender, spatial typology, vending mobility, and items sold. The collected information was then mapped together with the surrounding context such as road networks and accessibility, buildings and land-use characteristics.

2. Interviews with Street Vendors (previous study)

A quasi-ethnographic interview approach was used as the research instrument for collecting data from the street vendors. Convenience sampling was used to conduct interviews for gathering information about street vendors in two dimensions: the socio-cultural dimension and the time-space dimension. Questions were formulated on the basis of key questions and the hypothesis derived from the literature review and research objectives. About sixty potential respondents were screened for a controlled distribution of age, gender, mobility and items sold. Potential respondents were then indentified and, when the purpose of the study was explained, nearly all those invited to participate were willing to do so and a total of 50 data sets were collected.

Regarding the structure of the questionnaire, the questions were categorized into two main parts. Questions in part one were related to socio-economic data, time of use, type of goods and services provided, form of employment (full-time, part-time, etc.), equipment provided for selling the goods, customer attraction, effected laws and regulations, social behavior, environmental morality, and happiness and well being. In part two, the questions focused on the physical attributes of street vending such as stall type, mobility, selling space dimensions, supplementary equipments, work environment, customer attraction and identity.

3. Mapping street vending activity

According to Laguerre 1994, the mapping and marking the informal activities became a means for exploring the definition of informality. It appeared that the existing activities resisted the formal systems, structures and intentions of the space. Laguerre recognizes this resistance of the informal but states that the informal emerges in two directions, “either through the intentionality of the actor, or through the external construction of ‘informality’ by the audience”. This study as a consequence would apply mapping as a tool for exploring the system of street vending using the street vending in Bangkok as a cases study. Using the data from survey and interview recorded in 2013, there were 27 cases valid for mapping from 50 interviewed cases.

5 STREET VENDING AROUND THEWET MARKET

Thewet is a well-known old commercial district located in the inner city (old city) area. This area was named after the old palaces, Wang (Palace) Thewet and Wang Thewawet, constructed in the Rama V period (BE 2416-2458). Thewet Palace now is being renovated and Thewawet Palace has become a part of the National Bank of Thailand. There are also several important temples around this area such as WatThewarat, Wat (Temple) InthraWihan, WatBenchamabopit and WatNoranatSuthirkaram. Since Thewet has a long history of settlement, there are old communities attached to the fringe of the temples mentioned above. Markets and shophouse rows are situated along the Sam-Sen Road and Phadung Krung Kasem Canal. Before the 1990s, Thewet and Bang Kun Prom (an area well-known as a dress-making district and recently an area for street vending opposite the National Bank of Thailand) abounded with commercial activities. However, after urbanization began to spread outside the old city, the small shops and restaurants along Sam-Sen Road drastically decreased. Only the markets and some of the shops and eating places have remained active until this day.

Street vending in the Thewet District overall presents a strongly local feel. The visible features of street vending in this district produce a very conventional image of street vending, or an image that can be found in other places in Bangkok as well since the 1990s. Vending sets, which include pushcarts or stands with parasols that can be both mobile or stationary, are the prominent element of the Thewet street configuration. This image of street vending is similar to that found along Phahurat Street, which can be defined as parasitic urban elements in a reciprocal social system. However, according to survey, the identities of street vending in Thewet were found to be more diverse than its image suggests.

In terms of the spatial context, there were two main factors related to street vending. First, Thewet Market is an old market located just next to the interchange hub for several important bus routes as well as the ChoaPraya ferries (ThaThewet-Thewet Pier). Second, Thewet Market is surrounded by shop-houses, several governmental offices, state enterprises, places of education, and temples. The mix of land-uses in

this area has resulted in street vending also becoming varied in accordance to the vendors' main customers.

Figure 2 – Thewet district, 2013

Figure 2 – Map shows the distribution of street vending in Thewet district, 2013

6 FINDINGS

Street vending in Thewet is well known for creating a food street hub where local people and workers can come to purchase foods and have meals, especially at dinnertime. Street vending in Thewet generally accumulate near the markets, connecting bus stops and workplaces. Spatial observations revealed the use of traditional forms of intervention, such as pushcarts with parasols, their mobility and the items sold for everyday use. The analysis revealed the contextual influences on street vending identity. They were rich in the sense of locality and reciprocity, but were mostly vulnerable, poor and not very well educated.

The results from interview revealed that most of the street vendors earned incomes higher than minimum wage, more than half earned more than the starting income for employees with a bachelor's degree.

However, their working hours were also relatively longer than that of formal employees. There were also street vendors who earned high incomes; most of them had started their businesses with very low incomes and had emigrated from rural areas.

The typical type of street vending found in Thewet was street vendors selling food in pushcarts or stands with parasols. However, they were mostly static and sold in the same place. Some of them had two to three regular vending locations. They usually lived near their workplaces, in shared rented houses in old communities near the temples or slums. There were also street vendors who lived far from the Thewet district, however they had started off living in the Thewet District and had moved out because their rental places had been destroyed. Stall-type vendors selling non-food items were mostly found in front of workplaces, and the form of vending showed the relationship between income and spatial organization; higher-income vendors tended to be static, making high investments in strategic vending spaces. Interviews with food street vendors revealed the self-organization and reciprocity among them. However self-organization was rarely found in the younger generation of street vendors. Systematic, easy and fast installation allowed the possibility of reuse of urban spaces at multiple intervals during the day. This spatio-temporal identity could be defined as the “overlapping territorial identity” of street vending. The spatio-temporal identity in this area was quite unique, and could be defined as a “weekly cycle of overlapping territorial vending spaces.” Because there was only one vending interval, but there were different vendors in the same vending lot during the week.

Hawkers or mobile street vendors were also found in this area; most of the hawkers were engaged in the hiring system with patrons who provided their job and accommodation. This type of vendor usually worked as a street vendor seasonally, when they had free time from rice farming in another province. It can therefore be concluded that the role of street vending is to form an exchange between the urban and rural cultures.

Case study	Thewet		
Urban context	Local		
Spatial context	-Inner city -Old commercial district -Administrative zone -Interchange bus stop, bus terminal		
Land tenure (sidewalk)	-Public -Bangkok Metropolitan Administrative (BMA)		
Permit for street vending	-Temporarily Permitted Area (TPA) at specific days, times		
Street vendors	Conventional		
Items sold	Street food and low-end product		
Market awareness	Passive		
Working hours	Long		
Employment status	Vulnerable		
Entering to SV	Come from rural areas		
Income (Net)	Low income Avg. Min. Max.	 20,000 3,800 100,000	 Bth/m Bth/m Bth/m
Education	Low education level		
Social relationship	Reciprocal system Close relationship		
Roles of street vending			
Economic	-Informal -Local economy -Urban inclusive		
Employment	-Migrated from rural areas -Automaticity -Seasonal job		
Market place (Shopping place)	-Local market place -Gathered around market -Food, fruits, groceries, cheap clothes -Cheap price - Orange juice 15 Bth		
Customers	-Local people -Bank officers, Administration -Military workers, students		
Social	-Reciprocal system -Urban surveillance		
Culture	Urban-rural cultural exchange		

Identities of street vending			
Public Space	-Fluid with medium density -Self-made public space		
Defining territory	-Umbra network -Shaded territory		
Spatial occupation	-Push cart 1.2x1.2 sq.m		
Forms/element	-Parasitic element -Push cart + Umbrella		
Mobility	-Movable -Home-workplace-product resource are in close proximity within the community/district -Self-support for mobility		
Distribution	-Gathered around markets -Junction, bus stop -Soi entrance		
Penalty	Illegal	20	Bth/d
	Legal in TPA	200	Bth/m
	Out of permitted hours	200	Bath/m
	Illegal night (+eating area)	3,000	Bth/m
Sublease	500 Bth/d		
Related business	Rental umbrella+ setup	600	Bth/m
	Push cart parking lot	500	Bth/m
	Cleaning	20	Bth/d
	Electricity	20	Bath/d

Table 1 - Summary of street vending in the Thewet District

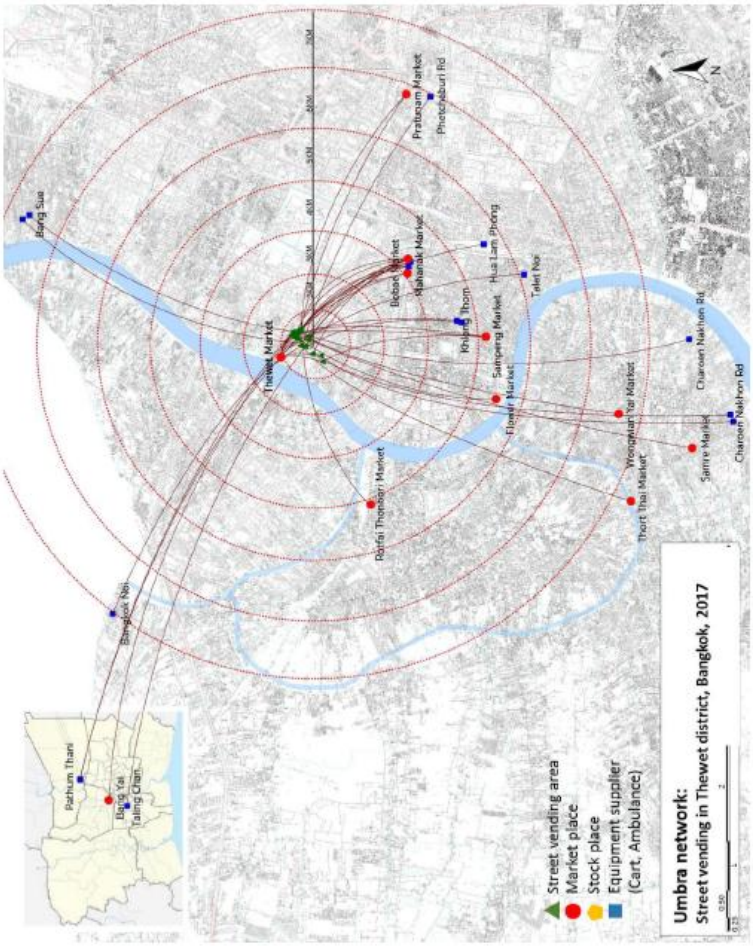

Figure 3 – Map show the umbra network of 27 examples street vedings that connect to other urban network both fomally and informally ways, 2017

7 CONCLUSION AND DISCUSSION

Mapping street vending activities reveal the more clearly that street vending activities performs informally but in a systematic trading process in which connected to urban network.

The use of shading devices such as parasols or plastic sheets was a commonly adopted mechanism in street vending in this area. These shading devices usually overlapped with one another and, side by side together, they unionized all the small vending units into one linear system connected to the building nearby. This could be called the parasitic element. The “umbra network” is a soft urban network line stretched along urban networks temporarily and informally. The term “umbra network” also expresses the living-in-the shadow culture due to local climate and the vendors’ reciprocal social relationship, as well as their shadowy economic features. These umbra networks are an important informal and temporal urban element that should be taken into account in the Asian urban morphology.

In Thewet, “self-made” public spaces also emerged through informal urban elements; this included the flow of users, activities and objects, and included street vending as a key element. These spaces provided a unique feel to the area and could imbue a given public space with liveliness and a spatio-cultural identity. A cross-cultural analysis revealed the complexity of this system as informal elements merged into public space, territories were blurred, public space became the private space of passageways to another shop, and public spaces were occupied by street vendor stalls. These result affirmed that Asian streets are rich in the multi-layering of space and time. They also proved that these kinds of streets have a two-sided characteristic of simplicity and complexity.

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ID 1588 | THE ANTHROPOLOGY OF MODERNIST MASS HOUSING: A TOOL FOR URBAN PLANNERS

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ABSTACT: Although the modernist failure myth largely descends from Jane Jacobs’ work, many of its advocates abandoned the observational method on which the American author grounded her work. Not only generalizations about the alleged failure of modernist architecture ignored non-environmental factors and disregarded the differences which characterize modernist public housing neighborhoods, but also they were unable of getting direct knowledge of how real life works in them. If we assume that each modernist public housing neighborhood is unique and different from all the others, as it is certainly the case, then we need to get first-hand knowledge of how it works. Starting from the review of anthropological research on modernist mass-housing in different countries this section of the course will discuss the implications of such research for urban planners.

1 PRUITT-IGOE AND THE MODERNIST FAILURE MYTH

The striking images of the demolitions of Pruitt-Igoe – the Saint Louis neighborhood built in the 1950s and partially blown up in 1972 – are still a powerful symbol of the alleged failure of modernist architecture. Oscar Newman (1972, 1996) presented Pruitt-Igoe as a paradigmatic example of indefensible, badly-designed neighborhood, inevitably destined to become an environment of fear, vandalism and decay. Rowe and Koetter (1978) used the pictures of its imploding buildings while talking of the decline and fall of twentieth century utopian architecture, which had produced “the impoverished banalities of public housing which stand around like the undernourished symbols of a new world which refused to be born” (p. 4). Charles Jencks (1977, 9) identified the Pruitt-Igoe demolitions with the death of modern architecture. In his book, the visual impressiveness of the building’s collapse was matched by the peremptory character of the epitaph which accompanies it: Modern Architecture died in St Louis, Missouri on July 15, 1972 at 3.32 p.m. (or there abouts) when the infamous Pruitt-Igoe scheme, or rather several of its slab blocks, were given the final coup de grâce by dynamite. Previously it had been vandalised, mutilated and defaced by black inhabitants, and although millions of dollars were pumped back, trying to keep it alive (fixing the broken elevators, repairing mashed windows, repainting), it was finally put out of its misery. Boom, boom, boom.

Without doubt, the ruins should be kept, the remains should have a preservation order slapped on them, so that we keep a live memory of this failure in planning and architecture. Like the folly or artificial ruin – constructed on the estate of an eighteenth-century English eccentric to provide him with instructive reminders of former vanities and glories – we should learn to value and protect our former disasters. As Oscar Wilde said, 'experience is the name we give to our mistakes', and there is a certain health in leaving them judiciously scattered around the landscape as continual lessons.

It took fourteen years from the publication of Jencks’ book for the dominant narrative of modernist-architecture’s failure to be seriously questioned. It was up to Katharine Bristol (1991) advancing for the first time the thesis that Pruitt-Igoe’s breakdown – and more generally the breakdown of some modernist residential neighborhoods – was not mainly attributable to its alleged design errors. There were enormous social, economic, institutional, and administrative forces at work, which all contributed to making of Pruitt-Igoe an unprecedented concentration of poor and deprived people in badly maintained buildings and tenures. Bristol (p. 163) argued that: By placing the responsibility for the failure of public housing on designers, the myth shifts attention from the institutional or structural sources of public housing problems. Simultaneously it legitimates the architecture profession by implying that deeply embedded social problems are caused, and therefore solved, by architectural design.

Another twenty years later the research documentary The Pruitt-Igoe Myth: An Urban History (2011), directed by Chad Freidrichs, pushed further the deconstruction of the narratives which had been built around Pruitt-Igoe. These narratives go well beyond asserting the failure of public housing. In the words of urban historian Robert Fishman, “Pruitt-Igoe is not just a national or even a world symbol for the failure of American public housing. It’s also been a symbol of a perceived failure of well-intentioned government policies in general.” According to urban studies scholar Joseph Heathcott, “We don’t want the people to think of Pruitt-Igoe as a failure, if they are going then to translate that failure into all public housing or all government programs, or all social welfare, or all modernism. … If we want to say that this one project, in this one place, for this one set of reasons declined to the point where people thought that it was necessary to tear it down, that’s one thing, but that’s not how we told the story”.

The fundamental shift in perspective firstly proposed by Bristol and later relaunched by Friedrichs is well argued and documented. It is in fact very surprising that the critique of modernism could gain such a wide acceptance although it was based almost solely on the claims raised by Jane Jacobs (1961) and by Oscar Newman (1972, 1996) about the indefensibility of modernist public housing neighborhoods. Due to the wide scope of Pruitt-Igoe narratives, their review also opens new avenues for reconsidering from more broadly informed ethnographical, historical, and critical perspectives mainstream critiques of modernist mass housing as a whole.

2 ‘A PLACE WE PLAYED HARD’: PRUITT-IGOE NARRATIVES OVERTURNED

Ethnographic studies of everyday life in modernist neighborhoods are very scarce. This gap is at least curious. In fact, the whole critique of modernist neighborhoods is based on the assumption that they don’t

work because they lack in everyday life. According to Newman (1972) such deficiency – and the crime which descends from it – depends on the way such neighborhoods are physically designed. Although Newman certainly demonstrates the existence of a correlation between physical design and propensity to commit crime, the relative relevance of the physical design factor in explaining the alleged failure of modernism is largely overestimated. Furthermore, the peremptory and final manner in which the whole modernist movement has been dismissed by Newman, Jencks, and many others, diverted scholars' attention from studying the inevitably complex social life that, for better or for worse, modernist neighborhoods undoubtedly host. Even in Pruitt-Igoe – that is in the paradigmatically badly conceived settlement according to crime-prevention-throughenvironmental- design criteria – a small number of interviews with former residents unveils an unexpectedly rich tapestry of memories and experiences. Before the intricate economic, social, and political conditions of postwar Saint Louis drove it to failure, a warm sense of family and community existed among its residents, as recounts Jacqueline Williams: There were friendships and bonds formed there. Perhaps these lasted a lifetime. I know a lot of bad things came out of Pruitt-Igoe, I know they did, but I don't think they outweigh the good, I really, really don't, because at first Pruitt-Igoe was just a wonderful place: it was wonderful! All former residents interviewed by Friedrichs provide an excellent account of their first years in the Pruitt-Igoe 'hell'. What is mostly significant about their memories is not only the emotional content, which can be easily distorted by time and by adolescence idealization, but the way space appears in their descriptions. It is in fact more difficult to reinvent or even to distort the way space was used. As an example, for Sylvester Brown Pruit-Igoe "was a place we played hard right up and down this long breezeway, and up and down the steps, and running around. And so it was a place where kids could really re ally have a chance to play hard". In the memories of Valerie Sills, all that even produced a strong sense of safety: Pruitt-Igoe was a safe place for me, I mean I don't care what people said about it. They lived outside it. If you didn't live in there you thought it was a bad place, but growing up in there was … you knew the people and you were never alone. I have to say you were never alone because somebody crossed the house, somebody down under you, somebody up over you, there's people here, there's lights here, there's life here, and so I'm not alone and I'm not afraid.

If then we move from Pruitt-Igoe – and from the intricate economic, social, and political conditions of postwar Saint Louis – the situation is even richer and more variegate.

The few studies which have been carried out on everyday life in modernist neighborhoods show very interesting results. The anthropological research undertaken by Jean-Françoise Augoyard (2007) in the 'Arlequin' neighborhood of Grenoble, France, and that conducted by Noël Jouenne (2005) in the Corbusian neighborhood of Firminy-Vert, also in France, will be reviewed here. They both highlight the limits of approaches – such as crimeprevention- through-environmental-design – which attribute to space and to build form itself a deterministic power over people and their social experience.

3 L'ARLEQUIN NEIGHBORHOOD IN GRENOBLE: EVERYDAY WALKS AND THE DECONSTRUCTION OF DESIGNED SPACE

The Arlequin neighborhood belongs to the so-called Villeneuve (New Town), a modernist settlement built between the mid-1960s and the mid- 1980s straddling the municipalities of Grenoble and Échirolles, in Rhône- Alpes, a south-eastern region of France. The Villeneuve was developed according to a schéma directeur, which envisaged six neighborhoods of 2000 apartments each, located around a large central area for community services and facilities. The Villeneuve project had a strong resonance in France and entailed the coordination among a number of central and local authorities. The whole program was based on the following design principles: mixture of land uses; simultaneous realization of public services foreseen by the plan and of other residential uses; centrality of public transport; creation of a certain number of working districts close to the Villeneuve.

Apart from the unitary design of the major service and infrastructure elements envisaged by the schéma directeur, each quarter of the Villeneuve is largely different from all the others, having been built in different times and according to various design criteria. The Arlequin neighborhood, built between 1971 and 1977, is one of the three neighborhoods belonging to the municipality of Grenoble, together with the Olympic Village (1965-1971) and with the Les Baladins quarter. It is a sinuous north-south-oriented 1.4-kilometers-long structure, with 120-degrees-inclined branches stemming from it at regular intervals. The building-

height varies from six to twelve stories. The whole structure is raised on pilotis, its ground level hosting an unusually long uninterrupted pedestrian gallery. The name of the neighborhood is due to the polychromous facades of the building. Beyond being a representative example of modernist architecture, the Villeneuve project was the subject of an important research conducted by Jean-François Augoyard (2007), which clearly demonstrates the complexity and subjectivity of the relationship between designed space and human behavior.

Augoyard's research is based on a simple but seminal insight: by walking in one's neighborhood people express their own personality. Therefore, the way a neighborhood –as well as any other living environment– is 'walked', changes from person to person. But since there are countless ways of tracing paths in one and a same space, people's walks can be studied and analyzed in the same way as a language. However, one's personality is manifested according to a 'linguistics of walking' which can't be simply decoded by observ ing and recording the paths traced through space. Each single walk corresponds in fact to a complex experience which is, in many ways, unique and not replicable, consisting at least of a sensory dimension, of a socio-relational dimension, and of an imaginary dimension: only verbal language can reveal its complexity.

In the light of the above, the analysis method is based on the reconstruction through narration of these 'walking experiences' done in the Arlequin neighborhood by a sample of its inhabitants in different moments of the day and of the week. In fact, in the words of Augoyard (2007, 19), «oral expression … has appeared to us to mimic quite closely the act of strolling. Like the latter, it is fluid, prone to digressions, capable of forgetting what is apparently essential and of lingering over details. Is it not another expression of an identical way of being?»

In the act of walking there are always a proactive component and a passive component, as there are in the act of reading: «The analogy with graphic expression is unendingly striking. Just as a book is read in company with a motionless (re)writing and is written at the same time that it is read for oneself and for others, walking resembles a reading-writing». If daily walks are a form of expression, a walking rhetoric exists which is «the translation of both the organization of the styles proper to each inhabitant and the correlations among these styles within a shared space» (p. 26).

The first observation that can be made before studying the inhabitants' walking rhetoric is that designed space does not exist as a whole in lived experience: «ignorant of spatial totalities, the inhabitant can exclude without refusing. This is the exclusion of an unrecounted, unlived territory, which is equivalent to a pure absence» (p. 28). It is important to stress that as pure absence the excluded territory is neutral to the inhabitant's experience and therefore does not pose a problem to the inhabitant.

Inside the space which he actually uses, the inhabitant materializes his walking practice through a multitude of rhetoric figures. Different personalities and various styles of inhabiting express themselves starting from the elementary 'figures of avoidance': paratopism, that is the form of ambulatory practice that proceeds via substitution of one path for another (p. 29); and peritopism, that is the variation of a path through a multitude of variations. The same architectural/ urban spaces take on completely different meanings not only when walked by different subjects, but also when traveled in different moments by one and the same person. This is for example the case of the mezzanine – a passageway internal to the building that doubles the unusually long ground floor gallery – which is simply avoided by some inhabitants, while being looked for by others for its quietness, for a temporary pause for thought, or even for an ambulatory night experience in a space which is imagined as a fascinating labyrinth.

The complexity of meanings that the architectural designed plan takes on in everyday walks is expressed by what Augoyard calls 'polysemous figures': ambivalence, occurring as the meaning of an element ranges between two opposite poles; staggered polysemy, happening as an element takes on several meanings which are similar and interconnected; bifurcation, describing one's behavior in correspondence to a choice point along a path; and metathesis of quality, occurring as «the repeated traveling through one and the same site can accidentally change in quality via nothing more than the effect of a difference in one's everyday chronological cycle» (p. 48). This body of figures shows that in everyday life designed space loses its functional and monumental monosemy: «the variety of usages ruins its beautiful clarity as a finished product» (p. 41). The figures which have been described up to this point are elementary figures, for they apply to single paths. The figures of redundancy and those of symmetry, instead, are combinatory figures which are noted at the scale of whole trips and of complexes of walks. The figures of redundancy

introduce in the act of walking the irrational element of pathos. The metabole is used to describe the various 'tones' (e.g. ironic, poetic, or playful) with whom a walk is carried out. The anaphora describes a walk featured by a centripetal dynamic around an attractive element which is mainly symbolic. The hyperbole denotes a deambulation which is overloaded with meanings that translate themselves in 'exaggerated expressions' (as when the verb 'to scale' is used to describe a walk up the mound in the park).

The figures of symmetry describe the way paths are combined and organize the orientations of one's walks. The properly called symmetry presides over all alternations in one's trip. Dissymmetry is produced mostly by accident when, after the departure toward a specific site, the return trip does not happen to occur as foreseen and another route is then taken. Asymmetry may be observed in all cases where a trip is affected as a whole by multiple and divergent variations. This body of figures shows the way designed space is disorganized and broken, often in unpredictable ways, in everyday uses.

The two last rhetoric figures of walking described by Augoyard, synecdoche and asyndeton, operate on the level of the relationships between the parts which make up the whole trip. The synecdoche concerns the relationship between whole and parts, when the part stands for the whole or the whole stands for the part: as in the case of a specific portion of the park, described as "the park" tout court; or in the case of a space which is identified by reference to one of its specific elements («Often, I go into the space that is dirt-covered ... toward the dragon, voilà!»). The asyndeton, instead, describes the links through which every element of expression (part of a route) follows another one of them in the constitution of the expressive whole. Augoyard's thesis is that ambulatory expression is grounded on an absence of connections. Walked routes would be made of basically discontinuous fragments. This is the major structural difference between the literary text and the text produced by the act of walking.

The afore-described rhetoric figures of walking are used by Augoyard to study the different ways space is appropriated by the inhabitants of the Arlequin neighborhood. These seem to reconfigure designed space in almost infinite manners, so to make us look almost irrelevant its capacity of conditioning the ways of appropriating space by its inhabitants. As an example, whilst for some of them the space which is perceived as 'domestic' shrinks up to coincide with their bedroom, for others it broadens up to include a wide portion of the gallery. The difference in the ways the neighborhood is appropriated are reflected in the language which is used to name places, which changes in different groups and sub-groups, and makes us appear the frequentation of a space as inseparable from the process of naming that characterizes that space. The notion of boundary gets fluid, being there no appropriation «that would have a definitive meaning or that would be established once and for all» (p. 16). Finally, ambulatory practices are enriched by an imaginary dimension which disproportionately broadens the possible meanings which one and the same spatial element may assume.

Conclusively, the decodification of the walking rhetoric performed by Augoyard makes appear dangerously reductive Oscar Newman's and Jane Jacobs' environmental determinism, and allows us to extend Bristol's observations from 'Pruitt-Igoe myth' to the whole 'modernist-failure myth'. Once again, environmental determinism legitimates the architecture profession by implying its capacity of solving social problems, and shifts the attention from the real causes of public housing problems. To Bristol's observations, we should add that the modernist-failure rhetoric also prevents us from appreciating the variety of social and physical situations which modernist neighborhoods have, and which necessarily require very specific policies in order to be managed. The Corbusian unité d'habitation of Firminy-Vert, which was studied by anthropologist Noël Jouenne (2005), provides us a good example of the kind of policies which would be necessary to make these housing complexes correctly run.

4 FIRMINY-VERT: EVERYDAY LIFE AT "CORBUSIER"

The unité d'habitation of Firminy, built between 1965 and 1967, is the last of the five unités – among the thirty globally designed by Le Corbusier – which have been ever realized. It is located in the modernist neighborhood of Firminy-Vert, built after 1953 thanks to the commitment and to the resolution of Eugène Claudius-Petit. This important French politician, who served as Minister of Reconstruction in French government 1948-53, gave up his national political career in order to realize his urban planning ideas as a mayor of Firminy. The neighborhood, designed according to Athens Charter principles by a group of modernist architects, hosts twelve residential buildings of different lengths and heights, a tower-building,

the Corbusian unité, two shopping centers, and several community equipments. Two of these – the Maison de la culture et de la juinesse (House of youth and culture) and the church – were also designed by the Master.

The work by Noël Jouenne is exclusively related to the Corbusian unité d'habitation. This is a big rectangular north-south oriented building 130 meters long, 21 meters large, and 56 meters high. It is the biggest of the five realized unités, containing 414 apartments (against Marseille's 337) for a population of up to 1800 inhabitants. The building was designed following the same principles adopted in Marseille, such as the elevation on pilotis, the façade libre, and the location of common services on the roof terrace (school, swimming pool, etc.). However, it was built with a quarter of the budget used in Marseille, giving up the realization of underground parking areas and economizing on many things, from insulation to finishing works. The apartments, of different sizes and typologies, are located on seventeen floors, organized on seven internal passageways. Most of them cross the building and face both west and east. The whole construction was designed using a Modulor 2.26 meters high and 1.83 meters large.

The research, based on anthropological methods, entailed observations and interviews over a period of one and a half years. One of the first questions which it tries to answer is: "How did people come to live to Corbusier?" Obviously enough, people moving to the unité d'habitation can be divided into two major categories: that of the ones moving by necessity, and that of the ones moving by choice. The second of these categories is the most interesting to our purposes. Among the factors which appear to be determinant of that choice is the positive image which is conveyed by the name of Le Corbusier, and by the idea of the Ville Radieuse: as in the case of a man reminding his father while driving close to Firminy-Vert and saying: "Here is the Ville radieuse!"; or in the case of a woman, who talks of "an element of utopia" guiding her housing choice. This fact is consistent with Pinson's (1996) observation that «the exceptional character of the Corbusian unités prevented them from being trivialized» as it happened, instead, in cases such as le banlieu and other similar modernist developments.

What is interesting about the myth surrounding Firminy-Vert's unité d'habitation, is not only that it attracts many people, but also that it conditions the administrative behavior of public housing managers. Applications to the local public housing authority for apartments at Corbu were often supported by covering letters written by the major. "Obviously, says the Mayor of that time, if we wanted to fill up Corbusier with immigrants that would have not been a problem. But Corbusier would have become a ghetto, and so Claudius-Petit tried, as well as I did, it shouldn't be said, to maintain a certain quota, because beyond that life would have become impossible for all of us". So in a sense, the image which by Le Corbusier is conveyed acts as a corporate brand, guiding people's behavior in many different ways. It is in this way that the unité be comes a socially mixed neighborhood, hosting not only low-wage families but also many teachers, architects, youths, and other middle class members.

The distinction between the ones who chose the unité by necessity and the ones who moved there by choice is somehow reflected in two distinct patterns of behavior concerning the duration of their stay. Although to the forty percent of the inhabitants Corbu represents an ephemeral 'habitat' which lasts up to a year, to a fifth of them it is a stable living environment which is inhabited from ten up to thirty years. But although the positive image conveyed by the architect's name is certainly influential on such a choice, other important factors also come into play. In fact for many families the long permanence at Firminy-Vert is part of a wider life project aimed at gaining access to the property of a house. This is made possible by the low cost of public housing rents.

Some of them are young people, as it is testified by the case of this former resident: Personally I lived at Corbusier and when I left I moved to a small single-familyhome development. In fact on my wage I couldn't afford do build one. I bought "turnkey" and it wasn't too expensive... But honestly, if I had the means to build a house my own way I would have inspired myself a bit more from the home which I knew at the unité d'habitation. Strictly related to long-term permanence at "Corbusier" is the social practice of apartment changing. This is made possible by at least three factors: the high number (at least thirty) of apartment typologies designed by Le Corbusier; the elevated turnover rate of apartments; and the relatively high vacancy ratio. These three factors provide an interesting kind of flexibility which allows families to easily adapt their dwellings to their changing needs.

It is also interesting to consider one of the main problems perceived by people inhabiting the unité: that of noise disturbances. The intricate manner in which apartments are composed means that each of them has

a high number of adjacent neighbors. Most of them gain access to their apartment from different streets and never meet each other. This makes the presence of an acous tic insulation one of the major requisites for the quality of everyday life. As we have seen, initial budget limitations determined significant cuts exactly on that item of expenditure. However, it is also interesting to notice how strongly the perception of noise disturbance changes across different cultural and ethnical groups: whereas to some northern-Africans noise appears to be synonym of life, to other inhabitants it is mostly a source of annoyance. These cultural differences would have significant implications for the way these estates should be managed.

5 CONCLUSIONS

In concluding this essay at least two orders of considerations are possible. The first regards the opportunity of substantially reviewing the narratives which condemn modernist architecture per se. Such opportunity is supported by two reasons. The first reason is that such narratives don't take into the right account the many and complex factors which determined the failure of some modernist architectures. This conclusion, strongly supported by the review of Pruitt-Igoe case, is also confirmed by the cases of Grenoble's Arlequin and of Firminy-Vert's unité, which are in fact examples of correctly working modernist neighborhoods. The second reason is that such critiques are grounded on environmentally deterministic approaches which appears to be, if not completely fallacious, at least substantially reductive in the light of the complex and unpredictable ways in which the living environment is being appropriated by different users. In both l'Arlequin and the unité the one and the same environment allows completely different lifestyles and relationships to space. Although some of Newman's arguments on the correlation between crime and physical design are certainly strong, it is time to fully reconsider their relative importance in explaining socially unsuccessful architectures. The necessity of reviewing the aforementioned narratives becomes particularly strong if we consider, as argued by Bristol (1991), that one of their effects is that of concealing the major causes which determined the failure of many mass housing projects.

This leads us directly to our second order of considerations which concern the major feature of modernist mass-housing buildings: complexity. Buildings conceived to host thousands of people, such as Firminy-Vert's unité and l'Arlequin's apartment blocks, are incredibly complex "machines à habiter" which require to be designed, built, and managed as such. Although Le Corbusier was a master in managing complexity, the way Firminy-Vert's unité was built and managed didn't take complexity into sufficient account. A cut in the budged for acoustic insulation could significantly alter the environmental comfort of inhabitants. Even an apparently insignificant change as that of the colors of passageways could have the significant effect of making difficult to many children orientation in passageways. This leads us to the final conclusion that modernist mass housing neighborhoods can work great if the resources which are invested in their construction and management are adequate. Although this conclusion may appear obvious, politicians, planners, and public housing managers are only rarely aware of that.

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ID 1632 | RECONCILING GOALS OF SOCIAL AND PHYSICAL SUSTAINABILITY: AN EXAMINATION OF SPATIAL DIMENSION OF SOCIAL INTEGRATION IN TRONDHEIM, NORWAY

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ABSTRACT: The paper presents preliminary findings from the first phase of a research project that is aimed at investigating the policy for decentralised local centers (commercial and transport hubs) in the city of Trondheim and an expressed goal of creating inclusive spaces at sub city level, while achieving a reduction in transport related greenhouse gas emissions. We use the case of social integration of refugees in the city of Trondheim to examine the potential of the planned local centers in achieving the expressed goal of creating a sustainable and inclusive city. We situate ourselves in the debate on social integration in the spatial domain viz. social mix versus segregation (Cole and Goodchild, 2001, Fincher et al, 2014 etc.) and the value of creating spaces of encounters (Fincher et al. 2014, Gressgård and Jensen 2015) to study the patterns of interaction among refugee groups in the city and their use of space in the local neighborhoods/ centers for such interactions. We relate these preliminary findings to the plans and policies of the Trondheim Municipality - both spatial and social welfare policies, to contribute to the debates on the role of spatial planning to promote social integration in increasingly diverse medium size cities in Europe. Municipal policy on integration of refugees in Trondheim is limited to the formal and structural aspects of society, while leaving the relational, interactional and cultural aspects to unplanned arenas and self-initiative by the refugees. There have been some efforts to represent the cultural diversity of the city through food and cultural festivals, with limited outcomes. As is illustrated by our preliminary investigations, most informants experience a sense of alienation and isolation, and interactions are limited to people of similar cultural backgrounds and other refugees, mainly in central locations. One of the main findings discussed in the paper is that refugees experience a sense of isolation in the neighborhoods they are housed in by the Municipality, raising questions to the efficacy of the policies of social mixing followed in Trondheim. We also find that spaces of social encounters in the local area have only limited potential to facilitate long lasting contact between the refugees and the host population, unless more targeted efforts for social network building is undertaken. The window of opportunity of the first five years of the 'Introduction program' of the Municipality are critical owing to the close contact refugees have to State

authorities. Disregarding the importance of the living environment and social links and bonds in the local community, is a shortcoming in the integration efforts of the Municipality, one which can be easily addressed. In conclusion, the paper raises questions for scholarship on the spatial dimensions of social integration, some of which will be investigated further in the current project.

1 INTRODUCTION

To develop more attractive local shopping- and service centers, is a strategy towards a more sustainable development in Trondheim. Based on a detailed analysis of the distance from where people live and their access to shopping, the Municipal Development Plan for Trondheim evaluates public transport and possibilities for densification in relation to existing and planned local centers[1]. This strategy is largely based on environmental objectives since it is assumed to reduce the need for transport and to minimize urban sprawl. In the development plan, there is also an underlying argument that local centers will become arenas for social and cultural encounters and thus contribute to a more inclusive and diverse city, (Trondheim Kommune 2010). Sustainable urban development means, in a broader sense, a commitment to create an inclusive and diverse city where everyone has equal opportunities to participate. Social sustainability includes, according to Bramley et al (2009; 2010), both the notion of 'social equity' and 'sustainable communities'. While 'social equity' implies that everyone should have equal access to employment, affordable housing, and services such as education, health, recreation areas, and public transport, the term 'sustainable communities' addresses senses of belonging, opportunities for social interaction, safety / security, perceived environmental qualities, experienced house quality, social stability, participation and involvement (Bramley et al 2010).

This working paper discusses the first phase of a research project, addressing questions raised in dialogue with Trondheim town planning office and IMDi (The Directorate of Integration and Diversity), on how to facilitate a more holistic view on the challenges related to the settlement and integration of refugees within Trondheim[2]. Whereas the responsibility of settlement and integration of refugees is organised under the health and welfare office, the town planning office has the responsibility for providing and ownership of social housing. In order to foster a comprehensive sustainability perspective for urban development, it is beneficial to see these sectors together. Further, the potential challenges related to settlement and integration of refugees are seldom explicitly addressed in long term planning strategies (see e.g. Hauge et al, 2015). IMDi stated an interest in learning more about how and in which ways the city is used by refugees, and in which arenas integration actually "happens". Since these being complex questions that are challenging to research, the project uses the local center development plan as a starting point for discussing the unclear spatial policies regarding inclusion and diversity in Trondheim. One important aim of the project is to explore the ways refugees experience and use their neighbourhood and the city, and thus gain insights into how social sustainability issues such as the settlement and integration of refugees could become an integrated element in the local center development. As of now, the plan for local centers is based on the goal to reduce greenhouse gas emissions, while aiming to create inclusive local neighborhoods/areas without any clear idea on how this might be achieved.

The first phase has included a literature review on social integration processes and theoretical frameworks for understanding social integration as experienced in and framed by urban space. Further five student groups (altogether 20 Master students) have carried out mapping exercises and interviews to investigate how refugees in five selected local areas in Trondheim use their neighbourhood, the local centers and the city as a whole. They subsequently discuss how housing, neighbourhood and local centers may facilitate or hinder social integration processes.

[1] In the development plan, local centers are defined as urban areas or neighborhoods with an identifiable center where the population can get access to their daily requirements for shops and services within walking and cycling distance from residential neighborhoods and workplaces (Trondheim Kommune 2013; 2014). Local centers should have a density of minimum 6 dwellings per hectare within a radius of 1-2 km, and should have at least 5-7000 residents and employees in order to justify a feasible provision of goods and services.

[2] The research project, "Lokalsenterutvikling som strategi for bærekraftige byer – besetting og integrering av flyktninger i Trondheim kommune", is financed by Husbanken (The Norwegian Housing Bank), and runs from September 2016 to December 2017. Professor Eli Støa is leading the project.

In the paper will first present theoretical perspectives on urban planning in the context of integration of migrants focusing on two main approaches, social mix and places for encounters. We will then continue with presenting discussions on integration that we believe will be useful in our further research. Finally we will present some of the main findings from the student work and based on this raise some preliminary questions for discussion. The limitations of using student work should be acknowledged, since we have limited control of the empirical data and the analysis of it. The student assignments are therefore mainly useful as an input, together with a review of relevant theoretical perspectives, into a discussion of issues and questions for further fieldwork within the project. The aim with the paper is to identify challenges related to the role local centers and housing may play in integration processes and to discuss how to pursue the research before we carry out our main fieldwork during spring / summer 2017.

2 THEORETICAL PERSPECTIVES ON ADDRESSING SOCIAL INTEGRATION IN A SPATIAL DOMAIN

Urban planners have to a varying degree addressed challenges due to immigration and (the lack of) integration. Vitello (2009) notes from an American context that while European countries have established a tradition of social planning, including national integration programs, the Anglo American planning tradition struggles to accommodate cultural difference. Planners have engaged with immigrant communities, typically in advocacy roles, but mostly community development has been done by community workers not planners. In European cities, immigration and integration have become a pressing question due to the refugee crisis and fear of terrorism. As often discussed in relation to a concern about the increased segregation of ethnic minorities in poor urban neighbourhoods, integration of immigrants is approached as a 'spatial problem' of uneven distribution of resources, welfare and a general 'good' living environment. Since 1990s, therefore, European countries have seen a shift in both policy and academic discourse from a dominant conception of poverty to "a focus on social exclusion, signifying a significant redirection of emphasis from the material deprivation of the poor towards their inability to fully exercise their social, economic and political rights as citizens" (Geddes 2000, p. 782-783, see also Andersen 2001). This shift in European policy has been followed by "a wide range of efforts to promote community participation in deprived, immigrant-dense areas of the city […] to encourage immigrant engagement so as to create a shared sense belonging and speed up integration (Gressgård and Jensen 2015, p. 2). Often known as integrated area based initiatives, a cross-sectoral approach to area-development seeing physical upgrading and community engagement as equally important, so-called deprived, immigrant dense urban neighbourhoods are undergoing regeneration to combat social exclusion and facilitate integration.

Fincher et al. (2014) and Gressgård and Jensen (2015), have identified three main theoretical approaches that have informed urban planning debates on integration; the 'right to the city' and 'social justice', planning and 'multiculturalism' or 'pluralism', and a newer discussion related to 'social capital' especially in relation to the above mentioned regeneration approaches towards poor urban neighbourhoods. The concept of 'right to the city' has been central to critical debates in urban theory (e.g. Lefebvre 1968, 1996, Harvey 1973, 2008, Mitchell 2003, Marcuse et al. 2009). When linked to urban planning practices, 'right to the city' suggests a consideration of the power structures present in the city and in urban planning practises, facilitating or hindering, in the present case, refugee's influence on their use and rights over urban spaces especially those shared with the host society. 'Multiculturalism' is a concept with many meanings; "at once a philosophy of the nation and nationhood, a set of public policies, and a democratic reality in many countries and cities in which ethnic and racialized variations exist in the population" (Fincher et al. 2014, p. 3). Fincher et al. (2014) employ the term to discuss the ways planning engages with ethnic and racialized difference, and as such 'multiculturalism' can be seen as a more specific term than 'pluralism' which is the concept that Gressgård and Jensen (2015) prefer in their review on very much the same topic from a Scandinavian context[1]. Within planning theory and urban studies, 'pluralism' often refers to the pluralist-elitist debate from the 1950s and 60s (see Allmendinger 2002, and Harding 2009), and has been developed as a perspective that encompasses difference, both in (cultural) values and in power and access to decision-making. Though we in the following chose to use the term 'pluralism', we acknowledge that both 'multiculturalism' and 'pluralism' are ambiguous concepts. For example How (2013) argue for the

[1] Gressgård and Jensen (2015) do not state clearly why they prefer using the term 'pluralism', however in a Norwegian context multiculturalism might be associated with the (quite polarized) debate on whether integration of ethnic minorities has failed or not, where critics of the Norwegian integration policy sees the multicultural society as a potential threat towards values they see as 'Norwegian'. As such, 'pluralism' might be understood as a less politically charged concept.

use of ‘transculturalism’ as a less static concept, that better capture the processes of intercultural exchange and cultural transformation that take place in urban spaces.

‘Social capital’ is a concept that increasingly has entered the debate and understanding of integration of immigrants, in addition to concepts such as ‘community cohesion’ or ‘social cohesion’ (Gressgård and Jensen 2015). ‘Social capital’ has been developed as a conceptual framework by scholars such as Bourdieu, Coleman, and Putman (Sullivan 2009, see Portes 1998 for a review), however especially Putnam’s (1995, 2000) conception of social capital as an inherent quality of a well-functioning civil society has proven to be attractive for policy directed towards ‘excluded’ and ‘marginalised’ communities. The assumption is that people living in deprived neighbourhoods have limited access to so-called bridging social capital which encompasses more distant social ties, and that “living in mixed-income communities may provide opportunities to interact with people who have more diverse social networks, and in turn auxiliary benefits from such interaction” (Arthurson et al. 2015, p. 439). As such, ‘social capital’ is associated with trust between different social groups and citizens’ ability to participate in the wider society. Hence, ‘social capital’ is also linked to a well-functioning participatory democracy, and suggestions that the quality of governance and outcomes will improve with increased social cohesion and the citizens’ participation as ‘co-producers’ in governance (Sullivan 2009).

As for Norway, ethnic segregation was until the 1990s treated as a question of class mobility and economic redistribution through the welfare policy (Holt-Jensen 2009). The debate on ethnic segregation as reinforcing the old spatial divide between rich and poor emerged, however, throughout the 1990s, and moved in the 2000s towards a fear of ‘ghettoization’ and ‘parallel society’ if a concentration of poor ethnic minorities in less attractive parts of the city were allowed to develop further. The focus on integration thus entered Norwegian policy and planning with the focus on area development, to a large degree inspired by integrated area based approaches to urban renewal in other European countries, especially the UK, Denmark, and Sweden (Brofoss and Barstad 2006, Lund 2014). In these approaches, participation as community empowerment partly building on arguments in line with the idea of ‘social capital’ is often a central strategy.

The theoretical approaches discussed above are, perhaps except from theories on ‘social capital’, not easily translated into urban planning practices. From a study of eight multicultural metropolis, Fincher et al. (2014) identify two main approaches to urban planning practices to support integration. The first approach, social mixing, target interventions on residential space. As noted by Cole and Goodchild (2001), the assumption of a mixed society as a more ‘balanced’ and ‘harmonious’ society is a normative idea with long traditions within planning. The idea was for example a prominent aspect of the British garden city movement before the First World War, and became systematically adopted into the housing and New Town programs of the 1945-51 Labour governments. While criticized from the 1950s for underestimating that segregation might also be a positive factor in developing a strong sense of community, the idea of social mix re-appeared in the New Labour housing policy from 1997, directed towards the housing estates from the 1950s and 60s. Hence, the current focus of attention on social balance “lies in projects designed to promote neighborhood renewal and social inclusion rather than, as before, on the principles of comprehensive planning” (ibid.:345). Fincher et al (2014) discuss the shift in focus in social mix planning in Europe, from being an explicitly class oriented project to become the “dominant solution to managing the segregation of internal and external undesirable Others in [ethnically] diverse cities” (ibid. p. 23) (see e.g. Lees 2008 and Arthurson 2015 on critical discussions on social mix strategies).

The second approach, planning for spaces for encounters, concentrates more on the design and use of public space. This approach involves “the creation of opportunities for interactions between ethnic communities in the hope that contact will reduce prejudice and social conflict” (Fincher et al. 2014; 43, emphasis in original). Since public space is connected to normative understandings of what is accepted as “appropriate” or “inappropriate”, the production of public space is often analysed in relation to theoretical debates on ‘right to the city’ (Fincher et al. 2014, Gressgård and Jensen 2015. See e.g. Mitchell 2003). Of relevance here is both the ‘visual manifestations’ of migrant minorities in the public sphere, and regulations of the use of public space – both formally and informally. Further, the assumption that encounter can “produce any kind of change beyond the time/space of the encounter itself is increasingly being challenged” (Fincher et al. 2014, p. 43, se e.g. Valentine 2008). In addition, there is a growing body of scholarship that point to the fact that encounters across cultures are likely to take place at sites beyond those that are usually discussed among planners, such as in schools, libraries, workplaces and everyday neighbouring practices like gardening and eating (ibid.).

Though both social mix approaches and planning for encounters in public spaces often come together in regeneration programs targeting immigrant dense neighbourhoods, e.g. the Saupstad-Kolstad area development program in Trondheim (Trondheim Kommune 2013), social mixing is not really discussed in planning strategies that encompass the city as a whole – such as the potential for densification and local center development in Trondheim – other than in the regulation of mixed housing according to size and type of ownership. According to Legeby and Marcus (2011), therefore, the focus on residential segregation and social mix limits the potential of the build environment for integration. They argue that the potential for interplay that develops as people share public space is equally important for integration processes as the residential mix.

3 INTEGRATION AND SPACE IN NORWEGIAN POLICY AND PRACTICE

Several researchers have emphasized the importance of housing for integration. E.g., research on reception centers for asylum seekers suggests that low standards of housing counteracts integration (Hauge et al, 2016). It is generally agreed that a high turnover of residents in an area tend to negatively influence people's feeling of safety and interaction between neighbours (see also Vacher 2007 immigrants experience from social housing in Denmark). Further, studies from Norway have found that the refugee's ability to obtain housing without help from municipal authorities (so-called 'self-settlement') may contribute to empowerment and a feeling of autonomy (Røe, 2015). However, there is a fear that self-settlement will reinforce to the increasing segregation of immigrants in marginalised areas, a situation believed to counteract integration (Valenta and Bunar, 2010; Røe, 2015). At city level, therefore, the idea of social mix is an important strategy when providing homes for refugees. This is true also for Trondheim, as the Health and Welfare office responsible for the housing of refugees seek to avoid concentration of ethnic minorities in certain areas, especially around Lademoen, which is a former working class neighbourhood close to the city center, and at Saupstad housing estate planned and built in the late 1960s and early 1970s (fig 1). Saupstad is today one of the most immigrant dense neighbourhoods in Trondheim, with around 30 % of the population being either immigrants themselves or having parents that are immigrants.

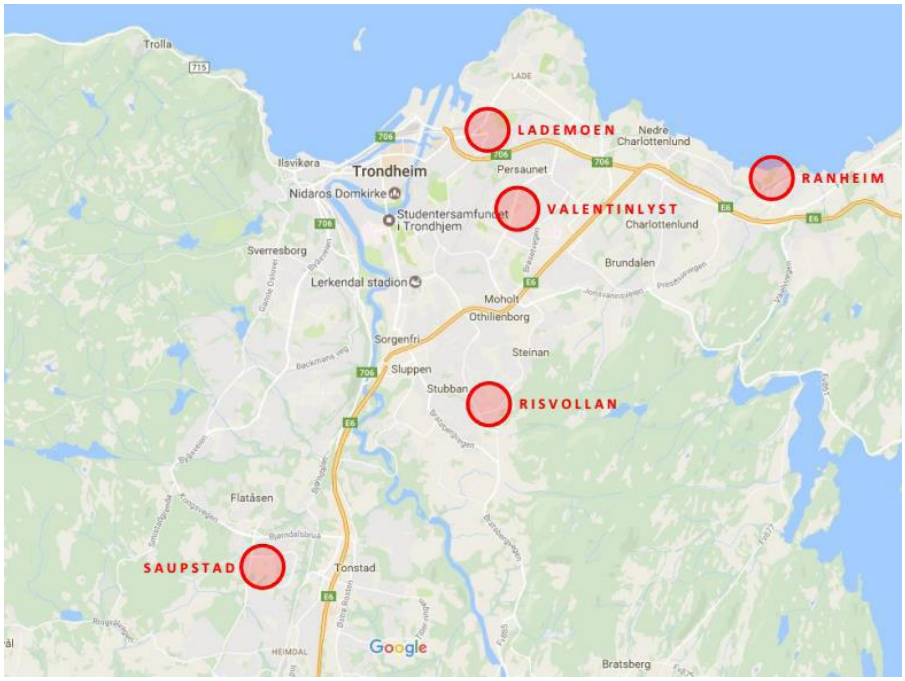

Figure 1: Map of Trondheim with five selected local centers at neighbourhoud level. Source: Google Maps.

Because of the relatively high amount of immigrants and low score on statistical indicators such as education, employment and health, Saupstad is part of an integrated area based development program. The development is a cross-sectoral initiative seeking to facilitate cross-cultural meetings and networks among the residents, in addition to a physically upgrading of the local service- and shopping center, schools and public spaces.

According to the Municipal Development Plan (2012-24), Trondheim wants to continue the densification and localisation policy by reinforcing the existing built structures- having the right business at the right place, rejuvenation of the existing local centers, and retaining and developing the blue/ green structures. It also aims to reinforce the existing public services and preserve cultivable land and ecologically sensitive forests (Trondheim Kommune, 2012;b). The densification policy also aims to serve other purposes, such as to reduce the need for expansion of transportation and a better utilisation of existing infrastructure (Trondheim Kommune, 2012b). This coupled with the choice of environment-friendly transport, can also provide a greater degree of diversity and accessibility (Ibid). This resonates with the argument that densification and transformation of the city could help refugees to be more interactive with locals. Therefore, the context of transforming local centres in Trondheim can potentially create a proactive space for an inclusive meeting and exchange with locals for the refugees. Beyond what is outlined in the Municipal Development Plan are the efforts to develop local centers into diverse and inclusive meeting places. Although the plan states this objective as part of the goals of the local center development, currently no concrete measures or means to achieve this have been identified. Refugees are not per se identified as a 'target group' by the plan although the societal development plan (kommuneplanens samfunnsdel) states the goal for inclusion and diversity for the city.

4 ON INTEGRATION (AND METHODOLOGY)

Integration is a complex and somewhat controversial concept (Ager and Strang, 2008). The understanding of integration ranges from an assimilation perspective, which implies an expectation that refugees should adapt to the host society so they eventually will not stand out, to a multiculturalist perspective in which everyone's right to keep their cultural and religious identity is recognized (ibid). Today, most reject assimilation as a measure of integration and accept that the arrival of refugees will involve a greater degree of cultural diversity and hence a gradual change in our own society at both the local and national levels. For the purpose of this project, we lean on Ager and Strang (2008), who developed a conceptual framework for approaching integration of refugees and immigrants. The framework builds on previous work developing indicators for evaluating integration in the UK, in addition to fieldwork in environments of refugee settlement and analysis of survey data. Ager and Strang define ten core domains of integration and divide them in four categories (see Figure 2). The authors insist the domains are interdependent and all significant for integration, with no primacy of one over the other. However, Valtonen (2004) points out the difference that a strong welfare state might provide, and that strong social rights of settling refuges can occur alongside weak labour market status, bringing out features of 'differential exclusion', peculiar to settlement in this particular context' (2004: 71).

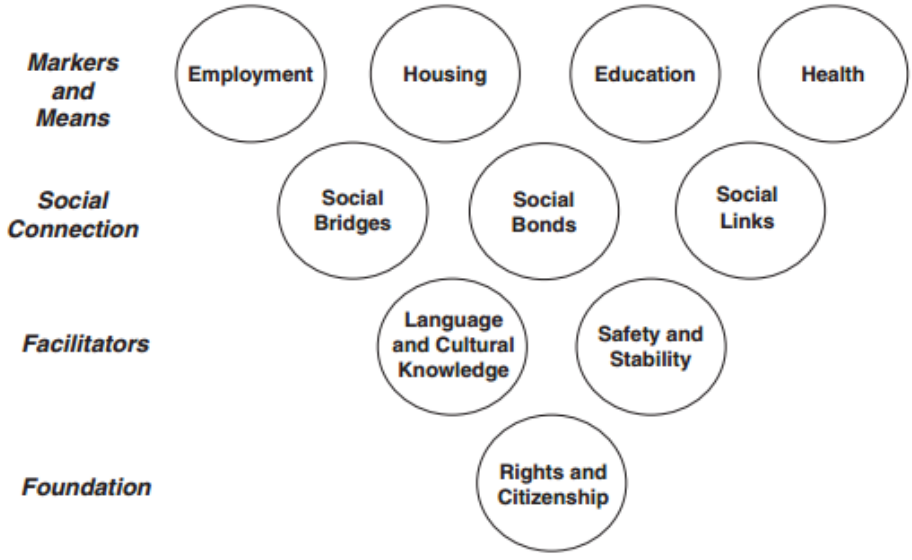

Figure 2 Ager and Strang's core domains of integration (2008: 170)

There are however other approaches to integration. For example the Efms INTERPOL (2006:18) defines social integration as “a generations lasting process of inclusion and acceptance of migrants in the core institutions, relations and statuses of the receiving society”, stressing the interactive process between migrants and the receiving society in which the receiving society has much more power and prestige (see also Esser 2000). Hence, integration might both refer to normative aspects of what characterises an ‘integrated’ immigrant, and an experience of inclusion or exclusion among the immigrant population. Methodologically, we first map the policy and practice on integration in Trondheim municipality that so far seem to concentrate on facilitating language and cultural knowledge, and access to housing, employment and/or education, and health services. Interviews have however revealed an understanding among municipal actors of the role of social networks and a general feeling of being included for integration to be ‘successful’ (i.e. partly covered by the social connection domain of the Ager and Strang 2008 framework). For this purpose, the municipality works closely with NGOs’ such as Red Cross. Second, we are in the process of performing in-depth interviews with refugees living in different parts of the city to explore their experiences of belonging and inclusion (or not) to their home, neibourhood and the city as a whole.

5 A SOCIALLY SUSTAINABLE CITY?: PRELIMINARY FINDINGS FROM THE FIRST PHASE OF THE PROJECT

Among the 13 local centers identified in the local center development plan, five were selected for the mapping exercise carried out by students of the master program in Urban Ecological Planning during fall 2016 (see Figure 2). Of these, the centers at Risvollan and Saupstad represent the development of housing estates in Trondheim in the early 1970s. The local centre at Valentinlyst was established in 1975, in relation to expansion of housing in the area. Lademoen and Ranheim stand out as not being clearly defined centers today. All local centers serve a population between 4300 and 5700 residents, and had between 58-185 refugees settled in the surrounding residential neighborhood in 2016. Saupstad has the largest share of non-western immigrants, with 30 %, while Ranheim has a small non-western population of 2,8 %. Based on qualitative observations, informal talks, interviews, focus groups discussions and workshops, the students explored how the refugees use and relate to their neighbourhood, the local center and the city as a whole[1].

Most groups struggled with finding relevant informants. They found it difficult to approach people directly at the local centers since it is hard to know who are refugees and who are just Norwegians of foreign origin or other kinds of immigrants. They therefore approached established arenas where refugees meet, such as language cafés, the municipal qualification program, churches, sports clubs and other meeting places for immigrants. Three of the groups managed to find a sufficient number of informants within ‘their’ local center, the two others came in contact with refugees living all over Trondheim but still asked them about how they use the city and their neighborhood. All together they interviewed 44 refugees either individually or in groups, in addition to several more with whom they asked brief questions. Some groups also interviewed other actors (social workers, representatives from housing cooperatives etc.)[2].

5.1 THE LOCAL CENTERS: SPATIAL QUALITIES AND THE ACTIVITIES OFFERED

It seems from the student investigations that the local centers only to a limited degree work as arenas for social encounters between the refugees and the host community. Most informants express that the city center is perceived as more attractive as a social meeting place, a place for ‘hanging out’, than the local centers. Moreover, the local centers often do often not offer activities which the refugees need, such as language cafés, opportunities for volunteering, sports, religious activities etc. Even when it comes to shopping, refugees do not necessarily prefer the local shops. They mainly go shopping where the prices are lowest, which is often in larger shopping malls such as City Syd, City Lade etc. Many also join the free bus to Sweden and do their shopping at Storlien.

[1] Trondheim municipality defines refugees as those who have received asylum in Norway and has lived in the city for less than five years. Among the questions the students asked, were: 1) What are your everyday activities? Where? When? With whom? How do you get there? 2) What kind of spaces/which spaces do you use in the neighborhood/city/city center/local center? 3) What are your most important social networks and why? 4) Describe a normal day/week

[2] For a more thorough description of main findings from the 5 student groups, see Appendix

As expressed by several informants in almost all the groups, the value of sports and volunteerism as a potential for social interaction among and between groups – immigrant and Norwegian, should not be underestimated. Volunteering functions both as a means for increased interaction, increased familiarity of the cultural and social norms as well as a 'grapevine' for information on employment opportunities etc. The language cafes also perform similar functions. Sport and training was mentioned by several informants as their only means of recreation and interaction with others, albeit mainly other refugees from similar cultural backgrounds. Religious activities were also seen to perform a dual role – of maintaining a sense of identity through one's religion as well as a meeting space for social interaction. Although not all local centers can feasibly provide all such facilities, the local of volunteer centres, sport facilities and religious centers should be part of the discussion on local centers at the city level.

The reasons for not using local centers are however not only lack of the 'right' activities and reasonable prices on grocery and other goods. The centers moreover tend to be perceived as boring, lacking attractive public spaces for 'hanging out' without having to buy something. In some neighborhoods (e.g Ranheim and Lademoen) there are no defined and visible center at all, which makes them even harder to relate to.

5.2 LACK OF VISIBILITY – AFFECTS SENSE OF BELONGING

According to the students, refugees (and other non-western immigrants) are generally not visible in (most) local centers (with a possible exception of Saupstad-Kolstad). This may be because these groups prefer other places. With the relatively small numbers of refugees living in each neighbourhood, it is hard to influence on and participate in the local everyday life. In most areas there are also a lack of visible 'symbols' of multicultural population, such as mosques and other aesthetic elements. Lack of visibility may affect the process of developing a sense of belong, assumed to be important for social integration (e.g. Efms INTERPOL, 2006).

5.3 SOCIAL ISOLATION

Few informants state that they have Norwegian friends. Informants in Ranheim, who were mainly single male youth, expressed a sense of hopelessness and isolation in the local area where they were accommodated. Their only comfort was in being able to interact with others from their own community in sport facilities located in other areas. In this sense we may draw the conclusion that they are not yet very well socially integrated. Time is probably also an important issue. The informants in this study have lived in Trondheim for less than 5 years, many of them for less than two years. It not only takes time to find new friends. Also achieving a sense of belonging or feeling at home in a neighbourhood and local center takes time. Informants state clearly that the main issue for them at this stage is to learn the language and to get work, this is important in order to be integrated in the long run.

Refugees are not a uniform group. There are obviously cultural differences, as well as issues related to gender and life situation. Young, single and most often male refugees move easily all around the city and seek places and activities where they can meet other refugees, often with similar cultural background as themselves. As was observed by the group of students that worked in Saupstad, it appears that female refugees with families and children are more frequent users of some of the activities offered within the local neighborhood. Here, women of immigrant/refugee background do come in contact with women of Norwegian origin, in for example the knitting group organized by the local volunteering centre but these interactions do not result in 'deep' ties beyond the immediate interaction. As they are conceptualized now, local centers are mainly seen to be shopping centers with some community functions such as the library in Risvollan and Saupstad. The value of interaction that these functions afford may not satisfy the ultimate aim of creating local inclusive neighborhoods.

5.4 HOUSING

Only few informants mention their residential situation as important for their everyday life. This may be due to how students asked their questions (housing was not emphasised in their assignment). But it is worth

investigating closer, since 'housing first' is one of the main slogans in Trondheim's strategies towards integrating refugees (ref?). We also know from research on other vulnerable groups that housing is important for how people perceive themselves as part of a society (dignity, empowerment, identity, privacy etc) (e.g Hauge et al 2009) and for the integration process (e.g. Røe, 2015).

6 RAISING QUESTIONS FOR FURTHER INVESTIGATION

At this stage in our research, we do not have sufficient empiric data to draw any substantial conclusions. We would still like to use this opportunity to raise some preliminary questions for discussion.

Integration of refugees in the first 5 years of their residence in the Trondheim Municipality is the responsibility of the Health and Welfare division of the City Council. This is facilitated through their accommodation in social housing combined with an obligatory 'Introduction Program' (Kvalifiseringssenter for Innvandrere INN) that qualifies refugees for entering the job market – defined as a certain level of language skills as well as basic school education. As stated by the representatives of the Health and Welfare division in a project related meeting, the focus is mainly on 'systemic integration' which can be evaluated through 'measurable indicators' such as attainment of a certain level of education, access to welfare services and integration through paid and gainful employment. Both the representatives from the Town Planning division and the Health and Welfare divisions acknowledged the need to understand and address social integration but expressed the gap in knowledge on the needs and functioning arenas for social interaction and integration. As expressed earlier, this project attempts to fill this gap in knowledge, and will do this by looking into for the role played by the local centers and neighbouring areas.

With reference to the frameworks for integration discussed earlier in the paper, municipal policy on integration of refugees in Trondheim is limited to the formal and structural aspects of society, while leaving the relational, interactional and cultural aspects to unplanned arenas and self-initiative by the refugees. There have been some efforts to represent the cultural diversity of the city through food and cultural festivals, with limited outcomes. As is illustrated by our preliminary investigations, most informants experience a sense of alienation and isolation, and interactions are limited to people of similar cultural backgrounds and other refugees.

The feeling of social isolation perceived by our informants might be an indication of a worrying implication of the lack of focus on social integration as opposed to systemic integration. These young people first come in contact with the local culture and community in their residential neighborhoods. Although they are all obligated to follow the Municipalities education programs in order for them to be qualified for the job market, their sense of alienation in the host culture can possibly have far reaching implications for their role as future citizens. The window of opportunity of the first five years of the 'Introduction program' of the Municipality is critical owing to the close contact refugees have to State authorities. Disregarding the importance of the residential environment and social links and bonds in the local community, is a shortcoming in the integration efforts of the Municipality.

The next level of our analysis relates to the spatial policies of the Municipality and their potential to address social integration. In the urban development stategies of Trondhiem Municipality that may be relevant for social integration of refugees, we recognize both social mix approaches and an emphasis on developing spaces for encounters in the local centers. The way refugees are accommodated all around the city with relatively small groups in each area may be due to pragmatic reasons (that's where the available housing is), but it seems that it is part of an overall strategy to avoid an accumulation in certain neighborhoods. We also see from the municipal paper on local centers (Trondheim kommune, 2012a) that there is an underlying assumption that strengthening the local centers will provide social and cultural meeting places. Still it seems from our preliminary findings that neither of these strategies so far have supported social integration between refugees and the host community. One can also raise questions regarding the policy of social mixing itself. Unless it is followed up by initiatives for social integration in local areas it may lead to the kind of isolation expressed by our informants.

From the first phase of investigation in the project, we can raise the following questions that will be explored in the next phase:

1. What are the functioning spaces of social encounter for refugees and how do these encounters have a bearing on relational, interactive and indentificational aspects of integration (Ager and Strang,2008; Valtonen,2004;Efms INTERPOL,2006)? How do the refugees perceive this relationship?
2. To what extent do these social encounters take place/facilitated by space in neighborhoods and local centers?
3. Which role does the home play, and the relationship between private and semi private arenas and public spaces in the local areas play for social interaction between refugees and the host community? What qualities of the various spaces and the relationship between them facilitate social encounters that may have consequences for social integration?
4. Is there a visible dimension to the integration process, and if so – how does it come to expression at a local level in Trondheim (and where?)

We hope that knowledge developed through looking more into these questions, will give insights that may be useful in a further discussion on the organization of policy domains and implementation structures in the Municipal administration when it comes to the broadly framed objectives set out in the local center strategy.

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ID 1641 | METROPOLITAN PLANNING AND URBAN MINORITIES “ON THE MOVE”. A TRANSNATIONAL PERSPECTIVE ON INTEGRATION PATTERNS

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1 INTRODUCTION

Planning traditions in European countries have generally either ignored settlement patterns of underprivileged migrating populations or tried to control them through imposed settlement actions or population redistribution (Desage et al., 2014). Urban integration of immigrants or of poor nationals in a migration situation (such as rural population attracted by employment opportunities in the city or returning expatriates from former colonies, etc.) has been generally addressed by providing specific or standard public housing or by implementing social mix policies. In this paper we address integration patterns by focusing on the characteristics of a “welcoming” territory or its “hospitality”, i.e. a territory that offers opportunities for integration and that showcases its social diversity. We further question the importance of morphologic configurations of metropolization and of governance arrangements characteristic of metropolitan planning for successful incorporation.

New comers to the city claim space and make place. In regard to these processes, we ask several questions: what settlement and place-making patterns of migrants, chosen or imposed, are associated

with metropolization in different world contexts? Can suburbanization be considered an advantage for integrating a new population, and under what conditions? How do city and suburban administrations, be they fragmented or federated in metropolitan governance institutions, respond to these processes of settlement?

In order to address these questions and see how metropolitan urban areas can use take advantage of their suburban morphology and of immigration we have studied U.S. examples of successful "gateway" metropolises of the 21st century. The choice of the North American example was based on the fact that morphological characteristics of metropolization have their origins in the U.S. and that we find in the American scientific literature successful stories of immigrants' incorporation that contribute to economic and territorial development. In addition to the US theoretical model we have studied two contrasting European cases of metropolitan pilot projects concerning immigrant and minority integration: that of Grenoble, in France, and of Cluj, in Romania. These two very different contexts in Western and Eastern Europe are put together here in regard to integration patterns of a similar population, impoverished Romanian in majority of Roma ethnicity. Highly excluded from the labor market and from formal housing, suffering discrimination and marginalization in Romania (Vincze, 2015), they are low-skilled and very poor immigrants in search of a better life. In France they often live, at least for a period of time, in very harsh living conditions in improvised and informal settlements such as slums and squats, from which they are often evicted.

In regard to this population, we give here the term "minority" a wide meaning that reflects not only a quantitative difference from the "majority" based on objective and/or subjective criteria, but especially a dominated position due to social and economic exclusion, and to forms of marginality (such as informal or illegal occupations and housing). We focus on the movement of these populations, chosen – such as their economic migration to western Europe – or imposed – such as resettlement after forced evictions – that makes them "new comers" with low resources in a territory where they aim to settle and make a living. In the American literature on migrations and cities, different types of immigrants (high and low skilled, with high and low human and social capital, etc.) are considered together as complementary in their settling and integration patterns. However, the different examples show that generally highly skilled workers have always been more easily integrated, whereas "poorer and less-skilled immigrants – who are often the backbone of the service economy – have met more resistance" (Singer et. al., 2008: 155).

1.1 METROPOLITAN PLANNING

Concerning the European cases discussed in this paper, the term "metropolitan planning" stands here for several types of processes that affect at present suburbs and urban areas. We will mention here three of them. Firstly, there is a territorial morphological change similar to the metropolization processes in the United States that challenges the traditional structure of European cities (Leroy, 2000). In France, for example, a continuous organization of buildings is conventionally defining a city or town. A new understanding of economic and everyday life relations between different territories imposes to consider the networking of urban core(s) with neighboring towns, villages and sprawling areas (Ascher, 1998). This organization generates a discontinuous and heterogeneous structure that alternates higher and lower densities and secondary centralities. The networking of urban, sub-urban or péri urban areas through an increased connectivity – that becomes more important than proximity – increasingly erases the importance of hierarchies between centers and peripheries. These new territorial arrangements, present in certain parts of Europe since the 1970s, are no longer reserved to metropolises or greatest cities but increasingly affect conurbations of less importance, in which most economic activities are relocated in the suburbs.

A second aspect of metropolization concerns administrative reform following this morphologic change. This process is marked in Europe by decentralization of decision-making from the State to the local level. In this process the metropolitan scale is often considered to be the most appropriate for local policy making (e. g. in housing and spatial planning). Encouraged at the European Union level, these reforms are put into practice at different pace and in different ways in European countries. In France, metropolitan governance has been reinforced especially since 1999 (Chevènement Law) and the decision-making power of Metropolitan administrations in spatial planning and housing issues is increasing. In Romania where "metropolitan associations" of town halls are only currently emerging on a voluntary basis and do not have any primacy over municipal authority in regard to specific competences.

A third aspect, “metropolitan planning” aims to give a tangible form to cities’ ambitions for distinction in the global competition between them. In relation to the economic dimension of a metropolis metropolitan developments and regeneration strategies generally aim to bring in innovation, specialization and cutting-edge technologies in order to foster economic dynamism. In this quest for excellence, metropolitan projects aim to attract specialists, highly skilled and creative people and in return they should find here good living conditions. Therefore metropolitan planning contributes to the homogenization of the metropolitan territory by reinforcing connectivity and developing or regenerating derelict areas left behind in the growth process, most often trapped as “gaps” in the metropolitan urban structure. In this way it contributes to raising the potential value of all properties regardless of their location, distance from the urban core, proximity to former industries of railway infrastructures, etc. From this point of view, metropolitan planning signifies injecting resources for the recapture of these forgotten territories in a quest for densification, intensification of urban life and distinction.

1.2 METHODOLOGICAL APPROACH

The American model serves here as a theoretical background for the interpretation of the two European case studies. The latter two have been studied in detail (through field observation, discussions with decision-makers, institutional and NGO representatives, analysis of planning documents, of policies and discourses, etc.). However, difficulties in studying together the three examples arise from different paradigms on integration of immigrants and minorities in the three national contexts (Escarfré-Dublet, 2015).

Fundamental differences appear between the ways countries like the US and Great Britain, on the one hand, and France, on the other, incorporate their long histories of immigration in the conceptual construction of society (Noiriel, 1988; Lapeyronnie, 1993). France has developed a universalistic model of integration in which the individual foreign origin has to be kept in the private sphere and become increasingly invisible in the process of assimilation. In this model, ethnic communities are considered to be antagonistic to the integration in the national social body. In the American pluralistic model, personal origin can be made visible in public space and can be claimed by ethnic communities. Communities can thus be recognized as initiators or stakeholders in local development, and as place makers that inscribe their identity in space. This is not the case in France, where ethnicity (and ethnic communities) are not considered as stakeholders in decision-making and in planning (Escarfré-Dublet, 2015).

Romania is a country that recognizes national minorities (such as Hungarian or Roma). Their presence is related to the multiethnic historical composition of the society, to the important movements in territorial borders in the region and to late formation of nation states. However ethnicity is mostly related to cultural aspects and to the preservation and promotion of these cultural specificities.

A relevant example of differences and incompatibilities arising from different paradigms for minorities’ inclusion in France and Romania is that of the reactions produced in the two countries by the EU Framework for National Roma Integration Strategies up to 2020. To the Commission’s request that all member states design integration strategies for Roma living on their territories, France has expressed the impossibility to adopt such a strategy on the basis of its universalistic model that does not recognize ethnicity and cannot assign advantages on the basis of this categorization[1]. On the other hand, Romania – the European country that is the most affected by the marginalization and poverty of its important Roma minority – proposed mostly cultural measures for their integration[2].

2 THE THEORETICAL MODEL OF GATEWAY CITIES IN THE U.S.

Northern American researchers have studied the way immigration affects cities and the changing patterns of these phenomena especially at the end of the 20th and the beginning of the Twentieth century (Price and Benton-Short, 2008; Singer et al., 2008). Using statistics on the percentage of foreign-born in the

[1] Une place égale dans la société française : Stratégie du gouvernement français pour l’inclusion des Roms dans le cadre de la communication de la Commission du 5 avril 2011 et des conclusions du Conseil du 19 mai 2011.
[2] Strategia Guvernului României de incluziune a cetățenilor români aparținând minorității rome pentru perioada 2012-2020.

overall population Audrey Singer has theorized a typology of gateway cities based on the historical evolution of urban immigrant settlement in the United States throughout the last century.

In addition to the “established gateways” of the 20th century, that are still attractive to immigrants (such as New York and Chicago), new gateways have emerged. They are called “twenty-first-century gateways” and are places where immigrant population has been rapidly rising since the 1980s (“emerging gateways” - e. g. Atlanta, Dallas-Fort South, Washington) or even more recently, since the 1990s (“preemerging gateways” - e. g. Raleigh, Durham, Austin). Finally, among these new destinations there are cities that had been attractive to immigrants one century ago, and that are now “re-emerging as immigrant gateways” after a period of lost drawing power in the middle of the century.

It is important to note that all these destinations that successfully incorporate immigrants experience overall population growth, and not only an increase of their foreign-born population. This dynamic shows that they have strong economies and that these territories are overall attractive (Singer, 2008: 12). Immigrants are drawn to these areas because of employment opportunities and their presence further contributes to the regions’ overall economic growth.

Singer shows that the settlement patterns in these “twenty-first-century gateways” have changed from previous ones in relation to the “restructuring of the U.S. economy, the decentralization of cities and the growth of the suburbs as major employment centers” (Singer et. al., 2008: 5). Suburbanization was accentuated by morphological transformations of suburbia towards denser and more heterogeneous landscapes that can be described as “suburban metropolises – decidedly not cities, but for the most part large, loosely bounded, lower density, sprawling, auto-dependent metropolitan areas (Ibid. : 15). In these areas new comers can find a series of opportunities such as: jobs, affordable housing, possibilities to establish small businesses and easy access to communication corridors.

2.1 FROM THE ‘ETHNIC ENCLAVE’ MODEL OF THE CHICAGO SCHOOL TO THE ‘ETHNIC COMMUNITIES’ OF THE 21ST CENTURY GATEWAYS

The assimilation model described by the Chicago School of sociology in the interwar period has dominated urban studies research on the settlement patterns of immigrants, both in the U.S. and in Europe, ever since. This model gives a particular role to “ethnic enclaves” situated in devalued areas near the city center and that were offering to new comers cheap housing, often in overcrowded and low quality buildings, and the proximity of employment opportunities. Therefore, as an arrival place of installation for the first generation of immigrants, the “ethnic enclave” represented a resource for integration offering the support of social networks of co-nationals or other immigrants. However, the enclave represented a temporary phase, since more economically prosperous or second-generation immigrants were moving out to the more valued suburbs where better quality housing could be found. Once they or their children had acquired linguistic proficiency, and integrated economically, first or second generation immigrants could easier integrate the mainstream population in the new living environment, further away from the city center (Park et al., 1925). Immigrants’ settlement patterns in “twenty-first-century gateways” are different. Unlike in the Chicago School model, many immigrants settle in the suburbs immediately upon arrival and do not go through the intermediary phase of the “crowded inner city immigrant enclave” (Hardwick, In Singer, 2008: 45). This pattern applies especially to immigrants with high human and social capital who can chose to settle in more desirable parts of an urban area. In addition, the establishment in the suburbs rather than in central cities of high-tech and bio-tech corporations and other firms that employ highly skilled and educated foreignborn staff are linked to these settlement patterns of the more privileged immigrants. However, less skilled and poorer immigrants follow the same pattern by settling in suburban areas where they find affordable housing in apartment complexes from the 60s and 70s or smaller homes, less desirable for the local population living in the suburbs. Sometimes overcrowding affects these housing environments, in a similar way as in the central enclaves mentioned before.

Furthermore, dispersed suburban settlement – instead of concentrated enclaves close to the city center – generates new types of communities and new models of integration. 21st century ethnic communities are rather inconspicuous and difficult to identify and delineate in the cultural landscape. For this reason they have also been called invisiburbs (Skop and Li, 2003). Invisibility however does not necessarily signify losing community cohesion and giving up the support community networks offer immigrants. According to Zelinsky and Lee, urban transportation and communication networks, as well as the use of instant

communication technologies (cell phones, e-mail, etc.) allow dispersed populations who lack residential propinquity to connect regularly and to construct and maintain ethnic communities (Zelinsky and Lee, 1998).

These connections, both virtual and physical, constitute the foundation of heterolocalism (Ibid.), as social presence in metropolitan space. 21th century ethnic communities thus differ from "ethnic enclaves" especially in terms of lack of spatial concentration and sometimes of spatial identification that makes them invisible. In addition, "although the most conspicuous heterolocal communities involve the relatively privileged, the model is also valid for certain lower-status groups whose economic survival relies upon movement and transactions over long distances while retaining or creating a sense of peoplehood." (Ibid.)

2.2 DRIVERS OF SETTLEMENT PATTERNS IN 21ST CENTURY GATEWAYS

The most important rationale for the suburban settlement patterns of immigrants in emerging gateway cities in the U.S. is the presence of affordable housing, as we have mentioned before. Housing in the suburbs is of better quality and more affordable than in areas closer to city centers (when these centers exist).

In addition, the presence of good schools and the proximity of places of work or of major public transport corridors offering rapid connections to places that concentrate job opportunities moreover guide settlement choices.

The location of new economic activities further from urban cores, sometimes in addition to the restructuring of territories from small agricultural towns to high-technology corridors for example, plays a key role. These employment opportunities concern highly skilled foreign-born workers, but they also have an effect on low skilled immigrants who can find facilities in these areas for establishing small businesses. Such opportunities offered locally can be for example "a large number of older business properties on smaller lots (less than 1,500 square feet) that are ideal spaces for small family-run businesses", as in Annandale (Singer et al., 2008: 153).

Theses settlement patterns further contribute to increasing densities in suburban areas that become more dynamic, as well as to increasing their diversity. Many places do not have any majority racial-ethnic group and become truly multiethnic places.

> *Over time edge gateways have developed a local identity as places where immigrants can find housing, transportation, jobs, and goods and services that cater to them. It can be argued that many edge gateways are performing the same functions as early twentieth-century enclaves provided. Some of these gateways may evolve into a more familiar pattern of either distinct ethnic communities or ethnic enclaves. Yet it is also possible that a different pattern of immigrant settlement is being realized in suburban Washington, and possibly elsewhere, one in which clusters of immigrants are not easily organized into distinct ethnic communities but live in a more multiethnic context (Singer et al., 2008: 138).*

However, in regard to local existing minorities, researchers have noticed that residential preferences of immigrants are often determined by avoidance of black neighborhoods, even if in these areas rents are low (Singer et al., 2008: 156).

2.3 RECEPTION AND LOCAL POLICY RESPONSES

Even if legislation concerning migration is adopted at federal level, by having to respond to the inflow of new foreign-born inhabitants local administrations have a key role as policy makers in immigrant's incorporation. Thus cities become de facto policy makers in regard to immigrants' socioeconomic and spatial integration (Price and Benton-Short, 2008: 18). They make policies that respond to the needs of new comers in access to housing, education, health care, etc. and those consenting to activities that allow immigrants to claim space and visibility in the suburban landscape (Singer et. al., 2008: 74).

However, not all local government institutions seek to assist or to include the foreign-born, and especially the poorer and less skilled immigrants. Especially the responsibility of local government for immigrant welfare sometimes meets resistance. In many cases adopted local law and ordinances that are designed to control immigrants concern housing regulations (such as zoning, restrictions against overcrowding, etc.) and employment policies. They are mostly directed at undocumented immigrants, but "the public debates surrounding them are socially divisive and contribute to the unwelcome environment for all immigrants" (Singer, 2008 : 4).

The most worrying facts for local communities are related to the visibility or hyper-visibility of groups of poor migrants. For example the installation of places where poor immigrants gather such as Labor Day sites stirs debates and contestations. In a similar way, concentrations of immigrants following the socalled "cousin syndrome" have a segregative effect pushing away locals:

> *As a locality in the suburbs becomes known for affordable housing and good transportation, a complex web of immigrant social networks draws in still more immigrants. […] At the same time, it is possible that large numbers of diverse immigrants settling in a place may make it less attractive for native-born residents who relocate and thus allow room for more immigrants to settle." (Singer et al., 2008: 157)*

3 THE FRENCH CITIES AND IMMIGRANTS

In France, "hospitality" towards immigrants is conceived first of all as a public service (Gotman, 1997). In line with the universalistic model, integration of immigrants is treated as a social inclusion problem. In this country which has a traditional strong position of the State and of non-profit organizations in the welfare and housing system (Esping Andersen, 1990; Kemeny, 1992; Ghekière, 2008) and a large stock of public housing of about 17,4% of the total housing stock (Pittini et al., 2015), hospitality towards immigrants equates to their affiliation to the basic statutory status of nationals ("le droit commun"). Specific measures or services that are especially designed for immigrants (e.g. special residences), actually show the non-access to regular public services, and constitute a "palliative hospitality" (Raffestin, 1997).

Secondly, the claim of space associated with immigration awaits a "gift" of space in a welcoming city. In the context of a strained housing market in most periods of the 20th and 21st centuries this reception has not been without difficulties in France. This un-welcoming city caused the emergence of informal housing clusters (slums) at different moments throughout the 20th century.

Since the 1990s, economic migrations from Eastern European countries (mostly from Romania and Bulgaria) have caused the re-emergence of this phenomenon in France. But from a quantitative standpoint, the phenomenon is a lot inferior to the 1960s slum problem: 12,000 to 15,000 people nowadays, living in about 450 informal settlements in France[1] compared to about 80,000 in 1960 (Olivera, 2011: 13), out of which around 46,000 in the Paris region alone (Barou, 2002: 17).

However today's precarious settlements of poor immigrants have a different relation to urban areas than those from the 1960s, even if their locations are very similar. For example, Portuguese slums from the 1960s near Massy in the south of the Paris Region were rising almost in the same areas as Romanian ones, 40 years after, in the beginning of the years 2000 (as shown in José Vieira's documentary « Souvenirs d'un futur radieux »). However, the present metropolitan organization makes them more visible, since they are not situated at the city margin anymore, but in "gaps" of the continuous metropolitan area. In this new landscape, informal settlements are less tolerated especially since all derelict areas that can host them need to be integrated in the metropolitan design through a strategy of "urban recapture" that all major French conurbations go through. (Oliveira, 2011: 13).

Since 2010 State legislation concerning "illegal settlements" of immigrants has been to encourage systematic evictions by local authorities, together with a social evaluation of the situation of the different families starting with 2012. The most important effect of this policy has been the dispersion of poor immigrants following the dismantling of their improvised settlements. However researchers have shown

[1] DIHAL, 2015. In addition to these European immigrants there were about 7,000 to 14,000 extra European migrants (mostly war refugees) in informal settlements of Northern France.

that informal settlements are not only places of marginalization and rejection, but also a resource for integration by creating social propinquity networks allowing to make a living and to access education, health care, and other services (Bourgois et al., 2015).

3.1 METROPOLITAN EXPERIMENTS FOR EUROPEAN POOR MIGRANTS IN GRENOBLE AREA

The metropolitan area around the city of Gtenoble, called Alpes Grenoble Métropole (AGM) comprises 49 administrative units (cities, towns and villages) and about 440 000 inhabitants. It has a legal status that has been evolving since the 1990s in line with the national decentralization policy. Increasing administrative power has been transferred to it both from the State and from the local administrations of the component localities. Since 2012, the number of European Union immigrants in AGM in a precarious dwelling situation (living in squats, slums or hosted in public shelters or in hotels by the public administration) has been quite constant, of maximum 700 people, out of which almost half were children. Most of these immigrants are Romanians, in majority Roma ethnics, having suffered from poverty and marginalization in the Romanian society.

Since 2013, temporary housing solutions provided by the local administration diminished. This caused an increase in the number of informal settlements, making them more visible in the urban and suburban landscape. More than half of these settlements were situated in the localities that neighbor the city of Grenoble (Table 1), on derelict sites or in locations waiting for regeneration and development. These settlements are continuously threatened by evictions (in average 1 or 2 per year per person) and these evictions engender a constant dynamic of dispersal and clustering in new settlements of variable size (from one family to several hundred people for the biggest ones). However the total number of people living in precarious conditions has remained rather constant, with the ones that access stable housing and employment being replaced by other new comers.

	Beginning of 2013	End of 2013	Evictions during the year 2014	End of 2014	End of 2015	September 2016
Grenoble	8	10	7	10	13	7
St. M. d'Hères	4	4	3	4	4	4
Fontaine	2	2	1	2	2	2
Eybens	1	1	1	1	2	1
Gières	1	0	2	0	0	0
La Tronche	1	2	0	2	1	1
Echirolles	0	2	0	2	1	1
Seysinet Pariset	1	1	1	1	1	0
Vizille	-	-	-	-	-	1
Total	**18**	**22**	**15**	**22**	**24**	**17**

Table 1 – Number of settlements per locality in AGM counted at different periodsand number of evictions during one year. Source: MOUS Bilan d'activité, Roms Action.

View this distribution of informal settlements in AGM, the local administrations of the localities in AGM decided to develop a common pilot program for integration, to which the different localities could adhere. This program is specific for EU immigrants living in informal settlements (mostly Romanian Roma), who have the legal right to work in France. The program is based on the partnership and coordination of the different participants who contribute to its different aspects (the AGM, the local administrations of all the localities, their social service agencies, the department administration, the prefecture representing the State, non for profit organizations offering guidance on different aspects of inclusion, education, training, etc.) Starting from existing framework measures for access to housing, this pilot program called MOUS (Maîtrise d'ouvrage urbaine et sociale) as a special procedure for integrating a part of the immigrant EU population. It was officially implemented in December 2013, after one year and eight months of trial. This inclusion program is based on offering access to standard housing for free, or for a very limited financial contribution according to family resources, in addition to a reinforced guidance for training and access to employment. The program is highly selective: in 2016 it had attained a capacity of 22 families in independent apartments (12 families comprising 57 persons by the end of 2013). Once a family can leave the program, a regular income offers it access to standard public housing a new one is selected and integrated the program.

The selection is based on a series of eight criteria that aim to evaluate the “capacity” to integrate. An assessment after the first five years of the program (2012 to 2016) counts a total of 24 families (117 persons) that have participated in the project. The objective was to attain independence through stable employment and access to public housing after 18 months in the program.

Since the apartments used in the program had been offered for free by the different local administrations they were located in different parts of the metropolitan area. This contributed to the dispersion of the families that would contribute to making “Roma” ethnic communities invisible in the local landscape. Moreover, this principle corresponds with general housing policies in France that encourage social mix by distributing public housing evenly in the different localities of a metropolitan area. Such dispersion procedures are applied in urban renewal of existing apartment complexes from the 60s and 70s that concentrate public housing (Lelevrier In Desage et al., 2014). However, in the case of the families having integrated the MOUS program we could observe a perpetuation of community ties with the people still living in the informal settlements.

The good results that the program had, based on its high selectivity, are intended to constitute a stimulation for a more global and systematic intervention strategy for the integration of underpriviledged immigrants. However, even if the coordination of the numerous participants from public administrations and non for profit organizations was fruitful, it was difficult to achieve and triggered some compromises (e.g. in the selection criteria). Moreover, this program cannot be applied directly to a different population, such as non EU refugees who need legal residence and work permits. Since this program was based on a voluntary participation of the different localities in AGM and on financing mechanisms that are not guaranteed for a long period of time, especially since the costs are quite high for a limited number of participants, it is very likely that such integration mechanisms will not expand and perpetuate.

4 ROMA MINORITY MARGINALIZATION IN THE ROMANIAN CITY OF CLUJ

For historical reasons, the morphology of Romanian cities from the north-western part of the country was characterized by a high density and a clear separation of the city from its surroundings. In addition to the traditional form of Transylvanian towns, a state policy from the 1970s against urban sprawl and implementied densification of already urbanized areas (Diaconu, 2013). Even if suburbanization accelerated starting with the 1990s, especially by the creation of new residential areas for the middle class extending the existing urban structure or densifying neighboring villages, the separation between urbanized and non-urbanized territories is still very clear today.

Following European directions and incentives, a feeble administrative reform has started in 2001 (Law 351/ 2001, than laws from 2006 and 2008) in order to create an administrative form of cooperation at metropolitan level. Such Associations between towns, cities and county administrations were created on a voluntary basis in the 12 biggest cities in Romania including the capital, in order to create “growth poles”. The main objective of this national strategy was to strengthen the role of these urban areas as drivers of regional economic growth and reinforce urban-rural relations contributing to reduce territorial disparities. In addition this type of metropolitan planning in line with EU recomandations was potentially allowing to access more EU and other international funding for implementing metropolitan projects. Created in 2008, the Cluj Metropolitan Association (Asociația de Dezvoltare Intercomunitară Zona Metropolitană Cluj) - CMA is made up of one city, the county administration and 19 villages on a radius of 30 km around the main city, as specified by the Law from 2001. The area had 413,761 inhabitants in 2011.

Cluj, one of the few cities in the country that experience population growth and that attract a large number of students suffers from the limited housing stock that is also in a general bad condition. This pressure on the limited housing market and on building areas creates inflation in housing prices, making housing unaffordable for the most vulnerable.

Concerning welfare policies, the liberal state that followed the communist regime diminished progressively social protection. Romania has nowadays the smallest stock of public housing in Europe (1,12% of the existing housing stock according to the 2011 census) and the highest rate of severe housing depravation in Europe: 23% compared to 5.2% European average (Pittini et al., 2015). In addition, the selection criteria for accessing public housing are not in favour of the most vulnerable (Adorjani et al., 2016).

After the structural changes in the Romanian economy since the 1980s and the diminishing of the Welfare State since the 1990s, the Roma minority has been increasingly excluded from the formal labor market and assigned in a marginal social and territorial position: “they are pushed to the social and spatial margins of the local societies, i.e. into positions of unemployed on the formal labor market, and/or towards housing areas that do not benefit of developmental investments.” (Vincze, 2015 : 18). This situation encourages “local entrepreneurs and mayors […] to exploit their poverty and dependence on social welfare or on underpaid day laboring” (Vincze, 2015 : 20).

4.1 SEGREGATION PROCESSES AND GOVERNANCE IMPLICATIONS OF THE METROPOLITAN TURN

In addition to the structural factors mentioned before and to the strained housing market in Cluj, the planning strategies of the city’s public administration encouraged gentrification and produced progressively the displacement of the most underprivileged inhabitants, mainly Roma ethnics from rather central locations to the margin of the city where they created informal settlements. The clustering of about 300 families (more than 1000 people) in an isolated area near the landfill in Pata Rât progressively transformed this process into a public problem. This peripheral settlement suffers from pollution, from all the nuisances brought by the propinquity of the landfill, from isolation (1,5 kilometers from public transport lines) and from extreme deprivation etc. (Dohotaru et al., 2016; Rat et al., 2012).

Forced evictions by local authorities from informal and public housing, without housing alternative or with forced relocations in the same marginal area further contribute to the clustering of marginal communities (Ibid.). The relative dynamic economy of the city of Cluj, especially in comparison to other areas, also attracts poor internal migrants from neighboring towns and villages that can only find shelter in this marginal area. The only resources for making a living in this area are informal work on the landfill – selective sorting activities – in which many Pata Rât inhabitants are involved (Rat et al., 2012) and underpaid day laboring.

In addition to the mobilization of activists concerned by the humanitarian problem related to ethno-residential segregation in a polluted and deprived area, the visibility of the cluster of informal housing near the landfill is increasingly acknowledged as a problem by the local administration because of its propinquity to the local airport. A pilot program funded by the Norway Grants for reducing social and economic disparities in Europe was launched in the end of 2014 (and ended in 2017)[1]. This program for social integration and de-segregation of the communities living in Pata Rât was created by the Cluj Metropolitan Association (CMA). Even if there is a partnership with the local administration of the city of Cluj, there is no direct involvement of the municipality through co-funding or direct participation in the project implementation. Since CMA does not have an administrative and decision-making competence, the transmission of this problem from the municipal to the metropolitan level can be interpreted as an opportunity to access funding and to move the problem from the city to a higher i.e. metropolitan level. This practice is in line with the common opinion that social problems should not be treated at local (city) level and that national and EU resources are necessary. This attitude is also based on the discriminatory way of considering the underprivileged population as not belonging to the city, but rather to the rural areas where they should resettle. Both this imaginary of hierarchy between urban and rural in line with social hierarchies and the power subordination of the metropolitan administrative level to the city level are contrary to the principles of metropolitan planning.

5 CONCLUSIONS

We have addressed in the beginning of this paper the conditions under which metropolization constitutes an opportunity for immigrant incorporation in the U.S. The two European pilot projects have further allowed to analyze in which way the metropolitan turn in the administrative reform of European territories can

[1] The program is entitled Social interventions for the de-segregation and social inclusion of vulnerable groups in Cluj Metropolitan Area including underpriviledged Roma (“Intervenții sociale pentru desegregarea și incluziunea socială a grupurilor vulnerabile în Zona Metropolitană Cluj, inclusiv a romilor defavorizați”) http://patacluj.ro

constitute an opportunity of coordination for the implementation of social integration programs for underprivileged immigrants and minorities.

In the U.S. model, the most important factors for successful inclusion of migrants are a dynamic economy, easy access to affordable housing and to transportation, propinquity with good education facilities and a non-hostile environment. In such successful “twenty-first-century gateways” immigrants are allowed to make place and contribute to the densification, local differentiation, economic development of the suburban metropolis. We can argue that there is more available space and that regulations are looser.

In the two European case studies immigrants and minorities are not allowed to take part in place making, especially in visible parts of the metropolis. Reinforced control over space is established through actions of dispersal (enforced evictions in both cases), marginalization (imposed resettlement in Cluj) and an overall policy of making the impoverished communities invisible in the metropolitan landscape. However metropolitan growth patterns and metropolitan planning make the territorial “gaps” of informal settlements increasingly visible.

In France in addition to access to space, access to employment and to affordable housing (public subsidized housing) are also highly regulated. In these conditions, underprivileged immigrants need increased support in order to integrate in society, that only measures that fall under “the basic statutory status of nationals” (“le droit commun”) cannot offer.

In France, the emergence of metropolitan administrations offers the possibility of implementing pilot projects (such as MOUS) that offer this reinforced assistance for social inclusion through employment and housing. They are based on the coordination of an extended number of stakeholders and decision makers interfering in metropolitan governance at different levels and of specialized organizations (in professional training, support on different aspects of integration such as language training, access to healthcare, etc.). However, stakeholders participate only on a voluntary basis and negotiations trigger compromises in the program principles (such as in the criteria for the applicants’ selection). This program matches the community dispersal objective through social and territorial mix. In the same time this politics does not appear to be contrary to maintaining immigrant communities when heterolocal functioning is made possible by an increased connectivity of the metropolitan area.

The high costs and the voluntary basis of this pilot project are obstacles for extending this kind of program to non-EU economic migrants and refugees, and for insuring its permanence. In the Romanian metropolization can hardly be considered an opportunity for the incorporation of minorities. The administrative metropolization is still at its beginnings and only offers city administrations the possibility to pass the embarrassing problem of informal settlements and of marginalization that it contributed to producing to another different administrative level. This tendency is very common among local administrations in different parts of the world that try to disengage from ensuring basic services to poor immigrants and minorities considering that it’s an issue that should be treated at State level (or federal in the US), or even at the supra-national (i.e. European) level. In Romania the Metropolitan Assiciation does not have any real decision-making power and the coordination of players is limited in the absence of a political commitment from the real-decision makers and especially from the city administration.

The questions addressed in this paper should be explored further in order to understand how European territories are affected by migrations and what are the potentials and opportunities they offer for incorporating immigrants and minorities successfully.

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ID 1702 | PLANNING, PLURALISM AND RELIGIOUS DIVERSITY: THE SPATIAL REGULATION OF MOSQUES IN ITALY

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1 INTRODUCTION: PLURALISM, RELIGION, AND URBAN PLANNING

In recent times, regulations governing religious practices in European cities have generated widespread debate in many countries. In fact, the growing religious diversity in many cities has significant consequences on the urban environment, and primarily the new spaces that it entails (e.g. places of worship and burial grounds) and new forms of expression in public (e.g. types of dress connoting a particular religious conviction, such as the Islamic veil or the Sikh turban). These spaces and forms of

public expression engender complex problems of regulation, including specific questions related to urban planning.

In these circumstances, the otherwise abstract issues of cultural pluralism and religious freedoms suddenly become concrete and urgent within specific urban contexts (Moroni and Weberman, 2016). Consider, for instance, when a religious minority applies to the local council for planning permission to build a place of worship: in many cases, in several European countries, such applications run the risk of encountering forms of resistance – for instance, by local authorities, politicians or grassroots movements – in which the objection to the proposed scheme is framed in terms of planning issues (for some examples in different countries, see for instance: Dunn, 2001; Gale, 2005; Gale & Naylor, 2002; Germain & Gagnon, 2003; Isin & Siemiatycki, 2002; Jonker, 2005; Kuppinger 2011, 2014a, 2014b; Landman & Wessels, 2005; Qadeer and Chaudhry, 2000; Saint-Blancat & Schmidt di Friedberg, 2005; Torrekens, 2013; Vahed and Vahed, 2014; Villaroman, 2012).

Many planning theorists have attempted to untangle the complex web of issues surrounding urban pluralism and diversity in Western cities, sometimes doing so with specific reference to religious diversity (Burayidi, 2000a and 2015; Binnie et al., 2006; Dwyer, 2015; Dwyer et al., 2016; Eade, 2011; McClymont, 2015; Murtagh and Ellis, 2010; Qadeer, 1997 and 2016).

The main aim of this paper is to contribute to this debate on planning and (religious) diversity in the field of planning theory. In particular, it stresses the importance of focusing theoretically not only on positive action, but also on the role of planning and building rules, which is sometimes neglected in the discussion of many planning theorists on questions of pluralism. The starting point of our discussion is the case of a new planning law governing the construction and location of places of worship in the Lombardy region, Italy[1]. Although the issue concerns various religious minorities, this article will focus on Islam and hence on the construction of mosques, which in Italy (as elsewhere) is a frequent target of local government opposition. What concerns us here is not so much the current legislation of the Lombard authorities per se as the example that these regional regulations furnish for a critical rethinking of some fundamental issues currently affecting several Western countries and cities. In fact, the planning restrictions introduced by the Lombardy region are similar to restrictions in force in other Western countries (see for instance Gale, 2005, on the UK, Kuppinger, 2014, on Germany, Torrekens, 2013, on Belgium, and Villaroman, 2012, on Australia).

This article is divided into four sections. The first briefly describes the characteristics of religious diversity in Italy and its spatial repercussions. The second focuses on the case of the regulations governing the construction of places of worship in Lombardy, Italy. The third section contributes to the field of planning theory, with reference to ways and means of guaranteeing pluralism in cities through the tool of planning rules, suggesting some theoretical guidelines for reforming the planning system in order to promote and protect (religious) diversity. The last section draws conclusions.

2 THE FACTUAL AND LEGAL CONTEXT: RELIGIOUS DIVERSITY IN ITALY

2.1 IMMIGRATION AND RELIGIONS IN ITALY

Unlike other European countries, Italy is quite new to the phenomenon of immigration; it was not until the 1970s that the country began to see a flow of immigrants, an influx that peaked in the 1990s (Bonifazi, 2007). In 1971 the number of immigrants residing in Italy stood at around 120,000 (barely 0.2% of the population). In 1991 this figure was 356,000 (around 0.6% of the resident population). By 2015 the proportion had risen to 5,014,000 (8.2% of the overall population) (ISTAT, 2015)[2]. According to projections by ISTAT (2011), the number of immigrants in Italy will significantly increase in the coming years: the

[1] A very similar law has been recently approved (April 2016) by the Veneto Regional Council, Italy (Regional Law 12/2016).
[2] These data do not account for migrants illegally present in Italy: according to Caritas and Migrantes (2012) today these number around 500,000.

proportion of immigrants will rise to 14.6% in 2030: that is, 9.5 million immigrants out of 63.5 million residents[1].

This increase in immigrants coming to settle in the country also brings to Italy customs and religious beliefs that differ from the traditional Catholic ones. According to Caritas and Migrantes (2012), 32.9% of migrants in Italy are Muslims (1,650,000), 29.6% are Orthodox Christians (1,482,000), 19.2% Catholics (960.000), 4.4% Protestants (223,000), 2.6% Hindus (131,000), 1.9% Buddhists (97,000) (on this topic, see also ISTAT, 2015). Hence, Italy is today characterised by a stable population of non-Catholic residents, for the most part immigrants (Allievi, 2000a, 2000b), including a sizeable number of Muslims. Islam is not only the religion practised by a third of the immigrants in Italy; it is also the country's second religion after Catholicism (Introvigne & Zoccatelli, 2013)[2].

The fact that, in recent years, Italy has experienced a shift from a Catholic majority to a tapestry of diverse religions (Pace, 2013a) is inevitably causing radical changes in the Italian social fabric, since Italy for centuries was a staunchly Roman Catholic country (and Catholicism continues to be the principal religion practised by those born in the country).

2.2 THE URBAN DIMENSION OF RELIGIOUS DIVERSITY IN ITALY

The significant and permanent presence of non-Catholic immigrants in Italy has major consequences also on the urban space. One of these consequences is the emergence of new places, some of which are specifically assigned for religious purposes (e.g. places of worship and burial grounds), while others are related to a particular practice influenced by religion (e.g. halal butchers). Further novelties include new patterns affecting both individual behaviour (dress codes like the Islamic veil or the Sikh turban), and collective ones (such as collective rituals linked to religious practices or calendars) in the public sphere and space, as well as the appearance of temporary spaces characterized by the codes or sensitivities of a specific religious minority – for instance, an area of a park where a group of Muslims gathers regularly at certain hours of the day (Agrawal, 2008; Allievi, 2000b; Becci et al. 2016; Chiodelli, 2015; Gökarıksel, 2010; Knott & Vasquez, 2014; Knowles, 2013; Kuppinger, 2014c).

In Italy, Islam in particular is having a significant impact on the city's spaces. One of the principal Muslim spatial 'markers' affecting the urban landscape is represented by Islamic places of worship (Chiodelli, 2015)[3]. In Italy there are two main types of Muslim places of worship. The first type is the purpose-built mosque (or formal mosque), usually in the classic form of the building, complete with a dome, minarets and Arabic script or symbols. The second is the informal prayer-hall[4], which is usually smaller, sometimes temporary, often arranged in former warehouses, private apartments or shops (Allievi, 2010b). The informal prayer room responds to the Muslim's everyday liturgical needs, but does not achieve the critical objective of establishing public recognition and visibility of Islam in the public arena, as would the construction of a purpose-built mosque (Metcalf, 1996).

Precise data on the number of Muslim places of worship in Italy are lacking at present, though today they may amount to around 1,000 (Chiodelli, 2015). It is worth noting that the informal prayer-halls account for almost all Islamic places of worship, and that there are fewer than a dozen purpose-built mosques in Italy. Lombardy's situation is paradigmatic: although around half a million Muslims reside in Lombardy (Menonna & Mirabelli, 2013), there is only one single purpose-built mosque in the region – that is, the small mosque (around 100 sq.m. of surface) of Segrate, near Milan.

One of the main reasons for this lack of purpose-built mosques in Lombardy (as well as in the rest of Italy) is the opposition by local population and authorities.

[1] Obviously, these data do not take into account the so-called 'second generation' (immigrant children who are born and grow up in the receiving country). Nowadays, second-generation immigrants in Italy are not significant from a quantitative point of view. However, their number is increasing rapidly (Caritas and Migrantes, 2012; ISTAT, 2012).
[2] A certain number of Italian non-Catholic worshippers must be added to non-Catholic immigrants. However, their number is not significant from a statistical point of view: for instance, Italian converts to Islam number about 70,000 according to the Italian Union of Islamic Communities; Italian Jews amount to around 24,000 (Pace, 2013b)
[3] See Pace (2013c) for an overview on the places of worship of various religious minorities in Italy.
[4] In the literature, they are sometimes also referred to as musallah (musallayat at the plural form).

There are several major cities in Lombardy where applications to construct a purpose-built mosque have been (repeatedly) presented to the local authorities, but rejected by them. This is for instance the case of Bergamo, Brescia, Lodi and Milano, to mention only some cities (Saint-Blancat and Schmidt di Friedberg, 2005; for similar cases in other Italian regions, see Allievi, 2010b and Galeotti, 2012). The president of the Lombardy Region, Roberto Maroni, has declared that mosques are “a virus whose spread we must prevent” (Montanari, 2014).

The case of Milan is particular striking. Although over 80,000 Muslims reside in Milan (Blangiardo, 2013), there is not a single purpose-built mosque. For around twenty years (from 1993 to 2011), the city was governed by right-wing governments which always opposed the construction of a purpose-built mosque in various ways. However, in the past five years, the city has been run by the left-wing administration of Giuliano Pisapia, which has declared on several occasions that it intends to remedy the lack of mosques in Milan. For instance, a couple of years ago Mayor Pisapia announced that a temporary purpose-built mosque would be constructed for the 2015 World Exhibition in Milan, and that it would become permanent after the Exhibition (Coppola & Santucci, 2014a, 2014b). However, the temporary mosque for Expo was not built. The only progress in this regard is the fact that, in September 2015, the Milan Municipality allocated through a public competition three public areas for the building of a place of worship for religious minorities. Two areas were assigned to Muslim associations for two purpose-built mosques (Dazzi, 2015a). However, the actual construction of these mosques will probably take time, and many bureaucratic hurdles may slow down the process (Dazzi, 2015b).

As will become clear in the following sections, this can happen also because the Italian framework of rules governing the construction of places of worship for minorities leaves ample decision-making power to the local public authorities: indeed, town councils have a de facto, and in some cases also de jure, faculty to block the building of a place of worship in their jurisdiction if they deem it undesirable.

2.3 THE NATIONAL LEGISLATIVE FRAMEWORK IN ITALY GOVERNING PLACES OF WORSHIP

The Italian Constitution recognises and defends the freedom of individuals and groups to profess the religion of their choice (e.g. articles 3, 7, 8, 19, and 20). Places of worship are deemed a functional part of exercising this constitutional right: in fact, the principle of religious freedom cannot be reduced to inward prayer, but must also be expressed through group worship (Bettetini, 2010). The availability of places of worship as intrinsic to the constitutional right of religious freedom is enshrined in several judgements passed by the Italian Constitutional Court (for instance, ruling no. 59/1958 and particularly no. 195/1993); similar judgements have been expressed by the European Court of Human Rights (see Manoussakis et al. vs Greece, 16 September 1996). Note that the national laws impose no special restrictions on the construction of new places of worship, whatever the religion (Tozzi, 2007): religious buildings are subject only to the standard set of building and planning regulations.

Despite this apparent latitude in terms of constitutional principles and national legislation, the reality at local level is very different. A constitutional law passed in 2001 (Legge costituzionale 3/2001, Modifiche al titolo V della parte seconda della Costituzione) ruled that town planning legislation was to be transferred to the regional authorities. The snag is that, in many cases, the regional laws on religious building lack the general and abstract character of the national law, with the result that forms of discrimination arise (Tozzi, 2010; D'Angelo, 2008), particularly as regards certain religious minorities such as Islam. As we shall argue in the following section, Lombardy in particular presents a blatant case of partiality in this respect (for an in-depth discussion on other regions of Italy, see Bettetini, 2010, Bolgiani, 2013, Rocella, 2008).

Note that this situation of discrimination at the local level is possible because Italy lacks a specific national law regulating the detailed and concrete aspects of the Constitutional right of religious freedom for all creeds, just as Italy also lacks a model of integration of (or relation with) migrants. In this regard, differently from several other countries, for instance France, Germany or the UK, in Italy “there has been no real reflection on the legislative process, even less in order to build a coherent model [of integration of (or relation with) migrants]. Conflicting approaches have prevailed in different moments, characterizing different laws. It is not by chance that practically all the more important laws on migration have been linked to a sanatoria (a regularization), discussed and approved often using the term ‘emergency’ and always bearing an emergency situation in mind” (Allievi, 2010a, pp. 91-92; see also Russo Spena, 2010). In the

absence of such a national law – and of a national strategy for the integration of migrants – the current situation is characterized by a high level of fragmentation and differential treatment. Besides the privileges granted to the Catholic Church (Casuscelli, 2007b), which are linked to its great influence on modern Italian history (Pollard, 2008), every creed can negotiate special arrangements with the State by signing a concordat (intesa). These arrangements refer to different aspects: for instance, the automatic access of ministers of religion to state hospitals or prisons; civil registry of religious marriages; the facilitation of special religious practices regarding funerals; access to public funds through a voluntary check-off on taxpayer returns (the so-called 8 per mille). In Italy, many creeds have signed a concordat with the State – Judaism, Buddhism, Hinduism, or the Waldensian, Lutheran, Apostolic, and Orthodox churches (Tozzi, 2009; Lariccia, 2007; Casuscelli, 2007a) – but for a variety of reasons, Islam is not among them (Allievi, 1996, Ferrari, 2000).

3 THE SPECIFIC CASE OF THE PLANNING LAW ON PLACES OF WORSHIP IN LOMBARDY, ITALY

Lombardy is Italy's most populous region and has some 10 million inhabitants. Not surprisingly, therefore, the region has the largest number of immigrant residents: at the start of 2015 records show that around 1,152,000 non-Italians lived in the region, equal to 11.5% of the total population. The immigrants registered in Lombardy amounted to 23% of the total of immigrants legally resident in the country (ISTAT, 2015), a significant proportion of whom were Muslims (39.6%) (Menonna & Mirabelli, 2013). Nevertheless, recent regional laws have imposed tight restrictions on the allocation of Muslim places of worship.

The regional law in Lombardy that regulates urban planning is law no. 12/2005 (Legge per il governo del territorio), which has been modified several times over the years, including its provisions on places of worship. In this regard, the most recent significant adjustment was made in February 2015: regional law no. 2/2015, Modifiche alla legge regionale 11 marzo 2005, n. 12 - Principi per la pianificazione delle attrezzature per servizi religiosi (for a detailed overview of the legislation regarding religious buildings in force in Lombardy, see Marchei, 2014, and Rocella, 2006, 2008).

In general terms, the law states that both the regional authorities and local councils must promote the construction and maintenance of places of worship. This happens in two ways: first, by specifying in the municipal planning document (the Piano di governo del territorio) areas where a given place of worship may be created; second, by determining how public funds are allocated for the creation and maintenance of places of worship. To be noted is that the public funds allotted for places of worship are considerable in their amount: for example, from 2006 to 2011 the municipality of Milan assigned around 19.6 million euros (UAAR, 2014). By law, the recipients of these measures include both the Catholic Church and religious minorities.

Despite its declared principles, this regional law includes certain clauses that raise severe obstacles to religious minorities (and particularly Islam) in terms of their access to the benefits envisaged by the law itself; but it also hampers the chances of constructing a house of prayer even without any public funding.

Before analysing three main restrictions which are particularly relevant in this regard, a point should be stressed. A fairly recent modification to the regional planning laws (regional by-law no. 3/2011) extended the definition 'facilities for religious purposes' to include any kind of place with some connection to religion (such as religious schools and cultural centres). As a result, the restrictions that apply to places of worship proper, which we shall analyse below, now also apply, for instance, to cultural centres and religious association headquarters. Consequently, it is no longer possible to set up an Islamic cultural centre, and appoint a room for occasional prayer, if it does not abide by all the rules referring to religious facilities proper. Note that this situation persists despite the fact that various court 9

rulings (e.g. Tribunale Amministrativo Regione Lombardia - Brescia, Sentenza no. 242/2013) have determined that gathering for prayers on the premises of a cultural or social association is insufficient to qualify the space in question as a religious facility as such (Fabbri, 2013).

3.1 RESTRICTIONS ON THE CONSTRUCTION OF A NEW RELIGIOUS BUILDING

The regional law in Lombardy regulating urban planning sets three main obstacles to the construction of a new religious building for certain religious minorities: a widespread, organised and stable presence in a certain municipality; the presence of a plan for religious facilities; respect for the local landscape.

First obstacle: the requisite of a widespread, organised and stable presence. According to the regional planning law, if a religious minority has not signed a special agreement with the State (as stressed, this is the case of Islam), it must have a "widespread, organised and stable presence within the council's jurisdiction" (regional law no. 2/2015) in order to access the benefits of the law. However, this requisite sounds particularly vague: what does a widespread, organised and stable presence mean exactly? What are the precise criteria on which its assessment must be grounded? The law does not answer these questions. Hence, such fuzzy criteria create leeway for discretionary decision-making in each council area. In fact, a municipal administration may simply reject an application by a Muslim association if it deems that the number of followers of Islam in its jurisdiction does not reach a certain – and otherwise unstated – quota (Casuscelli, 2009). The predictable consequence of this high degree of discretionality is the fact that creating a new mosque will become even more difficult than in the past because the majority of local councils in Lombardy are run by political parties and coalitions which are hostile to the presence of (Muslim) immigrants on their territory.

Second obstacle: local plans for religious facilities, and the 'mosque referendum'. The recent modification made to regional planning law (regional law no. 2/2015) made it obligatory for all local councils to draw up a 'Plan of Religious Facilities [Piano delle attrezzature religiose]'. In this scheme each council must identify specific areas in which to address the needs of the various communities of worshippers on its territory. This document is self-contained and distinct from the other specific plans constituting a local master plan according to the regional planning law, namely the 'Strategic Plan [Documento di Piano]', the 'Public Services and Facilities Plan [Piano dei Servizi]', and the 'Regulatory Plan [Piano delle Regole]'. If this plan of religious facilities is lacking (for instance, because it is in the drafting phase; note that in Italy the drafting and approval of a spatial plan can take years), no new places of worship can be built.

To be noted is that houses of prayer are the only collective places that are granted a specific, dedicated plan in the planning system, separately from the Public Services and Facilities Plan, which allocates the spaces for all other public amenities such as schools, hospitals, and parks. Before the aforementioned legal modification was enacted, religious facilities were included in the Public Services and Facilities Plan.

When a municipality draws up a Plan of Religious Facilities, it is required by law to consider the opinions of civic committees, the police force, and the prefecture in order to evaluate the related issues of public security. The underlying concern seems to be that places of worship can pose a threat to public security. This impression would appear confirmed by the fact that the law makes it mandatory for new religious facilities to install CCTV cameras connected to the local police department, from where the authorities can monitor comings and goings at the building's entrance.

Furthermore, the law stresses that the local councils are entitled to conduct a public ballot on the contents of the Plan of Religious Facilities; a popular vote that the press promptly dubbed the 'mosque referendum'. Note that the law refers to the possibility of a local referendum only with reference to places of worship, but not, for instance, with reference to dangerous facilities like factories handling volatile substances or involving other health-risk activities (such as landfill sites).

Third obstacle: respect for the local landscape. The new regional by-law places yet another obstacle in the way of completing new facilities for religious minorities. It states that the "aesthetics and architecture of the new buildings must be congruous with the particular characteristics of the Lombard landscape" (regional law no. 2/2015). But what is the 'Lombard landscape'? What are its specific features? Note that Lombardy covers a huge area amounting to 24,000 square kilometres (falling just short of the entire state of Belgium, and around half of Switzerland or the Netherlands), and has several distinctly different types of 'landscape' (mountains, plains, swampland, riverside) characterised by a marked variety of historical, natural, and settlement characteristics. One consequently wonders to what exactly this regional law is referring. Without specifying precisely what the distinctive characteristics of the Lombardy landscape are, in this case, too, the rule gives free rein to interpretation – and hence to improvisation and random discrimination.

3.2 RESTRICTIONS ON THE USE OF AN EXISTING BUILDING AS A PLACE OF WORSHIP

As pointed out earlier, in Italy most Islamic places of worship consist of informal prayer-halls, which in many cases are located in buildings whose original function was (or still is) quite unrelated to prayer, or whose main function is not worship. This applies for instance to the many Islamic cultural centres dotted around the country, where prayer is just one of the many functions performed alongside a busy schedule of social, cultural, and recreational activities. But it applies also to the headquarters of some immigrant associations where prayer is sometimes performed, or to secular buildings converted to prayer rooms. Consider that, in several of these places, prayer is practised only occasionally, since it is usually limited to Friday prayers or holiday prayers. In many cases, Muslims in Italy (but this applies also to Jehovah's Witnesses, for instance) have made up for the lack of official places of worship by establishing such informal prayer rooms.

However, the regional law on urban planning introduced several obstacles to this practice. It not only, as said, extended the definition 'facilities for religious purposes' to include any form of recreational centre or association locale with some connection to religion, so that all the requisites analysed in the previous section applies to them. The law set another obstacle to the creation of prayer-halls as well.

The regional by-law no. 12/2005 (art. 52) relaxed the regulations limiting changes to a property's end-use that did not require building alterations. Since then, such changes in end-use no longer require permits from the council planning department[1]. The snag is that another by-law issued the following year (Legge regionale 12/2006, Modifiche e integrazioni alla legge regionale 11 marzo 2005, n. 12 "Legge per il governo del territorio") ruled that this relaxation of regulations no longer included places of worship, meaning that anyone wishing to change the end-use of a property for religious purposes must now apply for a building permit. (Note that Lombardy is now the only region in Italy in which changes of end-use for religious purposes are given special treatment: Fabbri, 2013).

Normally, a building permit is a standard document certifying that a specific transformation conforms to the standards laid down in the planning and building codes; hence, on paper, the purpose of the permit is merely to ensure compliance with the regulations, with no room for discretional decisions by the public authorities (Mengoli, 2014). That said, in Italy the issue of a permit may be subject to all sorts of bottlenecks and red tape – legitimate or otherwise – implemented by municipal planning departments and other public bodies, as has been documented in a number of cases (D'Angelo, 2008, Rocella, 2008). This is exemplified for instance by the case of the mosque in Maderna Street, Milan. In 2013 the Islamic Turkish association Milli Gorus bought a warehouse and started work in order to transform it into the first purpose-built mosque of Milan, with a (small) dome and a (low) minaret. The renovation work on the warehouse was done in compliance with all the planning and building regulations. However, according to the regional law, in order for the building to be used as a house of worship, it had to receive authorization from the Municipality for a change in end-use, which it never obtained (Liso and Vanni, 2013).

3.3 RULING 63/2016 BY THE CONSTITUTIONAL COURT

The Italian Constitutional Court has recently examined the constitutionality of the Lombard by-law no. 2/2015, following a request by the Italian government. The government asked the Court to review various parts of the law; among them, also some of the provisions analysed in the previous sections: for instance, the requisite of the 'widespread, organised and stable presence' and that of respect for the local landscape. The ruling of the Court (Italian Constitutional Court, ruling 63/2016) was complex: it accepted several of the government's objections to the regional law, while it rejected some others. In particular, it declared unconstitutional the requisite of the widespread, organised and stable presence of a religious minority as a condition for accessing the benefits of the law, because this determines a situation of discrimination against certain religious minorities, which is in contrast with several articles of the Italian Constitution. By contrast, some other provisions of the law were not condemned by the Court. This is the case of respect for the local landscape, which, for the Constitutional Court, is a legitimate criterion on which assessment of a building project can be grounded. Despite the Court's judgement, this criterion

[1] Only in the case of premises with a floor area exceeding 150 square metres must prior notice be given to the municipality.

remains very vague, and, in our opinion, leaves a degree of discretionality to the municipalities which is too broad, creating the possibility of discrimination.

4 DISCUSSION: A CRITICAL ASSESSMENT OF THE LOMBARDY LAW AND A NORMATIVE PROPOSAL

4.1 A POSSIBLE REFORM

"The fact of pluralism […] emerges as self-evident. […] By definition, therefore, 'diversity' is an inescapable feature of human societies" (Triandafyllidou et al., 2012: 2). This unavoidable demand for pluralism is strikingly urgent in many European cities, and the growing complexities of ethnic, cultural and religious diversity pose new challenges to planning the urban environment (Qadeer, 1997; Moroni and Weberman, 2016).

We maintain that a specific reform of the planning system (for instance, of the Italian planning system) could help guarantee pluralism – including religious pluralism, at least in terms of its physical presence in the urban space. In particular, this reform should comprise a radical revision of traditional systems of spatial regulation, so as to ensure an impartial application of rules of a specific type, that is, rules curbing the negative side-effects of urban functions, instead of rules regulating the functions themselves, as happens at present. To achieve this end, three simultaneous conditions must be fulfilled, which we will analyse in the following sub-sections. (When describing these conditions, we shall imagine that the reform is applied to the Italian legislative system, but, in some respects, one may consider its application in other countries as well).

First condition: ensuring a system of more 'general and abstract' rules. Essentially, the rules to be applied must be as general as possible (i.e. referring to standard situations or actions, not to specific ones), and also abstract (i.e. applying equally to all, not to particular individuals or groups). The goal is to achieve equal treatment, but in a version more radical than the one currently advocated (Somaini, 2012).

At present, the above-mentioned rules introduced by the Lombard regional authorities are neither abstract nor general. Quite the opposite: they are tailored expressly to deal with specific subjects (e.g. specific religious faiths), and hence give rise to forms of discrimination born upstream, as it were. As stated above, the Lombard by-law no. 2/2015 determines different requirements depending on whether the religion in question is (or is not) 'widespread, organised and stable'. Furthermore, this Lombard by-law envisages certain special requirements that apply exclusively to religious facilities (such as drafting a specific Plan of Religious Facilities), and which do not pertain to any other kind of public facility or community amenity.

One might concede that these general and abstract rules are in truth only a question of degree. Nevertheless, once their status has been acknowledged (and formally enshrined in the legislation more strictly than happens at present), it is no longer difficult to distinguish between blatant violations of these principles and sincere attempts to address the situation as best as possible. In other words, it is not difficult to grasp whether a rule satisfies the ideal only to a certain extent simply because one is progressively trying to reach the ideal in the existing conditions; or whether this occurs for other unacceptable reasons in light of the ideal itself (in the second case, any actor can legitimately object, even through the courts).

Second condition: preferring negative rules. Although the introduction of more general and abstract rules would per se address several problems of discrimination regarding the creation of places of worship for religious minorities (for instance in Italy), this approach would not be enough on its own. In fact, the implementation of a particular type of (abstract and general) rules is necessary. In particular, in our opinion, regulations should be applied not to the uses of land and buildings as such, but to the consequences incurred (e.g. by referring to a checklist of predefined negative side-effects or externalities). For instance: irrespective of a building's actual function, a regulation could limit the decibels of noise that it may produce; this rule would apply equally to a bar, a sports complex, a Catholic church or a mosque, and be implemented for all areas assigned for new construction or modification (without distinction).

This bypasses the traditional planning practice of drawing up in advance an exhaustive list of the permissible and inadmissible end-uses (of both land and buildings) within a given territory, and of

assigning these according to distinct areas. In short, our contention is that planning regulations should apply only as means to curb any negative external side-effects resulting from activities performed in a given building; they should not in any way regulate the activity itself (Corkindale, 1998; Moroni, 2012; Rogge, 1979). It is essential to stress that the negative side-effects under discussion here are not ones that would hinder the socio-economic efficiency of a given area (the customary interpretation supplied by neoclassical economics). This has nothing to do with the oft-cited market failures: at stake here are the rights of the individual, and the crucial issue is finding the institutional requirements to reduce interpersonal conflict between individuals endowed with basic rights, and thereby broaden their chances of addressing different goals in a constantly evolving social and cultural flux (Cordato, 1980,1994).

Note that with this system, the issue of changing a building's end-use no longer applies, and the need for authorisation likewise disappears: if the plan does not contain a priori indications of a building's or land plot's end-use, then every change in a building's or land plot's end-use is always possible, provided that it does not cause negative side-effects. This would also solve another problem made clear by the Lombardy case: preparing a traditional zoning plan regulating the functions of lands and buildings is today made no easier by the difficulty of defining precisely what a place of worship is in the case of religious minorities. Is it only a specific building that has distinct religious connotations both internally and externally, or also, more generally, any building adapted for religious purposes? Is it only where rites are performed on a regular basis, or also a locale that occasionally doubles up as a house of worship? A place where only religious services are held, or where other events take place? And not least, how many people must gather in prayer to classify a building as a place of worship?

Third condition: impartial application of the (abstract, general and negative) rules. In liberal democratic states, an unbiased and impartial application of statutory laws and rules is a standard requisite (Sartori, 1957); this should be an inalienable principle. As we know, however, in practice things go very differently in some countries. This is for instance the case of Italy: discrimination against religious minorities occurs also through the biased application of the law, such as sluggish administration, bureaucratic holdups, and extra red-tape reserved for 'special interest' groups. Which is why it is crucial to eliminate any risk of discretional procedure regarding (also) the implementation of planning and building regulations. For instance, one way to do this is to make the issue of building permits automatic if and when the transformations proposed conform to the regulations: thereby removing discretionary power of whatever kind from public officers in the planning department. Actually, this could be expedited by placing the application system online, either partially or entirely (Meijer and Visscher, 1998 and 2006; National Institute of Building Sciences, 2002). Note that all this is possible once the legislation has been purged of ambiguities like those found in Lombard's planning framework, a fuzziness that leaves the door open to interpretation and discriminatory practices, even in the application of the rules.

4.2 A COMPARISON WITH OTHER PERSPECTIVES

As well-known, numerous authors have inquired how urban planning can contribute to the growth of diversity and pluralism in general, and to the growth of religious diversity in particular (Burayidi, 2000a and 2015; Binnie et al., 2006; Dwyer et al., 2016; McClymont, 2015; Murtagh and Ellis, 2010; Qadeer, 1997 and 2016)[1]. Even in the diversity of viewpoints and proposals, many of them declare that some kind of 'positive action' (i.e. 'affirmative action') by the public authorities – and by the planners as well – is of paramount importance. A 'positive action' implies that members of disadvantaged groups (such as Muslims) would be the target of specific measures in order to ensure them access equal to that of the majority population, for instance in terms of having a voice in the planning process and seeing their needs satisfied by urban policies. Among the various positive actions in the planning domain there are: developing methods for promoting participation in the planning process

which reflect the cultural specificity of different minority groups (Sandercok, 2000; Main and Rojas, 2015); appointing an officer specifically to deal with the problems and specificities of different cultural and religious communities, and training local authorities and planners in conflict negotiation and cultural sensitivity (Thompson, 2003); designing specific planning documents to deal with the needs of a multicultural and multi-religious city (Uyesugi and Shipley, 2005).

[1] For an overview on planning and diversity, see also Fincher et al., (2014), and van der Horst and Ouwehand (2012).

The discretionary power of mayors has been of fundamental importance in allowing the construction of mosques in several Belgian cities, despite the opposition by local councils and population (Torrekens, 2013). And “flexibility in planning norms and practices” (Qadeer, 1997, p. 493) is considered to be an key element of the Canadian approach to ethnic, cultural and religious diversity. In this regard, it is considered essential that individual planners and local authorities are encouraged (and trained) to become culturally inclusive, and to develop sensitivity to diversity in all its guises (Thompson, 2003). “It hardly needs to be said that the success of this kind of planning work depends very much on the skills and wisdom of the practitioners involved” (Sandercock, 2000, p. 27; see also Vahed and Vahed, 2014). The importance of this sensitivity appeared clear in the case, for instance, of some municipalities in Australia (Thompson, 2003); and it is an important element in the planning departments of several US and Canadian cities dealing effectively with diversity (Qadeer, 2015).

In many cases, scholars stressing the need for positive actions highlight the limits of a ‘normative approach’ to problems of pluralism and diversity in the urban sphere. As Sandercock (2000, pp. 15-16) argues, planning systems and regulations express the norms and values of the culturally dominant majority – that is, in Italy as well and in many Western countries, a Judeo-Christian, male and white majority. Hence, these norms are insensitive to religious minorities, in particular minorities distant from the mentioned traditions such as Muslims (on this topic, see also Burayidi, 2000b; Keetch and Richards, 1999; Diver and Thompson, 2007; Dunn, 2001; Fincher at al., 2014; Qadeer, 1997; Watson, 2005; Villaroman, 2012).

While we recognize that certain forms of positive action can be helpful (in particular, promoting various forms of participation, training officials and planners to deal with multicultural contexts, appointing specific public officers to address the problems of minorities), we believe that the principal reform must concern the background legal framework. The fact that the current legal framework is in many countries (as in Italy, particularly at the regional level) biased does not mean that it is impossible to create a more impartial one. A more impartial legal framework, based on a radical idea of equality of treatment, entails a profound revision of local plans and regulations.

As we argued with reference to Lombardy, here local authorities are not only reluctant to promote actions in favour of religious minorities; they often take advantage of the opportunities offered by the planning law in order to discriminate against them. At the same time, while the criticisms of a ‘normative approach’ to problems of diversity are convincing on certain points, they sometimes fail to consider some opportunities offered by this perspective. In many cities, building and zoning laws and practices have been revisited in order to accommodate the different needs emerging from cultural diversity (Burayidi and Wiles, 2015).

5 CONCLUSIONS

Religious diversity is a basic characteristic of a great many European cities, and is now an everyday reality of Italy’s urban environment. This diversity affects also the city’s physical structure, for instance through the appearance of new places with a religious characterization. This is the case, for example, of houses of worship of religious minorities. The spread of such ‘new’ places has inevitable repercussions also in terms of planning (theory and practice).

From this viewpoint, the case of the Lombardy region in Italy is paradigmatic: even if Italy’s Constitution explicitly guarantees the right of all religious minorities to create and enjoy places of worship, in practice this basic right is thwarted by the mesh of regional planning law and local planning practices. This is because the regional planning laws are prone to discriminatory decision-making by bureaucrats and policy-makers which violates the Constitutional right to religious freedom.

Planning theorists have often asked what it would take to foster and ensure diversity and pluralism in today’s cities and societies. Numerous proposals have been put forward in this regard. Although with several differences, roughly speaking we can state that the majority of these approaches claim that some type of ‘positive action’ is required on the part of the public authorities; at the same time, they often claim that any intervention on planning regulations would be insufficient and ultimately unsuccessful.

As we argued in the previous sections, we believe that in certain situations – as in the case of Italy – these positive actions run the risk of being ineffective simply because, for many reasons (for instance, political

ones), they are not implemented by local authorities. In Italy, contrary for instance to many US and Canadian cities, planning practice is not already responsive to ethno-cultural diversity, and planning departments have not already adopted pluralistic standards for the development of places of worship (Qadeer, 2015).

On the contrary, the efforts of many Italian local authorities are devoted to discriminating against certain religious minorities, something made possible by the discretionary power assigned to them by regional laws. This is why, when basic rights are at stake (including religious freedoms), it is crucial to ensure that rights are protected against the random impositions of the public authorities. This crucially refers also to planning and building regulations, since, as we stressed, in Italy it is exactly here, at the local level, that infringements of these rights occur.

For this reason, all regulations regarding land-use must be 'airtight' in how they work, and under no circumstances must they clash with the basic rights of individuals: they must function 'correctly' (that is, respect constitutional rights) even when employed by 'incorrect' public authorities (that is, public authorities willing to violate those rights).

Regrettably, the current Italian planning system (but this applies to other Western countries as well) seems more eager to satisfy the (presumed) needs of the urban fabric before it addresses the basic rights of the citizens themselves. This discrepancy is glaringly obvious in the case of the failure by certain Italian municipalities to ensure that religious minorities have their rightful places of worship, as required by the Italian Constitution. What is sorely needed at present is an inversion of the ratio between the government powers over the territory and religious rights (Rocella, 2008): along with other constitutional rights, the right for appropriate places of worship should have priority over planning decisions; and the town plan itself must ensure that those constitutional rights are honoured to the full. Faced with communities and institutions that frequently display hostility to the presence of ethnic and religious minorities on 'their' soil, endowing local administrations with discriminatory powers puts the democratic process in jeopardy. For this reason, it is essential to eliminate a priori the faculty of local councils to exercise differentiation (i.e. discrimination) through land use planning, thus avoiding any backlash on the basic rights of the citizen.

To achieve this, we suggest that radical changes should be made to the way in which land-uses are planned, governed and regulated. In particular, it is important to evolve towards systems composed of more general and abstract rules that deal first with the possible harmful side-effects, rather than interfere with the end-uses (i.e. preference should be given to forms of 'nomocratic planning': Moroni, 2012; Holcombe, 2013)[1]. This is obviously just an 'ideal', which may prove difficult to implement immediately and which would require several adjustments in order to be put into effect. However, we think it important to place it at the centre of the thoughts of planning theorists working on problems of (religious) diversity, who do not always consider the potential of a 'normative approach' to these questions.

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[1] Note that this does not involve introducing any special (and controversial) new 'group rights' or 'collective rights' into the system – something that many advocate as a means to provide minorities with better chances of building and managing places of worship (Calder et al., 2014). Instead, our proposal lies comfortably within the sphere of the universal rights of the individual. Indeed, it is worth noting that certain proposals that concern group rights actually seem to stem – as in the present case – from the notion that planning bodies can freely differentiate and decide specific land-uses at will.

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ID 1741 | IMMIGRANTS AS AGENTS OF URBAN TRANSFORMATION: TESTING NEW TYPOLOGIES AND NEW BRIDGES BETWEEN CONCEPTS AND EMPIRICISM

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ABSTRACT: The paper reflects on migrations and discusses how the role of immigrants in cities can be assessed. In a complex context of migrations and urban transformations I explore the relationship between these two components. Is the role of immigrants in urban spaces analysed by policy makers? Is the diversity of migrants and foreigners considered on urban planning and housing policies? What categories of immigrants do government agencies and supranational institutions contemplate? Do the variables considered when categorizing immigrants express the complex reality of migration? These are some of the questions that guided the reflections presented here. Being an exploratory work I will not seek to answer these questions but rather to critically discuss their pertinence. In the Portuguese context this discussion is relevant due to territorial imbalances and inconsistencies, affordable housing shortages and enhancing discourses on the value of the contribution immigrants make. When studying immigrants and foreigners who enter and remain in Portugal, it is clear, that the new and overlapping situations do not fit the traditional categories of immigration and tourism. Thus I propose a set of categories more adjusted to these circumstances considering immigrants and foreigners in the cities, their housing needs and specificities. Methodologically, the research consisted of a literature review and was carried out employing analysis of several laws and documents focusing conditions for entry and to stay on Portugal and the right to housing. The paper is divided into four sections. Section one gives a brief overview of the migrations complexities and some problems and challenges arising from this situation. Particular attention is paid to the migration studies and to the impacts of migration flows in cities. Throughout the section two I discuss the concept of immigrant and the way this one is operationalized in legal and administrative categories. This analysis confirms that traditional categories of migrants weren't broadened by the inclusion of the effects of migrations in the urban spaces. Recognizing this gap, in section three I propose a new approach who consider the impacts of immigrants and foreigners in the city, especially in its housing component. For the drawing of this exploratory typology I considered the situation in the Portugal, namely in the city of Lisbon. Conclusions are outlined in the last section.

1 THE COMPLEXITIES OF MIGRATIONS IN CITIES

Migrations are embedded in a globalized system, urbanized and framed by the interdependence between mobility of people, information and objects (Sheller & Urry, 2006). In an increasingly vast relational network of places, cities are particularly important (Sassen, 1991) and countries lose prominence. Consequently, the issues of social cohesion, sustainable development and migrations are becoming increasingly relevant to local authorities and communities. The migrations are a phenomenon eminently urban and the spatial inclusion of migrants in the city is a topic of interest, in the current context of globalization, urban complexification (exponential urban growth, fragmentation, gentrification), increasing mobility, diversification of migratory flows (King, 2010) and transnational practices (Vertovec, 2010).

Although the large diversity of migratory experiences appears as a striking feature nowadays, this is not unprecedented. In Europe, before the 19th century, diverse migratory movements were reported, determined by labour, religious, political, study and leisure reasons (Fassmann, 2009). The currently mentioned complexity of migrations is due not only to the diversity but also to the intensity of movements, covering an extensive combination of reasons of migration, travelled distance, fragmentation of movements (King, 2010; Sheller & Urry, 2006). The ease of mobility and communication, the new systems of economic and social organization allows and encourages new migratory modalities disregarded in traditional visions of migration associated with simples and permanent movements from one place to another (King, 2010). Nowadays there are sharp new and flexible mobility patterns, including migrations led by temporary workers, international students, artists and retirees, as well as hybrid situations between tourism and migration, namely residential tourism, which is becoming more popular, being no longer an

exclusive of the elites. Within this scope there is a need for innovative approaches, who allows to operationalize new concepts. These intentions should, go hand in hand with strategies to capture and analyse data related with these realities. More details on this are given in the work of a remarkable number of international organizations and scholars (Fassmann, Reeger, & Sievers, 2009; GCIM, 2005; Lemaitre, Liebig, Thoreau, & Fron, 2007; Ruhs, 2005; OECD Secretariat, 2015).

The impacts of immigration in the production and appropriation of urban space are least discussed than in other areas (economic, political, demographic, cultural). Despite this it is recognized that changes in migratory dynamics have repercussions in the urban space. In this regard note the existence of a literature that highlights the role of immigrants from the global South in the process of development and reinvention of western cities (Davis, 2001; Ford, Klevisser, & Carli, 2008), examines the relation between migrants and urban landscape (Gésero, 2014) and their effects in the housing market (Malheiros, 2001; Teixeira, 2015).

2 WHO IS AN IMMIGRANT?

Human mobility is a fundamental component of the economy and international migration. As a result migration plays an important role at local, national, regional and global levels and the management of migratory flows is a key issue not only in national political agendas, but also for supranational institutions. Certainly a set of phenomena in the context of migration is not controlled by governments, such as the entry of undocumented migrants, asylum seekers and the formation of new ethnic communities (Bertossi, 2008; Castles, 2004) and there are disconnections between migration policies and their results, between political discourses and laws and regulations Castles (2004). But even so, policies should not be underestimated. The States have the formal political right to control their borders, to decide who may and may not cross its borders and under which circumstances. Furthermore, as Ley (2010:8) points, states can play an active role in globalization, in particular by strengthening some imbalances in migratory movements As will be seen migration policies tend to be selective, namely through programmes and legislation that attracts welcomed people, creating special entry and stay conditions. For some individuals borders may be insurmountable barriers and for other mere places of passage.

Countries and companies seek human resources to improve their competitiveness and this is done in multiple ways. Correspondingly border control tends to differentiate those interested in entering. Some immigrants work on tasks that nationals are reluctant to do. The group of economic migrants is often devalued unless they are highly educated and have relevant skills for the host country while others are valued and engaged in high-value activities, such as immigrants and foreigners recognized as potential investors and promoters of economic development in the host country (GCIM, 2005).

Countries categorize immigrants legally and administratively by differentiating groups of individuals that can remain in national territory, for a predetermined period of time, defining the conditions that they must fulfil in order to have the right to remain there. As will be seen, this type of categorization is mainly linked to the connection of the immigrant with the work and length of stay, and these two dimensions are related to each other (OECD Secretariat, 2015). At the same timeit must be noted several efforts to standardize statistics on migration (Lemaitre et al., 2007) and more recently to explore data on temporary migration (OECD Secretariat, 2015; Vargas-Silva, 2016). Despite the attempts, no universal uniform definitions of the concept of immigrant, standards for the regulation of statistics and methods of gathering statistics on international migration have been achieved. The debates around the concept of immigrant and its operationalization are complex. Note the diversity of criteria considered, namely nationality, country of birth, length and motive of stay (ONU, 2002:10).

There are clear limitations associated with concepts and statistical data undermining a real picture of the migration and comparative analyses (Bose, 2012; Fassmann et al., 2009; Skeldon, 2012). The conceptualization of immigrant categories is supported by different sets of scales, distinct interests of nation-states, supra-national institutions and intergovernmental organizations.

The national statistics who describe international migration are closely related to the country's history and migrations in the country (Fassmann et al., 2009:17). Nevertheless there are evolutions taking place. In this dynamic reality the "classical" understanding of immigration associated to a movement in space with a minimum time of permanence in the destination has been successively rethought. It should be noted that the duration of the stay has changed rapidly and is now possible to recognize as a (temporary) immigrant

a person who stays in a host country for three months, something that would be unthinkable in the early twentieth century. The overlapping between migration, mobility and tourism makes it difficult to categorize groups present in the city even accepting that categories will always be a simplification of reality.

The complexity of mobility and migration is only partially considered within the legal and administrative. The categorization of immigrants is essentially delineated considering their positioning in relation to the labour market. Obtaining a residence permit/visa is essentially related to work, study or mixed situations (work and other reasons). Thus the type of visa granted and the entry and exit status of the country is closely related to the type of access to the labour market. Given this scenario, the level of education and skills is a distinguishing factor among migrants, something easily explained in a context of global competitiveness, in which countries and cities seek to raise resources (labour supply, capital).

If migration policies are to be framed in an integrated view, considering the economic and social perspectives of the phenomenon and the impact that migrations will have on the host society in multiple dimensions, the repercussions of the migrant presence in the urban space must also be considered. And finally these aspects should be considered in urban planning. Immigrants can make undeniable contributions to urban dynamics, particularly through an influx of young people, growing number of births and attenuation of aging, provision of new products and services, job creation, revitalization and animation of declining areas, production of new urban landscapes, cosmopolitanism and diversity of religions and cultural offerings.

The segmentation of migrations and the debates surrounding new categories of immigrants have diversified and become more and more widespread. There are an increasing number of studies who focuses international students, sun seekers, residential tourism, and lifestyle migrants. But while there is an impressive debate about the diverse migratory segments, becomes difficult to present a global view of the migrations, as already stated by Castles (2010) who argue the need for an interdisciplinary study of migrations, connecting migration processes to societal changes. Following the previous point, considering the desirable interdisciplinary and comprehensive vision of migration and the purposes of the present paper it is relevant to discuss the legal and administrative categories of migrants and the variables that characterize them, something not sufficiently critically discussed (Fassmann et al., 2009; Janoschka & Haas, 2014) but which reflects power relations and the drivers of migration policies. Despite all complexity in migration the variables to be considered in the categorization of immigrants have not changed significantly, being essentially based on the economic dimension.

It would be possible and useful to express the impacts of immigrants and foreign in the territory through the legal categories, towards a more comprehensive role of the immigrants as agents of urban transformations?

3 IMMIGRANTS AS AGENTS OF URBAN TRANSFORMATION

Migrants, foreigners and city users relate in multiple ways to the urban space. They contribute to modify the image of the neighbourhoods and of the cities, when they invest, live, or are present in the urban space. The following describes some of the most meaningful ways this groups impact the cities in its urban dimension. Next, I turn to the Portuguese context. To shed light on the research topic I confront the migration and urban situation, the positioning of immigrants in the housing market and the policies that can reinforce the role of immigrants as agents of transformation of the urban space. With this in mind, I present an exploratory framework how allows to confront migration and urban dimensions through typologies. In this frame it is listed a wide group agents and not only “traditional” immigrants, for the already mentioned overlapping between immigrants, foreigners, tourists.

3.1 INTRICATE INTERRELATIONS BETWEEN MIGRANTS AND URBAN SPACE

Among the new phenomena contributing to the study of the relationship between migration and city production are the new contexts of super diversity (Hall, 2015), the lifestyle migration, residential tourism, the foreign investment in the real estate market (Bernardos, Martínez-Rigol, Frago, & Carreras, 2014) and the increasing number of international students and skilled workers.

The term "lifestyle migration" (Benson & O'Reilly, 2009; Janoschka & Haas, 2014) is associated with privileged forms of mobility, which do not occur primarily due to economic reasons or safety issues, unlike migrant workers, refugees, asylum seekers. The lifestyle migration refers to leisure-oriented mobilities that are conceived as the spatial mobility of affluent people of all ages who move between places, that have the potential to provide a better quality of life, and it covers retirement migration, leisure migration, second home ownership and seasonal migration (Benson & O'Reilly, 2009). The migratory movements associated to these realities can modify urban spaces, promote the real estate business and eventually foster changes in the community life of the destination neighbourhoods (Janoschka, 2010). Foreign groups are encouraged by some states to enter and invest in the country, namely through the purchase of property (Ley, 2010; Sumption & Hooper, 2014). The investment in residential tourism, the development of second homes, the short-term use of housing for tourism purposes and the promotion of housing directed to foreigners induces questions about some consequences of these situations like socio-spatial changes, changes in the housing market, gentrification, empty buildings during a large part of the year, real estate speculation, etc.

Spatial distribution patterns, socio-spatial segregation, housing trajectories and housing preferences are classic themes of the social sciences being object of diverse approaches that allow to reflect on housing provision, social mechanisms and actions of agents. Ethnic issues are also addressed in these themes. The presence of immigrants in peripheral and devalued areas tend to question situations of social exclusion and even conflict and presence of violence through the ethnic dimension (Malheiros et al., 2007) and refer to the expulsion, relocation, involvement or empowerment of ethnic minorities living in those areas (Kempen & Dekker, 2006).

In the context of the central areas the dynamics occur under the watchful eye of political decision makers, scholars, and society in general. Here the immigrant presence is contextualized in a discourse of diversity and interculturality as a distinctive element and promoter of a neighbourhood or city, making it potentially more attractive (Loukaitou-Sideris & Soureli, 2012; Shaw & Bagwell, 2012). In these scenarios, the improvement of the urban space may even enhance gentrification and socio-ethnic transformation, resulting in a threat to ethnic diversity, intercultural practices and inclusive urban spaces, with detrimental effects on the most disadvantaged communities (Mendes, 2012). Moreover the increase in housing costs may affect the future installation of low-income immigrants and force the departure of those who live there. The right to the city, for the resident or for the present (Darling, 2016), is exposed in these situations, being discussed by academics and citizen groups. As will be seen, this is a problem that has been intensified in Portugal, for example in Lisbon, due to the intensification of tourism, the rise in the price of housing and the increasing supply of real estate for temporary inhabitants (Mendes, 2017).

Access to housing, conditions and location of immigrants' residence express the integration of these communities into the host countries. Housing is a human basic need, has a social dimension and additionally it has a territorial and economic content. Consequently, reflections on housing and immigration allows a multilevel understanding of immigrant integration, structural aspects (migration dynamics, urban policies, etc.), local contexts (socio-spatial structures, local level programs and measures, characteristics of the housing supply) as well as the characteristics of the families and individuals in question (economic situation, cultural preferences, relevance of contact networks, etc.). Housing is an economic and social asset and is a platform for accessing the city, living space, with an active role in building interactions and access to social rights. For all this, is justified a closer look at housing issues in the present study.

3.2 THE PORTUGUESE CASE

The study of immigration in Portugal is relatively recent. After the 1974 revolution and subsequent independence of the former colonies in Africa, the number of immigrants increased significantly but immigration only becomes a hot topic from the late eighties and nineties of the last century, due to the growth and diversification of immigration flows, associated to the entry of Portugal into the European Union, which gave rise to economic development. The strong social and economic impact of the presence of the new populations in the country and the lower visibility given to emigration in these decades it also acted in immigration valorisation (Baganha & Goís, 1999; Malheiros, 2011).

More recently, the noticeable decrease in immigration[1] coupled with the growing emigration volume has modified the picture. One could think that the new context has potentially made the analysis of the flows of foreigners arriving in Portugal and immigration potentially less relevant but the issue of immigration remains significant for Portuguese society. There is a maintenance of a stock of immigrants (including foreigners and recent naturalized), and new dynamics: significant reduction of inflows, consolidation of the immigrant presence associated with situations of family reunification, emergence of new Asian groups such as those from China, Bangladesh or Nepal, discourses and strategies for attracting international students, skilled worker, immigrant investor as those covered by the residence permit for investment activity (ARI) and by the tax regime of the non-habitual residents (NHR regime).

Additionally the benefits of the presence of immigrants to Portuguese society have been evidenced expressing contributions on the demography, diversity and cultural and economic dynamics of the country (Oliveira, 2014; Peixoto, Craveiro, Malheiros, & Oliveira, 2017; Rosa, Seabra, & Santos, 2003). The effects of migrations on population decline, even leads to discuss the relevance of the notion of "migration replacement", understanding that the aging of the population can be counteracted by a certain volume of immigrants.

By contrast repercussions of migrations in the urban space are less mentioned despite the contributions of immigrants in the configuration of the urban landscape (Gésero, 2014). The spatial expression of migrations within the Portuguese territory must take into account the evolution and characteristics of migratory flows, but also the process of urban growth, the characteristics of the housing stock, the principles of spatial planning, housing and urban policies.

The urban development in Portugal is characterized by a rapid urban growth at the end of the 20th century, not accompanied by desirable spatial planning measures. The inability to regulate urbanization which was replaced by an absence of action in the face of the complex urban patterns originated (combinations of urban sprawl, fragmentation) (Portas, 2011). In addition the housing in Portugal is also a problem. Notwithstanding the housing and urbanism rights enshrined in the Constitution of the Portuguese Republic (CRP) there was an absence of housing policies and the inability of the State to regulate Real Estate activity which significantly contributed to the persistence of housing lack (Ferreira, 1987; Nunes, 2011; Serra, 2002).

Recently affected by the economic crisis, the housing market undergoes transformations, confirming as perceived tendencies, the commodification and privatization of the housing sector. These processes were facilitated by a reinforcement of the discourses of valorisation of the urban rehabilitation and of the rental market framed by new legal acts which generates profits for property owners and investors, namely through "touristification" and gentrification[2] of the central and historical urban areas.

Another trend is the reduction of state intervention in housing. The social housing stock, despite little significant in quantitative terms, it was decisive for the improvement of the quality of life of many families living in precarious conditions in the last decades of the 20th century. There was an investment decrease in this sector namely in the maintenance and management of the existing neighbourhoods, and a shrinkage of the housing public promotion, starting from the from the early years of the new millennium, when the construction cycle associated with the Special Rehabilitation Program (PER) closed (IHRU, 2015).

In addition to the changes associated with the housing supply and the functioning of the market, the economic crisis had strong impacts on the access and maintenance of housing by many families, mainly the most vulnerable ones. Notwithstanding the prices for housing continue to be high, with a low number of affordable housing (in the private and public sector). The immigrant population, mainly non-EU immigrants shares these difficulties and adds to these, associated to their overrepresentation in unfavourable

[1] The Portuguese Immigration and borders service (SEF) accounts 445262 foreigners in 2010, 395195 in 2014 and 3388731 in 2015. According to the Ministry of Justice and the Portuguese National Statistical Institute (INE) a part of this decrease is explained by naturalizations.

[2] Gentrification is the process of social recomposition of the population in a given territory, as a result of the urban transformations that occurred in that territory, namely through renovation and urban regeneration operations. The improvements in the built environment and the social and economic revaluation of the area increase the economic value of housing and commercial spaces, making them inaccessible to the low-income population. As a result, there is a gradual replacement of the poorest residents by groups of higher socio-economic status. For a detailed review on this topic see Smith (1996) and Rodrigues (2008).

employment situations, situations of discrimination, difficulties and inequalities in access to credit, restrictions and constraints on access to public housing and other social supports and less access to information (Fonseca & Malheiros, 2013; Malheiros & Fonseca, 2011).

On the other hand, must not be forgotten, the financialization of the real estate sector in which the foreign investment is also present. The housing market, facing with the stagnation in construction and in the acquisition of own house, relied on new strategies based on urban regeneration and dynamization of the rental market, the luxury market, of the temporary and shortterm use of housing for tourism purposes. In this context, foreign investment seems to have had positive repercussions on market growth, not being negligible the advantages attributed to investors by the Portuguese government through ARI and NHR regime as well strategies to raise tourism and for attracting students and skilled workers.

Immigrants in Portugal have different profiles, as a result of the dates of entry into the country, nationality, socioeconomic characteristics and legal status. In turn, this diversity results in different positions in the Portuguese housing market. In a simplified way there is a duality in the access to housing by immigrants based on their economic capacity and investment interest in the housing sector. Some are in an advantageous position and can access higher levels of the real estate market, namely luxury segments. This group tends to appreciate spaces with qualified architecture and urbanism, in well-equipped areas and with socially prestigious status, and many times cultural and historical values associated. These areas, if only accessible to the classes with greater economic power, promote auto-segregation. This type of demand is especially profitable for the real estate sector by allowing a higher profit margin.

The others, the vast majority of immigrants are in less qualified segments of the labour market that places them at the level of the lower and middle-low social classes, and therefore in a vulnerable position to access housing. In this case they develop housing strategies towards the lower segments of the market, not only formal but also informal. This duality is confirmed through the situation of foreigners in the Lisbon housing stock (Malheiros & Fonseca, 2011; Ramos et al., 2015).

In the Portuguese context, there is no depth debate regarding the impacts of the Residence Visa for the investors and the implementation of favourable tax regimes for non-habitual residents. Although these are explored in individual projects (Loureiro, 2016; Mesquita, 2014; Quintela, 2014) the discussion has not been wide-ranging, especially with regard to the consequences of these at local and national level. This paper addresses the theme because the benefits deriving from these programs tend to be associated with investments in the real estate market. Other strategies for attracting foreigners should also be followed up, such as those targeted to international students and tourists, groups that have been growing as indicated by Alves (2015) and INE (2015).

Immigrant investor programs are strategies for attracting foreign investment. According to the political choice of the countries in which they are applied, it grants right of residence, citizenship or tax benefits to investors, professionals qualified (foreigners or even national citizens). The beneficiaries of these programmes choose to do it in countries with attractive social, economic, political and security conditions (Loureiro, 2016; Sumption & Hooper, 2014). Within a competitive context of demand for resources and capital the Portuguese government had implemented the residence permit for investment (ARI) in 2012, under the Law 29/2012 of 9 August. The program provides a valid residency permit in Portugal (Golden Visa) in exchange of capital investment made through: a) the purchase of real estate; b) investment in funds or c) creation of jobs. The acquisition of real estate is the most significant investment in this program (see Table 1) considering either the number of residence permits (94% of total residence permits were obtained through the acquisition of real estate) or the value of the investments (90% of the investment was made in real estate).

The tax regime of the non-habitual resident is implemented in Portugal in 2009 and is aimed at foreign or Portuguese citizens who have been abroad and wish to live in Portugal. The objective of the programme, according to information available, on the Portuguese finance website[1], is to attract non-resident professionals qualified in high value-added activities, intellectual property, industrial know-how and beneficiaries of pensions abroad.

[1]http://info.portaldasfinancas.gov.pt/NR/rdonlyres/83762009-3DC2-47FC-ABBE-35EFE35E8865/0/IRS_RNH_PT.pdf

To understand the purposes, impact of these programmes and its target in the real estate sector it is important to remember that these supports are instituted in a time of economic crisis, which has had high impacts, especially in the real estate sector. According to Quintela (2014:76) the Real Estate Mediating Professionals and Companies Association (APEMIP) revealed that investments made under the scopes of ARI and NHR, including investments from national emigrants had increase real estate sales since June 2013.

Types of investment	Number of Resident Permit		Investment	
	Nº	%	Eur	%
Acquisition of property	4712	94,18	2.772.806.471,60	90,1
Transfer of funds	284	5,68	305.696.704,02	9,9
Job creation	7	0,14	---	0,0
Total	5003	100,00	3.078.503.175,62	100,0

Table 1 – Resident Permit for investment Activities (ARI) – 8/10/2012 to 30/11/2016
* Considering family unification the total number of resident permits is 13133.
Souce: adapted from statistical map, available in http://www.sef.pt/documentos/56/Mapa_ARI_PT_abril17.pdf

These kinds of programmes are controversial in different ways. These policies are characterized as a way of "selling visas and citizenship" (Sumption & Hooper, 2014) and as a mechanism to transform a country in a tax haven for foreigners (Mesquita, 2014), illustrating distinct response by the State to immigrants, according with their resources. Moreover is hard to reach a consensus on whether these programmes are promoting migration or investments. Within the framework of the ARI it is required to the beneficiary a minimum time of physical/residential time stay in the territory but this period of time is limited to seven days in the first year of the benefit[1]. The contradiction increases when some measures concern with procedures related with ARI are set out in the Strategic Plan for Migration (measure 76). Within the NHR Regime and according to the Portuguese tax law, the so-called NHR will have to stay in Portugal for more than 183 days, followed or interpolated or have a dwelling, under conditions, who proves the intention to maintain and occupy the dwelling as habitual residence (Mesquita, 2014:7). This condition occurs along with doubts related to how effectively control the length of the stay in the country.

Moreover the economic benefits of this kind of programme to the country aren't clear (Loureiro, 2016:18). As Sumption and Hoope (2014) have highlighted there may be some shortterm benefits such as job creation, rising house prices, and increased tax revenues, but in the long run these programs could lead to stagnation in the housing market.

3.3 A TYPOLOGICAL PROPOSAL

Considering what has been described, I propose a typology of immigrants and foreigners to explore their impacts and relations in the housing sector. In this exploratory framework I considered the housing dimension, altough the ambition to present a wider framework who allows a more comprehensive perspective of the immigration and processes of urban transformation (spatial, demographic, economic, social and cultural). For now our main point is to warn about in the use of traditional categories of immigrants when studying both migration and cities. Taking into account the various urban uses, housing is one of the most significant allowing a set of analyses, as already mentioned. At this stage of the research is possible to easily explore, quantitative data from secondary source who considerer both nationality and housing, namely collected through census. For a broader analysis of the role of immigrants in urban space, would be required intensive fieldwork on immigrant entrepreneurship and urban experiences of diverse ethnic groups.

The typological proposal was performed considering two situations in confrontation: the most significant entries of foreigners and immigrants in the country and the known impacts they have on the housing market (see table 2). I started by categorizing immigrants and foreigners presents in the city having resorted to traditional variables linked to migration like the motive to entry, the duration of stay, the education level. Thought the various combinations of variables are specified some groups of immigrants and foreigners. The purpose to enter the country and the length of stay is seen as motivation factor to

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invest more or less in the housing, If the the immigrant is coming alone or with family or if there is an expectation of family reunification can also be established as to deal with. For international students and tourists the choice of a place to stay probably is more related with the presence of amenities, historical and cultural status of the neighbourhood than for long-term workers. Finally the level of education and the immigrant status is indicative of the purchasing power that a given group has, a determining factor for the demand of housing.

To describe the impacts of foreigners and immigrants in the housing market has been incorporated their housing preferences. The short term labour market migrants as well as students will probable access an accommodation in the rental market. Situations of homeownership are more likely to happen for long term migrants and other beneficiaries of the aforementioned programs. Many of the beneficiaries of these programs have acquired a home, either on a permanent basis to remain in the territory or as a form of monetization of capital, namely through lease or subsequent sale of propriety.

By contrast social and institutional support is fundamental, for some of the people entering the country, namely asylum seekers, refugees, not only for the housing component but also for other needs. However the public support does not answer to the housing problems of many immigrants in disadvantaged situations. There are many restrictions and constraints on access to public housing and a very limited number of accommodations. For the groups of foreigners who declare a short stay in the country, like tourists and visitors their needs tend to be fulfil by the offer of short-term rental markets (like the one promoted by Airbnb) or tourist accommodations. I include this last group in this framework because a first visit to the city can be one first step in a migration experience and the presence of tourists and visitors can is a driver of change in the real estate (Gant, 2015).

Through this framework it is possible to identify clear relations between mobilities and the housing market as wells as pointing implicitly new settlements patterns and urban transformations. At a later stage this relations could be further developed considered the geography of the studied groups, the type of location area (holiday regions, historical centre, elite zones, renewed areas, etc) and also the preferential socio-spatial locations (whether groups want to be closer to similar groups in social and/or ethnic terms).

Categories of immigrants and foreigners				Impacts in housing market -				
Motive for entry	Duration of stay*	Migrants education and status	Categories (exemples)	Home ownership		Rent Market	Social and institutional support (social housing)	Informal market
				Investiment	Occupied dwelling			
Labour related	Short-term	Predominantly high	Intra-company transferees; Posted workers, Manager, Researchers, Professors and other key personnel professionals, Job seekers			XXX		
		Mixed or indefined	Accompanying family members of temporary workers			XXX		XXX
		Predominantly low	Seasonal workers (agricultural activities or others) or other workers			XXX		XXX
	Long-term	Predominantly high	Highly skilled workers		XXX	XXX		
		Mixed or indefined	Familly reunification		XXX	XXX	XXX	XXX
		Predominantly low	Low skilled workers			XXX	XXX	XXX
Study related or Mixed labour and other propose	Short-term	Predominantly high	Students, Trainees, Youth programme			XXX		
		Mixed or indefined	Working holiday makers			XXX		
		Predominantly low	Au-pair			XXX		
Investment/ retirement	Very short-term to long term	Predominantly high	Residence permit for investment activities	XXX	XXX			
	Short-term to long-term	Predominantly high	Non Habitual Residents	XXX	XXX			
Humanitay categories	Uncertainty	---	Asylum seekers, medical treatment, refugees				XXX	
Others	Very short to short-term	----	Tourists, travellers, vitauts			XXX		

* Long-term stays are last more than 1 year; Short-term more than 3 months and less than 1 year and very short-term less than 3 months

Table 2 – Immigrants and foreigners and impacts on the housing market

4 FINAL CONSIDERATIONS

Immigrants and foreigners contribute to change in the urban dynamics to which it made an active contribution the impacts of these groups in the housing sector. In Portugal, despite the small number of immigrants, there is an increasingly diverse real estate market and rental market, especially targeted to foreign investors and lifestyle migrants, confirming a trend, already announced by Sumption and Hooper (2014). At the same time difficulties in accessing housing by the most disadvantaged groups, including labour immigrants, persist. It is argued that these aspects should be considered not only in the context of migration but also in the context of urban planning and spatial planning, under an interdisciplinary and comprehensive vision. So the implementation of measures for the management of migration flows, the impacts of the entry and stay of foreigners and immigrants in the territory must be considered and reflected in spatial planning strategies. However migration policies are still very much anchored to economical dimensions of migrations associated with labour, despite the discourses that praise interdisciplinary approaches of migration - a complex phenomenon of contemporary societies with social, economic and political implications. Thus we defend that should be given greater prominence to the diversity of migrants and foreigners and their role in urban spaces This can be done through a confrontation between the management of the entry, presence, exit and status of foreigners and the territorial planning policies, in which we include the housing policies. There are several limitations in this paper, part of them related with the exploratory nature (preparatory and preliminary) of the approach intended to be developed in the future. The discussion has focused on housing sector, not being possible to explore data about impacts of immigrants in other dimensions. Further data collection is required to achieve that objective, namely through mixed methods. It should also be noted that the study and analysis of the situation in Portugal, with specificities, must be framed in the European and international context. Notwithstanding, the time and data restrictions, it was possible to confirm the need to develop approaches that deepen the role of immigrants as agents of urban space transformation, where it is considered that migration policies are not negligible. Broadly, this paper has underlined the importance of discussing and reflecting migrations in an unconventional way and in different fields of study. The Portuguese case has made possible to outline diverse situations that deserve further development, namely the strategies, disguised as immigrant recruitment programs to attract immigrants, which clearly support the real estate sector.

In view of the debate here sustained, it is evident the relevance of an interdisciplinary view. The categorization of immigrants and foreigners present in the country and about to enter, considering their relations with the urban space could be an interesting starting point to deepen these issues in an empirical study, and to influence public policies in the medium and long term.

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ID 1750 | CHARACTERISTIC TOWNS - THREE LEVELS OF LINK AND DIALOGUE BETWEEN EUROPE AND CHINA

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ABSTRACT: There are many scenic, distinctive characteristic towns in Europe, such as Cordoba, Cuenca, Portofino, Kema and so on. They are famous tourist attractions, visitors often linger there. China's town plans and constructions often refer to European towns. Recently, China issued "The Notice of Fostering Characteristic Towns", which decided to carry out nationwide characteristic towns' cultivation work, it plans to cultivate about 1000 characteristic towns before 2020, China also identified 127 national characteristic towns for the first batch. This article takes the characteristic towns as the research object, and takes the field research, cases comparison and the policy analysis as the research methods, thinks the characteristic towns forms the link between Europe and China in 3 levels. It referred to Europe towns a lot in China's town plans and constructions, especially in the layout forms and architectural styles. For example, the Shannan town in Hangzhou city determines to build "China's Greenwich Town". These learning, imitation and reference form the first level of the link and dialogue between Europe and China. The Chinese governments support the development of characteristic towns by providing a number of favorable policies, which achieved remarkable results. Policy supporting comes from both local and national governments, such as local governments give Land use indicators and tax reliefs, the national government gives special funds and so on. This paper argues that this approach deserved to be promoted, European countries and local governments can also introduce similar incentive policies to promote the further development of the characteristic towns. This promotion of support policies will form the second level of the link and dialogue between Europe and China. This article prospects that Europe and China will achieve the third level of link and dialogue by promoting enterprise cooperation, such as European enterprises go to China to lead the construction of characteristic towns, Chinese enterprises go to Europe to lead the construction characteristic towns. This may create a win-win situation. These three levels of link and dialogue upgrade gradually and interact with the process, containing good social and economic benefits. They deserve attentions and active treatments.

1 INTRODUCTION

Europe has many scenic, distinctive characteristic towns, such as Spain’s Cordoba, Cuenca; Italy’s Portofino, Verona; France’s Kema, Annec; Switzerlandand’s Davos, Interlaken, Vevey; Germany’s Heidelberg, Meersburg and so on. These towns have beautiful scenery, deep cultural heritage and featured industry functions. They integrate into the surrounding landscape environment, become famous tourist attractions, visitors often linger there.

The rise of the construction of Chinese characteristic towns began in Zhejiang Province. In April 2015, the Zhejiang Provincial Government promulgated the "Guidance on Accelerating the Planning and Construction of Characteristic Towns". Then, the government introduced the list of the first batch of 37 characteristic towns. The following table is part of the list. In January 2016, the list of the second batch of 42 characteristic towns was introduced.

Town's Name	Featured Industry	City
Shangcheng Yuhuangshannan Town	Fund, Securities	Hangzhou
Jianggan Dinglan Town	IT	Hangzhou
Xihu Yunqi Town	Cloud Computing	Hangzhou
Xihu Longwu Town	Tea	Hangzhou
Yuhang Mengxiang Town	Information Industry	Hangzhou
Yuhang Yishang Town	Arts	Hangzhou
Fuyang Guigu Town	IT	Hangzhou
Tonglu Jiankang Town	Health Idustry	Hangzhou
Lian Yunzhizao Town	Cloud Manufacturing	Hangzhou
Jiangbei Dongli Town	Equipment Manufacturing	Ningbo
Meishan Haiyangjingrong Town	Finance	Ningbo
Fenghua Binhaiyangsheng Town	Health Idustry	Ningbo
Ouhai Shishangzhizhao Town	Intelligent Manufacturing	Wenzhou
Cangnan Taishang Town	Trade	Wenzhou
Huzhou Sichou Town	Silk	Huzhou
Nanxun Sanlianhuibi Town	Writing Brush	Huzhou
Deqing Dilixingxi Town	Geo Information	Huzhou
Yuecheng Huangjin Town	Wine	Shaoxing
Zhuji Wayi Town	Socks	Shaoxing
Wuyi Wenquan Town	Spa Resort	Jinhua

Table1 - Part of the List of the First Batch Characteristic Towns in Zhejiang Province

Figure 1 - Shangcheng Yuhuangshannan Town and Yuhang Mengxiang Town

The Zhejiang Province's characteristics towns construction achieved good results. It promoted the local economic transformation and upgrading of Zhejiang Province's new urbanization progress. It is known as "Zhejiang experience". After that, other provinces began to imitate the practice of Zhejiang Province. It was also led to the national government's attention.

July 2016, the Chinese Ministry of Housing and Urban Development, Development and Reform Commission and the Ministry of Finance jointly issued "The Notice Of Carrying Out The Training Of The Characteristics Towns". It decided to carry out the cultivation of national characteristics towns leading the nationwide construction of small towns. It planned to cultivate about 1000 characteristics towns in 2020. And in October 2016, It identified 127 towns for the first batch of Chinese Characteristic Towns. These 127 towns can be called national level, which have higher rank than the provincial level characteristics towns. Now the central and local governments are keen to promote the planning and construction of the characteristic towns which becomes one of their key works. It becomes a national boom, a new initiative to the economic transformation and upgrading. Cultivating the characteristic towns seizes the opportunity of the times. It becomes an important innovation to implement the supply side structural reform. It is a exploration of new type of urbanization development model.

The development of characteristic towns is of great significance in promoting the coordinated development of urban and rural areas, promoting the simultaneous development of new industrialization and agricultural modernization, and enhancing the potential for regional development. According to incomplete statistics, the declaration and planning of the characteristic towns allover China has already more than 1000.

2 THREE LEVELS OF LINK AND DIALOGUE

2.1 THE FIRST LEVEL OF LINK AND DIALOGUE

Some of the Chinese characteristic towns referred to European (also the American) towns in the planning and construction, mainly including the following two aspects. First, the reference and imitation are in the layout form, architectural style and so on. For example, the taiwushi town in Shanghai Songjiang District copied the British river town style and residential characteristics, reflecting the modern, international, ecological and tourism culture. This type of imitation and reference were common in the past years, It was blamed a lot. Opponents argue that China should build a town with Chinese characteristics rather than a European style. In recent years, this "direct copy" type of imitation became rare.

I believe that Chinese characteristic towns should not directly copy the European town's architectural style, which should be based on China's own style. Sometimes morden style is also suitable for same new characteristic towns.

Figure 2 - Taiwushi Town in Shanghai, Which has Both Supporters and Opponents

Figure 3 – Morden Style and Chinese Traditional Style are Generally Accepted

I believe that high quality of European rural environment is highly worth studying by China. It should learn from the European towns' overall environment of harmony, natural, beautiful, clean and tidy and other aspects, to enhance the overall quality and style of China's rural environment. In recent years, China are undertaking "the Beautiful Countryside Construction", which should be integrated with the construction of characteristic towns to improve the rural environment, to enhance the rural livability and ecology.

Figure 3 – High Quality of European Rural Environment is highly worth studying

Second, the reference and imitation are in the industry characteristics, for example, Jilin Province said: "Using the snow and ice advantages to build China's Davos town." Hangzhou Yuhuang Shannan town is committed to build China's Greenwich Town. Huangshan City has formed friendly cities with Interlaken, Taipinghu town in Huangshan City is committed to build China's Interlaken, a sports leisure town.

Chinese Characteristic Town's Name	Objectives
Shangcheng Yuhuangshannan Town, Zhejiang	China's Greenwich
Fuyang Gnign Towm, Zhejiang	China's Silicon Valley
Jilin Province	China's Davos
Taipinghu Town, Anhui	China's Interlaken
Yuhang Yichuang Town, Zhejiang	China's Milan
Yuhang Mengxiang Town, Zhejiang	China's Silicon Valley

Table2 – Some Chinese Characteristic Towns' Objective Towns

China's characteristic towns imitate and learn from the European (American) towns from the architectural style, spatial layout, the overall environment and industry cultivation which formed the link of the first level.

2.2 THE SECOND LEVEL OF LINK AND DIALOGUE

Chinese governments had provided a number of favorable policies in the support for the characteristic towns, which had achieved remarkable results. Policy support came from both the local governments and the national government, such as the local governments giving land indicators and tax relief, the national government providing special fund support.

Specific preferential policies generally lie in the following aspects: tax policy, land policy, income policy, financial support policies, etc. These preferential policies are not only related to the main project development enterprises, settled enterprises can also be related. For example, in Sichuan Province, the provincial finance provided a special fund of 1.5 billion yuan in 3 years, integrated special funds nearly 500 million yuan, through the "Reward Instead of Subsidy" competition mechanism to support the characteristic towns' infrastructure construction. In Shandong Province, it put forward no less than 5000 acres of new construction land plan indicators each year for the 100 characteristic towns, which are separately and directly issued.

This paper argues that this practice is worthy of promotion, European national and local governments can introduce similar incentive policies to promote the further development of European towns, which will create the second-level link and dialogue.

2.3 THE THIRD LEVEL OF LINK AND DIALOGUE

China's local debt refers to the special infrastructure enterprises set up by the local government borrows debt to provide basic, public services. The local government provides security to the debt. Over the years, local debt is an important source of funds for urban development in China. Because of the risk that the local government can not pay, the Chinese central government has imposed strict restrictions on the local government's borrowing, and it is very difficult for the local governments to carry out the construction of the characteristic towns through bank loans. At present, many local governments introduce private capital and private enterprises, the use of Public-Private-Partnership model (hereinafter referred to as "PPP model") to build characteristic towns.

PPP model refers to based on the concession agreement the government and private organizations formed a partnership in order to cooperate in the construction of urban infrastructure projects, provide some kind of public goods and services. They clear the rights and obligations through signing a contract which ensure the smooth completion of cooperation. Finally, the both sides can achieve more favorable results than the individual action which means a win-win ending.

This model solves the funds bottleneck of the construction of the characteristic towns, which plays a positive role in the capital market. It revitalizes the asset resources and provides diversified financial support for the construction of characteristic towns.

It can be expected: through the construction of characteristic towns Europe and China can form the third level of the link and dialogue, which lies in the enterprise-level win-win possibility, such as the European enterprises go to China to lead the construction or operation of the characteristic towns, Chinese enterprises go to Europe to lead the construction or operation of the characteristic towns too.

3 TO DEVELOP CHINA'S CHARACTERISTIC TOWNS SHOULD AVOID THESE TWO PROBLEMS

3.1 AVOIDING EXCESSIVE AND BLINDNESS IN CHARACTERISTIC TOWNS' DEVELOPMENT

With the support of the national government for the characteristics towns, local governments at all levels are keen to launch the local characteristic towns, showing the phenomenon of the emergence of the characteristic towns everywhere in China. Emerging some problems such as "performance project" oriented development, creating things out of nothing, ugly copycat, misconfiging the resources, etc. The construction of the characteristic towns has also become a new "nuggets" to a number of housing prices. Some characteristic towns's real estate percentage is far more than other industises, which formed new house reserve. It exacerbated the property excess and did not match the national government's requirements of property de-stocking.

Constructing characteristic towns are different from the construction of large quantities of real estate projects. In the construction process of the characteristic towns, it needs not only integrate the the needs and wisdom of governments, enterprises, financial institutions, social organizations, but also integrate local culture and the future residents' and visitors' needs in the beginning. While around the same time of encouraging the construction of characteristic towns, we must pay more attention to science, sustainable development. Excessive and blindness in characteristic towns' development should be strictly prohibited. It should also avoid constructing different towns with the same outlooking.

Governments should introduce relevant policies to promote and standardize the healthy development of characteristic towns. It should be strictly prohibited of the whole town development once for all. Reserving land more than proper scale in the name of characteristic towns should also be prohibited. It should be forbidden to engage in large-scale commercial housing development by taking the opportunity of the construction Characteristic towns' industry is the key to its success, the industry should avoid vague and having no basis. The main industries should be chosen accuratly and concentrated. Only in this way, it can stand and grow big. In addition to strengthening and improving their own "vertical" industrial chain, It should complete the "horizontal" gathering as well, such as the gathering of the fund, talent, technology, information and other elements. It should promote economic factors and cultural elements' highly integration and make the industrial chain and innovation chain in one, which finally will build a good, sustainable industrial ecosphere.

3.2 AVOIDING APPLYING EXCESSIVE EMPHASIS ON TOURISM

At present, most of the China's characteristics towns planned the development of tourism as the leading direction. They took the international well-known towns as development goals. But the vast majority do not have the conditions to become a world-class tourist town.

Accurate positioning is an important aspect of the development of the characteristic towns, through combine their own characteristics, identify the industry positioning, scientific planning, mining industry features, continuing humanities and protecting ecological, the formation of "production, town, people, culture" four integrated organics. It should find the most important, dominant, potential industry as the main direction, and make a difference positioning with other characteristics towns. Most of the China's characteristics towns should not put too much emphasis on tourism. The first job for them to do is to set up their own characteristics, make livable and workable, provide the good basic services.

4 PROSPECTS

The characteristic towns concerned about the livable, workable, travelable, which integrate "innovation, coordination, green, open, sharing" five main ideas, highlight the integration features of the industry, ecology, culture. It will become the model sample of China's new urbanization strategy and highlight the "people-oriented" development.

It can be expected that highly concentrated the population, industry, cultural, tourism and other resources the characteristic towns' construction is becoming a new model of China's urbanization development. China's characteristic towns' construction should focus on the following points: the characteristics of the industry development, the integrity of public services, good ecological environment, featured style and pattern, history and culture heritage protection, governance and institutional innovation, policy support and institutional mechanisms to explore.

At the same time, these three levels of link and dialogue upgrade gradually and interact with the process, containing good social and economic benefits. They deserves attention and active treatment. of the characteristic towns too.

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T08 | REGIONAL ECONOMICS AND SCARCE RESOURCES PLANNING

CO-CHAIRS: MICHAEL GETZNER; PANTELIS SKAYANNIS; JOÃO MOURATO

In times of globalization, dominance of financial markets, European integration, and neo-liberal policy frameworks and approaches – to name just a few fashionable buzz-words of current economic and political development – the demand for material and immaterial resources grows and reveals the issue of their scarcity, that in turn raises the question of allocation. Some scholars think that a new focus on regional economies, networks and structures is necessary to overcome political and economic gridlocks. However, regional economies and regional economic policies are truly embedded in national and international environments; thus the leeway of regional policies seems to be limited. Regional planning and regional economic policies can, nevertheless, contribute to decisions on how scarce resources are used regionally.

The co-chairs welcome papers and case studies in this area. Track papers could specifically focus on the following issues:

- Is scarcity a real problem or is it created because of the way modern life is structured?
- Government and governance for the design and implementation of regional economic policies. Is there space for a regional governance of scarce resources?

Contribution of planning and regional economics to an efficient, effective, and equitable management of scarce resources.

Valuation of scarce regional resources (e.g. human capital, infrastructure, land, ecological resources) from different methodological perspectives (qualitative and quantitative). - Empirical, methodological or theoretical approaches to regional planning and/or regional economics with respect to scarce regional resources.

Presentation of empirical urban and regional development projects and/or policies in relation to facing problems related to the management of space in the current context of strategic dilemmas.

ID 1344 | OVERCOMING RESOURCE SCARCITY BY IMPLEMENTING STRATEGIC REGIONAL PLANS THROUGH URBAN-REGIONAL DEVELOPMENT PROJECTS: A EUROPEAN PERSPECTIVE

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1 INTRODUCTION

The objective of this paper is to highlight some preliminary findings of an ongoing research project (2016-2020) entitled “From Plans to Land Change: How Strategic Spatial Planning Contributes to the Development of Urban Regions” (CONCUR) in which the author, as a postdoc researcher, and the co-author, as the project coordinator, are involved. The project is financed by the Swiss National Science Foundation and is based at the Swiss Federal Research Institute WSL in Switzerland. A team of circa 7 researchers investigates different aspects concerning how strategic planning contributes to the development of urban regions. In this paper, we argue that urban regions in Europe and beyond are currently encountering a range of challenges, such as providing a varied and efficient transportation network, affordable housing, green infrastructure, public spaces, and attractive investment conditions (Albrechts et al., 2017). In addition, a number of urban regions have been experiencing dynamic changes in the scale and scope of metropolitan governance (Zimmermann and Getimis, 2017), and new forms of flexible territorial governance arrangements have emerged (Oliveira, 2017). These economic, social and governance driven challenges unfold in a context of limited financial, human, infrastructural, land and ecological resources.

The hypothesis of departure postulated in this paper is that urban regions, in a scenario of limited resources, have been implementing strategic spatial plans through area-specific and functionally-oriented urban-regional development projects (URDP). Examples of such projects include the repurposing of outdated harbour, industrial or railway facilities, the reconfiguration of green infrastructures, the reinforcement of the public transportation network and the development of new residential areas. This is a claim in line with that of Tiwari and Winters (2016), who argue that “strategic planning today is used to determine where a project will be in the future” (p. 2). These authors also argue that one of the reasons that public administrations adopt a more intensively project-based approach to spatial planning is that governments are cash-strapped and must therefore prioritize capital-intensive actions in a market-sensitive environment (Tiwari and Winters, 2016). Carmona et al. (2009) underline that strategic planning is seen as the best means for an urban region to take advantage of the opportunities of globalization; and urban projects are the chief mechanism for implementing a futuristic vision of a global-oriented strategy. Urban development projects exist in urban regions with very different histories and development levels (Cohen, 1966), from Europe (Meijsmans, 2007) to elsewhere in the world (Carmona et al. 2009). Fast-track plan implementation through projects has been criticized, however, because these projects are often linked to neo-liberal aspirations of the entrepreneurial city (Moulaert et al., 2001). Other scholars decry the poor integration of urban projects in wider spatial planning processes (Swyngedouw et al., 2002).

The theoretical investigation in this paper is developed further by drawing on the qualitative analysis of 43 in-depth interviews with regional planners and planning experts on the European urban regions of Barcelona, Cardiff, Copenhagen, Dublin, Edinburgh, Hamburg, Hannover, Helsinki-Uusimaa, Lyon, Milan, Oslo-Akershus, Stockholm, Stuttgart and Vienna. This qualitative method of research was considered the most appropriate method to provide answers to the following research questions (RQ): RQ 1: What are the reasons for the implementation of strategic spatial plans through urban-regional development projects? RQ 2: How are the territorial governance arrangements behind the implementation of strategic plans through urban-regional development projects characterized?

Following this introduction, the paper continues with an explanation of what we mean by URDP. The third section provides methodological details. The fourth section includes a discussion of the case-study findings, derived from the interviews. In the concluding remarks of the paper, we support the statements of the co-chairs of this conference track, who argue that regional planning could contribute to decision-

making on how scarce resources can be used efficiently at the regional scale. In this paper, we advance this argument by exploring the practical linkage between the implementation of strategic spatial plans through URDP and how spatial transformation can thrive in such a context of resource scarcity. Nevertheless, we acknowledge that additional research is needed to improve knowledge on how strategic spatial planning contributes to spatial transformation and development of urban regions in an uncertain world that is undergoing rapid economic, demographic and environmental changes.

2 A WORKING DEFINITION OF URDP

Strategic spatial planning is usually undertaken at the urban regional level (see Ziafati Bafarasat, 2016; Albrechts and Balducci, 2013). Strategic spatial planning involves the construction of new institutional arenas within structures of government that are constantly changing. Although it may be more or less clear what strategic spatial planning entails in supporting spatial transformation, Oosterlynck et al. (2011), in line with Albrechts (2006), argue that plan implementation, social innovation and political decision-making are "black boxes" for spatial planners. According to Oosterlynck et al. (2011), spatial projects support plan implementation and are prepared for the spatial transformation of a specific territory or territorial area, such as an industrial site, a harbour facility, a green space or an abandoned railway structure, rather than for the transformation of a whole urban region or any other territory in its totality; however, they generally also involve aims for a structural change and catalysing effect at the urban regional level. For Albrechts (2006), spatial projects ideally are coordinated by public institutions, such as regional entities and/or municipalities, in close cooperation or partnership with private interest groups (e.g., real estate agents, retail companies) and non-governmental organizations (NGOs; eg environmental NGOs) and "aim at transforming the spatial, economic and socio-cultural fabric of a larger area through a timely intervention" (Albrechts, 2006, p. 1492).

For Ziafati Bafarasat (2016), the idea of urban-regional development projects, strategic projects and area-specific projects as an approach to steer spatial transformation is entrenched in the urban project tradition in several European countries (Meijsmans, 2007). In Italy, for example, strategic spatial planning at the urban regional level tends to involve some strategic areas, articulated into several key strategic domains, each of which has some spatial projects (see Sartorio, 2005). In the UK, in the 2000s the first strategic (national) plans were prepared for Northern Ireland, Scotland and Wales, aimed at integrating social, economic and environmental objectives into spatial strategies. Strategic spatial planning in the UK is highly market led and development oriented and aims at enhancing economic growth through strategic projects (see Reimer et al., 2014). In Switzerland, strategic spatial planning at the cantonal level comprises laying down the main principles of spatial development and identifying key strategic projects (see Ringli, 2003). In the Netherlands, the shift in spatial planning towards a regional economic approach and territorial competitiveness has enhanced the involvement of public and private interest groups in collaboration or partnership, whilst foreign investors are encouraged to participate in major public infrastructure projects (see also Reimer et al., 2014).

Based on overlapping descriptions given by Abdelwahab and Serag (2017), Oosterlynck et al. (2011), Carmona et al., (2009), Van den Broeck (2008) and Albrechts (2006), we have summarized five types of projects: (i) Urban projects are mainly driven by strategies within the context of globalization and increasing international, intercity and interregional competition. They are aimed at regenerating urban areas for promoting economic development, housing availability, and cultural activities (Albrechts, 2006); (ii) Rural projects are aimed at transforming rural and suburban areas into a more sustainable and dynamic form of development, as well as providing public services such as mail delivery, electricity and sewer systems (Albrechts, 2006); (iii) Strategic projects are the result of a process aimed at developing shared terms for sustainability and spatial quality. Strategic projects can be a catalyst for effective structural and fundamental changes, as they intervene in a concrete way in a spatial and social context. They must generate synergies between social, cultural, economic and spatial dimensions (Van den Broeck, 2008); (iv) Large urban projects are aimed at revitalizing city centres and central business districts, given the change from a manufacturing to a service-oriented economy and the increase international competition. Large urban projects have also been used to position urban regions in a global context (Carmona et al., 2009); (v) Strategic planning projects set a proper future development vision for the city, and they define and limit urban expansion onto agricultural lands. This type of project ensures proper service provision in the different areas of the city and guarantees sufficient housing provision to meet future needs (Abdelwahab and Serag, 2017).

As the result of the combination of these descriptions, our working definition of urban-regional development projects postulated in this paper is that URDP are spatial projects derived directly from the content of the strategic regional plan in force or those projects prepared after the publication of local development plans which have been elaborated in line with a strategic regional plan. Development projects are often negotiated or prepared through collaboration or partnerships between multiple levels of government and private interest groups and are backed by specific funding schemes. URDP are considered here as projects targeting rural (e.g., through infrastructure provision) and urban areas (e.g., through city centre regeneration) but, despite the target area, they must be of regional importance. Urban-regional development projects are a fast-track plan implementation approach to ensure that spatial transformation happens at the ground level in key strategic domains, such as housing, transportation, green-infrastructures, retail, industry, financial services, tourism, culture and sports. Fourteen urban regions were selected as case studies for this investigation. Details about these regions are provided below.

3 SELECTION OF CASE STUDIES AND METHODOLOGY

The 14 above-mentioned European urban regions were chosen because: (i) they represent different European planning systems, which is essential for generalizing the findings and for ensuring the diversity of plans and spatial projects, and (ii) their strategic plans are in force, or are about to be approved. The specific designations of the plans under discussion can be found in Table 1.

Case study*	Organizations interviewed**	Discussed plans
Barcelona	*Area Metropolitana de Barcelona.* Mediaurban Agency.	Metropolitan Urban Master Plan (to be released in 2018) with references to the Metropolitan Plan 1976.
Cardiff	Cardiff City Council. Cardiff University. Expert of regional transportation.	Strategic Development Plan for the Cardiff City Region (forthcoming) with references to the Cardiff Capital Region City Deal.
Copenhagen	Danish Business Authority. University of Copenhagen. Rudersdal City Council.	The Finger Plan 2015 - A Strategy for the Development of the Greater Copenhagen Area with references to the Finger Plan 2013.
Dublin	Dublin City Council. Eastern and Midland Regional Assembly. University College Dublin.	Regional Planning Guidelines for the Greater Dublin Area 2010-2022 with references to the Dublin City Development Plan 2016-2022.
Edinburgh	City of Edinburgh Council. Strategic Development Planning Authority For Edinburgh and South East Scotland. Royal Town Planning Institute, Scotland. University of Dundee.	Proposed Strategic Development Plan 2016 and Edinburgh Local Development Plan 2016 with references to the Strategic Development Plan 2013, to the Action Programme 2016 and to the Main Issues Report 2015.
Hamburg	Hamburg Metropolitan Region. HafenCity University Hamburg.	Regional Plan 2005 with references to the Regional Development Concept and to the Strategic Framework 2010.
Hannover	Region Hannover. Leibniz University Hannover.	Regional Spatial Planning Program (RROP) 2016 with references to RROP 2005.
Helsinki-Uusimaa	City of Helsinki.Helsinki-Uusimaa Regional Council.	Regional Land use Planning for Helsinki-Uusimaa Region 2016 with references to Helsinki City Plan - Vision 2050 Urban plan - the new Helsinki city plan.
Lyon	Le Sepal - *Syndicat mixte d'études et de programmation de l'Agglomération Lyonnaise.* Uni. Lumière Lyon	*Schéma de cohérence territoriale de l'Agglomération Lyonnaise* – SCOT 2030.
Milan	*Città Metropolitana di Milano. Politecnico di Milano.*	*Piano strategico triennale del territorio metropolitan 2016-* 2018 with references to "City of cities: A project for Milan"
Oslo-Akershus	Akershus County Council. Oslo City Council.	Regional Plan for Land Use and Transport in Oslo and Akershus 2015.
Stockholm	Stockholm City Council. Stockholm County Council. Nordregio.	Regional development plan for the Stockholm region RUFS 2010 with references to the forthcoming RUFS 2050.
Stuttgart	Verband Region Stuttgart. Cardiff University (on Stuttgart).	Regional plan 2009 with references to The Stuttgart Region's Landscape Park, the Neckar Landscape Park.
Vienna	Vienna City Council. Austrian Institute for Regional Studies and Spatial Planning. Vienna University of Technology.	Planning cooperation for the Spatial Development of the City Region of Vienna, Lower Austria and Burgenland 2011 (PGO 2011) with references to STEP 2025 - Urban Development Plan Vienna.

Source: Authors' own. *Alphabetical order; **Organizations with which the respondents were affiliated.**

Table 1 - List of the organizations interviewed** and the discussed strategic plans.

Forty-three qualitative, semi-structured interviews were conducted with urban and regional planners responsible for processes of plan making and plan implementation and with other knowledgeable urban and regional planning experts, such as academics and members of planning institutes. The interviews were carried out in English at the interviewees' workplaces between May and November 2016 and

followed an interview guide. Regarding the analysis of data on plan implementation, the interview transcripts were first organized into alphabetical order by case study and a single PDF file was created. Second, by employing the method of process tracing (see Schmitt and Van Well, 2016), each page on which references to (i) plan implementation, (ii) projects, (iii) urban projects, (iv) rural projects, (v) strategic projects, (vi) large urban projects, (vii) strategic planning projects, (viii) development projects, or (ix) strategic development areas were identified was isolated for in-depth analysis of the context; concrete examples of projects were located whenever provided by the respondents. Finally, quotations from the interviewees were extracted to support the discussion of the research questions (RQ). The findings of the interviews are discussed below and summarized in Table 2.

4 DEBATING PLAN IMPLEMENTATION THROUGH PROJECTS

This section draws on the analysis of the interviews to detail the reasons for plan implementation through projects (RQ 1) and the governance arrangements behind this plan implementation approach (RQ 2).

4.1 BARCELONA

Plan implementation in the Àrea Metropolitana de Barcelona (AMB) is the result of the "combination of small interventions with large urban projects" aimed at improving the core city and surrounding municipalities as a whole (interview at AMB). The respondents at AMB and Mediaurban highlighted that while some of the small projects, such as the construction of "urban facilities and parks", several city-making interventions are mostly aimed at boosting place attachment; large scale projects are mainly related to expansion of residential areas as well as improvement of the transportation network. According to the respondents, the reasons for the implementation of plans through urban-regional development projects are mainly related to the need for more effective management of the financial resources, which are limited at the municipal level. Municipalities need to cooperate with the AMB in order to see spatial transformation taking shape in their administrative territory. Numerous urban regeneration projects of regional interest are being promoted in multilevel collaborations arrangements involving AMB and the municipalities composing the urban region (interview at AMB). Examples of such projects are the urban improvement of La Rectoriai in the municipality of Begues and the improvement of the Parc Fluvial de la riera de Rafamans in the municipality of La Palma de Cervelló.

4.2 CARDIFF

Discussing plan implementation in Cardiff as an urban region requires references to the recently approved Cardiff Capital Region City Deal (see http://www.cardiffcapitalregioncitydeal.wales/), as this deal "is a way to get support from London for specific projects" (interview at Cardiff City Council, CCC). This means that the Strategic Development Plan for the Cardiff City Region (forthcoming) and the more strategic visions of the Cardiff Local Development Plan 2006-2026 will be both implemented through development projects and subsidized by the city deal. This city deal sets out a transformative approach to determine how Cardiff Capital Region will deliver the scale and nature of investment needed to support the area's growth plans (interview at CCC). The city deal is developed through cooperation between the UK Government, the municipalities of Blaenau Gwent, Bridgend, Caerphilly, Cardiff, Merthyr Tydfil, Monmouthshire, Newport, Rhondda Cynon Taff, Torfaen and Vale of Glamorgan, and the Welsh Government. Urban-regional development projects in the areas of infrastructure provision, transport planning (e.g., South Wales Metro project), digital network improvement, and support for enterprise and business growth and for new residential areas are the priority areas for project development (interview at CCC). The main objectives of the South Wales Metro project, "a Welsh Government lead scheme" (interview at CCC and Cardiff University), are: improving connectivity; linking communities with all major commercial, social and leisure attractors; enabling the region to function as a single coherent economic entity with comparable journey times for public and private transport modes; and offering realistic travel choices. South Wales Metro project has gained momentum with the city deal, as this funding scheme is the only funding source available for its implementation (interview with expert of practice in connectivity and transport).

4.3 COPENHAGEN

The Finger Plan 2015 has mainly been implemented through local development plans (interview at Danish Business Authority, DBA). However, due to scarce land resources available for the growing population, together with the relocation of industrial facilities from the harbour area to elsewhere, some urban development projects have been prepared. One of these projects is the Nordhavn project (interview at University of Copenhagen, UC). This project contemplates the transformation of an active industrial port into a modern residential and business area. When completed, Nordhavn will have room for 40,000 residents and an equal number of work places (interview at DBA and interview at UC). Limited financial resources, primarily at the local level, also mean that some municipalities in the Greater Copenhagen Area are becoming "even more entrepreneurs while engaging with getting private funding" to support plan implementation, often through a variety of small development projects in the urban functions of housing, transportation, environmental protection and water management (interview at UC). This more entrepreneurial style of spatial planning adopted by municipalities has paved the way for collaborations between municipalities and private interest groups, such as housing developers. Collectively, these groups have contributed to spatial transformation in the Greater Copenhagen Area. Development projects are the result of pair-wise partnerships between the Danish Business Authority, the city of Copenhagen and the municipalities located in the Greater Copenhagen Area (interview at DBA).

4.4 DUBLIN

The implementation of the Regional Planning Guidelines for Greater Dublin Area 2010-2022 (RPG GDA 2010-2022) mainly unfolds at the ground level through projects, which are prepared through pair-wise partnerships between municipalities, such as Dublin City Council, and private investors (interview at Eastern and Midland Regional Assembly, EMRA). Limited financial resources and reutilization of abandoned industrial and harbour facilities are the main reasons for the implementation of plans through projects. The Dublin City Development Plan 2016-2022, for example, contemplates a number of Strategic Development Zones (SDZs). These SDZs enable government authorities to "designate certain parcels of land for a fast-track planning process, where the development of those lands is considered to be of strategic national importance" (interview at Dublin City Council, DCC). A key purpose of SDZs is to enable the fast-track delivery of new residential and non-residential development in locations of strategic importance in the Greater Dublin Area. One of these SDZs is the "North Lotts and Grand Canal Dock" (http://www.dublincity.ie/main-menu-services-planning-urban-development-plans-local-area-plans/north-lotts-grand-canal-dock), which involves the repurposing of the docklands into a residential and business area. A number of collaborations, braced by various funding schemes, support the development of these SDZs.

4.5 EDINBURGH

The key role of the SESplan - Strategic Development Planning Authority for the Edinburgh and South East Scotland Region is to prepare and maintain an up-to-date Strategic Development Plan (SDP) for the area which takes a long-term view of how the area will change (interviews at SESplan and City of Edinburgh Council, CEC). As in Cardiff, the Edinburgh and South East Scotland City Region Deal (http://www.acceleratinggrowth.org.uk/) has recently been approved. This city deal is a mechanism for accelerating growth by obtaining significant government investment. The governance arrangements behind the formulation of projects funded by the city deal are the result of collaborations between the council areas of Edinburgh, East Lothian, Midlothian, West Lothian, the Scottish Borders, the southern half of Fife, the UK and Scottish Governments. Projects will be mainly directed at improving infrastructure, boosting economic performance through innovation hubs, expanding the regional housing programme and reinforcing tourism activity (interviews at SESplan and CEC). The financial capital derived from the city deal is crucial for overcoming the limited financial resources in Edinburgh and the South East Scotland urban region. Implementing the SESplan Strategic Development Plan through development projects is needed for spatial transformation to actually occur. At the time of the interviews, in Edinburgh it was not possible to identify specific projects but only the priority areas for intervention, such as housing and employment land.

4.6 HAMBURG

The Hamburg Metropolitan Region (HMR) works on “an informal basis” situation, which hinders its capability to engage in strategic regional planning (interviews at HMR). The HMR works on the basis of informal cooperation by bringing multiple interest groups together to “cooperate on projects” (interview at HMR). The HMR mainly reacts “to the initiatives that come from the region, from the municipalities, from the counties and from the members of the HMR” (interview at HMR). Plan implementation happens through area-specific development projects. In the HMR, the scarce land resources, the limited technical resources at the local level of government, and the need to effectively manage financial, human and natural resources are the reasons for the implementation of plans through projects. These projects are mainly developed through collaborations between HMR and municipalities located in Hamburg Region. Rural partnerships support projects aimed at contributing to the resolution of urban-rural inequalities. The HMR makes three development funding schemes available to support cross-border, settlement development, nature protection, biotope and transportation projects (interview at HMR): (i) Strengthening the Metropolitan Region’s “international competitiveness” through projects on topics such as economic development, tourism and culture; (ii) Providing public services, particularly inter-district solutions for technical infrastructure and for interlinking public transport; (iii) Managing spatial structure and land use, for example through settlement and zoning plans and ecosystems management and protection. These funding schemes are pivotal in supporting regional cooperation. Several projects spanning administrative municipal borders, from landscape protection to numerous park and ride and bike and ride facilities, have been subsidised.

4.7 HANNOVER

The interviewee at Leibniz University Hannover (LUH) convincingly highlighted that “Hannover is a benchmark for regional planning in Germany” and also that there is “a continuous tradition of spatial planning at the regional level” which greatly influences strategic regional plan making and plan implementation. According to the respondents at Region Hannover (RH), the Regional Spatial Planning Program 2016 (RROP 2016) is implemented through local development plans – “we can give some impulses, such as funding to support local infrastructures, but we don’t do it on our own”. The RH provides support “not only with money, but also with knowledge and technical expertise” so municipalities can develop new residential areas and propose reuse of former industrial sites, among other projects of regional interest (interviews at RH). The RROP 2016 works as a framework, which means that all development projects have to be implemented in line with the strategic regional plan. There is no margin of manoeuvre for additional projects which are not included in the plan unless they are catalytic projects for the Region Hannover. Scarce land resources, weak technical capability at the local level of government, and the need to effectively manage financial, human and natural resources are the reasons for the implementation of plans through development projects. These projects are mainly driven by collaborations between Region Hannover and municipalities.

4.8 HELSINKI-UUSIMAA

According to the respondents at Helsinki-Uusimaa Regional Council (HURC), the regional land use planning for Helsinki-Uusimaa Region 2016 is mainly implemented by means of local development plans. The HURC regional planners have been developing multiple methodologies to support plan implementation, such as the action plan. This “action plan is to support the implementation or the management of the Helsinki-Uusimaa regional plan.” (interview at HURC). The action plan is essentially focused on the expansion of the residential offer to meet the growing demand for housing in the urban region. Helsinki-Uusimaa Regional Council also sees the “regional plan as a tool for reinforcing the public transportation network”. The regional plan facilitates project-making, as it brings together municipalities to coordinate actions that help fulfil the content of the plan. There are several housing development projects underway, as well as projects of regional interest aimed at strengthening transportation links, including walking and cycling routes (interview at the City of Helsinki). Scarce land resources and limited financial resources at the local level of government are the reasons for the implementation of plans through urban-regional development projects. These projects are developed in coordinated collaborations or partnerships between Helsinki-Uusimaa Regional Council and municipalities, and they are in line with local land use plans.

4.9 LYON

SCOT 2030 - territorial coherence scheme for Greater Lyon – is mainly focused on economic and housing development. SCOT 2030 also devotes attention to environmental issues, nature protection and preservation of agriculture areas (interview at Le Sepal). It became clear after the interviews in Lyon that SCOT 2030 is an envisioned framework and that the local development plans in the urban region (Le Plan Local d'Urbanisme, PLU) have to be developed in line with SCOT 2030. In addition, it became clear that the implementation of SCOT 2030 will occur through revised PLUs. SCOT 2030 is also seen as an essential planning tool for boosting territorial cooperation and development projects (interview at Le Sepal). According to the interviewee at University Lumière Lyon, SCOT 2030 is essentially an "economic project…elaborated with the economical actors in the urban region"; is flexible enough to allow the development of urban-regional projects, such as project of Lyon's central business district and multimodal hub, Part-Dieu district (http://www.lyon-partdieu.com). Ongoing projects are aimed at fulfilling housing needs, preserving land for food and energy production, and safeguarding spaces for retail and industrial expansion (interview at Le Sepal). Scarce financial resources is the reason for the implementation of plans through projects. These projects are mainly developed through collaborations between Greater Lyon and private interest groups.

4.10 MILAN

The current regional planning efforts in the Milan urban region reflect a number of changes in the territorial governance system that have been taking place all over Italy, mainly since the publication of Law 56 on 7th April 2014 (interview at Città Metropolitana di Milano, CMM). Milan has always been a city governed by a variety of several actors; some of them represent economic interests, while others represent foundations, higher education institutions and chambers of commerce (interview at Politecnico di Milano). To a certain extent, these actors "have been crucial in…finding specific solutions to specific territorial problems through projects and have also contributed to the shaping of the urban agenda" (interview at Politecnico di Milano). Furthermore, "the role of the municipalities has not been so central as in other European cities, so there has always been a dynamic between the role of the municipality and the role of interest groups"; "there are a lot of projects that have a distinctive urban dimension that were independently promoted by interest groups" (interview at Politecnico di Milano). In Milan, "there has been a lot of civic involvement, grassroots involvement, projects, very transverse projects funded by a bank, a foundation, but involving social cooperatives, associations of inhabitants, also some local firms or schools…I think this is the richness of this region" (interview at Politecnico di Milano). The welfare project, numerous urban regeneration projects and habitability projects are examples of urban-regional development projects identified by the interviewees. These projects are established to overcome socio-economic imbalances, to contribute to social cohesion and to meet the rising housing demands due to an increase in population (interview at CMM). Limited financial resources and scarce land resources are the reasons for the implementation of plans through development projects. These projects are promoted both by public entities and by private interests groups.

4.11 OSLO-AKERSHUS

The case study Oslo-Akershus could be considered a great example of urban-regional collaboration and a truly functional urban area (interview at Oslo City Council, OCC). It brings together the City of Oslo and Akershus County Council to work in a coordinated manner on land use and transportation planning (interview at OCC). In March 2012, Oslo City Council and Akershus County Council adopted the Regional Plan for Land Use and Transport in Oslo and Akershus 2015. This plan will be in force until 2030, with potential extension until 2050. Plan implementation in Oslo-Akershus urban region unfolds at the ground level through the implementation of local development and master plans. To support plan implementation, an action program has been developed (interview at OCC). One of the 10 actions of the program is to "move different enterprises and especially logistics from the centre of Oslo to some clusters outside of the core city" (interview at OCC). In this regard, "a strong cooperation between Oslo City Council and Akershus County Council is pivotal" (interview at OCC). The interviews at Akershus County Council made clear that the Regional Plan for Land Use and Transport in Oslo and Akershus 2015 will be implemented in the coming years after each decision is negotiated and consensus among governments and interest groups is reached. Development projects can only be implemented after the elaboration of an area-specific

"master plan" (interview at OCC). The projects underway are related to the need to reinforce the housing offer and the transportation network. Environmental preoccupations, the need to give a new use to outdated industrial and brewery facilities, and scarce land resources for new residential areas are the reasons for the implementation of plans through development projects. These projects are developed only after consensus building is achieved among the County and City Councils and various private and non-for-profit interest groups..

4.12 STOCKHOLM

The Regional development plan RUFS is the chief regional plan for the Stockholm region (interview at Stockholm County Council, SCC). RUFS 2010 is now in force. Work is underway, however, to develop the next regional development plan – RUFS 2050 (to be officially released in June 2017). RUFS 2050 is a further development of RUFS 2010, and the vision is for Stockholm to be Europe's most attractive metropolitan region. RUFS "performs an important function and expresses the collective desire of the Stockholm region" (interview at SCC). Plan implementation in the Stockholm urban region "has to be done through the municipalities by the means of the implementation of land use plans" (interview at Stockholm City Council, SCityC). According to the interviewee at SCityC, most of the municipalities in the Stockholm urban region "have a very common idea of how the region will develop". In this regard, the municipalities, including Stockholm City, "are very involved in large urban projects" such as the Stockholm Royal Seaport, where 10,000 new homes mixed with work spaces will be built. The respondent at SCityC also underlined that Stockholm has to be more project oriented so it can better respond to the need to densify the city. However, any forthcoming project has to be developed strictly in line with both RUFS and local plans. Urban-regional development projects in the Stockholm region have been used as fast-track planning interventions, not because of financial restrictions, but as a way to respond quickly to increasing housing needs. There have also been major projects in water management as well as in reinforcement of the public transportation network. Environmental preoccupations, the need to transform an outdated harbour area and the scarcity of housing land are the reasons for the implementation of plans through development projects. These projects are developed in a cooperative manner involving Stockholm City Council and Stockholm County Council.

4.13 STUTTGART

The implementation of the Strategic Regional Plan 2009 for Region Stuttgart is done through local land use plans and landscape plans, such as those used to plan the Neckar Landscape Park (interview at Verband Region Stuttgart, VRS). Plan implementation is also done by projects, which are mainly focused on improving the green infrastructures (interview at VRS). Projects developed based on inter-municipal collaboration are more likely to be subsidized by specific funds made available by the VRS (interview at VRS). Despite the VRS's request for intra-regional cross-border projects, all projects must comply with the landscape plans in force. The chief aim of the co-funding scheme for green projects (i.e., regeneration of green-infrastructures mainly for recreational purposes) is "to balance and to improve quality of life and quality of environment" (interview at VRS). The VRS monitors and evaluates the implementation of projects and considers whether municipalities still want to develop the proposed projects or not, so funding is effectively allocated in projects that will really be beneficial for the whole population. The VRS also supports the municipalities in the urban region in preparing applications seeking funding for transportation and urban regeneration projects. Limited financial resources at the municipal level, scarce land resources and environmental preoccupations, mainly the need to preserve the natural resources available, are the main reasons for the implementation of plans through development projects. These projects are developed through collaborations between VRS and the municipalities located in the region, with the participation of private investors depending on the type of project.

4.14 VIENNA

Strategic regional planning in the Vienna urban region is highly complex, the respondents at Vienna City Council (VCC), at Austrian Institute for Regional Studies and Spatial Planning (AISP) and at Vienna University of Technology (VUT) emphasized. Austria is a parliamentary representative democracy

comprising nine federal states, including Vienna and Vienna's neighbouring states Lower Austria and Burgenland. These three states have their own spatial plans; for example, in Vienna the Urban Development Plan Vienna (STEP 2025) is currently in force. At the regional level, the Spatial Development of the City Region of Vienna, Lower Austria and Burgenland (PGO 2011) serves as a guideline for the states involved. Plan implementation at the urban regional level unfolds mainly through projects fulfilling priority areas of spatial development, such as housing, public transportation, public spaces, green infrastructures and all projects aimed at improving the quality of life (interview at Vienna City Council). Two main projects were identified by the respondents at Vienna City Council and at Vienna University of Technology. One is the repurposing of old railway facilities in Vienna city centre, where development of a multi-functional facility (i.e., housing, offices and retail) is planned. This project involves a partnership between Vienna City Council and the Austrian Railway network owner (ÖBB-Infrastruktur AG). The second identified project is the urban-regional development project of Aspern Seestadt (http://www.aspern-seestadt.at/en). This project is Vienna's largest urban development project and, as such, will be constructed in several phases over a period of at least two decades (interview at VUT). This project involves collaborations between public authorities and private investors. Several small-scale projects in Vienna urban districts have been implemented, mainly with the aim of reinforcing the housing offer, creating public spaces and boosting the public transportation network. Two regional managers act in Vienna urban region as project-making and implementation facilitators. Their role is to negotiate projects with municipalities and align the local with the regional interests (interview at VCC). Scarce land resources for new housing developments in the core city of Vienna and the need to effectively managed financial, human and natural resources are the reasons for the implementation of plans through development projects. Furthermore, the weak regional plan for Vienna urban region propels project-making as a fast-track modus operandi to enact spatial transformation.

Case study*	Examples of projects	Main urban function of the projects	RQ 1: The reasons for the implementation plans through projects	RQ 2: Territorial governance behind project-making
Barcelona	Several urban regeneration projects	Urban regeneration Residential City-making	Limited financial resources, mainly at the municipal level.	Collaboration between municipalities and the AMB.
Cardiff	South Wales Metro. http://gov.wales/topics/transport/public/metro/	Residential Retail Transportation	Limited financial resources.	Collaboration between the UK and the Welsh governments and city councils.
Copenhagen	Nordhavn http://www.nordhavnen.dk/ & others.	Residential Retail Transportation Cruise tourism	Scarce land resources. The need to repurpose outdated harbour facilities.	Collaboration between municipalities and the Danish government.
Dublin	North Lotts & Grand Canal Dock Strategic Development Zone Planning & others.	Residential Retail Business Public spaces Transportation	Limited financial resources. The need to repurpose outdated harbour and industrial facilities.	Collaboration between public authorities such as Dublin City Council and private interest groups
Edinburgh	Several projects (names not specified during interviews).	Innovation hubs Infrastructures Residential Cultural tourism	Limited financial resources.	Collaboration between the six local authorities and the UK and Scottish Governments.
Hamburg	Several projects (names not specified during interviews).	Retail Tourism Culture Transportation Residential Green infrastructure	Scarce land resources. Limited financial resources at the municipal level. Limited technical resources. The need to repurpose outdated harbour facilities.	Collaboration between Hamburg Metropolitan Region and municipalities located in Hamburg Region.
Hannover	Several projects (names not specified during	Residential Transportation Retail	Scarce land resources. Limited financial and technical resources at the	Collaboration between Region Hannover and

	interviews).	Green infrastructure	municipal level. The need to repurpose outdated industrial facilities.	municipalities in the region.
Helsinki-Uusimaa	Several projects (names not specified during interviews).	Residential Transportation Green infrastructure	Scarce land resources. Limited financial resources at the municipal level.	Collaboration between Helsinki-Uusimaa Regional Council and municipalities.
Lyon	Redeveloping of Lyon Part-Dieu district & others on housing and transportation.	Residential Food Energy Retail Industrial	Limited financial resources. Scarce land resources. Environmental preoccupations	Collaboration between Greater Lyon and private interest groups.
Milan	Welfare project Urban; Regeneration project; Habitability project.	Residential Urban regeneration	Limited financial resources. Scarce land resources.	Projects promoted by a variety of interest groups.
Oslo-Akershus	Several projects (names not specified during interviews).	Residential Retail Transportation Green infrastructure Public spaces	Scarce land resources. Environmental preoccupations. The need to repurpose outdated harbour and breweries facilities.	Partnership between Akershus County Council and Oslo City Council.
Stockholm	Stockholm Royal Seaport http://www.stockholmroyalseaport.com & others	Residential Transportation Retail Green infrastructure Public spaces	Scarce land resources. Scarce built up areas. Environmental preoccupations.	Partnership between Stockholm City Council and Stockholm County Council.
Stuttgart	Neckar Landscape Park http://www.landschaftspark-region-stuttgart.de	Green infrastructure Public spaces Residential Industrial Transportation	Limited financial resources at the municipal level. Scarce land resources. Environmental preoccupations.	Collaboration between VRS and municipalities. Collaboration between VRS and private groups.
Vienna	Project for reconversion of rail facilities into residential and commercial areas; Aspern Seestadt project.	Residential Transportation Industrial Green infrastructure Water front regeneration	Limited financial resources. Scarce land resources. Scarce built up areas. The need to repurpose outdated railway facilities.	Partnership between Vienna City Council and Austrian Railway network owner (*ÖBB-Infrastruktur AG*). Other public-private collaborations.
Main concluding remarks of the analysis of the case studies.	**Main urban function of the projects (see in Figure 1):**		**RQ 1 - Main justification for plan implementation through projects:**	**RQ 2 - Main type of territorial governance arrangements:**
	1) Residential; 2) Transportation; 3) Green infrastructures; 4) Retail; 5) Public spaces; 6) Industrial.		1) Limited financial resources; 2) Scarce land resources; 3) Repurposing of outdated facilities; 4) Environmental preoccupations.	1) Collaborations among public entities; 2) Collaborations between public entities and private interest groups.

Source: Authors' own elaboration. Notes: *Alphabetical order; RQ = Research Question (RQ 1; RQ 2).

Table 2 - Cross-case analysis of examples of urban-regional development projects, main urban functions of the projects, the reasons for the implementation of strategic plans through urban-regional development projects (research question 1, RQ 1) and territorial governance arrangements behind the formulation of projects (RQ 2).

5 CONCLUDING REMARKS

This paper provides a contribution to the main conference them – "Spaces of Dialog for Places of Dignity: Fostering the European Dimension of Planning" by revealing that the selected 14 European urban regions have been implementing strategic plans through urban-regional development projects in times of resource scarcity. Figure 1 summarize the key findings, in line with Table 2. The paper also highlights that such area-specific and functionally-oriented urban-regional development projects can act as catalysts for effective structural, socio-spatial and spatial-economic transformation, thereby contributing to fairer and more equitable spatial development. The implementation of strategic plans through projects is mainly attributable to limited financial resources, including at the municipal level (RQ 1, Fig. 1). In most of the

selected cases, local levels of government have no financial mechanisms for implementing local development plans in an organic manner (i.e., through a concerted implementation effort without projects - path A, Fig. 1). In this regard, municipalities are, to some extent, obliged to engage with national or regional governments to seek funding so they can implement plans through projects (path B, Fig. 1). For the municipalities to receive funding, they have to establish projects that fulfil specific needs (e.g., more social housing; better intraregional transportation networks) in concrete territorial areas. Projects are then seen as the most effective and least time consuming path for spatial transformation to actually happen at the ground level. In the majority of the cases, the projects are co-developed through collaborations or multiple partnerships involving a wide range of territorial governance structures (e.g., regional entities, municipalities, and private interest groups such as retail investors or real estate agents, RQ 2). The majority of the urban-regional development projects are supported by funding schemes from entities at supranational (e.g., European Union, EU), supraregional (e.g., national governments) or supralocal (e.g., regional agencies or regional governments) levels.

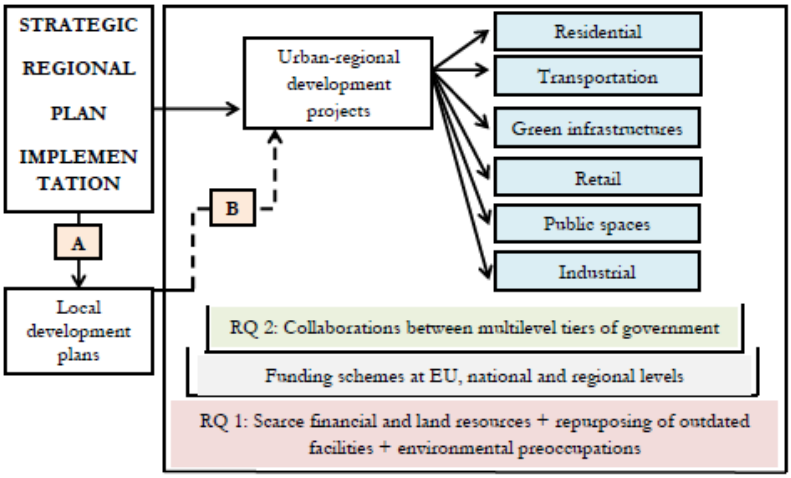

Figure 1 - Schematic representation of strategic regional plan implementation in the selected cases.
Source: Authors' own elaboration. RQ = Research Question (RQ 1; RQ 2).

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ID 1345 | THE URBAN-RURAN RELATIONSHIP AND ITS DEVELOPMENT TENDENCY BASED ON THE PHENOMENON OF PSEUDO COUNTER-URBANIZATION - TAKING WUHAN AS AN EXAMPLE

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1 BACKGROUND OF THE STUDY ON THE URBAN-RURAL RELATIONS BASED ON "PSEUDO COUNTER URBANIZATION"

1.1 THE JUDGMENT OF URBAN-RURAL RELATIONS IS AN IMPORTANT PREREQUISITE FOR THE COGNITION OF THE CHARACTERISTICS AND CONNOTATION OF URBANIZATION

Urbanization is, with the development of social productive forces, the process of promoting the rural population's migration in urban areas, causing changes in the social and economic space, and making closer sharing relations of public services. In this process, the urban area and the rural area are the two poles of the flowing of elements such as population, economy, and service, and is an important geographical space carrier in urbanization. Therefore, the judgment of the urban-rural relations has an important role of explanation and prediction for the cognition of the characteristics and connotation of urbanization development. And different development stages of urbanization are accompanied by different economic and social development levels, industrial divisions and institutional changes, and then show the corresponding urban-rural relations characteristics, forms, and functions. Therefore, so the prejudgment for the development trend of urban-rural relations is also an important basis for formulating the future urbanization development strategies.

1.2 URBANIZATION'S NEW CHALLENGES AND DEVELOPMENT TREND BROUGHT BY THE CHANGE OF URBAN-RURAL RELATIONS

The evolution of urban-rural relations in China is divided into three stages. The first stage (before the reform and opening up): The dual urban-rural system was comprehensively established, the areas with urban-rural antagonism continued to be expanded and its degree was continuously strengthened, and the rural areas are the main base for urbanization and industrialization; the second stage (1978 - 2002): Part of the dual urban-rural system began to break away, and in some fields such as the urban-rural land system and market were further strengthened with urban areas bring along rural areas; the third stage (2002 to present): Overall urban-rural development was clearly put forward. With the comprehensive deepening of the economic system reform, the dual urban-rural system began to really be broken systematically from the whole perspective, and rural areas began to be brought along by urban areas. At present, China has entered the stage of rapid evolution of urban-rural relations. Much of rural population, land, and industries have all begun to transfer to urban areas. The quality of urbanization needs to be improved. A large number of labor released by the "agricultural to non-agricultural transfer" are in urgent need for allocation, accompanied by a significant "semi-urbanization" population movement [1]. Therefore, the characteristics and connotation of urbanization in China will face more challenges as the economic and social changes are more diverse and complicated.

1.3 "PSEUDO COUNTER URBANIZATION" SITUATIONS LIKE "NON-AGRICULTURAL TO AGRICULTURAL TRANSFER" AND "MIGRATING INTO URBAN AREAS WITHOUT TRANSFERRING AGRICULTURAL HOUSEHOLDS" APPEARED IN SOME CITIES

"Counter urbanization" refers to the process that a large number of urban population and resources flow to rural areas and small towns when western countries' development of urbanization comes to a certain stage and the development of big cites begins to slow down [1]. According to the curve of urbanization and the experience of developed countries, "counter urbanization" generally appears in the stable development stage of the urbanization rate, and is an inevitable stage in urbanization. With great development of China's urbanization, the "non-agricultural to agricultural transfer" in household registration has quietly appeared in some places. Contrary to the usual "agricultural to non-agricultural transfer" trend in urbanization, some people hope that their urban household registration could be transferred into rural household registration. For example, in Hangzhou City and Tongxiang City of Zhejiang Province there have been collective requirements of college students for inter-provincial "agricultural to non-agricultural transfer". And a national survey also shows that more than 75% of migrant farmers are not willing to give up their agricultural household registrations. This situation appears to belong to "counter urbanization", but its logic and connotation are some different from the "counter urbanization" experienced by developed countries.

2 THE CONNOTATION OF "COUNTER URBANIZATION" AND ITS CHARACTERISTICS OF URBAN-RURAL RELATIONS

2.1 INTERNAL DRIVING FORCE AND EXTERNAL CONDITIONS OF "COUNTER URBANIZATION"

Residents' pursuit of low-cost, high-quality life and enterprises' goal of prioritizing profits are the internal driving force of "counter-urbanization" [2]. In the 1970s, developed countries accumulated the results of rapid development of urbanization, while their traffic congestion, environmental pollution and other "urban diseases" became increasingly serious. Urban space was unable to meet the residents' high quality needs for production, living, recreation and transportation and other basic functions. Enterprises would increasingly tend to use small towns or rural areas with lower element cost. Therefore, when a city develops to a certain scale, residents and businesses begin to relocate, to seek lower living costs and better living environment. On the other hand, with the continuous improvement of information technology and transportation network, the space and time distance between urban and rural areas was shortening, providing necessary technical conditions for "counter urbanization". At the same time, to deal with "urban

diseases" and the dual urban-rural economic contradiction, the western governments generally implemented the rural-urban relations policy of supporting agriculture in return and rural areas, strengthening rural infrastructure construction, improving the rural public service level, and narrowing the urban-rural gap [2], providing policy guarantee for attracting elements like population and capital and to transfer from large cities to small towns and rural areas.

2.2 CHARACTERISTICS OF URBAN-RURAL RELATIONS UNDER "COUNTER URBANIZATION"

In the "counter urbanization" of Western developed countries, their urban-rural relations also showed certain characteristics, specifically in population flow, spatial change and public services:

(1) THE CLASS OF POPULATION FLOW WAS THE RICH CLASS, AND IT WAS THE FREE FLOW BETWEEN URBAN AND RURAL AREAS.

Western developed countries have experienced four stages: urbanization, suburban urbanization, counter urbanization, and re-urbanization. From the suburban urbanization, the outward flow of population began to emerge, first appearing in the rich, and later extending to the middle class. Its initial power, as mentioned above, was the city residents beginning to pursuing a better living environment. Therefore, the essence of its population flow is "free flow" of pursuing higher life quality, and only the social class above the middle class has the capital for "free flow".

(2) THE SPACE OF CENTRAL CITIES SPACE GOT NEARLY SATURATED, WITH HIGH LEVEL OF URBANIZATION, THEIR FUNCTIONS SPILLING OVER.

The urban population of London in the UK decreased by 100,000 from 1950 to 1970, and after 1970, the speed and scale of "counter urbanization" accelerated. In the 1950s, the British urban population decreased by 20,000 per year, in the 1960s 40,000, and in the 1970s 90,000. In France, Germany, the United States, Japan, and other countries, the urban population also decreased at different degrees each year [3]. From (Figure 1), it can be found that the backgrounds of the urbanizations in developed countries were all stages with high-level urbanization. The city scale had been over a long-term accumulation of elements, and its space development was in a saturated state. These were the significant spatial features of counter urbanization.

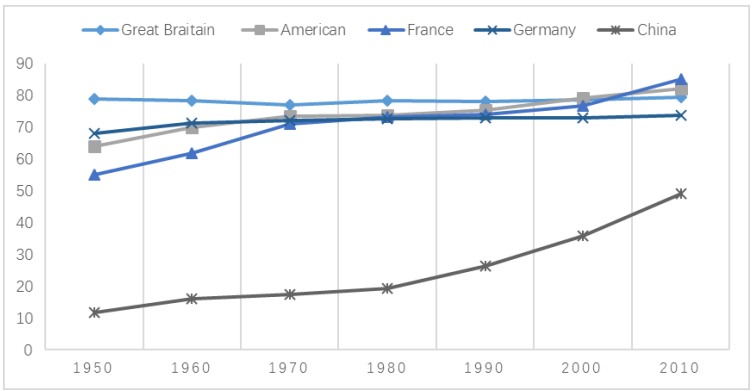

Figure 1 - In Britain, the United States, France, Germany, the urbanization rate since 1950

(3) THE CHARACTERISTICS OF THE INTEGRATION OF URBAN-RURAL PUBLIC SERVICES ARE OBVIOUS, WITH SMALL URBAN-RURAL GAP.

The Western "counter urbanization" was achieved under the premise of the urban-rural equalization of infrastructure and public services. For example, Japan's counter urbanization, was in the context of urban-

rural social integration. Its development of urban and rural industries and living facilities gradually converged, its urban-rural gap narrowed, and rural areas had a more favorable living environment than cities, resulting in a large number of urban population's free outflow. Therefore, urban-rural integration, especially the integration of public services, is a prerequisite for urbanization.

3. THE CHARACTERISTICS AND CAUSES OF THE URBAN-RURAL RELATIONS UNDER "PSEUDO COUNTER URBANIZATION" IN WUHAN

Wuhan City is a megacity in the central region, and 61.94% of its jurisdictional area is the agricultural ecological zone. In 2014, the agricultural population was 2.6803 million, with about 2030 incorporated villages and about 18,000 unincorporated villages. The overall population distribution, in accordance with its natural and geographical environment, features dense-north and sparse-south (as in Figure 2). At the end of 2013, Wuhan City's per capita net income of farmers already reached 12731 yuan, more than the national average of 8896 yuan. The income ratio of urban and rural residents was 2.34: 1, which was significantly lower than the national level of 3.03: 1 in the same period, and has gradually decreased in recent years. However, both from the income level or the urban-rural gap, Wuhan City lags behind Shanghai in a certain degree (as in Figure 3). Therefore, it still has a big development space in the driving force of "urban" on "rural" areas.

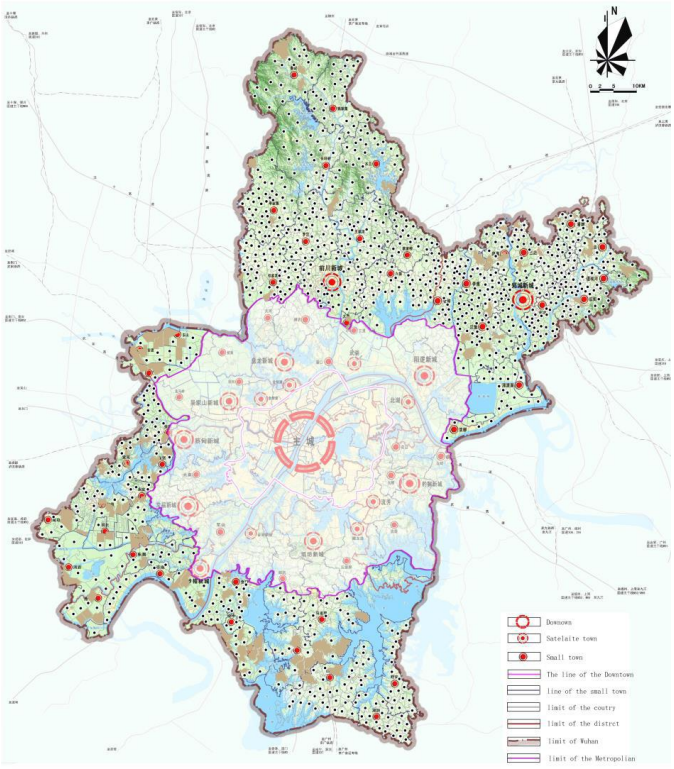

Figure 2 – The rural space distribution features in Wuhan

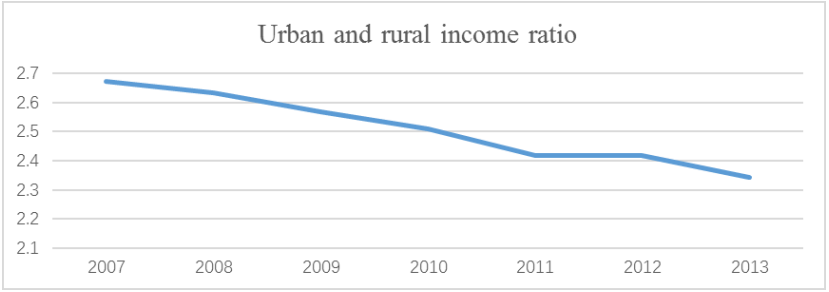

Figure 3 – The change of the urban and rural gap in Wuhan

3.1 THE AGRICULTURAL POPULATION HAS RISEN SLIGHTLY IN RECENT YEARS. "COUNTER URBANIZATION" OR "PSEUDO COUNTER URBANIZATION"?

In recent years, the agricultural population in Wuhan City, has shown a downward trend in volatility. Compared with the change trends of agricultural population and change rates in Shanghai and Chengdu, the driving effect of Wuhan's main urban area to the rural areas around it is still less than that of Shanghai. Through research, it is found that the majority of the rural residents in Wuhan are willing to move to the new urban area and the main urban area, but the current change trend of the agricultural population shows that the rate of urbanization of the agricultural population is on the fluctuant decrease, and in 2011-2014, "counter urbanization" appeared with its agricultural population growth. From (Figure 4), it can be found that the change rate of the agricultural population in Shanghai is relatively stable, showing that the rate of urbanization in Shanghai is relatively stable, while for Wuhan and Chengdu, the two metropolis at the similar development stage, "counter urbanization" appears with a fluctuant change in agricultural population. However, through in-depth analysis, it is found that the urban-rural relations of this "counter urbanization" are not consistent with the characteristics of "counter urbanization" in developed countries.

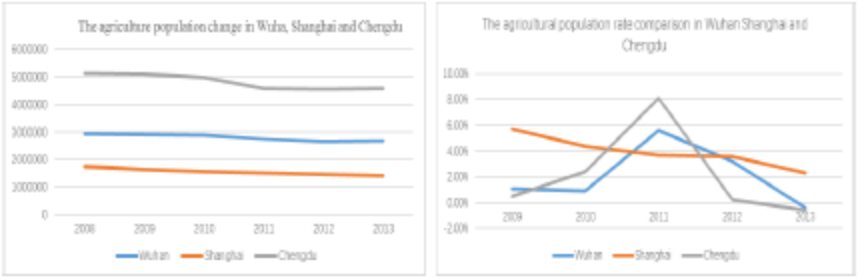

Figure 4 – The change of agricultural population and the population rate in2008-2014 in Wuhan Chengdu and Shanghai

3.2 DEMONSTRATION OF THE CONNOTATION OF "PSEUDO COUNTER URBANIZATION" IN WUHAN BASED ON THE CHARACTERISTICS OF URBAN-RURAL RELATIONS

The urbanization rate of resident population in Wuhan in 2013 was 79.3%, and the urbanization rate of registered population was 67.6%. The household registration system is not only a sign of identity difference, but also a difference in the level of rights and benefits. The equality of rights attached to the household registration for employment, enrollment, social security and others, determines the real level of urbanization. Therefore, considerable "semi-urbanized" people in Wuhan haven't been "citizenized" and enjoy the same treatment of urban residents, which is the focus of the current new urbanization. Wuhan's "pseudo counter urbanization" can be seen from the difference between its urbanization rate of household registration and that of its resident population. From the perspective of population flow, spatial changes and public services between urban and rural areas, the "pseudo counter urbanization" of Wuhan has the following characteristics.

(1) THE FLOWING POPULATION IS IN A "FORCED FLOW" BETWEEN URBAN AND RURAL AREAS OF FARMER-BASED MIDDLE-OR-LOW CLASS IN SOCIETY.

The main part of the flowing population in Wuhan is not the middle class flowing to the suburbs, but is mainly composed of migrant workers. Due to the high cost in the city and because they cannot settle in the city with household registration, most farmers still retain their agricultural household registration and their rural land as a way to increase income, but also as the reserved guaranty when they return their hometowns. So the flow of the population features repetitiveness and "forced flow" due to low income. Calculated with the natural growth rate of 7.5 ‰ in Wuhan, the agricultural population in 2013 and 2014 is basically the same as that of natural growth. Therefore, it can be found that there is not much change of household registration in agricultural population in recent years, and the growth is mainly natural growth.

(2) WUHAN'S URBANIZATION LEVEL AND ITS MAIN CITY AREA STILL HAVE A LARGE DEVELOPMENT SPACE.

Wuhan is a megacity in the central region, with an extremely high primacy ratio. The large-scale agglomeration of economy, education, industry and other elements enables it to have strong population absorbing ability, with its foreign population in 2014 reaching more than two million. And its population growth still has a strong momentum, so the development of its urbanization level still has a large space. From the perspective of space utilization rate in urban development, its spatial expansion is fast, but its extensive development way results in its poor land performance. Therefore, in its next development stage, the main city and urban development area still have a large population holding potential. Its urban space hasn't reached the saturation degree of "counter urbanization".

(3) THE DEGREE OF URBAN-RURAL PUBLIC SERVICE INTEGRATION IS NOT HIGH.

There are still big gaps between rural and urban areas of Wuhan in education, health care, and social security. The huge rural-urban difference in infrastructure and public services make it not have the conditions for "counter urbanization", and it still takes "urbanization" as the main driving force. Through the sample survey on Yanghu Village and Yingxiong Village of Jiangxia District, it was found that except basic public service needs, rural residents basically use public service facilities in urban areas. Although basic public service is accessible in rural areas, the facilities' configuration standards are too low, and their use rate is not high.

3.3 THE CAUSES OF "PSEUDO COUNTER URBANIZATION" IN WUHAN CITY

3.3.1 GRADUAL INCREASE IN THE BENEFITS OF RURAL HOUSEHOLD REGISTRATION MAKES SOME RURAL RESIDENTS RETAIN THEIR HOUSEHOLD REGISTRATION.

In 2014, the State Council promulgated the Opinions on Further Promoting the Reform of Household Registration System. It decided to establish a unified household registration system for urban and rural areas, cancel the non-agricultural household registration and ensure the legitimate rights and interests of the agricultural transfer population. Wuhan City has also established a pilot project for household registration reform. This is undoubtedly a great policy for the vast number of migrant farmers who desire to truly integrate into cities. However, according to a research report by the Academy of Social Sciences, nearly 80% of farmers do not want to become citizens, because the benefits of agricultural household registration are gradually increasing .

3.3.2 ECONOMY ESSENTIALLY DETERMINES THE DIRECTION AND DURATION OF THE RURAL POPULATION'S FLOW.

Through the survey of some rural villages in Jiangxia District and Xinzhou District of Wuhan City, it was found that farmers' income in agriculture is far less than that as migrant workers. Therefore, the young and middle-aged labor in rural areas chooses to work as migrant workers in cities to earn the annual income of 50-100 thousand yuan. The survey also found that agricultural income accounted for about 20% - 45% of the total income of farmers, and only a few agricultural villages could reach 60%.

The economy determines the outflow of the rural population in nature, but the instability of being a migrant worker in cities and the gap between migrant workers and urban workers in social security have led to the fact that the duration of migrant workers' work in cities is uncertain, and the high cost of urban life makes farmers not afford to completely settle in cities. Therefore, the outflow of rural labor is cyclical and repetitive. In Professor He Xuefeng's view, farmers' migrating into cities itself is a repeated, long-term process, and cannot be achieved overnight. British urbanization, from the clustering, suburbanization, counter urbanization, to urban-rural integration, took 250 years, France 120 years, and the United States, Canada, and Japan about 100 years [4]. In rough calculation, according to the annual income of 12731 yuan of farmers, and the main city's housing price of 8,000 yuan/㎡ and the new city area of 3,000 yuan/㎡ , if a farmer would purchase an apartment of 70 ㎡, he would spend, respectively, 43 years and 16 years

(not taking into account price increases and living expenses). In other words, it still needs to take Wuhan farmers at least 20 years to completely migrate into the city, and the citizenization of migrant workers is still a long process.

3.3.3 THE CONTRADICTION OF THE UNIQUENESS AND BINDING OF LAND LEAD TO THE INSTABILITY OF FARMERS' FLOW.

Under the current land system and collective construction land system, land is still the only means of production for farmers. Therefore, it is difficult for farmers to give up their only living guarantee and enter the city to engage in an unstable, not decent job. During the process of land transfer, farmers and village collectives don't participating the sharing of the value-added benefits for the non-agricultural use of agricultural land. On the other hand, for migrant farmers, the land without high output efficiency becomes encumbrance and binding. This contradiction caused by the uniqueness and binding makes the land use ineffective, and also leads to different willingness of land transfer for farmers with different land amounts, resulting in the instability of the rural-to-urban flow.

Therefore, in summary, the current "counter urbanization" in Wuhan City is actually a "pseudo counter urbanization". It is not the same process as the developed countries "counter urbanization", but a special phenomenon formed in the urbanization under China's special dual urban-rural system. In this special urbanization phenomenon, the urban-rural relations are still in a relatively fragmented and antagonistic state. However, with the macro regulation in policy and the economic development, Wuhan's urban-rural relations will face a new development trend in population, space, public services, and other aspects in the new round of urbanization development.

4 ON THE DEVELOPMENT TREND OF URBAN-RURAL RELATIONS IN THE NEW ROUND OF URBANIZATION IN WUHAN

At present, Wuhan City is facing a new round of the revision work for its overall planning. Therefore, it is of great significance to correctly understand the development of urbanization and to predict the development trend of urban-rural relations accurately for formulating urbanization development strategies and achieving urban-rural integration in the new round of overall planning. In the following, I still analyze the development trends of urban-rural population flow, urban-rural spatial relations, and urban-rural public service.

4.1 DEVELOPMENT TREND OF URBAN-RURAL POPULATION FLOW IN WUHAN

4.1.1 WUHAN'S RURAL POPULATION TRANSFER WILL SLOW DOWN, BUT THERE IS STILL MUCH TRANSFER DEMAND WITH MUCH TRANSFER PRESSURE.

In accordance with the relevant theory and international experience, when the urbanization rate is greater than 60% and agricultural workers accounted for less than 20% of the proportion of all employees, the dual urban-rural economic development stage, in the labor transfer level, has ended the dual structure, which means that the stock surplus labor has been finished being transferred [5]. In 2013, the proportion of the first industry practitioners in Wuhan was 9.7%, in theory, having crossed the "second Lewis turning point", but the future transfer of rural surplus labor will continue to exist. Because the rural areas of Wuhan are mainly concentrated in six new urban areas, the urbanization rate of the six new urban areas in 2014 was only 51.36%, which is lower than the national average of 54.77%. In the same period, the proportion of non-agricultural labor force in the new urban area was 64.8 %. In accordance with the 13th "Five-Year Plan" of Wuhan City, during this period there are still 50,000 of rural surplus labor needing to be transferred. However, because the population has been over the demographic dividend range, the rate of population transfer will slow down in some sense.

In addition, the pressure of Wuhan's transfer of incremental labor is also large. Wuhan City, as a megacity, the central city has strong attracting power to workers from the surrounding towns, as well as those from other areas. And there is a certain contradiction between the demand structure of Wuhan labor force and

the nature of surplus labor force. With Wuhan's the rapid industrial transformation and gradual growth of the high-tech industry, it needs more and more professional and technical personnel. And Wuhan is rich in human resources from university graduates, so the remaining labor generally has low education. Therefore, there is certain difficulty in employment transfer in Wuhan. At the same time, Wuhan City is in transition from the traditional agriculture to modern agriculture, so the scale land scale operation is bound to release a large number of surplus labor force, so in the new round of development, the pressure on the transfer of rural population is still great.

4.1.2 WUHAN'S RURAL AREAS WILL CONTINUE TO ASSUME SOCIAL SECURITY FUNCTIONS FOR A LONG TIME IN THE FUTURE.

The rural area is the carrier to maintain rural life and social stability. Rural areas first ensure the economic interests of farmers, and are the migrant workers' final home when returning their hometowns. They are the reservoir and stabilizer for China's modernization and urbanization. If there is economic turmoil in this country, migrant workers can still return to the rural areas, providing a buffer for modernization. As the process of migrant workers migrating into the city is a very long and repetitive process, in the next period of time, Wuhan's rural areas will still undertake their social security functions in addition to their functions of agricultural production, ecological conservation, and rural cultural heritage in the process of urbanization.

4.2 DEVELOPMENT TREND OF URBAN-RURAL SPATIAL CHANGES IN WUHAN

4.2.1 WUHAN'S MAIN URBAN SPACE DEVELOPMENT SHOULD COMBINE "STOCK POTENTIAL-EXPLOITING" AND "CONTROL OVER INCREMENTAL ACCOUNT".

Wuhan City, as a large-capacity carrier for urban and rural population, not only has a large population base, but also has the prominent demands for further population growth. External population has become the absolute mainstream of the growth of the resident population, especially the urban population. The population source structure tends to be diversified, the liquidity is increasing day by day, and the demand for production and life tends to be complicated. Therefore, the associated rapid expansion will be reflected in the space. The spatial growth of the main urban area is still the development trend of the next phase in Wuhan City. The future strategic direction of the main city's space development should be combining "stock potential-exploiting" and "control over incremental population". In addition, the new city areas and small towns will be the main urban space of the next stage of urbanization .

4.2.2 WUHAN'S RURAL AREAS SHOULD ENSURE "THE MINIMUM GUARANTEE" AND "OPTIMIZATION".

Compared with urbanization, the scale reduction of rural areas is an inevitable trend, but the future rural areas still bear important functions of production, life, industry and ecology, so the rural space development strategy should mainly be "the minimum guarantee" and "optimization". On the one hand, the production and living service functions of the rural areas should be supplemented, providing perfected facilities and conditions for the remaining rural people and getting ready for the reflow of population from residents of the main city areas. On the other hand, with the improvement of the urbanization, the overall size of rural areas will be reduced, and the layout of the residential areas will face new changes. Much functional configuration and social layout of the planning should not only meet the development needs of the current stage, but also take into account of the impact of the future size reduction. Coupled with the current instability of the transfer brought by incomplete urbanization of population, the rural space development strategy should be "ensuring minimum guarantee" to ensure the basic functions of rural areas in the urbanization. And at the same time, the idea of "optimization" development should be taken to get ready for the real "counter urbanization".

4.3 DEVELOPMENT TREND OF URBAN-RURAL RELATIONS IN PUBLIC SERVICE SHARING IN WUHAN

4.3.1 THE HIERARCHICAL CONFIGURATION SYSTEM LIMITED BY THE ADMINISTRATIVE DIVISION HAS BEEN BROKEN, AND THE NETWORK URBAN-RURAL PUBLIC SERVICE SHARING RELATIONS GRADUALLY APPEAR.

The emergence of new industries and technological revolution has brought about profound changes in residents' way of life or production, and the network systems such as rail transit have become more and more mature. The traditional hierarchical relationship between urban and rural systems limited by administrative divisions has been broken in some fields of functional relationships. The network characteristics of factor flow and energy transfer are more obvious. The urban-rural relations show an obvious network trend. The living circle of the most important public facilities in the rural areas has undergone a change without the limitation of the stratification of the administrative division. But the architecture of the rural area is still necessary to exist, and its significance lies in improving the efficiency of the facilities. Therefore, the future urban-rural public service sharing relationship should take the residents' facility use as the basis of the construction of the rural space system and "living circle" should be taken as a link between urban and rural areas, to form a network time-space relationship and society sharing relationship.

4.3.2 THE TREND OF RURAL HOLLOWNESS AND AGING POPULATION IS INEVITABLE, AND IT SHOULD BE GIVEN APPROPRIATE SUPPORT.

The rural hollowness and aging population is an inevitable trend in the urbanization in China. If the idea of "solving the problem" is taken to restrain this trend, it is bound to be difficult to solve it. Therefore, we should adapt to the change of social structure, improve the rural-related aging facilities, and carry out more activities for the elderly. We should give "auxiliary support" based on the existing status. This not only continuously improves the rural life quality, but also gets ready for the integration of the urban-rural public service for the visionary population reflow.

5 CONCLUSION

Wuhan City, as a megacity in the central region, its socio-economic development, and urbanization process characteristics will make its urban-rural relations have corresponding particularity, but also to a certain extent, considerable universality, because China's urban-rural relations in the same system framework are generally in a similar development base and stage. This paper analyzes the present situation and development trend of the urban-rural relations in Wuhan from the perspective of the special urbanization of Wuhan City's "pseudo counter urbanization", hoping to analyze and judge the urban-rural relations by analyzing its logic, so that the urbanization and urban and rural overall development in Wuhan have a more rational research foundation in a new round of development, to help lay a foundation for the construction of Wuhan City as a national central city. In 2014, the level of urbanization in China ushered in this historic threshold of 50% (54.77%). To promote a fundamental change from "rural China" to "urban China" in a country with the population accounting for nearly 1/5 of the world, the connotation and characteristics of urbanization will face some unique phenomena in China, and urban-rural relations will also face new changes. There is no doubt that this research will definitely be able to make due contributions to the strategic objective of achieving the new urbanization.

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ID 1418 | FOR AN ANTI- AND POST-CRISIS TERRITORIAL REGENERATION AGENDA. THE FRIULI VENEZIA GIULIA REGION AS A STUDY AREA

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ABSTRACT: The territorial impact of the longest and most severe post-war economic crisis is interacting, in Italy, with endemic territorial neglect that exposes people and local communities to devastating risks and a permanent state of insecurity and uncertainty. The "low carbon future" has also assumed, in the institutional and scientific literature and beyond its direct environmental implications, wider technological and socio-economic implications. A decades-long cycle of "reterritorialization", based on the regeneration of "territorial capital", can therefore become a major "Country project", at both local and national levels. It should be aimed at assuring security to the people exposed to risks, redevelopment of the settlements, certainty for investments, basic efficiency in the residential, production and service systems. It should also be oriented, on a broader horizon, towards the low carbon future. The huge financial commitment and the European fiscal compact are often considered the real constraints to the feasibility of such projects. However, the simulation (qualitative and quantitative) that is conducted in this paper, with reference to the Friuli Venezia-Giulia Region (not particularly large although functionally rather complex and governed with a Special Statute of Autonomy), demonstrates that the main problem is not so much financial nor the constraints on public budgets because most of the resources, in the regeneration of territorial capital, would be private (household savings), while public resources (essentially regional) should above all play a leveraging role. The problem appears rather to be cultural and political.

KEYWORDS: territorial capital regeneration, post-crisis plans, low carbon future

1 FOREWORD

The most serious post-war crisis is leaving obvious signs on local and regional economies and territories. This is compounded by the structural inadequacy of much of the national housing stock whose disastrous effects have again recently been demonstrated by the earthquake in central Italy. As a whole, the state of the Italian "territorial capital" (OECD, 2001) is due, in particular, to endemic neglect by central government.

Even the maintenance and upgrading of buildings by private individuals is lacking, apart from the new and promising investment prospects in big cities. Consequently, the territorial capital is visibly degrading: it loses security, cultural features, inhabitants, attractiveness, good performance, in a word, value. In such a

widely problematic situation, it should be attempted to produce appropriate analysis and diagnosis of the territory, along with timely interventions.

What is presented below is neither a policy work in progress nor a plan under study. It is just a simulation of something that, to be believed in, has to be considered useful and necessary by people and their governing elites. If the crisis, by virtue of some strange self-deception, makes it difficult for the governing elites to see the usefulness and necessity of an "anti-crisis" plan centered on the regeneration of territorial capital, this is not a problem of futility or impossibility of the plan itself, but a difficulty of analysis and vision by these governing elites.

The area we intend to focus on is Friuli Venezia Giulia (FVG), the Italian region firmly anchored, until a few years ago, in northeast Italy and its economic performance and also decidedly projected towards an advanced European context and a stable Central Europe (at least in the fields of logistics and transport; see Fabbro and Maresca, 2014). Today, the FVG Region seems to be going back to being a distressed (Mattioni, 2015), if not marginal region, while its border position is no longer perceived and managed as a resource but rather as a threat.

How to act, therefore, in the face of such a contradictory situation?

First of all, perhaps, by trying to put it in a perspective of critical analysis of the territory. In this case, it is inevitable to seek inspiration, guidance and teaching from the long cycles of territorial evolution. In the case of the FVG Region, we are now probably at the end of a cycle of structuration, or better of "territorialization"[1] , which lasted from the 1960s and that saw, in the "Friuli model"[2] of post-earthquake reconstruction of 1976, its “climax” and its political and cultural emblem.

The current phase of "deterritorialization" (Raffestin, 1986) certainly incorporates the crisis from 2008 onwards, but started before then and perhaps in the early 2000s. Deterritorialization implies a loss of functionality, of attractiveness of the urban structures, of value of the buildings and also the loss of control and power over the material, social and symbolic reproduction of the territory itself (Becattini, 2015). It is therefore clear that the return to a redevelopment process of the territory implies a credible and shared socio-economic perspective and also some degree of self-determination. These are faces of the same coin, and remain the pillars of every process that aims to rebuild conditions of self-reproduction in territories. It is what we could call the start of a "reterritorialization" cycle (Raffestin, 1984, 1986), and that here we try to pivot around a decades-long plan for the regeneration of territorial capital. The case study area is, therefore, the Friuli Venezia Giulia (FVG) Region. The simulation aims to verify the main parameters and technical feasibility of this regeneration plan, as well as the possibility of replicating the approach in other regions. The vision is that of a low carbon future but firmly anchored to the current and diffuse territorial needs. The social organization model that supports the plan is strongly based on the subsidiarity principle and not only in the vertical direction (from bottom to top) but also in the horizontal one, which means a strong initiative of individual local units, in cooperation with public bodies, but with distinct missions, tasks and operations (Moroni, 2015).

A plan for the redevelopment and improvement of the national housing stock, given its enormous technical and financial dimension, must be allocated in a decades-long and maybe even multigenerational perspective. As such, it must necessarily also deal with the more general global problems such as climate change, lack of jobs, aging population, migratory flows, which are often cited as the most critical issues of the coming decades (Mason, 2015). Moreover, the context of a stagnant economy amplifies the problems, reduces the chances of overcoming the crisis and also makes the cited criticalities interact with each other. A general plan for the reterritorialization of the country cannot therefore be conceived without putting it in relation to these critical issues and in the face of the European and international policies already in place to cope with them (UNFCCC, 2015). The "low carbon" strategies, i.e. based on the minimization of anthropogenic emissions of CO2 in the atmosphere, assume, in the institutional (CEC, 2008; ECF, 2010) and scientific (Wilson and Piper, 2010) literature, socio-economic and technological implications in

[1] This refers to the cycle of "territorialization, deterritorialization and reterritorialization" theorized by the Swiss geographer Claude Raffestin during the 1980s.

[2] The concept of the "Friuli Model" is an ex-post rationalization of what has been thought, decided and realized to completely reconstruct, in more or less ten years, the wide area of Friuli (Northeastern Italy) stricken by the 1976 earthquake and is due, in particular to Luciano Di Sopra (1998, 2016).

addition, of course, to the environmental ones. If the purposes of the strategies are to reduce air pollution and mitigate climate change and its adverse effects (which are often also the origin of large migration flows), the "tactical" action has to meet the shift in energy systems, the acceleration in the production and use of renewable energy, the changes in local communities and regional economies and, not least, in human settlements (Crawford and French, 2008). The "low carbon" strategy must therefore, in the long term, inform and guide the regional and national plans as well as the regeneration of the territorial capital.

2 FROM BUILDING RENOVATION TO THE TERRITORIAL CAPITAL REGENERATION

The old motto quand le batiment va tout va has, for decades, described the flywheel function of the building cycle. Is it a still valid motto? The idea that new buildings and infrastructure are just occasions to open building sites and boost the economy is still a quite widespread belief, but that now has to be radically redefined. If we look at some of the data relating to the construction industry, we realize that a historical cycle seems instead to have been completed and that territorialization processes must be radically rethought:

1. The first "macro" data are related to the environmental component of territorial capital. Artificial land use has reached (in territories of different level), in absolute as well as in relative value, a critical threshold: among the major European countries, Italy is the one with most artificial covering (about 10%; Eurostat, 2012); FVG is in eighth place among the twenty Italian regions, with 8% of artificial surface (ISPRA, 2015). This does not mean, of course, that no further square meter of open area should be built on, but that the state of strong urbanization of land, combined with the effects of climate change, is such as to advise against further expansion and to rethink current urban structures (Musco, 2012).
2. The second type of "macro" data are related to the settlement component of territorial capital. In the last decade, in fact, building activity has been halved. The data of the national "Territorial Agency" report that 100 residential sales in 2007 have become, in 2014, 54.8 in Italy and 51.4 in the north-east (non-residential is less than 50.0); other data (the residential area authorized by building permits) pass from a value of 1 square meter per family in 2003 to 0.3 in 2012 (ISTAT, 2015). Moreover, the data of ANCE[1] FVG (the association of builders) on the evolution of companies and employees in the building sector, show that the sector has almost halved in recent years: 100 companies in 2008, have dropped, in 2015, to 57.7 and the workers to 63.2.
3. Other very important "macro" data (ISTAT, 2011) are related to the maintenance of existing buildings. Data regarding the buildings previous to 1971 (therefore 50 years of age and over) show that more than half of the buildings (53.67% in Italy, 53.51% in FVG) are now outdated and consequently more vulnerable to the impact of natural disasters. It is therefore not true that there is less need to work in construction. It is instead true that there is a great need for maintenance, refurbishment and redevelopment of buildings in order to pursue new private and public goods, other than those of the past.
4. The last type of decisive data are related to human and social capital that, in FVG, are becoming impoverished more quickly than in the rest of Italy and Europe: the index of structural dependency (inactive population against working age population) passes in FVG, in the period 2001-2014, from 48% to 61% while it is smaller and slower in the rest of Europe where, in the same period, it goes from 49% to 52% (Eurostat, 2015).

If all this is true, then it is also true that:

1. The crisis in the building sector and, more generally, in the real estate market (the housing bubble of the first decade of 2000), cannot be explained, at least in western countries, only by sectorial and financial factors but also by more general and structural factors primarily connected with environmental, demographic, social and cultural factors.
2. The existing buildings satisfy the demand for space for housing and production. But, at the same time, because the crisis has impacted heavily on household investments, they lack maintenance,

[1] ANCE is the acronym of the Italian association of builders.

renovation and structural adjustments. Consequently they are visibly deteriorating, losing functionality and economic value.

3. Deprived of even the basic interventions of seismic upgrading, the building stock will become even more vulnerable to natural and anthropic risks and will, as a whole, lose performance capabilities that will also lead to a loss of functionality of the settlements as well as the quality and attractiveness of entire areas.
4. There is therefore a great need to return to producing in the construction industry because buildings, infrastructure and settlements inevitably degrade and, like any other artifact, need continuous maintenance.
5. The building sector is also labor-intensive and capable of activating a huge and intricate economic and employment supply chain[1].

A productive relaunch plan of the building industry, suitable to overcome the current crisis and meet the new structural changes on the demand side, must inevitably focus on the activation of a more complex and inter-sectorial supply chain than in the past (Verones and Zanon, 2012). This supply chain is that of territorial capital regeneration which includes, in addition to settlements and infrastructural capital, natural and environmental capital, and social and human capital (Camagni, 2008).

3 THE CET SUPPLY CHAIN TOWARDS RETERITORIALIZATION PROCESSES

If, together with information on the building sector, we read that related to hydrogeological risk and the degradation and depopulation of settlements, we cannot fail to note that, at least in FVG, a long "territorialization" cycle definitely ended with the early 2000s and that, since then, we have been in a lengthy and strong phase of deterritorialization:

- settlements and infrastructure are in excess in relation to their actual use; in some cases they are also under-utilized and/or obsolete (as, for example, some seaside and mountain tourism centers); entire territories are affected by severe abandonment processes;
- even human capital is shrinking and depleting faster than elsewhere (FVG is one of the regions with the highest rate of aging of Europe);
- the identity of places is strongly affected by external intervention (the shopping centers of the last decades or more recent infrastructure) but also by endogenous, high impact, interventions against which the old land use planning seems no longer effective (since the 1990s, the FVG Region has been trying to replace the old Piano Urbanistico Regionale of 1978, but without any significant result);
- the combination of several factors has therefore generated a loss of economic value as well as of the cultural and symbolic values of the territory. But also, which is possibly even worse, a loss of autonomy and self-government of the local communities.

The question is now which approach to adopt in order to frame and deliver a long-term strategy of "territorialization" based on a wide and deep regeneration of the territorial capital. A top-down macro-structural framework (mainly infrastructural and environmental) as the EU spatial policies have proposed for more than a decade (Fabbro, 2007) starting from the ESDP (1999)? Or a bottom-up micro-structural framework more closely related to the places of people's daily lives and the real local economies (Becattini, 2015)? There is no doubt that a valid approach should represent an alternative against the real difficulties that those macro-frames have demonstrated (Fabbro et al., 2015) particularly in terms of multilevel governance. But a plan for basic interventions aimed at the maintenance and upgrading of the existing building stock could obtain a broader consensus and transcend the limits of a traditional and sectorial policy, only if it helps, cumulatively, to move a larger and integrated supply chain of urban regeneration, land use protection from hydrogeological risks, landscape restoration (which, for simplicity, can be called the "construction, environment and territory" supply chain or CET). The development of a CET supply chain:

[1] According to ANCE to invest a billion euro in the building sector generates a fallout, on the overall economy (direct, indirect and induced), of over 3.3 billion and creates 17,000 jobs, of which about 11,000 in construction and 6,000 in the related sectors.

1. could deliver a multiple sustainability perspective (economic, environmental and social);
2. is also strongly subsidiary and inclusive because it would be based on the effective activation and participation of citizens even as small owners, investors, operators;
3. unfolds on different territorial and social scales: from building to urban block, from city to territorial and regional system; but it is also split into different dimensions of the social reproduction system: from housing, to production, to education.

The question that must therefore be answered is how to deliver a plan for the development of the CET chain onto a wide and diffuse process of reterritorialization. The hypothesis that is supported here is to issue a plan of public and private investment, on the CET supply chain, starting from the rehabilitation of buildings for seismic safety and energy efficiency.

It has been estimated[1] that, in FVG, for the energy rehabilitation of about 136 thousand single or double residential buildings and 146 thousand apartments, all built before 1971 (that, presumably, have very low energy efficiency) would require approximately 8 billion euro in the whole region (including the interventions for seismic safety in the territories at greatest risk but external to the zone of the 1976 earthquake and the reconstruction that followed it). This is a very considerable sum (equal to almost half the cost of the post-earthquake reconstruction in Friuli, at present value) but is extended to the whole region and comprises, for the greater part, the investment of household savings in the durable and primary good of the home.

An intervention of regional finance, equal to about 1 billion euro in five years, would trigger a total investment (private and public) of almost 5 billion euro which, if the ANCE multiplier is correct, would in turn generate a fall-out, on the entire CET supply chain, which is 3.3 times higher and would amount to a total of 15 billion euro. The regional intervention, which would be 200 million euro per year, is relevant but not impossible as it would be equal to 4% of the current annual regional budget. The feasibility of the five-year plan, like the one proposed here, does not seem to be so much financial but more strictly political and organizational because of:

- the competition, for regional financial resources, with other economic strategies (such as those related to technological innovation in the manufacturing sectors and that go under the generic but seductive definition of "factory 4.0");
- the greater political interest in symbolic policies instead of difficult ones requiring strong and durable choices in resource allocation;
- the long duration of a ten-year plan that conflicts with the short horizons of political returns;
- the significant financial, organizational and cultural magnitude of the plan that requires the existence of a particularly ableand motivated public management.

The process of regeneration of the territorial capital starts structurally from private houses and embraces the entire territorial system but, at the same time, starts financially from the Region and involves thousands of families. The municipalities and their associations, in a subsidiary position in relation to the families, have to identify the structural territorial elements (linear, punctual or areal) to be considered and restructured for the urban integrated regeneration as well as to identify places, spaces and services centers to be shared for the co-working and co-housing activities. Moreover, the Region, in order to provide sustainable mobility (based, in the first place, on the railway network) and general access to digital information, mainly has the task of identifying and intervening, through "territorial projects", on nodes, networks and connections of the various territories to be regenerated.

As regards the planning tools in the strict sense, these are not to be separated from the larger plan of territorial capital regeneration as they are, in fact, instrumental to this. The Region is responsible, with a regional spatial plan, for identifying both the value areas to be enhanced and the risk areas to be protected, and those areas to be considered as a priority in the redevelopment and regeneration process. But a socially embedded long term vision towards the low carbon future, has also to be promoted (see Fig. 1).

[1] See "Territorial capital and urban regeneration: the case of FVG region", MSc thesis in Civil Engineering by Elizabeth Paviotti, University of Udine, 2016

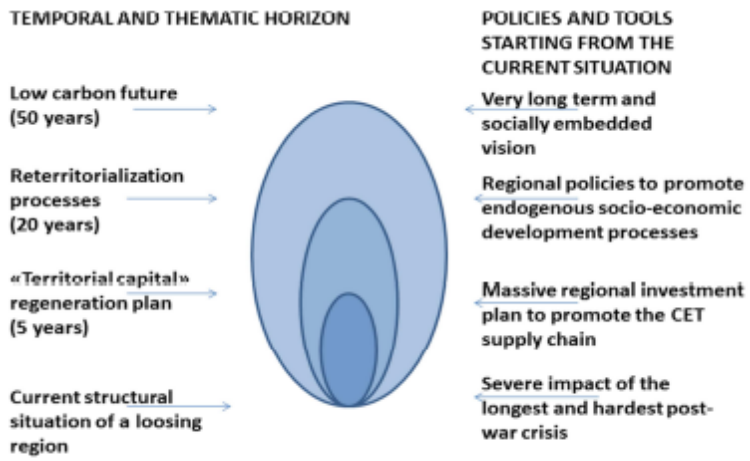

Fig. 1. For an anti- and post-crisis territorial regeneration agenda. Policies and tools aimed at pursuing a "low carbon" regional future along with the overcoming of the regional effects of the ten-year-long crisis

4 CONCLUSION

The territorial capital regeneration process, starting from the redevelopment of the existing houses and buildings, ultimately means to motivate the basic reasons and efforts for redevelopment of the building stock but bearing in mind, if possible, a broader reterritorialization process of the country. It is certainly a "vast programme" but it is no longer an option but a real emergency essential to revive the credibility and competitiveness of the country. Without basic territorial security and quality, in fact, there are not even the minimum conditions of efficiency to initiate credible and sustainable economic recovery plans. Moreover, a massive investment plan, on the CET chain, starting from single houses and small centers, has to be considered regenerative of all the capacities and qualities of the territories. As such, it is the basis and the heart of a real economic program of long-term reterritorialization. Some might argue that it would be easier and more profitable to bet on other scenarios such as the development of manufacturing sectors with higher added value, or territorial smartness (the world of "apps" that promises a happier life by manipulating the smartphone) or research & development or food and wine chains or local tourism. But none of these can, by itself, be an alternative to the CET scenario, only supplementary. The CET scenario is basic in the sense that, without an acceptable level of quality of the territory (in terms of safety, functionality, accessibility, attractiveness, aesthetics etc.) none of the other mentioned scenarios can stand alone.

The question we sought to answer is, therefore, how to pivot, towards a global low carbon strategy, a process of wide and diffuse anti-crisis territorial regeneration. The first answer is that, to be widely consensual but, at the same time, effective, the process would probably require to be reversed according to these steps: a. widespread mobilization of private household resources, through a regional financial leveraging, for energy improvement and earthquake safety of houses and buildings; b. an economic priority attributed to the regional CET production chain in order to pursue a rooted and strong anti-recession perspective; c. local, regional and national spatial plans to promote and encourage long-term investment in the overall territorial capital regeneration. In the paper, simulating the process in a small but functionally complex region like Friuli Venezia Giulia, we have tried to demonstrate that such a process is technically feasible but initially requires both the will to recognize the severity of the crisis as well as the state of the territory (which the governing elites do not normally like to recognize except for a short time after the latest disaster) and, consequently, the necessity for a nationwide long-term plan to overcome both the crisis and the degradation of the territory.

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ID 1462 | THE MENTAL HEALTH ATLAS AS TOOLS FOR AN COMPREHENSIVE SPATIAL BASED MANAGEMENT OF MENTAL HEALTH CARE

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ABSTRACT: Different funding schemes of mental health care coexist in Spain due to the transfer of power made to regional governments. Comparing the efficiency of those regional systems implies assessing several aspects. Among them, one of the most important is the structure and composition of the mental health network across the each region. This work attempt to present the mental health atlases (MHA) as a

tool developed to describe the current state of the regional mental health network but also to support the planning of health policies. MHA offer a comprehensive approach to the mental health care since it encompasses services provided by the health care system but also services provided by other agents of the regional government. To do this, the DESDE-LTC classification as well as a geographical information system are employed. The DESDE-LTC classification allows making an inventory of the different service unit embodied within the mental health network, describing the function of each unit in a standardized way, regardless the denomination of the unit or its affiliation to a body of the regional government. To illustrate the MHA, this work present the MHA of Bizkaia and Guipuzkoa, whose mental health networks are composed by more than 150 and 130 standardized services, respectively. The MHA of Bizkaia shows that there is a high concentration of services in an area called “Ría de Bilbao”. Meanwhile the MHA of Guipuzkoa exhibits a mental health network more geographically dispersed. Despite these differences, both examples yield a good performance in terms of quality of care, except in the case of long-term stay in hospitals. This work contributes to the planning of public services by delivering a tool, which can be applied to other countries or adapted to be used to analyze the current state of public services networks across the space.

1 INTRODUCTION

According to a WHO study, one third of the adult population suffers from a mental disorder each year. The European Study of the Epidemiology of Mental Disorders (ESEMeD) project stated that around 13% of the population reported a lifetime history of major depressive disorder in a large sample from six European countries (Alonso et al., 2004). In Spain, the ESEMeD group calculated the major depression lifetime prevalence to be 10.6%, which is a low value in comparison with other Western countries (Gabilondo et al., 2010). Across Europe, there is a growing awareness of the need for specific strategies, interventions and dedicated services for people with mental disorder but there is inconsistent implementation of evidence based practices.

Due to different political, cultural and socioeconomic contexts, the development and implementation of mental health services across countries has not been a well-coordinated, or uniform process. In order to assess mental health service provision internationally and understand different service contexts when implementing models of care, standardized service mapping tools are required. The Description and Evaluation of Services and Directories for Long Term Care (DESDE-LTC) project developed a classification tool for the coding of longer-term mental health care services. The DESDE-LTC (Salvador-Carulla, et al., 2011) describes service provision at the local level and later aggregates the information to the regional and national level, using a standard unit of analysis of health services based on functional teams.

This standardized information is introduced within the REMAST tool (Salvador-Carulla et al., 2015) which allows to collect and map detailed information, within a study area, of the structure of health and social care services, that provide care for, or are used by, people with mental disorders in terms of service distribution and utilization. To do this, different instruments and visualization techniques are employed, resulting in mental health atlases (MHA). The MHA brings together practice, policy and research to inform Mental Health policy and priority settings across Europe. To illustrate this, we carry out an ecological study aimed at describing and comparing mental health services at a meso level (small health areas) in two northern Spanish regions, Gipuzkoa and Bizkaia, which perform well although they exhibit differences in their mental health network services.

The remainder of the paper is organized as follows. The next section describe the area of study and briefly introduce the methods employed. The third section goes further into the MHA compilation, showing the main results for each type of analysis carried out. In this section, each analysis is illustrated with a sample of those results obtained from Bizkaia and Guipuzkoa provinces. Finally, concluding remarks are offered.

2 SCOPE OF STUDY AND METHODS

Guipuzkoa and Bizkaia are two of the province of Autonomous Community of The Basque Country, a region of northern Spain. Almost half of the 2,155,546 inhabitants of the Basque Autonomous Community

live in Bilbao's metropolitan area, which is sited within the province of Bizkaia. Of the ten most populous cities, six form part of this area.

In Basque Country, the level of sanitary zoning is the Health Area whose first delimitation took place in 1990. There are three Health Areas, which are the same that the so-called Historical Territories: Bizkaia, Gipuzkoa and Araba (the third province). These zones are subdivided into mental health catchment areas and, in turn, the catchment areas are structured by many basic health areas. Currently, there are a total of 20 catchment areas in Bizkaia and 12 in Gipuzkoa.

To carry out this research, data are drawn from two databases: i) the Minimum Data Set for Outpatient Mental Health Centers (CMBD-SMA), provided by the Gipuzkoa and Bizkaia Mental Health Services and Basque Government Department, safeguarding the privacy of patients to prevent geographical identification of individual cases; ii) the data sheets of mental health services obtained with DESDE-LTC instrument. All the data refer to years 2013 and 2014.

Based on this data, an ecological, comparative, descriptive and transversal study of Mental Health in Bizkaia and Gipuzkoa is carried out. It focuses on the evaluation of "services" and "basic types of care" at the meso level (catchment areas) following the model proposed in the Matrix of Thornicroft and Tansella (1999) for the evaluation of services. In addition, a GIS system is used for or mapping sociodemographic, provision and service use indicators. Results are shown by the MHA, covering different issues of the major importance for planning, such as: Health Metal Zoning, Socio-demographic analysis of mental health areas, Catalog of mental health services, Use of services, Accessibility to services and Comparison with other territories. The next section give further details of each step within the process and, at the same time, show the main results of each section.

3 RESULTS

Getting a full depict of a mental health network services that can be useful for planning purpose, implies a high level of research effort and training. This section goes further in the several steps followed within this process and illustrate them by showing a sample of results obtained from the study of Bizkaia and Guipuzkoa mental health network.

The first step is mapping those social and demographic indicators that are relevant to mental health care (Table 1). Information from population data, socioeconomics indicators and service inventory can be combined to provide a detailed description of the study area and to make comparison within each study area.

VARIABLE	STUDY AREA	
	Guipuzkoa	Bizkaia
Population density	7,856.05	21,144.08
Dependency rate	53.20	56.05
Aging index	177.37	214.13
Immigration index	92.96	94.07
People living alone	9.88	9.54
Elderly living alone	22.04	20.55
Unemployment rate	10.83	14.72

Table 1- Relevant information to Mental Health Care

Only maps for population density of Guipuzkoa and Bizkaia are depicted (Figures 1 and 2), but maps for each variable are available upon request to the authors.

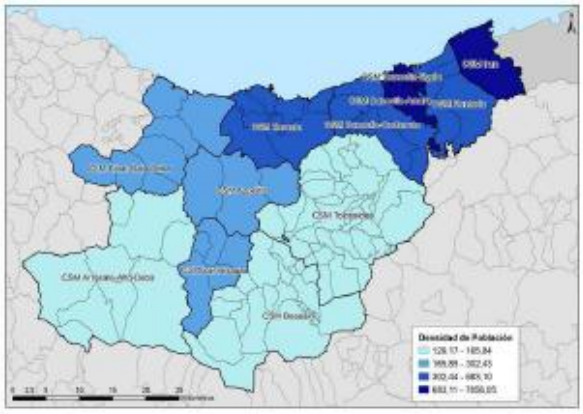

Figure 1 – Population density of Guipuzkoa province. Source: Authors' elaboration.

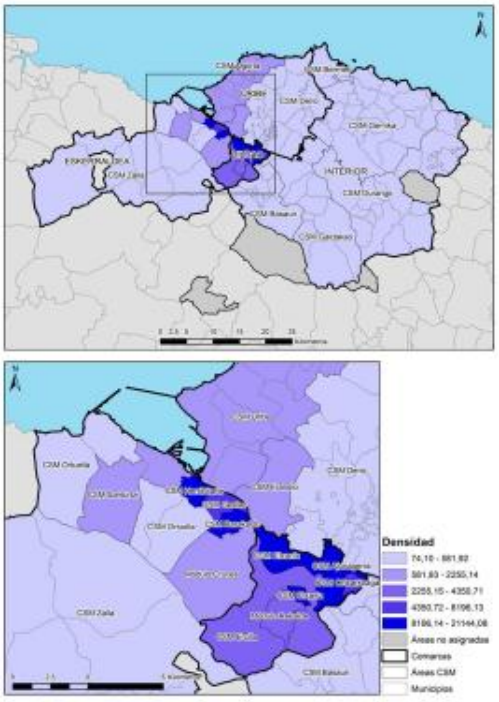

Figure 2 – Population density of Bizkaia province. Source: Authors' elaboration.

Once the study area is characterized, the second step is the classification and mapping of service provision (see Table 2). Classification is made by using the 'Description and Evaluation of Services and Directories for Long Term Care' (DESDE-LTC) instrument, which allows the standardized description of services for long-term Care based on the identification and coding of care teams within services. It follows the approach to service and care team evaluation developed by the EPCAT Group (European Psychiatric Care Assessment Team) and PSICOST Scientific Association since 1997, starting with the development of ESMS (European Care team Mapping Schedule) for the evaluation of services in mental health (Johnson et al, 2000), and related adaptations to the evaluation of services for older people in Spain (DESDAE) and services for disabilities (DESDE) and social care. This instrument is intended to compile information on input and process of care at the meso-level (e.g. health/social catchment areas) and micro-level (e.g. individual services) as defined at a modified version of the Care Matrix developed for the assessment of mental health care (Tansella & Thornicroft, 1999). In sum, DESDE-LTC allows to perform the following tasks in an standardized way: 1) Compiling a standard directory of long term care services in catchment areas, including the provision of social and health care services by the public, private and/or voluntary sectors; 2) Identifying the number of services/care teams in a catchment area for health system analysis and mapping; 3) Identifying the services availability, diversity, placement capacity and workforce capacity of the care teams operating in a catchment area; 4) Measuring and comparing the levels of provision/ availability and utilization of services/care teams between different catchment areas using an international

coding system; 5) Comparing the structure and organization of services/care teams in different catchment areas; and finally, 6)Recording changes through time in services/care teams available within a catchment area.

	Sanitarios	Mixtos	Sociales	Drogas	Judiciales	Educativos	TOTAL
Atención a la información							
I1.1 Dispositivo de atención de asesoramiento e información relacionada con la salud	1*						1*
I1.4 Dispositivo donde se ofrece guía y asesoramiento relacionados con el trabajo			1				1
Atención ambulatoria							
O2.1 Dispositivo de atención ambulatoria móvil de urgencia durante horarios definidos de tiempo	5						5
O3.1 Dispositivo de atención ambulatoria de urgencia no móvil con apoyo 24 horas	2/3						2/3
O8.1 Dispositivo de atención ambulatoria continuada (no crisis), no móvil con frecuencia de atención de más de una vez a la semana si se requiere	21/30+3*	1		3			21/*34+3
O9.1 Dispositivo de atención ambulatoria continuada (no crisis), no móvil con frecuencia de atención quincenal	3*			1*	1		1+4*
Atención de día							
D1.1 Dispositivo de atención de día aguda no episódica de alta intensidad (admite en 72 horas)	2/1						2/1
D1.2 Dispositivo de atención de día aguda no episódica que no es de alta intensidad (admite en 4 sem)	2				1		1/2
D2.2 Dispositivo de atención de día donde el usuario realiza un trabajo ordinario remunerado			5/1				5/1
D3.2 Dispositivo de atención de día relacionada con el trabajo de alta intensidad y estancia indefinida			14/5				14/5
D4.1 Dispositivo de atención de día estructurada de alta intensidad relacionada con la salud	4/14	6/1	3	5*			13+5*/15
D4.2 Dispositivo de atención de día estructurada de alta intensidad relacionada con la educación	1					16	16/1

Table 2- Classification of service in Guipuzkoa by DESDE-LTC Source: Authors' elaboration.

As a result, a wide range of service are classified in an standarised way and therefore comparisson are possible. As can be seen from Table 2 the service classified are those related with information and assessemet of health and non-health related needs, denoted with letter "I". Outpatient care facilities, which are denotd with letter "O" are also mapped. These facilities involve contact between staff and users for some purpose related to management of their condition and its associated clinical and social difficulties. Two major characteristics define these type of services: Acuity and Mobility. Acute care is provide by emergency facilities, which makes assessment and initial treatment in response to a crisis, deterioration in physical or mental state, behaviour or social functioning which is related to the condition; and (ii) can usually provide a same day response during working hours or at least within 72 hours after the care demand. Non acute care provide users with continuing care including regular contact with a health professional, which may be long term if required. Continuing care care teams may also provide acute/emergency care on a regular basis. Regarding to mobility, we distinguish between high an low mobility. In the former or home & mobile facilities contact with users occurs in a range of settings including users' homes, as judged most appropriate by professionals and users. For a care team to be classified as high mobility (home & mobile), at least 50% of contacts should take place away from the premises at which the care team is based; otherwise the service will be classified as a low mobility facility. Finally day care facilities, denoted by "D", are also considered. These facilities are normally available to several users at a time (rather than delivering care teams to individuals one at a time); (ii) provide some combination of treatment for problems related to long-term care needs: e.g. providing a structured activity, or social contact and/or support; (iii) have regular opening hours during which they are normally available: and (iv) expect care team users to stay at the facilities beyond the periods during which they have face-to-face contact with staff (i.e. the care team is not simply based on individuals coming for appointments with staff and then leaving immediately after their appointments). The care delivery is usually planned in advance. Day car facilities are also classified into acute and non-acute care. The former deals with health related needs, whereas the latter deals with non-health related needs. Although it is not included in Table 2, information about residencial care facilities, where hospital are condiered, are also collected.

Once each single facility has been classified using the DESDE-LTC code, they are geocoded and located in the territory, resulting in a map as shown in Figure 3 and 4. In this way, a picture of the complete mental health network across the territory is obtained, but showing the type of care provided by each facility.

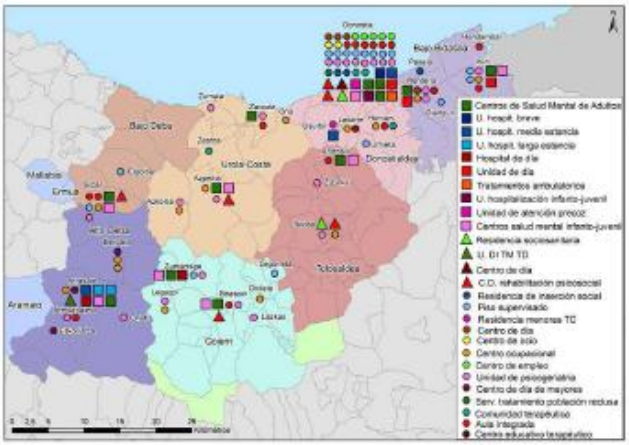

Figure 3 – Services in Guipuzkoa. Source: Authors' elaboration.

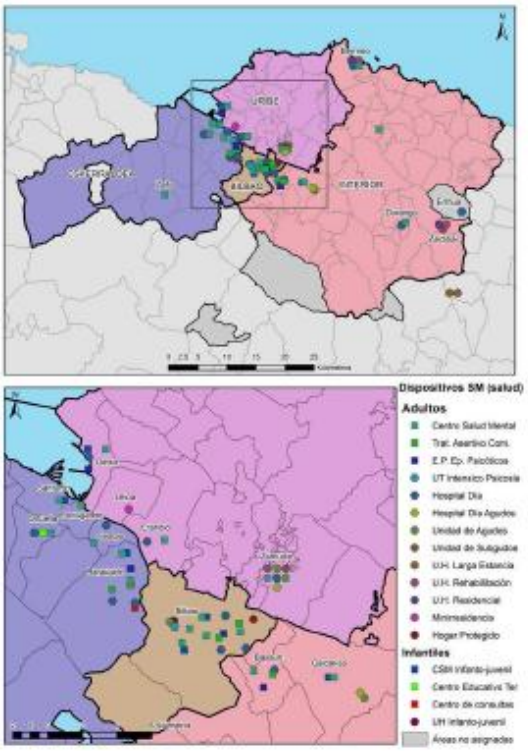

Figure 4 – Services in Bizkaia. Source: Authors' elaboration.

Then, several characteristic of the facilities are analyzed, such as availability of main types of care, placement capacity (beds and places) and workforce capacity per inhabitant. These characteristics determine the patterns of care and make possible comparison within different health system across Europe. In addition, these patterns can help to explain the differences in the financing systems of each region or country. For example, the overall capacity of a system and its balance between hospital and community care can influence the way the same incentive operates in two different countries. In this step, spider graphs are employed to depict and compare the mentioned characteristics, as can be seen in Figures 5, 6, 7 and 9.

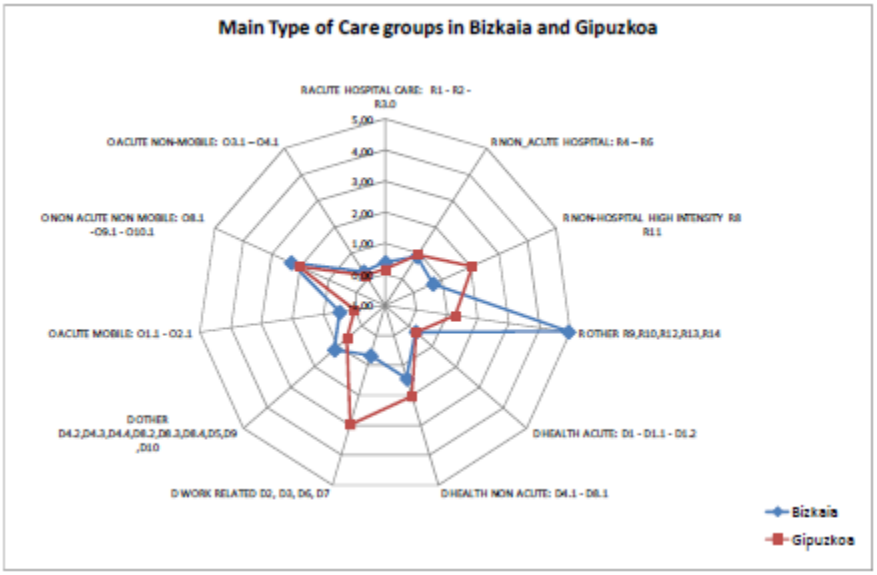

Figure 5 – Comparison of main type of care group in Bizkaia and Guipuzkoa. Source: Authors' elaboration.

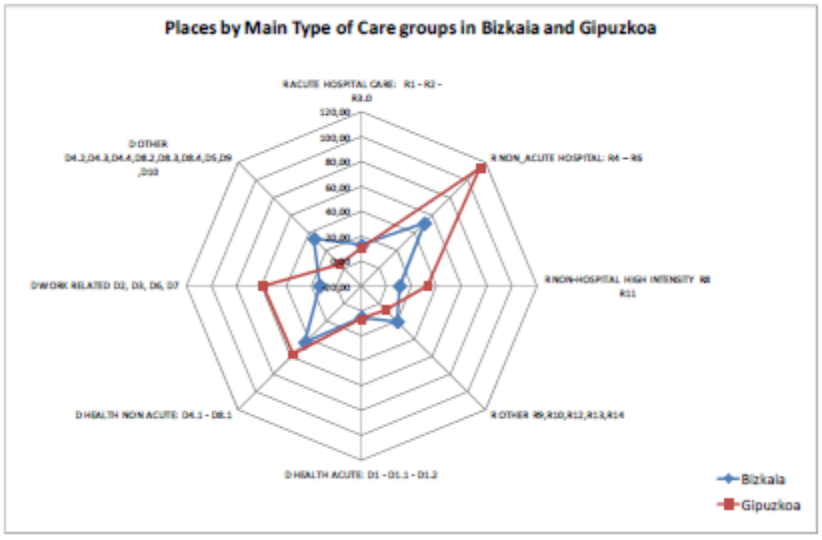

Figure 6 – Comparison of placement capacity in Bizkaia and Guipuzkoa. Source: Authors' elaboration.

In Figure 4, main type of care service per 100,000 inhabitants is shown. In this case, it can be observed that outpatient residential care are the most important type of care in the Bizkaia's mental health network outpatient; whereas day care facilities to cover work related needs are the most frequent type of service.

Figure 5 shows the number of beds/places in the corresponding main type of care. In this case, Bizkaia offers a greater number of places in other day care facilities; meanwhile Guipuzkoa offers more beds in non-acute hospitals and in works related facilities. A zoom can be also done over the previous information in order to obtain a more detailed view. For example, in Figure 7 residential care for medium and long-term stays are depicted, concretely the R11 code which refers to non-hospital facilities for adult population. It can be observed that Guipuzkoa exhibits a higher number of beds in this type of facility than then average of other eight Spanish Autonomous Communities with available data. On the other hand, Figure 8 shows that Bizkaia also promotes this type of care but in hospital facilities (codes R4 to R6), more than in other Spanish regions.

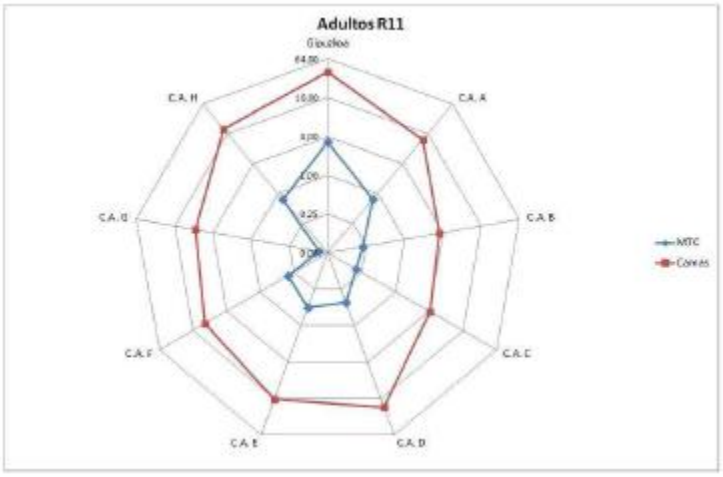

Figure 7 – Residential care for medium and long-term stays at non-hospital facilities in Guipuzkoa.
Source: Authors' elaboration.

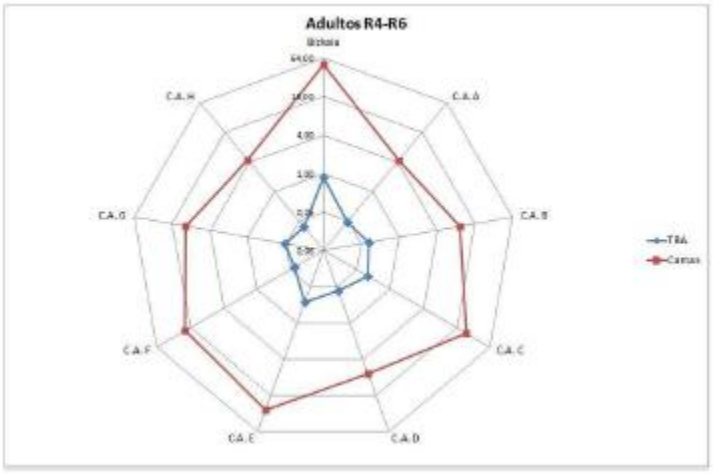

Figure 8 – Residential care for medium and long-term stays at hospital facilities in Bizkaia.
Source: Authors' elaboration.

The previous steps allow characterizing the mental health network services in each study area in a detailed way. The following steps collect and offers information about the use and the accessibility of these services providing a useful information for decision making. Thus, a bunch of relevant information about utilization of mental health services is drawn from the health dataset available, such as admissions and discharges in residential care, contacts in outpatient care, length of stay and so on. Several indicators are hen calculated (see Table 3) for each of the main type of care group.

	PREVALENCE*		INCIDENCE*		FREQUENCY*			
	Gipuzkoa	Bizkaia	Gipuzkoa	Bizkaia	Gipuzkoa		Bizkaia	
Adult Mental Health Center	31,081	35,21	6,70	7,23	254,30		225,51	
Child Mental Health Center	21,282	28,68	9,1225	10,76	154,86		236,16	
Drug Treatment centers	-	8,18	-	0,98	-		102,86	
	DISCHARGE RATE		READMISSION R.		AVERAGE S.TAY O & B		N. PATIENTS O & B	
Acute units in Hospital	1,627	3,25	0,809	1,42	22,3	14,3	1,29	2,29
Subacute units in Hospital	-	0,48	-	1,17	-	51,6	0,51	0,41
LTC units in Hospital	-	0,05	-	1,00	-	253	0,79	0,25

Table 3- Classification of service in Guipuzkoa by DESDE-LTC
Source: Authors' elaboration.

All these indicators are then mapped, in such a way, decision makers can visually detect the main differences across the territory for each main type of care facility. As shown in Figure 9, this information can be offered also referred to specific age groups, mainly child and juvenile group and adult group. In addition, it can be shown in a more aggregated way, according to the needs of the planner or decision maker (Figure 10).

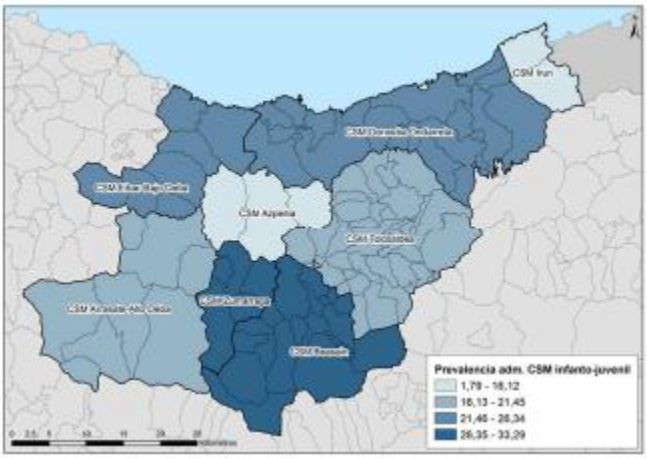

Figure 9 – Administrative prevalence of mental health disorder in child and juvenile population in Guipuzkoa.
Source: Authors' elaboration.

Figure 10 – Administrative frequency of mental health disorder in Bizkaia. Source: Authors' elaboration.

Finally, the last step is analysed geographical accessibility. In this step, the spatial unit is the catchment area of Mental Health Centre. Overlapping these areas with the corresponding drive time isochrones maps is possible to show the level of accessibility across the territory (Figure 11). In the case of Bizkaia, the map show that those areas with a high level of accessibility are mainly located in Bilbao0's metropolitan area and, to a lower extent, in isolated places of the remaining territory of Bizkaia province. In addition, places located in the frontiers with other provinces exhibit a low accessibility to mental health centres. If we put together this piece of information and the previous one, related to frequency, we can observe that the low accessibility of the western are of the province of Bizkaia could explain the low levels of frequency shown in Figure 10.

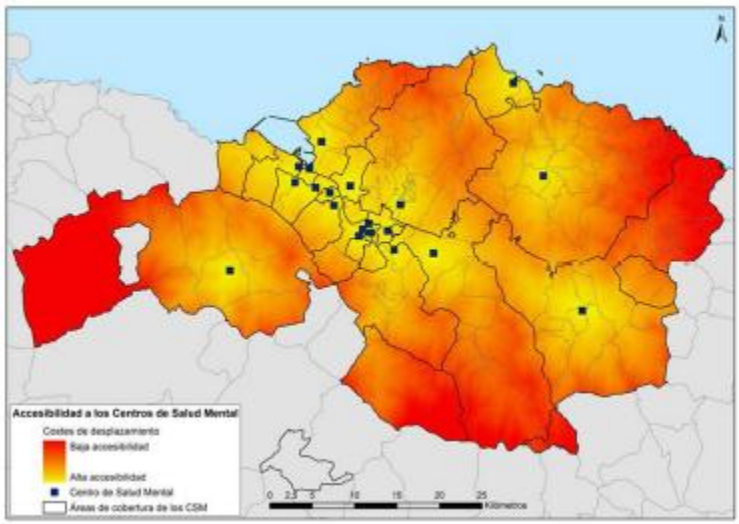

Figure 11 – Accessibility to Mental Health Centres in Bizkaia. Source: Authors' elaboration.

The whole MHAs for both provinces allows us to conclude that there is a high concentration of services in an area called "Ría de Bilbao" in the province of Bizkaia with can explain the utilization rate. Meanwhile the MHA of Guipuzkoa exhibits a mental health network more geographically dispersed. Despite these differences, both examples yield a good performance in terms of quality of care, except in the case of long-term stay in hospitals.

4 CONCLUDING REMARKS

The MHA toolkit allows for the collection of exhaustive and standardized information on the typology and functioning of services based on the territory useful for the planning of mental care based on informed-evidence. Compiling the MHA requires a huge research effort and also a high level of training, concretely to disentangle the different mental health facilities and to classify them by using DESDE-LTC coding, which allows to make comparison between different mental health networks, which includes mental care services offered by different providers and not only by the health system. At this point, it should be noted that there is a huge disparity in the availability of service and geographical information across different regions, making this task quite difficult.

The tool also provides information on the location of the services and highlights the existence of shortage areas for a better provision and equitable access to mental health care. The visual maps illustrate problem areas in the provision of services, becoming an easy-to-understand information for planners and decision makers.

Unfortunately, the results obtained from a sample of mental health networks across national territory cannot be extrapolated to the whole nation. In this senses, full regional and national service mapping should be carried out to obtain a complete depict of state of the mental health system in such territories and to effectively planning of this system. Despite this limitation, the compilation of MHA improve the information to users and society on the available resources of mental health care, allowing a more ethical, transparent and democratic participations in health issues. Furthermore, MHA provides a methodology that

can be extrapolated for analysing the current state of public services networks across the space and planning their evolution according to population needs.

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ID 1502 | SPATIAL PATTERN ANALYSIS OF MIXED-USE AND VERTICALIZED URBAN MANUFACTURING INDUSTRY IN THE SEOUL METROPOLITAN AREA OF SOUTH KOREA

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1 INTRODUCTION

Despite long-term job losses, manufacturing remains a critical part of the economic base of most metropolitan areas in South Korea. Most of the existing literature on urban manufacturing is focused on the locations of manufacturing and its economic impacts. Very little empirical research has been conducted on the spatial patterns of urban manufacturing industries which are characterized by mixed-use and verticalization. Using the Establishment Census Spatial database (DB) in 2013 of the Korea National Statistical Office, this research attempts to examine mixed-use patterns of urban manufacturing industry in the Seoul metropolitan area of South Korea. It calculates the urban industrial space mixed-use index, which is a modified entropy index, for each building unit based on individual establishments. Further, it attempts to examine the verticalization patterns of the urban manufacturing industry by calculating the average number of floors of establishments with respect to manufacturing subsectors.

2 URBAN MANUFACTURING AND ITS SPATIAL PATTERNS

There is a large body of existing literature which claims that manufacturing remains a leading sector in local and regional economies, with a much larger share of employment, higher wages, and a greater proportion of tax revenues vis-à-vis other industries (Helper, 2008; Helper, Krueger, & Wial, 2012; Leigh, Hoelzel, Kraft, & Dempwolf, 2014). Furthermore, a recent increase in interest in manufacturing around world is linked to the development of manufacturing technologies and processes (Reynolds, 2017). It is important to consider the location manufacturing facilities when coping with changes in the industrial environment, such as the fourth industrial revolution, the convergence of industries, the servitization of manufacturing, and the proliferation of smart factories.

While the traditional manufacturing establishments have moved their production activities to the outskirts of metropolitan areas, seeking lower land and production costs, the new manufacturing establishments in the knowledge-based or advanced industries tend to be spatially concentrated in large urban or metropolitan areas. In an analysis of the establishment dynamics of the knowledge-based industry, Park and Seo (2016) found that the metropolitan areas, especially the Seoul metropolitan area, are the growth hubs of the knowledge-based industry of South Korea. Their study revealed that 83.3% of knowledge-based manufacturing establishments started within the five major metropolitan areas between 2010 and 2013. Further, 92.5% of the knowledge-based manufacturing establishments have relocated within these metropolitan areas (Park & Seo, 2016). These spatial patterns can be associated with positive external economies or agglomeration economies of large urban areas or metropolitan areas (Glaeser, Kallal, Scheinkman, & Shleifer, 1992; Hoover, 1937; Jacobs, 1969; Krugman, 1993; Marshall, [1860] 1961). By selecting a location near each other, urban manufacturing establishments can receive access to specialized input suppliers and customers, a shared pooled market for skilled workers, and the benefits of technological spillovers.

Manufacturing establishments located in large urban areas or metropolitan areas may have a mixed-use and verticalized pattern. While traditional manufacturing industries are spatially concetrated in a single industry or a small number of industry sectors, urban manufuacturing industries with their demands for locations in large cities tend to accumulate in various industries to perform different functions. As Jacobs (1969) pointed out, the urban manufacturing industries tend to seek knolwledge spillover by stimulating growth between industries, rather than within them. In addition, urban manufuacturing industries may prefer verticalization to horzontalization strategy in high-density urban spaces as a way to overcome relatively high land prices and utilize the space efficiently. Recently Rappaport's (2016) study revealed that urban factories are built as vertical and hybrid buildings as they are smaller, cleaner, and quieter.

3 METHODOLOGY

3.1 DATA

To examine the mixed-use and verticalization patterns of the urban manufacturing industry in the Seoul metropolitan area, this study uses the ‘Establishment Census Spatial DB’ of 2013 of the Korea National Statistical Office. It combines the floor plan information of the building with the Census on Establishments of 2013 of the Seoul metropolitan area (Seoul, Incheon, and Gyeonggi-do), as well as Busan, the second largest city in South Korea. It provides various information not only on establishments, such as industrial classification, organization type, and the number of employees, but also on buildings, such as their addresses, number of floors, highest and lowest floor, and the total floor area of the establishment. Thus, it is useful for the analysis of mixed-use and verticalization patterns of urban industrial location. However, the spatial DB does not include all establishments within these areas, as it includes only those buildings with more than 15 establishments. This research focuses on establishments within the Seoul metropolitan area. The spatial DB provides information on about 358,000 establishments, which constitutes about 20.6% of 1.7 million establishments in the area.

3.2 METHODS

3.2.1 MEASURING MIXED-USE

A modified entropy index can be used to measure the mixed-use pattern of the urban manufacturing industry (Chang et al., 2016). Using the total floor areas of establishments and buildings, this research measures a pattern of combination and segregation of different industrial subsectors (2-digit level of the Korean Standard Industrial Classification, KSIC) within each individual building unit. The mixed-use index can be expressed as :

$$-\sum_{i=0}^{k}[(p_{ij})\cdot(\ln p_{ij})]\ /\ \ln k_j$$

Where

- ppi: Percentage of total floor area of industrial subsector i (2-digit level of the KSIC) in the total floor area of building j
- $kkjj$: Number of represented industrial subsectors in building j

The mixed-use index indicates the concentration or dispersion of different industrial subsectors within a building unit. It takes a value between 0, which implies that it is composed of a single industrial subsector, and 1. The closer the value is to 1, the higher is the mixed-use. The mixed-use index is depicted for each building using different shades of a colour to indicate its level in Figure 1 below.

3.2.2 MEASURING VERTICALIZATION

To analyse the verticalization patterns of the urban manufacturing industry, the number of floors of establishments in the manufacturing industry was measured based on the Establishment Census Spatial DB of 2013. Further, the average number of floors for 2-digit level of manufacturing subsectors was calculated.

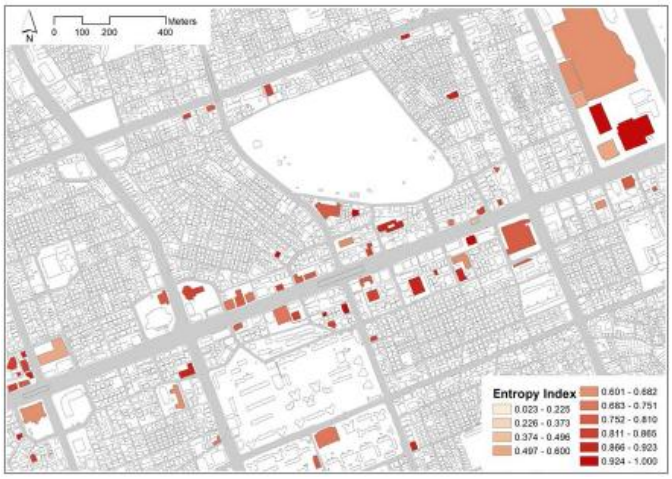

Figure 1. Mixed-use (Entropy) Index of Each Building Unit

4 ANALYSIS

4.1 MIXED-USE OF URBAN MANUFACTURING

4.1.1 MIXED-USE PATTERN BY MANUFACTURING SUBSECTOR

After calculating the mixed-use indexes of each individual building unit, they were aggregated for each industrial subsector to compare the mixed-use pattern differences among the manufacturing subsectors.

As depicted in Figure 2, the mixed-use patterns vary considerably across different manufacturing subsectors. The motor vehicles, trailers, and semitrailers indicates the highest mixed-use index (0.812), followed by the coke, hard-coal and lignite fuel briquettes, and refined petroleum products (0.809), pharmaceuticals, medicinal chemicals, and botanical products (0.807), electronic components, computer, radio, TV and communication equipment and apparatuses (0.796), and chemicals and chemical products (0.792).

It is interesting that the knowledge-based manufacturing industries (indicated by yellow bars in Figure 2) seem to have a higher mixed-use index than other manufacturing industries (indicated by grey bars in Figure 2). This implies that manufacturing establishments in knowledge-based industries are more likely to be located in a building with a diverse industrial composition. On the other hand, the traditional manufacturing subsectors, such as tobacco products, textiles (except apparel), beverages, and apparel, clothing accessories, and fur articles, have a lower mixed-use index, indicating that establishments in the traditional industries are more likely to be located in a building composed of a single or less diverse industrial subsectors.

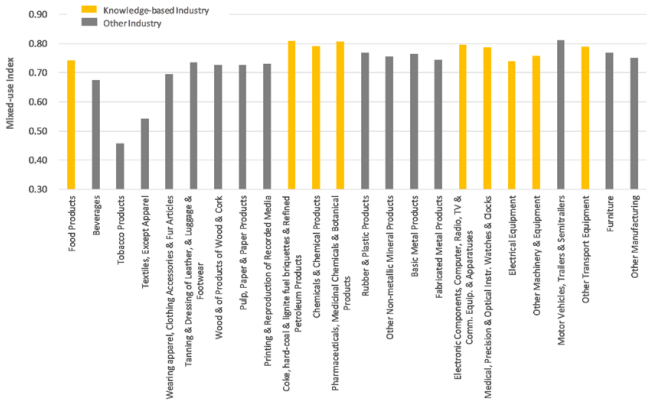

Figure 2. Mixed-use Index by Manufacturing Subsector

4.1.2 SPATIAL PATTERN OF MIXED-USE URBAN MANUFACTURING

This research conducts a spatial pattern analysis in Geographic Information Systems (GIS) to identify and compare agglomeration patterns of mixed-use urban manufacturing industries within the Seoul metropolitan area. In particular, hot spot analysis was performed to identify spatial clusters of areas with either high or low values of mixed-use within the manufacturing subsector. As depicted in Figure 3, the hot spot analysis indicated a spatial clustering of mixed-use patterns in Gangnam and Geumcheon areas in Seoul, as well as Anyang, Uiwang, Suwon, and Goyang areas in the Gyeonggi-do province. Gangnam is one of the well-known clusters of knowledge-based industries which have emerged spontaneously in South Korea. Meanwhile, Geumcheon is one of the clusters of knowledge-based industries with a planned national industrial park which started as Guro Industrial Park and became the Seoul Digital Industrial Park in the 2000s. Anyang, Uiwang, Suwon, and Goyang areas in the Gyeonggi-do are also representative high-tech industrial clusters of IT, R&D, Mobile, and LCD. On the other hand, Jongno and Yeongdeungpo areas were cold spots with a low tendency for mixed-use. These areas are famous as a cluster of traditional manufacturing industries such as precious metals and mechanical metals.

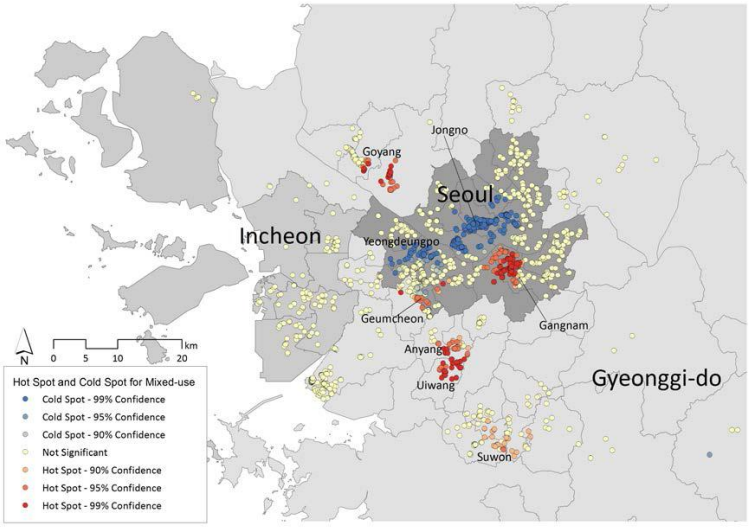

Figure 3. Hot Spot and Cold Spot for Mixed-use of Urban Manufacturing

4.2 VERTICALIZED URBAN MANUFACTURING

4.2.1 VERTICALIZATION PATTERN BY MANUFACTURING SUBSECTOR

To identify and compare the verticalization pattern of urban manufacturing, this research calculated the average number of floors of establishments with respect to manufacturing subsectors. As depicted in Figure 4, the average number of floors in the entire manufacturing industry was 4.0, with significant differences in the average number of floors of each manufacturing subsector. The manufacturing industry with the highest average number of floors was coke, hard coal and lignite fuel briquettes, and refined petroleum products industry with eight floors. It is followed by electronic components, computer, radio, TV and communication equipment, and apparatuses manufacturing (5.9 floors), medical, precision and optical instruments, and watches and clocks manufacturing (5.8 floors), other transport equipment manufacturing (5.7 floors), chemicals and chemical products manufacturing (5.7 floors), and pharmaceuticals, medicinal chemicals, and botanical products manufacturing (5.7 floors). All of these belong to the knowledge-based industry. Therefore, manufacturing establishments in the knowledge-based industry sectors (indicated by yellow bars in Figure 4) tend to be more verticalized within urban industrial spaces.

In contrast, food products, tobacco products, and fabricated metal products manufacturing industries have the lowest average number of floors with 1.2, 2.0, and 2.2 floors, respectively. Except food product manufacturing, the traditional manufacturing subsectors (indicated by grey bars in Figure 4) seems to have a tendency to be located in lower floors of a building. This seems to be related to the convenience of parts unloading, production, and storage spaces.

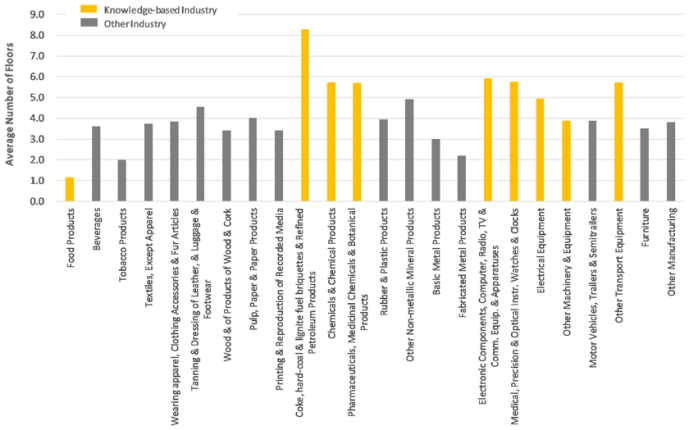

Figure 4. Average Number of Floors by Manufacturing Subsector

4.2.2 SPATIAL PATTERN OF VERTICALIZED URBAN MANUFACTURING

As depicted in Figure 5, hot spot analysis was performed to identify a spatial cluster of either high or low values of verticalization. Similar to the mixed-use patterns in Figure 3, Gangnam and Geumcheon, the clusters of knowledge-based industries, in Seoul are hot spots for verticalized urban manufacturing. In addition, the figure depicts a new emerging hot spot area in Seoul. Mapo is a cluster of new media and entertainment industry based on digital technology where Sangam Digital Media City (DMC) is located. Manufacturing establishments in these areas tend to have a more verticalized pattern.

However, in the outskirts of Seoul, Gyeonggi-do province indicates different patterns. Anyang and Uiwang continue to be hot spots for verticalized urban manufacturing, but their degrees of verticalization are not high. Further, Suwon, and Goyang are no longer hot spots for veticalization. Instead, some areas in Gyeonggi-do such as Suwon and Siheung have become cold spots for veticalization, indicating that manufacturing establishments in those areas tend to be located on the lower floors. In fact, Siheung has one of the old industrial parks with many low-rising flat factories.

Overall, the spatial pattern of verticalization is clearly different between Seoul and its surrounding areas. These patterns may be associated with the high land prices in the urban areas. Thus, urban manufuacturing industries may prefer verticalization to horzontalization strategy.

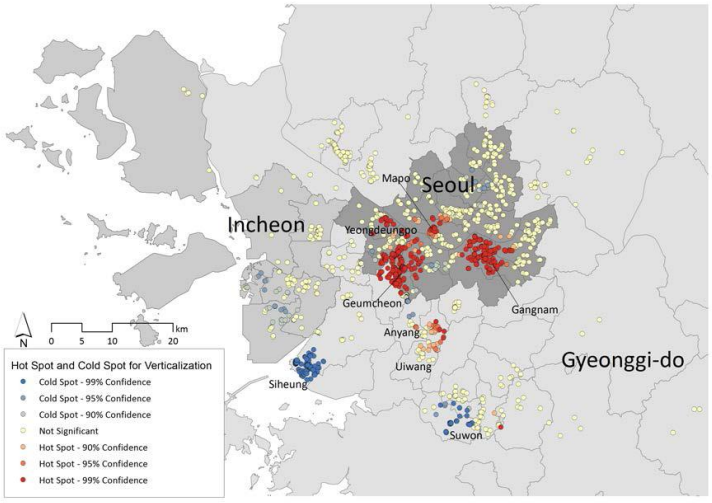

Figure 5. Hot Spots and Cold Spots of Verticalized Urban Manufacturing

5 CONCLUSION

This research analysed industrial location patterns of urban manufacturing in the Seoul metropolitan area of South Korea, which is characterized by mixed-use and verticalization, using the Establishment Census Spatial DB of 2013 of the Korea National Statistical Office. By calculating the modified entropy index for each individual building unit, this research found that the mixed-use patterns vary considerably among different manufacturing subsectors, with manufacturing establishments in the knowledge-based industries having a greater likelihood of being located in a building with a diverse industrial composition. In addition, the spatial pattern analysis indicated that several clusters of knowledge-based or high-tech industries in the Seoul metropolitan area, such as Gangnam and Geumcheon in Seoul as well as Anyang, Uiwang, Suwon, and Goyang in Gyeonggi-do, are identified as hot spots with a high tendency of mixed-use.

This research also examined the verticalization pattern of urban manufacturing by calculating the average number of floors of establishments with respect to manufacturing subsectors. The verticalization patterns vary significantly among different manufacturing subsectors, with manufacturing establishments in the knowledge-based industry being located in higher floors of buildings, indicating a highly verticalized pattern within the urban industrial spaces. The hot spot analysis of verticalization indicated a clear difference between Seoul and its surrounding areas.

The mixed-use pattern analysis was applied only to individual building units. However, the techniques in the research are methodologically replicable and extendable. Thus, the modified entropy index can be

extended for a certain district unit or grid zone. Furthermore, the mixed-use index in this research only identified the mixed-use patterns between industries, but it can also be based on functional classifications such as production, education, research, commerce, culture, finance, and transportation.

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ID 1685 | PRIORITIZATION OF THE LOCAL ECONOMIC DEVELOPMENT FACTORS: TR41 AND TRC1 NUTS II REGIONS IN TURKEY

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1 INTRODUCTION

One of the reasons for the emergence of the local economic development approach is the interregional development disparities and the inequalities created by these disparities. On the other hand, each country has not benefited from the offer made by the global economy and economic inequality between countries has continued to increase over time. With the impact of globalization, trade has been liberalized and borders have been abolished. ‘Top-down’ approaches have weakened and left their place in intervention on the local economy. Through this ‘bottom-up’ approach, local needs are better defined and strategies are being developed parallel to local targets (ILO).

This paper searches how the prioritization of local economic development factors differ by the actors in TR41 and TRC1 NUTS II regions which has different socio-economic development levels. In this context, the local economic development factors that have been determined by Wong (1998) as a result of extensive literature review and agreed upon in different scientific studies have been used and the frame developed by Wong has been the basis for this study.

In the first part of the paper, local economic development approach has been defined. Then, local economic development factors which has been the main input for the study, have been reviewed. In the thirdpart, the role of local policies in regional approaches in Turkey has been examined through development plans and regional development tools which are the most basic instruments of development. Regarding the analysis part, the questionnaire responses of the different institutional actors who ranked the local economic development factors according to their prioritizations at the local level have been evaluated by using Mann- Whitney U tests for regional differences, Kruskal-Wallis tests for institutional differences and mean rank.

2 LOCAL ECONOMIC DEVELOPMENT

Blakely (1994) defines local economic development as the process through which local governments or community-based organizations come together to maintain or revitalize business activities and/or employment. Local economic development mainly aims at mobilizing local employment in the market.

Employment associations, which are instruments of local economic development, also reveal the main purpose of local economic development approach by increasing the local economic capacity. And so these instruments help people who live in the settlement to have better living conditions and raise the social welfare level (Bartik, 2003). Similarly, World Bank (2003) describes local economic development as a process in which public, business and civil society sector partners work collectively to create better conditions for economic growth and employment. According to World Bank, local economic development aims to build up the economic capacity of the settlement to improve quality of life and provide better economic conditions for everyone.

Trah (2004) defines local economic development as a regional concept as well as a part of local development and regional government. According to her, local economic development is related to local activities which contribute to make the markets work better. Trah states that local economic development aims to revive the local economy by creating employment in the region and ensuring effective use of local resources in that region and to achieve new localities and opportunities by considering supply and demand.

International Labour Organization refers to local economic development as a process as World Bank describes. To International Labour Organization (ILO), local economic development is a participatory development process (ILO, 2006). Beyond World Bank and International Labour Organization, German Technical Cooperation Agency (GTZ) is another major international development organization which is actively involved in local economic development (Rogerson & Rogerson, 2010). The German Technical Cooperation Agency (GTZ) also describes local economic development as a process. According to German Technical Cooperation, local economic development is “an ongoing process by which key stakeholders and institutions from all spheres of society, the public and private sector as well as civil society, work jointly to create a unique advantage for the locality and its firms, tackle market failures, remove bureaucratic obstacles for local businesses and strengthen the competitiveness of local firms.” (Ruecker &

Trah, 2007). The concept of local economic development emphasizes 'locality' where every purpose, target, action and stakeholder has been stated in literature review or in the definitions of important international organizations. Tello (2010) determines the key factors underlying the concept of local economic development, which are indigenous resources and local control, new wealth formation, new capacity building and resource expansion, through local emphasis as well.

2.1 LOCAL ECONOMIC DEVELOPMENT FACTORS

Economic planning and management of limited local resources are crucial for local economic development. Despite that fact, there is still no definitive list of the factors which are critical for local economic development in literature (Steiner, 1990).

The local economic development factors have been developed by Wong (1998) as a result of extensive literature review and agreed upon in different scientific studies. In order to determine a comprehensive list

of the factors which are substantial for local economic development, she has reviewed 30 fundamental studies published in the US, UK and Europe. Topics of the studies is quite broad ranging from general local economic development surveys to statistical studies of economic conditions and to specific sectorial studies.

As result of literature review, despite the differences in terminology and classification, many common key components have been found. As Wong has studied, these common key components have enabled to reach 11 broad indicators which cover all fundamental issues in the general framework of local economic development. Based on the extensive literature-based grouping of Wong (1998) and the classifications in the basic strategies of local economic development, these 11 factors can be divided into 2 broad groups as traditional economic development factors and intangible factors (or we can name them as soft factors) are shown in Table 1.

Traditional economic development factors	Intangible factors
1. Locational factors	8. Quality of life
2. Physical factors	9. Business culture
3. Infrastructure	10. Community identity and image
4. Human resources	11. Institutional capacity
5. Finance and capital	
6. Knowledge and technology	
7. Industrial structure	

Table 1 – Local economic development (LED) factors (Wong, 1998).

According to Cities Alliance (2007), many indicators can influence regional competition. Therefore, it is very important to determine LED factors and to consider the local economic development indicators while designing local economic development strategies. Cities Alliance states the local economic development indicators measured and monitored during the strategic planning process under four categories (Table 2).

As described in Table 2, national indicators and local indicators are not independent of each other, only scale differences exist. In addition to monitoring the data at the local economic level, national indicators have broader scope. Although the scale of national indicators is large, national and local indicators are intertwined. Many cities follow the national economy to frame their local economy. Local indicators are likewise dependent on national factors however local dynamics and local resources are key determinants of local indicators.

National Indicators	Local Indicators
Economic structure	Economic structure
Overall size and growth	Size of the economy
Sectorial structure	Sectorial structure and specialization
Exports	Exports
Productivity	Firm structure and dynamism
Investment	
Local endowments	Local endowments
Transport and utilities infrastructure	Transport infrastructure
Financial infrastructure	Availability and quality of land and premises
	Cost of utilities
Human capital	Human capital
General demographics	Demographics
Employment and income	Employment and income
Education and skills	Education and skills
Institutions	Institutions
Governance (including rule of law, transparency and accountability)	Local business enabling environment

Table 2 – LED Indicators at the Local and National Levels (Cities Alliance, 2007).

Despite increasing recognition and applicability of local economic development whose practices can be traced back to the 1960's (Pike and others, 2006), measurement, tracking and analysis of local economic development (LED) approach are quite hard because of the complex components LED contains and process challenges. The 'locality' concept which underlies the notion of local economic development,

represents unique characteristics of each region. As a consequence, it becomes increasingly difficult to measure local economic development and standardize indicators.

Another study on indicators related to measuring local economic development belongs to Hodge and Midmore (2008), who determine the indicators and methods at different scales, taking into consideration of different development levels. While the study is more concerned with rural development policies, Hodge and Midmore also addresses alternative scales representing different approaches. The authors examine the basic indicators, indicative methods and implications of the local economic development process under four categories as sectorial, multi-sectorial, territorial and local.

3 THE CASE OF TURKEY

Regional approaches, evaluated at the level of local policies, include development plans that are fundamental development instruments and regional development tools. Development plans are examined in terms of approaches and policies, and instruments. On the other hand, regional development tools are examined in terms of scale. Regional development tools strategies vary with their own dynamics, supportive actors, different coordination levels, and their visions.

Development Plans	Approach & Policies	Instruments
1st Five-Year Development Plan (1963-1967)	-Regional planning -Growth poles (ex. East Marmara, Çukurova, Antalya, Zonguldak)	-Financial incentives -Investment on less developed regions
2nd Five-Year Development Plan (1968-1972)	-Region and provincial planning -Indirect regional planning	-Tax reduction -Financial incentive for private sector investment -Pilot projects-Keban
3rd Five-Year Development Plan (1973-1977)	-Sectorial and provincial planning	-Financial incentives -Industrialization programmes for less developed regions -Inventory studies - Package projects - Prior provinces for development
4th Five-Year Development Plan (1979-1983)	-Strengthen the link between sectors and regions	-Interest reduction for investments - Financial aids -Package projects -Provincial and regional investments -Çukurova Urban Development Project -GAP (DPT-JICA)
5th Five-Year Development Plan (1985-1989)	-Direct regional planning including regional impacts of projects (proposed 16 functional region)	-Acceleration of regional development programmes in order to determine potential resources -Through those programmes, selection of investments -Development of infrastructure in prior regions for industrialization projects -Financial aids for investments in prior provinces
6th Five-Year Development Plan (1990-1994)	-Regional and sub-regional planning	- Increasing financial aids for investments in prior provinces -Cash up for this purpose -Industrial zones
7th Five-Year Development Plan (1996-2000)	-Regional and sub-regional projects -Mobilization of regional abilities -Sustainable development	-Continue to prior provinces for development strategy -Urgent support programme for East and South-East Anatolia -GAP -Legal regulations -Residential projects -Supporting SME in prior provinces -ZBK, DOKAP, DAP
8th Five-Year Development Plan (2001-2005)	-Strategic regional planning -Clustering -Province development plans	-SBE supports -EU fund -First comprehensive regional plans -Human capital -Yeşilırmak River Basin Development Project
9th Five-Year Development Plan (2007-2013)	-Holistic approach -Sectorial and thematic policies -Policy development on active labour -Initiation of regional development policies on central level	-Development of institutional governance of SME -Extending Turkey Employment Agency programmes -Public investments -e-Government practice

10th Five-Year Development Plan (2014-2018)	-For human, with human development approach -Sustainable development -Participative approach -Benefit from scale economies while reconstruction of local governments	-Strengthen the Local Institutional Capacity Programme -Supporting infrastructure investments of rural and medium-small municipalities (KÖYDES, BELDES and SUKAP projects) -For an effective rural development policy, Rural Development Plan is promulgated for the first time

Table 3 – Integrated evaluation of regional approaches in Development Plans,
(Adapted from Regional Development ad hoc committee report (2008)

Development plans have focused in local approach in regional policies and local targets over time. Planning approaches and policies, targets and instruments have transferred from traditional to local and differentiated as well. Another major instrument of regional policies is regional development tools. Each regional development tool has differentiated strategies in terms of its own dynamics, supportive actors, coordination levels, and visions.

According to Ad Hoc Committee Report on Regional Development (2008), local and regional development tools are; investment support office, industrial parks/organized industrial zones, enterprise capital, conference/exhibit/fair centres, alternative tourism, cultural centres, business incubators, derivative businesses and insemination/core capital centres. When those tools are evaluated within the frame of Turkey, it is obvious that, tools, actors and coordination levels has been changing and will continue to change.

In order to determine appropriate mechanisms and tools for Turkey, it is necessary to designate which mechanism and instrument, at which scale, in which region, at which level and how should be implemented. National development targets, strategies and plans have major importance for that issue. However, the approach changes according to the scale of region where development tools are managed. The strengths and weaknesses, potentials and threats, local dynamics based on local analytical studies should be well established to produce optimum benefit at the local level. Not only central government (Ministry of Industry and Commerce etc.), but also local actors who affect local development have important responsibilities on the achievement of this process. The primary actors to contribute to local development and to determine the appropriate mechanisms and instruments are; governorships, district governorships, regional development agencies that are local but dependent to central government and in addition municipalities, provincial special administrations that are local governments (Ad Hoc Committee Report on Regional Development, 2008).

4 METHODOLOGY

The study aims to evaluate how local economic development factors are prioritized and perceived by different institutionalized actors in TR41 and TRC1 NUTS II regions with different socio-economic development levels.

Regarding the research topic, a wide literature review has been conducted on the different definitions of the local economic development approach from basic references and the LED factors that constitute the basic input of the study. Literature review has continued with the objective data aimed at revealing the local economic development approach in Turkey. The conceptual framework has been completed with these approaches.

In this paper which aims to demonstrate how the prioritization of local economic development factors differ by the actors in TR41 and TRC1 NUTS II regions with different socio-economic development levels, results of online questionnaire answered by different institutional actors have been measured by different quantitative methods to reveal regional and institutional differences. This stage constitutes the subjective evaluation part of the study.

TR41 and TRC1 NUTS II regions, which are the case areas and also has different socio-economical development levels, has been described with secondary data of the LED factors that has been taken into account in the paper. Secondary data about the regions has been objectively compiled. In the objective evaluation part which is the first phase of the assessment, TR41 and TRC1 NUTS II regions have

reviewed through the socio-economic development ranking surveys of provinces and regions (SEGE) and The International Competitiveness Research Institute's (URAK) inter-city competitiveness index and sub-indices that consist of human capital and quality of life sub-index, branding skills and innovation sub-index, trade skill and production potential sub-index and accessibility sub-index (Table 4).

		Years	Bursa	Eskişehir	Bilecik	TR41	Gaziantep	Adıyaman	Kilis	TRC1
Socio-Economic Development Ranking Survey of Provinces and Regions (SEGE)		1996	5	6	17	-	25	61	-	-
		2003	5	6	18	4	20	65	54	14
		2011	6	7	27	4	30	66	63	16
International Competitiveness Research Institute (URAK) Inter-city Competitiveness Index	General Index	2007-2008	4	6	48	-	10	63	59	-
		2008-2009	4	6	45	-				-
		2009-2010	4	6	46	-	10	64	63	-
	Human capital and quality of life sub-index	2007-2008	11	3	60	-	40	66	57	-
		2008-2009	10	3	58	-	34	66	61	-
		2009-2010	12	3	58	-	36	68	59	-
	Branding skills and innovation sub-index	2007-2008	3	16	38	-	7	68	70	-
		2008-2009	3	10	39	-	8	67	73	-
		2009-2010	3	9	41	-	5	64	74	-
	Trade skill and production potential sub-index	2007-2008	5	36	75	-	6	61	38	-
		2008-2009	5	27	73	-	9	61	35	-
		2009-2010	5	37	68	-	8	61	53	-
	Accessibility sub-index	2007-2008	8	11	30	-	12	53	69	-
		2008-2009	8	11	28	-	12	55	68	-
		2009-2010	8	13	30	-	12	56	68	-

Table 4 – Ranking of provinces and regions, Socio-Economic Development Index (SEGE,1996-2011) and Competitiveness Index(URAK, 2007-2011)

The questionnaire was sent to the actors with a prominent role in local economic development in TR41 and TRC1 NUTS II regions. These actors consist of governorships, district governorships, provincial special administrations, metropolitan municipalities, provincial and district municipalities and affiliated administrations, regional development agencies, chambers of commerce and industry, city councils, relevant NGOs, public and private partnerships. The questionnaires were delivered to the relevant units and experts. Participants who were sent the questionnaires by mail were asked to rank the local economic development factors according to their prioritizations in contributing to local economic development. In addition, the participants were asked about other indicators, suggestions, values, potentials, strengths and weaknesses of the locality they inhabit in order to evaluate better their perception about the local economic development.

	TR41 NUTS II REGION		TRC1 NUTS II REGION	
	Number of responses/ Target sample	Response rate (%)	Number of responses/ Target sample	Response rate (%)
Governorship	2/3	66.6	1/3	33.3
District Governorship	13/38	34.2	9/20	45
Regional Development Agency	1/1	100	1/1	100
Central Government	16/42	38	11/24	45.8
Municipality	19/43	44.1	12/25	48
Provincial Special Administration	1	100	0/2	0
Local Government	20/44	45.4	12/27	44.4

Chamber of Trade and Industry	9/18	50	5/9	55.5	
NGOs	5/6	83.3	2/3	66.6	
Private sector/Firms	2/2	100	7/7	100	
Total	52/112	46.4	37/70	52.8	

Table 5 –Frequency distribution of institutions in the questionnaire and their response rates

Questionnaires answered by the actors of different organizational structures who have ranked LED factors according to their prioritizations considering their local economic development, have been evaluated. The analyses have been based on the results of Mann- Whitney U tests for regional differences, Kruskal-Wallis tests for institutional differences and mean rankings.

5 PERCEPTUAL ASSESSMENT OF THE LOCAL ECONOMIC DEVELOPMENT FACTORS

Regional differences: In order to measure regional differences, the Mann-Whitney U test, a nonparametric statistical test used to examine whether two quantitative scale observation samples come from the same distribution was conducted. H0 and HA were hypothesized for each local economic growth factor and thresholds for reliability interval were tested.

H0: there is no statistically significant difference between TRC1 and TR41 NUTS II regions in terms of their perception on location factors' impact level on local economic development.

HA: there is statistically significant difference between TRC1 and TR41 NUTS II regions in terms of their perception on location factors' impact level on local economic development.

H0 is rejected for all LED factors. In other words, the result is; there is statistically significant difference between TRC1 and TR41 NUTS II regions in terms of all factors' impact level on local economic development. After that, the priority level differences of LED factors in regions were revealed by calculating the mean rank of local economic development factors (Table 6).

	Bursa	Eskişehir	Bilecik	TR41	Gaziantep	Adıyaman	Kilis	TRC1
Locational factors	2,322581	1,7916667	3,090909	2,257576	3,23076923	2,875	2,333333	3,12
Physical factors	3,451613	2,9583333	4	3,363636	4,20512821	4,5	2	4,12
Infrastructure	3,387097	2,875	5	3,469697	3,87179487	4,625	2,333333	3,9
Human Resources	3,774194	2,7083333	4,272727	3,469697	3,74358974	3,25	2,333333	3,58
Finance and capital	3,580645	4,5	4,727273	4,106061	3,69230769	3,5	2	3,56
Knowledge and technology	4,677419	3,6666667	6,454545	4,606061	4,25641026	4,14285714	3	4,163265
Industrial structure	3,612903	3,875	6,3	4,123077	4,20512821	3,875	4	4,14
Quality of life	3,870968	2,7916667	5,909091	3,818182	4,55263158	5	2,666667	4,510204
Institutional capacity	4,258065	3,9583333	6,090909	4,454545	3,64102564	4,75	4,333333	3,86
Business culture	3,709677	4,0833333	5,272727	4,106061	3,34210526	3,625	1,5	3,3125
Community identity and image	4,387097	3,826087	6,454545	4,538462	3,76923077	4,375	2,666667	3,8

Table 6 – Mean rank of local economic development factors

Institutional differences: In this study, institutional differences are evaluated in 2 main axes; institutions that are dependant to central government and local governments. Institutions that dependant to central government are governorships, district governorships, regional development agencies and provincial and regional directorate of ministries. Local governments are municipalities, provincial special administrations. Aside from this differentiation, chambers include; chambers of commerce and industry, commodity exchanges, chamber of merchants and craftsmen, NGOs include; city council and professional chamber and private sector include; companies. Institutions that are not quantitatively appropriate are excluded from questionnaire. In order to measure institutional differentiation, the Kruskal-Wallis test was conducted to examine whether more than two quantitative scale observation samples come from the same distribution. Institutional differentiations are evaluated within their regions. The difference between institutions that to central government and local government is aimed to reveal. H0 and HA were hypothesized for each local economic growth factor and thresholds for reliability interval were tested.

TR41 NUTS II Region: The null hypothesis was supported in the factors of locational factors, finance and capital, industrial structure, quality of life, business culture and community identity and image. That is, prioritization level of these factors does not differ between the institutions within the TR41 NUTS II region. After this, how prioritization of the LED factors differ was revealed by calculating mean ranks of the local economic development factors institutionally (Figure 1).

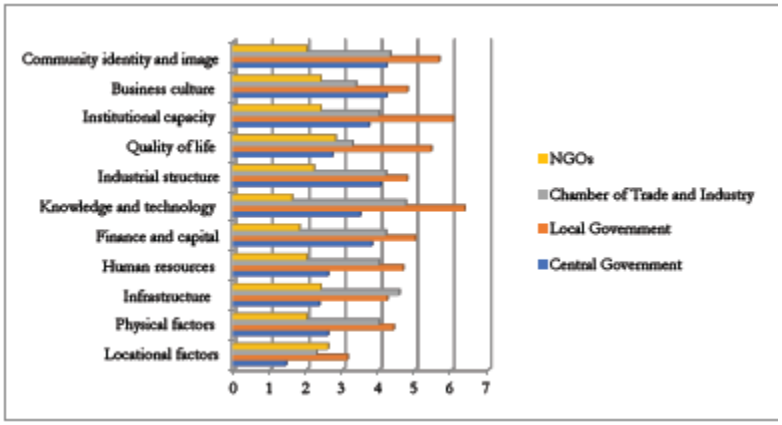

Figure 1 - Local economic development factors: TR41 NUTS II Region

TRC1 NUTS II Region: The null hypothesis was supported for all LED factors which are locational factors, physical factors, infrastructure, human resources, finance and capital, knowledge and technology, industrial structure, quality of life, institutional capacity, business culture and community identity and image. That is, prioritization level of these factors does not differ between the institutions within the TRC1 NUTS II region. After this, how prioritization of the LED factors differ was revealed by calculating mean ranks of the local economic development factors institutionally (Figure 2).

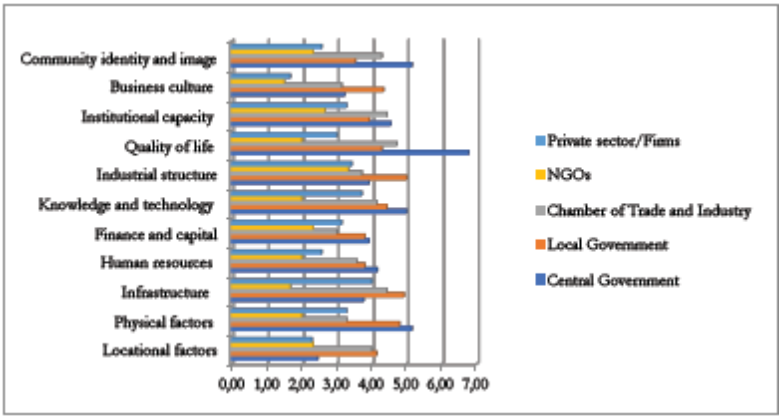

Figure 2 - Local economic development factors: TRC1 NUTS II Region

6 CONCLUSION

Objective assessment: TR41 and TRC1 NUTS II regions, which are the case areas and also has different socio-economical development levels, has been described with secondary data of the LED factors that has been taken into account in the paper. Secondary data about the regions has been objectively compiled. In the objective evaluation part which is the first phase of the assessment, TR41 and TRC1 NUTS II regions have reviewed through the socio-economic development ranking surveys of provinces and regions (SEGE) and The International Competitiveness Research Institute's (URAK) inter-city competitiveness index and sub-indices that consist of human capital and quality of life sub-index, branding skills and innovation sub-index, trade skill and production potential sub-index and accessibility sub-index. As well as the socioeconomic development ranking surveys of provinces and regions (SEGE) and The International Competitiveness Research Institute's (URAK) inter-city competitiveness index and sub-indices, the social capital levels of TR41 and TRC1 NUTS II regions were considered in the context of the objective evaluation part. Social capital level of NUTS II regions was grouped considering some particular variables which are turnout rate, number of associations per ten thousand people, suicide rate, divorce rate, edition of newspapers and magazines, tax-collection accrual rate, net migration rate, electricity theft-loss rate and the ration of higher educated population in total population. While TR41 NUTS II region is among the first developed regions in terms of social capital, TRC1 NUTS II region is among the fourth most developed regions in terms of social capital. It has been demonstrated that TR41 and TRC1 NUTS II regions have different development levels in terms of socio-economic development and competitiveness.

Subjective assessment: In the subjective assessment part, which constitutes the second stage of the evaluation section, it is observed generally parallel results to objective assessment. Prioritization of the local economic development factors, which consists of locational factors, physical factors, infrastructure, human resources, finance and capital, knowledge and technology, industrial structure, quality of life, institutional capacity, business culture and community identity and image differ in these two regions. In order to measure regional differences, the Mann-Whitney U test, a non-parametric statistical test used to examine whether two quantitative scale observation samples come from the same distribution was conducted. H0 and HA were hypothesized for each local economic growth factor and thresholds for reliability interval were tested. H0 is rejected for all LED factors. In other words, the result is; there is statistically significant difference between TRC1 and TR41 NUTS II regions in terms of all factors' impact level on local economic development. After that, the priority level differences of LED factors in regions were revealed by calculating the mean rank of local economic development factors. Mean rank values also support the results of statistical test. The locational factors stand out for both regions in terms of contributing to the localities' economic development. Industrial structure and human resources are among the factors that have similar priorities for both regions. As a result of these values, it has seen that the quality of life factor for the TR41 NUTS II region and the business culture factor for the TRC1 NUTS II region stand out. According to the result of the Kruskal-Wallis tests which was used to measure institutional differences, prioritization level of location, finance and capital, industrial structure, quality of life, business culture and community identity and image factors does not differ between the institutions within the TR41 NUTS II region. And prioritization level of all LED factors does not differ between the institutions within the TRC1 NUTS II region.

Traditional economic development factors/Intangible factors: The analysis have been evaluated within the framework of traditional economic development factors and intangible factors, and it has been observed that the traditional factors are still important for the TR41 NUTS II region and the locational factors are most important traditional factors for the region. Finance and capital, human resources, infrastructure and locational factors stand out for the TRC1 NUTS II region, as well as traditional economic development factors are important. This result can be attributed to the current economic structure in the region. For the intangible factors, it has observed that community identity and image, business culture and institutional capacity are prominent in TRC1 NUTS II region. This result is parallel to the current business dynamics and economic structure of the province of Gaziantep, which is relatively most developed within the region. It is an expected result that factors such as business culture and institutional capacity stand out because of the region's current industrial production and active economic structure. The findings of the research presented in this paper suggests that, local economic development and related basic factors change according to the level of socio-economic development and the local government structures. In addition to taking into consideration the central government's development axes and visions, local governments which adopted a multi-actored, multi-leveled and 'bottom-up' approach, are expected to be more successful in local economic development by making more effective policies considering local potentials.

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ID 1737 | PLANNING WITHIN SCARCITY: CHANGING A 'GROWTH PARADIGM' INTO A 'CAPABILITY APPROACH' TO THE TERRITORIES? A VIEW FROM THE NORTHWEST OF PORTUGAL

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1 A NEED FOR CHANGING THE APPROACH TO PLANNING?

Portugal inherited the European post-war planning approaches based on strong direct public action and regulation of private investment, both of which based on growth-oriented logics. Yet the socioeconomic and territorial impacts of the recent socioeconomic crisis have created different contexts and demands, aggravating the mismatch between the established planning practices and the needed action, thus raising the debate on the need to reframe the planning approach.

Portugal is a paradigmatic case of a wider mismatch, a territory where not only the impact of the crisis and the following austerity policies were especially severe, but also where planning practices still have difficulty in dealing with these new demands and need to be reframed towards more adequate local policies.

Set within this debate, and taking the Northwest of Portugal as a laboratory and a territory to reflect upon, this paper will argue that the recurrent growth paradigm of planning should be further changed into a capability approach to the territories: by understanding the existing contexts and their demands, local resources and stakeholders; by recognizing social and territorial diversity as a value; by defining local-sensitive solutions instead of one-size-fits-all models; and by treasuring specificity instead of specialization or competitiveness.

This reflection follows an applied-research project requested by the Regional Coordination and Development Commission of the North of Portugal (CCDR-N), which aimed at the definition of orientations for the cohesion of the North-western region of Portugal. This project paid special attention to territories that are usually less addressed than the denser urban cores: the peri-urban zones, the diffuse urbanization areas and the low-density territories. It analysed their demands and challenges by mapping statistical data, morphologies and dynamics throughout time, through fieldwork and workshops with municipal technicians, decision-makers and professionals from different disciplinary fields.

This project will thus be used here to discuss and support the argument that reframing the established planning practices is urgently needed – by focusing on the challenges to planning in scarce-resource contexts –, as well as to illustrate how these demands can be overcome through the valorisation of local specificities, the attraction of further resources, the involvement and reflexivity of the different actors, decentralised and network-based decision-making processes and small-scale articulated actions, in order to achieve territorial cohesion and inclusive solutions.

1.1 INTERNATIONAL DEBATE ON PLANNING WITHIN SCARCITY

In Europe, the widespread tradition of a planning system built upon rationality, strong public action and investment, has been put into question by the recent financial and economic crisis. Indeed, through both the recent aggravation of social demands and the limitations in public direct investment, the recent crisis exposed and aggravated the signs of mismatch between action and demand that the established planning system was starting to show in the previous years (Bourdin, 2014).

These signs have fuelled the rise of the debate over the orientation of public action, questioning the policies of austerity and suggesting its replacement by a more adequate distribution and use of resources (Awan et al, 2013), as well as over governance and networks of actors, reframing the roles of each participant in the planning processes, both by a stronger presence of the citizen participation (Healey, 2006; Forester, 2008) and through the transformation of the public administration (Sanderson, 2009; Cels et al, 2012).

Thus, while the framework for new planning approaches has widely been debated, the challenges lie on the implementation of planning practices that may implement these logics, to which this paper aims to contribute.

1.2 A VIEW FROM THE NORTHWEST OF PORTUGAL

Portugal is especially paradigmatic of this mismatch between the existing planning tools and the recent territorial and socioeconomic transformations, being a fertile laboratory for debating planning policies and practices.

Therefore, this discussion will address the challenges within the planning paradigms in Portugal, and their impact namely in the north-western area, from their relation with the consolidation of the welfare state – built in counter-cycle in comparison with most European counterparts, and in which the structural funds had a major role (Cordeiro Santos et al, 2015) – to the recent transformation of dynamics, demands and aspirations that call for new practices of governance and local action.

1.2.1 A LEGACY OF A GROWTH-ORIENTED PLANNING APPROACH

Following the European trends, Portugal has built its planning culture largely upon the modern principles of rationality, predictability and major public investment, but especially upon the logics of growth and its management: by defining constraints to urban occupation, by relying on public gains from private investment and by using major public investments financed by the as drivers and the backbone of territorial transformation. Therefore, within a logic of growth, most established planning tools within the Portuguese territorial framework have been frequently designed towards the ideas of intensity, density and expansion. Even though not always explicitly, these concerns seem to have dictated the underlying principles of several of the existing planning tools, in different scales and outputs. Indeed, at regional level, the regional plans seem to highlight the logics of density, the relations amongst denser urban cores and the focus on dynamics of intensification, of which the representation of the territorial model of the northwest [Fig.2] forms an example. The municipal masterplans could also be cited as paradigmatic of the planning logics of growth, namely managed through land use and the contention of urban perimeters.

These planning orientations might have been adequate within a context of growth, where densification and compactation would represent major issues. Nonetheless, recent transformations undertook a different direction, demanding new planning practices.

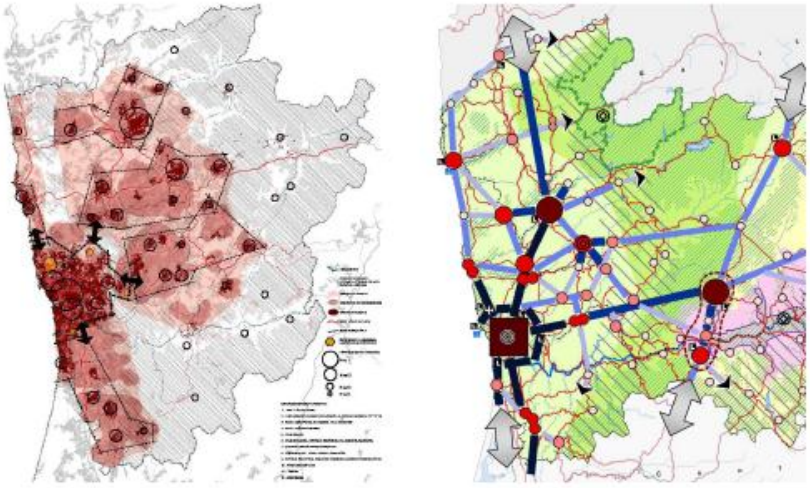

Figure 1 - Territorial models of the Northwest of Portugal, produced within the analysis and the plan of PROT-N, the Territorial Plan for the Northern Region of Portugal [source: CCDR-N, 2009].

1.2.2 RECENT SOCIOECONOMIC AND TERRITORIAL CHANGES

In recent years the growth-oriented approach has become increasingly mismatched from demands, proving to be not only unviable, but also somehow inadequate in certain contexts and in face of radical socioeconomic transformations. Firstly, due to the recent economic crisis that has put resources and capacities into risk, by drastically reducing public intervention and redirecting private investment into very specific areas such as the historical centres, which was accompanied by decreasing demographic rates and aggravated social demands. Additionally, striking evidences show that many territories do not follow growth patterns and are thus not benefited by growth-oriented planning tools or the centralization of services and facilities. Furthermore, these territories have also been the ones that suffered more radically the impacts by changes in the policy of allocation of resources: with the withdrawal of the welfare state and the cuts on public expenses demanded by the recent structural adjustment, these territories have been facing the closure of public facilities and the cuts on social support policies, thus contributing to aggravate their population loss, social vulnerability and territorial fragility.

Along with the previous trend of desertification of the interior of the country, we now witness the shrinkage of many urbanised areas, the losses of populations and the fragilization of many territories, even within the areas of more intense occupation [Fig.2].

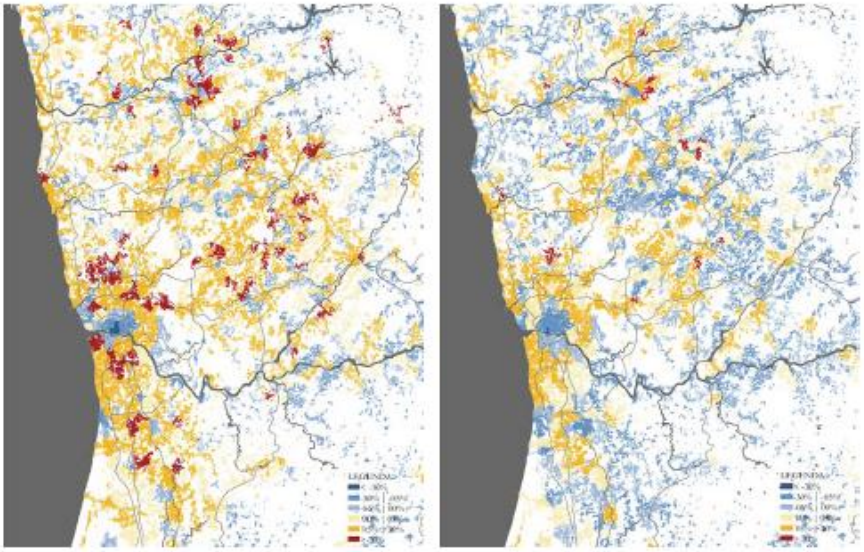

Figure 2 -Population variation in 1991-2001 and 2001-2011, in the northwest of Portugal, representing in warm colours the territories that are gaining population and in cold colours the ones with decreasing demography [source: MDT-CEAU-FAUP, based on data from INE -Instituto Nacional de Estatística].

Furthermore, the recent economic crisis aggravated the socioeconomic context, in which the increase in social vulnerabilities is one of the most visible aspects, shown namely by the intense raise of the unemployment rate is especially expressive of the aggravation of living conditions [Fig.3]. Even though this map refers to data from 2011 and the situation may have meanwhile changed, their structural impacts remain, along with the difficulties in implementing policies and practices to address them.

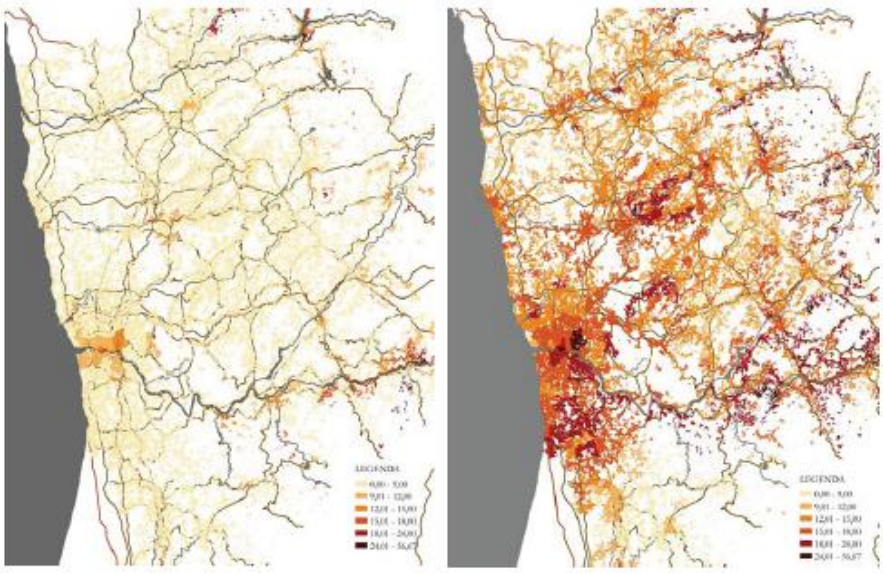

Figure 3 -Unemployment in 2001 and 2011, in the northwest of Portugal [source: MDT-CEAU¬FAUP, based on data from INE -Instituto Nacional de Estatística].

These patterns represent a change in needs and the aggravation of conditions, to which are added the policies of austerity and their impact, along with the change in the capacities of the public administration to face and tackle those needs.

Indeed, the fragilization of the Welfare State – with the privatization of basic support services, the cuts in public expenses and their impact in the reduction of services and support networks – contributed to the aggravation of social demands.

Along with this impact, we also witnessed the intense decrease of private investment, an important driver of the process of urbanization with their consequences: the bankruptcy of companies and investors and their impact in unemployment, the stagnation of the real estate market, the interruption of construction sites and the abandonment of unfinished constructions (Travasso et al, 2014). This also represented a pillar of public income, which therefore translated into further impacts.

Thus, the decrease in major public works, which have formerly acted as major drivers of urbanization and territorial improvement, has suffered an almost complete halt.

In this process of the last years, the modes of production, the relations amongst actors and the social demands have radically changed and represent probably a structural transformation, one which means that former patterns will not be retaken, but have rather changed into a new paradigm.

Traditional planning tools have shown difficulty in adapting to this new context, which requires a change of the spatial planning practices, both by understanding the existing territories and demands, as well as by reframing planning practices and roles, paying particular attention to qualification, instead of mainly growth logics. And if there has been an effort to address the qualification and rehabilitation of existing fabrics, this logic has mostly been concentrating uniquely in historical centres, forgetting the other territories.

This doesn't mean that the existing planning tools are obsolete, but rather that they may need to be adjusted to the different territories and demands, as well as complemented with further practices and approaches to make the whole planning framework more responsive, as well as to provide a more intense involvement of different stakeholders, and specially the civil society, in the role of designing common future.

In this task the academia, and applied research, may have an important role, by rethinking the way questions are debated, diagnosis are formulated, potentials are identified, and solutions are jointly achieved.

2 THE ‘METAPOLITAN ARCH’: A PROJECT FOR DISCUSSING THE TERRITORIAL COHESION OF THE NORTHWEST OF PORTUGAL

The research group MDT – which studies Territory Dynamics and Morphologies within CEAU¬FAUP – has been actively engaged in rethinking planning approaches and agents, namely through applied research projects in partnership with the regional and local administration, aiming at a wider public as well. Therefore, a project will be used as illustration to discuss this approach. It is a laboratory due to its nature of experimentation, where we have been trying to test different tools, ways of looking and reframing challenges, as well as in reaching for different publics in the task of conceiving planning as a shared task.

The ‘Metapolitan Arch’ (‘Arco Metapolitano’) project, commissioned by CCDR-N – the Commission for the Coordination and Regional Development of the Northern region –, aims to contribute to the territorial cohesion of the north-western area of Portugal. This project is coordinated by Nuno Portas, Manuel Fernandes de Sá and Teresa Calix and, after documenting the impact of the recent socioeconomic and territorial transformations, paid special attention to territories that are usually less addressed, such as peripheral areas, diffuse urbanization and low-density territories.

The project adopted the concept of metapolis (Ascher, 1995), which expands beyond the idea of metropolis, in order to describe a continuous urban area with heterogeneous densities and behaviours, but specially to address, analyse and understand the phenomena that shape it and that take place not only inside this territory but also beyond it. This “arch” stretches around Porto, comprising 43 municipalities and gathering more than three million inhabitants (almost one third of the total national population). The project gathered different professionals and disciplinary fields, undertaking multiple tasks and formats, namely through workshops with municipal technicians, fieldwork, the production of cartography and diagrams.

The intention of this project has been to contribute to strengthen a point of view that establishes territorial diversity, local identities and tactic interventions as major drivers of spatial and living improvement. Thus this example aims to discuss how a new planning culture based on a more profound comprehension of local specificities, on small-scale extensive and articulated actions, as well as in the awareness and reflexivity of the different actors within decision-making processes, while requiring less economic resources than the previous growth-oriented approach, may prove more responsive and flexible, inclusive and sensitive to both territorial diversity, as well as to societal challenges.

2.1 THE ‘METAPOLITAN’ LOGICS OF THE NORTHWEST

The project started with the characterization of the Northwestern area of Portugal, focusing both on the patterns of occupation, as well as on the socioeconomic dynamics and reactions to the recent transformations. Thus, the analysis of the behaviour of this metapolis allowed to discuss the major logics of relation and spacialization of the different phenomena, the territorial asymmetries (cf. Calix, 2017), as well as the relations between the denser areas, the extensive urbanisation and the low-density areas, trying not only to characterize the specificities of different territories, but especially debating their potentials. Towards this aim, a set of territorial samples were sellected in different contexts to be studied in detail, both in their urbanization patterns, as well as in their role within the green infrastructure [Fig.4].

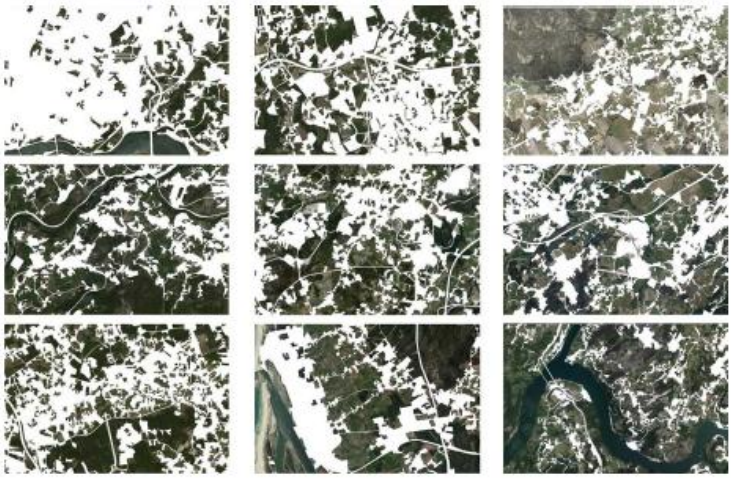

Figure 4 – The territorial samples studied in detail within the project, representing their non-built areas (from left to right, and top to bottom): eastern Porto and Maia representing the limits of denser cores; four areas close to Santo Tirso, Famalicão, Paços de Ferreira and Paredes representing the diffuse urbanization areas, and Esposende and Douro showing examples of lower density [source: MDT-CEAU¬FAUP, based on GoogleEarth imagery].

2.2 THE PROCESSES OF FORMATION AND TRANSFORMATION OF THE TERRITORIES

The sellected territorial samples allowed to test several exercises of analysis, especially focusing in areas that are often undervalued, which are often described negatively through enphysizing socioeconomic vulnerabilities, population loss, spatial fragmentation or difficulty in understanding their logics.

A fundamental starting point was recognizing the importance of the 'intelligibility' of the territories – or the ability to understand their own logics – as an important aspect for detecting their potentials and specific values, for strengthening the sense of belonging of the residents and the meaning of each territory to its outside, as well as for designing adequate and sensitive policies and actions.

Therefore, one essential task was to understand, present and describe the processes of formation and transformation of the territories, their logics and specific attributes. Indeed, often an unability of understanding a specific phenomenon derives from a lack of perception of its own patterns or the complex overlapping of different layers and processes that generated a complex reality. Thus, analysing and highlighting these different patterns may be useful for clarifying the different layers that form the territories, recognizing the specific 'nature' and causes of each story that they comprise [Fig.5].

Therefore, this task could contribute to detect and illustrate the specificities of each territory and their own logics of formation, transformation and use, which forms its identity and could further inform local policies.

Figure 5 – Different occupation logics in a territory close to Santo Tirso. The diagram: in green, the rural routes and buildings; in black, the urbanization along existing roads and cores; in blue, some housing developments. The photographs correspond to examples of these three patterns [source: MDT-CEAU-FAUP].

2.3 TERRITORIAL ENDOGENOUS AND SPECIFIC VALUES

Based on the specific logics of formation and transformation of each territory, the project also undertook studies on the identification of endogenous values and potentials, namely in order to understand how each layer and process may encompass attributes that are not only important for the territory's resilience, but may also represent elements – actors, materials, spaces – with the capacity to improve the quality of the territory and of the life of its residents.

Therefore, by illustrating some of these capacities, this task aimed at giving visibility to local attributes and potentials, highlighting the importance of the identification of specific logics, testimonies and legacies that tell the stories of the lives, uses, processes and transformations that shaped the space [Fig.6].

Simultaneously, and by focusing on positive aspects and potentials, this project has helped to discuss preconceptions that have established negative identities and thus limit the development of some territories. This study has shown, for instance, that the areas of extensive or diffuse urbanization, which tend to be mostly described as an occupation with high consumption of land and energy (UN-Habitat, 2016), actually have an opposite behaviour in the Northwest of Portugal: not only because it represents a pattern of a very permeable built fabric in which the constructions are closely related with non-built areas (most of which used for family and small-scale agriculture that provides for complementary subsistence or income, improving the livelyhood and resilience), but also because it shows a high incidence of pedestrian routines for pendular movements (thus illustrating a pattern of proximity and low-energy consumption for daily transport). The studies on the low-density areas and on the limits of denser urban cores have also shown the potentials for improved quality of life, namely due to the privileged relation with green areas, which could be further enhanced and represent major attractors for new residents and visitors.

Figure 6 – Location of cultivated fields and old houses related with agriculture close to Santo Tirso [sources: MDT-CEAU-FAUP].

Finally, a third aspect the project discussed was the potential of tactic intervention, thinking beyond the structural action, by dealing with the existing structure and attributes of each territory, complementing the extensive intervention with a network of chirurgical actions. This goal was tested through identifying leftover spaces that could be put into public use for improvement of the quality of life of residents and visitors: dead-ends, street enlargements, abandoned public facilities, amongst others, were just some examples of potential spaces that could be transformed into improved public places for everyday neighbourhood life, either through direct public intervention, through citizen mobilization and/or networks of agents, representing an endless potential in conceiving the territories, the decision-making processes and the actions [Fig.7].

Figure 7 – Location of spaces with potential for improvement of the public use: a dead-end street, a street enlargement and a public washing tank [source: MDT-CEAU-FAUP].

3 FINAL NOTES: THREE POINTS TO REFLECT UPON, TOWARDS A 'CAPABILITY APPROACH' TO THE TERRITORIES

Therefore, set within new societal challenges, the question is how to react and reframe the way of observing, discussing and improving intervention strategies. Indeed we believe that, besides adjustments in planning tools towards local demands, the major challenge of the years to come relies in building a new planning culture (Ferrão, 2011), improving the articulation and the soft skills of actors and the wider public. Thus, there are three main ideas we wish to put into debate.

3.1 TO VALUE EACH TERRITORY'S SPECIFIC IDENTITIES

The first principle to be highlighted has to do with observation and analysis, here defending the importance of accepting and discussing complexity, as well as realizing that we may put further effort into looking carefully, reading patterns and logics, their co-relations and meanings. This task demands, on the very basic level, to manage big data, trying to gather information, making sense out of the data, identifying and analysing patterns, as well as producing outputs to make them readable and thus understandable.

Yet this effort means, furthermore, to go way beyond the data into understanding, explaining and re-observing territories and their dynamics, according to the different perspectives and publics. Indeed, the attribution of patterns, identities, specificities, values and conflicts depends on the points of view, some of which fail to be recognized or taken into account in observation, diagnosis, prospective and planning of the territories. Some tasks and processes may be crucial for taking these aspects and meanings into consideration.

The multi-scale nature of the dynamics is also an important factor into understanding the local and global interconnections and their socioeconomic and territorial impacts. Themes such as the geography of labour and economic transactions, with structural consequences in the living conditions of the populations, are especially paradigmatic of the need to discuss multi-scale factors and thinking beyond geographic limits into understanding local phenomena.

The deconstruction of the multiple layers that form complex realities and territories may also help not only into understanding their patterns and logics, but also into explaining them and putting them into discussion. Indeed, the difficulty in reading, analysing and finding a sense into the specific processes of formation and transformation of some territories has often dictated interventions without clear directions and the implementation of contradictory planning actions, contributing to increasing misconceptions, negative perceptions and decreased sense of belonging. This vicious cycle might be inverted by further efforts into reading, discussing and sharing views on complex territories.

Finally, an aspect that is always crucial to take into account is the process and the relations amongst actors. Their identification, may not only help understanding their impact into shaping the territory, but may also shed some light into possibilities of reshaping processes, both to improve existing responses and to react to new demands.

3.2 THE IMPORTANCE OF QUALIFICATION, RATHER THAN GROWTH

A second major theme to be discussed has to do with the attitude towards action, here advocating for the importance of thinking beyond growth, but rather aiming at qualification beyond the urban cores. This starts from the recognition of the diversity of settlement patterns, and thus highlighting that one size doesn't fit all, as well as that growth and intensification may not be the sole aspiration of every territory. This attitude, though often defended, ends up rarely being taken as a priority, crashing into de normalization of models, procedures and rules.

The different patterns of the territory, from higher density to lower density, from intensely urbanized areas to territories of agriculture and forest predominance, face therefore distinct challenges and their value indeed abides to their specificity and diversity, characteristics that should be further highlighted as drivers of development, qualification and improvement.

This attitude may be materialised into finding the specificity and value in each territory, detecting elements, paths and patterns that may be recognised as part of local identities, improving their visibility and caring for their identification and qualification.

Additionally, the small scale, strategic thinking and tactic action might contribute to an effective improvement of the quality of the territories, namely the intervention in devalued public space, by acting chirurgically yet with major repercussions at local level in the daily use of the space.

3.3 BUILDING COMMON GROUNDS

The third aspect we wished to highlight is the construction of common grounds for discussion of the territory, for building shared visions and projects for the future, taking the debate of the territory as a pillar of citizenship and its planning as a collective action.

The strengthening of a dialogue amongst actors is a crucial task, one where the academia may work as a facilitator, by establishing connections, building networks, making voices heard, within the local administration, within technicians of different municipalities, with different approaches within the same institution, involving students, different generations, mapping affections and memories, discussing needs, potentials and visions: building a common future.

Figure 8 – Work session undertaken with representatives of the municipalities of Santo Tirso and Vila Nova de Famalicão within the "Metapolitan Arch" project, and workshop undertaken with the Association "Geração" (aimed at the active ageing) set with the "Território: Casa Comum" project [source: MDT-CEAU-FAUP].

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T09 | BRIDGING GAPS IN TRANSNATIONAL PLANNING

CO-CHAIRS: TUNA TASAN-KOK; THOMAS DILLINGER; PAULO CORREIA

While hyperactivity of global financial capital (Sassen, 1994) seems to continue in full-speed, looking for profitable locations across the borders, some recent geo-political and economic trends require new discussions in the field of transnational spatial governance and planning. 'Borderless world' has become quite a shadowy concept for one, due to increasing terror threats and attacks across the globe and increasing cross-border mobility triggered by wars, and other forms of social or political unrest. These fears have fuelled a new spate of wall-building along the borders around the globe even within the EU. Another interesting trend is fuelled by Brexit, with unclear consequences of UK's leaving the EU, which may also influence transnational regulations of spatial governance and planning. In relation to these trends, rules of supranational trade agreements may change, causing new rescaling tendencies of governance. There are obviously some gaps in theory not only in understanding how these new trends will shape new political, economic and spatial relations in Europe and elsewhere, but also in discussing their consequences for transnational spatial governance and planning.

Aiming to capture these new trends and their long and short term impacts, this track on "Bridging gaps in transnational planning" will put together planning scholars who will bring fresh blood to the traditional transnational planning field with rich case studies, empirical evidence and conceptual frameworks to close the gap. Potential themes of interest might include, but are not limited to:

- New forms of transnational and cross-border cooperation and spatial planning approaches that may promote inclusiveness, cohesion and integration in cross-border regions;
- Empirical and/or comparative studies that tackle new tendencies in governance of cross-border regions;
- Case studies that examine the challenges created by the changing transnational political economic landscape;
- Conceptualisations of transnational spatial governance and planning;
- Papers that link changing forms of rescaling governance and changing political economic landscape of Europe.

ID 1326 | COMPLEXITY AND ASYMMETRY WITHIN THE BORDER CITIES IN THE BASEL METROPOLITAN AREA. TOWARDS AN ANALYSIS OF RECENT SPATIAL AND ORGANIZATIONAL PROCESSES.

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1 INTRODUCTION

In the European context, changes derived from the globalization process and those concerning cooperation and integration -intensified at the end of the Cold War- have led to an increasing border permeability in a number of cases.

Under this framework, border urban systems become contact areas, where new opportunities for cooperation and collective development arise, but also new challenges, pressures and risks.

The case of the Basel metropolitan area, where urban systems from France, Switzerland and Germany converge, is a valuable example for analysing these issues. It is a paradigm of cross-border cooperation. Nevertheless, significant asymmetries persist and new unbalanced dependencies and internal conflicts have arose. Some of the most representative projects involving transnational coordination and development, which have led in some cases to losses of complexity at the local scale, serve as an example.

Cooperation, coordination and/or exploitation of cross-border differentials (Wages, prices, costs, land availability…) might be essential for the development of new optimization solutions, but they should not reduce either the complexity or the individual capacity of the urban nuclei located on both sides of the border to face uncertainty. Thus within a context of complexity, not only the potential benefits of collaborative development must be analysed, but also its implications at the local scale.

1.1 BORDERS WITHIN A CONTEXT OF GLOBALIZATION

In a globalized world, discussions concerning the "disappearance of the border" have multiplied in a number of fields, especially since the 1980s. Such a viewpoint contrasts with the intensification of political, social or armed conflicts throughout the planet, as well as with the understanding of borders as administrative divisions.

In the European context, the integration processes deployed from the end of the Second World War, that were intensified particularly after the end of the Cold War and that have continued up to the present, are leading to the enhancement of border permeability. The globalization process and the specific willingness of cooperation of the entities involved have contributed decisively as well (Sohn, 2014). Consequently, borders are acquiring a new significance (Groupe frontière, 2004); (Anderson and O'Dowd, 1999) and new roles; but they have not disappeared. In this context, collaborative projects have proliferated (Rojo, 2010). Therefore, border regions are not necessarily peripheral disadvantaged arenas, but spaces with high potential for interaction, especially in the social and economic spheres (Van Geenhuizen and Ratti, 2001). Since the late 1970s, new spatial, organizational and relational forms have emerged, driven by global demands. Transformations in traditional mechanisms and channels of exchange and communication have accelerated. The scale of interaction is global and competitiveness has grown in importance. Border urban systems are becoming contact areas of strategic interest, especially those entities capable of taking profit of physical proximity to different urban nuclei, regarding mainly cooperation and cross-border differentials and resources.

1.2 THEORETICAL FRAMEWORK

Within this context, borders became resources: new possibilities of interaction open up. Therefore, among the many possible approaches to the study of the border, we focus on its role involving not only separation, but also relation. We work on the basis of two ideas:

- Border as a limit, a division separating two areas. It involves differentiation and, consequently, relation.
- Border as an opportunity: it implies contact between the ensembles located on both sides of it. Thus, the presence of a border involves both relation and difference; conflict and confrontation but also exchange and collaboration. We want to highlight the simultaneity, sometimes contradictory of such realities. Borders can be permeated, they can tend to soften on the functional sphere or, depending on the case-, on the physical realm, but this does not imply disappearance at the social, economic and/or administrative levels (Nel.lo, 1996).

The following sections describe a context of permeability and cooperation, but also of confluence of inequalities and unilateral interests materialized in bilateral responses. Our aim is to analyse this issues at the urban scale by deepening into the case of the Basel metropolitan area.

2 COMPLEXITY AND ASYMMETRY WITHIN THE BORDER CITIES IN THE BASEL METROPOLITAN AREA

In order to understand cross-border interaction and interdependencies, we need to observe the city as a complex system composed of communications among elements (Ruiz, 2001). It is an open system: it exchanges matter, energy and information with its environment (Fariña and Ruiz, 2002; Boccolini, 2016). Therefore, the diversity and the quality of the relations is decisive for its future development. This factor turns out to be essential in a context of border permeability: the increase of perviousness enables direct interactions among urban systems that might have evolved as peripheral spaces in previous decades, being obliged to develop and to optimize themselves in a former environment where communications were limited. New possibilities of contact open up.

Moreover, urban systems are subjected to constant change. Interactions among elements of the system itself and with those of the environment lead to processes which in turn generate new ones[1]. Consequently, not only internal differences, but also those among border regions or other systems play a crucial role in their organization and functioning. Within a framework of relatively open borders, resources of urban systems on one side of the border can be observed by those on the other side as an opportunity to satisfy its own demands. Variations in the status of the border induce new probabilities of change to the urban systems located on both sides of it.

The Basel metropolitan area, integrated by French, Swiss and German cities and municipalities, is a valuable example to analyse this issues. It is a paradigm in terms of cross-border cooperation, but also an ensemble subjected to pressures and contradiction. During the last decades, a number of specific local and supra-local demands and circumstances have led to an increase of transnational collaboration. The cooperation structures have been regularized, (Reitel, 2007) and the connectivity among the urban nuclei has been improved. Shared dynamics have intensified as well, especially those aimed at boosting collective development. In turn, the volume of cross-border travellers and workers has remained significantly high, (Driscoll and Vigier, 2011), affecting housing trends and public transport demand, among others.

Nevertheless, the main border urban systems in the three countries keep having significant asymmetries in economic, social and political conditions. Basel has traditionally been the major node considering its wealth (higher than that of its neighbouring regions) and its ability to invest it beyond its boundaries (Walther and Reitel, 2013). Consequently, both the adaptation to variations in the status of the border and the ability of each of the cities to evolve and to develop strategies within a changing context have been unequal. Permeability does not mean fully integration. On the one hand, although cross-border collaboration is not a new phenomenon, the persistence of asymmetries regarding spatial planning

[1] We consider the phenomena of change as continuous spatiotemporal processes, and not as isolated events.

instruments, boundaries and limits for decision-making and distribution of power in each case is a fact. Their ability to face uncertainty and their autonomy is highly unequal. On the other hand, projects involving cross-border coordination and being regulated by those instruments might lead to contradictions between scales, or even to loss of urban complexity if global objectives are followed to the detriment of the local. We will analyse this two issues in the following sections.

2.1 NEW INSTRUMENTS OF CROSS-BORDER COOPERATION FACED WITH COUNTRY-SPECIFIC INSTRUMENTS OF REGULATION

The area of our study has been a pioneer in the field of cross-border cooperation in Europe. Cross-border cooperation structures have expanded since the 1960s. In 1963, the Regio Basiliensis project arose, bringing together the Swiss authorities in order to pursue joint economic, political and cultural development in the Upper Rhine[1]. Two years later, the French authorities of the region of Mulhouse joined into the Regio du Haut Rhin[2]. As a result of the former, in 1971 the Conférence Tripartite Rhénane was created (Hildebrand, 1996), aimed at encouraging exchanges among the state of Baden Württemberg (Germany), the region of Alsace (France) and the Swiss cantons of Basel-Landschaft and and Basel-Stadt. It was an important first approach to this field, substituted by the Commission intergouvernementale franco-germano-suisse in 1976. Nine years later, the Freiburger Regio-Gesellschaft was founded. It would pursue the same objectives as its French and Swiss homologous developed in the sixties. Thus, even though the three countries kept having distinct planning instruments and their own economic development, the foundations of tri-national development had been built. It was not until 1990s when the main efforts in search for coordinated development took off. On the one hand, thanks to the implementation of the Interreg programs. On the other hand, with the commitment made in 1995 to reinforce cross-border cooperation in the area, which would lead a few years later to the creation of the Trinational Basel Agglomeration (ATB) and to the development of a common development strategy for the member cities and municipalities. Its main objectives were to define priority projects and the creation of the association Agglomération Trinationale de Bâle (ATB partnership) (Duvinage et al., 2009). It enabled to give a regulatory framework to the practices that had been taking place during the previous years. In 2007, the ATB would become the ETB[3] and the cooperation perimeter expanded. The guidelines of a common development strategy were set out as well. In contrast, the systems of regulation within each country maintain strong differences, which have traditionally conferred unequal power to the communes/gemeinden[4], concerning their duties and functions. Despite the fact that cooperation at the local level has existed in the area from a long time ago, flexibility and ability to adapt to a changing environment vary on each case as well.

Thus, while centralization and hierarchy have traditionally characterized the French planning system, the Swiss one is highly devolved. The Confederation has a limited legislative responsibility. It collaborates with the cantons and coordinates them. The latter decide the competences that they will delegate to the communes. In any case, the higher authorities must allow the lower ones[5] room for manoeuvre. On the other hand, in the German system significant powers are granted to the Länder (Federated States), but unlike the French case, no privileges are conceded to any city over the rest. On their part, the gemeinden have a high level of autonomy as well, keeping general competence for issues at a local scale.

The above-mentioned asymmetries have affected the relations among the border cities, especially concerning the action strategies enabled by border permeability[6]: -Firstly because the ability to anticipate and to think strategically is crucial under the described framework[7]. Hence, those nuclei with greater decision-making capacity at the local level, such as Basel-Stadt, have an advantage regarding both the

[1] Source: Regio Basiliensis.
[2] Source: Conférence du Rhin Supérieur.
[3] As described in the Statutes of the Trinational Eurodistrict, the so-called ETB is a cross-border cooperation platform of the Trinational Agglomeration of Basel. It was created in 2007 as an association of local law, registered in the Register of Associations of the Court of Instance of Huningue.
[4] The gemeinde is the smallest subnational entity in Germany, comparable to the commune in France (both terms are used in Switzerland). It is commonly translated into English as “municipality” or “township”.
[5] Art. 2 para. of the Loi fédérale sur l'aménagement du territoire du 22 juin 1978.
[6] Even if the possibility existed that the whole area was unified from an administrative viewpoint, the border would not disappear, it would just be displaced.
[7] Both to anticipate changes in the environment and to act in advance, as well as to propose collective projects aimed at achieving collective goals while satisfying individual needs.

development of collaborative projects and the adaptability to changing environments. -Secondly because the development of projects based on bi-national cooperation enables costs-sharing, but it entails longer development processes and less unilateral control. The distribution of power and the availability of resources on each case, turn out to be essential. Therefore, cross-border projects should not be analysed without considering its local effects, and the latter must be studied simultaneously on each of the urban systems that are directly affected. With all of the above in mind, we will analyse major projects in two key fields regarding the recent development of border urban systems in the Basel metropolitan area: communications and life sciences, from a viewpoint of urban complexity. Our research focuses on the 1985-2010 period[1].

2.2 BEYOND THE BORDER: COMMUNICATIONS AND LIFE SCIENCES

2.2.1 THE BASEL METROPOLITAN AREA AS A COMMUNICATIONS NODE

The Basel metropolitan area is located in a privileged environment in the space where the northern front of Switzerland converges with the boundaries of south Alsace and the Land of Baden Württemberg (fig. 1). It brings together the area where the Rhine begins to be navigable[2] and a key location along the Rhine-Alpine corridor, one of Europe's busiest freight transport routes. The convergence of these two factors, added to its function as a gateway between Europe and Switzerland, turns this area into an important communicative hub.

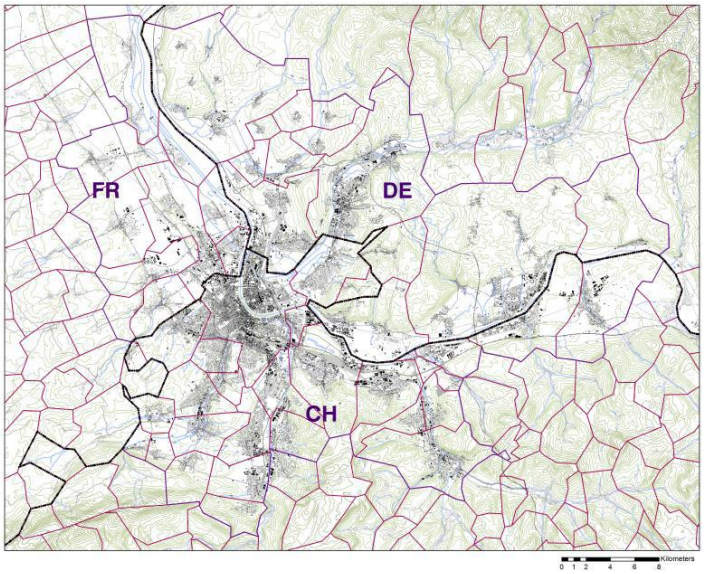

Figure 1 - Geographical and administrative framework of the studied area.
Municipal boundaries are shown in red; state boundaries in black. Source: Own elaboration.

The major city, Basel-Stadt, is settled in an area with an extension of only 37km2. It is subjected to growing pressures, increased by the boost given to "life sciences" industry in the city during the last decades. Firstly, because a multiplicity of leading companies in this field are located in Basel, creating a “pull” effect. Secondly, because this circumstance leads to additional demands (e.g. concerning land availability). On its part, the relationship with the canton of Basel-Landschaft, independent since the s. XIX (after numerous confrontations regarding distribution of power), adds an “internal border” to the already mentioned ones, at both the administrative and the physical level, and more difficulties concerning management purposes.

[1] Covering the period form the years prior to the establishment of the Schengen Agreement -with France and Germany as initial signatories- up to a recent stage, as a preamble to the new period that will start with the IBA Basel 2020.
[2] The river is navigable on a stretch of 883 km that links Basel and its delta in the North Sea.

2.2.1.1 THE CASE OF CROSS-BORDER HIGHWAYS: COMMON OBJECTIVES, UNEQUAL URBAN RESPONSES

Given this background, nodal areas regarding transport and logistics demand an increasing capacity for improvement (e.g. optimization of communication infrastructures, organization, transportation and storage capacity….). This ensemble of factors has introduced cumulative pressure over an area forced to deal simultaneously with issues concerning both global and local scales in order to solve external problems while keeping internal organization. From this angle, heterogeneous solutions have been adopted, ranging from expensive technical designs to cross-border coordination and search for opportunities beyond the border. The impact of those processes at the urban scale has been different in each case.

We will first focus on the main projects aimed at enhancing cross-border road connectivity in this area during the above-mentioned period[12]. Even though they share common objectives, the final developments are the result of individual planning approaches coordinated with those of the surrounding areas, and not of a single unified project. Thus, despite the fact that they succeed in solving common needs, we will analyse whether in any of the cases it was done at the sacrifice of urban complexity in what follows.

As stated, the Basel metropolitan area has an important location with regards to the North-South axis of the European communication network. In addition to the rail network that was built centuries ago (Linking the network in Basel with the German and the French ones), cross-border highways have been gradually developed, strengthening this axis. During the last decades, a number of approaches aimed at linking the main highways in this area have arose. The key project is the so-called Nordtangente, in Basel-City. It connects the French highway A35 with the A3 in Switzerland, and in turn with the A5 in Germany, within a spatial configuration that locates the junctions and the main linking section in an urban area on the northern front of Basel (figure 2), as we will discuss later.

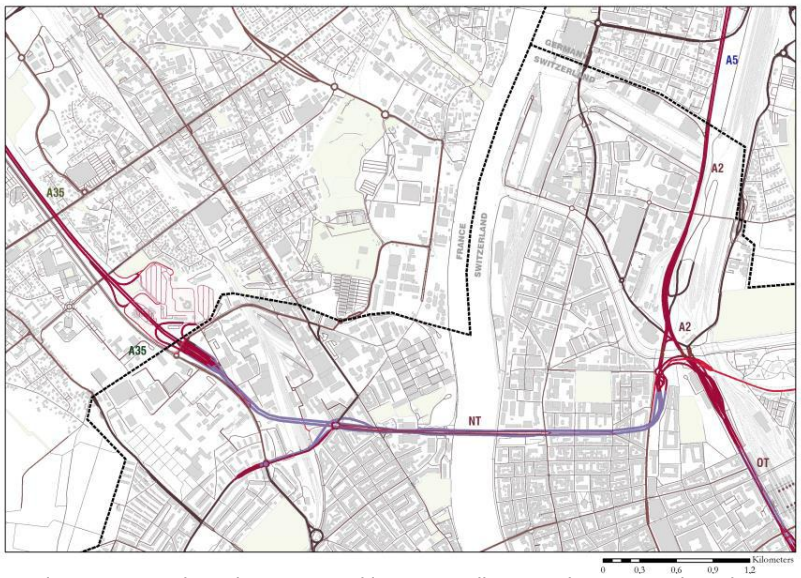

Figure 2 – Basel Nordtangente and its surroundings. Underpass road sections are shown in blue, State boundaries in black. Source: Own elaboration.

The section of the French highway, A35, linking Saint Louis (airport) and the Swiss border was opened in the late 1980s, when the German highway, A5, had already been in service for many years. It involved the duplication of the route that linked the Swiss exit of the airport with the city of Basel, but in this case as part of the French network[3]. The project was not only an axis of linear north-south connectivity. It also favoured the subsequent development of strategies targeted to increase the attractiveness of surrounding pieces of land. They were based on the general improvement of accessibility, the economic dynamics and the "pull"

[1] All of the analysed cases started before the development of the ATB/ETB, although some have been concluded a few years ago.
[2] It must be noted that dissimilarities regarding the projects presented do not necessarily emphasize the presence of the border, since the starting points, specificities of design, conditions and periods diverge, but they are valuable examples to analyse local effects of supra-local and collaborative projects.
[3] Connectivity solutions are distinct regarding network topology. The Swiss road links directly with Basel, and controls are carried out at the airport. Although it is located in France no intermediate customs points exist. The French highway, on its part, has multiple junctions. Additional customs control is required.

effect created by the leading industrial groups located in the environs. As a consequence, the degree of (inter)dependence with Basel-city was increased, as we will discuss later.

From a spatio-relational viewpoint, the ability to harmonize scales in this context was limited. The construction of the route did not create a large internal break in the local scale, since it was adapted to the structure that had been developed years ago (when the customs route linking the Euro-airport and Basel was built), but it established new rules that affected the subsequent development of surrounding space. The presence of large parking spaces related with the customs areas in the French A35 and in the German A5 respectively, serve as an example: both are located outside the Basel area, and constitute large "closed spaces" with almost no interaction with its surroundings. This latter is an important fact regarding the relation with Basel from the viewpoint of urban development. In spite of the customs giving service to both sides of the border, Saint Louis suffers the highest disruption regarding the future possibilities of improving urban continuity and activity[1]. It must be added that the spatial configuration of local networks in the border has suffered almost no variations in the analysed period. The maintenance of control-oriented structures at the local scale, where only a number of major roads go across the border while the rest are disadvantaged, generates weak and vulnerable networks. Thus, the communication with the neighbouring urban nuclei are limited, and so is the potential for new relations to emerge.

On its part, the Nordtangente project was approved in 1987, more than 50 years after the first ideas for its development came up, and after the rejection of an alternative option (Baumann, 1996). It became operational in 2008. The aim of the project, besides improving connectivity, was to separate through traffic from residential areas by building tunnels[2] and above-ground sections, and by including two levels in the Dreirosenbrücke (Dreirosen Bridge). Even though the highway would accommodate part of the local traffic as well, from a topological viewpoint unequal linking solutions were created. They involved a theoretical reduction of travel times in major roads while regaining street space for pedestrians, bicycles and public transport, but also the enhancement of the attractiveness of many surrounding areas (with an important economic component)[3]. Regardless of the specificities of design, which have been controversial[4], the solution adopted allowed to make functions compatible in a more complex way than the one presupposed for infrastructure projects of this kind. It was not only due to the separation of traffic flows, but also because it enabled to preserve the coherence of the urban fabric by keeping a high degree of connectivity at the local scale and by permitting the emergence and or maintenance of activity in the area.

However, the characteristics of the immediate environment were being transformed, and new rules regarding their development and the probability of variation were introduced. Not only the area under direct transformation was affected, but also those of the urban systems in its surroundings, which became directly connected through this specific channel.

The example illustrates the contradiction between potential and fragility in cross-border cooperation relations within a framework of asymmetrical spatial planning systems and economic, social and political conditions. In the Nordtangente project, a number of factors concerning specific economic interests and availability of resources, among others, enabled optimization at a supra-local scale without the local simplification that the introduction of channels of this kind commonly entails.

Nevertheless, projects of this kind bring on new risks for the urban system, especially within a context of poor land availability. These processes involve new developments and/or renovation of disused areas, but also the transformation of the economic conditions of the area where they are established. They may lead to potential displacement or expulsion of population and local uses and activity in the long term. It must be added that the creation of increasingly complex artificial artefacts as these ones, based to a greater or lesser extent on cooperation or bilateral or trilateral agreements implies not only growing dependence on the natural environment that they degrade, but also reciprocal dependence relations (and not necessarily balanced) among the urban nuclei involved. Since the proposed model depends on non-unilateral actions, so does its survival.

[1] Although this greater connectivity has benefited St. Louis in other ways.
[2] Grossbasel Tunnel (1432m) and Kleinbasel Tunel (1092m).
[3] In 2003, the Grand Council of Basel approved a development plan that included building and residential developments associated with the Nordtangente project.
[4] Some design issues have been publicly criticized, especially concerning street widths, considered oversized in a number of cases, and the design of public space.

These phenomena have also occurred in other fields that have been essential in the recent development of the city, such as the life sciences. Projects based on co-ordination, cooperation and/or exploitation of differentials have arose during the analysed period. In the following section we will deepen into some particular cases and their implications at the local scale.

2.2.2 BASEL AS A LIFE SCIENCES HUB

Basel-Stadt is not only a node regarding communication networks, but also life sciences, mainly due to the major role played by companies in the pharmaceutical and chemical fields since a long time. In the 1980s Basel remained an industrial city that showed signs of crisis, but that progressively began to redirect a significant part of its activity towards management and R&D. The boost given to this field from then on, derived from the confluence and the evolution of leading chemical, pharmaceutical and bio-tech companies, would turn the city and its surroundings into a hub at a supra-regional level.

The repercussions of changes concerning production, management and research activities were not only material, but also -and mainly- economic (Diener et al., 2006), social and organizational. Not only Basel, but also other nuclei in the metropolitan area such as Huningue, Saint Louis and Weil am Rhein, experienced new trends (housing, projects aimed at taking advantage of the tri-national condition, etc.). It must be added that, mainly during the 1970s and 1980s, a number of SMEs and companies were established in the nuclei surrounding Basel, attracted by the pull effect created by this latter.

However, the effects of proximity regarding the industrial establishments and the labour market have been contradictory. On the one hand, although it has served to attract new businesses to the smaller nuclei of the metropolitan area, asymmetrical dependencies have emerged, as Basel-Stadt is clearly the leading node (companies like Roche, Syngenta or Novartis have contributed decisively to its wealth). On the other hand, a number of small and medium enterprises located in those urban nuclei have experienced difficulties in competing with the conditions offered in Basel[1].

Given this framework, we will deepen into in the urban transformations carried out by large corporations like Novartis in response to the needs derived from their context. They have directly affected nuclei on both sides of the border by taking profit of cross-border coordination and differentials while locating their headquarters in Basel.

2.2.2.1 COMPLEXITY AND ASYMMETRY IN THE CASE OF THE NOVARTIS HEADQUARTERS CAMPUS

The case of the Novartis Campus Headquarters is a valuable example to analyse whether new local conflicts and dependencies arise under these circumstances, and their effects regarding the surrounding urban areas.

In 1999 a competition was proposed to transform an old industrial complex next to the Rhine into a “campus” oriented mainly to R&D and management activities. Two years later Novartis made the official commission. The object of the redesign was to transform the area of St. Johann in Basel (figure 3). The master plan included the development of buildings designed by renowned architects, the modification of Hüningerstrasse between the Huninge Customs and Kraftstrasse, (incorporating it into the Campus private area) and the relocation of one of the local customs points. With aspects of the adjacent industrial zones located in Huningue, a new linking road was designed. This latter was not only aimed at improving connectivity between areas on both sides of the border, but also at serving spaces that would later be reconverted. Besides this, a new underpass would link the parking area of Novartis in Huningue with the Campus area in Basel. As a result, the whole area turned into a continuous closed space located in two different countries.

[1] As highlighted in the 2011 PLU of Saint Louis, the areas located close to the border attracted a great number of enterprises especially during the 1970s and 1980s. Progressively, strong alternatives in the rest of Haut-Rhin and Alsace appeared, and the land prices in communes close to Basel-Stadt started to rise. Besides this, the conditions provided by Basel concerning wages (among others) induced additional difficulties. As a consequence, the amount of settlements of new enterprises in those areas has diminished considerably.

From a complexity viewpoint, the project is based on reducing the uncertainty of the environment in order to increase internal control. Although the design of Novartis Campus and the kind of activity it performs is adequate for integration at the local scale, the willingness of control prevails. The area becomes a “blind spot” that acts as a barrier to its immediate environment. As a consequence, its ability to evolve is restricted and the possibilities of interacting with the rest of the city are limited: the specific “rules” established for a definite area determine the future probability of transformation of its surroundings as well.

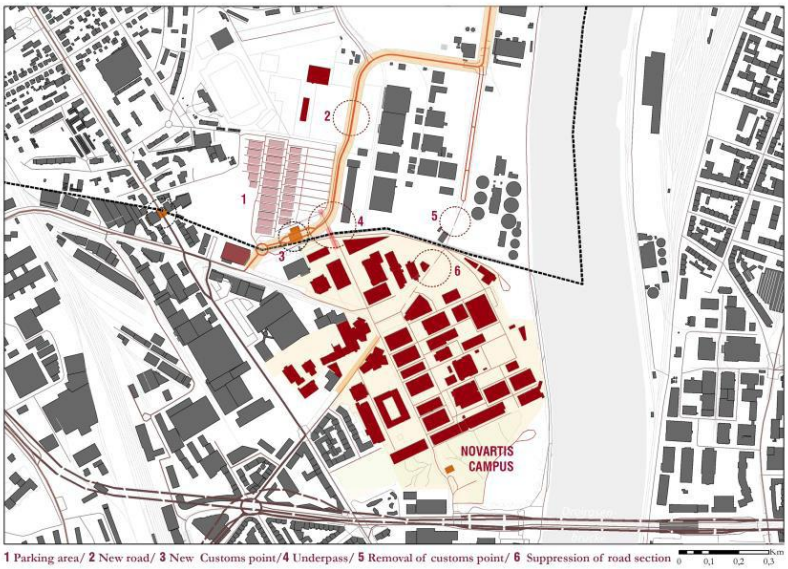

Figure 3 – Novartis Campus Headqurters and its surroundings in 2010. Source: Own elaboration.

Moreover, the persistence of borders on the physical and administrative levels has continued to affect design strategies. As stated, the ensemble has internal continuity on both sides of the border from a connectivity viewpoint, but the linkages between the two urban border nuclei are not significantly improved. It solves the needs of the campus area while generating an “external border”.

Despite all of the above, the final design in this case is not a consequence of a lack of resources. It results from a deliberate action aimed at reducing complexity to increase control. The example illustrates how projects and actions based on cooperation or exploitation of cross-border differentials do not necessarily lead to mitigate the “border effect”.

Variations of the conditions and or of the elements on the border urban system lead to unpredictable transformations and asymmetric relations with those on its surroundings, in spatial terms, as analyzed, but also economic or social. Recent changes experienced by urban nuclei like Saint Louis, account for this as well. They are no longer –or, at least, not only- based on small operations associated with its own scale and needs, but linked to the needs and demands in major urban systems of its environment:

A number of projects developed during the last decades have been based on cooperation and/or reciprocal exploitation of resources on the other side. Although these practices might lead to a positive-sum game, the relation is not symmetric: Saint Louis relies part of its development strategy on the possibilities opened by the enhancement of connectivity and the potential of physical proximity to a key node like Basel. This latter takes profit of the resources on the other side as well, but the distribution of power and the ability to anticipate and to develop strategies is different in each case, and the sharing of burdens and benefits can hardly be equitable. Both unilateral and collective solutions should not only be geared to adapt20 to changes in the environment, but to anticipate them.

3 CONCLUSIONS AND DEBATE

The settlement of a border involves differentiation, and also, consequently, relation. Thus, within a framework of accelerated globalization and increasing European integration, border urban systems have become contact arenas where relative permeability has brought new horizons for planning in a scenario of contradiction. Nevertheless, that does not mean lack of conflict and/or risk. These areas are subjected to a

high degree of uncertainty and they must often be able to deal simultaneously with local and cross-border solutions in order to evolve within a changing environment.

In the case of the urban system of Basel, subjected to significant limitations, the possibility of taking advantage of cross-border differentials and cooperation has been essential for it to face new challenges. Nevertheless, although tri-national cooperation has been present since a long time and its importance has increased in recent decades, the relations among the border urban nuclei within its metropolitan area are not symmetrical.

Collective development should not be detrimental to local development. The analysed projects illustrate that, despite the fact of sharing objectives and cooperating, new internal conflicts have arose at the local scale. The solutions adopted have led in some cases to the simplification of the urban space. They lead us to wonder to which extent those concessions made by each of the nuclei following common objectives may jeopardize their future ability to cope with uncertainty. The answer is not easy, since we can only analyse trends. In any case, it is essential to ensure a relative local degree of autonomy. Each of the urban systems must find its own “place” in the cross-border complex.

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ID 1335 | SPATIAL DEVELOPMENT STRATEGIES TO FOSTER TERRITORIAL COHESION IN THE DANUBE REGION

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ABSTRACT: The Danube river connects many countries, different landscapes and a number of regions with various cultural identities. A transnational EU project known as the Danube Urban Brand (DANUrB) aims to create a continuous promenade alongside the Danube, one of Europe's main waterways. This aim entails a whole series of challenges for the involved stakeholders and experts. The main essential tasks from the planning point of view pertain to the development of a cross-border strategy, which requires spatial analysis of well-developed regions. The main findings are being further developed within interdisciplinary teams for interregional and international usage. To tackle these complex planning tasks, a process was developed that ensures the sustainability of the resulting strategy and its outcomes, as well as its transferability to other Danube regions. A stable timeframe and a good team of planners are vital prerequisites for successful regional planning. Clarity and attractive presentation help generate the necessary understanding and support, and create an awareness of planning issues among all the stakeholders.

KEYWORDS: complex planning problems, planning process, strategy, transferability, sustainability

1 INTRODUCTION

1.1 MOTIVATION

The population decline in rural regions is a Europe-wide phenomenon that gives rise to major challenges for sustainable usage of rural environments, especially village settlements. In many places, tourism and agriculture are the most important economic drivers that contribute to preserving the cultural landscapes and enable the population decline in rural settlements to be delayed, or ideally stopped. The course of the Danube river, rising in Germany and ending in the Black Sea, represents a collection of various landscapes and cultural identities.

The historical and political environments in the eastern and western parts resulted in the evolution of different kinds of development in the settled regions alongside the river. An EU-funded project known as the Danube Urban Brand (DANUrB) aims to try to connect these regions via a holistic strategy which similarly preserves individual cultural identities within the regions. The project focuses on the design of a continuous promenade, which requires cross-border knowledge transfer, communication and cooperation concerning spatial development strategies. Tackling this ambitious goal involves the spatial analysis of well-developed regions. On the one hand, this requires the transfer of theoretical planning methods proven in practice and the definition of essential fundamental information for their practical application. On the other hand, it calls for the design of guidelines for the digital transfer of spatially pinpointed information to

enable structured storage of analysis outcomes, easy data handling for all involved stakeholders and ongoing future research within these fields.

1.2 STATE OF THE ART

To develop a common, sustainable strategy of this kind for the whole Danube region, established and proven methods from the German-speaking countries are used, serving as a structural framework to fulfil the aim of producing holistic, transferable solutions for complex planning problems. Scholl employs the method of "test planning", whose core idea is the regular discussion of possible solutions, their advantages and disadvantages as well as conclusions drawn from them. This happens within the framework of an organized process, in which several planning teams as well as experts and important stakeholders participate (cf. Scholl, 2011).

In order to deal effectively with complex planning tasks, the topmost priority, according to Schönwandt, is to define the problems – “problems first”. Only then should a suitable set of methods and solutions be sought. The problem definitions should be as concrete and well-founded as possible. It is important to note that problems are not self-evident and, above all, not objective, but rather concern the perception of individual actors and are therefore socially constructed (cf. Schönwandt and Voigt; 2012).

The definition of the problems should be expressed in terms of time and place, not just in words, but also by illustrative images and representative numbers. This approach facilitates the understanding of the solutionfinding process and the solution per se through conclusive arguments (cf. Scholl, 2012 and Signer, 2012). The use of images and numbers in planning is one of the most important means of communication for the visualization of spatial information. By using digital tools such as geographic information systems (GIS), complex planning problems and possible solutions can not only be viewed in a multi-scalar way, but also can also be stored and transferred in a sustainable manner. In addition, digital tools enable the development of a common documentation standard within cooperative planning processes.

1.3 OVERVIEW

The EU project “DANUrB – Danube Urban Brand” forms the basis for the application of these planning methods. DANUrB, which was launched in January 2017 within the INTERREG Danube Transnational Programme and ends in June 2019, is a project for cooperation in a comprehensive spatio-cultural network to strengthen cultural identity and solidarity in the whole Danube region through tourism and education. Thirtynine partners from Hungary, Slovakia, Austria, Croatia, Romania, Bulgaria and Serbia (…from seven countries bordering the Danube), representing universities, research institutions, socio-cultural NPOs, tourism enterprises and organizations such as regional and local authorities are involved. The aim is to develop innovative, sustainable cultural and tourism strategies with the intention of generating valuable economic and social impulses for the region (DANUrB, 2017).

The main assignment of TU Wien is to select suitable methods of spatial planning and research and show the practical implementation of the latter. A spatial analysis was carried out in which the methods were tested on site (in Austria's Wachau region); the subsequently defined problems? provide the framework for the development of project ideas and solutions. Particularly important is the possible transferability of this process and the potential solutions to other regions downstream on the Danube. In addition to this process, the results and findings are structured, processed and stored in digital form using a GIS database in order to ensure the transfer of knowledge and the reuse of the findings in other regions.

1.4 CASE STUDY REGION

The case study region is the Wachau, a landscape in Lower Austria (Figure 1) which forms the valley of the Danube between the towns of Melk and Krems an der Donau (Figure 2) and lies about 80 kilometres west of Vienna. Together with the abbeys of Melk and Göttweig and the historic town of Krems and Stein (Figure 3), the cultural landscape of Wachau was inscribed on the UNESCO World Cultural and Natural Heritage list in 2000.

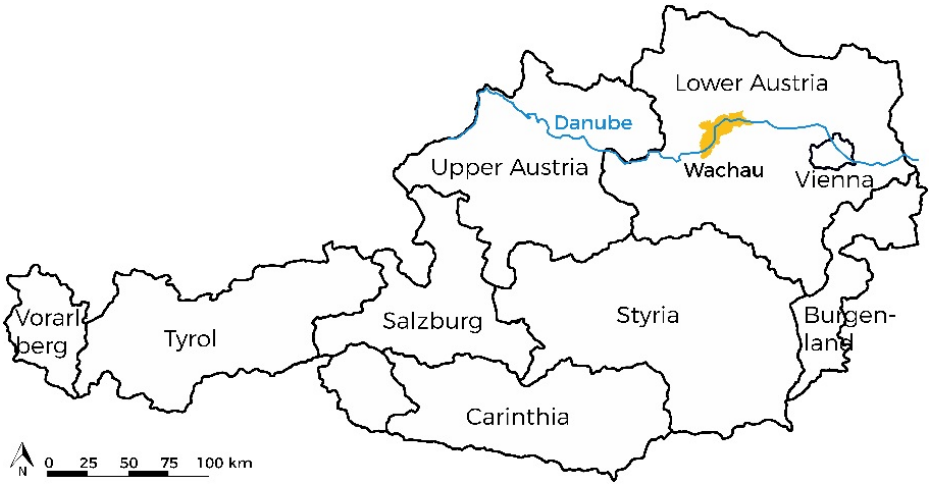

Figure 1: Location of Wachau in Austria. Source: own illustration, modified from: oesterreich.com

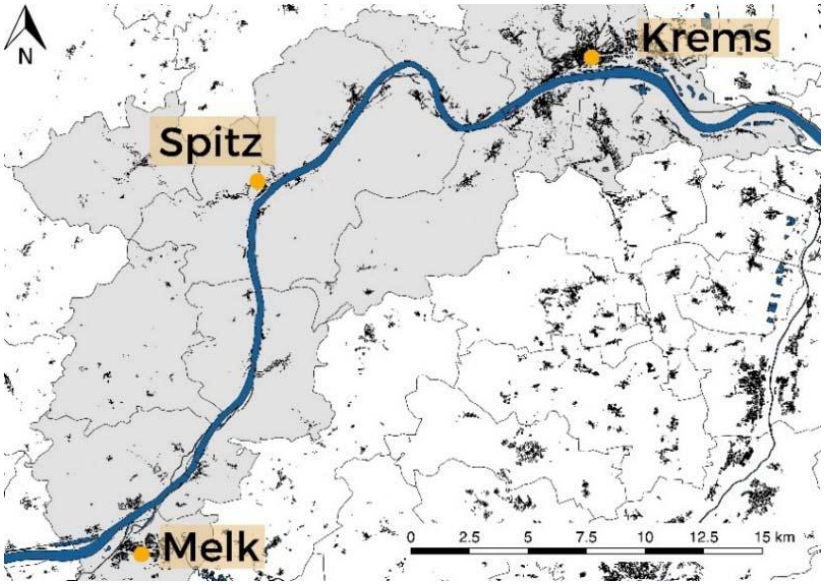

Figure 2: Wachau region with largest municipalities. Source: own illustrations, modified from: data.gv.at

The region is known worldwide for its unique medieval cultural landscape, its wine-growing culture and specific building culture. Figures 3, 4 and 5 below show impressions of the topographical situation of the region, with its vineyard hills and historic ruins. The main challenges are the preservation of the valuable capital of the region, as well as its compatible and sustainable development under the aspect of the UNESCO World Heritage.

l.to r.: Figure 3: View of Krems, historic district of Stein. Source: own picture; Figure 4: View of Dürnstein and the vineyards. Source: own picture; Figure 5: View of the historic ruin at Dürnstein. Source: own picture

2 METHODOLOGY

In order to address the complex tasks of the DANUrB project, the following structure of a planning process, illustrated in Figure 6, was considered:

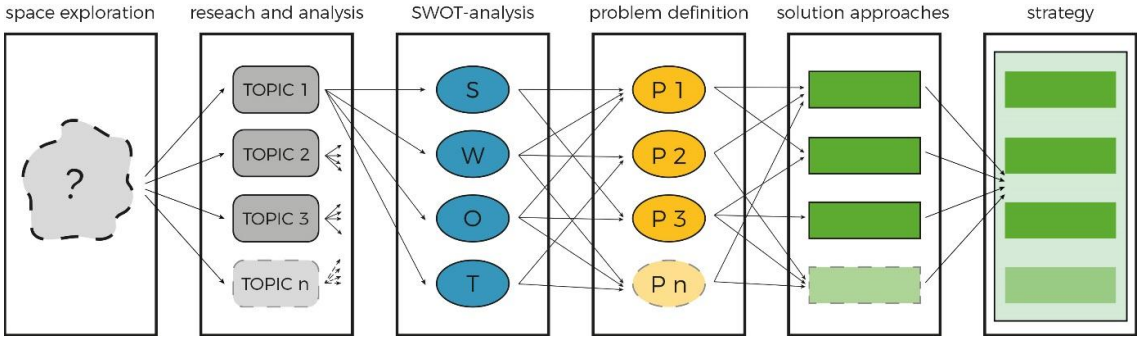

Figure 6: Structure of the planning process; source: own illustration

The process starts with the exploration of the research area. The Wachau region in Lower Austria served as the research region (see Chapter 3). This exploration is followed by the research and analysis of certain previously defined topics for the selected region. The results of these analyses are incorporated into a Strength - Weakness - Opportunity – Threads (SWOT) analysis, which forms the basis for the problem finding and definition. After defining the problem areas, tailor-made solutions are developed by several teams working in parallel. The best and most relevant solutions are combined to form a common strategy for the development of the region. The exact sequence and an explanation of the individual steps can be found in the following.

2.1 SPATIAL EXPLORATION

In order to analyze the research area and its conditions and challenges / problems, it is important to get to know the space, to explore it with all of our senses. This was done during a multi-day on-site research camp. Project partners as well as students from all partner countries participated in this research camp. The basis for the spatial exploration were lectures on the research area, the Wachau region itself, as well as the theoretical presentation of methods for spatial research and planning. The spatial exploration itself took place on two mornings; in the afternoon parallel workshop sessions were held for students and project partners, which served to record the impressions obtained.

The region was explored by train and bus along the riverbanks, with stops and tours in historically significant places and tourism hotspots. As well as getting to know the physical space, exploring the social and economic circumstances was also important. The local lifestyle, agriculture, culinary culture, contact with the local population and finding out about the typical regional traditions also played a key role. The perceptions and impressions were captured in photos and sketches.

2.2 RESEARCH AND ANALYSIS

The analyses were carried out in international and interdisciplinary teams, consisting of students of spatial planning, architecture and landscape planning, focusing on five thematic areas - natural conditions and landscape, transport and technical infrastructure, settlements and villages, population and social infrastructure, and economy. The mixed team composition allowed the input of experiences and knowledge from the individual disciplines, but also from the different nations and cultures. The thematic areas were defined in advance and covered all the fields relevant to the planning of the area.

The first phase of the analysis, the collection and processing of the findings obtained through the exploration of the space, took place during the research camp. First, strengths and weaknesses of the region with regard to the topic of analysis were filtered out. The week's results were presented at the end of the research camp. An in-depth analysis took place in the further course of the semester.

2.3 SWOT ANALYSIS

In the following step, considerations regarding strengths, weaknesses, opportunities and threats were first recorded within the group, after which they were discussed and weighed up in the plenum and rejected or supplemented as appropriate. The SWOT were documented in tabular form. This first SWOT analysis formed the basis for the problem definitions.

2.4 PROBLEM DEFINITION

The problem definition process was essentially divided into four working steps. The basis for this, as already mentioned, was the SWOT analysis, supplemented by a group-internal listing of relevant problem areas according to the individual analysis topics. The first step after this preparation was the collection of all problem areas, including a joint discussion, as well as another brainstorming session (Figure 7) to record any additions.

These problems were documented by word, picture and number, in order to ensure later traceability. From this brainstorming session, an attempt was made to compile a problem cluster in order to identify and understand the interconnections and effects of the individual problem areas (Figure 8). Subsequent to this step, the cluster diagram was reworked once more by adding a weighting to the individual effects. This took into account how strongly a problem field affects other problems and vice versa, which problems are affected by this, and to what extent (Figure 9). From this diagram of a problem cluster and the accompanying plenum discussions, some main problem areas emerged (Figure 10), which were noted for definite inclusion in the possible solutions. In addition to this method of filtering out problems, an attempt was also made to locate the problem and its chronological place by means of graphical illustrations, in this case, by map illustrations. The challenge was to illustrate the problems in a meaningful way. Since this was not possible in all problem areas, a literal description was added.

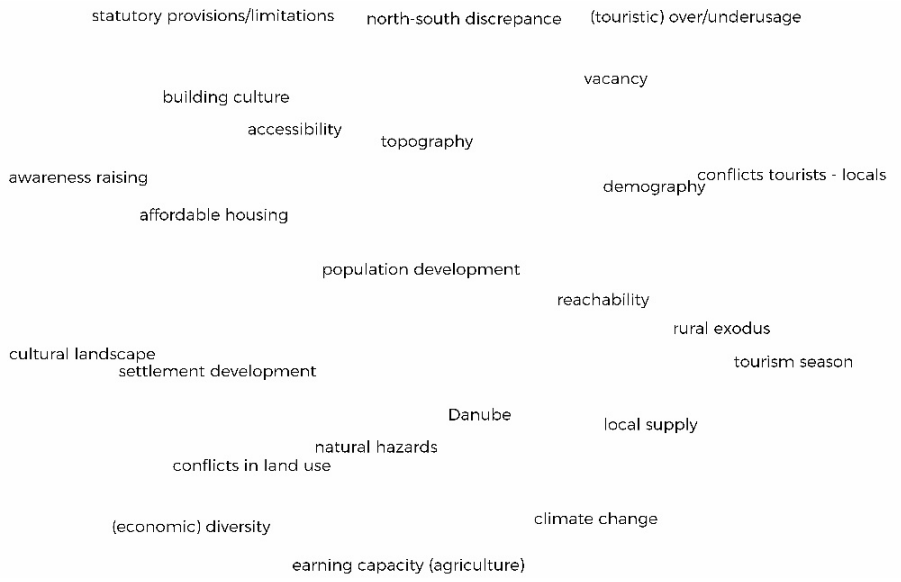

Figure 7: Brainstorming session on problems. Source: DANUrB – student team of TU Wien

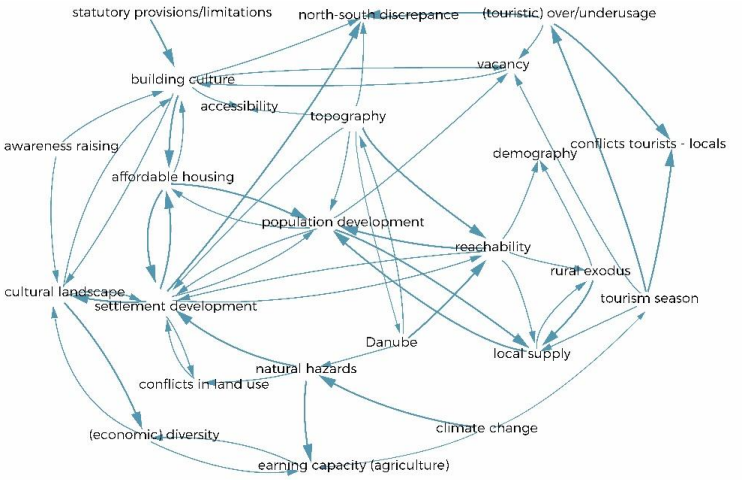

Figure 8: Interconnections between the problems. Source: DANUrB – student team of TU Wien

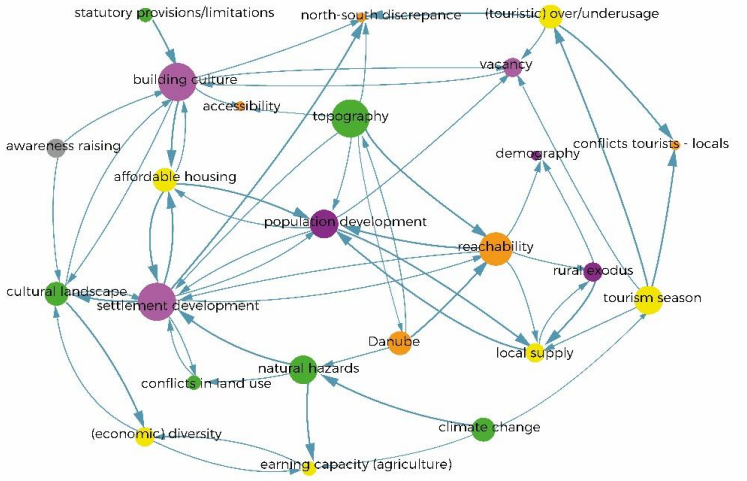

Figure 9: Weighted impacts of the problems. Source: DANUrB – student team of TU Wien

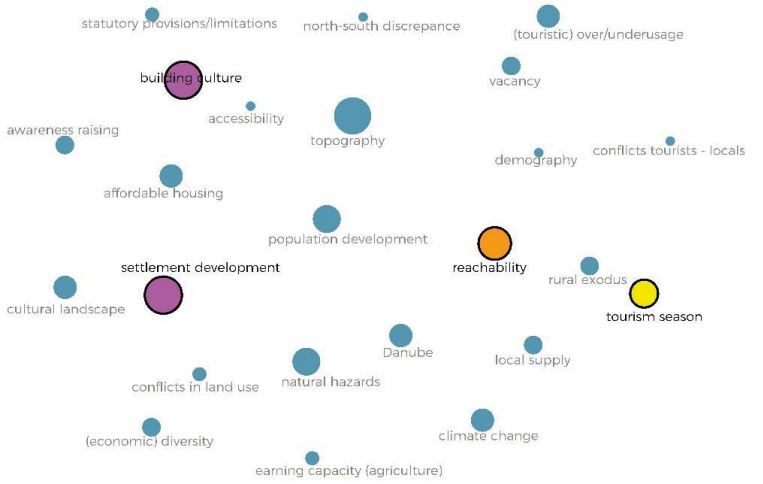

Figure 10: Main problem fields. Source: DANUrB – student team of TU Wien

2.5 POSSIBLE APPROACHES TO SOLUTIONS

At this stage it should be mentioned that the former five analysis teams reformed into three project teams in order to perform the following tasks in the manner of a test planning procedure.

The task of the teams was to develop ideas and projects for the region based on the jointly defined problems. These ideas and projects should also be transferable and act as an inspiration to other Danube regions in terms of their basic ideas and planning approaches. According to the "problems first!" approach, relevant problem areas were selected and debated, in order to develop a vision formulating objectives for the development of the Wachau region. The projects were to focus on a specific location and give details of stakeholders involved, a cost estimate and an explanation of the anticipated effect, documented with reference examples.

The solution-finding step was embedded in an open, constructive process in which the teams alternated between working individually and in the plenum. At these plenary meetings, the ideas and the status of the work in progress were presented to all and discussed together, debating the pros and cons of the project ideas, and whether there were similar ideas taking different approaches.

2.6 COMMON STRATEGY

In order to arrive at a joint strategy for the Wachau region in the last step, the best ideas from all the project teams were brought together and interlinked.

After the Wachau, the suggested process was also applied in two other Danube regions in Serbia and Hungary.

To exchange the results, a workshop was organized in which the students presented their work reciprocally and then looked for similarities or differences between the respective regions in order to create knowledge bases and possible process adaptations for the future work in further Danube regions.

2.7 ADDITIONAL COMMON PRINCIPLES AND TASKS

In addition to this strategic planning process, there are a number of other important principles and tasks within the framework of DANUrB which were essential for the transferability and further use of knowledge and implementation of the process. These are briefly explained below.

Knowledge, expertise: The most important basis for research into the spatial, social, cultural, historical and legal circumstances and characteristics of a region is proper training in spatial planning. The students are familiar with the methods and tools of planning and know how to deal with them. This know-how is essential to the success of the project.

Organization of an on-site research camp: In order to find suitable methods that can be used in research and planning in all Danube regions, the on-site research camp turned out to an ideal way of preparing project partners - researchers, stakeholders, representatives from different cities and countries, as well as students – for the complex planning tasks ahead. Particularly important was the excursion to the region, so that the participants could get a feeling for the region and its challenges. Furthermore, the workshop format was the only way to get partners from all countries around a single table. This made communication and cooperation much easier.

Data collection and data processing: In order for all the analysis and project results to be documented by word, image and number, comprehensive data collection and verification of these data were required. Furthermore, as already mentioned in chapter 1.3, a GIS database structure was developed. This database serves to store the basic data, analysis and project data as well as to transfer it to project partners in other countries.

The latter will then fill the database with results from other Danube regions throughout the entire duration of the project. An information and knowledge platform can thus be provided for all partners involved.

Determination of common scales: In order to ensure a certain comparability between the results and data from the respective project regions, the partners at the on-site research camp agreed on common standards that will be applied in the further course of the project. The focus is on a multi-scale view of the problems and results.

Creation of a glossary: The joint elaboration of a glossary containing definitions on the key issues surrounding the DANUrB project was essential in order to ensure a common understanding of the terms, to communicate one's own understanding to partners from other countries and, where necessary, to compare one another's interpretations of these key concepts.

3 RESULTS AND CONCLUSION

It proved useful to structure complex planning tasks into a defined process that is fully applicable and transferable to other regions. This was supplemented by jointly defined methods and benchmarks which allow a certain degree of comparability among the results for the specific regions. A GIS database was compiled to store all the above results and information and make them available for further use.

This strategy meant that in the very first months of the DANUrB project it was already possible to show the diversity along THE European river – the Danube – to resolve common problems, exchange ideas, and communicate and cooperate between regions and across national borders.

Work in planning practice must be underpinned by a solid foundation of planning theory and methodology. On the one hand, tried-and-tested approaches and concepts can be applied; on the other hand, however, difficult planning phases repeatedly occur in which special attention and a cautious, sometimes time-consuming approach are required. Innovative concepts and approaches are called for at all times. A strategic approach requires those involved to keep an eye on the essentials while simultaneously dealing with important, urgent matters. This calls for overviews of spatial and time resources, the organisation of the planning process and the key players in regional development, coupled with precise insights into specific regional and local circumstances.

A stable timeframe and a good team of planners are vital prerequisites for successful regional planning. The planning problems, be they routine tasks or unresolved complex problems of great societal and spatial significance, should be kept in mind at all times ("Problems first!"). Clarity and attractive presentation help generate the necessary understanding and support, and create an awareness of planning issues among all the stakeholders. The DANUrB research project has offered plentiful evidence of this, and will continue to do so.

The particular challenges of the project lie in the need for cooperation among teams from a number of regional contexts and planning cultures that differ to varying extents in terms of language, culture in the broadest sense, and mindset. Knowledge and understanding of these differences, combined with the will to build up trust and place the emphasis on shared characteristics, are important prerequisites for successful projects and developments at European level.

4 ACKNOWLEDGMENT

The DANUrB – Danube Urban Brand project is co-funded by the European Union (ERDF, ENI, IPA II) (see Logo Figure 11).

Figure 11: EU Danube Transnational Program Logo

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ID1450 | THE BOSNIAN SPATIAL PLANNING SYSTEM - ATTEMPT AT AN EXPLANATION

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ABSTRACT: To understand the Bosnian spatial planning system it is necessary to get an overview of the structure and hierarchical levels in Bosnia and Hercegovina (BiH). The process, of setting up a new state formation and order is directly linked with the war and its all impact (1992-1995), which has started after Bosnians independence from the former Yugoslavia (Socialist Federal Republic of Yugoslavia – SFRY) in March 1992. The war consequences have still an enormous influence on daily life in Bosnia and Hercegovina and on the spatial planning system as well. This paper tries to explain the complexity of the Bosnian spatial planning system, to show its gaps and to explain the cause for its transnational planning character.

KEYWORDS: Bosnia and Hercegovina, Federation of Bosnia and Hercegovina, Republic of Srpska, Canton, Spatial planning, Planning gaps, transnational planning

1 INTRODUCTION IN BOSNIANS ADMINISTRATIVE-TERRITORY STRUCTURE

After the war in Bosnia (1992-1995), which ended in November 1995 by the Dayton Freedom Agreement (DFA), Bosnia and Hercegovina become a new state structure. Since then, the country is structured in two entities, Federation of Bosnia and Hercegovina (FBiH), Republic of Srpska (RS) and one district -Brčko District. Brčko District, in northeastern part of BiH, is a self-governing administrative unit, as well as condominium[1] under the dual sovereignty of the two entities. The Figure 1 shows an overview of the administrative structure in BiH. Before the war, there was 109 administrative-territorial units respectively municipalities on Bosnians approx. 51.000 km² territory area. Through the DFA, the number of this units increases up to 142 (Ministarstvo za ljudska prava i izbjeglice, 2006). FBiH contains 79 administrative-territorial units, which are allocated in the ten cantons, 62 of 142 are situated in RS and one administrative-territorial unit is Brčko District (Ministarstvo za ljudska prava i izbjeglice, 2006).

[1] Merriam-Webster dictionary defines a condominium as a politically dependent territory under condominium (https://www.merriam-webster.com/dictionary/condominium)

The Federation of BiH, which covers 51% of the territory of Bosnia and Hercegovina is divided in ten cantons by the constitution. The law of federal units clearly defines cantons, defined in terms of their administrative characteristics and authorities. On the other side, there is no law, nor regulation about the minimum territory size or a num mber of inhabitants as a requirement needed for bbecoming the status of a canton. Comparing available datafrom the Agency for Statistics BiH (Table 1), it caan be concluded, that the minimum territory size of a canto on has to be bigger than 324km² (see canton No. 2 2 in Table 1), with at least three municipalities (see canton N No. 2 and 5 in Table 1) and more than 30.000 inhaabitants (se canton No. 2 and 5 in Table 1). The capital of F FBiH is the same as capital of Bosnia and Hercegoovina, the city of Sarajevo. In Federation part of Bosnia and Hercegovina there are three administrative levels. . The highest is the entity or federal level with the federal ggovernment, parliament, presidency and the housee of people. The next or middle level is the cantonal level. As mentioned before, there are ten cantons withthe cantonal government and cantonal council. The lowest llevel in FBiH is the local level with municipalities a and/or cities councils and mayors.

The other entity, RS, which coverss 49% of Bosnians territory area, has a less adminisstrative structure than the FBiH. This part of BiH has two aadministrative levels - the entity and local level. It c can be said, that the entity of Republic of Srpska has a centraal organisation in its capital Banja Luka. By the law w of spatial planning until 2015 of the Republic of Srpska, thhere have been defined six regions without a legislaation. The first stage plan for RS has foreseen four nodal-fu unctional regions. Later, through the elaboration oof the spatial planning law of the Republic of Srpska until 20 015, the territory was divided, as mentioned before,, into six regions. It was a trail to create a regional structur re, using a centre concept (Figure 2). The territorrial structure with its six regions had the greatest impact o on localisation of certain institutions and organisaations such as health care facilities or waste management. Thhe new spatial planning law for RS, valid from 20155 until 2025, foresees five nodal-functional regions (Figure 3). It is evident that there is no continuity in thhe regionalisation of the territory of Republic of Srpska.

Figure 2 |S Structure of Republic of Srpska in six regionsuntil 22015

No.	Canton	Area in km²	Municipalities in Canton	Inhabitants
1	Unsko-sanskikanton	4.125,00	8	287.030
2	Posavskikanton	324,60	3	38.375
3	Tuzlanskikanton	2.649,00	13	498.766
4	Zenicko-dobojskikanton	3.344,10	12	396.732
5	Bosansko-podrinjskikanton	504,60	3	32.341
6	Srednjobosanskikanton	3.189,00	12	251.714
7	Hercegovacko-neretvanskikanton	4.401,00	9	223.471
8	Zapadno-hercegovackikanton	1.362,20	4	81.309
9	Kanton Srajevo	1.276,90	9	446.853
10	Kanton 10	4.934,10	6	77.757
	TOTAL	26.110,50	79	2.334.348

Figure 3| St ructure of Republic of Srpska in five regions until 20025

The other entity, RS, which covers 49% of Bosnians territory area, has a less administrative structure than the FBiH. This part of BiH has two administrative levels – the entity and local level. It can be said, that the entity of Republic of Srpska has a central organization in its capital Banja Luka. By the law of spatial planning until 2015 of the Republic of Srpska, there have been defined six regions without a legislation. The first stage plan for RS has foreseen four nodal-functional regions. Later, through the elaboration of the Republic of Srpska until 2015, the territory was divided, as mention before, into sex regions. It was a trail to create a regional structure, using a centre concept (Figure 2). The territorial structure with its six regions had the greatest impact on localization of certain institutions and organisations such as health care facilities or waste management. The new spatial planning law for RS, valid from 2015 until 2025, foresees five nodal-functional regions (Figure 3). It is evident that there is no continuity in the regionalization of the territory of Republic of Srpska.

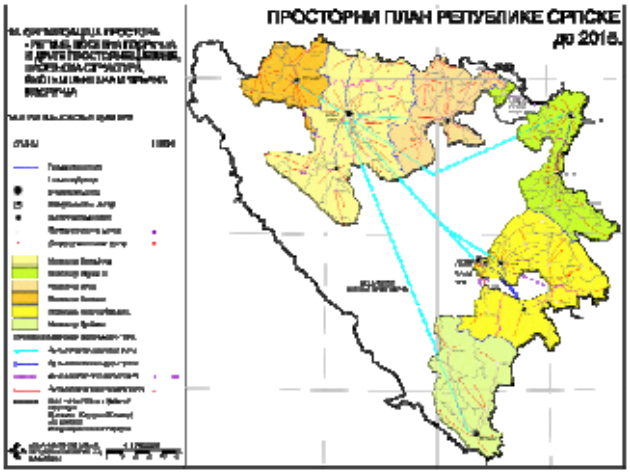


Figure 2: Structure of Republic os Srpska in six regions until 2015

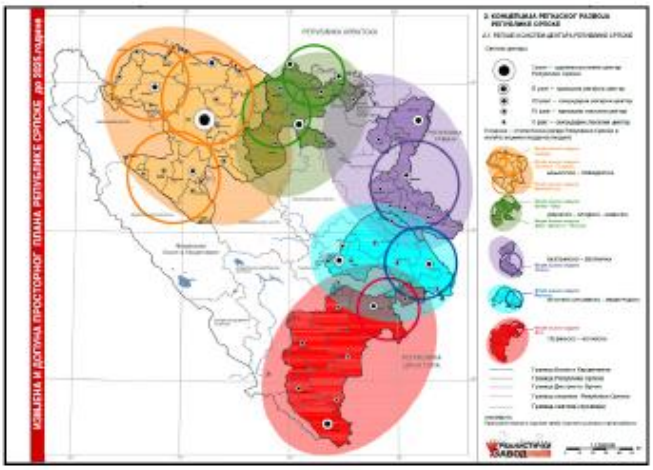


Figure 3: Structure of Republic os Srpska in five regions until 2025

The Statute of Brčko District co ome into force in May 2008, defines the special and unique case of the administrative-territorial unit of Brčko District (Statut Brčko). Brčko District with its self-governing characteristics is a territorial-admi inistrative unit on the local level. This special case of territory of the Brčko District includes the whole territoory of the municipality Brčko as it was on the 1sst of January in 1991, i.e. before the war. One of the resultts through the position and statute of Brčko Distrrict is that no one of the entities has a coherent territory bo ody.

2 SPATIAL PLANNIN NG SYSTEM IN BOSNIA AND HERCE EGOVINA AMONG PLANNING DOCUM MENTS

Before 1992 the spatial planning system in Bosnia was centrally organised with a strict structure like in all other republics of former Yugoslaavia (Figure 4).

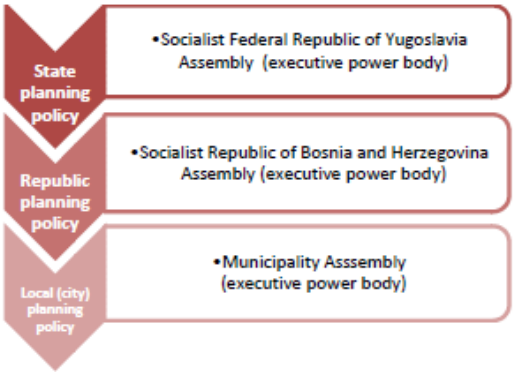
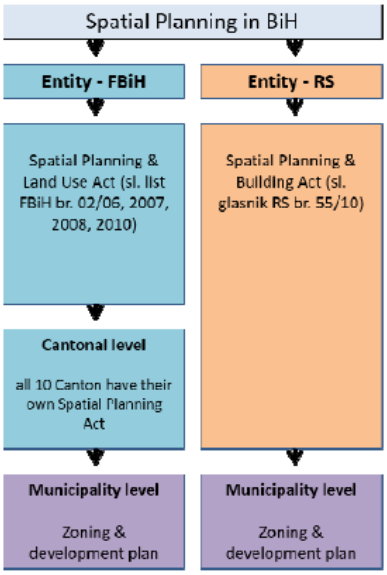


Figure 4 |Spati ial planning system in SFRY (E. Uruči by N. Tabor ri, 2017)

Following the new state order, thee Bosnian spatial planning system was changed an nd got its competencies in the new system. The whole comp plex administrative and political structure of BiH becomes obvious among the spatial planning system (Figuree 5). The highest administrative level, with spatial p planning competencies, is the entity level. In Federation of BBosnia and Hercegovina spatial planning is regulat ted by the Law for spatial planning and land use, Law on HHousing Relations and Law on the national monum ments are the highest legal acts of regulations and rules. The e highest legal act for spatial planning in the Repubblic of Srpska is the Law for urban planning and constructiion. The lover level is the cantonal level, but only iin FBiH. Every Canton is obliged to develop and draw its o own cantonal spatial plan according to the regulatiions which are defined in the federal spatial plan (Table 2). TThe lowest level with spatial planning competenciess is the municipality level. The Law for spatial planning and construction is regulating the spatial planning issuees in Brčko District. This is, as mentioned before, situated oon the municipality level.



The result of an administrative co onstruction like this is the proliferation of complexiity in every single field of activity including the spatial plan nning. Just counting all Bosnian spatial planning a acts, we get an incredible number of twelve (!), ten cantona al and two entity, spatial planning acts, which shou uld solve all problems and challenges of spatial planning and d development of the whole Bosnian territory. Addditional on this, there are spatial plans, including zoning planns and development plans for each city and municiipality.

Figure 5 | Levels with spatial pla anning competencies in Bosnia and Hercegovina w without Brčko District (E. Uruči, 2013 by GAP 2013)

No.	Canton	Law
1	Unsko-sanski kanton	Law on spatial planning and constuction (Sl. glasnik USK br. 10/11)
2	Posavski kanton	Law on spatial planning (Narodne novine PŽ br. 5/99)
3	Tuzlanski kanton	Law on spatial planning and constuction (Sl. novine TK br. 11/06)
4	Zeničko-dobojski kanton	Law on spatial planning (Sl. novine ZDK br. 2/04)
5	Bosansko-podrinjski kanton	Law on spatial planning and constuction (Sl. novine BPK br. 15/09)
6	Srednjobosanski kanton	Law on spatial planning (Sl. novine KSB/SBK br. 11/05)
7	Hercegovačko-neretvanski kanton	Law on spatial planning (Sl. novine HNK br. 4/04)
8	Zapadno-hercegovački kanton	Law on spatial planning (Sl. novine ŽZH br. 4/99)
9	Kanton Srajevo	Law on spatial planning (Sl. novine SK br. 7/05)
10	Kanton 10	Law on spatial planning (Sl. glasnik HBŽ br. 14/98)

Table 2 | Overview of cantonal laws on spatial planning (Korjenić, 2015)

3 PLANNING DOCUMENTS IN BOSNIA AND HERCEGOVINA

The spatial plan of FBiH contains development strategies and directions for planning management and land use of this entity. There are defined protected areas and development corridors which should take into account in spatial and land use plans on the lower levels (cantonal and municipal level). This federal law regulates: planning and land use, drawing and adoption of planning documents, art and contains of planning documents, its enforcement and supervision on enforcing of adopted planning documents (Figure 6). Since its first implementation in 2006, this law has been an amendment in 2007, 2008 and three times in 2010 (Sl. novine FBiH br. 72/07, 32/08, 4/10, 13/10 and 35/10). This is just one of indicators that shows the process of setting-up of a state system is still not finished. Beside of this law, the federal government has adopted few statutes which should manage all activities of spatial planning and land use on the territory of FBiH (Korjenić, 2015). According to this fact, the following documents may be mentioned as important documents:

- The Regulation on a Uniform Methodology for Drafting Physical Planning Documents,
- Regulation on special conditions to be fulfilled by companies and other legal persons so that they can register for performing professional tasks of drafting of planning documents,
- The Regulation on the Content and the Carriers of a Unique Information System, the methodology for collecting and processing data, and the forms of keeping the records,
- The Regulation on Amendments to the Regulation on Contact and the Carriers of a Unique Information System, the methodology for collecting and processing data, and the forms of keeping the records.

The intermediate, cantonal level in FBiH has the obligations to create they own spatial planning plans, in consideration on the federal spatial plan. As shown in Table 2 for every canton exists a spatial planning law, but the draw and implementation of a cantonal spatial plan are still not finished in every canton. The cantonal spatial plan contents definitions and projections for future land use and development axes taking into account the federal spatial planning law and other cantonal law, which are decided through the cantonal council. The cantonal law is created for the specific needs and opportunities for each canton referring to the federal law.

In process of drawing and preparing spatial planning and development documents, municipalities in Federation have the obligation to comply their documents and harmonise with the documents on the

higher level. This is a long-term plan made by the municipality and adopted through the municipalities council. Along the implementation of cantonal spatial planning laws, municipalities are obliged to create a municipal spatial plan or spatial plan of local self-government. Exceptions of this regulations are municipalities, which are part of a City for which no municipality spatial plan is foreseen. These local units are treated trough development strategies, which rely on spatial plans of the City (Korjenić, 2015).

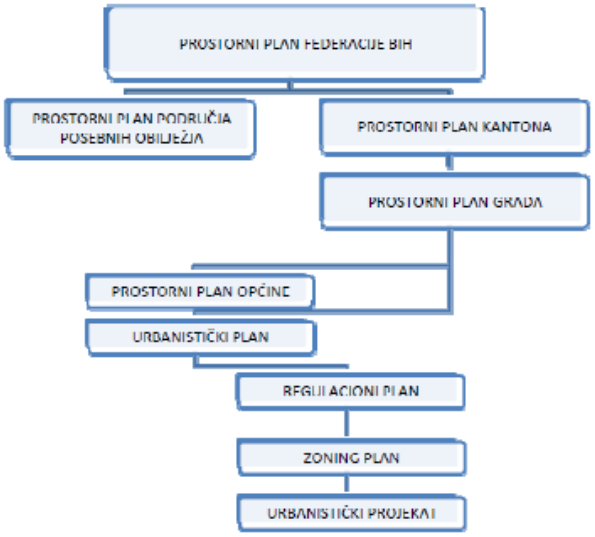


Figure 6 | Planning hierarchy, plans and documents in FBiH (Korjenić, 2015)

In the Republic of Srpska, the Law on urban planning and construction regulates the: planning and regulation of space, type, and content of spatial planning documents, the method of preparation and the procedure for adopting spatial planning documents and the basics of organisation. The documents of spatial planning define the organisation, purpose, and manner of using and managing the space, as well as criteria and guidelines for regulations and protection of space in this Bosnian entity. In addition to the mentioned law, there are adopted two basic regulatory acts for managing the spatial planning process in RS (Korjenić, 2015). These regulatory acts are:

- Regulatory act on Content and Control of Technical Documentation (sl. glasnik RS br. 8/2011) which regulates the parts and content of technical documentation, validation and control of technical documentation and types of projects,
- Regulatory act on Content of creating spatial planning documents (sl. glasnik RS br. 59/11) which prescribe the procedure for drafting and issuing spatial planning documents, the content of spatial planning document and the creation of the spatial planning document.

Spatial planning documents in RS can be strategic (Figure 7) or implementation (Figure 8) document.

The spatial plan of the Republic of Srpska, as the highest order plan, is adopted and passed by the National Assembly of this Bosnian entity. The Assembly is also in charge for spatial plans of special purpose areas, e.g. national parks. Spatial planning at the local level is based on every local administrative unit. The municipality makes decisions on spatial planning which reflect all territorial specify of the municipality. The local spatial planning decisions have to be aligned with the Law of urban planning and construction of the RS, as well as with the two regulatory acts, mentioned above (Korjenić, 2015).

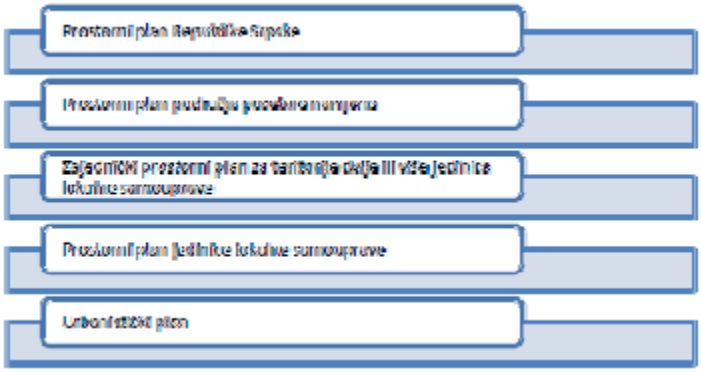


Figure 7| Strategic spatial planning documents in RS Figure 8 | Implementation spatial planning documents in RS

4 GAPS IN SPATIAL PLANNING IN BOSNIA AND HERCEGOVINA

The concrete problem in the field of spatial planning is the uncoordinated spatial planning and development between territory units on the same level, like the cases on the cantonal level in FBiH is and the uncoordinated spatial planning and development on the vertical line of administrative structure (top-down) in each entity. Any attempt to implement a balanced development between the two entities or between entity¬canton-municipality was not successful due to a strong political influence. In Bosnia and Hercegovina are every two years elections. One for the municipality and City level and two years later for the state and entity level, including the cantonal level. This fact affected directly the dynamic and continuously work in every single administrative sector.

The need for a comprehensive and coordinative spatial planning and development between the both entities and their administrative levels is best presentable on the example of the City or Canton of Sarajevo. The city of Sarajevo is divided in East Sarajevo (RS) with six municipalities and Canton Sarajevo (FBiH) with nine municipalities. Before the war, the city of Sarajevo included six city municipalities and four outskirt municipalities, with more or less the same area that the two cities have today. It was a differentiation of urban and suburban areas. In fact, the whole area is one coherent city-region area with small, middle and one big focal centre (Figure 9) (Nurković, 2016).

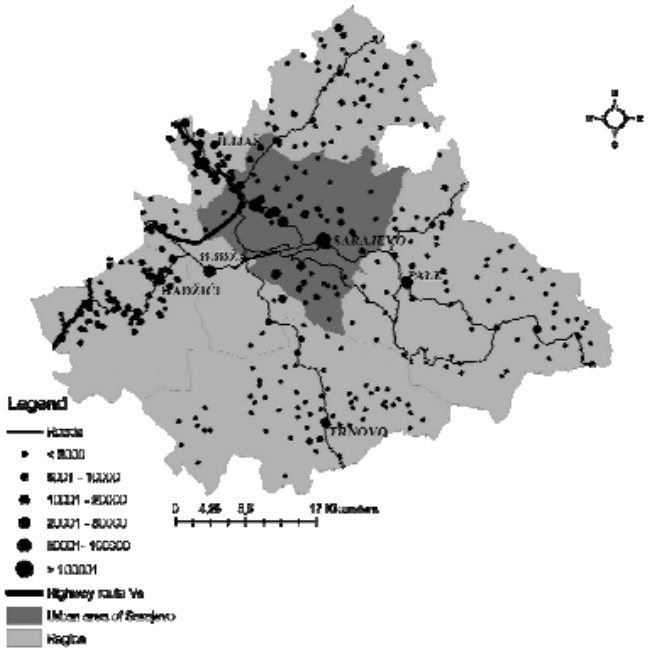


Figure 9 | Urban and suburban structure in Sarajevo region (Nurković, 2016)

Through the new order, the spatial planning competence for the city-region area of the capital of Bosnia and Hercegovina is spread over all administrative levels with no really a chance to ensure a balance and harmonised spatial planning. Spatial planning competencies, as mentioned before, are represented on all administrative level, except the state level. This is also the reason for not adopting or creating a spatial planning development strategy on the state level. Even other development strategies like economic, social, agricultural etc. do not exist on the state level of Bosnia and Hercegovina. Any attempt of creating a common development strategy for the whole country in any sphere becomes a transnational character. That means, that any decision has to be approved by the entity parliament and the city council of Brčko District. Decision made by the Federation of BiH has to be approved by every cantonal council. One attempt to overcome of this entity-political interests and administrative borders was the implementation of economic regions of BiH (Figure 10). This implementation is the result of the European project EURED (Regional Economic Development Programme in BiH). The goal was to ensure a balanced development of each region and to reduce disparities between urban and rural areas. The work of the regions was from its beginning full of administrative obstacles and political obstruction. Two of five regions are not active anymore.

Figure 10 | Economic regions in Bosnia and Hercegovina
(http://serda.ba/bs/2012-06-17-15-57-28/2012-06¬17-15-58-54.html)

On the other hand, there is an intersectoral fight between authorities on the cantonal level. Every Ministry e.g. spatial planning, traffic, economic etc. creates its plans and laws which are not referring and harmonised to each other. The next fact which affected the imbalanced spatial planning and development are the municipalities. The local authorities are only interested into developing their area as much as possible, into so-called, rentable projects of housing, office areas and shopping centres with no serious preparation or feasibility study for the certain project. Local authorities are often influenced by potential investors in cooperation with their political and private interests.

5 CONCLUSIONS AND RECOMMENDATIONS

The transition and reform processes which is Bosnia and Hercegovina following on its road to the EU membership should be harmonised to the reform agenda and to the contemporary trends in EU member states in all spheres, including the sphere of spatial planning (Korjenić, 2015). In the process of becoming the status of candidate state for EU membership, it is necessary to harmonise the national administrative system, in order to become more effective. For future development of the whole country, the acquisition of EU funding and EU partnership will play an important role. In this context, it is necessary to install an administration-management body with experts board on the state level which is not bound to the current administrative structures and hierarchies. This body should be a state Institute for Planning and Development. The task of the Institute would be to track current European and global trends in the sphere of spatial planning, to connect and organise working groups with the Bosnian authorities for spatial

planning, to create with them a common vision and action plans for certain spatial planning issues and areas of Bosnia and Hercegovina, to ensure a qualitative education in spatial planning, to create the profile, duties and action areas of spatial planer, and to connect Bosnia and Hercegovina with other countries and partners on the international level in the sphere of spatial planning.

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ID 1471 | UNDERSTANDING DIFFERENCES IN THE GOVERNANCE OF MACRO-REGIONAL COOPERATION

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1 INTRODUCTION

Since 2009, the gradual establishment of four so-called EU macro-regions has signalled a more comprehensive macro-regional strategy at the EU level. Up until now, such macro-regions have been established in four European areas: the Baltic Sea (2009), the Danube river (2010), the Adriatic and Ionian Seas (2014) and the Alpine mountains (2015). Since they have only been in place for about 2 to 7 years, macro-regions can still be considered a very recent phenomenon. Hence a systematic empirical overview of them is still in a primary stage (e.g. EC, 2016a).

When EU macro-regions were first launched, they were defined as areas 'covering a number of administrative regions but with sufficient issues in common to justify a single strategic approach' (EC, 2009: 5). From this definition, two elements are apparent. Firstly, EU macro-regions are composed of a number of smaller (regions or municipalities) or larger (nation-states) territorial entities each of them addressing their respective desires. Secondly, EU macro-regions correspond to areas with common issues, which may be geographical or sectoral in nature. These issues need a strategic approach in order to be addressed. Such an approach demands 'integrated frameworks [which help] to identify needs and allocate available resources', the so-called EU macro-regional strategies (Samecki, 2009: 1). Based on these two elements, it is fair to conclude that EU macro-regions encompass both a territorial and a functional dimension. Therefore, I argue that macro-regions are hybrid forms of organization balancing between these two dimensions.

Furthermore, existing macro-regions face various issues; they have different histories, political backgrounds, normative viewpoints and cultural preferences. In addition, they are brought into practice by a huge variety of actors and institutions. As a result, the way in which various macro-regions accommodate both dimensions is hypothesized to vary greatly. Hence, the underlying objective of this paper is to understand the hybrid nature of EU macro-regions and how they balance between the territorial and functional interdependences.

In order to address this question, I aim, first, to give an overview of the current state of the four existing macro-regions and, second, illustrate their hybrid nature by focusing on three aspects: 1) the pre-existing forms of cooperation and geo-political backgrounds these macro-regions build upon, 2) the substantive issues these macro-regions are dealing with, and 3) the governance structures they have set up. Both steps are the outcome of a thorough investigation of relevant EU and 'macro-regional' documents as well as interviews with a selective number of EU, cross-regional and national officials[1].

2 THEORETICAL AND ANALYTICAL POSITIONING

2.1 MACRO-REGIONS AS TERRITORIAL AND FUNCTIONAL SPACES

In the existing literature, the understanding of EU macro-regions has been developed by a number of considerations. From an EU perspective, macro-regional strategies are considered a form of bottom-up and place-based policy (Samecki, 2009; Barca, 2009), which has to be designed and implemented predominantly by its constituents. Another consideration comes from Stocchiero (2010) who welcomed the initiation of macro-regions by arguing that they constitute an 'interesting political experiment' comprising actors from various territorial levels (Stocchiero, 2010: 3). Furthermore, Schymik (2011) recognized the territorial and functional aspects of macro-regions by seeing them as a 'model experiment of macro-regional strategy' (Schymik, 2011: 5). Similarly, Dühr (2011) suggested that 'the argument for territorial and

[1] A list of interviewees is available on demand.

functional interrelations is at the heart of the EU macro-regional strategies' by arguing that macro-regions provide an additional governance layer for transnational cooperation (Dühr, 2011: 38). Lastly, Stead (2014) links macro-regions with the concept of soft spaces 'in terms of resource efficiency and policy coordination and integration' (Stead, 2014: 687). Although these considerations do refer to some functional and territorial aspects of macro-regions, they mainly point out their experimental substance. Interestingly, they do not address the issue of how these macro-regions balance between those aspects and how the state of macro-regions is affected by those aspects.

The following contributions, however, do connect to the distinction between territorial and functional organization within EU macro-regions. For example, Kern and Gänzle (2013) suggest that EU macro-regions may be affected by 'a shift from territorial to functional regions' (Kern and Gänzle, 2013: 10). In their terms, such a shift is described by the process of macro-regionalization and it affects the 'spatial dimension, boundaries, institutional set-up and governance' of macro-regions (ibid). As a result, macro-regions differ from territorial regions in their demarcation (based on functional interdependencies), shifting boundaries (transcending existing territorial boundaries), policy-specific institutional arrangements and new forms of functional governance.

Furthermore, Blatter (2004) elaborates the distinction between territorial and functional governance. To develop this distinction, he analyses categories such as 'the structural pattern of interaction, sectoral differentiation, functional scope, geographic scale, and institutional stability' (Blatter, 2004: 533). Based on them, he concludes that, in the ideal type of territorial governance, a central authority is charged with top-down interactions across the organizational structure (usually the nation-state); actors from the public sector dominate the participation in general-purpose institutions, which have clear boundaries across time and space. In contrast, the ideal type of functional governance encompasses networks interacting horizontally, incorporating both public and non-public actors, working in task-specific issues beyond concrete territorial, time and space boundaries.

2.2 AN ANALYTICAL FRAMEWORK TO STUDY EU MACRO-REGIONS

For the purposes of this study, I recognize the experimental character which macro-regions have thus far, however I regard their hybrid nature balancing between the territorial and functional dimension. To illustrate this hybrid nature of EU macro-regions, I suggest an assembled analytical framework. This framework is inspired by the contributions made by Kern and Gänzle (2013) and Blatter (2004), and it addresses two elements. The first element highlights the role of pre-existing institutions in mobilizing macro-regional processes, developing them and making them work. In fact, EU macro-regions build on pre-existing institutional arrangements, but the macro-regional processes themselves may, in turn, be affected by the pre-existing institutional arrangements. It is exactly because of this reason that 'macro-regional strategies need to be embedded in the already existing institutions operating at the macro-regional level' (Kern and Gänzle, 2013: 12). Yet, the second element shows the analytical pertinence of substantive scope and governance of EU macro-regions. This is because EU macro-regions result in a sort of new policies and governance structures. Drawing upon Blatter (2004) and Kern and Gänzle (2013), the substantial scope of EU macro-regions may refer to functional goals, tasks, boundaries or issues which territorial or functional regions have to deal with, while governance of EU macro-regions can be seen in the new forms of governance structures established in territorial or functional regions.

Hence, in order to understand how macro-regions are hybrid models balancing between their territorial or functional interdependencies, I focus on three aspects, namely 1) pre-existing institutions, 2) substantive content of macro-regional strategies, and 3) governance structures. To operationalize the three aspects, the first aspect analyzes the institutional and historical background which surrounds existing EU macro-regions. This includes an overview of pre-existing forms of cooperation preceded by a short overview of historical milestones determining the status of cooperation which have been in place before the launch of EU macro-regions. The second aspect concerns the substantial issues such as the scope, objectives, drivers and challenges attached to existing EU macro-regional strategies. The third aspect covers the organizational issues such as what governance mechanisms have been created and what issues they struggle with.

3 AN OVERVIEW OF THE CURRENT STATE OF EU MACRO-REGIONS[1]

BALTIC SEA REGION

The EU Strategy for the Baltic Sea Region (EUSBSR) can be traced back to 2006, when a report of the European Parliament called for a strategy for the Baltic region as a means to reinforce the regional cooperation of countries in the Baltics (EP, 2006). Following that, the European Commission (EC) released the Communication and the Action Plan for the EUSBSR in June 2009 and the European Council officially endorsed the Strategy in October 2009. The EUSBSR was the first EU macro-regional strategy and although it started as a purely European strategy including 8 EU member states, it was soon widened to involve 4 non-EU countries. It addresses 3 main objectives, namely 'save the sea', 'increase prosperity' and 'connect the region' which are further specified in 13 Policy Areas and 4 Horizontal Actions. At the end of the day, all these strategy features aim to develop implementation projects (flagship projects).

In order to make the EUSBSR work, various key actors are currently involved. Firstly, the European Commission holds a strategic role in facilitating the EUSBSR. Secondly, national coordinators are responsible for coordinating the EUSBSR at the national ministries level, while the coordinators of policy areas and coordinators of horizontal actions are in charge of the coordination of specific thematic actions (under Policy Areas and Horizontal Actions of EUSBSR). Furthermore, flagship leaders make EUSBSR projects run, while managing authorities of various funding programmes aim at ensuring complementarities between EUSBSR projects and other existing programmes. These actors get involved in or support the workings of EUSBSR governance mechanisms. In brief, the three components of the EUSBSR governance are: 1) the National Coordinators Group, 2) the Policy Area Steering Committee/Coordination Group, and 3) the Horizontal Action Steering Group.

DANUBE REGION

The EU Strategy for the Danube Region (EUSDR) was initiated, primarily by the efforts of Austria and Romania, as a new project of regional cooperation (Romanian Ministry of Foreign Affairs, 2010). The EUSDR was adopted by the EC in December 2010 and endorsed by the European Council in April 2011. The Strategy involves 9 EU and 5 non-EU countries and it addresses 4 main objectives, namely 'connecting the region', 'protecting the environment', 'strengthening the region', and 'building prosperity'.

Regarding the main actors involved in EUSDR, the European Commission offers strategic coordination and administrative support. In turn, National Coordinators (NCs) and Policy Area Coordinators (PACs) are in charge of coordination at the national and inter-ministerial level. In order to facilitate the coordination and communication between project experts and policy makers, the Danube Strategy Point (DSP) was established in 2015. Building on the involvement and expertise of actors, the EUSDR governance is organized around three components, namely 1) the Meetings of National Coordinators, and 2) the Priority Area Steering Groups, while 3) the Danube Strategy Point has got a more intermediate role between the other two components as well as the EC services.

ADRIATIC-IONIAN REGION

In 2014, the EU Strategy for the Adriatic-Ionian Region (EUSAIR) was launched as a tool for building prosperity in the region alongside the integration process of the Western Balkans (EC, 2014a). The EC adopted the EUSAIR Communication and its accompanied Action Plan in June 2014, while the European Council endorsed the documents in October 2014. EUSAIR involves 4 EU and 4 non-EU countries and aims at four basic areas of cooperation, namely 'blue growth', 'connecting the region', 'environmental quality', and 'sustainable tourism'.

The EUSAIR benefits from the EC support and the involvement of other actors. The EC services help the development of EUSAIR as facilitators and policy coordinators. National Coordinators supported by other institutions ensure the coordination and policy making at the macro-regional level. Another significant body at this level is the Adriatic Ionian Council, which informs the coordination of national agendas regarding

[1] See also Table 1, Annex.

EUSAIR among the Foreign Affairs ministers. Other officials at the national, inter-ministerial and regional levels (namely the Coordinators of Thematic Steering Groups) are engaged in running and implementing EUSAIR in their respective policy areas. Lastly, managing authorities of European programmes take part in the implementation/financing of EUSAIR projects. In terms of governance, EUSAIR consists of three main components: 1) the Governing Board, which is the main body coordinating representatives across the national level, and 2) the Thematic Steering Groups in charge of EUSAIR coordination and implementation, while 3) the EUSAIR Facility Point is anticipated to be an intermediate mechanism to support the previous two components and the EC services.

ALPINE REGION

More recently, the EU Strategy for the Alpine Region (EUSALP) was released by the European Commission in November 2015 and endorsed by the European Council in June 2016. It is perceived to be an EU laboratory for effective cross-sectorial and multi-level governance (EC, 2015a). The Strategy is composed of 5 EU and 2 non-EU countries which target at three basic areas of cooperation: sustainable growth and innovation, connectivity and sustainability.

The EUSALP is quite unique in terms of the actors' involvement. The EC services are present in order to provide strategic coordination and facilitation. National representatives get involved in various governance arrangements (e.g. Executive Board), but, due to their empowered role, actors from the regional administrations are of particular importance in EUSALP. Lastly, the Alpine Convention and the Interreg Alpine Space Programme participate as observers to support the implementation of EUSALP. After all, the governance structure of EUSALP includes: 1) the General Assembly, where EC, national and regional representatives meet in order to set the political agenda, 2) the Executive Board which is in charge of the overall coordination of EUSALP, and 3) the Actions Groups in charge of the implementation of EUSALP.

4 COMPARING THE CURRENT ISSUES OF EU MACRO-REGIONS[1]

4.1 PRE-EXISTING INSTITUTIONS

BALTIC SEA REGION

Although the Baltic Sea states were politically divided during the largest part of the 20th century, they targeted to cooperate according to the provisions of the Helsinki Convention on the marine environment already in 1974. However, this was not realized until the 1992 convention. Under this convention, the Helsinki Commission (HELCOM) was established in 1995 to address a good environmental status in the Baltic Sea. This body has been a key contributor with regard to sea matters, while its relevance and expertise has resulted to the 'Baltic Sea Action Plan' in 2007, a plan for the restoration of the ecological status of the Baltic marine environment until 2021. Similarly, the VASAB has been another crucial actor in the Baltic Sea cooperation in the field of spatial planning. Its activities can be traced back in 1992, while it is currently active in the framework of the Baltic macro-region by offering its expertise on various spatially related sectors. These two pre-existing institutions indicate that functional interdependences have been drivers of cooperation in the Baltic Region already for a long time. Nevertheless, political cooperation has gradually emerged since the 1990s, indicating territorial interdependencies in the Baltic Region as well. From this point of view, the Northern Dimension (ND) and the Council of the Baltic Sea States (CBSS) are important frameworks. On the one hand, the ND constitutes a tool for political dialogue and cooperation of the EU member states with neighbouring countries commenced in 1999 and extended in 2006 in order to frame the political cooperation in the Baltics. On the other hand, this political cooperation is enhanced by the CBSS, an intergovernmental body among Baltic states operating since 1992. The CBSS supports joint activities in a variety of policy areas, and it is currently involved in the EU Strategy for the Baltic Sea Region in the fields of security, climate change and neighbour relations.

Lately, the EU strategy for the Baltic Sea region (EUSBSR) was suggested to reinforce the regional cooperation of institutions in the Baltics countries (EP, 2006). This goal seems to be achieved according to a recent EC report, which states that the EU Strategy for the Baltic Sea Region has been a development

[1] See also Table 2, Annex.

which ‘reinforces’ and even ‘deepens’ the cooperation between existing regional frameworks (e.g. HELCOM and ND) as well as supports ‘the establishment of new networks and joint initiatives’ (EC, 2016b: 11). It has also provided ‘a new stimulus to put back on the political agenda some topics of regional importance’ (EC, 2016b: 13-14). Although the launch of EUSBSR may seem a development based on territorial drivers, it is equally dependent on functional needs. Based on empirical evidence, the EUSBSR is seen ‘to help the systematic cooperation of existing institutions’ and ‘to create a hub of knowledge’ deriving from existing expertise (Interview 4). This expertise certainly comes from ‘a number of ‘Pan-Baltic organizations’ which contribute to EUSBSR (Interview 9). In addition, respondents suggest that while pre-existing institutions (especially under HELCOM) offered significant work of political organization, the EUSBSR has contributed to policy coordination among participating countries and pre-existing cooperation arrangements (Interview 4). As an example, the Annual Fora organized by EUSBSR provide arenas for interaction between ‘pre-existing organizations [to] share their views’ (Interview 9).

DANUBE REGION

The Danube region is characterized by a unique geographical element (the Danube river) as well as fundamental transitions in political conditions of its constituent states. Illustrating its functional drivers, regional cooperation across the Danube river has been significant in the area of navigation since 1948. For almost seventy years, the Danube Commission has been a key actor to ensure a free navigation system in the Danube. Following the same functional logic, the International Commission for the Protection of the Danube River (ICPDR) and the International Sava River Basin Commission (ISRBC) operate, since 1998 and 2005 respectively, in order to support the navigation and sustainable water management in the Danube and Sava river basins. More recently, however, regional cooperation has also been developing to support stability and integration of Danube countries, especially the Eastern European countries in transition. Serving a more territorial scope, the Central Europe Initiative (CEI), the Danube Countries Working Group (ARGE Donauländer) and the Regional Cooperation Council (RCC) have been supporting the Danube states in their trajectory to increase capacity building and facilitate regional cooperation in the matters of economy, society, energy, transportation and tourism among others.

Since 2010, the emergence of the EU strategy for the Danube region (EUSDR) has brought a new momentum of regional cooperation among institutions and countries in the Danube region. Due to the EUSDR, for example, the ‘culture of cooperation’ in the Danube region has been improved (EC, 2016b: 26). This improvement predominantly comes from functional drivers. As mentioned by interviewees, ‘there was no systematic cooperation in some policy areas before, but they exist now (e.g. education, entrepreneurship)’ (Interview 2). Similarly, ‘new organizations get organized’ such as networks of researchers (Interview 5). Together with improved cooperation, a growing ‘political relevance’ of the region is recognized (EC, 2016b: 27), however, the main challenge of EUSDR is considered to be ‘how to avoid duplication (e.g. ICDRP)’ without having parallel structures working on the same issues (Interview 2).

ADRIATIC-IONIAN REGION

The Adriatic-Ionian region displays its own specificities due to its very diverse and delicate geopolitical space, as overwhelmingly illustrated by the collapse of the Soviet Union, the transition to an open economy, the partition of Yugoslavia and the Kosovo conflicts. In their effort to leave behind old conflicts and cease new opportunities, the Adriatic-Ionian countries tried to establish transnational cooperation starting from the political domain. As a result, a major accomplishment in this region was the creation of the Adriatic and Ionian Initiative (AII). This is an intergovernmental body created in 1999 in order to bolster regional cooperation and promote political and economic stability in the area. Hence, the AII mainly reflects a form of territorial cooperation aiming to address functional issues. Later, the AII constituted the forerunner of the Adriatic-Ionian macro-region. Following the AII, additional cooperation spinoffs were established since 1990 in order to address a more functional imperatives (e.g. among economic chambers, universities and local municipalities). From a similar perspective, cooperation among the Adriatic and Ionian regions was also supported by the CPMR Inter-Mediterranean Commission since 1990 and the Adriatic-Ionian Euro-region since 2005.

Since 2014, the EU strategy for the Adriatic-Ionian Region (EUSAIR) was initiated and has benefitted from the experiences of the Adriatic-Ionian Initiative, its spin-off organizations and cooperation structures

operating in the Mediterranean space (EC, 2016b: 38-40). Along the same lines, interviews suggest that 'all these networks are very useful for the future development of the Strategy… because all these networks showed that something is needed' as well as 'all pre-existing structures made some kind of seeds…' (Interview 7). However, we should be aware that other interview responses pointing to the Adriatic Ionian case suggest that cooperation of pre-existing institutions under EUSAIR entails 'nothing really revolutionary' and 'no really new ways of operating' (Interview 8).

ALPINE REGION

The Alpine area can be considered as a different case in contrast to other macro-regions in geopolitical and geographical terms. It has been a relatively stable and prosperous area throughout the last few centuries, while countries shaping the Alpine region retain a long tradition in transnational cooperation with a common view over the good condition of the mountain environment and its ecosystems. From a more territorial perspective, the Alpine Convention has been a major development in the region by targeting to the preservation and protection of the Alps since 1995. Alpine Convention is an international treaty covering all major areas of interests of Alpine states. Compared to the Alpine Convention, the International Commission for the Protection of the Alps (CIPRA) has been a wide network of institutions, which have been focusing on the protection and sustainable development of the Alps from a more functional perspective. Already since 1952, CIPRA advocates the added value of regional cooperation among the Alpine regions and surrounding areas in the fields of biodiversity and landscape, climate and energy, transport and mobility as well as youth-related issues.

Only very recently, the EU strategy for the Alpine Region (EUSALP) has emerged as an additional layer of coordination among institutions in the Alpine space. Since its launch, the EUSALP is expected to 'ensure their participation, where relevant, in order to build on existing expertise and to organize possible synergies among themselves' (EC, 2016b: 50). However, the EUSALP seems to be actually situated within an already institutionally overloaded arena comprising of the Alpine Convention and numerous sub-national regions (Interview 5). Against this background, the Alpine Convention is currently involved in EUSALP by dealing with the "Preservation and valorisation of natural resources" and supporting other policy areas as well, while CIPRA's involvement in EUSALP is still a process in progress (Interview 5).

4.2 SUBSTANTIVE CONTENT OF MACRO-REGIONAL STRATEGIES[1]

BALTIC SEA REGION

The substantive scope of EUSBSR has been described to reinforce existing cooperation in the Baltic Sea region. Following this, the Baltic Sea region was viewed by its constituents as an ideal case to test new approaches of regional cooperation and regional governance which can be further copied by other macro-regions. However, such a view was stimulated by two main drivers. The first and foremost driver of EUSBSR was the deteriorating condition of the Baltic Sea and its water environment. The improvement of such a water environment was recognized as a challenge shared by all countries of the Baltic macro-region, illustrating their significant interdependence with it. Hence, the so-called 'Cleaning the Sea' goal, was considered a sensitive and actual issue to be addressed by the EUSBSR, and it has been reconfirmed as 'a core field' in the Strategy as well (EC, 2016b: 16; Interview 5; Interview 9). Secondarily, there are also geopolitical drivers justifying the emergence of EUSBSR (Interview 5). Although the Baltic Sea macro-region was largely initiated as a merely European project, it was soon widened by the participation of Russia and other countries of the Nordic arc. This momentum has brought high expectations regarding the usefulness of EUSBSR, however evidence remains divided. On the one hand, it is argued that the visibility and understanding of the role, purpose and added value of the EUSBSR 'is still not sufficient' (EC, 2016b: 17). On the other hand, it is supported that actors saw the added value of EUSBSR due to the fact that cooperation in the Baltics was already more coordinated than other cooperation frameworks (Interview 3), as well as institutions identified new opportunities 'to get role again' (Interview 5).

[1] Four macro-regional strategies have been launched so far: the EU Strategy for the Baltic Sea Region (EUSBSR), the EU Strategy for the Danube Region (EUSDR), the EU Strategy for the Adriatic-Ionian Region (EUSAIR) and the EU Strategy for the Alpine Region (EUSALP).

DANUBE REGION

Similar to the EUSBSR, the overall scope of EUSDR was conceived as a new project of regional cooperation. The main trigger which justified or even hastened the initiation of EUSDR was the issue of floods and their implications to navigation of ships within Danube in 2007. To illustrate this issue, interviewees note that 'there was an actual problem (that of floods) and flood management required a transnational perspective' (Interview 2). Yet, the EUSDR's objective lies on a vision of building prosperity realized by a context-specific sub-goals such as supporting connectivity, attractiveness, environmental conditions, and ecosystems. In that sense, the Danube macro-region seems to be equally motivated by new opportunities to be taken by countries across Danube. These two elements suggest that functional interdependencies are clear drivers for EUSDR. Yet, the EUSDR instead of depending purely on functionalities, it also adds the territorial element of integration of the Western Balkans. In doing so, political motives were crucial triggers. To illustrate this, empirical interviews suggest that 'the Danube macro-region helps the cooperation of operational level actors without the need of legal complications' (Interview 2), element which provides a certain degree of flexibility in joint action and project development among countries. Although political motives may be drivers in favour of EUSDR, an emerging risk is the fading political discourses illustrated by 'the EUSDR seems to be given a lower priority in the political narrative at national level' (EC, 2016b: 30). Additional substantive challenges in the development of EUSDR relate to how 'to define the actual joint action or what is really the focus' and how to achieve 'more concrete outputs' (Interview 2).

ADRIATIC-IONIAN REGION

The overarching scope of EUSAIR is to primarily address the prosperity challenge and, secondarily, the integration challenge. Regarding the first challenge, the EUSAIR's ultimate goal is to promote economic and social prosperity by supporting attractiveness, connectivity, competitiveness and the marine environment in the region. Certainly, this goal suggests a sort of vision based on the economic and social interdependencies between the Adriatic-Ionian macro-regions. It is partly inspired by the logic and objectives of the preceding EU sea-level strategy in the Adriatic-Ionian region. Hence, the main motives for cooperation under EUSAIR have been instigated by sectoral challenges. Regarding the second challenge, the accession and integration processes of Western Balkans are significant to EUSAIR. The crucial issue in such processes is the Adriatic-Ionian countries to 're-start talking', illustrating the territorial dimension of the EUSAIR content. Interestingly, in such processes the 'EC seems to have played a more active role' as well (Interview 3). This last point is partly related to a key issue in the content of EUSAIR, which is an important gap between the political commitment expressed by the high/ministerial level and the sequential support of their subjected administrations. Although EUSAIR is 'still in its initial phase' (EC, 2016b: 36), the above-mentioned issue is often attributed to the 'lack of adequate human, financial, administrative and technical resources' as well as 'the lack of leadership, commitment and ownership' among the participating administrations (EC, 2016b: 41). All these causes, nevertheless, reflect both an organizational/functional and a territorial/political nature of problems emerging in the EUSAIR.

ALPINE REGION

In the EUSALP, attention is mainly stressed to ensuring an effective horizontal (across sectors) and vertical (between territorial levels) governance of the macro-regional project. The Alpine macro-region seems to be predominantly motivated by seizing further opportunities, similarly to the Danube case. These opportunities pinpoint to functional interdependencies such as environmental, social and economic concerns in the Alpine mountains. As a result, the main objective of EUSALP depicts a vision of building prosperity by supporting attractiveness, competitiveness, connectivity and environmental conditions. However, the main difference compared to other macro-regions is the enhanced role of sub-national regions instead of national states (Interview 3). As in the EUSAIR case, the EUSALP is considered to be 'still in an initial stage' (EC, 2016b: 46), and the crucial issue to EUSALP success is the 'gap between the Strategy and funding opportunities' (EC, 2016b: 49). As such, this gap seems to be explained by '[the] structures, frameworks and timeframes [of existing programmes, which are] often not compatible with the needs of a macro-regional strategy' (ibid).

CROSS-CUTTING ISSUES

Empirical research highlights a number of issues cutting across the content of all existing macro-regional strategies. The first issue refers how macro-regional strategies themselves are perceived. For example, macro-regional strategies are perceived as 'a platform of cooperation at the transnational level in order to avoid duplications' (Interview 3). In a similar logic, they are seen as 'frameworks of cooperation [offering] opportunities for strategic cooperation' to those involved (Interview 5). The second issue relates to the involvement of actors. Actors get motivated to develop macro-regional strategies 'because they are confronted with things that they cannot deal individually' (Interview 4). The last issue refers to a lack of clarity persisting across macro-regions. Illustrative quotes demonstrate a lack of clarity regarding 'what is really the focus' (Interview 2), 'what they wish to achieve or no common vision' (Interview 4; Interview 3), 'their process, scope and who is involved' (Interview 9). All three issues, however, indicate a consideration of macro-regional strategies according to their functional aspects rather than any territorial concern.

4.3 GOVERNANCE STRUCTURES[1]

POLITICAL LEVEL

The highest level of macro-regional governance (political level) performs quite similar patterns across all existing macro-regions. More specifically, three main bodies inform the design and revision of macro-regional strategies, namely the European Commission, the European Council, and the High-level Group for macro-regions. Initially, the EC holds the strategic coordination and facilitation of macro-regional strategies through its various Directorate-Generals (DGs). Its role lies to highlight the functional character of macro-regional strategies by ensuring the efficient coordination of actors at the macro-regional level. Furthermore, the European Council is responsible to ensure domestic political commitment, facilitate the efficient allocation of tasks and participation of relevant institutions, and raise visibility of macro-regional actions. Accordingly, major political decisions such as the revision of Action Plans are made at this high-political level. Additionally, the high-level group plays an advisory role to EC and Council as well as facilitates the exchange of knowledge and experiences between macro-regions.

Up to date, the role of EC, and DG-Regio in particular, has been significant to the get the macro-regional strategies started as well as make them work. Empirical evidence supports the argument that EC held the role of strategic coordinator and main facilitator in existing macro-regions, especially during their initial stages. In the Adriatic-Ionian case, for example, extra efforts have been devised in order to set the governance mechanisms and help them produce their initial results. Furthermore, the European Council has played a role in initiating macro-regional strategies, endorsing European Commission's workings, raising key horizontal issues of macro-regions (such as governance) and ensuring political commitment in favour of the development of macro-regional strategies. A slight difference to this pattern of high-level processes is the Alpine case, which is the only macro-region with a General Assembly. In this case, the EUSALP Assembly is a political body composed by EC, national and regional representatives, and the Alpine Convention (as observer). Although it may suggest a territorial dimension in EUSALP governance, its main task is to set the general political guidelines for EUSALP.

COORDINATION LEVEL

At the coordination level, a mechanism of National Coordinators is assigned across all macro-regions with coordination and visibility tasks. The main tasks of National Coordinators are, for example, to represent their respective countries in official meetings, find the most relevant delegators of their national administrations to develop and implement macro-regional strategies, coordinate the workings of their

[1] The analysis under this aspect is formulated slightly differently than the previous aspects. This is because the basic framework determining the governance of macro-regions has been sketched by the EC in a recent report (EC, 2014b). This governance report can be considered a milestone because it establishes three distinct levels of operation, namely the political, coordination and implementation. Having this in mind, the governance structures of macro-regions are analyzed in this sub-section based on these three analytical levels (see also Tables 1 and 2, Annex) supplemented by some complementary remarks on specific macro-regions.

subjected mechanisms (e.g. policy area coordinators), and finally make the results visible to those involved and the public. In most macro-regional strategies, such a coordination structure was established after the actual launch of macro-regional strategies, except the Alpine case. In this particular case, the so-called Steering Committee was responsible to prepare the macro-regional strategy following the resolution and the mandate declared by the participating countries in 2012 and 2013 respectively (EUSALP, 2013; EUSALP, 2014). This distinctive approach shows a more territorial approach in the EUSALP, at least at its early stage.

In order to support National Coordinators in their tasks, additional coordination structures have created at the national level (e.g. EUSBSR, EUSDR, EUSALP) as well as new working structures have been emerged at the implementation level. (EC, 2016b: 10, 27-28, 47). An example of such structures is a pilot European Regional Development Fund (ERDF) managing authorities' network established in the EUSBSR in 2016. Nevertheless, the Danube and Adriatic-Ionian macro-regional strategies have requested the establishment of a mediatory body to support the coordination and implementation of their macro-regional strategies, namely the Danube Strategy Point (DSP) and the EUSAIR Facility Point. Lately, a similar discussion is under way in the EUSALP (EC, 2016b:48). Regarding the former body, the DSP was created to harmonize the coordination of national and policy area coordinators in several functions. These functions relate to support the implementation, communication and monitoring between EUSDR policy areas and National Coordinators as well as enhance linkages between EUSDR and Interreg programmes (Interview 2; Interview 5). With regard to the second body, it is envisaged as a support system to help governance and coordination between EUSAIR National Coordinators, EUSAIR implementation bodies and EC services (Interview 1). Interestingly enough, the DSP was realized within a very short period of time (approximately one year since its conception), whereas EUSAIR Facility Point is still in progress (almost two years after its conception). In spite of that, both the DSP and the EUAIR Facility Point indicate a need to improve the functional dimension of macro-regional governance.

IMPLEMENTATION LEVEL

Lastly, the implementation level seems to be the most crucial part of macro-regional strategies, since the success at this level determines the continuity of the entire Strategies (Cretu speech, 2016). To support implementation, various implementation mechanisms have been established across macro-regions. These mechanisms reflect a functional type of governance (Blatter, 2004) because they are created in order to address policy-specific or action-specific issues (e.g. Steering Groups or Action Groups). Similarly, horizontal or cross-cutting issues are managed by similar type or organizations.

However, although creating and experimenting in new structures is evident, a number of organization dysfunctionalities still persist both at the coordination and the implementation level. A first issue is the lack of availability of funding sources. Statements such as 'not all countries have allocated sufficient resources' are illustrative to what is happening in the EUSBSR and EUSAIR cases (EC, 2016b: 16; Interview 1). A second issue is the differential support between the political representatives and the implementers of the macro-regional strategies. This issue can be observed in different occasions such as, in the EUSBSR, 'no clear mandates to representatives' or, in the EUSDR, 'a gap between the formal political support and the substantial support by national administrations' is recognized (EC, 2016b: 16, 31). Similar occasions hold in the EUSAIR case as well (Interview 1). A third issue is described by the lack of compatibility between the implementation structures of macro-regional strategies and the implementation structures of Interreg programmes (Interview 3, 4, 8). To illustrate this through the EUSDR, there is a 'gap between the Strategy and the programmes, which too often divides managing authorities and officials in charge for the EUSDR' (EC, 2016b: 32). Against this issue, actors have already warned that 'as long as existing institutions (EU, national, local) do not recognize the work done by macro-regional structures, macro-regional strategies will be struggling' (Interview 4). Finally, additional challenges arise with regard to the actors involved and the tasks allocated to them. For example, the allocation of tasks has been an issue for clarification both for coordination structures as well as those implementing actual projects. To resolve this issue in EUSBSR, the second revision of the EUSBSR Action Plan included a whole chapter to clarify tasks and responsibilities among actors.

5 CONCLUSIONS AND REFLECTIONS

This chapter aimed at providing an assembled analytical perspective of EU macro-regions. The main argument across this study is that EU macro-regions can be seen as hybrid models of organization which balance between territorial and functional interdependencies. Building on the distinction between territorial and functional spaces and informed by existing theoretical considerations, I attempted to illustrate the hybrid nature of EU macro-regions by looking into three analytical aspects (pre-existing institutions, substantive content of macro-regional strategies and governance structures).

Concerning the first aspect, the overall conclusion on pre-existing institutions suggests that the Baltic and Alpine macro-regions build on (rich) existing cooperation, where both territorial and functional dimensions are already established. In contrast, the Danube macro-region does not have long tradition of cooperation, except the domain of navigation, while the Adriatic-Ionian case enjoys limited pre-existing support coming only from political cooperation. More specifically, the EUSBSR is seen to reinforce and systematize the cooperation between pre-existing institutions in the Baltic region. In particular, its contribution is identified into improving policy coordination. In the Danube macro-region, the EUSDR has provided a new momentum for dialogue and regional cooperation. Although the main area of cooperation in the Danube was historically the functional area of navigation, the EUSDR provides new opportunities for political and economic cooperation among countries expanding from the core of the Danube river up to the Western Balkans. In the Adriatic-Ionian macro-region, cooperation of pre-existing institutions was provoked by the territorial need to make Adriatic and Ionian countries 'talk' again after a long period of disputes and conflicts. This issue still remains crucial, moreover the EUSAIR seems to build on experiences gained by the AII in order to create new cooperation arrangements driven by functional independencies (e.g. blue economy, environment and tourism). Lastly, in the Alpine macro-region, there is a significant heritage of cooperation. Pre-existing organizations such as the Alpine Convention and CIPRA together with national and regional administrations in the Alps do provide territorial and functional focuses to EUSALP, which therefore needs to ensure the balance between all them.

Considering the substantive content of macro-regional strategies, they all commence with a functional scope, which is to improve coordination and efficiency in a number of policy areas. However, territorial imperatives are also apparent in macro-regional strategies, especially the Danube and Adriatic-Ionian cases. This can be seen either by focusing on the integration process of non-EU countries in macro-regional projects or by looking at the involvement of multiple actors from different territorial levels in various macro-regional processes. In more detail, the EUSBSR was initiated as a 'European' project in order to 'Clean' the Baltic sea, but it soon broadened its pertinence to additional functional areas by incorporating non-EU countries. In the Danube macro-region, the main functional trigger was the issue of floods in the Danube river. Starting from this issue, EUSDR soon reflected a broader political vision towards building prosperity in the Danube region and opening its relations to the Western Balkans. Similar to the Danube case, the Adriatic-Ionian macro-region aims to promote economic and social prosperity as well as the accession and integration of Western Balkans. However, it was created from a different starting point. This starting point was pre-existing territorial relations under the AII, which are gradually developed in new functional forms of cooperation and networking. Obstacles to this trend seem to be the actual resources available as well as the political commitment of those involved. Turning to the Alpine case, the EUSALP is driven by a vision of prosperity which can be realized by a well-working functional coordination and governance. However, the realization of such a vision is threatened by incompatibility between EUSALP's goals and the available funding.

Concluding on the last aspect, the governance structures of macro-regional strategies are principally driven by functional interdependencies, while territorial interests are still evident. In particular, governance structures balance between high-level processes that ensure strategic supervision to the EU and national actors as well as operational processes by which governance mechanisms respond to policy-specific challenges. Certainly, the main logic in the architecture of governance structures may seem identical across macro-regions, since the main motivation behind it is to improve effectiveness at the high-political, national (coordination) and policy-specific (Implementation) levels. As a result, new governance mechanisms as well as working structures are created across all macro-regional strategies in order to solve organizational issues caused by different governance systems within participating countries. However differences in governance structures still exist depending on those involved and the resources available to them. Reasons explaining these differences are the limited level of commitment and leadership of actors, the limited allocation of human and financial resources and the gap between macro-

regions as strategy tools and the implementation of cooperation programmes under already established streams of funding. A side but still relevant issue explaining differences in governance structures is multi-level governance (MLG). According to empirical evidence, MLG works differently in each macro-region (Interview 4; 8). Moreover, MLG is linked to differences in governance structures either by pointing to different actors and how they affect governance processes or by challenging the bottom-up principle and how lower levels of government and policy implementation hinder governance processes in the higher levels (Interview 2; 3).

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ANNEX

Table 1: Main features of EU macro-regions

Strategy	EU countries involved	Non-EU countries	Main strategy features	Main actors/ roles	Stakeholders participation	Main governance features
EU Strategy for the Baltic Sea Region (EUSBSR)	Germany Poland Lithuania Latvia Estonia Finland Sweden Denmark	Norway Russia Iceland Belarus	Objectives and sub-objectives (3) Policy Areas (13) Horizontal Actions (4) Flagship projects	European Commission European Council High-level Group National Coordinators Policy Area Coordinators Policy Area Focal Point Horizontal Action Coordinator Horizontal Action Focal Point Flagship Leader	Annual Working Meeting Annual Forum of the EUSBSR	National Coordinators Group Policy Area Steering Committee/ Coordination Group Horizontal Action Steering Group
EU Strategy for the Danube Region (EUSDR)	Austria Bulgaria Croatia Czech Republic Germany Hungary Romania Slovakia Slovenia	Bosnia and Herzegovina Montenegro Serbia Moldova Ukraine	Pillars (4) Priority Areas (12) Indicative actions, examples of projects	European Commission European Council High-level Group National Coordinators Policy Area coordinators	EUSDR Annual Forum	Meetings of National Coordinators Danube Strategy Point Priority Area Steering Groups
EU Strategy for the Adriatic-Ionian Region (EUSAIR)	Croatia Greece Italy Slovenia	Albania Bosnia and Herzegovina Montenegro Serbia	Pillars (4) Topics per pillar (10) Cross-cutting issues and horizontal principles (5) Indicative actions, examples of projects	European Commission European Council High-level Group National Coordinators Pillar Coordinators	EUSAIR Forum EUSAIR Stakeholder Platform	Governing Board EUSAIR Facility Point Thematic Steering Groups
EU Strategy for the Alpine Region (EUSALP)	Austria France Germany Italy Slovenia	Liechtenstein Switzerland	Pillars (3) Pillar Priorities (9) Indicative actions, examples of projects	European Commission European Council High-level Group National Coordinators National Contact Points Action Coordinators Alpine Convention	Annual Forum of the EUSALP EUSALP Stakeholder Platform	General Assembly Executive Board (former Steering Committee) Actions Groups

Table 2: Overview of elements in the four macro-regions

	EUSBSR	EUSDR	EUSAIR	EUSALP
Key structures and pre-existing institutions				
(Predominantly) territorial scope	• Northern Dimension (ND)- 1999 • Council of the Baltic Sea States (CBSS)- 1992	• Danube Countries Working Group (ARGE Donauländer)- 1990 • Central Europe Initiative (CEI)- 1989 • Regional Cooperation Council (RCC)- 2008	• Adriatic-Ionian Initiative (AII)- 1999	• Alpine Convention- 1995
(Predominantly) functional scope	• Helsinki Commission (HELCOM)- 1992 • Vision and Strategies around the Baltic Sea (VASAB)- 1992	• Danube Commission- 1948 • International Commission for the Protection of the Danube River (ICPDR)-1998		• International Commission for the Protection of the Alps CIPRA (CIPRA)- 1952
Substantive content of macro-regional strategies				
Overall scope	• to reinforce the regional cooperation of countries in the Baltics	• a new project of regional cooperation	• a tool for building prosperity in the region • integration process of the Western Balkans	• an EU laboratory for effective cross-sectorial and multi-level governance
Motives	• environmental pressures • disparate development paths • routes for trade and communication • risks because of maritime traffic	• The world's most international river basin • The Danube can open the EU to its near neighbours	• functional area defined by the Adriatic and Ionian Seas • prospect of EU accession for other countries in the Region • port hinterlands • impacts of land-based activities	one of the richest areas in the world and among the economically most dynamic, innovative and competitive areas in Europe with unique geographical and natural features
Challenges	• To enable a sustainable environment • To enhance the region's prosperity • To increase accessibility and attractiveness • To ensure safety and security in the region	• Mobility • Energy • Environment • Risks • Socio-economic • Security, serious and organized crime	• Socio-economic disparities • Transport • Energy • Environment • Natural and man-made hazards and risks entailed by climate change • Administrative and institutional issues	• economic globalisation • demographic trends • high vulnerability to climate change and its foreseeable effects on the environment • energy challenge • geographical position in Europe, as a transit region • high degree of seasonality
Overall objective	The area could be a model of regional co-operation where new ideas and approaches can be tested and developed over time as best practice examples	By 2020, all citizens of the Region should enjoy better prospects of higher education, employment and prosperity in their own home area. The Strategy should make this a truly	to promote sustainable economic and social prosperity in the Region through growth and jobs creation, and by improving its attractiveness, competitiveness and connectivity, while	to promote sustainable economic and social prosperity of the Alpine Region through growth and job creation, by improving its attractiveness, competitiveness and connectivity, while at the
		21st century region, secure and confident, and one of the most attractive in Europe	preserving the environment and ensuring healthy and balanced marine and coastal ecosystems	same time preserving the environment and ensuring healthy and balanced ecosystems
Main goals/pillars	• Save the Sea • Connect the Region • Increase Prosperity	• Connecting the Danube Region • Protecting the Environment in the Danube Region • Building Prosperity in the Danube Region • Strengthening the Danube Region	• Blue Growth • Connecting the Region (transport and energy networks) • Environmental quality • Sustainable tourism	• Economic growth and innovation • Mobility and connectivity • Environment and energy
Governance structures				
Political level	• European Commission • European Council/ Council of Ministers • High-level Group	• European Commission • European Council/ Council of Ministers • High-level Group	• European Commission • European Council/ Council of Ministers • High-level Group	• European Commission • European Council/ Council of Ministers • High-level Group • General Assembly
Coordination level	National Coordinators Group	• Meetings of National Coordinators • Danube Strategy Point	• Governing Board • Facility Point	• Executive Board (former Steering Committee) • National Coordinators
Implementation level	• Policy Area Steering • Committee/ Coordination Group • Horizontal Action Steering Group	• Danube Strategy Point • Priority Area Steering Groups	• Facility Point • Thematic Steering Groups	Actions Groups

Sources: EC, 2009; EC, 2010; EC, 2013; EC, 2014a; EC, 2015a; EC, 2015b

ID 1488 | THE ROLE OF ARTS FESTIVALS IN THE EUROMETROPOLIS LILLE-KORTRIJK-TOURNAI: BRIDGING GAPS IN THE FRENCH-BELGIAN CROSS-BORDER METROPOLIS

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1 INTRODUCTION

The 21th century is when the globalisation of capital has found, as of now, its pinnacle. According to Sassen (2007), this phenomenon has been responsible for the destabilisation of past scale hierarchies, previously almost totally centred at the national level, depicted by the nation state figure. The proliferation of multinational capitalist organisations with their structures based on a network of branches spread across the globe with its strategic functions concentrated in a unique place (or in just a few of them) contribute to

the complexity of the world's multiscale configuration. This dynamic that involves the global capital puts under scrutiny the autonomy and centrality of the national sphere. Hence, other forms of spatial scales may rise to a more prominent role, such as the subnational (i.e. cities; regions), cross-border regions that include two or more subnational units, and supranational entities, like global electronic markets and free trade zones (Sassen, 2007).

That is the case of Eurometropolis Lille-Kortrijk-Tournai – ELKT (founded in 2008), which spans across the French-Belgian border and have been introduced in the global capital market through regional level politics, in a logic that is concomitantly transnational and subnational. To overturn the economic fortunes of a deprived region, this Eurometropolis seeks to benefit from an extremely strategic position in Europe's geography to put itself in the spotlight for the big international private capital and investments. Thus, ELKT's transnational governing committee has decided to make use of territorial marketing tools to promote the cross-border metropolis, investing in big cultural events and the subsequent reinvention of the region's image: from an underprivileged and charmless former industrial site into a new cultural bustling hub, open to creative and fresh talents. The idea behind such course of action is that the region must portray an attractive image for the foreign investors amid a 'locational war', boosted by the new hierarchy of scales, against other subnational and transnational entities.

Nevertheless, the strategies for this territorial marketing vary according to the position the city occupies in the global context. Cities with local or regional influence, like Lille – and by extension – the ELKT, need a more aggressive marketing approach so the range of its economic activities can be expanded. Braun (2008) states that it is a tendency that cities with industrial backgrounds start to delve deeper into territorial marketing tools in their quest for changing their image, both inwards (to the eyes of its own population) and outwards (for the investors).

Since 2004 Lille has been exploring this sort of experience. It has intensified after the formation of the ELKT in 2008, with an annual transnational arts festival called NEXT taking place in both sides of the border. The main goal of this initiative is to rework the image of the entire region that compounds the Eurometropolis and build a feeling of pride and attachment in their 2,1 million inhabitants over the fact that the 'industrial stigma' is now long gone and that they are embracing a thriving future based on arts and other dynamic related activities (e.g. creative industries and tourism). Thus, the main goal of this paper is to debate the role of big cultural and artistic events – and its inherent dimensions of identity and image – as a trigger for a transnational economic project such as the ELKT.

2 LITERATURE REVIEW

2.1 GLOBALISATION AND THE RISE OF CITIES AND REGIONS

The 21st century, as stated above, is when the globalisation of capital has reached its peak so far. Such a phenomenon has led to a new configuration of spatial scales, putting the classic centrality and primacy of the national level in a new perspective (Sassen, 2007). Multinational enterprises have proliferated around the globe, and their organizational structures lend a concrete contribution to the complexity of this multiscale world.

The global capital markets are, in fact, partially embedded in subnational places and move around intricate combinations of spatial scales. For example, the global capital markets are composed by electronic markets with global outreach and – at the same time – by locally rooted conditions, like financial centres and everything else they entail, from infrastructure to systems of trust (Sassen, 2007).

This dynamic of the global capital puts under scrutiny the autonomy and centrality of the national sphere (Sassen, 2007). As the 'national' is highly institutionalized and dense, the global structuration inside the national encompass a partial and generally very specialised and specific denationalisation of certain national components. Therefore, the new networks that connect cities through a variety of new activities and institutions are an example of a global scaling process constituted by the means of subnational places and the growing intensity of their cross-border transactions. Following the operationality and the logistics of the capital reproduction in this new configuration, subnational regions or cities are put in direct contact, ones with the others. That would allow the surging of other unities or spatial scales, notably the

subnational (i.e. cities and regions), the cross-border regions (which encompass two or more subnational entities) and the supranational cities (free-trade zones and electronic global markets).

Sassen (2007) also observes that these aforementioned phenomena have led to denationalised Estate agendas that are growingly managed in confluence with norms set by the big global private capital. Even though the geographical limits of the nation state territory remain largely unchanged, this movement changes the meaning of the exclusive authority of the Estate over its own territory, transforming its role in the face of the current scenario.

In a moment when virtually every Estate in the world adopts a governance that aligns to the neoliberal practices of economic competitivity, it has become usual – specially from the 1990s onwards – the institutionalisation of 'rights' of the non-national enterprises. The deregulation of cross-border transactions and the influence or crescent power of some supranational institutions (big multinational enterprises, e.g.) have been reshaping the classic role of the Estate: confronted with the current global economic scenario, a self-diffidence in the regulation of its own economy can be observed, leaving gaps in its structure that will be eventually fulfilled – directly or indirectly – by the big multinational enterprises.

According to Sassen (2007), the analysis of this new 'geography of power' that the nation state face allows to identify and conceptualise a specific set of operations that take place in the interior of national institutions but that are now turned to subnational and transnational agendas. It is in this sense that territorial organisations with local, cross-border or supranational scale earns an increasing significance in the current global economic scenario.

2.2 GLOBAL CITIES NETWORK

Amidst the context exposed above (2.1), namely the rise of the strategic significance of local and regional spheres amongst globalisation and the subsequent dispute for market, GaWC (Globalisation and World Cities Research Network) has started, in 2000 (GaWC, 2000) to classify cities around the world in accordance to its insertion in the global network. This classification is based upon four 'advanced producer services': (i) accountancy, (ii) advertising, (iii) banking/finance, and (iv) law (Beaverstock et al., 1999). The GaWC inventory identifies three different levels of global cities and 12 sub-levels. Following the rankings of 2016 (GaWC, 2016):

- Alpha++ cities: are cities most integrated with the global economy. Examples: London and New York (the only two in this category);
- Alpha+ cities: are advanced service niches for the global economy. Examples: Sydney, Tokyo, Paris, Shangai, Dubai;
- Alpha e Alpha- cities: are cities that link major economic regions into the world economy. Examples: Chicago, São Paulo, Moscow, Brussels, Mumbai (Alpha); Buenos Aires, Barcelona, Vienna, Seoul, Miami, Johannesburg (Alpha-);
- Beta (Beta+, Beta e Beta-) cities: are cities that link moderate economic regions into the world economy. Examples: Dallas, Lisbon, Berlin (Beta+); Rio de Janeiro, Oslo, Manchester (Beta); Lagos, San Diego, Bratislava (Beta-);
- Gamma (Gamma+, Gamma e Gamma-) cities: are cities that link smaller economic regions into the world economy. Examples: Guayaquil, Adelaide (Gamma+); Glasgow, Marseille (Gamma); Orlando, Sevilla, Porto (Gamma-);
- Sufficiency level cities (High Sufficiency and Sufficiency): are cities that have a sufficient degree of services so as not to be obviously dependent on world cities. Examples: Lille, Indianapolis, Belo Horizonte (High Sufficiency); Florence, San Antonio (USA), Jerusalem (Sufficiency).

The global cities network arises as a new terrain for politic-cultural debates as they create different geopolitics, parallel to that centred on the nation state, once they become '... a strategic site not only for global capital, but also for the transnationalization of labour and the formation of translocal communities and identities' (Sassen, 2005, p. 38).

An exam of the globalisation through the prism of the 'global city' concept introduces a strong emphasis on the strategic components of the global economy beyond the broad, diffuse, and somewhat homogenising

dynamics to which we are habituated to associate globalisation with: the one of the consumer market (Sassen, 2005).

2.3 CITY MARKETING

> *City marketing, as a field of academic research, originates itself mainly from two perspectives: the first one, related to the expansion of the traditional Marketing and its applications; the second one from the disciplines that have studied the city, the regions and the development (Urban and Regional Economy, Economic Geography, Urban Planning, Social Geography, between others).*

In the first perspective, cities are considered an object to which the marketing tools are employable. From the 1960s onwards, Marketing ceases to be conceived as something related strictly to business management activities: Kotler and Levy (1969) and Kotler (1972) were pioneers in expanding the concept of marketing. In the second perspective, marketing has been gaining significance for the cities because of the local and global processes related to globalisation described above (entailing, for example, locational competition). Cities and regions have been developing marketing politics as a result – or as an answer – to these processes, adapting themselves for different contexts and needs (respecting the particularities of each place).

Therefore, City marketing is the coordinated use of marketing tools supported by a shared customer-oriented philosophy, for creating, communicating, delivering, and exchanging urban offerings that have value for the city's customers and the city's community at large (Braun, 2008, p. 43).

The strategies for city marketing vary following the framing of the city in the global context. Global cities with high levels of insertion, centrality and influence (London or New York, for example) do not need aggressive city marketing strategies once their position in the world is already established, which guarantees a comfortable position in relation to the amount and quality of investments they receive from the global capital (Braun, 2008).

Nevertheless, cities that exert limited centrality and has the influence disseminated only up to the local or regional level necessitate a more aggressive marketing policy so they can expand the scope of their economic activities: "This strategy is more compatible with a business that aims to gain market share or fight its way into a new market" (Braun, 2008, p. 23). Hence,

> *… it enables a new approach to strategic planning in the public sector. City marketing enables a new level of quality within the local development policy in terms of comprehensiveness, creativity and flexibility. New resources in form of ideas, capital, and local knowledge are mobilised for local policy. In this way city marketing enables a strategic approach to public planning in collaboration with the private sector (Rainisto, 2003, p. 61).*

2.4 IDENTITY AND IMAGE

In the globalised world, local identities can be regarded as 'hybrid identities': local reviews of global and globalising cultural inputs (Hall, 1996). The role performed by these 'new identities' is another aspect of the globalisation effects on society, specially minority communities (ethnics, religious etc.) living in a western centre; they serve as needles and threads that sew them to this society. This feature of the new identities is what Laclau (1992) named 'common axe of equivalency': it is their 'lowest common denominator', the core of what unites them ultimately.

This kind of identification is essentially politic: it unites individuals – despite ethnic and cultural differences – through the social reality to which they are subjected as an outcome of a process of cultural hierarchisation. The intrinsic dichotomies between the different ethnic groups that composes this type of identity are not annulled, but are suspended – at least for a while – whilst social equality is still to be claimed. This appeal for social equality is what validates this kind of identification: it starts from several particularisms (ethnic questions, religious, genre) that by themselves or alienated from universal values

would not succeed in finding validation, but when connected to the universalism of social equality, they do succeed (Laclau, 1992).

Fontanille and Zilberberg (1998) point out that there are cultures that are perceived as a unity and others as a mixture. This implies that two different mechanisms rule them: the exclusion and the participation principle, creating two systems through which culture operates. The first one (i.e. exclusion) operates via a sorting/selection mechanism; once this process is over, comes to the surface the confrontation between exclusive and excluded, pure and impure cultures. The second one (participation) operates via a mixture/amalgamation mechanism, resulting in a comparison between what is alike and unlike. The alikeness assumes interchangeable magnitudes; the unlikeness involve magnitudes that opposes themselves as superior and inferior, an entailed hierarchy not always surpassed.

It must be reinforced that identity is one of the features operated by the city marketing: it works and reworks the image and the identity of a city. According to Noisette and Vallerugo (1996), these two concepts – identity and image – are not equivalents and come into tension in operations of territorial communication: the real identity morphs into a projected identity that is, on the other hand, what constitutes an image, a representation that is sought and has monetary value.

3 METHODOLOGY

This paper is based, in its opening moment, on the review of literature that is relevant to the discussions proposed here about globalisation and global cities, city marketing, identity and image. (Laclau, 1992; Hall, 1996; Rainisto, 2003; Braun, 2008; Sassen, 2005, 2007; GaWC, 2000, 2012, 2016, amongst others). In addition, the observations in loco regarding the subject of the research – namely the Eurometropolis Lille-Kortrijk-Tournai as an economic development project looked at through its cultural perspective – stems from several fieldworks conducted by the researcher, mainly based on participant observation. To add a new edge to the research and confront the fieldwork findings, documental sources were also consulted, such as reports and other studies related to the theme (Thiard, 2007; Durand, 2015), in conformity with the research validity and reliability criteria proposed by Yin (2014).

4 THE CASE IN QUESTION

4.1 THE LILLE-KORTRIJK-TOURNAI EUROMETROPOLIS

The social and economic structure of Hauts-de-France region was constructed, historically, over mining – the coal extraction, specifically – and industry, notably metallurgy and textile industry. Nevertheless, a complex succession of events in the 20th century brought several difficulties to a once thriving region: this includes the two World Wars, the oil crisis in 1973 and again in 1979 (coupled with the transition between energy sources: from coal to oil), the loss of productivity of the local mines and the intense internationalisation of capital (Siffert, 2016). This eventful century for the region found its nadir with the closure of the last coal mine in 1990 at the city of Oignies, decreeing the unavoidable death of the mining sector in Hauts-de-France.

Facing a rather difficult period, the region was compelled to reinvent itself economically. The plan for achieving that was structured over its strategic geographical position inside Europe (Figure 1), investing in the internationalisation of the region in close partnership with nearby Belgian cities, which became possible mainly because of the Schengen Agreement in 1985. Convinced that the creation of a transnational metropolis would be the trigger for the local development, political and economic stakeholders from both sides of the border decided for the creation of Eurometropolis Lille-Kortrijk-Tournai.

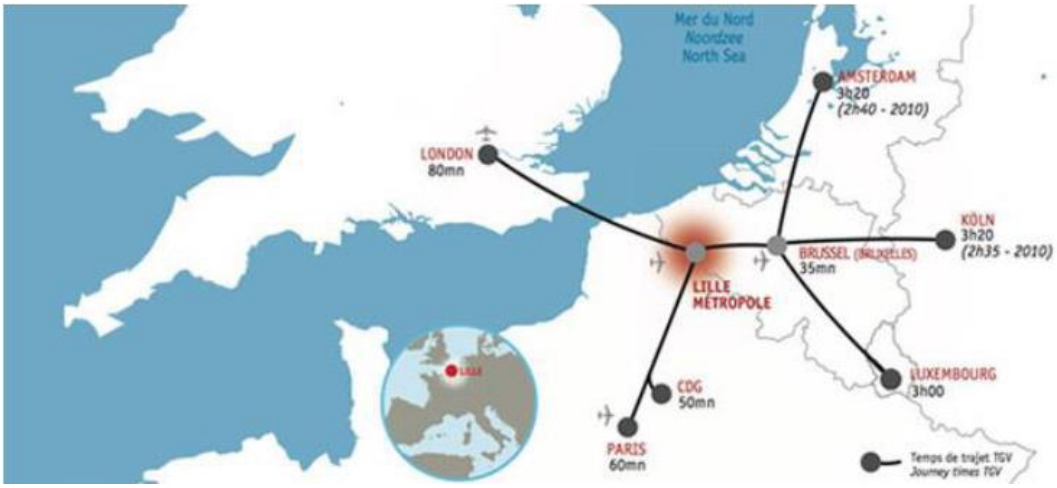

Figure 1: Location of Lille in relation to major European centres. Source: Eurométropole (n.d.)

Thus, the ELKT is a binational metropolitan area centred on the French city of Lille and on the Belgians Kortrijk and Tournai. It covers three subnational regions: Hauts-de-France (Lille and its own metropolitan area), Flanders (with Kortrijk as the main axis and where Dutch is the main spoken language) and Wallonia (centred on Tournai and where French is more widely spoken). Overall, ELKT is composed by 147 municipalities and in 2008 it had circa 2.1 million inhabitants (Figure 2). The main goal of the Eurometropolis is to enhance the cross-border collaboration, to bring together the local stakeholders and the institutions involved in the project, and to develop a common strategy to overcome the daily problems for inhabitants on both the French and the Belgian sides.

The seed of ELKT traces back to the year of 1991, date when the Permanent Intercommunal Cross-Border Conference (Conférence Permanente Intercommunale Transfrontalière – COPIT) was created. The COPIT meetings resulted in the creation, in 2002, of the French-Belgian cooperation agreement signed by the Prime Ministers from both countries which installed a transnational parliamentary group of work. They were entitled to do an inventory of the cross-border problems and to formulate some initial guidelines for the cooperation between the countries. Finally, as a result of this parliamentary cooperation, the ELKT is officially established in January 2008, with Pierre Mauroy – then Lille's mayor – as its first president.

Figure 2: Eurometropolis Lille-Kortrijk-Tournai and its main cities. The white line denotes the border between countries. Source: adapted from Ducuing (2008).

Durand (2015) points out in his study about the Eurometropolis Lille-Kortrijk-Tournai that the integration of a cross-border metropolitan could only be possible if multidimensional: (i) structural, (ii) functional, (iii) institutional and (iv) ideational. Amongst those dimensions, the one that interests the most in this paper is the fourth (i.e. ideational), once it is where culture, language and symbolism – as three of the main conforming features of an identity (Löfgren, 1991; Cuche, 2010) – are included.

Since 2001, Durand (2015) exposes, some efforts have been made seeking to create on the collective imaginary a sense of fellowship and attachment, specially through cartographic representations due to its symbolic force. We include in this same ideational category the big cultural festivals that grace the population with varied artistic performances. At the same time, those festivals can be a spark for the

conformation of an identity that proportionate a certain social cohesion for the inhabitants of ELKT (Siffert, 2016). For this reason, NEXT – International Arts Festival is going to be analysed in the next section (4.2) as a cultural event that contemplates Eurometropolis Lille-Kortrijk-Tournai.

4.2 NEXT – INTERNATIONAL ARTS FESTIVAL

Amidst the original themes proposed by the French-Belgian parliamentary working group involved in the ELKT creation and integration, no big scale cultural action had been previewed. However, artistic and cultural collaborations between organisations and stakeholders both sides of the border were something that had been happening beforehand, preceding the formal creation of the Eurometropolis. That contributed to encourage to some extent the inter-regional and international integration, even though it relied on scattered initiatives that lacked a more rigid systematisation.

Convinced that culture is an important tool to reinforce and promote the identity of Eurometropolis Lille-Kortrijk-Tournai, five cultural enterprises[1] decided – based on the experience of that previous cooperation – for organising an annual contemporary arts festival inside the cross-border domains of ELKT. This proved to be the cornerstone for the creation of NEXT, still in 2008. Such a cooperation was only made possible because of the legal assistance of Interreg IV[2], a device created by the European Parliament with the goal to help create political, institutional and economical basis for the integrations and development of cross-border territories:

> *NEXT was created due to financial support of INTERREG IV France-Wallonia-Flanders, the cross-border cooperative programme that seeks to reinforce the economic and social trades between the regions Nord-Pas de Calais[3]/Champagne-Ardenne/Picardie in France and Wallonia/Flanders in Belgium.*
>
> *INTERREG – "Interreg erases the borders" – is for 20 years an important asset to the promising and innovative projects beyond the borders.*
>
> *Four priorities are privileged by the programme: to favour the economic development of the zone; to develop and promote the identity of the cross-border territory; to reinforce the sense of attachment to a common territory; to stimulate the common management of the territory (NEXT, 2014, p. 47 –highlights not in the original).*

Henceforth, and articulated with the guidelines of Interreg, NEXT – International Arts Festival was officially created, being quickly incorporated by the ELKT governors to their bigger economic project. Its first edition premiered already in 2008, between the months of November and December (NEXT, 2008a).

Formed by the cooperation between two countries and three subnational regions, ELKT is a territory essentially pluricultural. Therefore, a project that would contemplate this kaleidoscopic culture should take precedence in certain common values: the bilingualism, the interculturality and the European citizenship, features that would contribute to the appreciation of the territory and the rapprochement of its citizens (Eurométropole, n.d.).

According to the promotion brochure of the first edition of NEXT (2008b), the Festival is presented as a totally unique initiative, being 'the first festival to laugh of the borders' (p. 3). In the brochure, the public is summoned to cross unlimitedly the borders, themselves nothing more than attributes merely 'inherited from history', and to surpass the barriers of language, considered 'invisible borders of the cultural differences' (NEXT, 2008b, p. 3) between the three regions:

[1] The five cultural enterprises are : La Rose des Vents – Scène nationale Lille Métropole e Espace Pier Paolo Masolini – Théâtre Internationale à Valenciennes (on the French side); Kunstencentrum BUDA – Kortrijk, Cultuurcentrum Kortrijk e Maison de la Culture de Tournai (on the Belgian side).
[2] One of the main goals of Interreg is not to just stimulate the international cooperation, but to also to diminish the influence of national borders, favouring an equal and complete economic, social and cultural development of the territories that compose the European Union (Hamez, 2004).
[3] Until 2016, the region now named Hauts-de-France was known as Nord-Pas de Calais/Picardie.

Strengthened by our long collaboration, inspired by the same demand and by the same will to touch the general public, we have the ambition to create an annual festival that will become an indispensable meeting of the Eurometropole's cultural life and an artistic event of international dimensions (NEXT, 2008b, p. 3).

And, beyond this cultural and artistic multidisciplinary ambition (embracing spectacles of varied natures), NEXT Festival was conceived, above all, as an important course for the promotion of cultural identity for the common territory, for its own inhabitants or to the outside of the cross-border zone (NEXT, 2011). After all, 'culture is one of the most efficient, the most visible and spectacular vector for building a sense of attachment to a common territory, to a common identity' (NEXT, 2011, p. 1). It is specially endorsed by the fact that NEXT events are spread across the whole Eurometropolis, between 18 structures (theatres, museums, maisons folies etc.) distributed both sides of the border, in addition to Valenciennes, that is not part of the ELKT but is annexed to the itinerary of the events.

As important as is to offer the spectacles, it is to guarantee the interurban transit (also interregional and international, in this case) of the festival attendees. To travel between cities is also a way for the inhabitants to get familiar with the Eurometropolis region and to build on the feeling of belonging and attachment. That is why since the first edition of the Festival 23 shuttle buses were put at the disposal, for free, of the general public connecting every city receiving an artistic event (NEXT, 2008a).

In 2013, the number of free buses put at disposal grew to 36 (NEXT, 2013); in 2014, a progress can be observed: 13 cities were contemplated with artistic events with 38 shuttle buses at disposal (NEXT, 2014). The boost in the number of buses offered by the NEXT Festival organisation between 2008 and 2013 sheds some light on the ever-growing concern in improving and expanding the transport structure. This significant increase, confirmed by the 2014 data, reinforce the key-role of the flux of the Eurometropolis inhabitants in the interior of its own territory.

In September 2016, NEXT received the EFFE Prize (Europe for Festivals, Festivals for Europe Prize): it was elected as one of the 12 most innovative festivals in Europe (La Rose des Vents, 2017). Having been chose amongst 760 candidates in 31 countries, NEXT was awarded for its creativity, '… its artistic programme, its "innovative perspective", its international partnerships, its values and its engagement with sustainable development' (idem, n.p.).

5 DISCUSSION

5.1 GLOBAL CITIES NETWORK AND THE POSITION OF LILLE: TERRITORIAL MARKETING APPLICATIONS

The simultaneous dynamic of geographical spread and concentration of activities is one of the key-elements in the organisational architecture of the economic global system. Nevertheless, Sassen (2005, 2007) observes that cities in the Northern hemisphere gather significantly more than half of the global capital market, being observed that the most robust part of the financial activities of the countries are concentrated of their biggest internal urban centres. In general, those are municipalities with greater insertion in the global cities network – the ones that are connected to major economic regions with extensive expression in the world economy – without necessarily being national capitals (GaWC, 2016). According to the 2016 GaWC ranking, those are the cases, for example, of Shangai (Alpha+); Chicago, Milan, São Paulo, Los Angeles (Alpha); and San Francisco, Boston, Miami, Barcelona and Munich (Alpha-).

This proeminence of the local and regional spheres and the insertion in the globalisation context on different levels stimulate the competitivity for the attraction of capital investment and deflagrate a true locational war, that also follows the basic law of supply and demand. The more places being sold (the bigger the supply), the higher will be the competitivity between those places for capital.

To Braun (2008), it is exactly this improvement in competitiveness – and the complexity that it brings to the urban development hurdles – that urges the cities to adopt city marketing policies. According to the same author, this kind of marketing encompasses the coordinated use of the marketing tools, endorsed by a

philosophy oriented by creation, communication and the exchange of urban offers that have added value for both the city's stakeholders but also for its community at large.

The strategies for this city marketing, nevertheless, varies according to the framing of the city in the global context. To Braun (2008), global cities with high levels of insertion, centrality and influence (e.g. London and New York) do not need to implement such aggressive techniques of city marketing, once their positions in the world are already established and guarantees them a comfortable situation in relation to the investments they already receive from the global capital.

On the other hand, cities which exert limited centrality and which the influence is limited to the local or regional level necessitate a more aggressive marketing policy so that they can expand the scope of their economic activities. This kind of strategy is more recommendable to cities which seek to gain a bigger share of the international capital market or insert themselves in a new market niche (Braun, 2008). It is exactly the case for Lille, a city considered by GaWC (2016) to be of "high sufficiency" in services; it means that, by the standards stipulated, Lille is not a global city, but has services enough so it does not become overly dependent of other cities (GaWC, 2016).

THE DISTINCTION IN TERMS OF CITY MARKETING

(…) is between the cities that are well placed in the urban hierarchy with diversified economies, agglomeration economies, high quality amenities and embedded in productive global networks on the one hand, and the cities that still struggle to overcome economic decline with a relatively weakly diversified economy and a legacy of an industrial past that once symbolised the city but it is now associated with decline, on the other hand. The first is well endowed to compete in the knowledge economy and one can expect a consolidated marketing strategy; the latter has a stronger incentive to deploy a more entrepreneurial city marketing strategy (Braun, 2008, p. 27).

Cities with symbolic functions based on a past of industrial excellence and that have experienced a process of decline tend to sense a strong incentive to diversify and change the ways they are perceived through the adoption of city marketing policies. According to Braun (2008), the selling of post-industrial cities is directly linked to the decline of their former more prominent activities. It is a universal tendency that cities with an industrial past start to delve increasingly deeper in city marketing tools to attract investments in new structures and events in a quest to change their image. This is exactly the case for Lille, a city that from 1990 onwards started to face a situation of economic adversity in the wake of the extinction of what was the prime activity for the region during two centuries, namely the coal mining (Siffert, 2016).

The city marketing contributes to the underscoring of a region and serves, mainly, as a factor of differentiation of a specific region in relation to other regions that compete for the same market niche. In implementing this type of strategy – and based on that to conduct the NEXT Festival, a major scale event and with international publicity – the binational governing committee of the ELKT sought to internationalise the region with the aim of seizing the opportunities to capture the international capital. The final goal for that is promoting the economic dynamization and development of the whole region.

Between 2000 and 2016, according to the GaWC reports, Lille went from being a city with sufficiency to being a city with high sufficiency. That denotes, in some ways, a relative success of the internationalisation strategy adopted by governors; nevertheless, it is still out to be explored and measured (quantitatively) the influence of the cultural policies implemented and, specifically, to which extend NEXT Festival had an impact in this process.

5.2 NEXT ARTS FESTIVAL: IDENTITY AND IMAGE

The relative similarities in the historic and cultural roots both sides of the French-Belgian borders renders to the collaboration and exchanges between the two national populations. Yet, the linguistic barrier between the francophones (in France and Wallonia) and the Flemish (in Flanders) tends to set some obstacles in integration both at the individual perceptions level and the spatial practices towards the neighbours (Hamez, 2004).

The role of culture as a crucial agent for the development of the integration plan is clear: '... the artistic creation would have a fundamental place as the main driving force for the attractivity of the territory and the well-being provided to the population' (Eurométropole, n.d.). Furthermore, 'culture is this indispensable link that sustains the conviviality' (idem), this cement of the social cohesion of the Eurometropolis.

Culture, represented by the NEXT Festival, puts itself as one of the catalysts of the social change so hardly sought for Lille – the main hub of ELKT – and the whole region. More than this, those cultural events reflect the need to change the image of a city and a region in a way that would prepare them for the future, so they can become attractive to the international capital. This is perceived by the local governors as fundamental for the economic development of a regions that aims to overcome decades of hardship after the deindustrialisation. The project behind NEXT is, in sum, the project of Lille: it is the split up – if not total, at least radical – with the mining and industrial past towards a dynamic future that welcomes innovation, technology and the specialisation of services. The Festival is, at the same time, the path through where this image change is sought and the final product of this project of territorial and aesthetical metamorphosis.

NEXT Festival, henceforth, presents itself as an urban event that responds to the missions that the city marketing delegates to this kind of promotional action. Therefore, it is an instrument of internal communication that aims to reinforce in its inhabitants a sense of attachment to the Eurometropolis and externally it communicates the newfound ambitions of the city, positioning itself strategically amidst the increasingly edgy competition for international capital.

There is a distance, an offset, between the 'image' and the 'identity' (Noisette and Vallerugo, 1996) of the ELKT, where the urban image bears the representational dimension whilst the urban identity is more tied to the reality. The effects of this distortion between representation and reality, previously carefully avoided, seem to be systematically pursued by the stakeholders of the ELKT, because it is exactly the image of the city the saleable parcel of the urban product (Thiard, 2007).

Thus, based on what was exposed, it was possible to grasp that the cultural project is also the economic project conducted by important stakeholders for the region, politicians and capital investors. NEXT Festival is therefore a consequence of the communion between the interests of the public authorities and those from the private sector. This artistic event is not only the vector for the promotion of local identity, but also the promotion of political and marketing interests.

In brief, the cultural proposition of the ELKT is a project that is the outlining of a new common identity for its inhabitants, a fundamental part in the restructuration of the economy as envisaged by their own governors and investors. As it is based on three different cultural matrixes (following the subnational divides that compose the ELKT), it can be concluded that the project of the eurometropolitan identity has, at its core, the goal of amalgamating differences – avoiding the value judgement of what is pure and impure – on behalf of a new cultural reference (and, in this case, to be marketed as an image); that is what Fontanille and Zilberberg (1998) call "the culture as a mixture".

6 CONCLUSION

The aim of this paper was to show how identity, even in rather transient times, is still something that holds strong meaning and power. On a moment where globalisation has, of now, found its pinnacle, new identities keep on emerging mainly as reinterpretations of already existing ones (Hall, 1996). The mechanisms for creating these new identities are presented in two ways by Fontanille and Zilberberg (1998): operating via exclusion and via participation. The second mechanism seems to be the one in use for the promotion of the Eurometropolis Lille-Kortrijk-Tournai project, once the cultural traits of inhabitants of three different subnational spheres are amalgamated together in a discourse that seeks the common ground between the three cultures – and the success of this discourse is pivotal for the broader economic project that entangles the ELKT region.

This course of action was spotted by the stakeholders – the political and financial ones – as the trigger for the rehabilitation of a deprived area in the wake of globalisation and in the aftermath of the crash of the former economic matrix, namely the coal mining. Using city marketing tools, they sought (and keep on

seeking) to promote the image of the region, aiming to put it in a prominent shelf at the 'shop window' of the city and regions that fight for the global market investment.

Nevertheless, there is still work to be done in this front: it is still out to be explored and measured (quantitatively) the influence of the cultural policies implemented in the Eurometropolis Lille-Kortrijk-Tournai and, specifically, to which extend NEXT Festival had an impact in this broader economic project for the region.

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ID 1517 | CROSS BORDER COOPERATION IN WESTERN BALKANS- A COMPARATIVE ANALYSIS OF CROSS BORDER EXPERIENCES BETWEEN ALBANIA-KOSOVO AND ALBANIA-GREECE

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ABSTRACT: The instrument for pre-accession assistance (IPA) is one of the main supporting tools for countries aspiring to join the EU. IPA II 2014-2020 programme strategy was approved and supports primarily Western-Balkan Countries in cross-cutting areas in order to prepare for EU-accession. As part of the strategy, territorial cooperation is also supported. Cross-border cooperation in the area is one of the main strands of territorial cooperation where different programs between the countries have been set. This paper investigates through a comparative analysis the experience of cross-border cooperation between Albania and Kosovo and Albania-Greece. The analysis spans not only at the analysis of the relative different projects and the ability of countries to make use of the program, but also looks at different and emerging themes in terms of cross border planning and governance. The analysis will delve into the first programing period 2007-2013 as well as the activities that have been held during the new programing period. The choice of the two different programs comes due to their distinctive characteristics, where on the one side one can find an EU member (Greece) cooperating with a non-EU member (Albania) and on the other side two non-EU states which have the same language, as well as Kosovo being a particular case study of state formation. The Albania-Kosovo case study is important to analyze also due to current development and cooperation between the two governments. So far, there have been two inter-governmental meetings between Albania and Kosovo to foster partnerships and greater collaboration between the two countries. Thus, it becomes very interesting to analyze whether the increase in cooperation between the two states is also reflected in the territorial cooperation programs, as well as their performance in terms of cross border cooperation.

KEYWORDS: territorial cooperation, cross border cooperation, spatial planning

1 INTRODUCTION

In 1991, as many other East-European countries, Albania gave an end to the dictatorial socialist regime. Very soon, the aspiration for joining the European Union and "becoming European" was articulated, forming the longest standing objective of every political party that has come into power in the country (Aliaj, 2008). Nevertheless, the road from a highly centralized and dictatorial regime towards an open and democratic one for sure has been a bumpy one. The "shock therapy" combined with political instability (Aliaj, 2008) (Aliaj, Shutina, & Dhamo, 2010), culminating in 1997, with the fall of "ponzy" pyramidal financial schemes (Aliaj, Janku, Allkja, & Dhamo, 2014)and the civil war in the country, have held the aspiration for joining the European Union back.

It was not until April 2006 in Tirana, when the agreement on Stabilization and Association was signed, which afterwards entered into force in 2009. This agreement marks the intensification of activities between Albania and the EU, culminating in 2014 with the candidate country status (Ministria e Integrimit, 2016). Now Albania is awaiting to open the negotiations, process which should begin once the Judiciary reform has started implementation (COM, 2016a).

In 2006, there are also changes in terms of the support that countries aspiring to join the EU receive. As such, the Instrument for Pre-Accession Assistance (IPA) was created. The latter is a single financial instrument which simplifies and designs the EU support for the period before accession (European Commision, 2014). It is important to notice that IPA substitutes previous instrument such as Poland and Hungary Assistance for the Restructuring of the Economy (PHARE), Sales and Purchase Agreements (SPA), Special Accession Programme for Agriculture and Rural Development (SAPARD), Community Assistance for Reconstruction, Development and Stabilization (CARDS) (European Commision, 2014). The aim of IPA is to increase efficiency of support through a single support framework which increases institutional capacities, cross border cooperation, economic and social development as well as rural development. During the first programming period (2007-2013) IPA was framed into five main components such as: transition assistance and institution building; territorial cooperation under the framework of cross border cooperation; regional development; human resource development and rural development.

Until receiving candidate country status, Albania could benefit only from the first two components, hence as part of IPA it has been engaged in different cross border programs with EU members (i.e Greece) and non-member states (i.e Kosovo, Montenegro, FYROM). These programs continue to be present also for IPA II programing period 2014-2020 (COM, 2016a). Albania-Kosovo CBC and Albania-Greece CBC are quite interesting based on the fact that between the first represents two countries with the similar identities composed of the same language, similar culture, belief, mentality and social norms while the second represent a cooperation between a more developed and experienced member state and a candidate country with less experience. Thus it becomes interesting to see whether there are any distinct changes between the implementation of the two programs based on two main factors such as regional identity and experience.

2 TERRITORIAL COOPERATION

The intensification of interrelations at the EU level has had great impacts also on border regions. Firstly, borders have lost their physical meaning and are becoming more and more only symbolic, and secondly they have become the platform for the development of greater territorial cooperation (Kramsch & Hooper., 2004). The EU itself is somewhat a system of cooperation and interdependence between different states and in order to reduce complexity of different bilateral arrangements they have decided to unite into a supranational body (Sousa, 2012). In this sense, integration is seen as “Europeanisation consists of processes of a) construction, b) diffusion and c) institutionalization of formal and informal rules, procedures, policy paradigms, styles, 'ways of doing things' and shared beliefs and norms which are first defined and consolidated in the EU policy process and then incorporated in the logic of domestic (national and subnational) discourse, political structures and public policies.” (Radaelli, 2004, p. 3)

However, the degree of cooperation across borders varies due to different factors such as political, historical, economic, cultural and geographical. One of the main reasons for the different degrees of cooperation is also the fact that cooperation is based on a voluntary process where states, regions or other subnational units act together to achieve common visions and solve common problems. In addition, there are different EU initiatives which support greater cooperation between member states and especially across border. As such article 2.1 of the 1980 ‘Madrid Convention’ defines trans frontier co-operation as: … any concerted action designed to reinforce and foster neighborly relations between territorial communities or authorities within the jurisdiction of two or more Contracting Parties and the conclusion of any agreement and arrangement necessary for this purpose (Council of Europe, 1980). Some of the reasons for cooperation include but are not limited to: there is an overlap of interests; There is a shared historical memory; there is a strong interdependence between the two regions due to geographical or economic factors; there is a political objective for future joint action. (Commitee of the Regions, 2009)

Borders have usually been underdeveloped areas, usually secluded which currently show high structural differences with other more central, urbanized and developed regions. This is even more true when it

comes to former Eastern Bloc countries such as Albania, where the paranoiac obsession of invasion from the capitalist forces, transformed border into heavily guarded and military areas (Aliaj, Janku, Allkja, & Dhamo, 2014). Thus the objective is that through cooperation to foster a greater degree of development and allow for structural disadvantages to be reduced.

Although, cross border cooperation has been a process gradually evolving at the European level, sometimes also in parallel to the European Integration process, after the 1990s, the Commission took the lead in supporting different cooperation initiatives spanning from large-scale macro-regions encompassing two or more nation states, the development of inter-regional and transboundary urban networks; and the support of pan-European high-speed transport infrastructure aimed at moving Europeans, as well as cross border cooperation projects (Kramsch & Hooper., 2004)

3 CROSS BORDER COOPERATION IN ALBANIA

For the purpose of this paper two main programs of cross border cooperation are taken in consideration such as Albania-Greece and Albania Kosovo.

3.1 ALBANIA- GREECE

The IPA Cross border program between Albania and Greece for the period 2007-2013 was approved by European Commission in 2008 (European Commission, 2008). The eligible area consisted of the region of Epirus, Region of Western Macedonia and the Region of Ionian Islands in Greece, and the districts of Gjirokaster, Vlore and Korçe in Albania. The overall objective of the program was to increase "the standard of living of the population by promoting sustainable local development in the cross border area" (European Commission, 2017).

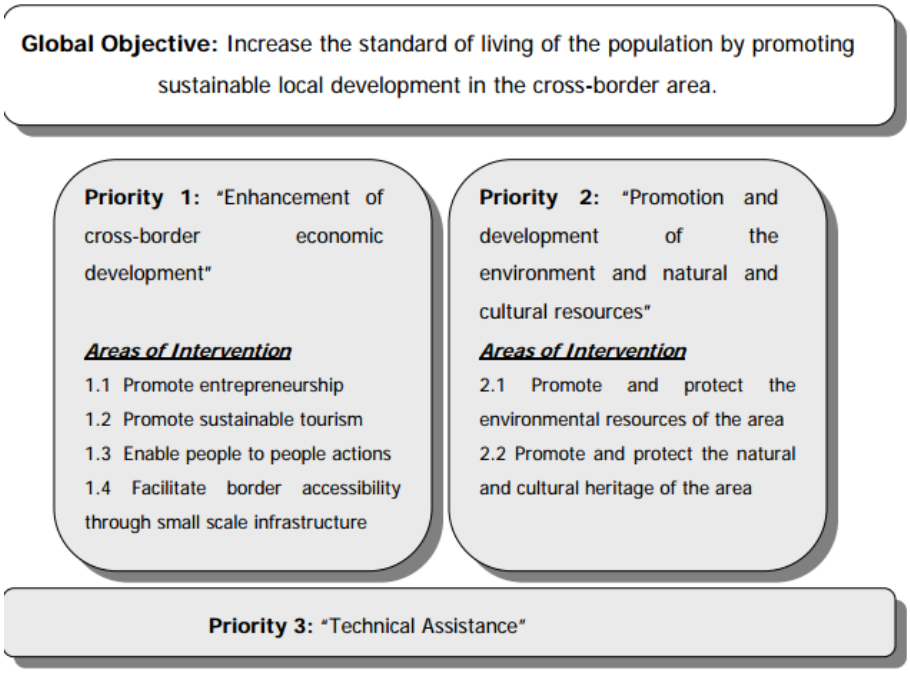

Figure 1 – Objectives and Priorities

In order to achieve the main objective three priority axes were set. Two of them had development concerns (90% 0f budget share) at their focus while the latter was a cross cutting priority aiming to increase institutional capacities (10% of budget share) (ibid). A common feature of the program, although it has been quite successful is the fact that most of the projects are led by Greek actors. Out of 44 projects in the area, only 4 of them are led by Albanian partners while the rest are all Greek institutions. Meanwhile, out of the 4 Albanian leader none of them are governmental institutions, they are either Higher Education Institutions or NGOs (CBC GREECE/ALBANIA, 2017). On the other hand, across the Greek border there

is a greater balance between the governmental institutions taking Lead and the non-governmental ones. In this sense it shows that Greece, as a member state, having greater institutional capacities and experience with European projects plays a driving role in the program. Projects have primarily focused on tourism development, especially eco-tourism initiatives. Meanwhile, in terms of environmental initiatives most of the projects have focused on waters such as the Prespa lake or the Vjosa river (CBC GREECE/ALBANIA, 2017).

Although several projects have been implemented on both priority axis, they still do not have had any strong impacts in redefining the issues and challenges of the cross border area. The reason is due to the limited amount of available finances which do not allow for large scale investments. Projects usually aim at knowledge and technological transfer and distribution or establishment of partnerships and networks which are actions that needs longer timespans in order to show meaningful results. In addition, most projects need to work in synergy with other, larger, investments projects in order to increase results. Therefore, it becomes imperative to have greater coordination and collaboration between central and local governance levels.

Meanwhile cooperation continues also for the programming period 2014-2020. The program has set three main priority axis such as “Promotion of the environment, sustainable transport and public infrastructure”, “boosting the local economy” and “technical assistance” (CBC GREECE/ALBANIA, 2017). The eligible areas have not changed which show greater stability of the program. However, the administrative reform in Albania has reshaped the borders of local authorities, thus requiring time for the re-establishment of new networks and increasing capacities at the local level again. In addition, it is worth to mention that the program has built on the results and experiences of the first programing period showing greater stability and coherence when compared to the Albania-Kosovo program.

3.2 ALBANIA- KOSOVO

The IPA Cross border cooperation between Albania and Kosovo was planned to be established in 2007 and entered into force in 2010. The initiative took 2 years to start the implementation phase in order to allow for the institutional setting to be set in place. Both countries, and especially Kosovo which only achieved its independence in 2008. The IPA cross border cooperation was seen as a special program established between the two countries also due to the status of Kosovo (Ministry of European Integration; Ministry of Local Governance, 2010). The program area consists of two units in Kosovo, the southern economic Region and the west economic Region, while for Albania is represented by the districts of Kukes, and the two adjacent areas composed by the districts of Shkoder and Diber. The programme area has a contrasted geographic profile. It is rich with mountain ranges, plains, valleys, rivers and lakes. The total population in the programme area was of 1,292,595 composed by 64% of population living in Kosovo and 36% in Albania (Ministry of European Integration; Ministry of Local Governance, 2010). Nevertheless, the majority of the population is composed by inhabitants of Albanian origin, while the rest were ethnic minorities, including Montenegrins, Serbs, Bosnians, Turks, Romas, Ashkaelias and Egyptians (RAE).

From the very beginning the program faced several challenges in implementation such as poor regional and local government organisational structures; no clear division of competencies and tasks between central and regional/local administrations; potential beneficiaries from the private and public sectors in rural areas had limited capacity in project identification and preparation, strategic planning and project implementation. The overall strategic objective of the initiative was the sustainable development in the cross-border region while specific objectives included strengthening of capacities, protection of environment, socio-economic development and increased partnerships and networking. There were two main priority axis such as promotion of sustainable economic, social, cultural and environmental development of the region and technical assistance. The latter was extremely important as both countries show weak institutional structures and capacities for programing and managing the projects.

The program was met with great enthusiasm by actors on both sides of the border. Several projects have been implemented during the period 2010-2013 and some are still in the final stages (CBC ALBANIA/KOSOVO, 2017). Nevertheless, it is important to note some factors such as, projects have been primarily focused on environmental issues and tourism development. In the region there are different non-governmental actors which have shown greater capacity in programming and implementation of such projects. On the other hand, (public) institutions have shown weaknesses in terms of application and

project management, especially at the local level. In most cases, project leaders were from the central government, meanwhile when local authorities were engaged they had a partner role. In few occasions they have managed to successfully lead projects. This is supported by the data on the projects awarded for the period 2014-2015, where there are Project leaders from the “governmental sector”, and mostly the leaders are from Albania (CBC ALBANIA/KOSOVO, 2017).

The cross border programme for Albania-Kosovo continued also in the IPA II programming period 2014-2020. The CBC bodies coordinating the programming and implementation process on the respective sides of the border are the Ministry of European Integration, Directorate for Cross-border Cooperation and Transnational Programmes, Albania and the Ministry for Local Government Administration, Department for Cooperation and Regional Development, Kosovo . In this case, the eligible areas for Albania have changed and are now composed by the district of Kukes and the district of Lezha, while for Kosovo they remain the same. The Programme aims at providing assistance for cross-border cooperation in the following thematic Priorities (TP): protecting the environment, promoting climate change adaptation and mitigation, risk prevention and management; encouraging tourism and promoting natural and cultural heritage; investing in youth, education and skills; technical Assistance (CBC ALBANIA/KOSOVO, 2017).

Nevertheless, it is also important to highlight some other activities which have occurred outside of the EU umbrella but might have impacts on cross border cooperation. In 2013, the Territorial Administrative reform was carried out in Albania which reshaped local authority boundaries in the country from 373 municipalities and communes towards 61 municipalities. This was considered as a highly necessary reform which would increase local authority capacities in territorial management and development (Kuvendi i Shqiperise, 2014). However, the period when the reform took place, between 2013/14 meant that the local authorities are still focusing on understanding and adapting to the new situation, so no real impacts can be seen as yet in terms of the cross border program. In addition to the territorial reform, in 2015 in Albania, 4 regional development agencies were established (Keshillimi i Ministrave, 2015). The latter are expected to increase coordination between central and local level in terms of development issues. The rationale is also that these institutions will also help in the preparation and increasing capacities for dealing with ERDF in the future. Currently they are also eligible for cross-border cooperation activities. Nevertheless, it is too soon to see any impacts yet on the program.

Other important activities include the opening of the local office of the Albanian development fund in Kosovo in Gjakova in 2015. This office will also support cross-border. Meanwhile, the respective central level governments have established an ambitious platform for bilateral cooperation. Three high-level meetings have been held between the two governments with the aim of developing joint programs and projects. However, results have been very minimalist and the enthusiasm of the early stages has now started to fade away. In addition, it is worth also to mention the cooperation between the Ministry of Urban Development of Albania and the Ministry of Environment and Spatial Planning in Kosovo. The ministries after several joint technical meetings also opened a call for young architects and urban planners to draft a vision and cross border projects. It is also worth to mention, that as part of different spatial planning activities in Albania and Kosovo, the homologue institutions now are invited as part of the different consultation phases. Nevertheless, although there is a positive increase in institutional activities both at the central and local level and the institutionalization of new channels of communication, the impacts on cross border projects seems relatively low. The latter is also related to the institutional capacities for programming and implementation of projects.

3.3 CHALLENGES OF CROSS BORDER COOPERATION

Several challenges have been observed which have not allowed for an effective attraction of IPA funds during the 2007-2013 programing period and still remain as a challenge also for the 2014-2020 period, although changes have been made to the program. As such it can be mentioned:

1. Covering of VAT expenses. In the agreement between the EU and the Albanian government, specific articles sanctions that the cost of VAT will not be covered by the EU grant, but from the beneficiary institution. Considering that cross border projects reach high values (for Albanian institutions) also the value of the VAT is quite high. Therefore, becomes very difficult to cover these expenses through other financial means.

2. Covering the cost of co-financing. The agreement between the EU and the Albanian Government foresees that no less than 15% of the total value of the project need to be covered by the beneficiary. In many cases, Albanian (public) institutions find it difficult to cover the costs of co-financing, sometimes leading towards the missing of project deadlines.

3. Government priorities change. The process of winning an EU cross border project goes through 2 main phases: Programming and Implementation. The first process is strongly related to government priorities. Hence, in Albania, where there are very often changes in the political priorities, especially after elections, have also an impact in the programing process. The process is that same and there is no difference between national and local level changes in priority. Although, a shift in priority at the national level has greater impacts, it is argued, that also in cases of changes of priorities at the local level, projects are put at risk.

4. Coordination between national and local level. The programing process is an exclusivity of the central governance, while in the implementation phase local authorities are eligible to be part of the process. The main problem of non-coordination between the two different levels regards investments and priorities in infrastructure development. Although Albania has drafted the General National Spatial Plan, approved in June 2016, it is too soon to draw any conclusions on the improvement of the coordination. Nevertheless, it can be argued that the increase of communication between the two different levels are expected to produce better results. However, as previously mentioned, the high differences between the different political parties in charge of different authorities can become an inhibiting factor also in this case.

5. Changes in the modalities of implementation. In the financing contract of the project are also defined the ways of implementation. In many cases these predictions signed in the initial contract are non-appropriate, therefore very often become subject to changes. However, changes in the initial contract require a long time, which bring delays also to the implementation of the project. Thus, due to issues like this, sometimes, authorities find it too time consuming and time wasting to deal with these projects opting for other less bureaucratic opportunities.

6. Delays from the programming phase to the implementation one. From the moment of programing to the moment of implementation, there is a considerable amount of time, in some cases between 6-8 months. During this time, the programed project may have lost credentialed and its problem priority reduced, or even be resolved through other means, as well as cases where the situation has degraded so much that there is little the project can solve.

7. The qualification of the staff working with CBC projects are not appropriate. The institutional capacities at the central and local level in Albania are low, especially at the local level. As IPA regulations are continuously changing, gaps can evolve in the programing and implementation of EU CBC projects. Difficulties can be seen in both phases such as programming and implementation. IPA is an instrument in continuous evolution with regard to the way and regulation of implementation. This usually happens as the EU Commission tries to improve the program, efforts which have not given the desired results. This evolutionary process has implication on the different institutional settings in charge of working with IPA projects, thus, considering also the relatively low capacities, the challenge becomes even bigger.

8. Sustainability of projects. Based on rules, the donor (EU) is present until the finalization of the project, afterwards it is the duty of the Albanian government to guarantee the sustainability of the project as well as continue building on it. In practice, several projects are neglected after implementation, thus the impacts start declining very soon after the implementation.

9. Non- Leader role of the Local Institutions. Local governments in Albania are used to expect “financing” and investment from the central government. Very often, they refrain from taking a leader role in issues of development and investment. This is also obvious in CBC projects, as very often, local governments are reluctant on being in the driving seat. The latter comes also as a result of the disparities in institutional capacities between the central and the local level.

4 CONCLUSIONS

The aim of this paper was to analyze cross border cooperation initiatives between of Albania with two different types of states such as Kosovo and Greece. In general, although there is great enthusiasm for the cross border cooperation initiatives challenges are big and very often hinter the development and implementation of projects. The reason why this two different programs were chosen was to see whether there were any differences between cooperation with a country with similar historic, cultural and economic development background (Kosovo) and a country which is a member state and has higher experience and institutional capacity such as Greece.

Albania and Kosovo have shown a greater degree of cooperation also outside of the EU framework encompassing higher degree inter-governmental meetings, creation of new institutions, and joint initiatives to improve cross border activities. However, the results have not been as expected. These activities have not had any impacts (yet) on the programing and implementation of cross border projects. In addition, compared to the Albania-Greece cooperation, in this case it is mostly NGOs and other actors outside of government structures that seem to be the drivers of success.

Meanwhile, the Albania-Greece cooperation seems to be more structured and better equipped to deal with the high techno-bureaucratic requirements of IPA. The greater experience and capacity of the Greek part has shown its impact also on the program and the projects. As previously mentioned, the projects are dominated by Greek partners leading the way, while Albanian ones are usually followers. Thus the challenge in this case is to increase capacities of Albanian partners to start leading projects.

In addition, there are also some more technical and coordinative challenges that are not fully met and cannot be fully met only by the program but require a greater sense of commitment and political will. Firstly, due to the nature of financing of IPA, there are financial challenges. Especially on the border between Albania and Kosovo which is composed by some of the poorest local authorities. The second challenge is that of coordinating IPA cross border projects with other priority investments done by the central governments. The coordination initiatives initiated by the Albanian and Kosovo government seem to be a good start, however with little results yet. Thus in this case, drafting a (spatial) strategy or an action plan between the two countries for the cross border region would be one of the recommendations and seems possible also due to the very good relationships between the two governments. A similar approach can be done also in the area between Albania and Greece.

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T10 | HOUSING AND URBAN REHABILITATION AND QUALIFICATION FOR PLACES OF DIGNITY

CO-CHAIRS: ROELOF VERHAGE; IVAN TOSICS; DIOGO MATEUS

The rehabilitation of urban areas in order to improve living conditions is a central concern of urban policies. Over the years, the objectives of urban rehabilitation have extended from the improvement of the quality of the dwellings, via the improvement of the quality of buildings, public space and facilities, to the improvement of “quality of life” in the broadest sense, including notions of socio-economic development, environmental wellbeing, and social cohesion.

Since the 1990s, under the influence of the retreat of the welfare state, and of cuts in public spending, urban rehabilitation projects have become more and more dependent on private investment. Public interventions have become indirect, focussing on incentivising private investment in deprived areas.

In the current situation, after the Great Financial Crisis, this approach to urban rehabilitation is challenged. Private investors have become more selective in their investment decisions, and more reluctant to invest in the rehabilitation of deprived areas. As the public budgets are also decreasing, new ways have to be found to rehabilitate those areas.

In this context, participative practices, and the stimulation of citizen initiatives in order to improve living conditions are considered as innovative ways to appraoch urban rehabilitation. But what are the capacities of such approaches to actually regenerate deprived areas? How to mobilise citizens to participate actively in the improvement of their neigbourhoods? What kind of economic model to invent in order to translate citizen involvement into investment? What is the most appropriate role of the public sector in this context?

The aim of the track is to explore these and related questions on the relation between urban rehabilitation, citizen initiatives, private investment, and public sector activities. The track would welcome papers focusing on theoretical reflections, and applied analyses of urban policies and projects dealing with these issues.

ID 1327 | NEW MECHANISMS OF INTERVENTION IN THE EXISTING CITY: RECUALIFYING THROUGH DEGROWTH. OBJECTIVE: A RESILIENT CITY THROUGH A CIRCULAR URBAN PLANNING

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ABSTRACT: It is becoming widely accepted that the future of urban planning and the place of the satisfaction of our needs in our cities, will be based on urban redeveloping and regeneration, instead of continuing with the unlimited consumption of virgin land. Therefore, the challenge is to qualify and intervene on the existing city, otherwise we run the risk of incurring into greater inefficiencies and resources shortages. Hereby, urban qualification is understood as a model of efficiency, effectiveness and sustainability. Once it is accepted the goal of effective intervention on the city, we must confront the systemic problem which concerns urban planning: the practical impossibility of intervention in the consolidated city, except by injecting public money (that we don't hace, and will not have) or by programming artificial re-densification. Both procedures cannot be considered as feasible methods. While the city is still growing and consuming large quantities of virgin land, there are no opportunities to generate the added value needed so that the existing city can reinitiate the redeveloping process. Therefore, we must catalyse urban redeveloping by limiting expansion and generating value. Reducing urban growth does not only diminish the ecological footprint, but it generates an increase in value in the already altered land, that facilitates the regeneration of the existing city. Concentration of value through physical net degrowth that generates net value growth. In other words, this approach provides a new mechanism to intervene in the existing city: active and programmed urban degrowth acts as a generator of value and as a redeveloping catalyst. This land use approach is the first step towards resilience and circular urban planning (brand new concept provided in this paper, as the closure of life cycle in land use). As a matter of fact, resilience can never be fully achieved if mechanisms that facilitate urban degrowth are not effectively implemented. Degrowth is itself resilient: In fact, the response of degrowth should be viewed as the most resilient of all. The background is the theory of the circular economy and the philosophy of cradle to cradle: waste should be understood as a food of a new parallel process. Garbage is food, as well as degrowth generates value.

1 STATE OF ART: SYSTEMIC CRISIS

There is no doubt about the fact that the urban network and the built-up building park around us, is close to reach its logical life cycle. It needs interventions to improve efficiency and sustainability; substitution, rehabilitation, redeveloping, regeneration and urban renewal that allow to realize for all, its social purpose. Operations of adaptation to the standards of sustainability, quality, comfort and accessibility.

We must be able to combine this need for renewal, with urban regeneration and the improvement of public endowments and facilities. In short, in improving the quality of space and urban land. As stated in the Leipzig Charter on sustainable European cities (UE 2th May 2007), an in the Toledo Declaration (URBAN Intergroup at the European Parliament 2010) a new urban alliance is needed to implement the strategic commitment towards integrated urban redeveloping.

Some of the foundations that have constituted the urban model that we have all met, with their lights and shadows, must be rethought and overcome. The model does not work 1. As Eduard Fúhr points out: Over the last few years the concept of 'shrinkage' has developed to a central category for urban design and planning 2. Concepts such as benefit, equidistribution, value, ownership model, how to finance urban conversion, relocation, insolvencies, public and private scope of action, gentrification and maintenance cost of the city, together with a context of flat population growth, are the basic elements of a reflection around the city, its state and its derivatives, which must be rethought in order to facilitate that urban planning fulfills its social purpose 3. The maintenance of the system in the current terms in urban planning and development, is a guarantee of more urban degradation and impoverishment for many, and more to come.

The urban planning as we know it has to undertake a paradigm shift, a deep and courageous change, because there is no other solution that is based on alterations to the current model. We must intervene or encourage intervention. Solutions based on continuing an expansionist city model cannot, and should not, continue to leave behind an inefficient, costly artefact that cannot be altered.

The public administrations do not have and will not have money to regenerate the city, it is impossible. Neither should they, it is not fair. We cannot continue to consume resources as if they were unlimited. We cannot wait, because there is nothing linked to the time that can be remedied, but to the contrary; aggravate. Waiting for the economic cycle to recover is denying the root problem: a way to make that is exhausted.

On the other hand, we should not persist in dysfunctional intervention models, such as subsidies, the non-application of the essential duty of conservation linked to the ownership and the indissoluble linkage of the use itself with the right of use of the land should not be persistent. The true cost of the maintenance city must be faced and clear out who and how must face it. We should not continue with this imperative model and move to a participatory and co-responsible model, going deeper into alternative modes of housing, tenure and ownership, typology, transformation and collaborative urban planning.

1.1 THE ECONOMIC UNSUSTAINABILITY OF THE URBAN PLANNING MODEL.

How is the regeneration financed? The question is: who pays redeveloping? 4 . We are witnessing the end of expansive urban planning that pays at its expense, and based on its own capital gains, the construction and maintenance of the city. It is an exhausted model. We must assume the conceptual shift from the analysis and the criterion of economic viability to the criterion of economic and long term sustainability of what we plan.

Urban redeveloping will be the central goal of urban action from now on, and one of its fundamental elements is the economic sustainability and assumption of financial charges. Who pays for redevelopment? It is usual to assume that the city is self-financing. The change of focus that urban redeveloping brings us, inevitably faces this question. The city has degraded with the use, has been consumed. Does the city really self-finance?

The answer is NO. Expansive urban planning, with its burdens, endowments and assignments, has financed the construction of the city, but when it comes to dealing with regeneration and redevelopment, the model does not work. In order to tackle the issue in its entirety, we must overcome the barriers of the scope itself and approach the intervention from the collective, putting collective rights before the individuals. The real challenge is: How can urban conservation be adopted as a strategic approach to spatial sustainable development? 5 How can we make it? How can we finance it?

2 SENSEMAKING.

2.1 DEGROWTH AND SOCIAL CHANGE. 6

Inexorably, in addition to start to think about articulating systems for the enhancement of urban land and reducing the ecological footprint, those two concepts must be combined with the necessary reflection on the limitation of expansion, mobility, uses mixtification and the study of the optimal urban density. Only from this profound reflection can we optimize the model and justify the effective and full fulfillment of the social goal that corresponds to urban planning.

This social purpose, and therefore that of urban regeneration, has a scope that goes beyond the simple spatial transformation and refers to the reorganization of social relations. We live in fragmented cities, due to the social differentiation in the use of space. How to rebalance this social-spatial distinction of the centre (with its different concepts of centrality) and the periphery, must be the motor and objective of the urban redeveloping strategies to be implemented. In this way, the implementation of these rehabilitation, redeveloping and urban renewal strategies will generate positive impacts that, in turn, can serve as an essential lever for the economic and social development of the city and its citizens. But the underlying problem is deeper: Should we satisfy demand or manage supply? Societies will have to learn to deliberate

under uncertainty within the scope of flexible management and to stop planning oriented either towards growth or decline, but towards the well-being of people.

The question on the one hand lies in the concept of finitude, of the existence of limits, in the reciprocity work and the implications for the formation of social capital in a context of degrowth. It is a mere physical, empirical question. And on the other hand -the fundamental one -the key is to increase in this context the welfare of the people. For this, the key is cooperation as a theoretical root, as an attempt to explain the concept of degrowth: the work of reciprocity 7 and the implications for the formation of social capital. in a context of degrowth 8. Facing the paradigm of the dominant sustainable development, the hypothesis of the sustainable degrowth 9. But degrowth not only as a decrease in consumption as we know it 10, but with the idea of strong and sustainable consumption 11.

It is possible to interpret this movement not as a depressive factor but as a catalyst 12 for the true fulfilment of the social function of urban planning. The argument is that -from an evolutionary perspective-, the fact that there are some potential elements for conscious social change, can be substantiated (one could imagine a democratic refoundation in the perspective of the decline, which includes ecological, social and anthropological challenges 13) even in a degrowth era 14.

The different variants of the strategies of degrowth 15, as an emerging concept, share the perspective of a greater democratization besides the environmental conscience 16. The degrowth is presented in this way as a way of transition towards a socially and ecologically sustainable future 17. Thus, the approach to degrowth is more fundamentally raised as questions relating to the relationship between material prosperity and individual and social well-being 18. The Cohousing movement, for example, is a model for making life more social and greener in an urban context. Cohousing fits perfectly well with economic theories and good practices of degrowth 19.

The key is whether this is possible without traumatic changes in the institutional framework 20. Under what conditions can it be socially sustainable? 21 An interlocking cultural and political shift is needed that embraces degrowth as positive social development and institutional reform. Therefore, sustainable degrowth is not only a structuring concept; is a political and social project that offers a new grouping motto for a social coalition built around the aspiration to build a society that lives better with less 22 23.

In the literature on degrowth, relocation in relation to the mobility of people towards overcoming urban petrification is widely considered as a strategic approach for the transition towards a society of decline. Spatial decentralization can lead to social and environmental consequences that confront the goals of a decrepit society. The maintenance of localization and the change only of the decentralization of decision-making in the planning process, do not necessarily lead to a just and sustainable society. It is essential to have multi-scalar transitional strategies, with careful steps 24, in the context of planning to pursue the urban renewal, based on the mobility of localization. This shows the complex relationship between paradigmatic social transformation and spatial development, and the significant role that urban planning can and should play in the transition to degrowth 25.

In short, the key is the degrowth as defined by Schneider 26 as "An equitable reduction of production and consumption that increases human well-being and improves local and global ecological conditions in the short and long term".

2.2 PARADIGM SHIFT

We operate with a model based on constant expansive growth that does not work when urban redeveloping must be faced. We are not prepared to assimilate and manage both the degradation of the urban environment, and the urban decline itself, because the natural (we think) is that the city grows as long as it does not meet its physical limits. Therefore, when we get signals that do not fit the paradigm we do not stop until we find the cause that allows explaining such behaviour against nature without having to question the paradigm. But the system does not respond. The change must be systemic, it must be total. The objective should be refocused and redefined purposes. That is, the need is to replace the traditional expansive model, for the regeneration of the current urban system.

To do this, new ways of proceeding should be programmed, and at the same time make citizens aware of their obligations and responsibilities, not just their rights. New models of strategic planning instead of shortened planning and millimetre definition. Regarding the way to approach the planning, the procedures and basic methodologies (ideas) that will have to be applied, will be:

a. Prospective planning. That who aims to show the opportunities and benefits of linking territorial foresight tools to urban planning procedures.
b. Management planning. The one that not pretends a direct relationship between needs and spatial display. The fact of granting specific intensities and uses to each and every part of the territory, in fact limits its development to that specification. It is necessary that the planning establishes the objectives, but without limiting their spatial development, in such way, that through that flexibility can be effectively implemented with greater effectiveness the determinations of the purposes of urban planning. Urban planning legislation has no obligation to guarantee the activity of speculators; on the contrary, it has, or must have, the obligation to avoid it. Therefore nothing forces to attribute in detail the buildability to the land. It could (and in my opinion, should) move to a goal-oriented model where the emphasis is on the goals pursued for the city without fossilizing the media. It is necessary to overcome the cult of the plan itself -which is only a mean-to work on planning. This would allow avoiding that the means substitute the ends, to adapt the means to the circumstances of each moment.
c. Continuous planning. Scrum planning. Based on: adopting an incremental development strategy, rather than complete product planning and execution. Basing the quality of the result more on the tacit knowledge of people and the local people involved in self-organized teams, than on the quality of the processes employed. And overlapping the different phases of development, instead of performing one after another in a sequential or cascade cycle.

In addition to emphasizing the objectives, it is necessary to reconsider them regularly and at high frequency. Social needs evolve rapidly and undergo changes that were unpredictable very recently and are elements that drastically condition social configuration. The capacity of adaptation of the urban activity to the new problems is null. It is not about putting planning upside down every four months, it is about outlining the variable parts so that the whole serves better the quality of life of the people.

Regarding the key ideas and concepts of the paradigm shift should be the following, and should guide the nomenclature of urban action in the coming years:

2.2.1 THE EFFECTIVENESS VS EFFICIENCY

The concept of efficiency is commonly accepted. Efficiency understood as optimization or maximization of work done. However, the concept of efficiency forgets the purpose for which the work is developed, so that its ultimate object is better understood by the concept of efficiency. Work can be very efficient, but not effective for the defined purpose. For this, it is critical to link the optimization of the work to the intended end, of the plan to the goal, because in the process of maximizing the performance, effectiveness can be lost if the functionality of the work is not taken into account: its usefulness.

Above and beyond any technological advance, it is necessary to press on the need for efficiency, as a step prior to effectiveness, an idea that dismantles the paradox of efficiency -Jevons paradox 27 -which stated the final increase in the aggregate consumption of the system. The dilemma is between satisfying demand and managing supply. Only by acting, either from both sides, or only from the incentive of demand, goals can be achieved, never only from the stimulus of supply. Focusing on increasing efficiency implies the assumption of the obligation to satisfy demand, even though it may be growing steadily. An approach from sustainability must replace the satisfaction of the demand for the management of available supply, in our case, talking about available and buildable land. The key concept is to overcome efficiency for effectiveness. Because strategies that aim to satisfy the demand cannot be sustainable, ecological or viable.

2.2.2 THE RESILIENCE

Resilience is a dynamic process that ends with a positive adaptation in contexts of great adversity. Resilience is also the term used in ecology to indicate the ability of a sytem to absorb disturbances without significantly altering its structure and functionality characteristics; being able to return to its original state once the disturbance has finished. Factors that foster an ecosystem's resilience give way to sustainability.

What does this have to do with the urban question? 28 Urban resilience is the ability of a city exposed to a threat to resist, absorb, adapt and recover from its effects in a timely and efficient manner, including preserving and restoring its basic structures and functions. This resilience concept is linked to the dynamic concepts of urban development 29. In this sense, resilience is a process and not an immediate response to adversity 30. Being resilient has little, if anything, to do with being invulnerable, but with learning and adaptation 31. Resilience is the key response to climate change, and in that context, education, learning and training must be taken as a key element in strengthening the response to climate change 32.

What holds the present article as a novel concept is that the degrowth is itself resilient 33. As a reaction to aggression, the response of retraction must be considered as the most resilient and feasible of all. This is why a holistic approach to designing, planning and managing resilience is essential, including an assessment of the cultural dynamics and processes within cities as well as their physical elements 34.

The critical issue is what cities and their urban communities must do to move toward a more resilient state in the future. The concept of "urban governance", contributes to the comprehensive management of urban resilience. There is a significant need for a new approach to urban governance to address uncertainties and future environmental and climate change challenges 35.

2.2.3 CRADLE TO CRADLE36 . CIRCULAR ECONOMY. CIRCULAR URBAN PLANNING

In the ecosystems of the planet, there is no garbage, there is a complete closure of material cycles. Our societies can do the same by designing all the products so that the materials are recycled in the same use, or recycled "upwards", meaning that the next use has the same or more value than the current one. The paradigm shift will success with the idea that in any productive process, garbage should be understood as the food of a new parallel process. Abundance and diversity can and should be celebrated whenever the process is closed and the residue of a process serves either as a biological food of that same process, or as a technological food of a parallel process, but always in a circular feedback scheme system.

To understand this concept, in terms of urban land consolidation and therefore planning, it is essential to link with the obvious, but often infrequent: “the time”. Space and time must be linked, that is to say, occupation, land use and its schedule, and its expiration. The planning parameters and their value should be linked more strongly with the validity of the plan itself in their temporal scope and not beyond, and especially linked to the effective use of the land. The urban plan classify the land, but only in what they are in force, although we seem to forget it. The temporal dimension is not rigorously applied and must be indissoluble. The plan should be reviewed from time to time and give flexibility to land use. This is the first step towards resilience and circular urban planning understood as the closure of the life cycle of land use.

Circular urban planning: This new concept deals with incorporating the concepts of circular economy and circular production into urban planning and land use, with the aim of creating intelligent cities that are able to adapt and learn from their own mistakes: resilient cities. Definitely in the planning we must consider this flexibility, the end of life of the buildings, the linkage of the effective use of the classification of the territory, and the closing of the life cycle of the use of the land and to flee of the linear models. In order to reach it, the land must be able to occupy and vacate with the same ease. We must work for it.

2.2.4 SUSTAINABLE MOBILITY VS SUSTAINABLE ACCESSIBILITY: CONNECTED SELF-SUFFICIENCY

Capital in all matters relating to urban planning is the problem of mobility. How to face it? There are only two ways. The first is to mitigate through means of transport of greater environmental efficiency and social efficiency, in particular, the enhancement of collective transport. The second is to reduce the

environmental and social consequences of traffic by reducing physical mobility but increasing other means of connection.

Mobility seeks to bridge the gap between the members of a community and the places where they meet their needs or desires, that is, to enable accessibility. That is to say, accessibility is the objective that, through the means of transport, seeks mobility. The usual logic that equates mobility with accessibility. The confusion of both terms is the basis of the accepted formula that "greater mobility greater accessibility". Under this simplification we have been planning; a criteria that, without improving accessibility -and often worsening it -have had a main impact on mobility problems.

Accessibility not only has one variable -the transport-but it is the result of the interrelationship of multiple variables in which spatial planning and socio-economic organization play a fundamental role. Accessibility is a concept linked to the places, the spatial layout, and the territory.

The objective to be guaranteed should not be to have many means of transport that reach ever greater distances, but to have access to goods and services. Accessibility, therefore, is valued either in relation to the cost or difficulty of movement required to meet the needs, or in relation to the cost or difficulty of the supplies or customers reach the place in question.

Sustainable accessibility thus becomes a more far-reaching approach than sustainable mobility. By facilitating reflection on needs, it facilitates reflection on the construction of urban relations and, therefore, reflection on the city model.

To this end, it is not enough to improve and expand the transport system, it is also necessary to question the spatial or geographical level in which the inhabitants develop: increasing accessibility can only be achieved by increasing the proximity between the inhabitants and of these to their needs. Factors with a critical impact on the processes of construction of the city, in short, concepts that express a new model of society towards which we are headed. In this new scenario, the level of self-sufficiency of regions, cities, neighbourhoods, and buildings is a critical issue.

Everyone should try to solve most of their needs on their site in their territory. In the first place the energetics, but not only them. Cities must work with nature, not against it is the new paradigm. Urban processes will be more stable, the more integrated they are in natural processes and in biological cycles that feeds back.

Connected self-sufficiency 37 is a concept that seeks to opposite the established dynamics, breaking the limits and the usual practice of waste, and oppose the notion of freedom that is linked to the right to waste and abuse natural resources, processes that can forget the links between economy and nature. Connected self-sufficiency understood as optimization of the use of all existing resources, with a tendency to close the cycles of materials and energy in the sites themselves, and as a search for the balance between the logic of natural processes and the advantages of network interrelation.

3 THE IDEA: DEGROWTH GENERATES VALUE.

We are accustomed to deny certain realities: Housing prices never go down; the city expands by its own nature... Jew-Christian culture has taught us to conceive history as a linear progress, so we do not know how to read properly, and less to digest, the phenomena that do not fit in that conception. Other cultures focus on the cyclical aspect of history and are better equipped to understand phenomena that do not correspond to the linear progression paradigm.

Reality shows us that in order to mobilize consolidated urban land, any urban redeveloping operation must plan an increase in urban buildability in that concrete area (an added value), in order to be able to carry out and assume the cost inherent to the dismantling of the existing artefact, and to build the next one.

Given that it is necessary a contribution of an added value to achieve the intended mobilization (putted away the increase of buildability, nor of the public subsidy), taking into account the dispersion and effective loss of the urban critical mass of the periphery, a new mechanism of intervention arises as a way of contributing to that necessary increase of value that switch it on. Indirectly: and if that additional value, that increment, or question of opportunity, comes to be given exogenously?

The line of research that this article advances, matrix of development of the PhD thesis of the author, tries to contribute with a different answer, a new mechanism of intervention in the existing city: the degrowth as generator of value. Active and programmed degrowth as a means of concentration of demand, through the restriction of supply and catalyst of urban redeveloping.

For there to be intervention in the existing city there must be a profit, and as long as it continues to grow and consume virgin land, there will be no possibility of generating an added value in the existing city, so we must intervene in supply not only limiting expansion, but even reducing the occupation. Thus we can generate expectation and added value in the consolidated and non-consolidated urban land which may catalyse its redeveloping. As Brent D. Ryan notes, "Accepting the inevitable decline and abandonment of some neighbourhoods, while rebuilding others as new neighbourhoods with innovative design and planning, can reignite modernism's spirit of optimism and shape brighter future shrinking cities and their residents" 38, to which I add that not only with this resigned acceptance but proving it as a means of generating such added value.

Degrowth, not as a hygienic need or only to reduce the ecological footprint, but applying its effects as a method to generate an increase of value, which rise to the opportunity of redeveloping of the existing urban network. Degrowth not of value, but in terms of consumption of net land and built roof. A form of concentration of value, through the physical net degrowth, but net growth in terms of the resulting final value holistically measured. The challenge is to use the degrowth as a means to generate an increase in urban value and urban qualification.

The investigation will focus on the search for qualitative formulas and catalysts, which excel the increase of value and urban qualification, through land and built areas abandonment in parallel with retraining and integrated efforts in others. The purpose is to demonstrate that resilience and circular urban planning can be achieved through degrowth in the existing city. The ultimate aim should be the requalification to effectively fulfil the social purpose associated to urban planning.

The claim, logically is not to give a panacea that solves all the problems inherent to the sustainability and efficiency in our cities, but to propose a new path that contributes to the achievement of the intended accomplishment and serves as a catalyst for integrated actions.

The challenge is how to increase the quality of life in a context of degrowth 39. This is the real challenge: that degrowth may serve to increase the quality of life of people.

4 RESEARCH OBJECTIVES

The research delves into the search for qualitative elements that facilitate the implementation of hypotheses and catalytic formulas to achieve this; and the study of its consequences. The objectives of the research are:

1. Formulation of the hypothesis and the sensemaking process followed to reach to that conclusion.
2. Identification of boundary conditions that might change in other to allow the implementation of this theory, identifying current and future catalysts.
3. Identification of benchmarks, establishing weighting relations for a holistic and global calculation, necessary for identification of feasible actions to implement the scenario.
4. A real case of implementation study and its consequences: Bilbao and its next step of urban transformation. Contrast between actual growth plans and the application of this theory.
5. The study of cities in rebound: cities in which active hygienic degrowth programs were implemented in the recent past, and now are growing again. Where are they focusing their new growth? It`s interesting to see if this new resurgence is applied in the redeveloping of the consolidated but empty city.

The PhD thesis advances different qualitative aspects on which to influence in order to create the conditions and the appropriate ecosystem for the effective development of the hypothesis. Such as: 1) The review of the property rights. New models.

A. Differentiation between land property rights and built property rights.

- Between built property rights and its use. 2) Sustainable construction. Prefabrication and industrialization. Light construction. 3) The new concepts of urbanization (land transformation), occupation and land use. 4) New concept of relocation in urban redeveloping areas. 5) Investment vs. speculation. 6) Urban planning and foresight. Management planning 7) Continuous planning: Programmatic indeterminacy. Stratification of functions: flexible multiplication and mixed urban uses. 8) The non-place as work space ergo the non-place as living space.

The following are elements that may constitute factors of acceleration catalysts or triggers that facilitate the application of the hypothesis and are part of the PhD research:

1. New concept of the participation of the community in the capital profit of the urban action.
2. New concept of the distribution of benefits and charges in land transformation.
3. New concept of the delimitation of the distribution areas. New zoning.
4. Temporality of the classification of the land´s uses.
5. Reuse. Valorisation of the debris.
6. The duty of conservation by the owner.
7. The duty of disassembly after the use´s end.

5 CONCLUSIONS

Any reflection on Sustainable Urban Planning must start from these two basic assumptions: that growth has limits, and that we have already surpassed them, or we are very close to it. And therefore lead to an immediate corollary: we must stop growth. Degrowth is inevitable in physical terms in order to achieve a sustainable, efficient and effective urban balance. There is no technical solution to the problem 40.

There is an invertment in the pyramid of the population in our society and even a net degrowth in population in many cases. This downward trend has been maintained over time for decades, and all data point to a progression of this trend by the low birth rate. The next generations, those that will occupy what we plan today, will (must) generate a much lower demand for buildable land and buildings. If the empty housing stock data is joined, we will arrive at the rapid conclusion that the city runs the risk of diffusing its critical mass, within a consolidated urban network with multiple dotational deficiencies and low efficiency. We must try to turn this threat into an opportunity.

Likewise, the ecological crisis is a direct consequence of the current social and economic model, based on the exploitation of the resources of the planet beyond any limit. An economic model built on the absurd belief that perpetual and unlimited growth is possible. This is the real Gordian knot that must be eradicated 41.

The question of urban density linked to efficiency, sustainability and the mixtification of uses in the search for a rationalization of transport mobility, inexorably leads to start to think of articulating systems to give added value to the urban estate and to reduce ecological footprint. The problem has much to do with the inadequacy of our cities to the new requirements and demands, and with the lack and the physical deterioration of the endowments in urban land. The challenge is not only due to the intervention in the existing city, but also through the requalification of consolidated and non-consolidated urban areas. Requalification understood as the valorisation of the urban areas in all its extension and measure holistically in all its transversality of disciplines.

The basic question is how to act in the existing urban network. Taking only the paradigm of efficiency through density, the urban redensification must inevitably pass through the liberation of part of the already built areas. It is not materially possible to achieve efficiency by increasing urban density, without achieving in parallel the liberation of the non-dense, or unconsolidated, otherwise the net built area of the urban system as a whole would be grown, obtaining the opposite effect of loss of efficiency (Jevons paradox). But it is not only efficiency the paradigm to follow.

We must reject the traditional urban development schemes: the consolidation of land transformation. Urban petrification should be attacked connecting it with land use. The objective should be to achieve the raise of the quality of life of the people. Urban planning is a public function with an inherent social purpose,

which should be no other than to end socio-spatial inequalities and the system that generates them. We must face the systemic problem that impinges on current urban planning: the practical impossibility of effective intervention in the existing city. Any urban redeveloping operation must plan an increase in urban buildable capacity resulting from the specific area in order to be viable. So we can be able to start assuming the costs of disassembling the existing artefact, in addition to the assignments of the future artefact, taxation and later the new development and buildings. In the current conditions it is necessary to program in the particular area an additional value to the previous one to be able to mobilize it. The new idea that this article presents, focuses on articulating a method that leads to the necessary increase of value, that generates the opportunity of action, allows the viability of the processes of urban redeveloping and makes them possible; through the active degrowth, through the liberation of the urban land and of the buildable areas, as a means of concentration of the demand, by reducing the supply and availability, that concentrates the opportunity, grows the value and catalyses the process of redeveloping.

The ultimate objective is to re-qualify and demonstrate that resilience and circular urban planning (understood as closure of the life cycle in land use) can be achieved through degrowth in existing and consolidated urban areas. Degrowth is itself resilient: Resilience is a process and not an immediate response to adversity. As a reaction to aggression, the response of retraction should be considered as the most resilient and feasible of all. The challenge is to degrowth, not as a hygienic need or only to reduce the ecological footprint, not as an action of mere collateral expense to the system, but as a method to generate an increase of value, that gives rise to the opportunity to the redeveloping of the existing urban network. A form of concentration of value, through physical net degrowth, but net growth in terms of final result value. That is to say:

a. The degrowth as a generator of value. Active and programmed degrowth as a means of concentration of demand, by restricting supply, acting as an urban redeveloping catalyst.
b. The key concepts of philosophy "cradle to cradle" are intuitive and rooted in the imitation of nature: garbage is food, as well as degrowth generates value. Circular economy, circular urban planning.

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ID 1349 | SOCIAL HOUSING POLICY OR SOCIAL POLICY FOR HOUSING? THE ROLE OF THE PROGRAMA ESPECIAL DE REALOJAMENTO (PER) IN THE HOUSING/PLANNING NEXUS IN PORTUGAL

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ABSTRACT: Recent (European) comparative studies in the fields of housing policy and spatial planning have been dominated by taxonomical approaches (attempts at categorising systems and temporal stages of state action) and measures of the 'maturity' of national systems. In this paper, we adopt a genealogical perspective and consider (national and local) cultures central to the shaping of policy (differences and convergence). We set out a long-term, in-depth exploration of the planning-housing nexus in Portugal – a case that helps adding nuances to mainstream theorisation – and focus on the Programa Especial de Relojamento (PER; Special Programme for Rehousing), a programme that has had changing roles (from a financial instrument to a core component of policies of urban regeneration) in connection with political and planning cultures changing in time and space. Our goal is contributing to making sense of the intersection between planning cultures in transition and changing housing policy, namely the generalised shift toward regeneration and concurrent retrenchment of state action – and the relation among housing as welfare ('social housing policy') and housing as urban policy ('social policy for housing').

KEYWORDS: planning cultures; comparative planning studies; policy diffusion; policy generation; Lisbon.

1 INTRODUCTION

In late 2014, while we were preparing the bid for the research project from which this paper stems, most people we talked with – Portuguese scholars with extensive experience in housing, planning and urban research – were quite surprised of our decision to study a programme they considered to be virtually concluded, somehow outdated and indeed not central to the political and academic discussions of the time. The Programa Especial de Realojamento (PER; Special Programme for Rehousing), had been launched in 1993 to provide financial instruments to the municipalities in the metropolitan areas of Lisbon and Oporto to rehouse the thousands of households living in informal settlements, often out-and-out slums. Despite having never been formally concluded, the PER had had its acme during the late 1990s; and much had be written at that time. All in all, most of our contacts seemed almost to suggest that housing, and policies thereof, were not really a central topic in a country undergoing harsh austerity measures – most of which prompted by the memorandum of understanding signed in 2011 when the country was bailed out by the 'Troika' made up of the European Commission, European Central Bank and International Monetary Fund.

The scarce scholarly interest to the PER was surprising in a way. In the wake of the global financial crisis, housing, and its crises, had come back to the centre of international attention (see, e.g., Aalbers, 2016; Madden and Marcuse, 2016; Garcia-Lamarca and Kaika, 2017). In Portugal, it was eventually the recovery, rather than crisis and austerity, to trigger the national debate about housing. While the economic recovery of Lisbon and Oporto, materialised since 2015, has been driven by a boom in tourism and real estate, touristification and gentrification have become central to academic, political and media debate. Habita, a group of activists born in 2005 and constituted as association in 2012, had long been denouncing growing housing problems in the country and evictions of households living in precarious settlements in various municipalities of Lisbon Metropolitan Area (hereafter LMA), made in name of the PER itself. In 2016, Habita succeeded in bringing the UN Special Rapporteur for Adequate Housing to visit Portugal. The report of the visit (Fahra, 2017) highlighted both the risks stemming from gentrification and touristification, and the permanence of situations of precarious housing in informal settlements. In March

2017, the centre-left majority in the national parliament voted a recommendation to the national government, asking a systematic evaluation of housing needs and urgent policy action[1].

We should not be surprised by cycles of scholar and political attention to (issues such as) housing. The recent 'return to housing' has reverted a long-cycle, started sometimes around the 1970s/1980s, during which housing, rather than a central component of welfare, had been considered primarily a commodity to be delivered by the market – see Madden and Marcuse (2016) on the double nature of housing as 'home' and 'commodity'; while the focus of public policy shifted toward promoting the regeneration of the built environment – of which housing would be one, among many, elements. In this paper, we are concerned with the nexus between housing policy, on the one hand, and planning policy, on the other – and the relation among housing as welfare ('social housing policy') and housing as urban policy ('social policy for housing')[2]. All in all, we see, in the sequence of cycles of scholar and political attention, a failure to understand housing holistically, through integrated approaches capable of considering the need for the state to lead both the provision of decent and affordable housing, and the regeneration of the built environment.

As such, this paper is located at the intersection of the (European) fields of comparative studies about housing and planning systems; and uses this intersection to provide a more nuanced framework for their understanding. Both fields have been dominated by 'taxonomic' approaches: housing studies have been dominated by attempts at categorising housing systems and temporal stages of state action; while comparative planning has been especially concerned with measuring the 'maturity' of national systems (see next section)[3]. Our theoretical hypothesis is that such taxonomic approach often fell short from understanding in-depth the dynamics of policy generation and diffusion in a field, housing, which is characterised by complex intersections between policy areas and levels of governmental action.

Indeed, this seems to be the case for Portugal, which we deem a particularly useful field of exploration. Baptista (2013) and Tulumello (2016) consider Portugal a place at the 'borderlands' of, and hence useful to enrich, urban theorisation. With regards to planning system, Campos and Ferrão (forthcoming) have noted that Portugal has an awkward place in comparative studies – possibly a component of the broader difficulty to fruitfully include 'southern perspectives' in the EU debate on planning (Janin Rivolin and Faludi, 2005).

Against this background, we adopt a genealogic approach (cf. Campos and Ferrão, forthcoming) to the issue, in that we consider the long-term perspective, and the production of 'thick narratives' (cf. Flyvbjerg, 2004), fruitful instruments to unravel the relations between multiple levels and scales – e.g. between European pressures in the field of housing and planning, and local planning cultures – in the making of local and urban policies. We shall use the case of the PER, understood within its national context, for our exploration for two main reasons. First, because it is a good example of multi-level policy – the national government provided the funding instruments and general regulations, while local authorities were in charge of planning, design and implementation. And, second, because it allows us to explore the tension between the two dimensions of housing provision and urban regeneration – and between social housing policy, and social (and urban) policy for housing. All in all, the PER can be said to constitute an 'incipient regional plan', in that it is a policy that restructured the regional built environment significantly – in LMA, about 20,000 households were rehoused – but in absence of a proper planning instrument. As such, the extent to which the provision of housing was integrated with larger concerns for urban regeneration was dependent on a set of factors, including the municipalities' approaches and the different phases of governmental action.

The paper is structured as follows. Section 2 reviews existing comparative literature on housing and planning systems in Europe to emphasise the dominance of taxonomic, and static, approaches. In sections 3

and 4, we respectively summarise the recent histories of the Portuguese planning system and housing policy, to provide the backdrop to the study of the PER. Section 5 sets out a genealogical reconstruction of

[1] We collect news about developments in this area on the blog of the project exPERts, https://expertsproject.org/.
[2] Using a distinction suggested by an interviewee (cf. section 4).
[3] The fact that the ongoing process of comparative analysis of planning systems funded by ESPON is still concerned with the measurement of the maturity of national systems (Nadin et al., 2016, 10) shows how the dominant approach has remained quite stable in time.

the conceptualisation and implementation of the PER, focussing on the legislative framework and on the relations between the national government and local authorities. Concluding remarks are set out in section 6. The paper is based on two main sources of evidence: i) review of the original policy documents (laws, decree-laws, reports, governmental programmes…); and ii) a set of in-depth interviews with key informants (scholars, politicians, and civil servants and officers)[1].

2 HOUSING SYSTEMS VS PLANNING SYSTEMS IN EUROPE

This section briefly reviews the European comparative literature on planning and housing systems, emphasising the coexistence of national differences with processes of convergence amid 'Europeanisation' (cf. Börzel, 2002). It should be preliminarily reminded that the EU has never been granted formal responsibility over spatial planning and housing policy; and that convergence is thus the result of less formal processes (e.g. inter-state cooperation), or stems indirectly from convergence of other policy and regulation areas (e.g. finance and macroeconomics, energy, transportation…).

The Compendium of Spatial Planning Systems (CEC, 1997) marked an interest by the EU in understanding differences among member states' planning policies, fostering the burgeoning of comparative planning studies (e.g. Farinós Dasí, 2007; Stead, 2013). The Compendium divided EU planning systems in four 'traditions' (CEC, 1997, 33-37): the regional economic approach (typical of France), the comprehensive integrated approach (Denmark and Netherlands), the land use management (UK) and the urbanism tradition (Italy and Spain) – with other national systems falling in between two or more traditions. The Compendium and most comparative works were interested in emphasising the 'maturity' of the systems; and fostering convergence toward those considered more mature. Maturity was broadly defined in terms of the 'degree of public acceptance of the need for planning', of the 'provision of up-to-date policy instruments', of the 'degree of vertical integration and cooperation between levels of administration', and of the 'existence of transparent and productive consultation mechanisms' (CEC, 1997, 35).

More recently, some doubts have been cast over the dominance of studies about (static) planning paradigms and traditions (see Getimis, 2012; Tulumello, 2015). The field of planning cultures emerged, in many respects, as a different take on comparative studies. Sanyal (2005) adopted a global perspective with the aim of contributing to the deparochialisation of planning studies – in line with post-colonial approaches to urban studies (see Roy, 2009). In Europe, Knieling and Othengrafen (2015) developed the 'culturised planning model' to explore the trajectories of planning policies and processes among EU member states, by way of looking into 'taken for granted assumptions' and 'unwritten patterns of power' (ibidem, 2135). With respects to processes of harmonisation of planning systems amid Europeanisation, Knieling and Othengrafen conclude that: 'adaptational pressures, for example Europeanization, obviously result in the customization of existing structures, frames and policies ("planning artefacts" and "planning environment") but do not necessarily touch the underlying core cultural traits ("societal environment")' (ibidem, 2144).

In the same way, the field of housing and housing systems presents a variegate number of different situations around Europe. Comparative studies (see, from different perspectives, Lundqwist, 1992; Harloe, 1995; Kemeni, 2001; Allen et al., 2004; Alves, 2016; Di Feliciantonio and Aalbers, 2017) have focused on two main dimensions: first, the overall composition of housing systems (types of tenure, weight of public/private/non-profit sectors, quality of the built environment…) and, second, the (national) policy approaches to housing.

This field is marked, despite the differences originated in the phases during which welfare systems had been built before and after the world wars, by processes of convergence in the last few decades. Comparative studies agree on a set of generalised trends, considered crucial components of the transformation (and retrenchment) of welfare state since 1980s amid neoliberalisation. The shift from state-provided social-rented housing towards stimulus of homeownership, support to private/charity social housing, and privatization of public housing stocks are the main trends emphasised. Doling (2006) exposed the development of a (deficient) EU 'housing policy by stealth', made up of the effects of

[1] All translations documents, texts and interviews in Portuguese are ours.

statements about desirable housing outcomes – made explicit in the Kok report (EC, 2004). All in all, the increase of levels of homeownership and private renting (hence decrease of social housing) seems to be 'desirable' for EU policies/politics – i.e., there seems to be a role of EU in the promotion of withdrawal of state from housing provision[1].

At the same time, the shift from provision to regulation and support of private/charity developments has been considered consistent with the transition toward a focus on 'regeneration' of the built environment (Cameron, 1992; Gómez, 1998) – as opposed to the new developments (and modernist planning) in the era of public housing provision. We are interested in making sense of the intersection between planning cultures in transition and changing housing policy, namely the shift toward regeneration and concurrent retrenchment of state action, for both external constraints (including European pressures and recurrent crises) and internal political, if often silent, decisions (e.g. that to favour homeownership over other forms of tenure). In this respect, the Portuguese case, which we shall now turn to, offers many insights.

3 THE PORTUGUESE PLANNING SYSTEM

Historically, spatial planning has had a weak status in Portugal – a situation that is reflected in its relative weakness as a discipline[2]. Despite a brief rush of modernization in the 1930s, until the early 1970s the disciplines. For the most part, spatial planning continues to be taught in Portuguese universities as a sub-discipline within larger academic fields (engineering, architecture, geography, landscape design, law, etc.)' (forthcoming).

Portuguese system had maintained three of its key historical features, namely i) a 'urban' perspective through which spatial planning was managed by the governmental branches and was considered the purview of architects and engineers; ii) the lack of a sound reference framework for spatial planning at the regional level; and iii) a centralized nature, in a context where, however, state initiative and leadership were scarce and the impact of regulations remained relatively weak in confronting the interests of the real estate sector.

Between the end of 1960s and the democratic revolution of 1974 things started to change. The Third Development Plan (1968-1973) is a first example of proactive development scheme based on a regional approach – although it hardly challenged the prevailing perspective or offered any meaningful role to the municipalities. The revolution (followed in 1976 by the first election for local authorities) introduced a dialectic between the tradition of centralism represented by the Directorate for Urban Planning (Direção Geral do Planeamento Urbanistico, DGPU) and the more active Portuguese municipalities such as Lisbon and Oporto. The introduction in 1982 of the municipal masterplan (Plano Director Municipal) signalled the adoption of a more integrated approach and a recognition of the role of the municipalities; however, the masterplans were de facto put on hold by the Directorate since a new law, in 1990, made them mandatory.

Against this background, the decade that preceded the enactment of the PER and the years that immediately followed it (from the early 1980s to the late 1990s) was a period of significant steps toward a more integrated planning perspective at the regional level. A number of different factors contributed to this trend. Politically, this was a period of relative stability, which was also reflected in the long tenure (1985-1995) of Valente de Oliveira as ministry of Planning and Administration of the Territory. Despite the delay in their implementation and the still prevalent focus on urban growth, the municipal masterplans 'introduced into public consciousness the idea that urbanisation and construction had to follow rules […] [and] created, for the first time, a market for specialists in urbanism and spatial planning' (Campos and Ferrão, forthcoming). Local planning cultures were also changing: in 1982 the first master's programme in urban and regional planning opened in Lisbon; while a new, interdisciplinary approach, which conceived housing as a key component of urban planning and development, was developing in centres such as the National Laboratory of Civil Engineering (Laboratório Nacional de Engenharia Civil) (interview, former secretary of state for Spatial Planning and Cities). During the 1990s, professionals trained in geography brought for the first time 'an important contribution to affirming spatial planning as a counterweight to the

[1] For instance, the memoranda of understanding signed with Portugal and Greece by the European Commission and European Central Bank for the recent financial bailouts include provisions for the liberalisation of the housing market.
[2] Campos and Ferrão note that planning's 'multiple affiliations and […] recentness as a technical and scientific domain help explain the absence of any autonomous academic or professional community or associations that represent its various

more “urban” approach traditionally promoted by architects and urban engineers’ (Campos and Ferrão, forthcoming). Finally, the influence of Portugal’s adhesion to the European Community in 1986 was felt also in the field of planning: among other things, Campos and Ferrão (ibidem) cite the European Spatial Development Perspective (ESDP, 1999) and Portugal’s participation in EU programs such as Urban and Urbact as significant factors in the development of Portuguese planning culture and urban policies.

A set of new planning instruments and bodies were introduced with the goal of consolidating the planning system, and inspired to a more integrated and strategic approach in spatial planning, such as the Regional Spatial Plans (Planos Regionais de Ordenamento do Território, PROT, introduced in the early 1980s), while in 1990 municipal masterplans became a mandatory requirement for municipalities to apply for EU funds and expropriate land – a single act that allowed Portugal to move, in a decade or so, ‘from a situation in which the existence of mandatory land-use plans was the exception to one in which the entire country was covered by such plans’ (Campos and Ferrão, forthcoming). In 1994, the Programme for Consolidating the National Urban System and Supporting the Implementation of Municipal Master Plans (Programa de Consolidação do Sistema Urbano Nacional e de Apoio à Execução dos PDM - PROSIURB) introduced strategic planning. In 1998-1999, the new ministry of Infrastructure, Planning and Territorial Administration, passed a comprehensive reform of the planning system (Spatial and Urban Planning Policy Act, Law 48/1998) which defined and regulated spatial planning as an autonomous policy area; introduced for the first time a clear-cut distinction between the statutory and developmental arms of the planning system; and harmonized Portuguese planning law with key principle derived from ESDP process.

Finally, some local experiences were important in this general trend toward a more integrated planning perspective. In Lisbon, the new socialist mayor, elected in 1989, created a Strategic Planning Department, which oversaw the preparation of the municipal masterplan (approved in 1994) as well as of Lisbon’s Strategic Plan (1992); at the same time, a regional plan for the LMA was approved (PROT-AML, 1991) (Oliveira and Pinho, 2010, 411-414).

Even during the 1990s, however, and despite the progress we have described, the planning system remained marked by serious imbalances. In their review of Portuguese urban policy in that decade, Domingues, Portas and Sá Marques (2007, 312, 318) note that:

> *[a] paradoxical framework thus exists, in which initiatives with greater urban incidence are a result of the central government’s sectoral policies or of special programmes and projects, which are limited in scope and articulation […]. If we exclude the exceptional character of EXPO’98 […] everything else can be summed up as sectoral investments commanded by the central government, responding to basic priorities providing infrastructures and expanding the coverage of social policies (new facilities, rehousing programmes, combating poverty and intervention in critical areas).*

This is certainly the case of state intervention in the field of housing, and of the PER specifically, that will be discussed in the next sections. Carmo et al. (2014) point to the difficult relations between housing policy, housing system and spatial planning, emphasising the weakness of statutory instruments, incapable of regulating urban growth but at the same time too rigid to allow for the regularisation and upgrade of the growing number of informal settlements; and pointing to the excessive dependency of municipal authorities on the issuing of building permits as a source of financing.

4 HOUSING POLICY IN PORTUGAL

The Portuguese housing system is consistent with dimensions highlighted for the Southern European context (Allen et al., 2004; Costa Pinto and Guerra, 2013; Di Feliciantonio and Aalbers, 2017): high levels of private ownership and low levels of social rented housing; high proportion of secondary homes; strong role of families in access to home; and significant role of self-promotion in the production of housing.

Allen and colleagues (2004) suggest to go beyond simplistic explanations of such characters, according to which Southern European countries are ‘lagging behind’ in the implementation of (public) housing when compared with more ‘advanced’ European countries. Allen and colleagues instead suggest to use a more complex understanding grounded on the concept of ‘public action’, that is, ‘a way of looking at housing issues and housing policies as the outcome of a system of relationships among the different actors

involved' (ibidem, 157). The absence of a large social rented sector in Southern European countries is thus explained on three main factors (ibidem, 166): i) 'a strong political inclination in favour of home ownership', considered to be an effective way to achieve social sustainability; ii) the sale of the public rented housing stock as a result of institutional difficulties to manage it; and iii) an orientation of public administration toward 'implementing rules to control private initiative, rather than developing "entrepreneurial attitudes" within the public sector'. Focusing on the case of Italy and Spain, Difeliciantonio and Aalbers (2017) trace the 'pre-histories' of Southern European housing policies in the fascist era. These approaches are relevant for our purpose in that they focus on the intersection between contextual peculiarities and common trajectories, including those of neoliberalisation and globalisation.

Sketching the historical trajectory of the Portuguese housing policies, and its peculiarities amid the aforementioned Southern European context, will help us make sense of the way the housing system has been shaped at the intersection of policy, planning and wider trends.

Similarly to what we have emphasised with regards to planning policy (cf. previous section), multiple contradictions characterise Portuguese housing policy (Allen et al., 2004, 165). Public housing was introduced in early 20th century and a significant stock has been built in major metropolitan areas during time; however, this has been constantly sold to tenants willing to buy. Housing policy during the dictatorship (1933-1974) was characterised by the primacy of private intervention and paternalistic public interventions to accommodate dramatic situations and prevent potential conflictual situations (Serra, 1997). All in all, public housing and housing market were not capable of accommodating population growth and rural-urban migrations. In early 1970s, the situation was dramatic in Lisbon and Oporto metro, where dozens of thousands of households were living in informal settlements, in conditions of overcrowding or in houses without decent conditions.

With the end of the dictatorship, housing emerged as a major public issue, with the proliferation of protests, occupations and self-organisation practices (Santos, 2014). The 'right to housing' was included in the democratic Constitution (art. 65). Programmes to implement social housing and improve informal settlements were launched, the most famous being the Local Mobile Support Service (Serviço de Apoio Ambulatório Local, SAAL) (Portas, 1986; Bandeirinha, 2007). Though such programmes are the first attempts at making housing policy a core element of urban policy (interview, researcher and former IHRU board member), they were insufficient in scale and time to bring about structural transformations. All in all, public action was not capable of taking the lead in regulating urban growth and housing promotion (Serra, 1997). Since the 1970s, three channels existed to access housing (interview, researcher and former IHRU board member): private construction oriented toward homeownership (by large the most important), public housing to rehouse from illegal settlements, and co-ops.

Toward the end of 1980s, the shortage of housing was still a major problem, for a set of reasons (Ferreira, 1988, 55-56): absence of a comprehensive national housing policy (also because of the 1977 intervention by the International Monetary Fund, which froze the launch of public housing developments); relevance of land property in processes of accumulation – this being quite typical of Southern European countries (cf. Salzano, 1998; Garcia, 2010); a model based on big developments (public and private); weaknesses of the financing system; and scarce technological and organisational development in building industry.

Public action shifted progressively further away from housing provision in the following times. The transition is considered to have been completed during the governments of Cavaco Silva (1985-1995). The building sector was liberalised, paving the way for the boom of investments in real estate and construction after the adhesion to the European Community. Since then, housing policy was primarily shaped through a series of mechanisms for stimulus and subsidising of homeownership (Serra, 1997; Allen et al. 2004, 165; Santos et al., 2014), which were provided by the Department of Finance, rather than that of Housing – a 'concealed' housing policy, according to a former secretary of state for Housing (interview). Overall, between 1987 and 2011, 17.9% of public expenditure in housing was used for provision (basically, the PER), while 73.3% was funnelled to subsidies to homeownership and 8.7% to subsidies to rent (IHRU, 2015, 4). The housing sector and housing policy (including the state) played a crucial role in the financialisation of the Portuguese society and its 'semi-peripheral' economy, characterised by a weak welfare state balanced by a strong 'family welfare' (Santos, 1985; Santos et al., 2014).

Amid retrenchment of state action in housing promotion, a growing emphasis on urban renovation and regeneration is found (see, e.g., Guerra et al., 2005). One of our interviewees, a civil servant responsible

for several projects of renovation in Lisbon, suggested that one should more properly talk of public support to private renovation (see also Tulumello, 2016, 122-124). Indeed, the investment in this area was always a minimal quota of total expenditure (cf. IHRU, 2015).

The most comprehensive attempt at structuring housing policy within urban policy in tight relation with regeneration was made by the socialist government in charge between 2005 and 2009. For the first time no secretary of state for Housing was appointed, and the competence over housing given to the secretary of state for Spatial Planning and Cities. An expert, one of the most known professors of geography and spatial planning in the country, was appointed. The attitude of the government was signalled by the transformation of the National Institute for Housing (Instituto Nacional da Habitação, INH) into the Institute for Housing and Urban Regeneration (Instituto da Habitação e Reabilitação Urbana, IHRU).

The former secretary of state for Spatial Planning and Cities, interviewed, stressed that his goal was transitioning from 'social housing policy' (politica de habitação social) toward 'social policy for housing' (política social de habitação) – i.e. articulating the right to housing within the right to the city and housing provision within urban regeneration. This made particular sense, in his opinion, in relation to the rigid subdivision of responsibility for housing in the country. After 1974, with the creation of local power and processes of decentralization (but in a framework of a centralised state; cf. Seixas and Albet, 2012), housing policy was considered a proximity policy, to be led by municipal authorities. At this level housing policy tends to be considered an urban policy, in close connection with urban planning—'the "land rights statute" passed by parliament in 1976 and other complementary land policy instruments approved in subsequent years, aimed at applying the constitutionally enshrined rights to housing and to an orderly territorial development' (Campos and Ferrão, forthcoming)[1]. At the state level, instead, housing is mainly considered an issue of financing and public works – 'giving people a home' (dar casa às pessoas) in the words of many of our interviewees. Indeed, INH and its predecessors have basically been financial institutions.

The former secretary of state admitted that he found many pushbacks of institutional and political nature, among which: the difficulty to transform the IHRU from a financial institution toward a promoter of housing/regeneration policy (this being confirmed by the president of IHRU appointed by the secretary of state, interviewed); a bipartisan consensus on the importance of homeownership; and processes of alienation of public housing stock already ongoing when he took charge. The former secretary of state also admitted that the failure to pass a national strategy for housing policy made most reform attempts vain.

All in all, it is hard to find a general consensus over the Portuguese housing policy. For one interviewee, professor in sociology and urban studies: there has never been a housing policy in Portugal. There have been packages [pacotes] […]. Why packages? Because one can control goals, and funds allocated to it, better. Now, an integrated housing policy, thinking of housing needs and solutions, this is something… There was the strategic plan[2], but, how you perfectly know, it was praised, but remained in the drawer. It has no influence whatsoever.

This is an idea shared by many of our respondents (former secretary of state for Spatial Planning, professor of urban sociology). However, another interviewee (researcher and former IHRU board member) believes that the Portuguese experience with housing policy shows a 'path', in which some ideas, generated more or less consciously during earlier eras (like with the SAAL) consolidated in later stages (like during 2005-2009).

In the years following the economic crisis, the centre-right government – amid the pressures of external borrowers who bailed out the country in 2011 – enforced a harsh austerity agenda (Pedroso, 2014; Seixas et al., 2016), clearly steering away from the previous reforms: during those years housing policy was marginal to the governmental agenda. As of today, according to an interviewee, professor of urban sociology, housing policy is exclusively 'local', in that virtually no state intervention exist. However, amid political and public pressures following the visit to Portugal of the UN Special Rapporteur for Adequate Housing (see introduction), members of the new centre-left government and parliamentary majority

[1] On this distinction there are different interpretations. For instance, one interviewee, researcher and former IHRU board member, agreed that 'not much [of housing] falls in the state's competences'. However, two other interviewees, former secretary of state for Housing and a professor of sociology and urban studies, referred that communist municipal governments did not want to cooperate into the PER because they believed that housing policy (or, at the very least, funding thereof) is a state responsibility.
[2] The reference is to the aforementioned attempt made in 2005-2009.

(including a congresswomen we interviewed) have referred to ongoing processes for the promotion of a general housing law.

5 THE PER AND/AS URBAN REGENERATION

In this section, we shall discuss the role of the PER, launched in 1993 and not formally concluded, in the aforementioned framework. The PER has been the main – at least in terms of funding – program of housing provision in the democratic Portuguese history. Its goal, stated in its instituting Decree-Law 163/1993 was that of 'getting rid of shacks' (erradicar as barracas). As we noted before, the incapacity of housing policy and market to accommodate housing needs resulted, among other problems, in the production of following waves of informal settlements – where settled rural-urban immigrants before 1974 and, afterwards, mainly populations (of both Portuguese and African descent) migrating from the liberated colonies. Understanding the extent to which the goal of 'getting rid of shacks' has been a component of wider attempts at urban regeneration – or rather a sectorial housing policy – is the main question we shall try to answer. In order to do so, we adopt a 'genealogic' approach (cf. Campos and Ferrão, forthcoming), reconsidering the history of the PER and of regeneration policies in the light of the context sketched above.

5.1 BEFORE 1993: INFORMAL SETTLEMENTS AND EARLY POLICY RESPONSES

Before 1993, some policies for the regeneration and refurbishment of the built environment had provided some responses to the problem of informal settlements, still falling short of 'solving' it. In 1985 the socialist government launched the Programme of Urban Refurbishment (Programa de Reabilitação Urbana, PRU), expanding to public spaces the interventions on degraded housing stock that had took place under the Programme for the Recovery of Degraded Buildings (Programa de Recuperação de Imóveis Degradados, PRID). The PRU made available additional financial resources and foresaw the creation of local technical committees[1], as well as the 'temporary rehousing of the building to be recovered […] [or] their permanent rehousing whenever needed' (Ruling 4/SEHU/1985, line c, point 4), integrating housing policy in the broader framework of urban policy. The PRU did not identify a specific field of intervention; not being restricted to intervention in the historical centres (Pinho, 2009, 846), the PRU could cover rehabilitation projects in any degraded area, including informal neighbourhoods. However, a few months later, the publication of the Decree-Law 366/1985 established 'the guidelines for investments by municipalities and the state to promote programmes of social housing, in areas of the country that are especially in need of interventions and are destined to rehouse the population living in informal settlements'.

During the decade of centre-right governments led by Cavaco Silva, urban policy developed with the goal of defining 'programs to counterbalance the macrocephaly of the largest urban centres' (Program of X Constitutional Government, p. 29); in this context, the government's program mentioned the 'rehabilitation of the illegal urbanisations through the cooperation with local authorities of the metropolitan belt' (idem). This was the only intervention of urban regeneration defined by the government in this first phase.

Cavaco Silva's electoral campaign of 1991 seemed to mark a turning point in this respect (Ferreira, 1993a, 4). Pressured by the public opinion and the opposition parties[2], the prime minister acknowledged the relative neglect of pressing housing issues in the previous years; and promised a more incisive action in the field of housing policy in his next mandate (idem). This promise, however, remained forgotten until 1993, and public investment in housing policy remained stagnant until that date (idem).

A few months before the enactment of the PER, an experts' committee was formed on the initiative of various organization operating in the field of housing. The committee published the influent White Paper on Housing Policy in Portugal (Livro Branco sobre a Política de Habitação em Portugal; Ferreira, 1993b). The White Paper called for a '500,000 houses plan' (Ferreira, 1993a, 51-52), and the creation of a publicly owned stock of lands to be destined to the plan. Out of the total of 500,000 houses to be built, some

[1] Local technical committees had been part of the initiatives launched after the democratisation to support decentralisation and improve technical skills in municipalities (Pinho, 2009, 837).

[2] For instance, the socialist administration of Lisbon launched a campaign to advocate more funding and technical support to municipalities with the goal of solving the problem of informal settlements (see CML-DGSPH, 1990).

60,000 (Ferreira, 1993a, 17) were indicated as instrumental to the 'provision of socially rented housing on an appropriate scale, in order to allow for the elimination of the informal settlements and illegal urbanisations existing the metros of Lisbon and Oporto' (ibidem, 45). This social housing stock was supposed to adopt an investment and management model characterized by (ibidem, 45, 52): partnerships between central and local authorities; the 'creation of regional housing companies, especially in the metros of Lisbon and Oporto, collecting financial and other resources from the central administration and the municipalities'; the establishment of residents' associations; the adjustment of the rent levels of the social housing sector to market value; the refurbishment of the public housing stock; and the introduction of the possibility to sell public housing units to tenants.

The White Paper also suggested the integration of the programs for rehabilitation of the existing public housing stock into a wider refurbishment programme including 240,000 housing units (ibidem, 16), which was also expected to contribute to reducing the need for building new social housing developments. In short, the White Paper sought a more systematic integration between the goals of housing provision and urban regeneration; an integration that was however absent in the PER and its surrounding policies launched by the centre-right government – whose discussion we shall now turn to.

5.2 1993-1995: PER AS A FINANCIAL INSTRUMENT

Amid a growing public and political debate about the pressing housing issues, in 1993 the government launched six different measures, announced as a comprehensive 'housing package' (pacote da habitação) – the Decree-Law 163/1993, which established the PER in the metropolitan areas of Lisbon and Oporto, being part of it. The PER followed the suggestions presented in the White Paper in relation to the need to 'getting rid of shacks' and rehouse the families of residents; to the cooperation between central and local authorities; and to the adoption of a system of subsidised rents. However, differences between the Decree-Law and the White Paper were significant, and especially: in relation to the nature of the funds financing the programme, because the White Paper's suggestion for the creation of a national fund for housing with the contribution of workers and private companies was discarded; with regard to the modality of rehousing, insofar, in addition to new developments, the PER envisaged the possibility to purchase on the market, while the White Paper focused on refurbishment; and because the Decree-Law of the PER did not provide any guidelines as to the management model of the new neighbourhoods.

The emphasis on the complementarity between new construction and the purchase of housing units on the market is a significant illustration of Cavaco Silva's housing policy. The PER aimed at stimulating the 'contribution of the market' for the development of the social housing sector – something that was made possible without specific policies supporting private initiatives towards that goal. For this reason, equally important to the PER was a second Decree-Law launched in the context of the 'housing package', designed to reform the legal regime of the contracts for the development of housing (Decree-Law 165/1993) – contracts signed by public institutions and private companies for the construction of affordable housing units. In short, the new regime made easier for private developers to participate in the development of the social housing sector and public facilities.

The land policy, one of the cornerstones of the White Paper (Ferreira, 1993a, 59), was completely forgotten in the PER and in the 'housing package'. Though another Decree-Law (164/1993) acknowledged the 'lack or relative scarcity of land that would allow construction at affordable prices', interventions on this issue remained limited to allocating publicly-owned land for construction – and did not include, for example, an effort to counter speculation in real estate. Similarly, the only dimension of 'urban regeneration' included in the Decree-Law was the obligation to demolish the shacks once the rehousing had been completed.

In the words of an interviewee, former secretary of state for Spatial Planning, In my opinion, the PER was a financing instrument based on an agreement with local authorities. What happened is that some local authorities had a more strategic vision and included the PER in wider [urban] interventions, others [did not] […]. Let us be crystal clear, the PER was a funding instrument. Nothing more than that. The ways it was adopted by each local authority may have been different […]. Virtually no one in [the field of] spatial planning considered the PER a spatial planning instrument.

5.3 1995-2001: STEPS TOWARD AN URBAN POLICY?

The socialist government that take charge in 1995 prioritised speeding up the implementation of the PER. In an interview, the secretary of state for Housing of that government considered that the previous government had virtually not acted to implement the rehousing. Indeed, the rate of expenditure accelerated dramatically after 1995, peaking in 1999 (IHRU, 2015, 8). The PER was amended and further new regulations approved (Law 34/1996; Decree-Law 79/1996; Diploma 420/1996; Decree-Law 30/1997; Diploma 371/1997). On the one hand, the obligation to demolish the settlements was extended to the shacks included in the surveys but abandoned by the households before the rehousing (hence often inhabited by households not eligible for the PER) – a situation that, according to some civil servants we met during the fieldwork, is affecting many households still today. On the other, the so-called PER-Famílias (PER-Households) was introduced to allow individual households to use the financial instruments of PER to enter the private housing market. Two subsequent socialist governments (1995-1999; 1999-2002) operated to make the PER more flexible. During the tenure of the first socialist executive, many significant measures were implemented to that goal; indeed, for the first time in the history of democratic Portugal the housing portfolio was placed in a ministry responsible for urban and regional planning, the ministry of Infrastructure, Planning and Territorial Administration – although the next executive reformulated the organizational chart separating once again the portfolios for planning and housing.

Looking at those years, and especially those of the first socialist government, we can make sense of the relationships between the rehousing process, on the on hand, and urban regeneration goals and spatial planning policies, on the other – in that the overall governmental strategy had to be mediated, and was possibly even contrasted, by local political and planning cultures.

As for the integration of PER with urban regeneration goals, in the first stage, having the PER being designed basically as a financial instrument, the decision whether to make the rehousing a component of a wider policy of urban regeneration was delegated to local authorities. According to the report on the state of the PER released in 1999, only six out of 18 municipalities of LMA had included urban refurbishment and regeneration among their goals (Guerra, 1999, 57). The same report emphasises that 'only a fraction of the municipal authorities involved looked at the PER as part of a broader strategy of territorial regeneration' (ibidem, 60). Importantly, the report highlights a different attitude in Oporto metro, emphasising the importance of local politics and planning cultures in the shaping of the implementation of PER.

In absence of interest of local authorities to act beyond the simple provision of housing, the socialist government signalled a different attitude, starting to work with local governments and deciding to use EU Structural Funds to complement the rehousing process with the provision of public services and businesses (interviews with a former secretary of state for Housing and a civil officer in the national Department of Housing). In 1996, the sub-programme Operational Intervention for Urban Renewal (Intervenção Operacional Renovação Urbana, IORU), originally designed by the previous centre-right government to buy land and build infrastructures, was reformulated to allow for the construction of open spaces and public facilities, and to support the establishment of small private enterprises (Coutinho, 1997). By widening the offer of programmes intended to complement the PER's limitations[1], the socialist government also established a more integrated approach in relation to the goals of the housing policy: the socio-economic integration of the rehoused families was therefore seen also in its territorial dimension and in the context of the urban planning and development.

A 1997 survey, included in the abovementioned report (Guerra, 1999), indicated that the IORU was the complementary programme that municipalities used the most, followed by the sub-programme Integrated Operational Interventions (Intervenção Operacional Integrar, IOI; a component of the Health and Social Integration axist of the second EU Community Support Framework, 1994-1999), and then by the Anti-Poverty Programme (Programa de Luta Contra a Pobreza). This situation illustrates the strong dependency of the PER-related urban regeneration processes to the dynamics of EU funds. Once again, a more systematic use of European funds to integrate urban regeneration actions with the PER was found in Oporto metro (ibidem, 66-68). Among the other programs that complemented the PER, and beyond the

[1] The Decree-Law establishing the PER only referred to the Anti-Poverty Programme (Programa de Luta contra a Pobreza).

abovementioned examples, we can mention the Urban initiative – following the report, in 1997 only two municipalities had applied for these funds, one in the Lisbon and one in Oporto metro (ibidem, 67).

As for the relation between the PER and spatial planning policy, another dimension highlighted by the report (Guerra, 1999) is a lack of any significant influence of the PER on planning policies in the LMA – and, more broadly, on local policies at municipal level. The authors of the report argued that this situation had two reasons (ibidem, 60): first, the acknowledgement, by local municipalities, of those problems that the PER intended to solve was still not a central policy goal; and, second, the PER was implemented when the municipal masterplans had been already completed. Indeed, for half of the municipalities, the PER arrived in a late phase of elaboration of municipal masterplans, which were mostly approved between 1993 and 1994. For the other half of the municipalities, however, the two processes developed more or less in the same years, with the municipal masterplans approved between 1995 and 1999. Following Guerra (ibidem, 71), in 1997 the municipalities that were developing PER actions of average scale (in relation to the number of rehoused households) presented the highest rate of progress with respect to the established timeline (>25%). This observation led the authors of the report to conclude that the presence of either a relatively large or a relatively small number of households to be rehoused was a factor in delaying the action of municipalities. However, we may wonder – for example in the case of Sintra, a municipality implementing a medium-scale PER action, which had attained in 1997 the highest rate of progress in the northern part of LMA (46.20%, against a national average of 20%) – whether the pace of implementation was not also speeded up by the lack of a valid municipal masterplan.

The Decree-Law 156/1997 introduced more flexible procedures for introducing changes in municipal land use regulations in areas interested by rehousing programs destined to the residents of informal neighbourhoods. Through the provisions of this Decree-Law, the municipalities were allowed to change their land use plans whenever these changes were required for the construction of rehousing sites, even if this implied introducing changes to previous destinations of use, building regulations and development plans. Indeed, the following two years were the two with most budgeted operations (IHRU, 2015, 8). Surprisingly, this provision, which created a 'quasi-emergency' state for the implementation of the PER, has not been noticed by academics and policymakers and none of our interviewees remembered such possibility – the only notable exception we could identify is a brief mention in a 2006 article on urban planning and social cohesion (Fernandes, 2006).

5.4 2002- DEMISE AND REBIRTH OF THE PER

A new phase for the story of the PER opens up in 2002 with a new change of government from centre-left to centre-right. In the structure of the new government, housing and planning are separate again, and for the first time a ministry of cities is created (Ministry of Cities, Spatial Planning and Environment). The program of the new government (Program of XV Constitutional Government) adopts a discourse in line with the 'European' mainstream. The key objective of housing policy became the creation of incentives for the refurbishment of existing buildings and the revitalization of the rental market (vs. the previous emphasis on new constructions and homeownership); as far as social housing was concerned, the main goals became the definition of policy instruments for the renewal of the existing housing stock and ensuring the progress of the PER.

In line with the governmental goal to 'reduce the role of the State in the development and management of housing provision' (Decree-Law 199/2002), the new 'urban policy' (política para as cidades) had urban regeneration at its core – despite the lack of national resources invested in this field, whose development, with the exception of the programme POLIS, remained almost completely dependent on EU funds and private investments (cf. Baptista, 2013). The PER followed this pattern, shifting away from construction and toward regeneration by a new set of amendments (e.g. the Decree-Law 271/2003), which opened up the possibility to sell municipal housing units built with the PER or other municipal programmes. Also, for the first time the municipalities were allowed to use PER funds to build public facilities and services. In 2004, the new PROHABITA programme was launched (Decree-Law 135/2004), providing a broader framework for rehousing interventions outside of the metros of Lisbon and Oporto (previously endowed of limited funding under the provision of Decree-Law 226/1987) and extending the provision of the law to all situations of severe housing stress (while the PER had been limited to interventions in informal settlements).

Despite the introduction of significant conceptual, legal and operational changes in the field of housing policies, however, the national budget approved for 2003 introduced a set of limitations on the municipalities' ability to borrow funds. While it did not affect the projects already budgeted, the new provision rendered virtually impossible the signing of new contracts for PER developments. At the same time, stricter budgetary requirements pushed the municipalities to sell out the council housing stock to fund new developments. Even before the passing of the 2003 state budget, various municipalities had voiced their concerns about the possible demise of the PER (see Morais, 2002; Lusa, 2002); indeed, this proved to be the case after 2003, with the expenditure for rehousing plummeting in the following years (IHRU, 2015, 8) – and a parallel rise of critical voices (see Simão, 2003; Felner, 2003).

After a parenthesis of three years the Socialist Party took back control of the government in 2005. Under the goal to integrate housing policy in the broader framework of urban and regional planning (cf. section 4), the government vowed to conclude the implementation of existing rehousing programs, and to promote a policy of regeneration within and beyond these programs. Two flagship initiatives were launched. First, a pilot programme for the regeneration of 'critical neighbourhoods' (Iniciativa Operações de Qualificação e Reinserção Urbana de Bairros Críticos, IBC). Second, an amendment to the PROHABITA programme (Decree-Law 54/2007) was introduced to address the cases of households not originally included in the PER and subsequently evicted from demolished settlements (a problem which has recently been at the centre of activist mobilization; cf. introduction). This last intervention constituted an emergency measure rather than a long-term solution – a constant in recent Portuguese history, in which a trade-off existed between the urgency of the process of slum clearing and the rights of the residents that were not included in the original PER survey of 1993.

The PER seemed to have reached its final stop after 2010, when the global financial and economic crisis of 2007-2008 started to hit Portugal. A year later, the socialist government was forced to ask for international financial help, and on June 2011 a new, centre-right government took office. Under the new government, marked by a policy of austerity (Seixas et al., 2016), rehousing programmes progressively came to an end, while demolitions and evictions multiplied – in the vast majority of cases, without any housing solution being offered to the evictees – especially in the municipalities of Amadora and Loures. It was only after the return of the Socialist Party to the government (as majority stakeholder of a parliamentary coalition including the Left Bloc and the Portuguese Communist Party), that a new phase for the PER and Portuguese housing policies seems to be opening. Indeed, in the context of the renewed attention to housing, left-wing political parties have asked not just new policies but precisely a 'new PER' to solve, once and for all, the issue of precarious settlements in Portugal (Henriques, 2017).

6 CONCLUSIONS

Twenty-four years after its launch, and a decade or so since it has been considered de facto a dead policy, the PER seems to be reborn from its own ashes. Its history is useful to add some nuances to consolidated ideas about housing and spatial planning in Portugal and, by extension, Europe.

All in all, there is general agreement that the PER, influenced by some longstanding feature of the Portuguese system, ultimately 'failed to establish genuine city policies' in the same way previous programs did (cf. Campos and Ferrão, forthcoming). The main reasons for this failure may be identified among two main lines: first, the lack of top-down coordination and, second, a strong dependence on local planning cultures and changing national governmental goals; in other words, the missing institutionalisation of the programme into a 'plan' with cogent and regulatory power. On the one hand, this confirms to some extent that the Portuguese planning system is not 'mature' according to the mainstream definition of the Compendium (CEC, 1997; cf. section 2). But, on the other, a careful historical reconstruction shows how the static understanding provided by the 'maturity' framework does not help much in casting light over the complex political and multi-scalar dimensions through which a complex policy such as the PER is implemented in a period of time of almost a quarter of century; and confirms the need to integrate taxonomical comparison with in-depth, genealogical analyses.

Indeed, the history of PER casts some shadows over traditional interpretations of the relative underdevelopment of Portuguese (and Southern European) welfare, namely the stress on the temporal 'delay' with respect to European transformations (see, e.g., Giannakorou, 2005; Seixas and Albet, 2012). At a first sight, the PER was a (late?) policy against the mainstream, so to speak, in that it was a massive

programme of housing provision, in a time in which states were abandoning the provision of housing in the first place. However, we saw how the big chunk of funding for housing in Portugal since the 1980s was made up of the subsidies for homeownership – in line with the pressures by global and European institutions – even in the years when the expenditure of PER peaked; perfectly in line with European trends more widely. As such, our case reinforces the idea that the study of policy 'paradigms' only partially helps making sense of processes of policy conceptualisation and diffusion, in that it conceals what is more often characterised by conflict among permanence and changing patterns, and tensions among different levels and scales (cf. Getimis, 2012; Tulumello, 2015).

With regard to the relation between 'social housing policy' and 'social policy for housing', the PER has had an ambiguous, multifaceted nature. Created as a financial instruments for provision of public housing (by a government whose goal was reducing state intervention in housing), the PER became a pivotal element of attempts (by different governments) at shaping and institutionalising a national urban and regeneration policy; and back and forth, following the alternation of governments and their political goals. At the same time, the various phases were mediated by the relation with local authorities and local planning cultures. This story unravels many of the tensions between provision and regeneration; in that the shift to regeneration seems to be, at the same time, a necessary complement to previous policy approaches and a rhetorical instrument in the context of state retrenchment. A perfect example of this are the reforms by the centre-right government in 2002/2003, which made possible using PER funding to provide public services and stimulating urban regeneration, at the same time as they virtually killed (or, better, hibernated) the programme through financial provisions. All in all, the relation between housing policy proper (as conceptualised and implemented in connection with urban and planning policy) and economic and financial policy seems to be a fruitful field for further discussion – e.g. by way of exploring the way housing policies have often been 'concealed' as financial supports to homeownership while housing policy proper was being cut in the name of sound national finances.

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ID 1374 | CONTRIBUTION OF SPATIAL PLANNING TO AFFORDABLE HOUSING IN AUSTRIA

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1 INTRODUCTION

Developing the affordable housing stock is an ongoing political and social challenge with great relevance for ensuring equal living conditions and social peace. With the aim of providing a certain share of low priced dwellings, planning authorities seek to mobilise suitable plots of land and support developers with subsidies. These mechanisms are complex and therefore the coordinating board for planning in Austria, the Austrian Conference on Spatial Planning, started a so called 'partnership' by bringing relevant stakeholders together to evaluate the actual contribution of spatial planning to affordable housing. As a result, recommendations were formulated that now serve as policy guideline for the further development of planning instruments towards a flexible and demand orientated Affordable Housing production. The paper sums up the stakeholder discussion and depicts the current challenges and potentials spatial planning faces in Austria. Thereby, the paper contributes to the international discussion of developing planning instruments and approaches.

2 AFFORDABLE HOUSING IN A PLANNING PERSPECTIVE

The production of a building stock holding affordable dwellings for people with low income or in difficult social situations represents a continuous and challenging state assignment. The political approaches and regulatory frameworks differ widely among countries and spatial planning has therefore a variable importance for Affordable Housing. Nevertheless, the provision of adequate housing gets discussed from international to local level and experiences large media interest. In 2016, the HABATIAT III conference in Quito, Chile reinvigorated the global commitment to a sustainable urbanisation and set the focus to the implementation of the 'New Urban Agenda'. This agenda got adopted in the end of 2016 (United Nations, 2016) and emphasises a sustainable urban development which amongst other goals aims to provide affordable and sustainable cities to foster prosperity and quality of life for all. Affordability plays an important role throughout the declaration and is also strongly associated with spatial planning to for instance facilitate a social mix. The subscribers also declare to "… encourage the development of policies, tools, mechanisms and financing models that promote access to a wide range of affordable, sustainable housing options …" (United Nations, 2016). The New Urban Agenda illustrates the global commitment but needs ambitious national implementation now.

The European Union as a supranational organisation is authorised by the member states of to set union wide regulatory frameworks for sectoral subjects to foster economic cooperation and growth. Housing though is fully reserved to the member states and their national regulations. That also accounts for spatial planning which is an individual responsibility of the member states.

The Austrian approach to 'Affordable Housing' is strongly linked to political ideologies and the social, political and economic developments that have taken place in Vienna in the beginning of the 20th century. The liberal land market in the then empire lead to large scale real estate speculation, mass accommodation and terrible living conditions. The scarce housing supply combined with poor working conditions was a fertile soil for the social democratic movement. The doctor and publicist Victor Adler contributed with his reports strongly to a raising awareness and a political turnover (e.g. Adler, 1888). After the foundation of the first republic on 12th November 1918, Jakob Reumann became Vienna's first ever social democratic major. Part of a holistic social democratic reformative programme was a large-scale housing programme to end the drastic housing scarcity in Vienna and improve the hygienic conditions in the capital city (Podbrecky, 2013, p. 13). The federal state as well as the city of Vienna were almost broke after the war, therefore a new tax on luxury goods was introduced und tax revenues directly used for the housing programme. In the years 1919 to 1934 the city of Vienna was able to build 61.175 flats until the civil war ended the social democratic reign in Vienna (Podbrecky, 2013, p. 17). The city continued building

dwellings after the 2nd World War and as a result, the municipality of Vienna owns today 27 per cent of the city's housing stock (Rumpfhuber et al, 2012). Throughout Austria, a system of subsidised housing production which is strongly influenced by the Viennese example, was established. Municipalities or limited-profit developers are getting large-scale subsidies for housing production but are at the same time bound to sell or rent dwellings at fixed prices considerably below the market level (Reinprecht, 2014). People in Austria spend on average less than 30 per cent of their income for housing.

In the whole discussion on Affordable Housing, the meaning and understanding of 'affordability' poses a challenge itself, because there is no mutual or common understanding amongst stakeholders and authorities. Nevertheless, the term is omnipresent in policy papers, guidelines and legal acts. The typical analysis taking only 'ratios' of household incomes that are spent on living into account, cannot be used as a basis for well justified judgements, because incomes differ widely (Paris, 2007). The paper does not explore the concept of 'affordability' any further, but simple points out that although an intensive discussion took place in Austria and recommendations for Affordable Housing were formulated, the concept of 'affordability' remains to be fuzzy and lacks in definition.

The Austrian regulatory framework for subsidised housing production is beyond doubt sophisticated. Numerous legal acts on different legislative levels as well as many public authorities and private stakeholders form a multi-actor and multi-level framework, in which spatial planning in the narrow sense of allocating land uses, has a crucial strategic role. Ideal locations need to be identified, land needs to be zoned according to the actual demand and the development within certain planning horizons has to be secured. In case of Austria there is in fact no lack of building land in most regions that face an ongoing populationgrowth.

The actual demand for dwellings could theoretically easily be satisfied but most of the undeveloped building land is simply not available on the market, because land use titles do not need to be claimed within a certain period of time. More than a quarter of the whole zoned building land in Austria is at the moment not developed and used for speculation or as an asset (ÖROK, 2014a). This building land is often centrally located, has a proper public infrastructure but is difficult to mobilise. At the same time, an expropriation title for housing exists, but is so far not applied and easily conflicts with the constitutionally guaranteed sacredness of property. Spatial Planning struggles on the one hand with existing land use titles that are consummated without any public consultation completely in the interest and perspective of the owner/s. On the other hand, building land is needed desperately and planning has to zone in appropriate amounts of land in the right locations. This happens predominantly on the municipal level, with a lack of regional coordination. Planning faces manifold challenges in its vital contribution to the provision of sufficient affordable dwellings and an evaluation of constraints as well as possibilities seems to be necessary.

3 EVALUATING SPATIAL PLANNING IN HOUSING PRODUCTION

Every 10 years the 'Austrian Conference on Spatial Planning' publishes the 'Austrian Spatial Development Concept' (ÖREK) which serves as a national policy guideline in planning but has no legal liability for the provinces or municipalities. Nevertheless, the last concept in 2011 (ÖROK, 2011) addresses besides other current issues also Affordable Housing. Action 2.3 emphasizes a 'Quality-based approach to coping with growth' (ÖROK, 2011, p. 56) and Action 3.3 a 'Sustainable development of settlements and free space' (ÖROK, 2011, p. 70) both aiming for the implementation of integrative perceptions and policy implementations. To achieve this, an essential backbone of the ÖREK 2011 is the establishment of so called 'partnerships' involving relevant public authorities and stakeholders for specific topics in a discussion process.

The 'partnership' for Affordable Housing was established in 2013 involving the Austrian Federal Chancellery, the Federal Ministry of Science, Research and Economy and 8 provinces as well as special interest groups (Austrian Economic Chambers, Chamber of Labour, Austrian Association of Cities and Towns, Austrian Contribution of Spatial Planning to Affordable Housing in Austria Association of Municipalities, Austrian Trade Union Federation). The lead management was performed by the Federal Chancellery as the topic of Affordable Housing is essential on a national policy level but needs strong cooperation and specific adaption on provincial level. The fundamental aim was the formulation of recommendations and a policy guideline based on the analysis of the contribution of spatial planning to

Affordable Housing with an evaluation of the legal situation and regulatory framework. The result of the partnership process were two studies, one on the connection of planning law and Affordable Housing and another on the role of civil planning contracts in planning, complemented by a set of recommendations. The actual implementation now relies strongly on the provinces that need to adapt their legal framework and supervise and support planning activities especially on the municipal level.

The carried-out evaluation of the contribution spatial planning has on Affordable Housing and which measures could be taken in the near future, is based firstly on the mentioned studies and secondly on the contributions of stakeholders in the discussion. The eventual recommendations were adopted consensually by the members of the 'Austrian Conference on Spatial Planning'. It needs to be mentioned that therefore the described outcomes are not based on a holistic scientific analysis but rather based on a political discourse and decision making process. Spatial planning in Austria is a provincial assignment, which means that the federal state only holds the competences for certain sectoral planning activities enumerated in the Federal Constitutional Law. Residual planning tasks are carried out by the single provinces, which also means holding the responsibility for planning legislation and executive assignments. Due to this fragmentation, there exist 9 planning laws regulating spatial planning and development. In detail the goals, tool sets and procedures are alike among the provinces but differ considerably in detail because of the absence of a framing legal planning act on federal state level. At the same time, there does not exist any national binding concept for spatial development. This institutional and legal set up leads to a complex and diverse structure and inventory of planning instruments as well as strategies that also serve to support the provision of people with affordable dwellings.

3.1 PUBLIC AUTHORITIES IN AFFORDABLE HOUSING PRODUCTION

The federal state regulates the tenancy act as well as the condominium act and has therein certain possibilities to steer market prices for renting and selling dwellings. For example, there is a fixed maximum rent in large parts of the building stock deriving from before 1945. Public Housing is also settled at federal state level and targets less well-off population groups, while housing subsidies are a responsibility in regulation and execution of the single provinces. The planning and building laws are passed by the provincial parliaments, but the actual execution of land use planning and the issuing of building permits is set on municipal level.

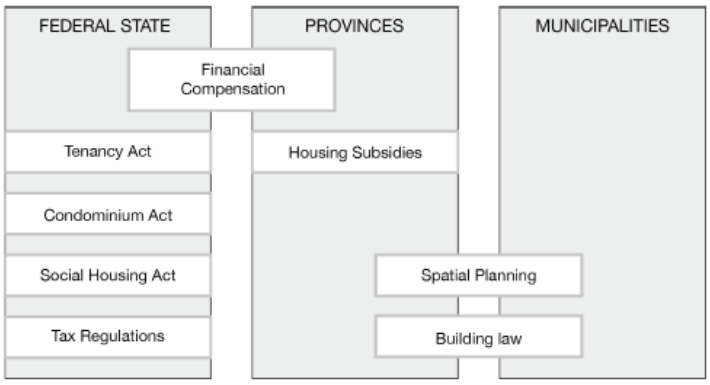

Figure 1: Responsibilities and Institutions for housing and spatial planning

As indicated in Figure 1 relevant responsibilities for Affordable Housing are disperse which poses a challenge to politicians and public authorities in coordinating their actual actions in this field. The federal state holds the responsibility of regulating most of the essential legal framework and the single provinces receive tax money from the federal state to invest in housing subsidy programmes. In 2012, the provinces altogether spent about 2.5 billion Euros on loans and direct subsidies for housing production and restoration (Amann and Lugger, 2013). The municipalities have no direct influence on the regulatory framework but are nonetheless essential stakeholders for planning the built environment. The distribution of the state assignments within the federal republic is tightly set by the constitution and it is very unlikely that political majorities for alterations will be achieved in the near future. Therefore, improvement within the existing legal structures of administration and subsidies appears to be the ultimate strategy.

Austria has due to its federal structure a tradition in splitting up state assignments and allocating them to different public authorities and levels. As there does not exist a self-contained constitution, the Federal Constitutional Law (Bundes-Verfassungsgesetz, BGBl. Nr. 1/1930) assigns the legislative powers over public affairs to the federal or provincial governments. Public Housing – Volkswohnungswesen – is by Art. 11 Federal Constitutional Law to be regulated by the federal government and further executive laws to be adopted by the provincial governments. This means a common responsibility with a basic formulation of the goals and instruments on the upper and the executive legislation on the lower level. In 1974, the Land Acquisition Act (Bodenbeschaffungsgesetz, BGBl. Nr. 288/1974) was adopted by the parliament to define a regulatory framework for public housing. The Land Acquisition Act holds an expropriation title to obtain land for social housing production and provides thereby a valuable instrument in negotiations with land owners and for price regulation. Due to legal concerns the Land Acquisition Act was never put into practice by the provinces. This leads to the paradox situation that centrally located, zoned and undeveloped land Contribution of Spatial Planning to Affordable Housing in Austria could theoretically be claimed for Affordable Housing but not a single attempt was undertaken to use the regulations in the Land Acquisition Act to actually secure land for Affordable Housing projects.

3.2 FIELDS OF ACTION TOWARDS AFFORDABLE HOUSING IN SPATIAL PLANING

The mentioned partnership of authorities and stakeholders on Affordable Housing identified urgent fields of action in spatial planning to enhance a more effective and efficient provision of land for housing production. One essential outcome of the 'partnership process' is a set of recommendations based on the analysis of the status quo of planning in combination with an expert assessment and listing of the measures at a glance as follows (ÖROK, 2014b, pp. 15-19).

a. Affordable Housing needs to be established as a goal in spatial planning law,
b. Affordable Housing needs to be perceived as a regional planning-responsibility,
c. Specific land use categories for Affordable Housing should be established, the experiences be shared and criteria be defined,
d. Other planning instruments should support Affordable Housing by making appropriate densities possible,
e. Evaluation and enhancement of the role of civil contracts to acquire land for Affordable Housing,
f. Acquire suited undeveloped plots by a diverse set of instruments; limited dedication of building land; introduction of regulations for financial fees for infrastructure installation and maintenance; establishing the legal basis for land consolidation,
g. Evaluation of the responsibility for public housing and adaptation for actual implementation.

Complementary measures should be undertaken in the field of subsidies for Affordable Housing and tax incentives for owner to sell preferably to limited-profit developers should be taken into account. The recommendations illustrate the urgent need for a holistic perspective in planning. Single improvements will have only small positive effects while the true capacity lies in an integrative and coordinated development. Goals and political aims need to be clear and stable on all levels and should then be legally adopted. Measures in different fields need to be undertaken simultaneously to have a maximum impact. The following chapter discusses several highlighted fields of action from a planning perspective and depicts the status quo and potential of certain instruments and measures.

3.3 PLANNING INSTRUMENTS FOR AFFORDABLE HOUSING

Spatial planning is executed in Austria by the provinces as well as by the municipalities. Interestingly the municipalities hold a planning monopoly penetrated only by topics of superior public interest. This leads to a strong position of the municipal councils in planning decisions and to a local planning focus bound to administrative boarders. But people have a certain flexibility in their choice of residence depended on manifold reasons that are individually taken into consideration. Housing has therefore not a municipal but for the majority of people a regional quality. So the discussion of planning instruments should be set on regional as well as municipal level to illustrate the actual possibilities of authorities to contribute to Affordable Housing.

3.3.1 INSTRUMENTS FOR AFFORDABLE HOUSING AT PROVINCIAL LEVEL

The provinces are responsible for the planning legislation and are therefore the essential authority in defining the planning instruments and setting the planning goals. Each planning act contains overall goals for the intended spatial development and some refer to housing provision explicitly. One common goal in all provinces aims to satisfy the actual housing demand. Some laws specifically state that land should be affordable, the housing quality up to date and the share of residential use well-balanced to commercial use. But generally, the goals do not promote Affordable Housing as a priority field of action in planning. In operative planning, the provinces have the possibility to establish holistic or sectoral planning programmes and concepts. Some have already development concepts which explicitly refer to Affordable Housing but the discussion is still a basic one and besides overall aims and goals Affordable Housing plays an inferior role. The regulation of Housing subsidies plays an essential role for Affordable Housing, but is not directly combined with planning measures referring to land use categories and titles or the provision with a sufficient technical infrastructure. Terms for financial aid are referring to the income situation of applicants or building characteristics and qualities. The actual location within villages or cities and the infrastructural characteristics don't get considered in subsidy regulations. The same accounts for planning strategies concerning the densification in city districts.

A fiscal instrument that some provinces have already introduced are taxes for the provision with infrastructure (roads, sewer network, water network etc.) that are also payable without a developed plot of land and get calculated by a basic cost multiplied by the square meters of the particular plot. The administration of this tax though is the responsibility of each municipality and an initial evaluation is just underway but no results so far available.

Another provincial instrument to assume a long term active role on the land market, is the installation of land funds. These funds help municipalities to buy land suitable for the construction of subsidised dwellings but operate strictly within the boundaries of economic feasibility and are not supported by tax money. Nevertheless, such funds can help to promote Affordable Housing in central locations with high living standards by providing money at the right time without any benefit interests.

3.3.2 INSTRUMENTS FOR AFFORDABLE HOUSING AT MUNICIPAL LEVEL

The municipalities itself are in charge of forecasting their own future need for building land based on population prognosis and are responsible for land use planning and development plans. This means that municipalities are the key actors in steering the actual location of housing production on a local level. Due to the absence of a regional demand calculation and distribution mechanisms, municipalities are in fact carrying out their planning tasks independently and without a compulsory coordination. The housing production is Contribution of Spatial Planning to Affordable Housing in Austria therefore dependent on the existing land use, the disposability of land on the market and the existence of an investor. Steering this process in a temporal dimension while achieving the production of a certain share of Affordable Housing is a challenging task that municipalities perform by using a set of planning instruments. Land use planning represents the backbone of spatial planning which is offering exclusive land use categories to the owners of parcels. Planned constructions need to be according to the legal dimensions of such land use categories, but the decision, when and whether to develop building land is in the hands of the owners only. Establishing firstly land use titles for Affordable Housing and secondly ensuring the actual development poses therefore a challenge for municipalities.

A possible strategy is the use of the specific land use category "Reversed Areas for Affordable Housing". Given that there is no expropriation title on the municipal level such reserved areas imply the reservation for the intended use for 10 to 20 years. The owners have the possibility to offer such plots to the municipality or limited-profit developers. The prices are due to the restricted use normally significantly lower. Nevertheless, the zoning of such areas always needs an actual demand and proper argumentation as a basis and cannot be simply used on a large scale to apply pressure on land prices. Four provinces have already introduced this land use category and others are discussing to do so as well.

A rather new measure in land use plans is the temporary zoning of building land. For newly zoned building land a certain time frame for the permitted development gets defined. This should put pressure on the owners either to sell or request a building permit themselves. The experience with this new approach is so far low and it's not yet possible to judge on the effect on land prices.

Another instrument on local level are land consolidations. Unfavourable plot shapes and a lack of public infrastructure pose a challenge to an effective development of certain areas. Consolidations exist meanwhile nearly in all provinces and are executed with increasing efforts. The main advantage is a costefficient consolidation for the participating land owners and safe-guarding a sufficient infrastructure. For responsible authorities, the procedure poses considerable costs and a positive completion can be at risk at any time, if participating owners impede the consolidation draft. A possible improvement to land consolidations in the future could be the compulsory dedication of a certain share of land to Affordable Housing projects according to subsidy regulations.

The nowadays perhaps most attended instrument in municipal spatial planning are planning contracts. Achieving certain goals by using time consuming and circumstantial administrative procedures faces its limits. Additional contracts based in civil law are meanwhile widely possible throughout Austria and are an important planning tool for municipalities. Via contracts the actual development within certain time frames can be assured and actual land uses commonly agreed on. The essential condition is the interdiction of a causal connection between the zoning act and content of the contract. Generally, the conformity with constitutional requirements is challenging if municipalities are using planning contracts on variable cases and furthermore contracts are so far often not applied in a transparent way. Nevertheless, such contracts have a great potential to help foster Affordable Housing and can contribute to secure quality standards and realisation of actual projects.

As shown, municipalities have a variety of planning instruments to contribute to the provision of Affordable Housing. They can decide on project locations and indirectly influence land prices. The biggest challenge remains possibly the local perspective of planning authorities not taking regional developments into account.

4 CONCUDING REMARKS

As the title of the article states, the contribution of planning to Affordable Housing is without doubt a big one. Real estate market logics and subsidies also have a crucial role in housing production, but are strongly linked to titles established by land use plans and planning restriction. The ‘partnership process’ and the formulated recommendations based on the ‘Austrian Spatial Development Programme 2011’ state clearly that there is already a wide variety of planning instruments but in many provinces the tool kit still needs to be expanded. The true benefit of the ‘partnership process’ was forming a communication platform, bringing different public authorities and stakeholders to a discussion table.

The evaluation of the planning contribution to Affordable Housing did furthermore clearly show that planning itself has no overall power but needs the coordination with other public sectors. Although legal regulations might pose the essential basis for the execution of efficient policies, the starting point is clearly the coordination and discussion among relevant stakeholders and introduction of a governance process. The presented ongoing discussion in Austria could be perceived as a possible approach to assess and develop the regulatory framework for Affordable Housing and improve planning measures. The discussion and evaluation based on a national effort served as a starting point and politicians and authorities in the provinces and municipalities hopefully perpetuate this effort. Recent amendments of planning acts take the recommendations into account and indicate that the ‘partnership process’ was fruitful. An effective contribution by planning to Affordable Housing can especially be achieved by combining the listed instruments. This needs ambitious efforts on all political levels and a further holistic discussion on the regulatory framework for Affordable Housing.

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ID 1376 | RENEWED NEIGHBOURHOODS: REQUALIFIED AND DIGNIFIED NEIGHBOURHOODS? EXEMPLES OF DISTRICTS IN REGION AUVERGNE RHÔNE ALPES (FRANCE)

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ABSTRACT: In France, for 40 years, a public policy called policy “of the City” has been implemented to act globally on the social and urban exclusion. Since 2003, this policy has knew an important change and tries through actions of urban renewal to transform profoundly the neighbourhoods of social housing. By improving social housing, public places, facilities, by demolishing and building housing and by attracting private investments to diversify housing and population and by diversifying the functions of these neighbourhoods, it is a question of making of these stigmatized districts, "banal" districts. After more than ten years of urban renewal, we can wonder about the effects of this policy on these areas in terms of requalification and dignity. Are these neighbourhoods less stigmatized, really requalified? Did they acquire a better image? Are they dignified to be inhabited for the inhabitants of these neighbourhoods and for the inhabitants or the citizens generally? If the first evaluations of the policy of urban renewal show that the living environment was improved, that the inhabitants feel better, and that they consider these neighbourhoods as "banal" neighbourhoods, dignified to living there, they also suggest, with regard to the difficulties met in certain neighbourhoods to attract private investments and actors, and new inhabitants, that these neighbourhoods are still far from being requalified in the public opinion. After having presented the policy of urban renewal, its emergence and its objectives, we shall return on the results of evaluations of the urban transformations led on all the concerned neighbourhoods, and we shall show, by analyses led in renewed neighbourhoods of the region Auvergne-Rhône-Alpes, that it is advisable to be very careful as for the requalification of these neighbourhoods.

1 A POLICY OF URBAN RENEWAL IN THE STIGMATIZED DISTRICTS

1.1 A BRIEF HISTORY OF THE POLICY OF URBAN RENEWAL

In France, for 40 years, a policy called "city and urban renewal" was organized. This policy aims at handling the social, economic and urban problems concentrated in the districts of social housing, and at revaluing these districts which suffer from a bad image and which are thus stigmatized in the French public

opinion. If the policy ”of city”, which claims to act globally on the social and urban exclusion, is an old policy, that of urban renewal, which aims at transforming the space, expanded these last fifteen years.

Four big phases give rhythm to the policy of “city and urban renewal”:

- A first phase, said "experimental", from 1973 till 1981. Conceived from experimental way, resting on circulars, and exceptional, contractual and incentive tools and means, this policy allowed an awareness at the various actors (political actors, companies managing the social housing) problems met in districts of social housing, and an improvement of the built and the urban planning in these districts.
- A second phase, called "operational", from 1981 till 1988. This second phase is the one of an operational policy which is equipped with diverse tools to fight against the social and urban exclusions, with more consequent financial means, national and local authorities to govern this policy, and which benefits more and more districts.
- The third phase, that said "of the maturity ", since 1988. This third phase is the one of a reached maturity policy, which is equipped with legislative texts and with a ministry, and which acts on the problems of these districts in a global way and in various territorial scales (district, town and suburbs).
- And the fourth phase which, according to certain researchers, would have begun in the end of 1990s. We see the change of a policy of rehabilitation of the housing into a policy of "urban renewal ", requiring and justifying the appeal to the demolition of social housing.

This development of the policy of "urban renewal" was gradually made through 15 big urban projects, GPU (Grand Projet Urbain) at the beginning of the 90s, then with 50 big city projects, GPV (Grand Projet de Ville) since 1998, and 70 operations of urban renewal, ORU (Opération de Renouvellement Urbain) in 2001. The actors of the social housing refused for a long time that the demolition of social housing is a justifiable way of management of the social housing stock, in particular in the districts where the urban planning had been considered stigmatizing. It will be necessary to wait for 1998[1], 2001[2] and 2003[3] so that are thrown the bases of an ambitious policy of urban renewal, which the program of the demolition is an "essential element[4]".

In 2003, Jean-Louis Borloo, Ministerial Delegate for the city and the urban renovation, wishes to intervene massively in the stigmatized districts, to renew them in depth and to simplify the management and the application of the policy of “the city”. He implements a national program of urban renewal, PNRU (Programme National de Renouvellement Urbain), over 5 years between 2004 and 2008, having for objectives to realize 530 projects of urban renewal before 2013, in particular to demolish 200 000 social housing[5], to offer 200 000 social renting housing, by reconstructing housing on their place or by putting back on the market the vacant housing, to rehabilitate 400 000 social housing, and to make blocks with 400 000 social housing. He suggests to centralize the financing State of the policy of the city by creating in 2004 a single window, the national agency of urban renovation, ANRU (Agence Nationale de Rénovation Urbaine)[6], and allows actors other than the State to finance this policy, in particular by the association “Foncière Logement[7]”.

[1] Particular financing for the demolition and the change of use of social renting housing.
[2] Circular N 2001-77 of November 15th, 2001 relative to the devolution of the decisions of financing for demolition and change of use of social renting housing.
[3] Law of 2003 on the programming of the city and the urban renewal.
[4] Law of 2003 on the programming of the city and the urban renewal.
[5] It is the rule of 1 for 1: for 1 demolished social housing, it is 1 reconstructed social housing, but the latter is partially reconstituted in the district and for another part outside of the district. That allows the construction of private housing in the district.
[6] The ANRU is an industrial and commercial public institution. Within it, there are representatives of the State and the local authorities, representatives of the social housing, and personalities qualified regarding the policy of the city.
[7] The Foncière Logement is an association created in 2002, for districts in urban renewal and the municipalities were submitted to the article 55 of the law of Solidarity and Urban Renewal of 2000. It aims at implementing the social mix. Financed by the “Action Logement” (1 % housing collected by collectors, grouped in the “Union d’Economie Solidaire pour le Logement), it intervenes as investor. It can acquire of the built or not built land to build of social housing for the municipalities which have to build of the social housing, and housing with free rent in districts in urban renovation which want to diversify their populating.

This policy of urban renewal is inspired by previous policies led in France, the United States and United Kingdom (Le Garrec, 2006). So, it is inspired by French actions of urban renovation led from the end of 1950s in deteriorated old centres of the cities which consisted in demolishing the unhealthy and dilapidated housing and in reconstructing new housing. It also resumes the contents of the policies of "urban renewal", which means urban revival, and which is a policy led in the USA in the 1950s and 1960 to accompany the demographic and economic decline of the dense American city centres and the scattering of the populations in more and more spread "suburbs". This policy consisted at first in leading specific actions of renovation of the built by means of the inhabitants, without moving, then actions of spectacular and expensive demolitions with moving of the inhabitants and the gentrification of these city centres. Finally, it is similar to the policy of urban regeneration of United Kingdom from the end of 1970s which consisted "in making live again" the old industrial cities by demolishing and by reconstructing totally or partially to allow the mixing of the functions and the economic development of these urban spaces.

By actions of urban renovation, or of operations of demolition-reconstruction of housing and morphological transformations of districts, this policy aims at promoting the mixing of the functions by allowing the development of economic activities and the facilities, the social mix, by developing a new offer of housing (social home-buying, renting free), to attract employees, less precarious populations and new inhabitants; and at revaluing the image of districts.

1.2 A FIRST EVALUATION OF THE NATIONAL PROGRAM OF URBAN RENEWAL

The national program of urban renewal, which was translated at the end of 2011 by the demolition about 145 000 housing, the reconstruction about 140 000 others, the rehabilitation of 325 000 housing and the making blocks of 236 600 housing, was estimated these last years. These evaluations tried to measure the effects of the urban renovation at the same time on the housing and living conditions of the inhabitants of districts, and on the functioning of districts and their attractiveness.

So, the effects of the urban renovation on the housing conditions and the lives of the residents of districts are rather positive. The local and national political and professional actors questioned by the committee of evaluation and follow-up of the ANRU agree on the fact that the urban renovation restored some dignity to the inhabitants, by bringing them the proof of a reinvestment of public authorities and by offering them a prospect of positive evolution of their housing conditions and life (Regards Croisés sur l'évaluation de la rénovation urbaine, 2014). And the inhabitants tell to be globally satisfied by the urban renovation. Indeed, several studies give evidence of this satisfaction of inhabitant. An investigation of the institute of survey, CSA, realized for the ANRU in January, 2013 shows that 78 % of the questioned households say themselves very satisfied (29 %) or satisfied (49 %) with renovations realized in their district, 59 % declare to have the feeling that life in their district evolved for the better, or still 59 % of them declare to be very optimistic (12 %) or optimistic (47 %) for the future of their district (Dix ans de Programme national de rénovation urbaine : Bilan et perspectives, 2013, p.54). Another study led by the Social Union of the Housing confirms the feeling that the requalification of the living environment is felt in a strongly positive way by the inhabitants. The latter emit the idea according to which they have found a certain dignity. The transformation of their districts restored them the feeling to be a full citizen of their city, and restored their trust in institutions (Idem, p. 55). Also the expressions of the inhabitants collected in actors' exercise books of the national dialogue on the future of the policy of city confirm the feeling of an improvement of their quality of life at the end of the urban renovation. Quality of the new built, the improvement of the living environment, green spaces and public places are so advanced (Idem, p. 55). Finally, a study of the committee of evaluation and the follow-up of the ANRU realized on 8 renewed districts show that 62 % of the questioned inhabitants estimate that their district is " better than before " (Mon Quartier a change, 2014, p. 16).

However, criticisms are formulated towards the housing conditions and towards the life during or after the urban renovation. They concern the length and the succession of the works, which cause nuisances, and also on the weakness of the dialogue around the projects or still on the persistence of the social problems at the end of the urban renovation. Others explain that the urban renovation did not benefit in the same way all the inhabitants. Indeed, as far as to live well in housing represents for the most part of the tenants the priority concern, those who benefited from a rehabilitation or who were able to reach on the spot a new housing appreciate realized improvements. However, the inhabitants less directly concerned by the urban

renovation, because they live in the part of the stock not rehabilitated or not renewed, live that as an injustice (Regards Croisés sur l'évaluation de la rénovation urbaine, 2014, p. 56).

As for the effects of the urban renovation on the functioning of districts and their attractiveness, they are rather mitigated. The urban renovation was not able to favour enough the diversification of the functions of districts and populating, and to revalue the image of districts.

If the urban renovation allowed to rehabilitate facilities, to build a new offer of facilities and amenities, and to re-revitalize the convenience stores, it rarely allowed the implementation of a real economic development project. Few economic activities became established in districts.

The diversification of the statuses of occupation of housing and consequently the populating was low on the renovated districts. It represents between 6 and 7 % of the total initial stock of housing. The ANRU considered that approximately 80 in 85 000 housing except social renting housing had been delivered on the renovated districts, in the term or beyond the duration of the agreements. This volume of housing so decomposed:

- Approximately 50 000 housing dedicated to the entry, among which 15 000 for the social entry and 7 800 beneficiaries of a bonus ANRU, - Approximately 19 000 housing produced by the Foncière Logement, - About 7 500 housing in PLS (Prêt Locatif Social)[1] or intermediate renting, - About 1 800 housing in free renting, - About 2 500 housing from the construction of residences aimed at specific public (students, elderly). In this housing, was added about 2 800 housing put on sale. (Dix ans de Programme national de rénovation urbaine : Bilan et perspectives, p.76).

In the majority of districts, thus the weight of the social housing remains important, of the order of 70 in 80 %, and decreases on average from 5 to 10 points. This low diversification tended to be rather made on zones in limit of the renovated districts, in geographical areas with strong visibility and in joint with the other districts, which contributed to the preservation of the mono-functional characteristics of the district of social housing in their hearts. It is due to the slowness of realization and the uncertain marketing of certain property deals. The new inhabitants are still afraid of settling down in these districts and the promoters hesitate to invest in operations which seem consequently risky.

The renovated districts still suffer from difficulties in terms of image. They are considered as districts of social housing, mono-functional and thus remain still little attractive.

2 RENEWED DISTRICTS IN LOOKING FOR REQUALIFICATION

To illustrate this looking for requalification, let us stop on two districts in region Auvergne-Rhône-Alpes which were the object of urban renewal: the district of La Monnaie of Romans-sur-Isère and the district of Teisseire in Grenoble.

2.1 THE DISTRICT OF LA MONNAIE (ROMANS-SUR-ISÈRE)

The district of la Monnaie was built on the east zone of the city of Romans-sur-Isère, on an off-centred tray, in border of a main road, in two phases, between 1957 and 1974: a first phase which corresponds to the district of Ancienne Monnaie, and the second phase which is the one of Nouvelle Monnaie.

[1] Prêt Locatif Social means social renting loan.

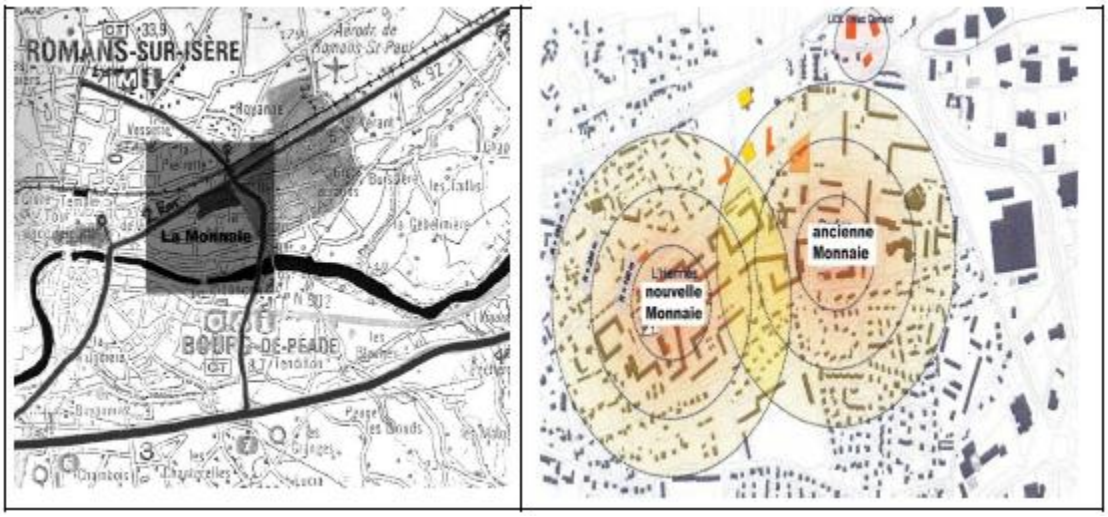

Figure 1- Maps of area
Source: Town of Romans-Sur-Isère

This district is an area of exclusively social housing with 1830 housing all properties of the “Office Public de l’Habitat du Pays Romanais” (OPHPR), and distributed in 47 buildings of type bars and towers, benefiting from wide public places. Very quickly, this district became the district of social housing the most stigmatized in the department of the Drôme and benefited from the policy of City from the 1980s. After a program “Habitat et Vie Sociale”, the neighbourhoods is the object of a “Plan Local de Development Social in 1983, then of operation of “Développement Social of Quartier” in 1989; and from 1993, the City of Romans integrate this district in the approach of “Contrat de Ville” (Duarte, 2011). In the early 2000s, the strong specialization of this territory in social housing and the low urban quality (mediocre public places, enclosing) are perceived as partially responsible for the loss of residential attractiveness of the district. In 2000, the recommendations of an urban and social study confided to the cabinet Philippe Panerai serve as base of reference to the implementation of an “Opération de Renouvellement Urbain” (ORU). Then, in 2003, a diagnosis of the Workshop Franck Huillard, identifying the urban and social stakes in the district, is used as support to the candidacy of Romans in the registration with the ANRU.

Figure 2- Pictures of La Monnaie
Source: Town of Romans-sur-Isère

In December, 2004, an agreement of Urban Renovation is signed between the State (ANRU), the town, the OPHPR and the Association of local authorities of the country of Romans as contracting authorities of the operations, as well as by all the financiers (Rhône-Alpes Regional Council, General Council of the

Drôme, Caisse des Dépôts et Consignations, Association “Foncière Logement”). It has for main objectives to:

- Diversify the functions of the district of La Monnaie by the diversity of the housing and the economic development; - Guarantee the law and order and support the creative activities of social link; - Favour the resolution of the social difficulties; - Favour the opening of the district on the city and the urban area.

It plans in-depth interventions for a 58,4 million euro total amount:

- The demolition of 491 housing essentially in the East of the district; - The constitution of a district of social housing more reduced after demolitions;
- The reconstitution of 491 social renting housing demolished (among which 85,5 % outside the district); - The making of blocks and the renovation in the standards " Energy-saving Building " almost exhaustive of the stock of social housing; - The development of all the public road networks and the public places; - The requalification of three public gardens; - The realization of five social / commercial facilities and the strengthening of the attractiveness of the school built heritage in the service of the construction of the social mix; - The realization of a sustainable district of 300 private renting housing and in property ownership instead of buildings demolished in the East of the district.

The evaluation of the impacts of the urban renovation, between 2010 and 2014, shows mitigated results (Richard, 2013).

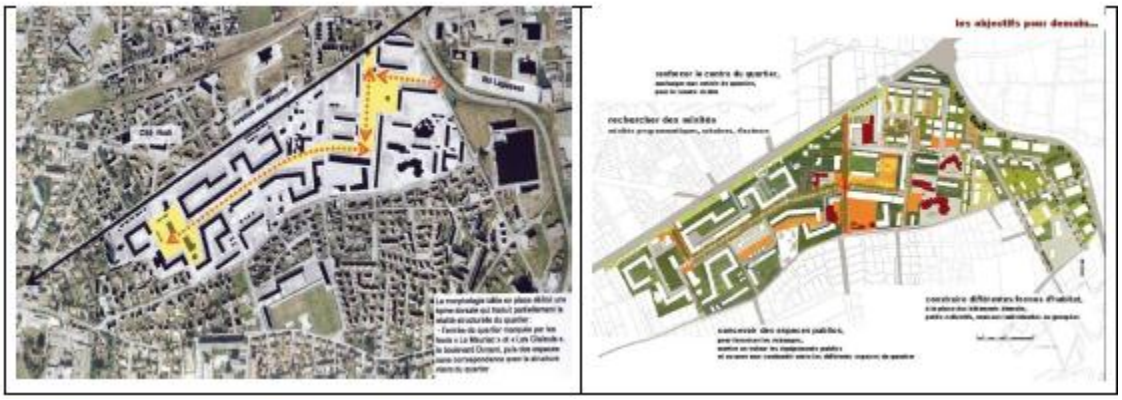

Figure 3 – Maps before and after the urban renewal
Source: Town of Romans-sur-Isère and Agency Passagers des Villes

So, the effects of the urban renovation on the housing and living conditions of the inhabitants are globally positive. The “résidentialisation” allowed an improvement and an embellishment of the living environment as well as a demarcation specifies various spaces which make up the residential units (car park, children's games, lawns, tubs with household waste…). The tenants very appreciated the restructuring of feet of buildings, because it allowed a better identification of spaces and their uses and so participated in the reduction of the small conflicts of the everyday life. This “making of blocks” has also pulled a use of the outer spaces, previously little qualified.

As for the effects of the urban renovation on the functioning of districts and their attractiveness, they are more reserved. On one side, there is an undeniable effect of the demolitions-reconstructions. The demolition of the part is the neighbourhood (300 housing) was perceived in a positive way. It allowed, according to the testimonies of the inhabitants, to aerate the district, to avoid the "ghettoization" and "the cramming of the populations" which existed on this sector. The reconstruction of the demolished housing outside the district allowed an important devolution of the social housing on the sector of La Monnaie. It was also translated by an important geographical rebalancing of the heritage of the social lessor on the whole city of Romans. In the same logic, the movement of the businesses on the avenue of Maquis in border the North of La Monnaie participates actively in the opening of the district on its margins and in the strengthening of the commercial activity of the district (the turnovers of the observed businesses knew an increase since their new presence). On the other hand, decade after the signature of the agreement of urban renovation, we have to admit that certain public facilities always have difficulty in attracting a public

outside the district. Except during events with exceptional character (the media library or the game library for examples), the majority of facilities shine in local scale. If they fill perfectly their function of facility of closeness, they seem to have some difficulties opening to the rest of the city. And the construction of 300 deprived housing on the aera Rochegude, in periphery of the district, to attract middle-class inhabitants to La Monnaie are not still effective. The property developers are reluctant to invest and the new inhabitants hesitate to settling down in this district which has a negative image too.

2.2 THE DISTRICT OF TEISSEIRE (GRENOBLE)

The district of Teisseire, situated in the Southeast of Grenoble, was built between 1958 and 1962. Compound of 31 bars, 7 towers, and 1250 social housing managed by the company ACTIS, this district is connected with the city centre by the avenue Jean Perrot thanks to the public transport network. Surrounded with ill-assorted spaces, it is lined, on the West, by the district Malherbe, in good condition general and essentially lived by middle classes, in the North by the city Jouhaux and its social housing and in the East and in the South, in border of the nearby municipality of Saint-Martin- d'Hères, by multiple industrialists lands and sports facility.

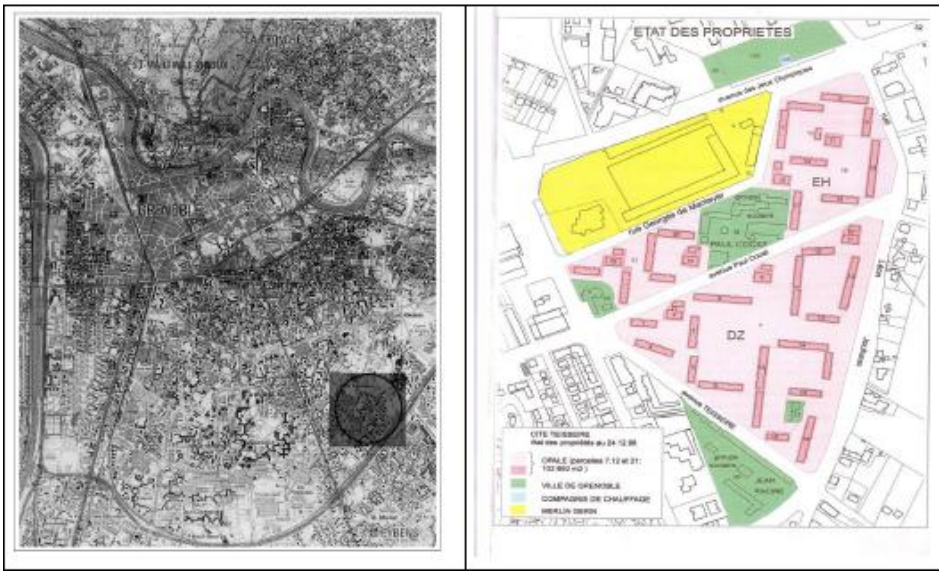

Figure 4 – Maps of Teisseire
Source: Town of Grenoble

Figure 5- Photography of Teisseire
Source: Town of Grenoble

The municipality of Grenoble, to face the problems of degradation of this neighbourhood, implemented urban policies: a first operation of rehabilitation via the procedure “Habitat et Vie Sociale” between 1979 and 1984, a “Contrat de Ville” of Grenoble between 1994 and 1998, a “Contrat de Ville” of urban area between 2000 and 2006, and a “Grand Projet de Ville” between Saint-Martin-d’Hères and Grenoble, from 1994, which will be afterward inserted into the program of the ANRU.

The Teisseire project is not, strictly speaking, an ANRU "project". The project is widely previous at the same time to the ANRU (on 1994, the district is registered on the “Grand Projet de Ville”) and based on principles taken away enough from the national recommendations (by emphasizing in particularly the making blocks or the rehabilitation rather than on the demolitions recommended by the ANRU). The choice of the making blocks was imagined in answer to a diagnosis of district: to thwart a rather negative image, it was a question of transforming "large sets" into "residences"; in the face of a cutting gives a complex of the public / private space, the making blocks aimed at improving the conditions of management of spaces ; in answer to the conflicts of uses put by the presence of young people in foot of tower, the making blocks had to bring more reassurance of the entrances of buildings. Among the surprises of the urban renovation to Teisseire represents the arrangement of the ZAC Teisseire-JO. In the launch of the project of urban renovation, the future of the brownfield Schneider was not decided yet. The planners seized the opportunity of this liberation of space to revitalize the North of the district Teisseire and propose a diversification of its housing.

Before the urban renovation, Teisseire consisted of 1200 social housing. About 250 housing was destroyed, an equivalent number of new constructed housing, 430 housing was rehabilitated and 18 created residential units. In parallel of the operation ANRU, 460 housing was delivered on the ZAC of Teisseire-JO (which ¾ in social entry). In the end, the district knew an important diversification of housing: 75 % in social housing against 100 % before (Duarte, 2011).

Figure 6 – Pictures after urban renewal
Source: Monographie territoriale du quartier de Teisseire, Grenoble, 2015, p.4 and p. 27

The results of the evaluation[1] realized in 2014 by the team “Trajectoires-Réflexe” on the housing conditions and the living environment of the inhabitants and on the attractiveness and the image of the district are mitigated.

Those concerning the housing conditions and the living environment show that 40 % of the inhabitants of Teisseire consider that their district improved with the urban renovation and more particularly with the rehabilitated buildings, the new constructions, the green spaces, the playgrounds for children, the businesses, and the making blocks, and that the important interventions on parks, green spaces and playgrounds were particularly appreciated for 80 % of the investigated people. However, when we question them more specifically about the housing, a third of them, even 38 % of the tenants of social housing and 42 % of the oldest inhabitants (20 years and more), declare to meet difficulties and to be dissatisfied. Among the motives for dissatisfaction, we find: the cost of the housing considered too expensive, a lack of cleanliness of the common spaces, the dilapidation of the non-rehabilitated housing, the problems of squats near their housing or a size of housing considered unsuitable.

[1] I participated as expert in the methodology of evaluation.

Concerning the functioning and the attractiveness of the district, it seems that the neighbourhood is more mixed socially and that it attracts new inhabitants. The PRU allowed to cross from 100 % of social housing to 75 % (with the construction of the ZAC of Teisseire-JO) and thus to diversify socially the housing. The data which we have on the sociological profile of the inhabitants of the social stock show that the district Teisseire tended to become impoverished less: even if Teisseire remains a district of big precariousness, the part of the most modest fell, including among the recent moved in the social stock. In 2000, 90 % of the recent moved made parties of the poorest of the stock, while this rate comes down to 75 % in 2014. Besides, the inhabitants of the social stock income of which improves leave less systematically the district (75 % of them stay on the district while the average in the other districts from Grenoble is 45 % of moving with equal resources). The origin of the buyers in social entry on the ZAC of Teisseire-JO also confirms this impression that it is possible to go up in the social scale while remaining to live on the district (several owners of the street Bourette in particular, arise from the district). However, the choice of a localization of the new housing for the middle classes in the borders of the district questions the social mix and the attractiveness. On one side, this choice of localization showed itself strategic: among the choices of acquisition on the district, the inhabitants quote in particular the fact that buildings "were not really in the district". Of other one, it emerges from survey than these inhabitants become integrated little into the life of district and look rather towards the outside. Even if they frequent certain facilities (library, shops), they prefer for the greater part to put their children outside the district.

In 2003 and 2007, the Barometers[1] of the neighbourhood Teisseire paint a portrait of the district in "the fragmented and contrasted image", divided between a population of old nostalgic of a golden age of the district (workers stemming from the immigration Italian and from the Maghreb working on the factory Schneider), and for whom the district had stop degrading, and a population settled more recently, and which does not seem to want to stay there. These inhabitants consider that Teisseire is "dangerous" neighbourhood, "where we burn cars ", "gangrened by a gang warfare held by families of the district ". The survey driven with the inhabitants in 2014 allows to draw up an evaluation in halftone on the image of the district. When we question the inhabitants about the image which they had of Teisseire before fitting out there, only 39 % of them had a positive image of it, against 37 % a negative image. In the question: "now that you live in the district, you would say in a general way that it is pleasant to live?": 65 % of them answer positively this question. Thus the point of view of the inhabitants changes when they live to Teisseire but no radical way. In parallel, other data confirm that the reputation of the district improved: the rates of vacancy or rotation in the social stock widely fell (apartments have fewer difficulties in being rent).

Nevertheless, this image remains fragile in and the outside the district. In the district, 54 % of the questioned inhabitants of Teisseire declare to wish to move outside the district in the shorter or longer term. This rate is particularly important for the inhabitants who moved into the district for less than 5 years (60 %) and for the youngest (less than 40 years). This rate is also not insignificant for the present inhabitants in the district for more than 20 years (46 %), for the oldest (36 %) and the owners (48 %) who are nevertheless generally inhabitants more anchored in their housing and their district. Outside the district, the inhabitants interviewed within the framework of Barometers have still a bad image of the district (Duarte and Leard, 2012). Teisseire remains a "dangerous" district, "insecure", which explains the absence of its requalification.

3 CONCLUSION

In France, the national and local evaluations of the program of urban renewal show that the effects of this policy on the phenomena of requalification and dignity of the districts of social housing are mitigated. On one side, the results of these evaluations demonstrate that the housing conditions and the living environment of the inhabitants of these districts improved. The urban transformations, in particular the quality of the new housing, the improvement of the green spaces and the public places, had positive effects on the image of districts. The inhabitants consider these places as dignified to be inhabited. On the other side, the urban, often partial renovation, did not diversify completely the functions of these districts,

[1] The Barometers of districts are surveys led by the laboratory ROMA, then the laboratory Pacte of the University of Grenoble Alps in connection with the Agency of Town planning of Region from Grenoble on various districts of the urban area since 2002. The principle is to go to interview the "silent inhabitants ", those who are not usually heard on their urban way of life.

and did not attract only some private real estate investors and new populations that in the renewed margins of districts. This lack of functional and social diversity and attractiveness explains or is understandable by the image still stigmatized of these districts at certain inhabitants and in the public opinion. With the current implementation of the second national program of urban renewal which has for objective to renovate a little more the "hearts" of districts, shall we attend finally a requalification of these districts?

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ID 1377 | URBAN REHABILITATION AND SUSTAINABLE MOBILITY OPTIONS FOR RESIDENTS - AN EXAMPLE FROM SOCIAL HOUSING IN VIENNA

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1 INTRODUCTION

The City of Vienna, a very important owner of social housing complexes built from the 1920ies onwards, has for some years carried out several renovation projects with a focus on thermal-energetic redevelopment measures. Presently the renovation and modernization of social housing blocks originating from the 1950ies to 1970ies is a challenging task for Vienna, as for many other European metropolises, too.

Considering the expected population increase, technological progress and lifestyle changes, and responding to ecological goals it will be necessary to adapt municipal housing rehabilitation procedures and to exploit potentials unused until now. A recent co-operative exploratory project (Smart City im Gemeindebau, 2016), aiming at the initialization of a smart modernization process, dealt with a wide range of themes: How to provide high-quality and affordable living conditions? How to integrate the residents in planning procedures? How to consider new accommodation needs due to demographic and societal changes? How to make use of new technologies? How to improve the residents' mobility options, the traffic situation and the quality of the urban environment?

Although mobility and traffic are important topics for the concept of smart and sustainable cities, until now they have scarcely been considered in social housing rehabilitation projects in Vienna. During such projects people living in social housing complexes could be supported with various measures to improve their daily mobility. This paper presents selected results from the above-mentioned project, concerning mobility and traffic themes.

2 FACTS ABOUT MUNICIPAL HOUSING ("GEMEINDEBAU")

Vienna municipal housing has a long tradition since the 1920ies and is internationally often considered best practice for social housing. Unlike other forms of social housing, the municipal flats in Vienna are owned, rented, administered and renovated by the city itself. Vienna always kept up the policy not to sell municipal flats, and presently the municipality-owned company "Wiener Wohnen" (Vienna Housing) administrates about 220.000 rented apartments housing approximately 500.000 persons. The allocation of municipal flats to new tenants is bound to criteria such as housing needs, income limits and a minimum period of residing in Vienna.

While many of the residential complexes built in the 1920ies and 1930ies have already been renovated and modernized, the task is still impending for the bigger parts of the large stock of after-war flats built until the 1970ies. About 40 residential complexes are being rehabilitated per year. With the aim of reducing heating costs and improving the fabric of the buildings as well as the comfort for the inhabitants, standard rehabilitation procedures consist of various measures, the most substantial of which is thermal insulation.

Due to the wide spread of the sites of municipal complexes, which is demonstrated by Figure 1, municipal housing rehabilitation is an important factor for urban development, quality of life and building trade in Vienna.

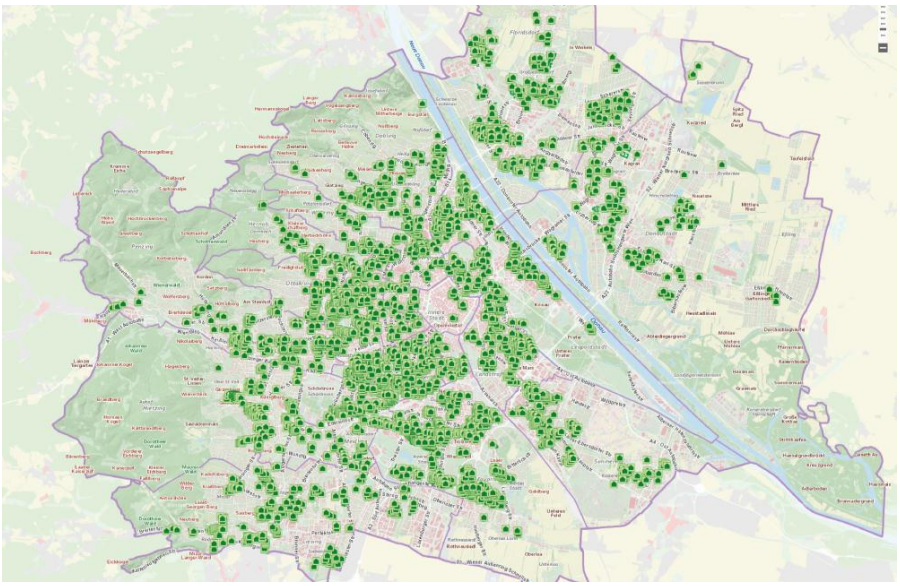

Figure 1 – Dispersal of municipal housing complexes in Vienna
Source: Stadtplan Wien, https://www.wien.gv.at/stadtplan/ (10.05.2017)

However, the common municipal housing rehabilitation practice still offers a high potential for better implementing urban development and mobility policies.

3 URBAN DEVELOPMENT STRATEGIES IN VIENNA

The Smart City Vienna Framework Strategy (Magistrat der Stadt Wien, 2014) declares three main goals which have to be implemented by developing the sectors energy, mobility, buildings and infrastructures: (1) strict preservation of natural resources, (2) high and socially balanced quality of life, (3) development and productive use of innovations and new technologies. Unlike other smart city approaches focusing on the technology dimension, the Vienna strategy considers also the social dimension of innovation. Among others, the strategy highlights that organizing mobility in a resource-efficient and socially compatible way is a core subject of smart cities, and formulates goals concerning mobility: By 2030 a high share of motorized individual traffic will be shifted to public transport and to bicycle and pedestrian traffic, and new propulsion technologies such as e-mobility will be established.

We conclude that if, according to the ambitious goals of the Vienna strategy, existing urban areas are to be transformed, municipal housing rehabilitation requirements must go beyond the state of the common practices. Among others, it would be necessary to systematically deal with the refurbishment of public and semi-public spaces, the improvement of the traffic situation in the surroundings of the housing blocks, and the improvement of mobility options for the residents.

The Vienna mobility concept (Magistrat der Stadt Wien, 2015) describes the realistic steps for influencing the traffic system and achieving the smart city goals relating to mobility. The mobility concept describes several fields of action, e. g. fair distribution of public spaces, mobility management, car-sharing and bike-sharing concepts.

The urban development plan STEP 2025 (Magistrat der Stadt Wien, 2014) postulates that customized concepts for architectural and functional improvement of residential areas dating from the period of the 1950ies to 1970ies should be elaborated, based on analyses and assessments of the sites. According to the presently observed population increase in Vienna, the development plan highlights the question of how to exploit potentials for re-densification of the buildings.

4 INNOVATIVE SOLUTIONS FOR HOUSING AND MOBILITY

The way how residential buildings are integrated into the urban structures, the design of infrastructures for walking and cycling and the number and situation of parking lots strongly influences the mobility behavior of the residents.

The parking regulation introduced in the 1960ies in Vienna, obliging developers by law to construct as many parking lots as apartments, doubtlessly contributed to a steady increase of car traffic for the next decades. Coming along with policy changes towards the goal of a sustainable traffic system, the legal obligation to construct parking lots has been lowered some years ago; presently a parking lot must be provided per 100 m² habitable surface, and for specific cases the authority may lower the ratio.

From innovative mobility solutions related to housing, the concepts of car-free or car-reduced residential areas is best-known and has successfully been executed in diverse European countries for nearly twenty years. Car-free and car-reduced residential areas usually offer good bicycle parking and cycling infrastructures, sometimes also car-sharing and bike-sharing facilities. Several examples are presented on the website “Plattform autofrei / autoarm wohnen” from Switzerland. In Vienna a car-free housing site with 250 apartments has been established in 1999. Since the tenants and owners of flats are bound by contract not to possess a private car, the Vienna car-free housing site, like several others, addresses ecology-minded citizens above all.

For the last years, several innovative mobility services have become more user-friendly by new technologies, e. g. by giving easy access to shared vehicles or carpooling, by comfortable reserving and billing facilities. These new possibilities are increasingly used for mobility services within new buildings or new urban development areas. The City of Vienna supports the provision of “mobility points” with several sharing services in urban development areas such as the new quarter “Seestadt Aspern”, and recently has also opened new ways of financing such investment: As presented by the website of the City of Vienna “Fonds für umweltfreundliche Mobilität”, a new municipal mobility fund, supplied by contributions from developers and investors, aims at providing environmentally sound mobility solutions in urban development areas.

But even if innovative mobility solutions may be applied for new urban quarters or new buildings, this is not the case for already existing quarters and for urban rehabilitation projects. Practical examples are missing of how sustainable mobility can be enhanced through social housing rehabilitation projects.

5 CASE STUDY KROTTENBACHSTRASSE 40-46

The above-mentioned research project (Smart City im Gemeindebau, 2016) highlighted several options for action that might be implemented in accordance with a social housing rehabilitation project, by the example of a municipal housing complex in Vienna.

While working on the traffic and mobility part of the project we interviewed the inhabitants about their mobility, thoroughly analyzed the traffic situation of the block and the adjacent streets, and observed the way people used the semi-public inner courtyard and the public spaces around. On this basis finally we defined options for action.

5.1 CHARACTERIZATION OF THE STUDY AREA

The perimeter block at the fringe of the densely built urban area was constructed between 1958 and 1970, and has 150 apartments, a post office and two small shops. The five-storey building is made accessible by 12 staircases, all of them opening to the inner courtyard. There are 28 parking lots rented to tenants, 12 of them located in the inner courtyard and 16 outside, in an adjacent parking area. The photos in Figure 2 give an impression of the housing complex.

Figure 2 – The case study complex: View from Krottenbachstrasse (1), inner courtyard (2 and 3)
Photos: Andrea Weninger

As shown in Figure 3, the residential area north of Krottenbachstrasse dating from the period before 1914 is characterized by its grid-like road network, but also by several municipal housing complexes built after 1955. South of Krottenbachstrasse the character of the area changes significantly: the terrain rises, and some recreational facilities and residential buildings are situated on the hillside. The housing complex under study is quite well-supplied with nearby shopping opportunities and health, education and recreational facilities. Many destinations can be reached by foot within short time.

Figure 3 – The surroundings of the case study block
Source: Stadtplan Wien, https://www.wien.gv.at/stadtplan/ (10.05.2017)

5.2 INTERVIEWS WITH INHABITANTS

The interviews were carried out in November and December 2015 by "wohnpartner“, an organization who attends to the communication within municipal housing complexes on behalf of the City of Vienna. The extensive personal interviews aimed at gaining information and at detecting potentials for a “smart” rehabilitation project. They were based on a questionnaire which, among others, also contained questions about the mobility behavior, the traffic situation and the urban environment, as well as about related needs and wishes of the inhabitants.

A third of the households were reached, and detailed interviews with 50 inhabitants and two shopkeepers took place. Among the 50 questioned inhabitants there are 32 women. All age groups are represented – from “20-30” to “over 80”; the strongest age group is the 51-60 years olds. Two thirds of the interviewed persons are living in one- or two-persons-households, nearly one third in households with children. About half of the interview partners are retired – some of them because of disability or illness, a quarter are employed, and 9 persons are out of work.

As regards mobility behavior, walking by foot and traveling by public transport are most important, a large majority of the interviewees doing so frequently, followed by riding in a car driven by someone else. In contrast, the options of driving a car oneself or riding a bicycle are used only by a minority of the interviewees. Accordingly, 30 persons dispose of an annual ticket of Vienna public transport. 28 persons (more than half of the interviewees!) do not possess a car, and still 20 persons live in a household where nobody holds a driving license. From the 22 car owners 13 are parking in the public streets, and 9 on a rented parking lot of the housing complex. Only 14 persons have a bicycle, most of them keep it in their own cellar compartment. None of the inhabitants has an electric car or an e-bike. Although cycling

presently is not a common mode of transport, two thirds of the interviewees consider that providing bicycle parking facilities when renovating the housing complex would be a good thing. Altogether, the questioned inhabitants are rather satisfied with their living conditions and urban environment. But more than a third of the interviewees consider that road safety is “poor” or “very poor”.

The major problem is that pedestrians feel uneasy when crossing the adjacent highly frequented road (Krottenbachstrasse).

5.3 ANALYSIS OF THE TRAFFIC SITUATION AND OF PUBLIC SPACES

The public transport connection, ensured by a bus line in the adjacent main road, with a bus stop directly in front of the block, and a nearby urban railway line, is rather satisfactory. Anyway, the intervals during off-peak-hours are rather long, and the nearby bus stop is lacking comfort and has no waiting time display.

The conditions for pedestrian traffic in the surroundings are quite good, but still offer a lot of room for improvement. Foot paths leading through the council housing complexes supplement the grid-like road network north of Krottenbachstrasse. People use the semi-public spaces of the inner courtyard of the case study block for passing through, but rarely for staying. In the study area many destinations can be reached within walking distance. But the street layout favoring parked cars makes the sidewalks often very narrow. The Krottenbachstrasse can be crossed on a crosswalk (without traffic lights) in front of the apartment complex. But due to its high traffic volume and the increased risk of accidents, the Krottenbachstrasse is a considerable barrier to pedestrians. The rising terrain opposite the investigated apartment complex can be accessed by a public staircase leading to some recreational facilities, but it has no ramps and cannot be used by people with mobility limitations.

Since there is no cycling infrastructure in the study area, cycling is not an attractive option for residents. However, the 30 km/h zone north of Krottenbachstrasse allows biking in mixed traffic with cars, but bicycle traffic is bound to the one-way system of this zone and cannot profit from exceptions which are common in other districts of Vienna. The Krottenbachstrasse is unattractive for cycling and even rather dangerous, due to the high traffic volume and the high speed, the bus traffic and the one-sided cross parking. Correspondingly, the number of cyclists on Krottenbachstrasse currently is low. The area south of Krottenbachstrasse cannot be reached easily due to its steep slope. In the vicinity of the apartment complex, there are almost no parking facilities for bicycles in the public space.

The number of car parking spaces within the public streets is high, with a very high level of capacity utilization. Unlike other similar quarters of Vienna, in the study area the public parking space can be used free of charges. In the 30 km/h zone cars are usually parked lengthwise on one side, and angular on the other. The remaining space for walking and cycling is severely restricted. The narrowness of many sidewalks punctually is even reinforced by waste collection containers or other street furniture.

Within the examined housing complex 28 car parking lots are available and leased to tenants. Compared to the high capacity utilization of the public parking spaces, the personally reserved in-house parking spaces seem underused.

The photos in Figure 4 illustrate the analyzed conditions of the neighborhood, such as the narrowness of sidewalks, the lack of cycling infrastructures, the reserved parking lots, a semi-public passage through the case study block, the public staircase and the crosswalk across Krottenbachstrasse.

Figure 4 – Infrastructures for parking, cycling and walking in the neighborhood
Photos: Andrea Weninger

From the baseline study we conclude that there is a high potential for improvement. In a first phase of collecting need for action the space for ideas stayed wide open:

- Making pedestrian crossings in Krottenbachstrasse safer
- Redesign of the inner courtyard, maintaining and re-designing the public pedestrian passages, taking into account the requirements of barrier-free accessibility
- Securing and further improving the dense pedestrian network in the study quarter, including the much-used routes through the municipal housing complexes, which constitute a special quality of the study area
- Safeguarding sidewalks of 2 meters minimum, by changing road design in favor of pedestrians
- Increasing the usability of public space for people with mobility limitations by providing stairs with ramps or elevators in steep terrain
- Providing high quality bicycle parking facilities in the housing complex, well integrated into the redesign of the inner courtyard
- Improving the cycling infrastructure in adjacent streets, in particular in the Krottenbachstrasse
- Finding solutions for the establishment of collective garages for several blocks, replacing the parking lots assigned to the case study complex, and using the potentials for high quality design of the inner courtyard and the public space.
- Providing car-sharing and other mobility services like rental of an e-bike or a bike trailer for the residents (“mobility station”)
- Providing traffic and mobility information for the residents, e. g. by installing a digital bulletin board which can also be used for reservation of mobility services
- Rebuilding street furniture with high quality design (waste bins, bus stop)

5.4 CONCLUSIONS FROM THE CASE STUDY

The above list of potential for improvement contains three different types of measures:

A. Edificial measures within the municipal housing complex. Responsibility for implementation: Owner and property management organization (“Wiener Wohnen”)
   - Re-construction measures within buildings and open spaces
   - Utilization changes for existing spaces
   - Furnishings for common rooms and open spaces

B. Accompanying participatory, activation and organisation measures Responsibility for implementation: There are various options – the responsible organisations must be commissioned by “Wiener Wohnen” or the City of Vienna
   - Participation procedures for accompanying re-design measures, e. g. for the inner courtyard

- Activation and motivation of inhabitants, support for self-organization
- Business models for (commercial or self-organized) mobility services
- Traffic information and mobility management measures

C. Traffic measures, street design measures and edificial measures concerning the surroundings of the housing complex Responsibility for the implementation of measures: Diverse municipal departments, district authority and other organisations (transportation-company, property developer etc.)
   - Traffic measures, safety measures
   - Design of the public space, street design and re-allocation of functions
   - Public transport measures
   - Development and construction measures on nearby properties (collective garages)

It is evident that many of the above-mentioned measures are strongly interdependent. For example, if convenient bicycle parking facilities for the residents of the case study block are constructed, they will be more appreciated and asked for, if at the same time a bicycle route in the adjacent main road is provided, and maybe even more if additionally, residents can run a self-organized bicycle repair shop.

However, the approved procedures of municipal housing renovation projects presently do not include aspects of the urban environment, and residents' participation in renovation is not carried out systematically. Taking this into consideration, the above-mentioned project (Smart City im Gemeindebau, 2016) was finished by developing practical guidelines for measures that might be implemented by the property managers themselves, especially the construction of bicycle parking facilities.

6 SUSTAINABLE MOBILITY OPTIONS

With the aim of stimulating sustainable mobility, people living in municipal housing complexes could be supported with various measures that might be carried out during renovation projects. The residents should be able to cover their daily journeys in an efficient, cost-effective and environmentally friendly manner. They should have more individual choices and should be able to use technological and social innovations for their mobility, for instance by using a car now and then without possessing an own car. Such innovative mobility solutions might make people more satisfied with their residential situation.

Independent from the above-mentioned case study, in a more general way, and taking into account current literature on housing and mobility (Raum & Kommunikation, 2014; Arbeitsgemeinschaft Fussverkehr Schweiz, 2014; VCÖ, 2015), several options for action, that might be implemented in accordance with municipal housing renovation projects can be identified.

CREATE GOOD CONDITIONS FOR CYCLING:

The construction of sufficient convenient bicycle parking facilities during a renovation project may be a strong factor for motivating the residents of municipal housing complexes to increase the use of this efficient, healthy and environment-friendly mean of transport. Bicycle parking stands may be situated in the open space of the housing complex or in under-used ground floor rooms or, if lift transport is possible, even in upper floors near to the apartments. It is important to guarantee a good practical usability by implementing quality criteria like direct access from the street, short distance to the stairway entries, protection from weather conditions and from theft. For the access and locking system smart technological solutions may be used. In Vienna, housing companies can obtain public funding for raising bicycle parking stands.

PROVIDE MOBILITY SERVICES AND RENTAL:

The residents will find cycling even more attractive, if they can rent an e-bike, a bike trailer or other equipment, and if a compressed air pump and a toolkit for repair are available nearby. For implementing such services in municipal housing complexes there are still some open questions to be answered: What is the adequate organization form – commercial service or self-organization, what is the best size of the

service provider? Is the target group limited to residents of the complex, or is there open access? What is the adequate reservation system?

PROVIDE ACCESS TO CAR-SHARING FOR RESIDENTS:

If the tenants of municipal flats get used to car-sharing they can increase their options for their everyday mobility and maybe they can more easily do without an own car.

There are several possibilities of how to support car-sharing among the residents: The housing company or a commissioned organization may limit itself to inform the residents about existing car-sharing systems, or it may try to get a car-sharing station within or in front of the housing complex by negotiating with the car-haring companies. The creation of an own municipal housing car-sharing system all over Vienna would be most ambitious; a detailed business model would be needed.

IMPROVE THE FOOTPATH NETWORK:

Many municipal housing complexes offer the possibility to pass through, and thus are significant parts of the quarter's footpath network. When securing and improving theses passages the municipal housing companies can contribute to supporting the active and healthy mobility form of walking. Especially the attractive design of the entrances as interfaces between public and semi-public spaces, including lighting, is important. For the redesign of the inner courtyards and other open spaces of the housing complexes a participation procedure for the residents is recommended. Possible conflicts between the openness to passing through and residents' wishes to close the complexes for security reasons must be discussed during such participation procedures.

RELOCATE PARKING LOTS INTO COLLECTIVE GARAGES:

One of the most ambitious aims of the Vienna Mobility Strategy is the aspired redesign of public streets in favour of walking and cycling. The relocation of parking space to collective garages would open up the scope of action not only for the public streets but also for the renovation of municipal housing complexes. In our case study example the inner courtyard which presently offers 12 parking lots (with a weak degree of capacity utilization) could be redesigned in favor of a resting place or a small children playground – facilities that were missed by the questioned residents.

7 CONCLUSIONS

The implementation of measures in the fields of action set out above requires a lot of coordination and cooperation between different departments and organizations. While the responsibility for construction activities within the housing complex clearly lies with "Wiener Wohnen", the responsibility for the implementation of accompanying, activating participatory action has yet to be determined. The residents' participation and mobilization for self-organization from the beginning would be necessary for the implementation of measures. Furthermore, for really improving the residents' mobility situation a combination of measures, both within the housing complex as well as in the surroundings will be adequate.

This approach would require focused cooperation between the housing organization and municipal departments responsible for traffic and urban space, as well as private companies and organizations. Suitable cooperation mechanisms presently are lacking and should be established.

We have to be conscious of the fact that municipal housing complexes are widespread over Vienna's territory and that adapted procedures for municipal housing renovation have the potential not only to improve the quality of living for the resident, but also to contribute to the ambitious mobility goals of a sustainable city.

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ID 1382 | ROLE OF THE RUMORS DURING THE URBAN TRANSFORMATION PROCESS IN ISTANBUL GECEKONDU SETTLEMENTS

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1 INTRODUCTION

This paper is a product of the PhD thesis focusing on the urban transformation process into gecekondu[1] neighbourhoods (the special name for informally, DIY-constructed building groups constructed only in Turkey) in Istanbul and focuses on the rumours flowing mouth to mouth before and after the urban transformation project.

This paper is endorsed on Deleuze and Guattari’s arguments about flows, assemblages, and machines. Urban transformation is taken as a machine and the information is the key element of this machine. Rather than the rules, procedures or laws about the urban transformation process, words are moving faster. We always watch on TV or see in the newspapers advertisements about new transformation projects, or professionals’ comments about the necessity of the processes. In addition to this, urban transformation in gecekondu does not only happen by the law or by the projects called urban transformation projects. Any kind of luxury residence projects, big shopping malls or big transportation projects can initiate the urban transformation process. This is not an operation that is determined step by step. Communication and negotiation with the inhabitants one by one are very important and at this point, rumours come into the

[1] Gecekondu is an informally constructed house which is built autonomously by the people who uses it. Gecekondu houses come together and make big neighborhoods. For further details: (Karpat, 1976), (Erman, 1997, 2004), (Ergün, 2008). For a Deleuzean Perspective on informal settlements: (Co Villanueva, 2012)

play. On the gecekondu neighbourhood scale – where the neighbourhood relations are very close - information about the prospective urban transformation projects are influencing the area spreads from mouth to mouth and transforms into rumours. Rumours canalize desire flows making some spaces more attractive, some others less, and affect the daily life of gecekondu inhabitants and their decision process.

In this context, the aim of this paper is to follow the information flows related to urban transformation from the macro scale of Istanbul region to the micro scale of gecekondu neighbourhoods by analysing the news, advertisements, speeches of public authorities and listening to gecekondu inhabitants' stories. Focusing on gecekondu inhabitants, this study demonstrates how information transforms into rumour, the ways it flows through the gecekondu neighbourhood, and finally how people react to these rumours before, during and after urban transformation processes.

The words flow will be followed from macro (Istanbul) to micro (gecekondu) scales and the main aim is to find out how urban transformation works with words. In this paper, first, the theoretical background of the research will be revealed. In the second part, the methodology of the paper will be presented. As a macro scale, discussions about the urban transformation law, the importance of the seismic risk in Istanbul, and the rumours about the demolishment threat in gecekondu areas will be introduced. Secondly, focusing on Istanbul -Sarıyer gecekondu neighbourhoods, the two steps of urban transformation will be analysed. The first part will show the rumours flowing into the gecekondu areas before any project is declared. Rumours about the demolishment of the neighbourhood start even before any urban transformation project becomes concrete. The second part will demonstrate what is happening after urban transformation is completed. After the project triggering gecekondu transformation, most inhabitants move to mass housing areas which are assigned for them, and there, they still continue to discuss who paid how much for the new house or who had the most advantageous flat and so on.

2 THEORY AND METHODOLOGY

Urban transformation emerged in the beginning of 2000s not only in scope of "urban transformation projects", but especially for creating new urban project areas by focusing on gecekondu regions. While there are technical reasons such as seismicity and necessity for transformation, urban transformation has taken place in the form of demolishing especially gecekondus, and building shopping malls, large transportation projects of luxury residency areas, particularly in large metropolitan cities such as Istanbul. The most differentiating aspect of the transformation process experienced in gecekondu neighbourhoods in comparison to other urban transformation projects is that it is usually carried out without planning, over piece by piece projects and based on negotiations. The most emergent issue in this process is the news on the media and rumours flowing across the neighbourhood. It may be stated that various different people, institutions and groups on all scales need to have a say on urban transformation, and there is a bombardment of information regarding urban transformation because of this. The new social organisation proposed by Hardt and Negri (2012) as "the mediatised" may be discussed. This new form is described by Hardt and Negri (2012) as a type of information society, and the information flowing in the media is joined by the people who live in the image world established by this information. They argue that the people of this world has no problem about not being able to say much, but on the contrary, they suffer from the abundance of expression, as well as communication. Hardt and Negri (2012: 22), citing Deleuze, stated that: "the issue is no longer having people express themselves" says Gilles Deleuze, "it is to create small seclusion and calmness intervals at the end of which they may find something to say. Oppresive powers are not preventing people from expressing themselves, on the contrary, they are forcing them to express themselves. Such a privilege to have nothing to say, and the right to say nothing; because, only then there is an opportunity to catch the thing that is rare, the thing that is even rarer, worth saying." Considering information bombardments and the issue of the mediatised in terms of urban transformation, it is seen that rather than hiding information about a subject, there is the issue of constant circulation of new information, documents and images. Hardt and Negri (2011, p. 111) defend the idea that today's dominant production system produces "intangible goods" such as ideas, information, ways of communication and relationships. These intangible goods may be significant indicators of urban life. The city becomes the space for all these flows. Similarly, we may argue for urban transformation that it does not only produce buildings, but also new urban lifestyles and forms of information. These new lifestyles whose images are shown in the mass media, actually take an important place for this article and reminds us a quote from Deleuze (2003, p. 30): "A dream is a terrifying desire for power. All of us are more or less victims of other people's dreams. Even worse, even though the one whose dream you are caught in is the sweetest, most beautiful girl in the

world, she may become a monster – not with her soul, but via her dreams. Keep away from others' dreams, because if you are trapped in the dream of the other, you are fucked.".

In the process of urban transformation, information turns into rumour and can move fast via ambiguity. These micro information flows usually develop with the support of the media or different capital groups, and move through the word of mouth about the initiation of a law or a future foundation of a mega project. These urban transformation rumours whose source is usually unknown may arise from not only the citizens, but also contractors, professionals in the sector, or statements by the public authority. Wright (2008) indicated that it is not important for a rumour to be true or false. In addition to this reference, we may talk about how rumours work. In the process of urban transformation, a rumour about a provisory investment in a neighbourhood may lead inhabitants to sell their houses. At this point, rather than the truth or the lie, it is important that rumours can mobilise people. Secondly, Wright (2008) stated that although rumour is considered "false information" by its nature, it contains true and false information together. In this context, in the urban transformation process, rumours arise related to an investment, or demolition coming to a gecekondu neighbourhood. While these may partly be true, there is no certainty on when they will happen. The function of rumour here is to speed up the process, and allow citizens to develop ideas on a predetermined tendency against potential situations. Additionally, rumour does not proceed as a straight line, but it forms connections, moves like a rootstalk by changing itself during connections.

It may be stated that the fundamental methodology of the study inspired by the approach of Deleuze and Guattari. This method that we may describe as handiwork by joining the material in hand was applied by Deleuze and Guattari by borrowing the term 'bricolage' from Levi-Strauss (Deleuze & Guattari, 2012). Considering it in terms of cultural studies, bricolage may be thought of as installation/interpretation of objects, forms, expressions or relationships that are not directly related by recombining them. For the first part of the research, more than 6,000 news pieces in 3 major national papers (Sözcü, Zaman and Milliyet) and TV advertisements about urban transformation were located and analysed. In the second part, in-depth interviews were conducted with 20 gecekondu inhabitants from 3 different neighbourhoods in Sarıyer (a district experiencing urban transformation), who had moved to mass housing areas. The interviews were made in the mass housing areas located in peripheral areas of Istanbul (Kagıthane, Kartal and Guzeltepe). Superimposition of these two scales shows us the circulation of 'words' from the citywide narratives to the mouths and actions of inhabitants.

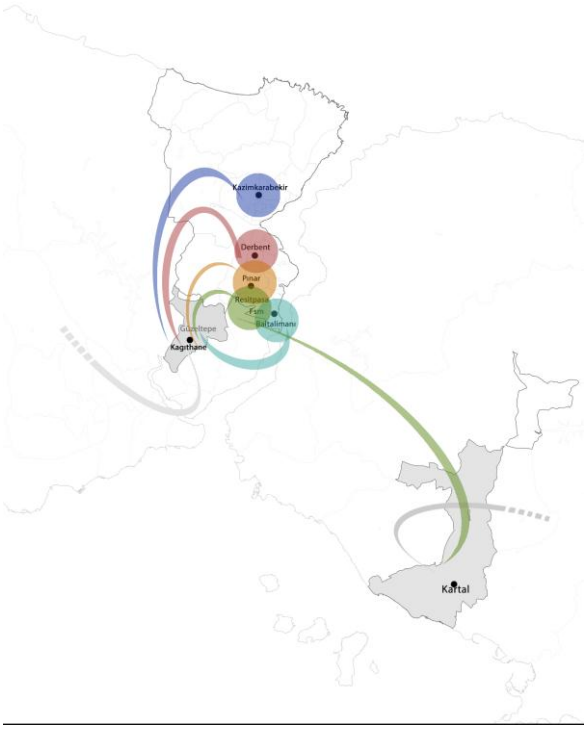

Figure 1. Map of the Sarıyer Gecekondu Neighbourhoods Moving to Peripheral Areas

3 FIRST RUMOUR: URBAN TRANSFORMATION LAW

Consequtive laws, executive orders and law changes are starting to be seen in the news, advertisements and all types of media. Thus, it is seen that rather than in-depth research about the law, the information about this is spreading around. Therefore, in the urban transformation process, law suddenly becomes fluid and turns into information, which flows. In 2005, discussions on an urban transformation law started in the public sphere and the Chamber of City Planners launched a press conference regarding "the Draft Law for Urban Transformation." The statements were in the lines of the idea that the draft law had the potential to create new problems (ŞPO, Mart 2005)(Chamber of City Planners, April 2005). In the statements, the Chamber of City Planners, argued that, although there was the claim that the law was prepared based on scientific data, it was formed in ignorance of science and protection councils. On the other hand, the

chamber of profession stated that old city areas and those that lost their characteristics were devlared “Urban Transformation and Development Areas” in a way that may be a subject of all kinds of speculation later, and this law would create areas of rent. In this process, a perception of suspension of this law was created given the potential that there is an opposition and various opposing scientific ideas. Nevertheless, not so much later, June 2005 faced the initiation of the law for “Protection of Damaged Historical and Cultural Immovable Assets by Restoration and Usage of These by Reanimation.” While the name of the law cannot be related to urban transformation, it is known as the first law of urban transformation that proposes urban transformation in historical neighbourhoods. During these debates, while the changes in the law of TOKI (the Housing Development Administration) were not reflected in mass media in a way that would explain what changed one by one, TOKI’s authority and activities constantly appear in front of us with the term urban transformation. TOKI’s size and many houses built by this institution usually appear on the news.

It is seen that from the start, especially the private sector and the public authority have an important call in terms of urban transformation. However, in the first stage, urban transformation is presented as a process to “get rid of” gecekondus and “illicit” housing, and it is focused rather on very poor neighbourhoods. A news article published in the daily Milliyet in 2007 emphasised this: “Illicit buildings will become “normal” with the law of transformation zones.” Increasingly intensified circulation of discussions on earthquakes in the city is one of the most important factors that allow urban transformation to work fast. Relating urban transformation to this issue of earthquake is a significant pushing power. Another important rumour that emerges in the urban transformation process is the law of “transformation” or “urban transformation” that is expected to “come into power.” It is seen that the law that firstly appeared in the news in 2006 as “the Draft Law for Transformation Zones” has been started to be discussed as the law for converting gecekondu areas into legal status. The news article in Milliyet entitled “Looting Would Become Legitimate”, described the law known as “the Draft Law for Transformation Zones” as a law that provides gecekondu owners with the opportunity of buying a residence with payment term of 20 years.

Before the “Law for Transforming Areas of Disaster Risk” came out in 2012, as opposed to the laws in previous years, there was a positive reaction in the whole society and the newspapers. It is seen that a statement was made about this law in the news by Kadir Topbas during the opening of AKP Bahçesehir Municipality Office. It is an important indicator that a statement was made about urban transformation during the opening of an AKP municipality office, and this statement was made by the Mayor of Istanbul. It is seen that, in this sense, the urban transformation law was meant to stay as an operation of the AKP as an organisation. Again, in the daily Zaman, news pieces were seen regarding families who “were saved from gecekondu life” by moving from gecekondus into mass housing project as a result of urban transformation in the period right before the parliamentary discussion on “the Law of Urban Transformation.”

Considering the style of providing the news pieces after the approval of the law, the pro-government nature of the newspapers was slightly influential. As opposed to the case in Zaman where the positive aspects of the law were emphasised, on the same day the law came out, the daily Sözcü used the title of “Urban Transformation Law Final” to provide an objective and non-critical language. That the “law was final” ensures the perception that this service has been provided and it is a good service. By the law came into force, we see for a few months that newspapers included very intense amounts of pieces reporting that urban transformation is now started town by town. This issue of initiation was paid a great importance, and the opening speech by the period’s Prime Minister Recep Tayyip Erdogan was made during the urban transformation process of the Esenler Airport area by determining a starting date (5 October 2012). Transformation of the law into information, rather than being for information of the public about the laws, is operated with the aim of mobilising the society regarding urban transformation. All these rumours of a law, whether they have a trace of truth or not, create great excitement and make it easier for desires to flow in the direction of urban transformation.

4 EARTHQUAKE RUMOUR

Rumour of earthquakes has a place especially in the initial stages of urban transformation in detailed processing of the imposition in gecekondu neighbourhoods to demolish buildings and transition to mass housings. In this sense, rumour of earthquake creates an axis of ridding people of their place and home. One of the arguments for sustaining an entire urban transformation process is which parts of the city, an

Istanbul earthquake will affect, which may also initiate the formation of urban transformation projects. It was not a coincidence that the years in which the construction sector started to rise correspond to the aftermath of the earthquake in Izmit in 1999. This issue does not stay as a statement that only comes from official offices to the people and only affects poor groups of people, but it has a place in daily life that increasingly moves towards middle-classes. Çiçekoglu (2015, p. 22), in her book on an analysis of insurrection threshold in movies regarding urban life, described the idea of emphasising the destructive nature of the urban transformation process and usage of earthquake rumours as an excuse for wealthy neighbourhoods by "in the days of 'construction by destruction' that surrounded the city again after 40 years, Fenerbahçe is being demolished again using the possibility of an earthquake as an excuse." This rumour may be traced back to a statement in 2004 in the daily Milliyet by Kadir Topbas, who then had been Mayor of Istanbul for only 5 months, based on rumours where such an earthquake would affect as "I will demolish. Let them call me evil" (Milliyet, 6 September 2004).

With this statement made by Kadir Topbas as soon as he started his job, the post-2004 process based on "urban transformation" in Istanbul started especially in a way to "empty city centres." However, we see that Kadir Topba still did not use the term "urban transformation" based on this article.

In the early 2000s and in parallel to the timeline of these statements, it is seen that the word flows regarding an earthquake were rather on the level of technical information and they usually involved statements by architects and engineers. Considering the changes in the people and institutions speaking about earthquakes in that time, it is seen that the period of 2000-2006 where academics with technical knowledge were visible was followed by a period of the public authority or people of the law spoke about earthquakes, and were joined later by contractors.

It is seen that the news pieces about buildings in most towns in Istanbul not being resistant enough for earthquakes were more frequent after 2006. It is also seen that the interviews with engineers about fault lines and possibility of an Istanbul earthquake before 2005, left their place for a discussion on "weakness of buildings" led by TOKI and private sector firms. The argument for urban transformation that started over stability and life safety increasingly evolved towards cultural transformation or construction of luxurious buildings. It appears that images used in this article and similar ones usually consist of ruined buildings, cracked walls or aerial views of crammed up city textures, and therefore strengthen the information provided by the news in this context. The news of the instability of buildings in Istanbul and that they carry a risk of collapse in case of an earthquake appeared in certain intervals in newspapers.

Until the Law No. 6306 in 2012[1] came into force, it is seen that the term "disaster" was not used in relation with an earthquake or urban transformation. Additionally, the concept of "risk" we almost did not see at all till 2008 started to emerge in the news after these dates. In the form, it is reflected in the media, it is thought that the responsibility of the public authority is limited to public buildings, and single buildings are considered in the responsibility of the property owner. Again, the same point of view may be seen exactly 5 years later than this news piece in the Law No. 6306, where the responsibility of urban transformation was left to the property owner. Therefore, the process starting with the 2000s and reached 2015 does not work by instant changes through legislation, but is cooked in the media, government statements, developed, added and related, eventually reaching the Law No. 6306.

It started to come out in the newspapers that "Earthquake-Centred Urban Transformation" was initiated in the old gecekondu neighbourhood of Zeytinburnu Sümer. Ali Agaoglu, one of the significant investors in the urban transformation process who has been popular since 2007, confessed in 2009 that the buildings in Bagdat Avenue were constructed using sea sand and scrap metal, and created anxiety in higher-class residents rather than gecekondu citizen. This example clearly demonstrates the process of very technical information such as seismicity or construction quality turning into a rumour. After Agaoglu's statements, it is seen that initiatives took place regarding the construction activities in Bagdat Avenue and surrounding areas. Again, Agaoglu, stated in 2010 that Istanbul should be demolished not by an earthquake, but by construction firms. It may be argued that these statements in two consecutive years played an important role in carrying the urban transformation process from the particularity of gecekondus into the lives of middle and higher income groups.

[1] The Law For the Risky Areas

The image above used in the news piece regarding Agaoglu's statement is a significant example of the idea of a building and a city in the aftermath of urban transformation. The high-rise building in the form of a skyscraper with a helipad represents the interpretation that urban transformation is not being implemented only for building stronger structures, but it is also used for creation of a new urban lifestyle. After the approval of the "Law for Transformation of Areas Under the Risk of Disaster" on 31 May 2012, more striking news pieces about the risk created by earthquakes started to appear in the media, and newspapers used the argument of urban transformation as the only solution more often. The piece whose image is shared above emphasised especially that urban transformation is not only about refurbishing buildings and the issues of society and environment should be in the process, and showed that there is a move towards more theoretical argumentation than in the previous piece. In the image used in the news article, the human silhouette covered with windows seems to relate the "ideal human" with urban transformation by providing a reference to Da Vinci's Vitruvian Man.

Consequently, the argument that urban transformation is a must for preparation for earthquakes started after the 1999 Izmit earthquake became increasingly dominant in the entire media, and the people and institutions expressing this argument changed through time. The process, which usually progressed through scientists and academics in the beginning of the 2000s, started to be spread over the statements of the public authority later. The function of the central government components and the Metropolitan Municipality to distribute information on earthquakes started to be left to private sector components by the early 2000s. The information that progressed through risk, disaster and destruction and evolved towards earthquake-centred urban transformation brings us to the definition of social democracy by Ulus Baker (2010, pp. 343-344): "a regime, and even social-democratic regime individualism, is absorbed in the body of an imaginary 'potestas' that is intended to solve problems in the name of the people who are assumed to be 'innocent' and have the necessity of being 'governed'; government becomes a service". The emphasis is on the desire of the state to pursue the best interests of the public by implementing urban transformation whether the public wants it or not.

The argument of urban transportation that spreads not only in terms of seismicity but also in many fields, or discussions over the common good, also become frequent in the case of gecekondus. The issue of "public interest" that is reached by debates on "occupation" that are carried out considering the property issues in gecekondu areas seems important for reaching consensus in many layers of the society regarding gecekondu demolition.

5 RUMOURS OF DEMOLITION

Gecekondu neighbourhoods have continued their existence by constantly considering the possibility of demolition since their first stages of establishment. In this sense, rumours of demolition are not new for gecekondu neighbourhoods, but it is a mechanism that has been familiar with for more than 50 years. On the one part, it may be argued that these rumours increase the power of solidarity among gecekondu-dwellers in terms of supporting each other and collecting stories in which they stand against demolitions all together (Gizem Aksümer, 2010; Murat Cemal; Yalçıntan & Çavuşoğlu, 2008; Yücel & Aksümer, 2011). On the other hand, rumours of demolition entering gecekondu neighbourhoods become a driving force of the urban transformation in the 2000s.

In this context, it may be seen that the reflection of urban transformation debates in the 2000s on gecekondu neighbourhoods did not start with a single urban transformation process, but the process was significantly pushed forward by the re-emerging rumours of demolition that were more intense. Even before the revelation of urban transformation or a project that affects gecekondu neighbourhoods, urban transformation enters the neighbourhoods as a "rumour of demolition." Sometimes, there is no urban transformation project at all, but instead, investments around, transportation projects, and shopping malls lead to a group of gecekondus to be demolished. Important findings include that small-scale projects and plans that only affect gecekondu neighbourhoods do not find a place in the media, and government statements related to these do not appear. Only news pieces about the Derbent neighbourhood took place in the media for a few times as the project was "showcased" abroad. On the other hand, gecekondus usually appear on the news in cases related to resistance against demolition or crimes such as fights. The news pieces that concern the issue of gecekondu the most, those related to mass housing areas, are only carried out over the issues of where these housings are built, whether lotteries are drawn or not, or the number of residences. In the article on how rumour woks, Wright (2008) emphasised that rumours

strengthen solidarity and sense of community. We may see this in gecekondu residents supporting each other during demolition stories and keeping watch to prevent demolition teams entering the neighbourhood. On the other hand, stronger solidarity and sense of community brings about faster spread of rumour in the community. Progression of rumour does not happen in a straight line, but takes place in a net-like, rootstalk-like formation, and information is usually spread through multiple different sources with different interpretations rather than a single source. This rootstalk-like operation seems suitable for the gecekondu neighbourhood, where social relationships are also rootstalk-like. Therefore, starting rumours is a factor that speeds up the operation of urban transformation. In this context, in order to see the working mechanism of information flowing from various channels on the adjustment of gecekondus, this section will investigate in detail the rumours of demolition in the Fatih Sultan Mehmet, Baltalimanı and Resitpasa neighbourhoods of the Sarıyer district.

Demolition has been a part of daily life for gecekondu residents since 1950s, that is, since they built their gecekondus. Nevertheless, newspaper articles show that the first encounter of Sariyer's gecekondu neighbourhoods with urban transformation after 2005 occurred with the demolition in the Derbent neighbourhood. In the article "Sarıyer'de Yıkım Savası" (Demolition War in Sarıyer)(Milliyet, 2006) it was reported that actually only one building was demolished in scope of urban transformation, and again in this scope, neighbourhood residents opposed the issue with a violent reaction and established barricades in the neighbourhood due to the rumours that their homes would be demolished[1]. In this sense, the emphasis is significant on the report that the demolition team that entered the neighbourhood with the police and anti-riot water cannon vehicles did not intend to demolish the houses in the neighbourhood, and the people were agitated about "false rumours."

In the same article, it was reported that tear gas canisters were fired near the elementary school and the student were taken to the hospital. 2006 was a period where especially the concept of urban transformation became popular by emphasis and worked over gecekondus, while it had the characteristics of attempts of violently implementing projects with gecekondus. Another article about gecekondu transformation was published in September 2013 in Milliyet. The period after 2010 was a period where a discussion as "transformation on site" emerged about urban transformation. In this article, it was stated that it is possible for gecekondu residents to enter urban transformation without payment and stay in their location.

In parallel to this information, one of our interviewees, Ayse stated that there has been rumours about demolition in Baltalimanı for very long, and "the people are fed up with it." Similarly, Mehmet (Ugurmumcu Neighbourhood, 50-55) said he knew about the rumours of demolition in FSM since his young days, and the residents have slackness due to the idea that "they will always say there will be a demolition, but they will never demolish it." Accordingly, such slackness made it easier for 35 buildings to be demolished in FSM.

Gecekondu residents who face a new demolition rumour or possibility every year have lived through long-lasting rumours of "they say demolitions will take place" during the course of the process of urban transformation. The news that demolition will take place in the neighbourhoods of FSM, Baltalimanı, Resitpasa and Pınar where the interviewees who moved to mass housing previously lived, reached them even before the project was known publicly. In addition to shopping malls, mixed-usage residencies, luxury residential complexes in old villages, and mega projects such are large transportation investments in Sarıyer, the roads, bridges or green areas that are the extensions of these projects lead to a partial process of destruction and transformation in gecekondu neighbourhoods. It is seen that rumours, speculations and the direction of information flow are highly important in cases where the neighbourhood is not completely a subject of urban transformation, but only some plots are in the demolition zone.

It is seen that demolition rumours in FSM, Baltalimanı, Resitpasa progressed until the construction of the second intercontinental bridge. Halil, an interviewee who moved out of Baltalimanı, stated that the rumours that these neighbourhoods would be demolished, became more prevalent after the construction of the bridge: "The second bridge was opened in Hisarüstü, and it passed between Baltalimanı and Hisarüstü. It may be 1990, I am not sure. There was the rumour for years that Hisarüstü would be removed and

[1] For further details about the opposition of gecekondu neighborhoods to the urban transformation process:AKSÜMER, G. 2010. Luttes Contre La Transformation Urbaine Des Quartiers De Gecekondu D'istanbul: Etude De Cas Du Quartier Kazimkarabekir. Master Recherche, Galatasaray Üniversitesi.

Baltalimanı and Armutlu would be expropriated." Ibrahim, who also moved out of the same neighbourhood provided a parallel argument: "It is not about the rumours, but these (projects) were always ready. I was buying a flat in Hisarüstü. When I went there, the man showed me a map of the location and said the situation is complicated there. It was 1998. Hisarüstü, Baltalimanı, Armutlu… I could not trust these places and but a flat there." That these rumours may be traced up to the end of 1990s, shows that there was a period of demolition rumours until 2005 for 10-15 years.

Again, Mehmet from FSM, who was affected by the same projects (Ugurmumcu, Male, 40-50) stated that such rumours came into the neighbourhood before they received the official notice of demolition. Such rumours in the form of gossip that may arise in coffee houses and women's house gatherings are also seen in Baltalimanı and Resitpasa. Halil coming from Baltalimanı even stated that they were informed about the road to be constructed in the neighbourhood with the official notices, but in this process, negotiations were made with many people beforehand. He shared his doubts that preliminary negotiations were made with some residents and those residents were informed beforehand. Tekin said most residents learned about the demolition process from Kadir Topbas speech in the neighbourhood. In this stage, speculations or newspaper articles about the negotiation meetings of construction companies also become the first source of information about the process.

While the interviewees had various complaints about these new mass housing areas and especially women missed their old neighbourhoods, the weariness from the threat of demolition and the unsustainability of the process provides a sense of satisfaction from living in a flat. Housewife Ayse, who moved out of the Baltalimanı neighbourhood (Güzeltepe Konutları, 50-55) stated that she is very sorry to have left the neighbourhood, but added her satisfaction from having a legitimate home here, as "I am thankful that we no longer have this issue of demolition." Waiting for long times for a demolition is an exhausting process for the residents. These households that are in the middle and lower income group are starting to quit painting their houses or dealing with other issues in the neighbourhood as soon as rumours of demolition start. The previous section emphasised the most important characteristic of gecekondu¬type housing as these are not constructed at once and they are turned into liveable, usable, nice houses by modifications through the years. Therefore, sustainability of gecekondus and neighbourhoods consisting of gecekondus depend on constant small repairs and refurbishments. Disruption of the refurbishment process in the household or the neighbourhood leads these places to get unusable over time. Passage of time increases the desires of the residents to leave the neighbourhood.

6 AFTER THE URBAN TRANSFORMATION

The circulation of rumours continues for urban transformation or the gecekondu neighbourhood even after the demolition is carried out. Rumours about who received how much money or who got the better house continue after demolition. This process that works over various assumptions where everyone introduces different information for circulation is a simple product of another ability of rumour, the ability to cause arguments. Wrigth (2008), emphasised that rumours may have a political role in playing people against each other and presented the roles taken by various media organisations during the massacres of Kosovo and Rwanda as examples. While the outcomes are not this heavy, especially the rumours that are introduced in the beginning stage of demolitions in the urban transformation process, the rumours that the person who gets to demolish first will receive more money or the person who leaves will gain more, lead to divisions among gecekondu residents. Newspaper articles reported that, following demolitions, a solution satisfying all neighbourhood residents was achieved in gecekondu neighbourhoods and various informal neighbourhoods. One of the first examples of these was about the transformation project that was planned for implementation in the Neslisah and Hatice Sultan neighbourhoods, also known as Sulukule. Many media outlets reported about this project that all residents wanted the project to be carried out, and no one could not wait for their new mass housing home.

The rumours arising in the neighbourhoods are generally reduced to 3 main questions in the minds of the residents: how many buildings will be demolished, whose building will be demolished, and who will earn what in this process? In this context, different rumours are often related to issues such as where the demolition take place and how many buildings will be demolished, and different numbers are discussed about everything. With rumours, a process of ridding people of their homes is started, and a sort of slippery slope is formed. No one is completely sure about any number or where the demolition will take

place. Even today, statements by different interviewees about demolition of different numbers of buildings are important indicators of this uncertainty.

In the case of FSM, the rumour that 300 buildings would be demolished after the road project started to circulate, the Municipality reduced this number to 260 after various negotiations, and eventually, only 35 buildings were demolished. Since the possibility of the demolition of 300 buildings to the reduction of 35 buildings, about 2-3 years passed, rumours multiplied by variation in this process, and the residents were forced to consider multiple possibilities together in this process. In the case where only 35 buildings were demolished, applications for reconstruction of the buildings in the neighbourhood could not be considered, and 35 households moved to mass housing areas. An administrator in Sarıyer Municipality, Sükrü Muhtar, described the road project to be carried out in Baltalimanı. While describing it, he stated that 60 buildings received notices of demolition in the years 2004-2005, but it was previously estimated that a much higher number of buildings would be demolished. Investigation was made after an expert was appointed in 2005, a “pro-people” report came out, but right after this, about 260 houses were demolished with the presence of 5000 police officers. After a year following the demolition of the buildings, the court cancelled the plan. Therefore, the number of buildings to be demolished was unclear even until the buildings were demolished.

Another group of rumours in the neighbourhoods is who is/will be given how much money or who will be able to receive how many houses where. Ahmet from Baltalimanı (Güzeltepe Konutları, 45-50) stated they learned that early negotiators were given more money, while late ones were given less. Sükrü Muhtar from the Gecekondu Administration at Sarıyer Municipality stated that people whose houses were in danger started negotiations even before the houses were demolished, and it was guessed that some people had already agreed. Thus, who received what or agreed when, always constitute suspicious information.

7 DISCUSSION

This study emphasised that urban transformation does not happen only by laws, projects of capital movements, but is also may be led by affections created in citizen. Word flows are not merely tools to read the situation, but the mechanism of urban transformation works via word flows themselves. In this sense, the word flows in the urban transformation process were traced in different stages from the scale of Istanbul to the scale of gecekondu neighbourhoods. It was found that there are arguments that appeal to emotions such as fear, desire, excitement in the urban transformation process, and the machine is working this way. The process was thought out as a relation of powers as Deleuze meant: “a power relation is a function in the form of “starting, inciting, combining…” In the case of discipline societies, the following holds: dispersing, serialising, combining, normalisation” (Deleuze, 2013a, p. 48). All axes of fear including the laws or the created turbulence and destruction carry the quality of an “initiation function”. New residence typologies we encounter through advertisements, arguments that emphasise how nice urban transformation is, or the context that does not provide gecekondu residents with an option other than mass housing, “incite” the machine and rejoin gecekondu owners in the peripherals of the city.

As the work flows regarding urban transformation get intense, the arguments by chambers of profession and academics converge and more connections may be made, urban transformation starts to be seen as an “unequal tool for sharing rent”, and the side of the government and the public authority resorts to arguments such as that urban transformation is the only way to solve the threat about an earthquake. In this context, it was seen that opinions about an earthquake were presented to the media by scientists, geophysicists and geologists in the early 2000s, but statements of contractors that the earthquake will destroy the entire city took the stage beginning with 2006, and scientists disappeared from the media regarding the issue of urban transformation. Thus, horrifying earthquake scenarios and collapsed building photos, unhealthy and bad representation of gecekondus, and as opposed to these, the new, modern buildings as objects of desire, appeared in the media very frequently. On the other hand, the argument made over the importance of large projects and the unhealthy nature of gecekondus pushed gecekondus away and praised mass housing areas that are being constructed in the peripherals. The two axes related to the flow of words are technical knowledge and legal knowledge that circulate in connection to each other. A third axis is that this knowledge is turned into information, divided into small pieces and converted to rumour. As a result of interpretation of a passed law or transformation about various speculations, rumours of “destruction” come to gecekondu neighbourhoods. Simultaneously, the media and even the public authority manage process due to bombardment of such information. In addition to small scale

pieces of information such as which project will be implemented where or which neighbourhood will be demolished, many words of mouth go into circulation about when the law of urban transformation will come into force, and this issue influences the process greatly. Consequently, we encounter the bombardment-like circulation of word and ambiguation of it by transformation into rumour by cristallisation as an important way of mobilisation that turns the gears of urban transformation, even after the process of moving to new houses.

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ID 1383 | STUDY ON LIVING SPACE AND COMMUNITY ATTACHMENT OF THE THREE GORGES MIGRANTS - A COMPARISON BETWEEN MIGRANTS RESETTLED NEARBY AND RELOCATED OUTSIDE

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ABSTRACT: China has a large number of migrations organized by the government, mainly for engineering, ecology and poverty alleviation. The project of resettlement has great significance in politics, economy, society and other aspects. Previous research on migration is mostly based on the survey of economic income and social adaptability, instead of living space and community attachment. These fields have a bearing on the vital interests of migrants, and play definitive roles in the living quality and dignity after relocation. The migrants of the Three Gorges are chosen as the object of study, because of their symbolic significance and the large number of migration samples. The migration is divided into two modes: 79% are resettled nearby, and 21% are relocated outside (Shanghai, Zhejiang, Sichuan, Hunan and so on), then four groups of sites are selected as the research destinations. The study records the forms of living space of the migrants' present and original residences, (the submerged areas are consulted according to the surrounding villages.) and induces residential features, street forms, housing forms, social and economic characteristics. Furthermore, communications with migrants show their living conditions and community attachment, and the evaluation of living space before and after the migration. The investigation of the two modes of migration reflects the great influence of the living space and community attachment on the stability of migrants. The living space of migrants resettled nearby changes to a lesser extent, thus leads to faster life adaptation, but there are still problems of integration into city life; migrants relocated outside face obvious differences in living space, difficult community culture, hence the lifestyle changes significantly. The humanistic construction method of the immigrant community, as well as the adjustment of the social psychology, determines the success or failure of the migration project, and the maximization of the dignity of the migrants, in order to properly arrange this special group.

KEYWORDS: Living Space, Community Attachment, Migration Project, Dignity Maximization

1 INTRODUCTION

1.1 RESEARCH PURPOSE

In China, governmental migrations, mainly for engineering, ecological migration, poverty alleviation and so on, are very common, and the resettlement of migrants is of great significance in politics, economy, society and other aspects. The form of living space and community attachment of migrants, which are related to their vital interests, have a decisive role in the quality of living environment after the migration.

Maladjustment of living space, inharmonious neighborhood are two widespread issues caused by migration. For example, an investigation on resettlement of migrants of Qingshanzui Reservoir in Chuxiong

City, Yunnan Province in 2012 showed that, though the migrants' living condition has been improved, there is still inadaptability in the conversion from the vast rural space to the relatively cautious urban space, while following problems also occur in social interaction: living restructuring, neighborhood defamiliarization, sense of relative deprivation, residential concentration, neighbor intrusion and so on. (Ran Qizhu, 2014)

The huge number of migrants involved in the Three Gorges Project, whose relocation destination covers several provinces, are facing diverse living space and complicated resettlement situation. Centralized communities and individuals are placed in towns and villages at the same time. At present, the research on the ontology of the Three Gorges migrants is mainly based on the investigation of economic income, social adaptability and social relationship. (Li Zhe, 2016) This paper examines the residential patterns and community attachment of the two types of migrants, hoping to explain the great impact of living situation and space forms on their stability and integration.

1.2 RESEARCH SITES

After the impoundment of the Three Gorges Dam, there are two cities, 11 counties, 116 towns that need rebuilding in whole or in part. (Ji Changhua, 2007) And the migrants are resettled in two ways: 79% are resettled nearby (resettled locally) and 21% relocated outside (moved to Shanghai, Guangzhou, Zhejiang, Shandong, Sichuan, Hunan and other places).

Figure 1 - Urban area of Three Gorges Reservoir Area (Zhao Wanmin, 1999)

As one of the resettlement provinces for migrants relocated outside, Sichuan has a few differences in geographical climate from the Three Gorges area, and there are many changes in living habits, residential environment and interpersonal communication after the migration. Chongqing is the resettlement site for migrants resettled nearby, which means fewer discrepancies on these aspects. Chongming County, Shanghai is another resettlement area for migrants relocated outside, with diverse climatic conditions and cultural environment. For a more comprehensive understanding of living space and community attachment in different resettlement situations, and the comparison between two types of migrants' living conditions, the following sites are selected as research destinations. Though a great number of original residences has been basically submerged by the rising water level of Yangtze River, or abandoned, the visit to towns and villages nearby can also clearly reflect the corresponding living situation and forms.

The specific relationship between the present and original residences is shown in the figure:

	Present Residences	Original Residences
Relocated Outside One	Panxi Village, Chongming District, Shanghai	Zhoudu Village, Kai County, Chongqing
Relocated Outside Two	Caichang Town, Dayi County, Chengdu	Wanzhou District, Chongqing
Resettled Nearby One	Kai County New Town, Chongqing	Kai County Old Town, Chongqing
Resettled Nearby Two	Baidi Village, Fengjie County, Chongqing	Baidi Village, Fengjie County, Chongqing

Table 1 - Research destinations of present and original residences

2 LIVING SPACE

Living space forms, living social space and residential groups are the three elements of urban living space, and the residential group is the link between space forms and social space. After a long period of construction, the living space of the Three Gorges migrants has undergone tremendous changes, and reconstruction has been a significant feature of spatial succession, having a lot of internal correlations with the socio-economic process of migration. Different forms of living space for both migrants resettled nearby and relocated outside, like work unit communities, individual migrant communities, and mixed residential areas in old towns, have their own characteristics in functions, streets and facilities. Factors, like the commercial management and housing mode, housing distribution reform, the resettlement system and so on, which are related to culture and other socio-economic aspects, promote the continued reconstruction of migrants' living space.

2.1 RESIDENTIAL FEATURES

"The Three Gorges Project Migration Ordinance (2001)" makes clear that the migration implements the combination of local and outgoing, centralized and decentralized resettlement, while the migrants could figure out their own moving ways along with the government's measures. Migrants ought to be resettled nearby in the original county or district as priority, or else they will be relocated outside in or out the original province. And the migration of the latter follows the principle "relatively concentrated, scattered placement", that is concentrated relocation in certain counties and districts, and dispersedly dwelling within the area. (Su Hong, 2002) Living characteristics of the two types of migrants can be summarized as the following four categories:

	Present Residences	Original Residences	Space characteristics
Relocated Outside One	Country of water town	Country in mountain area	Mixed residential area
Relocated Outside Two	Town in plains	Town in mountain area	Shop front housing estate
Resettled Nearby One	New town in mountain area	Old town in mountain area	Gradual changing estate
Resettled Nearby Two	New house in mountain area	Old house in mountain area	Traditional residential area

Table 2 - Settlement characteristics of present and original residences

2.1.1 MIXED RESIDENTIAL AREA

The migrants relocated outside in Chongming County, Shanghai are dispersed to different villages, thus form mixed residential areas with local residents. The migrants own a certain amount of contracted land and household plots assigned by the government. And their housing standard follows Shanghai planning per capita standards. This kind of arrangement represents a major resettlement method for a large number of migrants relocated outside - that is, preventing the formation of aggregated migrant communities in order to facilitate their adaptation to new settlements, which also allows local residents to participate in interaction with migrants. Residential planning is always the continuation of the normal style of present residences.

Figure 2 - Panxi Village in Chongming, Shanghai, a present residence of migrants relocated outside

2.1.2 SHOP FRONT HOUSING ESTATE

Caichang migrant residential area in Chengdu, Sichuan Province is another form of centralized resettlement of migrants relocated outside, where the houses and farmland are separated from local residents, and some of the public facilities are shared together. There is one important feature that the residential and commercial functions overlap in space - the bottom of residential buildings is designed for commercial use, arranged along roadsides. This design concept tries to improve the employment of migrants as the starting point, while the phenomenon of vacancy of these shop fronts are not rarely seen in migrant residential areas, which means the actual demand for business services is not matched with the scale and amount provided.

Figure 3 - Caichang migrant residential area in Chengdu, Sichuan Province, a present residence of migrants relocated outside

2.1.3 GRADUAL CHANGING ESTATE

Cities and towns in Three Gorges Reservoir area are undergoing the gradual process of urban renewal, dually driven by the relocation of migrants resettled nearby and urban redevelopment. The retained area and new migrant settlements, represented by old town of Kai County and new town of Wanzhou District, have emerged with the gradual expansion of commercial function and the decline of residential function along with the city's development. Business permeates into the neighborhood and spreads along the streets. Roadside buildings are remodeled or rebuilt, which separates the once contiguous residential neighborhoods with the enclosures of commerce. Migrants resettled nearby from towns and villages are rapidly placed in the process of urbanization.

Figure 4 - Scenery of new and old town of Kai County, Chongqing

2.1.4 TRADITIONAL RESIDENTIAL AREA

The living environment and lifestyle of the majority of migrants resettled nearby has not changed much after the migration. Above the flooded old houses and villages, the new communities continue the original residential form and relationship among the neighborhood. Influenced by the mountainous terrain of the Three Gorges area, a patchwork of landscape often occurs in the villages and towns.

Figure 5 - Relics and new buildings of Baidi Village in Kai County, Chongqing

2.2 STREET FORMS

2.2.1 STREET SYSTEM SCALE

The living space of both migrants resettled nearby and relocated outside is composed of different scale of street systems. There are massive streets and lanes for vehicles and pedestrians between buildings in shop front housing estates and gradual changing estates, to guide the traffic flow to shop fronts of residential areas, resulting in the small-scale street system for the diversity of functions. As a result, green space between dwellings is relatively reduced, and in fact, forms borderless settlements which are easy to cross.

Figure 6 - Small-scale street system in old town of Fengjie County, Chongqing | Figure 7 - Big-scale street system in Caichang County, Chengdu

In contrast, big-scale street system is, on one hand, due to the demand of some migrants for the comfort of living environment, and on the other hand, because of the traditional form of residential areas that meets basic living needs. This system means the relatively concentrated, or even absent commerce in communities. In general, migrants are low-income groups, whose survival needs are still at the first place. The two scales of street systems fit different socio-economic status of the living groups.

2.2.2 VERTICAL STREET SPACE

Before the construction of the gam project, there have been a large number of urban vertical streets that connect the altitude difference in terrain. These vertical street space, as an important part of urban collective memory, is not only the traffic channel of residents, but also the unique commercial ladder space of cities along the Yangtze River. The settlements of migrants resettled nearby also continue the design of vertical ladder space, but the field research finds that there are situations where some shop fronts are vacant, and degenerate into a single function of the pedestrian walkway. The reasons behind include the lack of diversity in new urban areas and other planning and design factors.

Figure 8 - Street space of Wanzhou District and Kai County, Chongqing

2.2.3 DIFFERENTIATION IN CENTER AND EDGE

The flooding degrees of urban area within the Three Gorges are different, causing the mixture of migration resettlements and original residential areas. From the vigorous developing Wanzhou District, to the relatively stagnant Kai County, the urban social space has shown a mode of differentiation in center and edge.

(Gao Shangwu, 2016) The center area gathers business, finance, transportation hub, catering and entertainment, public square and other public urban functions, and provide a rich and colorful modern atmosphere of the city life to the migrants and indigenous residents, where especially many migrants resettled nearby live with their work units. More rural migrant groups live in urban fringe areas and small towns.

Figure 9 - New-built residential buildings in downtown of Wanzhou District, Chongqing
Figure 10 - Old town of Fengjie County, Chongqing

2.3 HOUSING FORMS

In the process of migrant housing building, first the local government is in charge of planning, surveying and infrastructure construction. After the reform of housing system in China, the resettlement groups are no longer divided into work unit migrants and individual migrants. The construction of settlements also develops from the organization by the government, of design, building and distribution at the beginning, to new ways of self-building by groups or individuals of migrants. Consequently, there are two main modes of settlements formed: residential areas built and distributed uniformity, where migrants only participate in the final election; and self-built resettlements sited and planned by the government, and designed and constructed by migrants. (Guo Chunxia, 2009)

The richness of construction modes increases the rights of migrants and give more decision in building cost control, residential house types and sizes, fund raising and other aspects. The change of policy eases migrants' major dissatisfaction with cost and design. Housing demolition compensation funds are also allocated to individuals in accordance with the rural housing compensation standards, used by migrants for housing construction.

	Housing form of present residences	Housing form of original residences
Relocated Outside One	Courtyard house, determinant layout	Courtyard house, zonal distribution along the mountain
Relocated Outside Two	Row dwelling, zonal distribution along the street	Courtyard house, zonal distribution along the mountain
Resettled Nearby One	Multi-story building, enclosed residential area	Multi-story building, mixed residential area
Resettled Nearby Two	Row dwelling, zonal distribution along the street	Courtyard house, punctate distribution along the mountain

Table 3 - House forms of present and original residences

Due to the mountainous terrain within the Three Gorges Reservoir area, rural areas are generally difficult to form large residential areas, so the buildings and roads usually show zonal distribution, while in some small blocks, there may be row and enclosed dwellings. Insufficient depth creates the strip distribution of buildings along roads. And buildings in urban areas traditionally follow zonal or punctate distribution. Height difference in terrain forms a patchwork of landscape.

In newly-built migrant communities for migrants resettled nearby, there is a wide range of residential types which contributes to the mixture of multi-story and high-rise buildings. In recent years, the construction of skyscrapers has also enriched residential block types. A certain degree of autonomy is given to migrants relocated outside on the specific housing construction, while block forms are still in accordance with the local residential form, and form mixed communities with local residents according in different geographical conditions.

Domestic scholars have conducted extensive research on migrant housing adaptability, including surveys of the Three Gorges migrants in Jiangsu, Guangdong, Shandong province by Ma Defeng (2005), Cheng Yu (2005), Xia Yongxia (2009) and other scholars. The results of visits show that the living quality of migrants has generally been improved, and benefit from the improvement and upgrading of infrastructure. But for the changes like moving out of bungalows, sharing public space, migrants also reflect certain inadaptation.

2.4 SOCIAL AND ECONOMIC CHARACTERISTICS

From the beginning of the migration, helping migrants for achievement of employment is a win-win method to attract migrants to move and to solve their practical difficulties. In the reality of urban industrial emptiness (Xu Jingjing, 2006) and the lack of knowledge and professional skills of migrants (Zhao Wei, 2007), the government often turns to the third industry to seek employment opportunities. Therefore, as the basic space for business activities, shop front is considered as potential jobs. This opportunity for employment also become a means to promote migration and relocation. In the process of such interaction between local government and migrants, a large number of communities are created with mixed commercial and residential functions.

On the other hand, migrants are involved in the rapid Chinese urbanization process. The participation of market capital contributes to the function replacement in mixed residential areas of old towns. And the increment of commercial profit and living comfort brought by the development of the society also cause the movement of migrant groups in different socioeconomic status. The Three Gorges Project has given the local government countless opportunities of direct participation in the reconstruction of urban space, which promotes a greater degree of succession and expansion of residential areas in relevant cities and towns. The impact of urban housing demolition, employment, education and other factors, as well as the pursuit of a higher living standard, are major reasons for multiple movement of some migrants resettled nearby and relocated outside.

3 COMMUNITY ATTACHMENT

Community attachment is an important factor affecting the existence and development of communities. For the Three Gorges migrants, their sense of belonging to the community is more embodied in the psychological state into a new cluster, including confirmation of their new identity, and emotions of their investment and evaluation in communities. The construction of migration communities is the key project to promote the resettlement, so it is of great significance to grasp and adjust their community attachment. (Shan Jingjing, 2006)

3.1 INFLUENCE OF NEIGHBORHOOD INTERACTION

The interaction between migrants and local residents has the most important influence on their social adaptation. (Feng Xiaotian, 2006) And changes in community communication are particularly evident for the decentralized arrangement of migrants relocated outside. Migrants resettled nearby and some of those

relocated outside, are arranged into a centralized system with a group of several families, that is, to establish new migrant villages and communities. Thus the familiar language, customs, lifestyles, and the same culture guarantee relatively frequent social communication, but to some extent also cause relatively fewer contacts with local residents. (Feng Xiaotian, 2004) And the rest of migrants relocated outside are settled in disperse, which expose themselves to local communities. Under this new cultural background, the necessary communication with the local has become an important way to adapt to the social life.

The specific relocation process of unified and individual settlement, or integral moving, determine the composition of migrant groups and their mutual relations. Compared to the way of integral moving which removes all the original community to a new residential area, and individual settlement which organize familiar migrants with mutual trust to carry out construction by themselves, the residential areas of unified settlement show a complex population structure. The habitants need to re-familiar with each other, and face differences in living habits due to the occupations and living environment before migration.

Figure 11 - Migrant houses in Chongming District, Shanghai and Zhaojia County, Chongqing

The survey finds that, besides obvious elements that affect neighborhood communication like language and customs, the difference in living habits is one of the main barriers of mutual identification between migrants and the local. For instance, activities like airing cereals in multi-story communities, contradiction between migrants' health habits and urban lifestyle can both arise misunderstanding of two resident groups. While over time, migrants have gradually eliminated the gap on lifestyles and concepts, and established identification of neighborhood relationship, with the partial integration of values. But it certainly takes a longer way for both groups to truly get rid of the identity of strangers.

3.2 INFLUENCE OF SPACE DESIGN

Community attachment is closely related to the formation and development of communication space. (Jing Wei, 2015) In the practice of migrant community construction, the formation of many blunt models of space design, is born of the excessive stress of meeting the necessary settings of living functions, and economic technical indicators, such as greening rate, volume rate and others. In fact, public space of many communities does not support the development of community attachment. Here only to discuss the mismatching of migrants' behavior of consumption and leisure with space design.

Farm product markets and commercial service facilities are often the necessary supporting projects of migration communities, in order to meet the basic consuming needs of migrants. But the field survey finds that, the markets and shops are often left unused, instead some permanent or temporary stalls appear along the streets outside markets outside. This phenomenon results from factors like the disproportionate provisions of commercial capacity, and conflicts between the normal habits of migrants and local life, while also shows that blunt models of space design cannot meet the autonomy of migrants' daily activities, so the related functions are changed or even abandoned.

Concentrated green space is a general planning element in public space of modern residential areas, and also the standard design of migration resettlements, where are often stalled with sports equipment, seats, decorations, etc. However, the survey also finds that some green space are suffering from the lack of later maintenance, with the emergence of damaged facilities and low utilization rate, while some migrants also make full use of the public space to plant vegetables. Facing the design unsuitable for individual needs, migrant groups will re-divide the space functions through daily activities. Therefore, the summary of the

rules and characteristics of their living behaviors should be regarded as the basis for planning and landscape.

Figure 12 - Phenomenon of stalls and farming around migration resettlements

3.3 INFLUENCE OF GOVERNMENT POLICY

Three Gorges Migration is a national project, and the corresponding policy system is made up of pre-compensation, subsidies and post-support, trying to ensure that the living standard of habitants involved is not reduced, whilst to protect their legitimate rights and interests, and satisfy their demand for living and development. (Liang Fuqing, 2012) In the survey, it is hardly avoided to find that the economic benefits of some migrants have been violated for some reason in the implementation of specific policies. And the dissatisfaction of the local government also reduce their community attachment to some extent. Unfortunately, this point is not within the scope of this article.

In general, the government policy determines the ownership of urban public and community resources. In terms of fairness, a large number of migrants resettled nearby are arranged in new towns, districts and villages, which brings relatively better public services and the ownership of more resources, including commercial, cultural, medical, educational, sports areas and public transport, compared to those migrants relocated outside who generally moved to the edge of urban areas. At the same time, the local government is bound to put in unequal construction funds on city centers and surrounding areas over a long period of time, resulting that the difference in green environment, public space, service facilities and other aspects, between the local residents and migrants relocated outside is hard to narrow. Some migrants resettled nearby imply that the infrastructure construction which start from the very beginning, cannot keep up with the pace of the migrant influx into new towns.

Figure 13 - Interview of migrant living situation

There is also a clear correlation between the community attachment of migrants relocated outside and the economic level of relocation sites, which is reflected in the compensation policy. (Li Huaquan, 2007) Migrates relocated in Chongming, Shanghai, for example, supported by land and employment aid policy of the local government, maintain satisfactory revenue and achieve general improvement in living conditions, for families who continue farming, as well as who change into the secondary and tertiary industries. On this basis, their relationship of neighborhood and sense of identity is maintained at a better level. Relatively speaking, those relocated outside who moved to Sichuan, Hubei and other economically weak areas, have more complaints about the migration life, which is the direct result of the difficulties encountered in related areas.

4 CONCLUSION

The Three Gorges is the largest control project in the history of water conservancy, with the relocation of amounted to over 1,100,000 migrants. Habitants in the reservoir area lost their original farmland and houses, even the familiar neighborhood and the means to earn a living. Their faster adaptation to new environment and transition from migrant to settler, is not only related to people's livelihood, but also determines the success or failure of the project.

Migrants relocated outside need a longer transition period than those resettled nearby. Some scholars divide the role-transforming process of migrants relocated outside into three stages: the label phase during the first and second years after migration, the learning phase during the third and fourth years, and the assimilation and comparison phase after the fifth year. (Liu Chengbin, 2007) With the conversion of roles, migrants' consideration points also develop from the comparison with original living at the initial stage, to the differences of economic income level, identity and other important factors from local residents.

Objective material conditions are the basis for the migration life, which varies in economy, culture and urban construction level among resettlements. For all migrant groups, the sharing of interests is the fundamental goal of the reconstruction of their living space. And the differences in the quality of living environment, public facilities, neighborhood communication will exist for a long time between two types of migrants and the local. Migrants' efforts of integration into local life should be based on the appropriate community environment, and the policy aiming to guarantee their living standards. Furthermore, aiming at the psychological particularity of this group, migrants' community attachment needs improving in three aspects: promotion of neighborhood communication, reasonable space design, and adequate political guarantee. The otherness caused by the migration status could be ultimately reduced or eliminated.

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ID 1387 | IMPACTS OF THE NEW URBAN LEASE LAW AND THE NON-REGULAR RESIDENT TAX REGIME ON HOUSING AFFORDABILITY AND URBAN REGENERATION IN LISBON´S HISTORIC CENTRE

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ABSTRACT: The adoption of the euro accelerated the dependent financialisation of the Portuguese economy, which remained structurally backward despite its integration into global finance. The flow of foreign credit towards the real estate, infrastructure, and construction sectors since the mid-nineties fueled the suburban expansion of Lisbon and the abandonment of its historic centre until the crisis of 2008. After the collapse of that model of urban development, Lisbon's historic centre became a space of opportunity for global real estate investment offering high profitabilities in the international short-term-rental and premium markets. With thousands of abandoned dwellings and tenants paying very low rents, the rent gap of the historic centre was enormous. Since many residents of that territory were tenants paying controlled rents, it became necessary to change the lease regime in order to rapidly and easily evict them and let investors engage in the transformation of the area. The new urban lease regime liberalised the rental market and triggered the actualisation of rents above the capacity of many tenants in a context of rising demand for rental housing and strong austerity policies —and evictions multiplied. The non-regular resident tax regime was implemented by the Portuguese government to attract foreign high-skilled professionals and pensioners. Under this special regime, foreign citizens benefit from a reduced flat personal income tax rate of 20% and any pension income generated abroad is totally tax exempt —even when not taxed in the country of origin. As a corollary, housing supply for conventional use has dropped significantly and prices have increased dramatically in the historic centre as tourist apartments proliferate and foreign investors multiply. Urban regeneration fuelled by tourism and international investment has not stopped the loss of residents in this area, while the impossibility for many locals to find affordable housing there constitutes a worrying outcome of Lisbon's commodification. Keywords: gentrification, commodification, touristification, austerity, public policy, Portugal

1 OBJECT AND METHODOLOGY

Lisbon's historic centre is an interesting case for the study of urban commodification in the financially dependent periphery of the Eurozone due to the combination of two factors. On the one hand, Lisbon is the capital and largest city of a semiperipheral country that joined the European Economic Community (EEC) in 1986 and therefore has been a member of the European Union (EU) since 1993. Furthermore, Portugal adopted the euro as soon as it came into circulation in 2002, and experienced a profound process of dependent financialisation and alleged modernisation until the global crisis of 2008. However, Portugal is one of the European countries that have suffered most the impact of the latter, and austerity has been imposed there with special harshness. On the other hand, Lisbon's historic centre is worth analysing because it is currently experiencing a deep and rapid transformation that, fuelled by foreign real estate investment and a remarkable tourism boom, started and developed while the country was subject to austerity under the increasing burden of sovereign debt.

The urban transformation and commodification of Lisbon's historic centre is an ongoing process that takes place in the context of the equally ongoing crisis of the periphery of the Eurozone. Therefore, the case-study methodology has been chosen in order to guide its analysis, since it allows the examination of "[...] an existing, real-life situation in all its complexity, exploring it as close to the people concerned as possible, describing the situation in as much detail as possible, and finally explaining the findings in a clear and comprehensible way." (Kyburz-Graber, 2004, p. 54). The case study is supported by a general macroeconomic contextualisation emphasising the dependent financialisation of the contemporary Portuguese economy, as well as by a short review of the rent gap theory of Neil Smith (1996).

The research included the conduction in Lisbon, between June and September 2016, of 12 structured interviews with the stakeholders listed in Table 1, who were asked a common questionnaire. The interviews were held in Portuguese and the answers have been translated into English when quoted.

Public Sector	Private Sector	Civic Sector
André Moura *Lisbon Tourism Observatory* (Coordinator)	Catarina Lopes *EastBanc Portugal* (General manager)	Inês Andrade *Renovate Mouraria* (President)
Miguel Coelho *Parish Council of Santa Maria Maior* (President)	Ernesto Portugal *Habitat Invest* (Marketing manager)	Rita Silva *Habita* (President)
Paula Marques *Lisbon City Council* (Councillor for Housing and Local Development)	Nuno Martins *ERA Chiado/Lapa* (Partner)	Leonor Duarte *Citizenship Academy* (Member)
Pedro Miranda *Territorial Intervention Unit of the Historic Centre* (Senior technician)	Eduardo Miranda *ALEP - Portuguese Local Accommodation Association* (President)	Maria de Lurdes Pinheiro *APPA - Heritage and Population Association of Alfama* (President)

Table 1 -Interview participants

2 GENERAL MACROECONOMIC BACKGROUND

The insertion of Portugal into the European Economic Community (EEC) in 1986 deepened and accelerated the dependent financialisation of its economy. The abundant inflow of foreign credit that followed, channelled towards non-tradable sectors such as construction, real estate, and infrastructures that were less subject to international competition at the expense of manufacturing, did not improve the structural conditions of the former. Instead, it materialised in the combination of a backward economic framework and a modern globalised financial sector. As it encouraged mortgage-based homeownership through subsidies and tax breaks while failing to create a comprehensive public housing system, the State encouraged private indebtedness, fuelled suburban expansion, and stimulated the contruction and real estate sectors (Reis, 2016; Rodrigues, Nunes, & Teles, 2016).

Since their emergence when the Portuguese financial sector was starting to be liberalised in the mid-eighties, the sustained expansion of real estate investment funds has been according to Rodrigues et al. (2016) one of the major symbols of the tightening nexus between housing and finance in the country. The number of real estate investment funds operating in Portugal increased from 48 to 242 between 1996 and

2016. The most remarkable expansion, however, took place between January 2005 and December 2009, when the number rose from 66 to 253. The historic maximum of 265 registered funds was reached in June 2011 and, since then, this indicator has followed a slightly negative evolution. Between 1996 and 2016, the total net asset value increased from 2,301.5 to 11,068.9 million euro, with a historic maximum of 13,067.4 million euro reached in January 2014 and a negative evolution thenceforth (Comissão do Mercado de Valores Mobiliários, 2016).

Figure 1 – Portuguese public debt, % of GDP (International Monetary Fund, 2016)

Figure 1 – Portuguese public debt, % of GDP (International Monetary Fund, 2016)

Figure 1 shows the evolution of the Portuguese public debt between 1970 and 2015. It shows that the public-debt-to-GDP ratio increased in Portugal at a rather constant pace between the end of the dictatorship and the integration into the EEC. While in 1974 that ratio was of 13.5%, in 1986 the public debt represented 56.9% of the country's GDP. In a context of local and global economic instability, the IMF intervened the country twice in 1977 and in 1983, and imposed fiscal austerity programs that would trigger economic stagnation, rising unemployment, and impoverishment (Mamede, 2015).

The country's integration into the EEC motivated a remarkable economic dynamism that materialised in the rapid expansion of its GDP. Figure 1 shows that public debt remained relatively stable between 50% and 60% of the GDP between 1985 and 1995. The constitutional reform of 1989 enabled the reprivatisation of public assets that had been nationalised in the seventies during the brief revolutionary term. The process started with the banks and insurance companies, continued with the industrial firms and energy utilities, and then involved virtually all other public assets in Portugal (Mamede, 2015).

An ambitious privatisation programme was launched in 1996, its revenue being essentially used to reduce the public debt (Baklanoff, 1996). The effect is visible in the temporary decrease of the public-debt-to-GDP ratio between 1995 and 2000 from 58.4% to 47.9% that is displayed in figure 1. However, this was paralleled by a dynamic of growing private indebtedness due to the abundant credit offered by the banking system to Portuguese firms and families. The volume of loans granted to the private sector increased from 66,000 million euro in 1995 to almost 155,000 million in 2000 due to the combination of financial deregulation and privatisation with low interest rates. Families —particularly middle class ones— were getting indebted usually to buy a home, and 40% of the liabilities of Portuguese firms were owed in that term by real estate and construction firms in a context of increased access to home ownership, abundant public investment on infrastructures, and emerging real estate speculation (Mamede, 2015).

Figure 1 shows that public debt increased in Portugal at a relatively moderate pace from 47.9% of the country's GDP in 2000 to 71.7% in 2008. Mamede argues that this was consequence of the rising social expenditure by the State due to the erosion that both the growing unemployment and the dropping tax revenue from economic activity were producing on the public budget. “Contrary to what many suggest, the degradation of public finance was not the cause of the crisis: it was, above all, the reflection of an economy that was showing obvious signs of exhaustion.” (Mamede, 2015, p. 37). Figure 1 shows that the Portuguese public-debt-to-GDP ratio was lower than 70% until it started to grow extremely fast with the contagion of the subprime crisis in 2008, reaching a historical maximum at 130.2% of the GDP in 2014. According to Mamede, as a consequence of austerity “Portugal became […] a poorer country with little optimistic perspectives about its future. Besides indebtedness of firms and families […], the country faces today high levels of public debt, less employment, and less salaries after successive years of weak productive investment.” (pp. 39-40).

Since the signing of the Memorandum of Understanding between the Portuguese government and the Troika in 2011, and in the name of fiscal austerity, deficit reduction, and competitiveness, GDP has fallen, unemployment has grown, profitable public assets have been privatised, value-added tax (VAT) has increased, labour regulations and protections have been loosened, and wages of public workers have been cut to adjust the balance of payments by reducing internal demand (Rodrigues and Reis, 2012). According to Louçã (2011), wages have also been indirectly reduced by the State as it has cut social protection while simultaneously rising regressive taxes and prices of services that constitute a big share of the families' spending —e.g.health and education provision, transport, or energy.

3. THE RENT GAP THEORY

The rent gap theory (Smith, 1996) addresses the land-and housing-market dynamics and the role of investment and disinvestment in gentrification. It suggests that the latter starts when the difference between actual and potential rents is wide enough to encourage investment:

The rent gap is the disparity between the potential ground rent level and the actual ground rent capitalized under the present land use [...]. The rent gap is produced primarily by capital devalorization (which diminishes the proportion of the ground rent able to be capitalized) and also by continued urban development and expansion (which has historically raised the potential ground rent level in the inner city). [...] As filtering and neighborhood decline proceed, the rent gap widens. Gentrification occurs when the gap is sufficiently wide that developers can purchase structures cheaply, can pay the builder's costs and profit for rehabilitation, can pay interest on mortgage and construction loans, and can then sell the end product for a sale price that leaves a satisfactory return to the developer. (p. 65).

This theory succeeds to interpret urbanisation, urban restructuring, and gentrification as the spatial materialisation of capital accumulation and macroeconomic restructuring. It links the production of urban space to broader dynamics of capitalism and to the cyclical movements of capital, under the assumption that uneven urban development is inherent to capitalist expansion and devalorisation is necessary for future revalorisation (Mendes, 2014). While Smith (1996) develops the rent gap theory to understand urban restructuring within the logics of capital accumulation, Harvey (2005) deals with the concept of monopoly rent to explore the relationship of culture —which he argues that despitebeing a commons has become a commodity— with capital accumulation. According to Harvey, monopoly rents derive from the exclusive control and exploitation of a given tradable, unique and non-replicable asset by a private owner or group of owners.

4 ABANDONMENT AND DEPOPULATION OF LISBON'S HISTORIC CENTRE

"The historic centre was empty, it was dead at night", said the coordinator of Lisbon Tourism Observatory in his interview. Meanwhile, the marketing manager of Habitat Invest explained that "[...] most buildings [in the historic centre] were abandoned and degraded a few years ago; they were collapsing with no maintenance at all." Table 2 shows that 32.4% of the dwellings in the parish of Santa Maria Maior, 26.8% of those in Misericórdia, 23% of those in Santo António, and 20% of those in São Vicente were empty when the latest national census was elaborated in 2011 (Instituto Nacional de Estatística, 2016).

Parish	Occupied	Empty	Total	% Empty
Misericórdia	7,671	2,811	10,482	26.8%
Santa Maria Maior	7,289	3,498	10,787	32.4%
Santo António	6,541	1,952	8,493	23.0%
São Vicente	8,229	2,056	10,285	20.0%

Table 2 -Occupied and empty conventional family dwellings (Instituto Nacional de Estatística, 2016)

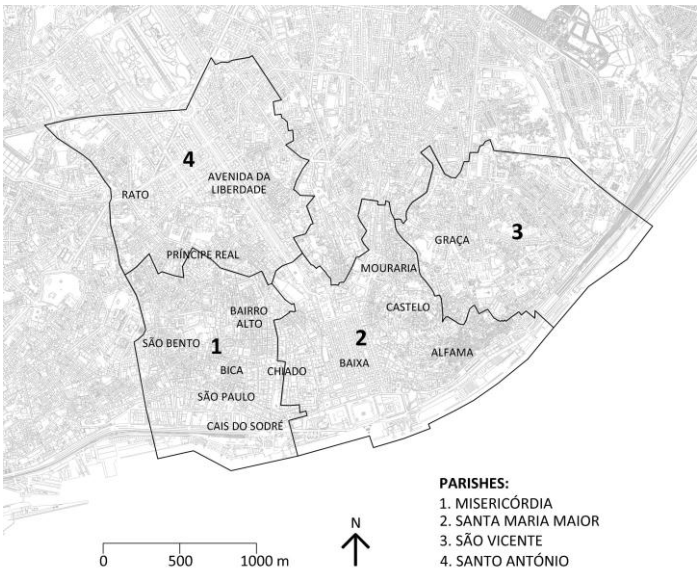

Figure 2 - Four parishes of Lisbon's historic centre

The evolution of the total number of registered voters between January 2002 and December 2015 confirms the demographic decline of the municipality of Lisbon and evidences a more significant population loss in the historic centre —paralleled by an opposite trend in Lisbon Metropolitan Area (AML). As shown in table 3, the total number of registered voters decreased during that term by 27.3% in the historic centre and 11.5% in Lisbon, while it grew 7.5% in the AML. Within the historic centre, the decline has been greater in the parishes of Santa Maria Maior and Misericórdia, which lost 32.8% and 30.3% of their registered voters respectively between 2002 and 2015 (Ministério da Administração Interna, 2016).

	AML	Lisbon	Lisbon's historic centre	Miseri-córdia	Santa Maria Maior	Santo António	São Vicente
Jan. 2002	2,239,214	563,318	67,013	17,453	17,008	15,296	17,256
Dec. 2015	2,407,947	498,775	48,701	12,169	11,422	11,918	13,192
Variation	+7.5%	-11.5%	-27.3%	-30.3%	-32.8%	-22.1%	-23.6%

Table 3 – Evolution of the nr. of registered voters, 2002-2015 (Ministério da Administração Interna, 2016)

The rent controls that were enforced by the dictatorship and motivated the payment of low rents by traditional tenants until the legal reform of 2012 are often appointed as guilty of the abandonment of Lisbon's historic centre. They are generally accused of having made maintainance impossible and triggered the deterioration of the built environment. However, the president of APPA argued that "[...] tenants were paying very low rents, but it was them taking care of the houses. If buildings were not collapsing it was because of them; landlords were doing nothing but speculate. At most, they were maintaining the façades." According to the president of Habita, the abandonment of the historic centre is actually consequence of the speculative model of suburban expansion that was in force until the financial crisis of 2008. Meanwhile, the president of ALEP pointed at the typologies of the historic centre's housing stock as a significant factor behind the area's demographic decline, and added that moving out of old neighbourhoods like Alfama has often been seen as "[...] part of the story of family success."

5 THE NEW URBAN LEASE LAW

The Novo Regime do Arrendamento Urbano (NRAU) [New Urban Lease Regime] was passed by law number 6/2006 (Diário da República 41, 2006), revised six years later with law number 31/2012 with the stated objective of dynamising the Portuguese rental market (Diário da República 157, 2012), and slightly altered again two years later with law number 79/2014 (Diário da República 245, 2014). According to the official site Portal da Habitação (2017) of the Instituto da Habitação e da Reabilitação Urbana (IHRU) [Institute of Housing and Urban Regeneration],

> *[...] the urban lease reform of 2006 failed to provide a sufficient response to the main challenges faced by urban rental —especially those related to the contracts with rents previous to 1990, with the difficulty of carrying out refurbishment works in leased buildings and with a complex and slow eviction procedure.*

The amendments introduced to the law number 6/2006 in 2012 were a condition included in the Memorandum of Understanding that was signed between the government and the Troika in May 2011:

> *In particular, the reform plan will introduce measures to: i) broaden the conditions under which renegotiation of open-ended residential leases can take place, including to limit the possibility of transmitting the contract to first degree relatives; ii) introduce a framework to improve households' access to housing by phasing out rent control mechanisms, considering the socially vulnerable; iii) reduce the prior notice for termination of leases for landlords; iv) provide for an extrajudicial eviction procedure for breach of contract, aiming at shortening the eviction time to three months; and v) strengthen the use of the existing extrajudicial procedures for cases of division of inherited property. (European Commission, 2011, p. 31).*

The amendments made to the urban lease regime in 2012 flexibilised the duration of the contracts, eliminated the minimum rental terms, and established a by-default length of two years for residential and five for non-residential use in absence of further specifications. Additionally, by virtue of the new legislation, the automatic renovation of a contract may be avoided by the landlord by notification to the tenant at least 60 days in advance for contracts between six months and one year; at least 120 days in advance for contracts between one and six years; and at least 240 days for longer leases. Furthermore, residential contracts signed before 1990 became subject to a rental-renegotiation mechanism between both parties —with the only exception of tenants older than 64, vulnerable, or severely disabled. The process of adaptation of older contracts to the new regime was shortened and simplified, and rents of residential properties are now subject to update after five years of occupancy —the Social Security being generally in charge of the problems that may derive from the overhaul. The NRAU also facilitates the eviction of non¬compliant tenants, as well as the extintion of the contracts when major refurbishment works are planned (Diário da República 157, 2012; Portal da Habitação, 2017).

JLL Research (2016, p. 11) indicates that the amendments made to the urban lease regime in 2012 were motivated by the need to “normalise rents” and, “[...] along with a special eviction procedure that enables leases to be terminated more quickly in cases of default by the tenant, has already started to produce results.” Indeed, according to this source:

> *Thanks to amendments made to the urban lease law, thousands of degraded buildings in our cities have become interventional. And therefore today, we have developers from all over the world rebuilding the historic centres and changing Lisbon and Oporto’s urban landscapes at a steady pace. Buildings in ruins are being replaced by quality projects. Thus, life in our cities is being completely transformed, gaining unstoppable momentum, creating an energy that attracts both people and trade. Streets are reborn, as buildings are inhabited by Portuguese, as well as many foreigners from so many origins who, every day, buy homes in Portugal. (JLL Research, 2016, p. 4).*

In her interview, the president of APPA defined the NRAU as “the eviction law”. Both the general manager of EastBanc Portugal and the president of Habita highlighted in their interviews the fact of the removal of rent controls on commercial and residential property being one of the conditions of the Troika's bailout in 2011. The former highlighted the fact of this legal reform having “[...] unlocked lots of spaces that were closed and allowed new things to be opened and investors to invest”. In contrast, the latter argued that this policy was included as a part of what she defined as “the Troika's blackmail” —despite the fact of the liberalisation of the property rental market having “nothing to do” with the public budget. After the collapse of the model of suburban development and the stop of the credit flow towards the Portuguese middle class in 2008, Silva argued that real estate investors turned the attention towards the historic centre, which “[…] offered high profitability opportunities based on luxury regeneration and high-end developments. But since most of the residents in the historic centre were tenants, it became necessary to change the lease law to rapidly and easily evict them [...]”.

The coordinator of Lisbon Tourism Observatory argued that the NRAU "[...] had a great impact on the historic centre. There was a shift from being able to do nothing to being able to do anything. Tourism has been crucial for urban regeneration and this reform was very important to stimulate it". According to member of the Citizenship Academy Leonor Duarte, "residents are being evicted in the historic centre. Buildings are sold and the new owners only need to say that they'll refurbish them —even if it's false, because nobody checks—and they can end the contracts." Meanwhile, the marketing manager of Habitat Invest explained that the NRAU allows landlords to come to agreements with old tenants —who were paying "derisive" rents—and proceed to the refurbishment of their properties. This is consistent with the view expressed by the president of ALEP, who argued that the most important effect of the NRAU was to allow the renegotiation of old rents. Due to the fact of landlords who do not live in their own properties but lease them instead being predominant in Lisbon's historic centre, he indicated that the impact of this new legislation was especially remarkable in that territory:

> *properties were empty and 12% were second homes, so 42% of the 15 thousand properties in the four parishes of the historic centre were not permanent residences. Low rents were passed on from parents to children and landlords refused to do any maintainance. It was a tacit agreement, since tenants knew they were paying extremely low rents, but there was always pressure to get rid of tenants paying 40 or 50 euro.*

In 2012, according to the president of ALEP, all those landlords who were able to start the rent-update process under the NRAU did so, but there is still a large elderly population above 65 years of age and many low-income tenants who remain relatively protected under the new law:

> *There were tenants paying 60 euro who had returned to their hometowns but kept their apartments in Lisbon to come sometimes. So in 2012 landlords wanted to get rid of their tenants even if they had no specific plans for the property; it was preferable to empty it and then see what to do, because otherwise they couldn't sell it, they couldn't lease it, they could do nothing with it. Thousands of rent-update processes started. There was a transition period of five years and then rents were liberalised. 2017 will be a crucial year because that period will end for many —but not for those above 65. For those below 65, the tenant had to make a proposal and the landlord had to make another one. In absence of agreement and in order to extinguish the contract, landlords had to pay the tenants a compensation worth "x" times the rent they had proposed. The higher the rent a landlord would propose, the higher the indemnisation he would have to pay to remove the tenants. But still, many found it worth it to pay; others activated the transition period that will end now in 2017.*

In April 2016, the Portuguese Parliament introduced a new amendment to protect the historic shops, threatened by soaring rents and eviction orders as a consequence of the liberalisation of the rental market. The period of transition for old rents to adapt to the new legislation was extended 10 years until 2027 for those establishments of cultural and historic interest and older shopkeepers were protected from eviction even if refurbishment was planned by the respective landlords. In summer 2016, the three parties supporting the Portuguese center-left national government agreed to extend the five-year transition period that was initially considered in the NRAU of 2012 until 2022.

6 GOLDEN VISA PROGRAMME AND NON-REGULAR RESIDENT TAX REGIME

Since it was launched in 2012, the Golden Visa programme awards the Portuguese residence permit and the right to move freely within the Schengen area to those foreign citizens making significant investments in Portugal. JLL Research (2016) estimates that 90% of the investment received through this program was allocated to the real estate sector. According to the information available from the Chamber of Commerce Portugal-India (2016), the Golden Visa programme applies to investment on real estate property worth at least 500 thousand euro acquired free of charges or mortgages after October 8, 2012 and before the application for the residence permit. The requirements of this scheme include a minimum stay of seven days during the first year and two weeks during the following periods of two years. The residence permit —which must be applied for within a maximum of three months after the entry in Portugal—is initially issued for one year and then renewed for periods of two years. After five years, the permit becomes permanent and one year later the Portuguese citizenship may be issued. However, the Chamber of

Commerce Portugal-India specifies that the properties bought under the Golden Visa scheme may be freely rented and let for commercial, agricultural, or tourism purposes. In case of acquisition and refurbishment of properties that are more than 30 years old or located in designated urban regeneration areas, an investment of 350 thousand euro is enough for being eligible for a Golden Visa (JLL Research, 2016).

In September 2009, the non-regular resident tax regime was implemented by the Portuguese government with the stated objective of attracting foreign high-skilled professionals and pensioners and their wealth. Since then, this scheme has been available for those citizens who are deemed resident in Portugal for tax purposes but have not been so during the five years prior to the year that will be taxed under that regime. According to the legislation, fiscal residence is available for those citizens spending a yearly stay of more than 183 days on Portuguese territory; for those having a dwelling and the intention to maintain and occupy it as their habitual residence; for the crew of airplanes and ships of companies based on Portuguese territory; or for the expatriate employees of the Portuguese State. Under this special regime, non-regular residents benefit from a reduced flat personal income tax rate of 20% for a non-extendable maximum period of 10 consecutive years as long as the fiscal requirements are met throughout that term. The list of high-added-value professionals that may apply for a special non-regular resident tax includes architects and engineers; visual artists, actors, and musicians; auditors; doctors and dentists; teachers; psychologists; liberal professionals, technicians, and alike; and investors, managers, and directors.

While the income obtained in Portugal from the listed activities by non-regular residents is taxed at the reduced rate of 20%, any income obtained abroad that is taxed by the source state is totally exempt from taxation by the Portuguese authority. In the case of employment income, this holds even when conventions to eliminate double taxation do not exist but the former has been taxed by another state. Self-employment, capital, real estate, and surplus incomes obtained abroad are totally exempt from taxation if they have been taxed by the source state when conventions eliminating double taxation are in force, or if they have been taxed by any country other than those included in the list of tax havens of the Portuguese State —even when conventions do not exist (Autoridade Tributária e Aduaneira, 2016). Furthermore, since January 2013 any pension income generated outside the Portuguese territory —even if it was not taxed in the country of origin—is totally tax exempt under the non-regular resident regime. JLL Research (2016, p. 11) indicates that “[t]he competitiveness of the Portuguese regime compared with similar regimes in other countries has resulted in important investments in the national real estate sector.” According to this source, “[s]everal foreign citizens, mainly French, have purchased a house in Portugal, attracted by the advantages of Non-Habitual Residents Benefits and also by the quality of life that Portugal offers.” (p. 12).

Asked during his interview about the impact of the Golden Visa programme and the non-regular resident tax regime on Habitat Invest's activity, Ernesto Portugal said that both programs —added to the removal of rent controls—have significantly increased foreign investment and this has materialised in more urban regeneration. Indeed, he mentioned those three policies as the most crucial public decisions behind the ongoing transformation of Lisbon's historic centre: “A large part of our customers are Golden Visa holders. The non-regular resident tax regime has had more remarkable impacts on the French and Scandinavian markets, but I think it still has a lot to deliver”. According to partner at ERA Chiado/Lapa Nuno Martins, the Golden Visa programme has been especially useful for attracting Chinese investment but the non-regular resident tax regime has a more significant impact nowadays: “Three or four years ago, the Golden Visa was very important. Then, due to some irregularities that were identified, it dropped while fiscal incentives skyrocketed. Since the beginning of 2016, the Golden Visa programme has grown again”.

While acknowledging that the Golden Visa programme has absorbed housing stock and thus increased prices in benefit of all real estate investors, the general manager of EastBanc Portugal stated a more favourable opinion on the non-regular resident tax regime:

> *I don't like the Golden Visa programme too much, but I think the non-regular resident tax regime is good. It attracts Europeans who are culturally closer, and a higher social layer of people who will open businesses here, who will bring entrepreneur initiatives... the Golden Visa attracts people with half a million euro —now they only need 350 thousand— who arrive here and then don't show up again. They spend here, what, seven days a year? I don't find that very interesting, I don't think it's positive for the country. I think the non-regular resident regime is. It brings people with higher educational level, many entrepreneurs who must stay here at least 50% of the time and*

> *therefore will be doing something here. And it's very-high-income people. With the crisis we lost lots of brains. Whoever was able to leave, left. So now Portugal needs to attract smart people with initiative and training.*

In his interview, president of ALEP Eduardo Miranda explained that the Golden Visa programme had a great impact on the housing stock at Parque das Nações —usually known asthe Expo since the area was developed to host the International Exhibition of 1998. Since 2014, once that real estate stock had been sold out, Golden Visa investment would focus on the prime area of Chiado. Both areas meet the requirements of the type of investor that is usually attracted by this scheme:

> *Chinese and Brazilians tend to like good, modern, large apartments. Chinese investors used to be taken to Alfama and then to the Expo. After seeing those tiny flats in Alfama, they were willing to buy anything at the Expo. They were horrified; those millionaires don't want to live in tiny apartments. That was the marketing strategy.*

The property type that Golden Visa applicants often seek in Lisbon is very expensive in the historic centre and, according to Miranda, that programme has even inflated the prices of real estate properties targeting this group of wealthy investors: “Properties worth 350 or 400 thousand euro went up to 500 thousand. Then it inflated the prices of those worth 200 thousand, because the purchase of two properties worth 250 thousand each is also accepted. For them it's cheap anyway”. The current crisis in Brazil and the traditional linkages of the Brazilian elites to Portugal was also mentioned by Miranda as a key factor to be taken into account in order to understand the phenomenon of real estate investment under the Golden Visa scheme. Those elites, he argued, are worried about the situation in Brazil and seek “[...] a B plan to protect their wealth. They want value outside the country in case everything goes wrong, and assume that real estate property in Portugal will always gain value”.

According to Miranda, the Golden Visa programme brought a total foreign investment of 500 million euro during the first semester of 2016 —450 of those having been invested in real estate property. However, he also argued that it has not been the Golden Visa scheme attracting the gratest share of foreign investment towards the Portuguese real estate market. This took off in 2014, he indicated, with the non-regular resident tax regime that allows foreign investors to

> *[...] pay 20% instead of up to 50% of tax. If they earn 4,000 euro, they save 1,000 just from taxes. Before 2013, it was required to be a fiscal resident here —i.e. to spend at least 183 days in Portugal— to be eligible. Since then, those purchasing a property to be used as permanent residence are also eligible. Even if they're still working on its refurbishment and still live in, let's say, France, the fiscal residence is already here. But some have been required by the French State to sell their home there to be allowed to be taxed in Portugal. This programme is the core, the engine of urban regeneration in Lisbon. It encourages Belgians, Scandinavians... and mostly French to purchase property in Portugal. Some 25 thousand French are estimated to have come to live here in the last years. It's them who have changed the real estate market in Alfama, Mouraria, Bica... and boosted refurbishment. It's very difficult for a Portuguese to find properties to buy there now because they're all being sold to foreigners.*

7 THE RISE OF HOUSING PRICES

President of APPA Maria de Lurdes Pinheiro argued that only the wealthy can afford an apartment in Alfama since the liberalisation of the rental market in 2012. During his interview, Miguel Coelho expressed serious concern about gentrification in Santa Maria Maior: “Many of the residents are not reaching the benefits of this [urban] transformation. Urban regeneration is neither bringing more residents nor delivering more comfort to the existing ones. In fact, the opposite is happening: it's forcing them to leave”. Focusing on the neighbourhood of Mouraria, Inês Andrade explained that “we lose population because people can't afford a house here anymore; prices have increased a lot”. According to Leonor Duarte, “inhabitants are disappearing from the historic centre, which is planned to be left just for tourism and luxury housing. The population loss is constant and the attempts to secure the existing population are unsuccessful because the housing issue is not solved”.

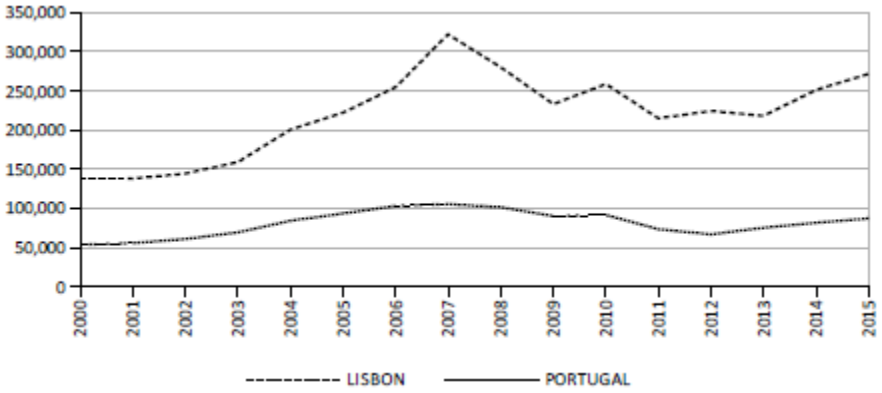

Figure 3 -Average value (€) of traded dwellings (Instituto Nacional de Estatística, 2017b)

The number of housing sale/purchase contracts increased 22.3% in Portugal and 105.9% in Lisbon between 2012 and 2015 (Instituto Nacional de Estatística, 2017a). As shown in figure 3, the average value of the traded dwellings was 26% higher in 2015 than in 2011 in Lisbon and 18.2% higher in Portugal as a whole (Instituto Nacional de Estatística, 2017b). Urban regeneration explains the new dynamism of the Portuguese real estate sector, "[...] owing to greater demand from international investors, fuelled by the potential of tourism and the international public's growing interest in high and medium-high quality housing products." (Cushman & Wakefield, 2016, p. 14). In Lisbon's historic centre, the average housing price increased 22.3% only in 2015. A total of 2,199 sales worth 709 million euro were registered that year in that urban area —11% and 37% more respectively than in 2014 (Confidencial Imobiliário, 2016). According to the consulting firm Cushman & Wakefield, the average asking price in Lisbon was close to 3,000 euro per square metre by the end of 2015.

Housing supply for permanent residence has dropped significantly due to the proliferation of tourist apartments and the multiplication of global investors attracted by the profitability of urban regeneration. The incapacity for most locals to afford housing in that area expands demand and pushes prices up also in the periphery. Miguel Coelho indicated that in 2013 a one-bedroom apartment in Alfama costed between 80 and 150 euro a month and three years later it costs between 1,000 and 1,500 euro. Ernesto Portugal indicated that in 2013 Habitat Invest was selling apartments for 3,000 euro per square metre and now they are doing so above 6,000: "There has been a general sustained growth and I believe this trend will continue in the next years, because we're still far from the values of other European capitals". For Eduardo Miranda, any improvement in those areas where rents had been kept very low triggers gentrification: He argued that "even without the foreign market and the tourists, those rents were unsustainable; they would rise to 350 or 400 euro. Students have paid 250 euro for years and pay 300 for a room in good condition".

Pedro Miranda highlighted that "if you're paying 200 or 300 euro and the rent suddenly rises to 1,000 —if the landlord wants to lease the apartment on a monthly basis at all—then how can you afford that?" Nuno Martins indicated that prices have become really high in some areas of the historic centre —upto 10,000 euro per refurbished square metre in the most expensive ones: "that's very high for the national reality, it's brutal, but there's a small percentage of the population with lots of capital who can reach that". He identified a "growing disequilibrium" between high demand and low supply in the real estate market of the historic centre. Martins also indicated that, in little more than one year, the price of the refurbished square metre increased from 2,500-3,000 to 3,000-4,000 euro in the area between Infante Santo avenue, Áurea street and Príncipe Real —with the exception of the premium areas of Chiado and Lapa. "This has obviously made housing less affordable in Lisbon; prices were 30% lower just one year ago", he argued.

According to André Moura, "prices have rosen, of course, but that's the market law: if something becomes more attractive it automatically becomes more expensive —unless there are public policies of price control, which may work during a given period". He argued that some years ago "[...] people didn't want to come [to the historic centre] because it was old, it wasn't interesting, it wasn't appealing. Now they want to because it's beautiful and appealing, but what's beautiful is more expensive, that's the current model."

Ernesto Portugal interpreted the increase of real estate values as a positive phenomenon stimulating a market that used to be stagnant. He acknowledged that "access to housing may be more difficult" now, but

highlighted that degraded dwellings in derelict buildings are being replaced by a high-quality refurbished apartments.

According to the president of Habita association, “urban regeneration is good, but this regeneration is expelling the inhabitants because it's not for the people who live here”. Councillor for Housing and Local Development Paula Marques argued that “it's a fact that urban regeneration has created a disequilibrium when it comes to social mixture. We shouldn't demonise tourism because it generates economic activity and employment, but the imbalances that it generates must be addressed”. She added that “a city needs to be inhabited by a diverse population. Tourism and tourists are welcome —we're also visitors elsewhere. Mixture is welcome —Lisbon has always been inhabited by very diverse people”. However, she highlighted that “[...] we need to address the issue of real estate speculation that is linked to the Golden Visa programme and to foreign investment that isn't focused on residence but on speculation”.

8 CONCLUSION

The ongoing global commodification of Lisbon's historic centre is stimulated by a highly investor-friendly legal framework designed in the context of economic crisis and austerity to attract foreign capital towards the Portuguese economy. Specific policies with strong influence over Lisbon's derelict urban fabric were implemented that include the new urban lease law, the non-regular resident tax regime, the Golden Visa programme, and several fiscal and administrative incentives to facilitate urban regeneration.

Despite its undisputed success in bringing foreign investment, boosting the refurbishment of derelict buildings in the historic centre, and dynamising the construction, real estate, and hostelry sectors, that legal framework has triggered new forms of gentrification. As it stimulates demand on external markets with greater purchasing power, it is a crucial factor of the rise of housing prices above the financial capacity of the local population in a context of crisis and austerity. Moreover, properties purchased and refurbished by global investors are often used by their new owners not as residences but as commodities.

Against this background, grassroots movements claiming the right to the city have emerged in Lisbon and are actively advocating housing affordability to counteract the identified trends and its inherent threats. Not only are they demanding policy changes but engaging in the public debate and participating in the elaboration of urban policy alternatives. Social movements flourish at the local scale under neoliberalism and austerity, and Lisbon is not an exception as the local community starts to organise against the commodification of the city and to elaborate specific alternative policies prioritising the social function of housing and the right to the city. With local elections to be held in October 2017 and the transformation of the historic centre occupying a central position in the agenda, it remains to be seen how much influence these and other initiatives that may emerge will have on urban policy in the near future.

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ID 1402 | LOW INCOME HOUSING PRODUCTION IN THE NEIGHBORHOOD OF SANTA IFIGENIA IN SAO PAULO, BRAZIL

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1 INTRODUCTION

This paper deals with the analysis of the production of Social Housing provided by private investors and public agencies in the neighborhood of Santa Ifigenia, a neighborhood located downtown São Paulo, State of São Paulo, Brazil. The time span corresponds to the administration of former mayor of the city, Gilberto Kassab, between March 2006 and December 2012.

The studied area corresponds to 10 blocks defined as Special Zones of Social Housing Interest (ZEIS). The ZEIS were created with the aim of controlling land value in certain areas of the city in order to be accessible to low-income people. The area is a very deteriorated portion of downtown Sao Paulo and, despite being occupied by tenement housing, it is in a historic district surrounded by areas where the land value is high due to the full urban infrastructure and job offer.

Plans to revitalize the area were strengthened during Kassab municipal administration. However, the private sector resists to participate in the process because it believes that the area designated for low income housing is too large (about 25% of the total) and that this discourages private investments. Developers have been pushing the municipal government to change the zoning of this area and to designate the ZEIS as a predominantly commercial area.

The area adjacent to the ZEIS has already been transformed and has been receiving significant investments from the public sector, such as the restoration of the Luz Train Station and the creation of the Museum of the Portuguese Language (partially destroyed in a fire in December 2015 and now undergoing restoration), the construction of a concert hall at Julio Prestes Train Station, and the creation of Estação Pinacoteca Exhibition Hall. (Fig.1)

Figure 1-Santa Ifigenia neighborhood showing the State Art Museum and Julio Prestes Train Station in the foreground and the ZEIS in the background left. Photo By Agnaldo Bertolo, March 2009

This paper deals with relatively recent housing policy provision, so literature about the subject is scarce. For this reason, the research method was mainly based in fieldwork and in an investigation of all housing projects that were approved for construction by the municipal government.

This study focuses on the perimeter defined by the 2002 Master Plan of about 10 hectares zoned as ZEIS 3, which correspond to a total of 5 complete blocks and 6 partial blocks. The goal of this study is to analyse the effectiveness of these ZEIS in the process of revitalizing the area and to determine whether or not the purpose of building housing for low income people has been reached.

2 ZEIS IN SAO PAULO MUNICIPALITY

The 2002 Strategic Master Plan (PDE-Lei n° 13.430/2002) established 686 ZEIS in Sao Paulo, with the purpose of reserving areas for the construction of social housing, in order to guarantee the permanence of low-income population where they already live, albeit in precarious conditions. Therefore, areas occupied by slums, illegal lots or tenement houses should continue to house the poor but in decent houses to be built by private or public development. Some underutilized areas were designated as ZEIS with the aim that urban property fulfil its social function, considering that Sao Paulo County had a deficit of 380 thousand housing units at the time of the elaboration of the Master Plan, when the population of the city was 10,4 million.

The 2002 Master Plan established 4 types of ZEIS (ZEIS 1, 2, 3 and 4). ZEIS 3 is located in central areas or adjacent to the railroad where transformations are in progress for several reasons. ZEIS 3 was set up in degraded areas that need immediate recuperation and this is one of the main guidelines of the Master Plan. The railroad border was also designated ZEIS 3 since the area has potential for transformation in view of the deindustrialization. Therefore, the ZEIS 3 designation came to meet the need to avoid gentrification, a process that frequently occurs when there is urban revitalization. (Pessoa, 2009) This is an effort to maintain low-income people in areas where there is good urban infrastructure rather than dislocate them to the periphery of the city, where infrastructure is insufficient. The ZEIS 3 also intends to avoid urban sprawling encouraging densification of the city. The population today suffers with a low-density occupation, facing problems such as waste of time in commuting or lack of urban equipment like schools or health facilities.

In ZEIS 3, at least 40% of the built area must be designated for Social Interest housing (HIS) and the units are to be sold for families whose income is lower than 6 minimum wages (about 1470 euros). UP to 40% of the units can be designated for Popular Market Housing (HMP), reaching a population that has a family income of up to 16 times the minimum wage per month (about 3.900 euros). The real estate market considers ZEIS 3 attractive to HMP but not to HIS. Therefore, developers have no interest in building in these areas.

3 SANTA IFIGENIA NEIGHBORHOOD

By the end of the 19th century, the Santos-Jundiai railway was built. This significantly altered the urbanization of the city of Sao Paulo. From then on, many farms on the border of the railroad were urbanized. The Swiss Frederico Glete and the German Victor Northman acquired the Maua farm and parceled the land with streets larger than the ones of the “triangle” (the oldest area of the city), giving origin to the neighborhoods of Campos Eliseos and Santa Ifigenia. (Toledo, 1983)

Major urban transformations occurred during the administration of mayor Joao Teodoro Xavier (1872 to 1875) such as the Luz Garden, which was at that time the main park and leisure area of the city. The Luz train station was built during the decade of 1900, in the same place of the former station built in 1867. The new station, a steel structure, was fabricated in England and for quite some time was the main building of the city, symbolizing progress and the coffee production of the state which was at that time Brazil’s main export commodity.

From the decade of 1930 on, the area began to decline because of the coffee crisis. Other facts also contributed: the construction of a bus terminal, the high-income population that lived in the neighborhood moved to other parts of the city and, later, the displacement of downtown activities to the Paulista avenue. By the end of the 20th century the area was occupied by homeless and drug addicts, reinforcing the decay of the region. At that time, Santa Ifigenia neighborhood was named Crack Land, in allusion to crack addicts that live in the area. Many efforts were made as an attempt to reverse this trend with no success.

4 NOVA LUZ [NEW LUZ]

Because of the deterioration of Santa Ifigenia neighborhood, the region became the focus of requalification proposals, considering that it is a place with good infrastructure, good transportation system and is part of downtown urban fabric. In 2005 Gilberto Kassab, vice mayor during Jose Serra administration, delimited an area defined by Maua street and Casper Libero, Ipiranga, Rio Branco and Duque de Caxias avenues, totalling 105.000m² as a public utility area. The idea was to attract private enterprises to invest in the area as an attempt to recuperate it, considering that it is one of the most degenerated in the city. In this occasion, 23 companies applied. (Souza, 2010)

The area was informally renamed as Nova Luz, which is thought to be an attempt to disqualify the neighborhood and the old region that carries an important part of the history of the city. In December 2005, Jose Serra passed the Municipal Law 14.096 that grants tax incentives for the companies that registered to invest in the area. (Souza, 2010)

In March 2006, Gilberto Kassab became major of Sao Paulo and soon afterword announced that he would expand the Nova Luz project design area, including avenues Rio Branco, Duque de Caxias, Prestes Maia, Ipiranga and Alfredo Issa square, totalling 27 blocks that could be subject to intervention and expropriation. The new perimeter totalled 26,9 hectares. A few months later, an area was expropriated to build the Technology, Information, and Communication Center of Sao Paulo (PRODAM) and also for the Metropolitan Civil Guard. (O Estado de São Paulo, p. C3, March 10, 2007) The Odebrecht Construction Company, among others, said it was willing to invest in the region but had difficulty in acquiring real estate because the buildings had many owners and the area was very fragmented. The Patronal Housing Union (Secovi) lead a group of developers interested in the area, with the purpose of implementing the urban design project conceived by Jaime Lerner, former mayor of Curitiba, Paraná. The project advocated by Secovi Vice President, Claudio Bernardes, proposed a new occupation for the blocks with low-rise buildings. Their central patios would have semi-public commercial areas, while blocks with only residential apartments would have private central patios. In the perimeter, 80-storey towers would be built, exploring the maximum construction potential of the blocks (coefficient of utilization equal to 4 and exemption from onerous granting).

The tenants and building owners were surprised at this design project, which was developed without their participation. This adversely affected the municipal purpose, because even though the area is very degraded, it is not abandoned and there is economic activity. On the contrary, the electronic equipment trade in Santa Ifigenia Street and surrounding area is a very intense economic activity and is the second source of municipal taxes for the city. At that time, the Santa Ifigenia Merchants Association (ACSI) was established, in order to discuss issues related to the Nova Luz urban design project. (Souza, 2010)

5 THE CONSORTIUM URBAN DESIGN PROJECT

In May 2010, the news about the enterprises that formed the consortium in charge of the revitalization of Santa Ifigenia neighborhood came to public. They were: City Company, Concremat Engineering, Aecom Technology Corporation, and Getulio Vargas Foundation. (OESP-11/05/2010) The City Company, originally an English company, is well known in Sao Paulo since the beginning of the XX century because of the design of neighborhoods of Jardim Europa, Pacaembu and Alto de Pinheiros among others. The City Company was also responsible for the master plan of the 2012 London Olympic Village. At the time, the municipality granted private companies the right to apply the urbanistic concession allowing the private sector to expropriate areas. This was the cause of strong complaints from the owners of the buildings. This issue will be addressed later in this paper.

In December 2010, the consortium presented the design project for the area surrounded by avenues Casper Libero, Ipiranga, Sao Joao and Duque de Caxias and by Maua Street, totalling 45 blocks qualified in 5 sectors. (Arcoweb-28/03/2011)

6 ZEIS AT NOVA LUZ

The 8 hectares area that comprehends the ZEIS at Nova Luz was defined by the 2002 master plan, aiming to maintain in the neighborhood the population that already lived in the area (in precarious homes and tenement houses) and to improve their living condition. The ZEIS is seen by Claudio Bernardes as an obstacle to the implementation of Jaime Lerner's urban design project, because in ZEIS only 20% of the area could be used as non-residential area. It is implied that a large area reserved for low-income people would not be attractive for real estate investors who were only interested in risk-free profit.

> *"The map of the concession area indicates that the core of the polygon − which includes Rio Branco, Ipiranga and Duque de Caxias avenues and Maua and Casper Libero streets − is formed by ZEIS 3. In this area, the local government guideline provides for the construction of up to one thousand low-income housing units − two lots totalling 15 thousand m² have already been expropriated for that purpose at Aurora and Vitoria streets.*
>
> *"But the investors sided with the housing syndicate (Secovi) considered that this amount of low income housing units should be spread out rather than concentrated in only one area, which could limit the middle-class interest in living downtown.*
>
> *"" Nova Luz was conceived to disseminate a new growth pattern for the city, mingling various uses in the same region. The proposed pattern is not interesting for the real estate market. Our design project was conceived by Jaime Lerner and he will not participate in the competition anymore" says Bernardes.*
>
> *"He still refutes the urban planners' critical comments that the market does not want to build low income housing for low profit. "We want to build but in a spread-out way."" (OESP October 2009)*

Once again, a ZEIS in a central area (Fig.2) is seen as a depreciation factor that discourages investments, as in other areas of the city the ZEIS apartments are being built but units are being sold for middle class population rather than for families earning up to 6 minimum wage income. A search in the county website in July 2011 showed that no permit for construction of low-income housing was requested. It seems that all activities ceased while awaiting the Nova Luz urban design project definition. At Santa Ifigenia's ZEIS, the only building that started to be built was a self-help construction organized by Compamare, a cooperative of the paper and recyclable materials collectors. The building was not finished and the construction was paralyzed.

Figure 2-ZEIS at Rua do Triunfo showing a well-preserved old building. Photo by the author, December 2015

7 URBANISTIC CONCESSION

The consortium project keeps the ZEIS as it is, considering that it is part of the Zoning Law of the city and cannot be altered. Stephen Engblom, an American architect and one of those responsible for the revitalization design project of Luz, believes that the areas reserved for low-income houses may repel some investors. On the other hand, he advocates the idea that people should not live in segregated places and sees social diversity as a positive factor. The master plan of the city aims to avoid gentrification and was therefore conflicting with mayor Gilberto Kassab and the main investors.

Gilberto Kassab was elected mayor of Sao Paulo in October 2008, defeating Marta Suplicy. In November, he announced his plan to expand the urban policy instrument named Urbanistic Concession for Santa Ifigenia neighborhood. This instrument must be approved by the Municipal Council and then applied in Santa Ifigenia area. Since then, many mistakes were made by the municipality and by the press, misinterpreting the instrument and its application in view of the Statute of the Cities, a law that regulates policy instruments.

> *"The Statute of the Cities never provided for Urbanistic Concession (Federal Law 10.257/2001), although the media, politics and civil entities frequently misinterpret it as it is made clear in public hearings." (Souza, 2010)*

Even worse is the fact that the municipality was aiming to use the urbanistic concession at Santa Ifigenia area, allowing private companies to expropriate with the excuse of implementing an urbanistic project, and then later invest in real estate enterprises in the expropriated lots, and profiting from this action. The previous owners of the buildings would be excluded from the process. That would be a very negative precedent, considering that expropriation is a prerogative of the public sector, with very rare exceptions.

> *"This provision refers to public service concessionaires that execute services for the public sector under a public concession or permission, after a bidding process, pursuant to article 175 of the Federal Constitution. That includes electric energy supply services, communication services, water and sewage supply, urban public transportation services etc. (Harada, 2009)*

The concessionaires offer services in exchange for the granting of the concession (Union, States, Federal District, or County) and are authorized to charge users a fair tariff for the value in the winning bid. The question is: can the concessionaire execute public service and charge for this service? Is there a legal provision that allows private enterprise to expropriate and pay compensation with non-public resources in order to implement urban revitalization design projects? Can the private sector profit by selling units resulting from the expropriation? In practical terms, the bill of law is creating the institute of concession of real estate speculation, which is prohibited for the public sector. It is not possible to expropriate with the purpose of reselling. (Harada, 2009)

In 2011, the Electrical Material and Home Appliances Retail Union filed a Direct Action for Declaration of Unconstitutionality (ADIN) against the Urbanistic Concession Law (Law 13.917/2009).

According to the urban planner Lucila Lacreta, of the non-governmental organization Defenda São Paulo (Support Sao Paulo), the Federal Constitution, article 182, 4th paragraph, says that the Municipal Government is authorized, under a specific law and for an area included in the master plan, to require, under the terms of the Federal Law, that the owner of no-built, underutilized or not-used urban land promote its proper use. Breach of the law results in the payment of progressive property tax and further expropriation. What is clear is that the proprietors should participate in the urbanization project. Nevertheless, none of the real state owners were notified by the municipality to participate in the revitalization process in the analysed time span. This is an extremely serious failure because it excludes the landowners and gives to private investors the possibility to profit with the process. What is proposed in the bill of law is compulsory expropriation, even when the landowner is willing to participate in the urban renewal process. In the revitalization, the investor shuns the proprietor by paying the current market value, which is low because of the degradation of the area.

In April 2011, the Courts suspended the Nova Luz project, but in August of the same year, the ruling was reversed, and the ADIN was dismissed.

8 CONCLUSION

The starting point of this research was to understand the reasons why the construction of social housing in the Santa Ifigenia neighborhood did not occur despite the great need in central areas. In the course of the investigation, what was found is that there is a complex game of power where the municipality takes the side of the large construction groups, disrespecting the rights of the landowners or tenants of commercial or residential units. Once again, an urban area is treated as merchandise that generates high profit for small but powerful groups while the concept of “social function of the city”, recently introduced by the Statute of the City remains ignored.

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ID 1405 | IMAGE AND QUALITY OF LIFE IN NEIGHBORHOODS WITH RENEWAL DEMAND – CHALLENGES IN THE COOPERATION BETWEEN URBAN PLANNERS AND HOUSING PROVIDERS: THE CASE STUDY WÜRZBURG

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This paper focuses on residential neighborhoods that are located in or near the city center and characterized by a negative (external) image as a result of demographic, social and economic transitions. Using the case study of Würzburg-Zellerau as an example, it will explore approaches to improving a neighborhood's image with a view to enhancing quality of life and to identifying potentials as well as limiting and success factors.

1 BACKGROUND

This paper is based on the research project "ImiWo – Images of Inner-City Residential Quarters." Using two neighborhoods, one in Berlin and one in Würzburg, as case studies, the project identified framework conditions, influencing factors and relevant stakeholders along with their specific impact on the development of neighborhood image. In addition, the role of public-sector housing providers and

municipalities within this process, as well as their scopes of action in regard to enhancing quality of life, were explored in cooperation with municipal housing associations.

Economically weak and socially vulnerable neighborhoods with urgent demand for renewal can be found in many cities in Germany and elsewhere. The German federal government set up the funding program Soziale Stadt ("Social City") with the specific goal of promoting integrated approaches to developing such urban neighborhoods that encourage extensive citizen participation. By upgrading the quality of housing and public spaces and taking the improvement of safety and ecological considerations into account, they aim to create a more attractive residential environment in order to increase quality of life for residents of these neighborhoods – and thus ultimately increase the educational and economic opportunities open to them, as well. The program seeks to improve infrastructure and provide good living conditions for children, families and elderly residents in order to contribute to a diverse social structure and promote a sense of community among the neighborhoods' residents. (cf. BMUB, 2014; Eltge and Kocks, 2015; Häußermann, 2006)

The paper provides an overview of the various approaches to improving quality of life in urban neighborhoods and takes a closer look at the strategies implemented by the City of Würzburg (125,000 inhabitants) to increase quality of life in the inner-city neighborhood of Zellerau (12,000 inhabitants) and improve its image. A media analysis showed that this neighborhood was stigmatized for years by the use of disparaging terms such as "Little Moscow," "Broken-Glass District" and "social hotspot," and the paper will demonstrate how Zellerau's image has evolved up to the present day.

1.1 METHODOLOGY

Würzburg-Zellerau was selected based on the fact that it is an inner-city neighborhood in which structures were in place for cooperation between housing providers, the municipality, urban planners and various other institutions and stakeholders, such as citizens' groups and NGOs, in the field of urban renewal.

Research conducted on Zellerau included an analysis of reports in the media and of available literature and documents, interviews with urban development and housing experts, and an extensive survey of inhabitants of Würzburg in general, and Zellerau residents, in particular. (cf. Berndt and Sinning, 2016: 5ff)

2 NEIGHBORHOOD IMAGE AND QUALITY OF LIFE – A DEFINITION OF TERMS

NEIGHBORHOOD When it comes to defining the term "neighborhood," I refer to the definition proposed by Schnur, which emphasizes everyday life: "A neighborhood is an area embedded in a specific context that lacks clearly defined boundaries, but is rather socially constructed through various actions taking place inside and outside it and serves as a focal point for residents' daily lives and individual social spheres, which intersect and overlap within a relatively small-scale residential environment providing the spatial framework for identification" (Schnur, 2013: 31).

The significance and development of neighborhoods include structural, physical, social, economic, political, symbolic and historical dimensions that imbue them with specific characteristics as a "complex spatial and social setting" (ibid.: 30).

In summary, a neighborhood as understood in this paper can thus be characterized as a socially constructed (rather than administratively defined) area that is small enough to offer the potential for partial social identification and interaction (cf. ibid.: 31).

IMAGE An image is a mental concept formed by individuals based on the sum of their objective knowledge, subjective feelings, experiences, notions, assessments and prejudices relating to the object or entity in question. (cf. Johannsen, 1971: 35; Leser et al., 1989: 264). In other words, an image is not merely a reflection of reality and objective conditions, but is rather always colored by personal judgment, attitudes and experience (cf. Berth, 1959: 124f). Thus an image "incorporates both objective und emotional components into a dynamic overall impression of objects, spaces, people etc., which is formed based on first-hand information and the personal perceptions of the respective individual as well as information and perceptions conveyed by others" (Wiest and Wörmer, 2012: 3).

2.1 NEIGHBORHOOD IMAGE

Based on these definitions of the individual terms, "neighborhood image" can be described as "a concept created collectively by individuals and their social practices (the image) regarding a multi-faceted part of a city without clearly defined boundaries (the neighborhood)." (Berndt and Sinning, 2016: 11)

2.2 IMAGE AS A FACTOR IN THE DEVELOPMENT OF NEIGHBORHOODS

The question of neighborhoods' image is of more than merely academic significance. It impinges directly on how neighborhoods form and change over time and on their potential for development. A neighborhood's image is decisive for those who live there. Whereas an address in a "good" neighborhood can open many doors and be a source of positive identification, living in a "bad" part of town" can negatively affect how its residents are perceived by others, the opportunities available to them and their quality of life, which can ultimately propel the entire neighborhood into a downward spiral.

Thus it is vital to improve the image of negatively perceived neighborhoods. However, in order to avoid economic and social segregation and the displacement of residents in the process of gentrification, it is crucial to strengthen residents' connections to their neighborhood and to ensure stable development and attractive residential environments in all parts of the city.

Changing the image of a neighborhood affects its development and vice versa. As can be seen in Figure 1, it is possible to distinguish between different types of neighborhoods based on how they are perceived by residents and by outsiders, but such perceptions can change over time depending on the specific dynamics of a particular neighborhood's development.

2.3 QUALITY OF LIFE

As used in this paper, the term "quality of life" refers to a multi-dimensional concept of wellbeing that "includes both material and immaterial and both objective and subjective aspects of individual as well as collective welfare and emphasizes quality over quantity (Noll, 1999: 3). In the context of collective welfare, it is used to describe conditions allowing a good life for everyone (cf. Berger-Schmitt and Noll, 2000: 33f) based on economic growth, security, order, justice, freedom and high quality of life as primary principles of a modern society (cf. Jochmann, 2010: 92f). Quality of life, social cohesion (i.e. decreasing disparity within society and strengthening social bonds among its members) and sustainability are the three pillars of collective welfare (cf. ibid.).

Image Types	External Image positive +	External Image negative -	Trend
Internal Image positive +	**Type A: Gentrified Neighborhoods** Established neighborhoods consisting largely of buildings dating to the decades prior to WW I that have been modernized according to the highest standards Characterized by a high share of owner-occupied apartments, socio-economically privileged residents, upscale restaurants and shops etc.	**Type B: Emerging Neighborhoods** "Hip" neighborhoods on the brink of gentrification, usually located near the city center, with a building stock dating largely from the pre-WW I period and rents that are still fairly moderate While these neighborhoods are often characterized by a high percentage of residents with working-class and/or immigrant backgrounds, an influx of artists and other pioneers attracted by low rents and the central location typically ushers in a period of rapid change in social and household structures, increasing investment pressure, and rising rents due to the neighborhood's growing popularity	↑↑ *Upgrading* Increasing attractiveness >> Danger of displacement of long-standing residents

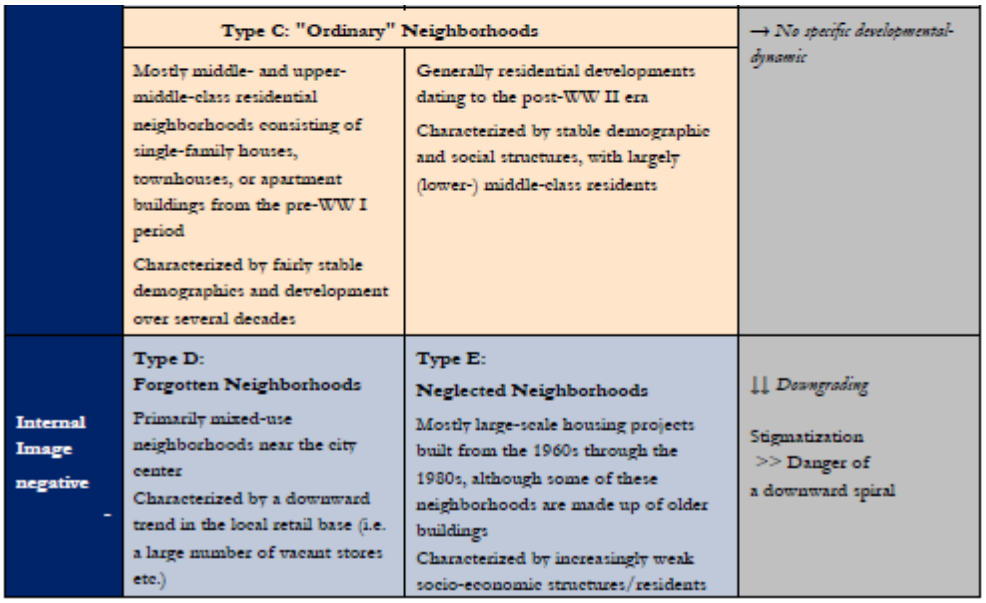

Fig. 1: Different types of neighborhoods based on image and developmental dynamic (Berndt and Sinning, 2016: 31; translated from the German)

In this understanding, quality of life is regarded as arising from an interaction of objective and subjective factors (cf. Greiffenhagen, 2003: 362), i.e. favorable conditions and subjective welfare across various domains of life (cf. Zapf, 1984: 25). As such, it is a multi-dimensional concept based on a constellation of objective and subjective perceptions of wellbeing. Individuals' objective circumstances are determined by factors such as income, living and working conditions, family relationships, social contacts, health, social and political participation, and the natural environment (cf. Jochmann, 2010: 93), while their subjective sense of wellbeing results from their personal, emotional assessment of their particular circumstances and attitude towards life in general. (cf. Noll, 1999: 10). Quality of life is a decisive factor in terms of how neighborhoods are perceived. Thus improving subjective and objective quality of life is key to boosting a neighborhood's image and attractiveness.

3 IMAGE AND QUALITY OF LIFE AS ELEMENTS OF AN INTEGRATED APPROACH TO NEIGHBORHOOD REVITALIZATION

An integrated approach to urban development – i.e. a comprehensive strategy aiming to ensure a livable, affordable, and socio-economically diverse neighborhood – can contribute significantly to enhancing quality of life and revitalizing urban neighborhoods. More specifically, providing better quality housing, upgrading public spaces and creating an environment that is safer, more ecologically friendly and more attractive overall can have a major impact by improving quality of life for a neighborhood's residents, which in turn ultimately leads to better educational and economic opportunities. In addition, providing an infrastructure that meets the needs of children, families and senior citizens can contribute to promoting a diversity of uses and social cohesion in the neighborhood. (cf. Drilling and Schnur, 2012; Jochmann, 2010; Kaltenbrunner and Schnur, 2014)

3.1 COURSES OF ACTION AVAILABLE TO URBAN PLANNERS AND PUBLIC-SECTOR HOUSING PROVIDERS TO ENSURE LIVABLE NEIGHBORHOODS

Figure 2 shows the basic approaches that can be taken within an integrated strategy aiming to revitalize neighborhoods by enhancing their image and attractiveness and how public-sector housing providers and urban planners can contribute to changing the way neighborhoods are publicly perceived. Which approaches are the most suitable in a given case depends largely on the type of neighborhood (see Fig. 1) – i.e. the current state and public perceptions of the respective neighborhood – but other factors may also play a role, such as framework conditions in the municipality as a whole that affect the scope of action

available to planners and others involved in the image enhancement process. However, although the point of departure may be different for the various types of neighborhoods distinguished in Figure 1, the overall aim is always to foster diversity and create a livable, mixed-use neighborhood. This means providing conditions conducive to local businesses, creating public spaces offering scope for experimentation and social interaction, and encouraging community involvement, citizen participation, and individual responsibility. (cf. Bürgin, 2013: 137).

Mix of Approaches in Integrated Neighborhood Development					
Communicative Approaches	Social Approaches	Approaches Based on Planning Legislation and Housing Policy			
		Construction Measures	Financial Instruments	Planning Legislation	Housing Policy Instruments
▪ Marketing the neighborhood as an attractive location for businesses and tourist destination ▪ Campaigns to redefine the neighborhood's image and appeal, e.g. by creating new attractions/landmarks ▪ Neighborhood branding ▪ Public relations campaigns involving the local media (press, local TV stations etc.) ▪ Encouraging citizen involvement and participation	▪ Outreach work to promote a sense of community and social capital ▪ Fostering involvement and empowerment ▪ Promoting self-organization and political representation through community organizing and participation committees ▪ Intermediary neighborhood management ▪ Close monitoring of sociodemographic developments within the neighborhood ▪ Provision of professional counseling and arbitration for neighborhood residents on tenants' rights, social problems and other relevant issues	▪ Construction of new housing ▪ Modernization and refurbishment of existing housing ▪ Redesign and upgrading of public spaces ▪ Measures to improve infrastructure and the residential environment for specific target groups ▪ Creating communal/public spaces for social encounters and interaction	▪ Demand-side subsidies, i.e. the provision of housing allowances for low-income groups ▪ Purchase of residential properties by public-sector housing providers ▪ Funding of modernization measures ▪ Supply-side subsidies, i.e. funding for the construction of new housing ▪ PPP investments in infrastructure (BIDs, HIDs, NIDs) ▪ Public funding (i.e. funding provided according to Article 164 of the German Federal Building Code, by the EU, and by the German development bank KfW) to promote urban development measures ▪ Subsidies/Funding for housing cooperatives	▪ Zoning by-laws governing the residential use of properties and the number of stories allowed ▪ Regulations prohibiting the use of residential properties for other purposes and the conversion of rental housing into condominiums ▪ By-laws on rent caps and the share of modernization costs that can be allocated to tenants to control increases in housing costs ▪ Statutes governing the percentage of subsidized housing for low-income groups and the preservation of the social environment ▪ Bilateral agreements between municipalities and investors on the socially responsible and just use of land ▪ Modernization and redevelopment statutes ▪ Modification of zoning regulations and local development plans ▪ Preemptive right-to-buy for public entities	▪ Strategic municipal concepts to ensure an adequate supply of affordable housing ▪ Measures to reduce tenant turnover ▪ Fines to prevent the use of residential properties for other purposes ▪ Sale of publicly-owned properties to the investor with the best concept rather than the highest bidder ▪ Measures to control rising rents (i.e. rent caps, restrictions on admissible rent increases for existing leases, and hardship provisions to protect tenants from steep raises in rent once subsidies cease) ▪ Stipulations committing investors to include a given percentage of subsidized housing in new construction ▪ Strategic alliances for social housing policy ▪ Occupancy management

Fig. 2: Overview of Instruments and Measures of an Integrated Approach to Urban Development (Source: ISP 2016 based on Berndt and Sinning, 2016: 111)

Thus the mix of instruments and measures urban planners choose to effect the desired change in a neighborhood's image will depend on the specific situation and goals in the particular case. A good example of what such a mix can look like is provided by the case study of Würzburg-Zellerau, which is presented in more detail in the following.

4 WÜRZBURG-ZELLERAU – A CASE STUDY

Located near the city center of Würzburg, the Zellerau neighborhood is delimited by the river Main to the north and a belt of green spaces to the east, south, and west. A printing-machine factory, a steam laundry and a large brewery were the main providers of employment to the local residents up until 1945, and Zellerau is perceived as a working-class neighborhood to this day. The fact that it was the site of military barracks for decades additionally contributed to its negative image. Currently Zellerau is home to approximately 12,000 inhabitants and includes a higher than average percentage of low-income households and residents with immigrant backgrounds.

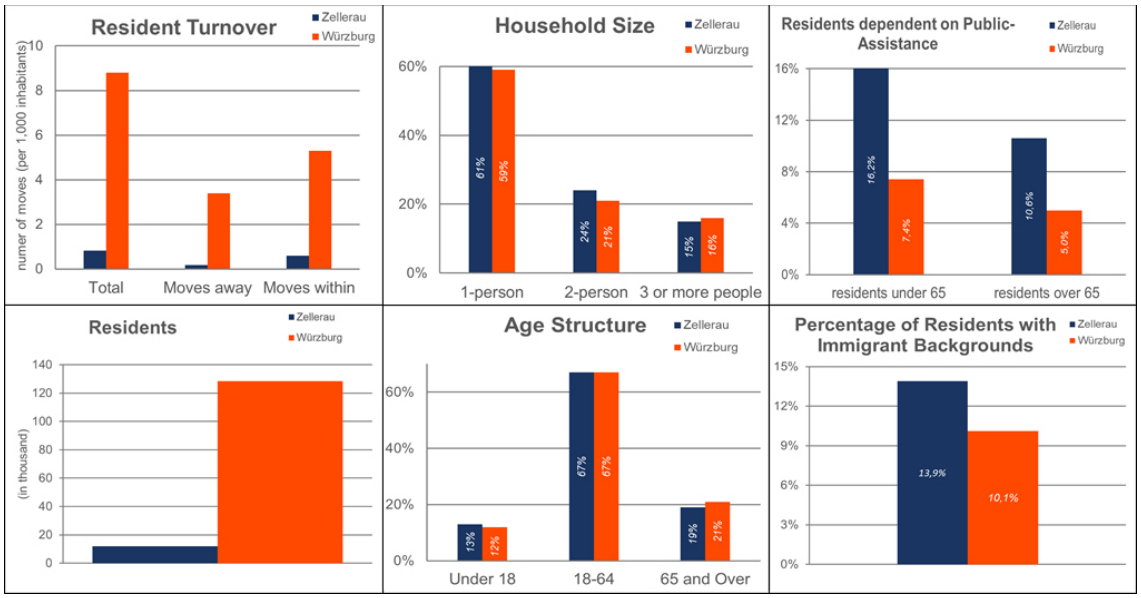

Fig. 3: Sociodemographic data for Zellerau compared to the city of Würzburg overall in 2013 (Source: City of Würzburg, 2013)

For many years, derogatory terms such as "Little Moscow," "Broken Glass District," "social hotspot," and "slum kids" were used to refer to Zellerau and its inhabitants. The program Zukunft – Leben in der Zellerau ("Living in Zellerau in the Future") was launched in 2007 as part of the German federal government's Soziale Stadt funding scheme in order to develop Zellerau with a view to providing better quality of life and healthier living conditions as a key to boosting the neighborhood's image. An analysis of media reports on the neighborhood show that these efforts have succeeded in improving Zellerau's image (cf. Berndt and Sinning, 2016).

4.1 QUALITY OF LIFE IN ZELLERAU

A recent survey of Zellerau residents showed that their perceptions and assessments of the quality of life in their neighborhood are rather varied. Zellerau's green infrastructure, local supply, close-knit community and cultural diversity are regarded favorably. Moreover, it appears that especially older residents identify strongly with their neighborhood and take a predominantly positive view of it, although many in this age group, in particular, are concerned about safety and cleanliness.

Positive opinions regarding the local infrastructure are especially evident in regard to the excellent quality of medical care and facilities for senior citizens and those requiring care. On the other hand, due to the high percentage of residents with low incomes, demand for food banks and similar organizations offering aid to the poor is high, both among the general population and among senior citizens. This indicates that the number of elderly residents living below the poverty line is likely to increase in the future and is a trend that planners need to take into consideration.

4.2 INSTRUMENTS AND MEASURES AIMING TO BOOST ZELLERAU'S APPEAL AS A LIVABLE NEIGHBORHOOD

Figure 4 illustrates the different instruments and measures implemented in developing Zellerau with the aim of creating better social conditions and the relative weight given to the various approaches.

As can be seen in Figure 4, refurbishment and construction measures were the predominantly employed approaches, while instruments provided by planning legislation and housing policy played a minor role. Strategies designed to foster empowerment and community involvement were also of particular significance. The emphasis given to these approaches partly had to do with the fact that funding was

provided by the program Soziale Stadt, which stipulates that efforts during the first phase focus on eliminating substandard housing and tackling social problems.

The mix of instruments and measures described above proved effective in the first phase and succeeded in promoting Zellerau's transition from a "Type E" to a "Type B" neighborhood over the past decade or so. Future efforts will focus on stabilizing this positive trend and continuing to develop Zellerau into an affordable, attractive neighborhood with a healthy demographic and social mix. It will be necessary to evaluate whether the instruments in place are suitable to achieving this aim and determine if they need to be modified or supplemented with additional ones.

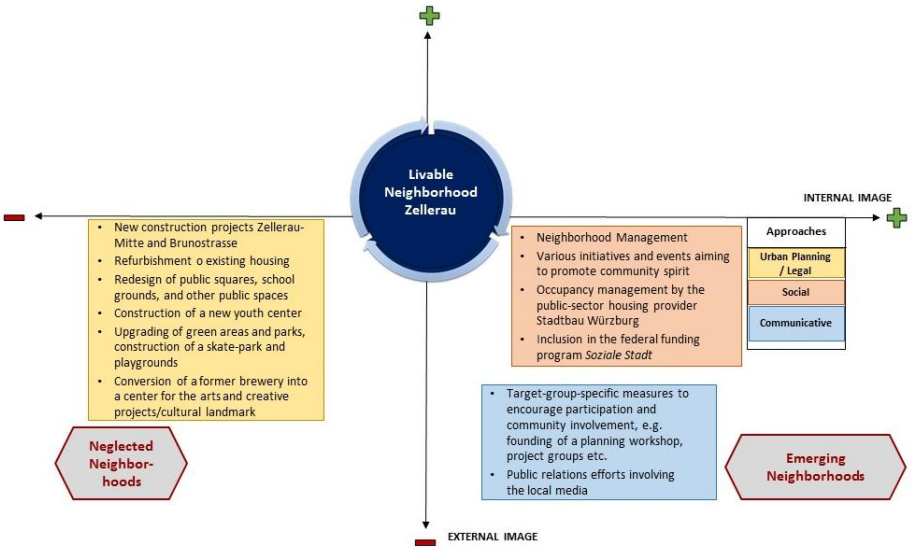

Fig. 4: Measures implemented in the development of Zellerau from a Type E to a Type B neighborhood (Source: ISP 2016)

5 CONCLUSION

Although its residents confirm a high quality of life and have a positive opinion of their neighborhood, the image and perceptions of Zellerau among outsiders are still predominantly negative. However, the results of a recent survey of residents provides a more differentiated view, with the neighborhood's green infrastructure, local supply, close-knit community and cultural diversity being regarded favorably. Older residents, in particular, identified strongly with their neighborhood. Zellerau's negative image, technical infrastructure and safety concerns were seen as the neighborhood's main drawbacks.

In order to improve the neighborhood's image and quality of life over the long term, the city of Würzburg launched a wide-reaching plan for cooperation among multiple stakeholders, including urban planners, city administrators, public-sector housing providers, and neighborhood management, as well as NGOs, social institutions and citizens.

This collaborative approach appears to be particularly relevant because it has the power to produce the broad, profound impact required to effect real change and truly boost a neighborhood's image and quality of life.

In addition to extensive cooperation, using a mix of instruments as shown in the example in Figure 2 proved to be an effective strategy. The city of Würzburg and the municipal housing association Stadtbau GmbH, in particular, played a central role in upgrading the Zellerau neighborhood by building housing and strategically selecting tenants to ensure a healthy mix in terms of age, household size and income. Stadtbau's strategy of

"Creating, Maintaining and Allowing for Diversity" is key to counteracting unhealthy social structures and making the neighborhood more attractive overall, while at the same time ensuring that rents remain at moderate levels (cf. Berndt and Sinning, 2016: 169 f).

Continuous monitoring of social, economic and demographic data with a view to the neighborhood as a system, its demographic structure and residents' needs could be helpful in identifying potential problems early on in order to adapt strategies accordingly and thus ensure the quality of neighborhood development over the long term.

Although some urban development concepts take the aspect of improving image into account, relevant approaches and measures are hardly ever integrated in a strategic manner, or even at all. This may be due to a lack of knowledge on how to deal with the issue of negative neighborhood image.

The case study of Würzburg-Zellerau can contribute to a better understanding of the complexity of interrelationships between quality of life, integrated development strategies and neighborhood image. However, the results also show that there are still a number of issues to be addressed in further research, e.g. a more differentiated analysis of goals, strategies and instruments relating to image building and the specific roles of the various stakeholders within this process, and the connection between boosting neighborhood image and gentrification, as well as possible measures to prevent or at least limit the displacement of residents due to rising rents.

In any case, rather than rejecting efforts to improve neighborhood image out of hand as paving the way for gentrification, they should be regarded with an unbiased eye, and the chances and risks inherent in developing a certain neighborhood should be analyzed and weighed against each other objectively.

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ID 1414 | EMPTY HOUSING: CRITICAL REVIEW ON THEORETICAL EXPLANATIONS OF HOUSING VACANCY

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ABSTRACT: The issue of housing vacancy as a spatial phenomenon, as an outcome of urban restructuring or as part of a rhetoric developed around urban generation, has been considerably debated in the fields of housing and urban studies and policy-making. However, the definitions and the conceptualizations of empty, underused, vacant or abandoned housing in urban agglomerations as topics to look into, as well as the theoretical frameworks developed to understand the procedures and the reasons behind their emergence, are diverse and sometimes controversial, depending on the disciplinary origins and epistemological paradigms adopted. The essay attempts to provide a better understanding of the various types of urban housing vacancy through a critical review on key theoretical frameworks in the fields of housing economics, housing studies, geography and spatial planning to identify key points and assumptions between various disciplinary perspectives; as well as to reflect on whether more or less multi-dimensional explanations are able to grasp the complexity of the phenomena, which as it is argued, occur in many different contexts for many different reasons. For the purposes of this paper, the most prevailing concepts and theories used and translated by planners and researchers in urban studies to explain housing vacancy phenomena, are explored. The review focuses on literature dating back to the 1960's and attempts to cover the debate on housing vacancy, with a reference mainly to North-American and European cases, through the following three conceptual frameworks: i. housing vacancy as mobility "opportunity" ii. vacancy as demand variation and iii. vacancy as a "shrinkage". Four key concerns are discussed in detail regarding each of the conceptual frameworks: the extent of attention paid to spatial aspects and to cross-scalar relationships, to actors' role and impacts, as well as the understanding of vacancy as part of context-dependant historical processes. The paper concludes with a more general reflection on whether these commonly used theoretical frameworks are able to touch upon the complex social, economic, political and cultural relationships embodied in housing and conceptualize housing not only as a "composite commodity".

1 INTRODUCTION

Over the last decades housing vacancy and abandonment have been thoroughly examined in academic literature, either by means of providing a descriptive-analytical view on the phenomenon or its measurement (Hillier et al. 2003, Yin and Silverman, 2015, Accordino and Johnson, 2000) or incorporating the vacancy issue in a wider debate on urban restructuring, policy change, neighborhood transformation and gentrification (Marcuse, 1985, Häußermann and Clock, 2004). Conceptualizations of empty, underused, vacant space as well as explanations on the reasons behind its emergence have not been agreed (Morckel, 2014). The article focuses on the latter aspect and provides a critical review on three key conceptual frameworks which, albeit developed under different historical, political, circumstances and socio-economic conjunctures and referring to different housing systems and urban settings, are often used for the analysis of vacancy process in different contexts. The aim of this article is to contribute to a better understanding of the diverse mechanisms, reasons and phenomena intertwined to housing vacancy and reflect on whether underlying disciplinary logics might restrict the views only on certain facettes of complex vacancy issues.

The article examines three conceptual frameworks: i. housing vacancy as part of the supply-demand link and as a necessary condition for residential mobility, as shown in filtering and vacancy chain models; ii. vacancy as a result of changing demand for specific tenures or neighborhoods, investigated through the theories of tenure residualization and the low-demand hypothesis and iii. housing vacancy as the outcome of universal patterns of demographic and economic restructuring explored by the "global" framework on urban shrinkage. After a brief review of the main definitions and the key points addressed by each concept, three key concerns addressed by all frameworks are critically discussed and disciplinary limits are presented . Considering that housing vacancy has been seen as a social or/and a spatial phenomenon, the first key point examines to what extent theories provide a spatial understanding of the phenomena. In this sense, spaces as well as scalar relations are key points on the basis of which concepts are compared. The second point concerns the potential importance of the physical space has in the explaining reasons for housing vacancy. The third point addresses the role of actors in the process of vacancy and raises questions on whether and when housing vacancy is structural or a result of aggregated individual attitudes. The paper concludes with a more general reflection on whether these commonly used theoretical frameworks are able to describe complex social, economic and political issues intertwined to housing vacancy, on whether contextual specificities play a role and the way the various conceptualizations of the issue of vacancy highlights different values which when translated into policies might lead to highly diverse approaches.

2 CONCEPTUALIZATIONS OF HOUSING VACANCY

2.1 VACANCY AS OPPORTUNITY: FILTERING & VACANCY CHAINS

Filtering is a concept, developed primarily for the US and UK context, to model the operation of housing markets and the nexus between housing supply-demand and household mobility patterns. This theoretical model, explored in depth by post-war scholars in housing economics, has its roots in early urban ecological perspectives, with the study of (Gibb,2003). In the following part a brief presentation of North-American literature on filtering will address the origins and the main concepts around filtering models and their links to vacancy.

Classical filtering models assume that higher income households and their demand for "better quality dwellings" drive urban growth and that wealthier households' movement towards the outskirts, their increasing demand for housing triggers construction while creating vacancies in the existing housing stock. Vacancies along with suburban expansion decrease market values and render second-hand dwellings available to the next lower income group (White, 1971; Grigsby, 1963). In this regard, vacant housing constitutes an "opportunity" (Ratcliff, 1949; Turner, 2008) for low-income households who can improve their living standards without increasing their costs. Prior conceptualizations focus on the relation between supply and market prices and assume that households' conditions and income remain unchanged. Framing filtering solely as occupancy change, the excess in housing supply and therefore vacancy is linked to housing affordability (Ratcliff, 1949). When the decrease in market value is quicker than the decrease in quality, households can access better dwellings without extra costs (Grigsby, 1963). Recent

conceptualizations suggest that instead of housing units "filtering-down" the social hierarchy, households tend to improve their living quality while moving up the housing hierarchy (Marullo, 1985; Bier, 2001).

In first filtering explanations, aspects of heterogeneity, spatial fixity or durability of housing commodities have not been taken into consideration. The submarket hypothesis (Grigsby, 1963; Sweeney, 1974) and the development of vacancy chain models provided insights on the structure and the interdependencies between parts of the housing market and better explained supply-demand dynamics and relations between flows of housing resources and rent (Galster and Rothenberg, 1991). Vacancy chain models made the measuring of degrees of mobility in a given housing market and the evaluation of distributive effects and vacancy occurrence during the process of filtering possible. Chains conceptualize the way in which material resources or social positions are distributed in a housing system (Chase, 1991 p. 134). Similarly, filtering these models suggests that chains are initiated with the creation of new housing units and ended either when new actors join the system, or when the last units in the chain are destroyed, merged or abandoned (Marullo, 1985).

Irrespective of the diverse methodological assumptions in measuring the impact of new construction, most empirical studies claim that every new unit generates multiple additional vacancies and increases housing choices for other households (i.e. see Turner, 2008). However, the extent and the type of vacancy supply, the "optimal" allocation of new resources in submarkets as well as the "effectiveness" of the market in delivering "better" housing services to low-income households have been debatable. Most empirical findings demonstrate that higher vacancy rates tend to concentrate in the lower parts of the market (Ratcliff, 1949; White, 1971; Malpezzi and Green, 1996), although the reasons are not clear. Certain authors speculate that new dwellings introduced in higher submarkets remain available longer and change hands more often than units introduced in the middle or lower ranks (White, 1971; Skaburskis, 2006), or find correlations between vacancy chains' length and tenure (Turner, 2008). Others identify the problem with the time-span in which better dwellings trickle-down the market hierarchy, suggesting that filtering is effective when new dwellings address middle-income household demands (Ratcliff,1949). Most studies on filtering distributive effects assume that an increased supply facilitates households' upward mobility independently from their position in the market (i.e. see Bier, 2001). Interpreting surplus and vacancy as a higher degree of mobility opportunities is rather inconsistent and research is needed on the type of "opportunities" found at the lower level, or on whether resources are accessible (Clark, 2006) as well as on the probabilities for low-income households to experience upward mobility (see Chase, 1991; Marullo, 1985; Galster and Rothenberg, 1991).

2.2 VACANCY AS DEMAND: RESIDUALISATION & "LOW DEMAND"

Housing vacancy phenomena, manifested in Europe and primarily in the UK context in the 1970's and the 1980's, have been long-debated in the fields of social policy and housing studies. The following part draws on the UK experiences and comprises the analysis of the debate on housing vacancy for both the private and public sector through the concept of "residualization" and the concept of "low-demand" for housing.

"Residualisation" describes a set of parallel, more or less interrelated, processes operating at a global, national or local scale with impacts on national macro-economic, political/ideological, policy and social dynamics and between others, on the social structure of the housing consumption as well as on the role of social housing. This process refers to a wider social economic and political transformation which led to the relative shrinkage of the social rented sector, its de-prioritization from social policy agenda and its conversion into a "residual service" solely for the needs of the lower-income groups (Forrest and Murie, 1983; Malpass and Murie, 1999; Lee and Murie, 1999; Hall et al., 2005).

Global economic changes of the 1970's had an important impact on local dynamics of growth, labor market, employment and income, affected housing consumption and altered the scope of social policy (Harloe, 1995). Global competition, the new international division of labor and the tertiarisation of the economy have resulted in the increase of unemployment among the lower-skilled workers in several European advanced capitalist economies. The distribution of the aftermaths, however, has been uneven for both parts of the population, social classes and in areas (Forrest and Murie, 1983; Ball, 1983), with the regions dependent on manufacturing facing a "decline". As it is argued, long-term unemployment have fostered income-polarization between economically active and inactive households and led to their economic and political marginalization (Forrestand Murrie, 1983). In this context an increasing, non-causal

though, correlation between income and tenure, linked either to labor structure or to consumption practices, has reflected a "polarization" between tenures and social classes (Hamnett,1984). The shrinkage of the formerly "mixed" private rental sector, the expansion of owner-occupation in size and scope and the considerable concentration of lower income groups in housing estates have been only some of the indications (Hamnett,1984). Policies played an important role in the process as well. The promotion of homeownership since the 1960's (Lee and Murie, 1999; Clapham et al., 1990), the subsequent "right to buy" policy (Kemeny, 1995; Allen 2008) and the expansion of the mortgaged markets, rendered homeownership an "attractive" as well as feasible option for middle-class households. The increasing maintenance costs-to-rent ratio in the social housing sector was coupled with an overall decreased funding directed to council housing and a shift in the system of financing, according to which subsidies were channeled to individual beneficiaries fostered the process of residualisation (Malpass and Murie, 1999; Harloe, 1995).

The expansion and the relative social diffusion of homeownership and the cross-tenure socio-economic and ethnical divisions, raised questions on whether "tenure" is a relevant analytical tool for understanding changes across parts of the housing system (Lee and Murie, 1999). This fact coupled with the persistence of "decline" and abandonment in specific geographical areas and its emergence in private sector housing (Kennan et al. 1999) have led to the adoption of "all-embracing" conceptual models on neighborhood change (van Beckhoven et al. 2005). Theoretical perspectives on "low-demand" provide a spatial understanding of the process of housing provision and focus on specific locations usually associated with "poverty" and "deprivation". Early research is influenced by the US debates on "neighborhood change" and "decline", and by the "social exclusion" policy debate in the UK (Lee, 2010; Watt and Jacobs, 2010). Recent contributions investigate micro-dynamics and the role of individual perceptions and choices in housing consumption and in the process of "decline" and redevelopment.

Hypotheses on the role of economic, social and policy restructuring remain relevant and incorporated in the analysis. Some contributions stress that the uneven distribution of housing demand across England is the projection of the long-standing regional disparities and divisions (Lee, 2010). However, they pay particular attention to the way in which these tendencies have been consolidated in inner-city neighborhoods of former industrial centers in England. As suggested, inner-city "decline" is the result of culminated events and processes. The gradual, later more rapid, "de-skilling", de-population and poverty concentration, is assumed to affect the "popularity" of inner-city neighborhoods and to lead to the stigmatization of their inhabitants. Local communities, experiencing multiple levels of distress (i.e. unemployment, low quality services, fear and crime) have often lost their sense of belonging. State-initiated decentralization (Lee and Nevin, 2003) on the one hand and delayed policy responses (Keenan et al., 1999), mismanagement of council housing or even renovation and demolitions programs (Jones and Watkins, 2009) on the other, have fueled household moving, vacancy and resulted in a generalized decline (Power, Mumford, 1999; Goodchild et al. 2002). Additional studies have considered the relationship between low-demand and changing "consumer preferences" and suggested that in order to understand the reasons behind "unpopularity" a more thorough look is needed on local experiences (Goodchild et al. 2002), individual perceptions on homeownership (Lee and Nevin, 2003), or on the meanings attributed to suburban lifestyles (i.e. safety, family and quality) (Townshend, 2006).

2.3 VACANCY AS SHRINKAGE: "DECLINE" IN GLOBAL PERSPECTIVE

Urban shrinkage, albeit its metaphorical use in former studies on "urban decline", is considered to be a relatively recent conceptualization of disruptions in the urbanization process linked to demographic and economic shifts. More precisely, the analysis on "urban shrinkage" concerns a macro-scale view on urban development process and explains spatial transformation as the interplay between demographic and economic drivers examined, in most of the cases, through the prism of globalization. The term "shrinking cities" refers to cities or urban agglomerations experiencing important population losses due to structural economic changes, political and rarely environmental crisis and as a phenomenon has often been associated with processes of deindustrialization, economic restructuring, suburbanization and urban sprawl, with demographic change being the main driver or the most prominent aftermath (Haase et al., 2016; Turok and Mykhenko, 2006). These urban transformations have been long-researched in the North-American context since the 1970's and in (Easter)Europe mainly after the 1990's. Nevertheless, there is no consensus about whether "urban shrinkage" addresses a new condition or constitutes a re-conceptualization attempt.

The theoretical and conceptual underpinnings of "urban shrinkage" can be found in literature about urban change with more recent contributions claiming to offer an alternative view on "urban decline". In recent years, a number of writers questioned the main assumptions of cyclical development theories, such as the staged nature of urban development and the "inevitable" succession of "decline" by redevelopment (i.e. see Friedrichs, 1993), while proposing that shrinkage is a long-term component of urban development (Fol and Cunningham-Sabot, 2010). Growth and decline are seen as structural and relational components of urban development that in the context of globalization evolve simultaneously (Bontje and Musterd, 2012). This asymmetrical relation between locations of growth and shrinkage has been explained as the spatialization of processes linked to the expansion, reproduction and crisis of capital accumulation in and through space (Harvey, 1982; Harvey, 2001) which, among others, consolidate in the spatial and functional re-organization of production globally (Massey, 1994) and has numerous consequences for local economic and social dynamics in several old industrial economies.

In a similar vein, the development of "global cities" (Sassen, 1991), characterized by the spatial concentration of financial-service businesses, information and communication networks and an advantaged location in terms of infrastructure, institutional development, economic and cultural production (Scott, 2008), evolves in parallel with the expansion of "shrinking cities", which face difficulties while adapting to the post-Fordist condition (Bontje and Musterd, 2012; Wiechmann, Pallagst, 2012) or coping with international competition for investment. Although these relations are fairly unexplored empirically, researchers argue that the level of integration of localities to global networks and their ability to attract capital and labor, is the key for understanding growth and shrinkage patterns at a global scale (Cunningham-Sabot et al. 2014).

Apart from the interactions of capital and labor flows in the context of global economy, demographic change and population decline in Europe has been associated with low fertility rates and population ageing. Long-term change in population structure is considered a driver of shrinkage as well, with numerous effects on the households' structure (i.e. size, number) and on the labor force (Haase et al. 2016). Research suggests that demographic shrinkage, although in place since the 1960's, has been further intensified by structural economic and political changes (i.e. post-socialist state) and the subsequent out-migration, having cumulative effects on local economy and taxation revenues, housing markets, public service delivery and physical manifestations with housing vacancy being a "typical" indicator (Wiechmann and Pallagst, 2012). Nevertheless, micro-scale or rather contextual housing-related issues such as housing vacancy, apart from some relevant contributions (i.e. Haase et al. 2016; Couch and Cocks,2013; Häußermann and Glock, 2004) have been rarely examined in depth, probably because of the general focus on the macro-scale causalities of shrinkage.

3 DISCIPLINARY LIMITATIONS IN COMPARATIVE PERSPECTIVE

3.1 OBJECT OF STUDY AND DISCIPLINARY BOUNDARIES

The main difference between the conceptual frameworks and theoretical underpinnings analyzed above is the way in which the core object of study is defined. Although all three address a certain, short-or long-term, housing-related process or transformation with social and spatial impacts, the main focus as well as the lenses through which this change is explained may differ. Filtering and vacancy chain models, being primarily concepts of housing economics, conceptualize moves and transactions in the housing markets, while "residualisation" with a strong influence on political-economic approaches, investigates shifts in class structure and divisions in relation to changing institutional forms and meanings (i.e. property or state). On the contrary, "low-demand", with links to sociological traditions, investigates the nexus between preference, place and community and "urban shrinkage", a more recent conceptualization with roots in the fields of geography, regional science and urban planning, searches for universal (spatial) patterns concerning the way in which globalization forces interact with demographic and capital flows and impact on territories. Despite the fact that common intellectual developments, philosophical and social theory influences can be identified (i.e. global-local debate or post-modern views on individuality), or common theoretical understandings (i.e. theories of cyclical development, theory of "spatial fix") each of these frameworks is to a certain extent limited by disciplinary lenses. In the following part, main assumptions and common points between theoretical frameworks will be critically analyzed. Special attention is paid to

socio-spatial considerations, multi-scalar dependencies and collective / individual actors' roles in the framing of each concept.

3.2 SOCIAL, SPATIAL PHENOMENA AND SCALAR RELATIONS

Key distinctions between the three analyzed frameworks lie in the ways in which vacancy is explained in social or spatial terms, with priority given to economic, social or cultural aspects and in the ways scale is conceptualized. Housing economics investigation of filtering and vacancy chains focus on market spaces and instead of relations, investigates "positions" of actors and assets in the housing market. The phenomena are described in economic terms while space-related aspects are limited to spatial attributes (i.e. "spatial fixity", "durability" and "location"). The necessary simplifications implied by econometric modeling, and the nature of quantitative methods (i.e. data limitations), restrict the complex spatial and cross-scalar considerations and discard the social reality, political and institutional conjunctures in and through which housing markets operate. In this regard, instead of using space to explain economic processes, filtering use spatial characteristics and boundaries (i.e. administrative) to rationalize dynamics, which may operate beyond the confined metropolitan limits.

Although the systemic understanding of social change provided by the analysis of residualisation, relations between macro political-economic processes and socio-spatial configurations are not always strong. More specifically, "tenure" as an analytical tool might provide an aggregated understanding of complex patterns of social change, thus causalities between class and tenure restructuring can be misleading (Somerville, 1991). Furthermore, the notion of tenure does not involve per se spatial considerations, while it refers to specific material settings (i.e. council estates). Socio-spatial patterns of housing provision in residualization debate are not always central in the residualization debate. In this sense, a scale-gap can be found between macro-level explanations (i.e. national / regional) and the micro-level considerations focusing on the physical characteristics of council estates (i.e. condition, typology, morphology etc). Similar issues can be identified in the analysis of "low demand". In this case, a more elaborated area-specific framework of analysis provides insights on the ways in which communities, neighborhoods and individual perspectives and cultures interact with economic and political changes operating outside the neighborhood. Nevertheless, structural changes are usually a background since cross-scalar links between regional disparities and "neighborhood decline" are often assumed.

Urban shrinkage is problematized primarily as a spatial phenomenon. Its explanation, linking global economic networks to local effects, such as population loss, is supposed to offer a "relational" and scalar understanding of growth and decline in urban agglomerations (i.e. Martinez-Fernandez et al., 2012). As suggested, the reasons that part of the empirical research conducted have not traced the manner in which specific macro-scale dynamics relate to context-dependent aftermaths might be linked to the centrality of demographic / quantitative view, as well as to the rather generic operational definitions of the "shrinkage" issue (Bernt, 2015). As shown by Haase et al. (2016), housing vacancy is considered to be a "typical" aftermath of shrinkage, nevertheless it might have various explanations and relevance in each context undergoing demographic decline. Considering that the macro-scale dynamics of capitalist development impact on the socio-spatial forms and territorial divisions (Soja, 2000), the examination of shrinkage and growth beyond the dualisms of urban-suburban or beyond urban agglomerations, may reveal different facets of this transformation, and might explain the phenomena as a change in the pace or the socio-spatial organization of the urbanization process.

3.3 BUILT ENVIRONMENT & THE "NEIGHBORHOOD COMPONENT"

Although the units of analysis or the spatial focus of each of the concepts may differ between cases and perspectives, the role of the physical settings in which these transformations occur and the centrality of the "neighborhood" in the analysis have been considerably debated. Analytical frameworks investigating structural social changes or city-wide dynamics, providing a systemic understanding of urban change, pay little attention to the effects that physical environment or neighborhoods' material structures may have on this process, while concepts with stronger links to the sociological perspectives consider that a neighborhood is the meeting point between macro-and micro-scale socio¬economic dynamics and is, therefore, the key for understanding urban transformation.

In the case of filtering, albeit the quantitative focus and the non-spatial understanding of housing market mechanisms, some research takes into consideration the spatial aspects and blueprints of filtering processes (Baer, Williamson, 1988). More specifically, spatial aspects of vacancy and urban abandonment are addressed as neighborhood phenomena (Arsen,1992). Research exploring the nexus between household mobility and neighborhood change, suggest that instead of dwellings' characteristics, demand is affected by the "quality" and structure of neighborhoods (Leven et al. 1976; Grigsby, 1963), while determining probabilities of filtering (Sommerville and Holmes, 2001). In the same vein, housing abandonment is interrelated with neighborhood socio-economic, ethnical composition and the pace of change, with factors such as racial composition, income levels, social status, levels of ethnical segregation being crucial for identifying probability of abandonment and explaining its clustering (Sternlieb et al., 1974). . Most of these contributions, based on urban ecological premises, give importance more to the ways in which the social and physical structure of neighborhoods affect household mobility and vacancy, and to a lesser extent on where filtering occurs and why, tracing, sometimes, questionable assumptions on households behaviors (i.e. the tendency of households to choose neighborhood in the basis of social or ethnical homogeneity).

In tenure residualization and low-demand research there is no agreement on links between physical characteristics and vacancy and the possible neighborhood effects in the process. Certain scholars suggest that poor dwelling conditions are the key for the depopulation of council estates, since they have direct impacts on the popularity of housing (Praak and Priemus, 1983 in van Beckhoven, et al. 2005). Other perspectives thoug , find no causal links between the two processes (Power and Mumford, 1999; Kennan, et al., 1999; Bramley and Pawson, 2001). The neighborhood component, albeit non-existent in studies of tenure residualization, is considered to be crucial for the explanation of low-demand dynamics, according to which there are explicit and sometimes causal links between housing demand, high vacancy levels and inner-city neighborhood abandonment (see Keenan et al. 1999 and Goodchild et al. 2000). Drawing on sociological traditions, explanations of changing housing demand suggest that housing "unpopularity" and the de¬densification of neighborhoods of economic and social activities are interrelated and lead to the disruption of the community. The so called "vicious cycle of decline", manifested in neighborhoods, runs along with the growing households' dissatisfaction leading to neighborhood depopulation (Keenan et al., 1999; Bramley and Pawson, 2001).

In the literature on "shrinking cities", the role of the physical environment in the process of shrinkage is introduced only at the more specific analysis at the local scale. The aim is the examination of the physical manifestations of shrinkage (i.e. housing vacancy), yet no causalities between the process of shrinkage and typological/morphological characteristics of the housing stock, are found. Material aspects are used to explain the reason that in the context of generalized shrinkage, sub-areas of urban agglomeration follow different trajectories in the vacancy process (Hausermann and Glock, 2004). As mentioned, urban shrinkage analysis pays attention to the impacts of global and regional dynamics on urban agglomerations. Nonetheless, the "multi-dimensionality" proposed in theory is not always present in empirical research, since in-depth specific relations between global tendencies and neighborhood dynamics are not demonstrated (Bernt, 2015). The variegated forms of growth-shrinkage relations are examined either in terms of various urban forms (i.e. inner city or suburban locations) or in terms of hierarchies between cities (i.e. capital or second cities), or else in different contexts and rarely between neighborhoods. Empirical investigations, however, use the neighborhood space as an analytical tool in order to understand spatio-temporal juxtapositions of economic, demographic tendencies in situ (Haase et al, 2014). Nevertheless, the centrality of the neighborhood component in the urban shrinkage framework depends more on the context or the scale of analysis the former knowledge and less on disciplinary limitations (see Bentley et al., 2016 or Hackworth, 2015)

3.4 STRUCTURAL OR ACTOR-CENTERED DRIVERS OF CHANGE.

Collective and individual actors' roles identified in three conceptual frameworks, depend primarily on the approach adopted. Although both structure and actor-centered approaches can be found in each conceptual framework, the over-representation of the one or the other approach relates to the disciplinary scope and the way in which the "problem" is defined.

The role of individual behaviors and choices are considered important for the explanation of housing vacancy in neighborhood studies with this perspective being adopted, albeit in different ways, by filtering

and low-demand hypothesis. Filtering models, echoing premises of rational choice theory, assume that aggregate social behavior results from the behavior of individual consumers seeking to maximize their utility or profit. In many filtering and vacancy chain models, individual household decisions to move in order to improve living standards, change "lifestyles" or to seek for "newness" and neighborhood "homogeneity" (Galster, 2001), are considered the driving force of the whole process, therefore the ones shaping residential mobility patterns. Distortions in the process of housing allocation, which may result in long-term vacancy and abandonment are usually explained by research as a result of (aggregated) landlords' decision to disinvest (Sternlieb et al., 1974), while in other cases the result of state intervention in the housing market (i.e. taxation, see White,1971). Furthermore, collective private actors such as real estate agents or developers involved in housing supply are conceptualized as passive followers of housing demand (White, 1971), which in fact has been contested by studies about real estate speculation (Smith,1979; Aalbers, 2006).

According to the changing demand hypothesis, housing vacancy is the result of rising "unpopularity" of specific areas or types of housing schemes. The debate focuses mostly on community responses to changes and on individual preferences, assuming that choices constitute the driver of neighborhood chance. Individual actors' "aspirations", tastes, perceptions of specific "unpopular" areas are not embedded in a social/class/ethnical structures' or discourse analysis, which could provide more insights on the manner in which "positions", "behaviors" and symbolic meanings are shaped beyond consumer preferences. Similar and rather undermined simplifications can be found considering the links drawn between spatial concentration of actors with similar "situations" and problems, the rise of anti-social behavior and disruption of community bonds that foster "flight". Although the term "popularity" is strongly interconnected with individual "tastes" and preferences, some research attempt to explain relationships between individual and collective actors' practices, while combining aspects borrowed from institutional and sub-cultural approaches to explain neighborhood change (i.e. Power and Mumford, 1999). Nonetheless, both filtering and low demand hypothesis frame residential mobility in terms of "choice", thus failing to recognize that the spatial concentration of "poverty" and spatial "entrapment", as well as households' "exclusion", might be linked to the limited accessibility or feasible housing options and highlight structural forms of discrimination.

Although considerations regarding the changing institutional and policy roles have been relevant for the analysis of low-demand housing, stronger influences of political-economic perspectives can be found in "residualization" and to a certain extent in the literature on "urban shrinkage". A considerable amount of contributions on "tenure residualization" analyze links between changing social configurations and the housing system. More specifically, they investigate impacts of social, political-economic processes in labor relations, class formation, state policies, housing provision or consumption patterns. Tenure-class interdependencies have been widely debated, yet their mutual or causal relationships have not been proved (i.e. see Saunders,1984). Some research suggest that tenure residualization reflects the impact economic restructuring policies had on working class fragmentation and political disempowerment (Forrest and Murie, 1984). Others suggest that the declining "successful" class-based housing struggles might highlight the "political decline of the working class" (Savage, 2000 as cited in Somerville, 2005 p.113). From a housing system-welfare state transformation perspective, scholars suggest that tenure residualization constitutes a result of state value-laden responses to the process of "maturation", and involves a set of specific policy decisions (i.e. state-controlled non-profit sector, minimization of state subsidies, promotion of homeownership) (Kemeny, 1995). Not-profit housing, limited to low-income households' needs, is isolated from competition with commercial housing sectors, thus the formation of two polarized and disconnected tenure systems limits the possibilities for dumping rents in both sectors (Kemeny, 1995; Lennarz, 2013). Yet other, more determining views consider housing a "capitalist commodity" and suggest that shifts from residualist to mass housing models and vice versa, correspond to "normal" and "abnormal" phases of capitalist development (Harloe, 1995), disregarding the role of individual actors in the process.

Theories supporting the "urban shrinkage" concept are also influenced by political-economic theorizations. In this perspective, shrinkage is seen as part of the structural change of capitalist development with specific socio-spatial configurations in built environment. Despite the analysis of the drivers of change in a global context, the path through which shrinkage is analyzed at the local scale remains unclear and rather general, since pre-existing local or regional asymmetries, institutional and legal changes, specific private interests in situ as well as the ideological framework in which policies leading to shrinkage have been justified, are in certain cases not extensively explained. Thus, a specific pattern of global tendencies (i.e.

industrial restructuring, suburbanization etc.) seem to be translated in the same way in each case (i.e. see Weichmann and Pallagst, 2012). These simplifications and argumentation gaps might be rather symptomatic of the attempt to fit all "urban shrinkage" specificities under a unitary framework that explains a "global phenomenon" (Pallagstet al., 2014).

4 CONCLUSIONS AND DISCUSSION

The comparative analysis of the concepts reveals that housing vacancy might originate from rather different urban processes and be explored by various disciplinary perspectives. Some of the concepts analyzed share common points and influences, while having important differences. The critical review of certain important aspects such as spatial, scalar and actors' considerations revealed the over-sighted factors, the assumptions and the contradictions between the concepts. In this sense, it demonstrated that disciplinary lenses might limit the scope of explanations of rather complex phenomena, while highlighting on the other hand that similar overall tendencies might not impact in the same way each context.

The issue of vacancy seen as a spatial manifestation of economic, demographic and social change, is a measurable indicator of change in "taste" and "preference", a result of institutional failure, a natural market process, a societal necessity or even a driver of further "decline". Understood as problematic or as natural, housing vacancy is seen as the result of a dynamic and sometimes contradictory relation between fixity and motion (Harvey, 2014), places and flows (Castells,1996), indivisibility of supply and heterogeneity of demand (Arnott, 1989), place-bounded meanings and individual aspirations. In this regard, it is considered to be framed through the interaction between social practices and material settings. However, the review revealed that when social or spatial components or their interrelations are missing, explanations seem to be shaped in a "void" (Madanipour, 2013). This is quite obvious for instance in the ways in which residential preferences is conceptualized in some of the theories. Choice seen solely as driver of residential and neighborhood change without reflections on the its relation to existing resources or on the contextual or societal conditions under which these preferences emerged, explanations tend to be incomplete.

Regarding the scalar interrelations, apart from filtering models, all concepts explore the causes and consequences of vacancy in different spatial scales without clear links between spatial, economic and political scales at all times. Considering the way in which research on urban shrinkage, and to a lesser extent on residualization, have analyzed the impact of globalization on local physical "decline", it could be argued that observations at a global scale might indicate tendencies, yet cannot explain in itself the conditions and processes under which capital and people fled from a specific urban context. At the same time, global restructuring cannot be translated in the same way in Detroit and Liverpool, although both cities have been affected by deindustrialization processes. Instead, the examination of these global dynamics at a local scale can only be meaningful when contextual specificities and historical developments are embedded in the analysis.

With regard to the methodological aspects of scale selection, each research prioritizes one spatial unit and timeframe, in which the phenomena are observed, measured and explained. A number of empirical studies, irrespective of the different disciplinary focus, examine housing vacancy at the scale of neighborhood. Neighborhood as a socio-spatial entity, albeit the ambivalence and diversity of definitions (see. Galster, 2012), and its changing meanings still comprises some of its "traditional functions" and constitutes a site in which social interaction, routines, everyday life practices and experiences can be studied (Forrest, 2004). However, the scale of the investigation depends not only on where the phenomena occur, but on the type of interrelations researched each time, as well. Therefore, even if we consider housing vacancy a neighborhood phenomenon, a multi-scale testing might be necessary in order to understand whether observations and conclusions are consistent when examined at different scales (Andersson and Musterd, 2010, p. 25).

Explanations of housing vacancy mechanisms prioritize economic over other kind of drivers of urban transformation. Either as the output of flawless markets' and consumers' logic or as an aftermath of capitalism inner logic, vacancy is often explained on the basis of economic rationality of the markets, state or individuals. This perspective is not problematic per se, but it might be misleading especially when individual and collective actors' roles and agency is seen as a minor aspect of the urban transformation process. Vacancy seen as part of filtering is explained as a "natural" housing market process and as

process detached from the agents and structures producing it. In this respect, vacancy is considered problematic only when it leads to extensive property devaluation with impacts for owners and markets. Similarly, when vacancy is explained as low-demand, it is more likely associated with "supply-demand" schemes in housing economics, than with the complex relations between poverty, space and place, which it actually refers to. In this perspective, vacancy takes a neutral meaning and housing is perceived as a consumption-driven process. Vacancy seen as part of tenure residualization process, is explained in wider economic terms with the difference that its implications are considered to be problematic. The "problem" is confined to a specific tenure and a segment of the working class and therefore the housing process is explained as the struggle between capitalist abstract logics and aggregated and predetermined social categories. Shrinkage, although potentially referring to a structural urban change in the context of global capitalism, is a relatively "neutral" term (Oswald, 2005). However, when shrinkage is rather explained as a (new) normality of urbanization under global capitalism, growth-shrinkage relations seen as "natural" and in this sense they are depoliticized.

The critical analysis of three commonly used concepts is an attempt to demonstrate the great variety of approaches that can contribute to the understanding of the drivers and the possible reasons behind housing vacancy phenomena. Deciphering the disciplinary origins of each concept is important in order to understand whether an issue, appearing similar at first glance, is actually referring to similar processes and whether it has similar meanings. Furthermore, looking at the concepts' disciplinary premises, in a dialectic manner the conceptual gaps, their similarities as well as limitations are better revealed. This might need be faced when trying to work on disciplinary boundaries, and to combine in a sophisticated way ideas and methodologies. Lastly, the various meanings and terminologies might be relevant for conceptualizing the overall patterns in each case, while potentially having several implications on the way the specific phenomenon is problematized, whom does it affect and in what way it is going to be addressed by policies.

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ID 1432 | THE REUSE OF ABANDONED PUBLIC BUILDINGS: AN ANSWER TO HOUSING CRISES? AN INVESTIGATION ON THE CITY OF ROME

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ABSTRACT: The recent financial crisis had a strong impact on housing affordability. To the European Observatory on Homelessness the number of homeless has increased in all countries along the last ten years (Housing Europe, 2015). The current Europe refugee crisis is feeding this population, making proper policies more complex and urgent. Regrettably, the public support for housing in EU has decreased along the last ten years. In metropolitan areas’ peripheries, where there is a default in infrastructures and services, new residential buildings have been built. The Italian capital city well epitomizes this national framework. Between 2012 and 2015 Rome has consumed 160 ha. In this context, squatting has been often the only one solution for people who is waiting for a public house. Along these years, the movements for the housing right supported many people to have a quality dwelling. The research explored the re-use of public abandoned buildings as a possible solution for housing crisis investigating the case of the so called “Casilino 900” camp and of Roma people living there. Can the self-help housing for abandoned public buildings respond to the increasing housing demand? Employing municipal data on state-owned buildings, the paper proposes in its results a housing capacity map. The map shows the empty public properties in the city of Rome and identifies for each building its housing capacity. In the conclusions, considerations from the case study are drawn considering the broader national situation on re-use for housing of abandoned public space.

KEYWORD: housing crisis, public building, re-use, Roma population

1. BACKGROUND

1.1 HOUSING POLICY AND HOUSING DEMAND IN ITALY: FOCUS ON THE CAPITAL CITY

In Italy 650.000 families are waiting for public housing (Federcasa, 2015). According to governmental data, eviction notices increased 48% between 2008 and 2015. The public housing stock (ex IACP) was partially sold or need to be refurbished. A critical lack of affordable houses does exist. Yet, due to the financial crisis, they are generally empty. Regrettably, the public support for housing in EU has decreased along the last ten years, from 1.1% of GDP in 2003 to 0.8% in 2012 (Pittini, Ghekière, Dijol, & Kiss, 2015). In Italy,

the public fund for social housing (GESCAL) was abolished and a lack in policies followed during the 1990s. To face the housing demand and the shortage in the investments, private funds have been introduced and a part of public stock have been sold.

Today housing policies in Italy are regulated by the “Housing Plan” (art. 11 D.L. 112/2008) and the management passed from the state to the municipal level. Social housing is considered today as a system of solutions for the welfare, so, differently from the traditional ERP (Edilizia Residenziale Pubblica) it is part of economic strategies and, thus, urban transformation programs. The National Plan for Housing Policies (Presidenza- Consiglio-dei-Ministri, 2009) expects to increment the public stock and to refurbish the existing one, and supports housing cooperatives formed by final residents of the public houses.

In the city of Rome, where is registered the highest housing demand in Italy, the “Housing Plan”, approved in 2010, expects to build 6.000 public housing (traditional ERP with public investments) and 20.000 social housing (public-private funds). The program is based on a demand for the weak segment of city population of 52.800 housing in 2009 (CRESME, 2009) and, considering city administration contributions, can afford 25.700 of the actual demand.

According to Legambiente, one of the most active environmentalist association in Italy, the Housing Plan will increase the current land-use surface in Rome with 40 million cubic meters, producing a land consumption equal to 9700 hectares (Bianchi & Zanchini, 2011). The construction of social housing on the outskirts aggravates the expulsion process of a large population that is unable to support rents in the gentrified city that has about 245.142 empty apartments (Ibid.).

In this framework of new buildings and empty rooms, the indebted Municipality has implemented a twofold policy strategy. On the one hand, it sold the vast public assets, including ERP properties, and, on the other, purchased or leased areas for public services. In addition to the purchase of areas for social housing, the Municipality rents apartments in residences whose rent value range from 2140 to 4200 euros/month to host family in housing emergency (21 Luglio, 2011). Beyond these costs, which are part of municipal public spending, there is the expense for the rent and the management of nomad camps (around 16 million euros / year according to data in 2011 by the association “21 Luglio”).

Meanwhile, in Rome, due to the ban on lists for public housing, the movements for the right to home and the citizens with difficulties in finding a dwelling moved on their own occupying empty buildings. According to interviewees listened in this research and as confirmed in municipality official website[1] (Comune-di-Roma, 2011), municipal administration acknowledges that occupations in some cases really helped housing emergency and so had to regulate these processes . According to a specific regional policy, based on self-help housing regional law (Lazio, 1998), eleven abandoned buildings in the city of Rome have already been refurbished and occupied. This law states that, if the Municipality supports the most of refurbishment costs (i.e. facade and structure), low-income people waiting for housing can take part to the public announcement for the rehabilitation of empty buildings, joining a housing cooperative.

1.2 ABANDONED PUBLIC SPACE AND THE GOVERNMENTAL INTERVENTION

The deindustrialization processes, began in the second half of the last century, have left abandoned and nonfunctional pieces of city. With the recent economic crisis, the need to regenerate and reactivate existing assets "in a medium to long-term perspective, safeguarding the environment, landscape and limiting agricultural land consumption as a key to sustainable development has become evident" (Arcidiacono, Bruzzese, Gaeta, & Pogiani, 2015).

That of urban voids (open spaces and unused buildings) is a phenomenon that has different origins and shapes. On the one hand, the great abandonment of industrial buildings that began at the end of the last century, linked to the decline of the Fordist production system, affirms the end of the urban growth of some contexts (shrinking cities) in parallel to the growing phenomenon of the megalopolis (Oswalt, 2006). On the other hand, the disposal of large urban infrastructures become obsolete, as some railways stations4. Another issue is that of unused large public structures such as barracks, convents, ex mental hospitals

[1] Interview with the representative of movement BPM. See Section 2 for details.

(abolished by a national law in Italy). Finally, there are all those abandoned private spaces that, due to the economic crisis, have lost their function.

To valorize public properties, the Italian government introduced a federalism program for public properties, and it is known as Federalismo Demaniale. It refers to barracks, villas, historic buildings that, the government transfer to local public administration to sold and cover the public debt (Presidente-della-Repubblica, 2010). Many of these spaces have been transferred from the state to the municipalities, worsening the economic and management constraints of local administrations. This valorization policy was carried out based on the housing offer, and on the belief that the real estate is coming into crisis and has been no longer able to adequately respond to demand as in the past, mainly due to the shortage of economic resources. As a result of such a policy orientation and as a prove of such a real estate crisis, there is a large amount of unsold assets and stalled real estate transactions (Mangialardo & Micelli, 2017).

If, on the one hand, there is an immobile real estate market, on the other hand, the crisis has produced innovative and different bottom-up experiences of re-use of abandoned spaces.

An example is the temporary re-use of spaces by the so-called creative class that has occupied abandoned buildings to organize artistic, cultural or social activity for a short period of time. Such experiences, which have been implemented in several European cities in the end of last century, have revealed new political instruments of negotiation between administration and active citizens (Inti & Ingaggiato, 2011).

Other contributions to the recovery of abandoned property are related to housing occupations, as the experiences in Rome that occurred in the last decade through the work of the three main groups for the housing right (BPM, Action, Coordinamento cittadino di lotta per la casa). If squatting until the 1970s and 1980s had a political aim, those of the last thirty years have been driven, above all, by the need to find an alternative housing solution and to fill in the lack in housing policies. In the capital city, many of these occupations have been approved by the Municipality because they contribute to solve housing emergencies[1]. From the point of view of public intervention in the process of recovering abandoned buildings, beyond the urban regeneration policies there are different experiences of relationships between administrations and active citizenship. In Milan, the Municipality generally acts with public-private funding partnership to elaborate projects for the re-activation and re-use of vacant buildings (i.e. BASE)[2], for the third sector and the creative class, to support innovation experiences[3].

The city of Turin, that for its industrial productive vocation has been interested, more than other Italian cities, by the industrial decline of the 1990s, historically moved towards urban recovery and programs for citizen participation and social interest (for instance, AxTO, Case del Quartiere)[4].

In Naples, the current municipal administration has shown an ideal engagement with ‘commons’ issue by establishing a public campaign on this issue and a proper municipal secretary (Secretary on right to the city, urban policies, landscape and commons). Within this space of public debate, the Municipal administration conveyed in a resolution that last year recognized seven 'free’ municipal buildings (as the promoters of those initiatives use to define the processes), previously occupied, as strategic commons for citizenship and 'civic development environments’ (Comune-di-Napoli, 2016). Being formally acknowledged as space of public and cultural relevance within a municipal administration legal act (a resolution of municipal council[5]), they will be ideally protected from future eviction.

[1] In an interview for this research a member of BPM group explains that the recent occupations in Rome have no more a temporary character as in the past. It is supposed to be that the inhabitants will stay longer, thus, the recovery operations have more quality, and care about energy saving too.

[2] BASE is a cultural innovation project in Milan. It is a 6.000 sq. mt. space based that host co-working, workshops, shows and artistic performances.

[3] Public lesson by Carlo Calvaresi, 2017, Innovazione e rigenerazione urbana a Milano. Da BASE a molto altro, University of Naples.

[4] “AxTO” is a public program by Turin Municipality for the regeneration of peripheries according to public spaces, housing, school, job and community. “Case del Quartiere” is a network of neighborhood places where different activities for the community take place.

[5] The resolution is DGC 27/05/2016 n.446

In Italy, where soil consumption is still very high, i.e. 8 m2 / second in the last 50 years (ISPRA, 2016), urban regeneration is today the most pursued policy to safe economic and environmental resources. Moreover, cities can count on a more active and conscious population about urban issues.

2. THE CASE STUDY

2.1 HOUSING POLICIES FOR ROMA POPULATION IN ITALY AND IN THE CITY OF ROME

The present research focused on the Roma population that never had easy access to a stable housing. In Italy, in fact, the gypsy host request has always been solved through the 'camp policies', i.e., urban areas, commonly located in the city fringes or peripheries, formally delimitated and conceded or abusively occupied, where Roma people are precariously settled, living in caravans or shacks. This kind of response arises from the incorrect assumption that all Roma are nomads and they base their living culture in the camps.

These ideas are based in a mentality developed during the second half of the 1980s, when the first Regional Law (R.L.), N.82 of 24-5-1985 (Norm in favor of Roma people) was enacted (Lazio, 1985). The R.L. 82/1985 recognizes and protects the practice of nomadism associating it, though, to the whole Roma population. These measures have been efficient for the most part of Sinti and Roma population, mainly composed of nomad people living in Italy with difficulty in parking (since they were moving by caravans) and staying legally for a period in a public area. Today, however, at least 2/3 of the Roma population is sedentary and lives in houses. Some Italian Regions, as Tuscany and Emilia Romagna, established a local legislation which adopt and broaden the principles of the R.L. 82/1985 already in the 1990s (Lazio, 1985). As a matter of fact, since the 90s, a large Roma migratory wave occurred, due to refugees from the wars in Ex-Yugoslavia countries.

The temporary camps hosted refugees and the minimum living standards established by laws were no more applied due to the emergency to accommodate migrants.

In 2008 after the further migration from Romania (which joined the European Union in 2007), the Italian Government conferred to the Prefects of Rome, Milan and Naples (cities that host the largest number of Roma people), and then, Turin and Venice, extraordinary powers to solve the housing problem of Roma, and the situation of "Emergency" was acknowledged and declared.

Once again, the identified policy solution was the camp: a temporary answer before the housing inclusion, according to the declarations of municipal administration , which became permanent[1]. Anyhow, beyond the limits of political commitment with the issue of integration, the myopia of adopted policies and the economic barriers to access the Rome formal housing market, the issues of affordable housing for Roma people still confronts a major problem of social acceptability. Without a decisive political intervention to abolishing discriminations and to promoting the cultural integration of Roma people, this community, commonly labelled as a social problem and associated with micro-crimes and high urban violence, have poor chance to rent a house outside the camp. There are, in fact, many different hindering factors that get Roma housing inclusion, harder than that of other citizens. First, the common preconception, that prevents, in most cases, the simple request to rent a house. Second, the difficult to progress in the rankings to access to a public house for which, one of the requirements, is to have suffered an eviction, a condition in which most of Roma has never been, as they always lived in camps in Italy (and not in a formal house). Another hindering factor is that the political decision related to the location of a camp follows the real estate market and the profitability criteria linked to the rent of the area. It is necessary to free that area from a camp to raise its value. Conversely, if a land is not attractive for the real estate, it is more interesting to start an urbanization process building a new camp. There is, finally, a business barrier that involves the so-called nomad "equipped" camps[2], linked to the land and infrastructures costs, as well

[1] This view has clearly emerged from the surveys of ethnographic work, both in communal documents and in articles produced by various field research.

[2] Equipped camps represent the answer of Rome Municipal Government to Roma people informal settlement. As alternative to the informal camps, the Municipality provides regular "equipped" camps that consist in private area where Roma families live in small modular containers. Conversely to the informal settlements, all the equipped camps are located outside the ring road which bypass city-center around Rome (Grande Raccordo Anulare - GRA)

as to the public funds for the associations involved. This factor is also related to another issue: the low claims of Italian government to the European funds for Roma Emergency (Italy had requested 1 million euro of EU funds in 2011 whereas Spain, which requested 62 million euro). In the city of Rome, when the "Nomads Plan", the main tool of municipal policy on Rom issue, was presented in 2008, there were at least one hundred camps: "equipped" camps (so-called "solidarity villages") with video surveillance and managed by non-Roma organizations; ancient partially-equipped camps, where often some services were provided; and, finally, informal settlements frequently evacuated and reformed in more invisible areas of the city (Romito, 2008).

The aim of the "Nomads Plan" was to host a maximum of 6000 Roma within 13 camps equipped in the capital territory (outside the ring of the so-called Gran Raccordo Anulare, whose acronym is GRA, the ring road which bypass city-center around Rome), for a total cost of 32 million euros, from the Roma emergency fund. The plan was based on the data collected by a census carried out by the Italian Red Cross in 2008, which reports: 2700 people in the fourteen "tolerated" camps, 2200 in over eighty abusive settlements and 2241 in the seven authorized villages. About 100 settlements for 7200 people.

2.2 THE CASILINO 900 : FROM THE INFORMAL SETTLEMENT TO THE EQUIPPED CAMP

The study focused on the real experience of a Kosovo community currently living in a last generation camp in the Rome suburb. The research has been structured as a story of transition from the slum, "Casilino 900", where the community lived up to the settlement demolition, to the "equipped camp". The failure of both housing solutions, one informal, the other regular, has prompted the community to organize themselves and move out of the camp to claim the right to housing.

"Casilino 900" was one of the most ancient informal settlement in the city of Rome. From the 1960s to the 1980s it hosted Italian southern migrants that arrived in the capital for job. Around the end of the 1960s the first Roma groups occupied the camp. Then, as an effect of wars in the Balkans, many refugees arrived. In 2000, around 703 people from Bosnia, Kosovo, Montenegro, Serbia, Macedonia, Poland, other regions of ex- Jugoslavia, Italy, Marocco and Czechoslovakia lived there in 150 barracks (21Luglio, 2011).

In 2008 the camp experienced several initiatives aimed at participation and integration of the inhabitants, as "Savorengo Ker" (translated from romani "the everyone home"): a self-built home realized by a group of inhabitants with the support of Università di Roma Tre and Stalker|ON. "Savorengo Ker" was built to symbolize the will of a part of Roma population to live in a house, not in containers, as housing policies always provided for them. Despite the initiatives to counteract the eviction, in February 2010 the "Casilino 900" was evacuated, according to the municipal "Nomads Plan". In around a month was completed the demolition of the barracks and the transfer of residents (618 people including 273 minors) into four new generation equipped camps outside the GRA.

The group from Kosovo was transferred to "Camping River", 30km far away from the "Casilino 900", living in containers in an area rent by the Municipality (7€/person a day). The equipped camp had one hundred height containers (14, 21, 23 sq.mt.), height bungalow and twenty-two rooms for four hundred seventeen people (107 from "Casilino 900") (Figure 1). The area is very close to the riverbank and it is reached getting a train form the city center plus a shuttle, running every hour, from the "Prima Porta" station (1€ each journey) localized 3km far away from the camp.

The regeneration of the area where the "Casilino 900" was, has never proceeded and the area has bee recently illegally occupied again.

Figure 1. The container house at Camping River. First author field-work photo

2.3 RESEARCH METHOD AND MATERIALS: THE FIELD-RESEARCH

The research was shaped by an ethnographic approach at the methodological level, accordingly, different techniques were employed to address the field research (Beaud & Weber, 2007; Gold, 1997; Olivier de Sardan, 1995). The field research last nine months and combined the following main tools for data collection: participant observation in the public assemblies organized by the Kosovo community; interviews to the actors involved, informal conversation with key informants and documental analysis/secondary source consultation (web-sites, public reports and municipal administration data). While triangulating all these different sources, a final map of the abandoned public properties in Rome was elaborated.

The assemblies were organized by the Kosovo community transferred in “Camping River” one year before in collaboration with different associations of non-Roma people (named gagé in Roma language). Meetings occurred weekly for the first four months. The group had two directions and aims: report the violation of human rights of Roma population in the capital and find a better housing solution in one of the abandoned building of the city. Through a key informant from the Kosovo Community, we could access to the “Camping River” and map it, also getting interviews with inhabitants[1].

We collected five interviews with camp inhabitants, based on a life history interview approach: three with residents from the Kosovo community that have been transferred from “Casilino 900”; one with a young guy from Romania living there and finally one with the shuttle driver who has been working for Roma equipped camps services for a long period[2].

Moreover, three interviews were realized with members of associations involved in project for alternative solutions for housing crisis and best practices in Italy: a member of “BPM” (Blocchi Precari Metropolitani), a group for the right to home in the capital; a member of “Popica Onlus", an association helping Roma population in the city of Rome; a representative from “Casa della Carità” a charity association from Milan.

Follows a section on best practices of self-help housing experiences in the city of Rome according to the Regional Law on self-help housing (L.R. 11 Dec. 1998, n.55), to explain how does it work and to carry on this as possible solution for housing crisis (Lazio, 1998).

Employing municipal data on state-owned buildings, the research proposes in its results a housing capacity map. After data collection, inspections to abandoned public properties in the city were conducted and documented by a photo archive and field-notes. This register was used to produce a housing capacity map that shows the empty public properties in the city of Rome. For each one of the considered group of buildings its housing capacity is estimated. Other properties were selected for social and public services, or appointed to be sold to finance municipal housing policy.

[1] Every equipped new generation camp is monitored. To enter it is necessary to show an ID and to inform the reason and the name of the resident visiting.

[2] The cohabitation between the Romans and Kosovars that arrived in the “Camping River” later was not pacific. The Romans did not want to be interviewed.

Finally, the map allowed to select, together with Roma community representatives, a building sample for future self-help housing activities, providing a related cost assessment. The building chosen to develop a housing project was a unused depot of the Local Transport Agency in Rome claimed by different realities in the capital.

3. FINDINGS

3.1 CONTENTS FROM THE FIELD-WORK

The ethnographic experience – visits at the camp, participation at assemblies, interviews with housing activist at national level, secondary data and document analysis -, allowed to produce information at three level: 1) housing and human condition of roman community in Rome; 2) possible political path and operative answers to housing crisis (especially in term of reuse); 3) elements for an operative solution for Roma housing problem in Rome.

As for the first point, contents came from life history interviews made with Camp dwellers as well as from the personal researcher experience of the Camp life. As a matter of fact, the visits to the Camp showed the difficulties to access it from the city-center. Starting from Flaminio metro station in Piazza del Popolo, Camping River dwellers must take a train to Prima Porta, then a bus or private Shuttle which connects directly this point to the Camp, but passes once per hour. Therefore, Village River dwellers take at least 1 hour and a half to reach the city center. Life history interviews showed all housing diseases related with the container solution and the different approach from different communitarian group. Two different communities were joined in the Camping River, the Kosovars, mainly dislocated from Casilino 900 and the Roma people, mainly arrived there after the '90 Balkans wars. Roma people just provided one short interview. In general, this community showed fear to speak about their condition, also due to the relation with local cooperative which manages their housing in the camp. Moreover, the unique interview coming from this group showed the cultural relevance of communitarian dimension for Roma people, where being close to family and its own community is a priority which lead dwellers to accept housing diseases.

> *We Romans Roma could not live alone. We are just fine when we are all together. So even when one day I get married I ought to stay in a place where my whole family is […]. It's not because we do not have the money that we remain here, but because we need so much space to live close to our families (Dimitri, Romania).*

On the contrary, Kosovar Roma community members interviewed, showed a firm will to claim for a real house. This community arrived earlier in the city and suffered previously the eviction from "Casilino 900" to "Village River". They are not nomads and suffer the camp housing condition based on 14/21 or maximum 32 sq.mt. containers.

> *We want to create a negotiation platform [with public institutions because we only want homes, not to live with two or three thousand people in a fence (Bajram, Kosovo).*

As for the second level of contents the interviews with the representatives of Blocchi Precari Metropolitani (BPM), a coordinated network of housing struggle movement, and Popica Onlus showed an increasing reality of Italian housing policy: the replacement of public government by social movements, active citizenship and so called third sector in the provision of welfare. BPM reported a long experience in urban occupation, even testifying the recent changes of the movement action responding to the changes of housing crisis and related social demand. The interviewee told how the occupation strategy changed along the last twenty years. Until the nineteens housing struggle movement pointed at empty large building, such as school, emptied by the demographic downturn. Nowadays, the BPM promote a new kind of occupation aimed not only at large spaces but also at empty apartments. Moreover, while 1970s e 1980s housing movements were born to support mostly national community (e.g., meridional immigration), the current housing struggle has a larger responsibility and need to learn to deal with a multicultural, multiethnic and even multigenerational (from the student to the old people) demand. The interviewee referred of a proper structured administration based on desks open to the public, collecting private demands on the base of a pattern form. No more public houses are going to be built, and list to popular housing are stopped since many years. This, together with new immigration waves, leads to a crisis proved in the BPM interview by the existence of lists also for occupations.

> *There are counters that address the issue of the right to housing, for example, to protect against evictions, unsecured loans. These counters come both through propaganda and word-of-mouth. One tries to understand the problem of the applicant person. You compile a chart that lets you understand the issues in terms of housing, economics or for example regarding documents in the case of immigrants. Once the problem ha been identified, we explain what our goal is: to put into motion the Municipality Housing Plan of six thousand popular houses, which has never taken off, and therefore participate in the demonstrations that push this plan. Those who live in a very delicate situation are assisted in occupations that have already begun, they decide through assemblies or ask for other movements. Occupations are decided based on a project at times they are to carry out a protest, (those of those days at the former San Paolo), sometimes to stay.*

BPM interviewee emphasized in his tale the new relief acquired from the activity of reuse of occupied space. This activity has turned fundamental especially in the case of large dismissed space occupation, i.e., the occupation of those space born for a use different from housing, such as ex-industry. From this perspective, a paradigmatic experience was that of Metropoliz LAB, where BPM member and Popica Onlus[1] cooperated.

The Metrpoliz experience concerned the occupation and reuse of an ancient bakery factory, dismissed and abandoned for twenty years. Interviewees reported how Metropoliz was a succeeded experience both on the side of cultural integration and reuse for social housing. Different cultural communities, from Latin America, eastern Europe, Northern Africa and even Italian and Roma People live there. They formed a larger community with co-habitation rules. They use local materials, still from the ancient building to build their own houses. The integration process was not an easy one, especially for Roma people who arrived later. Nonetheless, it testifies the viability of reuse and self-recovery of abandoned building as an alternative path for housing emergency. Housing emergency concerns with people in social, economic and, in some cases, political marginalized conditions. The process of occupation and reuse, guided by a partnership among different social actors, opened to member of this community a door to social inclusion. Maria di Maggio, of Popica Onlus stated:

> *The community [a specific Roma Community of the neighborhood Centocelle in Rome periphery] did not rely on the third sector, and continues to be independent. Considering the need to start a residential path, they turned to BPM, as a struggle for the home. Meetings were held and the community participated in the struggles for housing rights together with the movements*

This kind of bottom-up experiences, which occurs in the informality, with no official government recognition and legitimation, and even in the struggle, reflects a logic of integration totally absent in housing solutions such as those of equipped camp.

Finally, the third kind of contents collected during the ethnographic research concerned data about abandoned/empty public building in Rome. This information based on municipal government documents, were discussed together with Roma Kosovar communities, within assemblies in the aim to identify the ideal space for re-use and housing among those listed. Results of this part of the research are presented in the following Section.

3.2 CONTENT ANALYSIS: THE HOUSING CAPACITY MAP

Between 2008 and 2011 the city of Rome experienced three different occurrences which, somehow, provided different opportunities to rethink the re-use of public buildings: 1) the National government measure establishing the federalism of the public properties (federalismo demaniale) according to the d.lgs. 28 May 2010 n.85 (Presidente-della-Repubblica, 2010); 2) sale of National Ministry of Defense barracks; and 3) the Local Transport Agency (ATAC) financial crack.

[1] Popica Onlus is the other association interviewed which is concerned with Roma children and in general with Roma integration issue.

To reduce public debt, the Italian Government is transferring state properties (buildings and lands) to the municipalities to propose valorization projects (properties federalism). In July 2010, a list of building complexes totaling euros 3.087.612.747 was drawn up. In Rome alone within GRA ring the municipal administration acquired 19 buildings and 37 land. About half of the complexes of historic or environmental significance, others of commercial interest, can be resold to achieve the Municipality's goal of recovering the debt (the cadastral value is euros 23.803.958 according to municipal data).

Furthermore, there are all the unused military complexes, included in a fund built up in 2010, which is a result of an agreement between the Municipality and the Ministry of Defense (art. 2 comma 195 Law n. 191/2009) (Presidenza-Consiglio-dei-Ministri, 2009). At time this research was carried out, in 2011, thanks to this agreement, the Municipality planned to collect 600 million euros in properties from the Government to ease the public deficit. So far, Rome has found fifteen building complexes, including forts old buildings and barracks.

At least 8 complexes were identified to be converted into residences to cover the housing emergency in the capital. The choice of complexes is inspired by the observations made by the "Barracks Committee" (Comitato per le caserme), a civic organization made up of groups of citizens and citizen associations to claim the public use of unused military properties.

At the local level, finally, another opportunity to re-use public abandoned properties has emerged. Following the financial collapse of ATAC, the Municipality intervened for the alienation and enhancement of the company's real estate assets to reduce the debt . Currently, there are fourteen building complexes[1] that could be re-converted to new use. Height of these can be transformed, respecting the existing volume, with no variation in the Piano Regolatore Generale - PRG (Rome zoning plan). The other six complexes can be converted for a different use then service public transport, according to a local regulation of 2008 for dismissed infrastructures, that provides 50% volume building increasing.

Thus, there are forty-eight public buildings of which at least eleven can be retrieved for residential use. Those located within the GRA have been selected to recover the centrality, in opposition to the sprawl that increases land consumption and traffic to the capital, where the main services are. The rest of the properties is used for public activities. Necessary expenses for the renovation of building complexes that can respond to more than three thousand homes have been estimated. Base on the costs related to self-help housing recovery, an average spending (over excess) of € 1400/sq.mt. (to be divided between cooperatives and public authorities) was established. In addition, the partial sale of other properties has been assessed to cover the public costs for the refurbishment in lack of public funds for housing. (Figure 2)

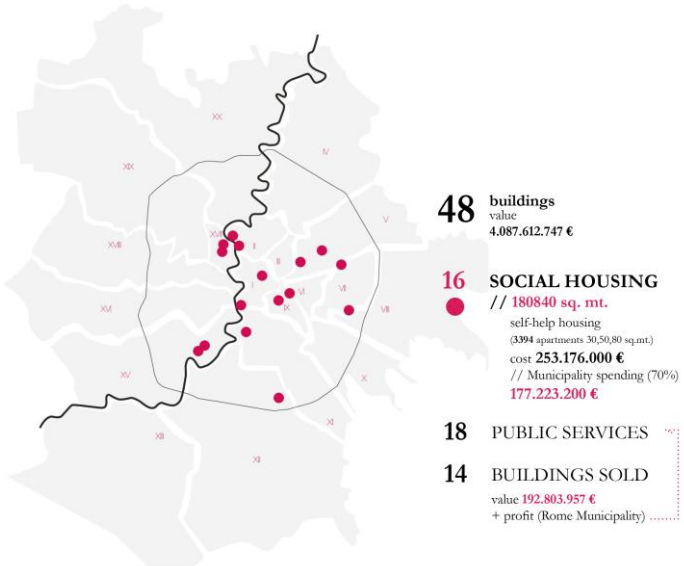

Figure 2. Housing capacity map of dismissed public buildings in the city of Rome. First author elaboration

[1] Resolution 39, June 2011 by Rome Municipality

Lastly, a self-help housing model is proposed on one of the selected complexes, occupied by the movements for the right to home: a dismiss depot of local public transport agency. The depot is in a central area of Rome, just steps from the metro and the Basilica of Saint Paul. The context is mainly residential and it is included in a urban regeneration program.

4. CONCLUSIONS

Italy has a vast abandoned real estate portfolio and a relevant number of people waiting for a house also because housing policies have been slow and myopic over the last decades and part of the public properties have been sold. This research provides evidences that the self-help housing to re-use abandoned public buildings can be a technical viable path for housing crisis and against land take. The case presented shows, above all, that main barriers are of political and administrative nature. Temporary solutions (i.e. containers and residences) for housing emergency (refugees, Roma population, people in the lists for housing) are no longer desirable, as they contributed to reducing public funds.

The experience of self-help housing in the Italian region of Lazio is an example of sustainable, (at the same time economic, environmental and social) recovering of public buildings. The regional administration covers the expenses to recover common and external parts. The occupants gather in co-operative and restructure the interior of their future homes. As a return to the society, common spaces inside the buildings are provided for social services or to host associations. In addition to building spaces, this practice builds communities through the recovery work and the common home need. As a result of the creative work of building his own home, a bond between the good and the inhabitant, and, thus, a sense of responsibility and care for that space is produced. In Rome many of these occupations have produced new centralities for the city: multiethnic places where social integration and environmental sustainability is experimented.

The theme of integration is more and more current in Europe, especially in Italy, increasingly affected by refugees migrations.

The assistance approaches to the Roma population have shown many limitations, as the “Casilino 900” case showed. Regarding the Roma issue, it has been pointed out that it should not be treated in the specificity of ethnicity, but within policies that concern any citizen. The limit to a specific approach to the Roma population, as a specific cultural community, which has been the most popular until today, has produced marginalization and social exclusion with inevitable negative effects on the non-Roma population as well. The camps, as the experts maintain, as complainants who live there and as evidenced by the continuing news stories, are ghettos of illicit. Nando Sigona using a Foucault expression defines them as "total spaces [...] places where the life events [...] of an individual appear to implant in a fully encoded existence" (Sigona, 2015).

The camps provided by the “Nomads Plan” are in isolated contexts, are structures designed for five hundred people, with administrative costs for the municipality comparable to rent a house for each family. Just an integration approach, driven by forward-looking policy and long-term cultural (and not only economical or technical) programs can solve situation of ordinary emergency.

If nomadism in Italy can be said to be disappeared, then speaking of nomadic camps is a non-sense[1]. The goal is to facilitate access to the home. Housing solutions should be considered for individual realities (families, individuals, extended families, etc.), as is the case for non-Roma families. For those who live in Italy for many years and are in the lists for social housing, it is necessary to rethink the requirements for the access.

Parks can be used as temporary structures for nomads (about 1/3 of Roma population in Italy) or for those who want to start a residential settlement. However, management should be rethought because it is subject to high costs and reconsidered location because it does not favor integration. Valuable alternatives for extended families who want to continue living together are micro-villages.

[1] According to data by association helping Roma population (“Comunità di Sant’Egidio” in Rome, “Casa della Carità” in Milan, “Caritas Diocesana” in Naples) 1/3 of Roma living in 2011 in the main Italian cities stayed in camps, while 2/3 lived in houses.

Based on these conclusions, we argue that an integration approach for housing problem needs to be settled at level of national governmental policy. Thus, it is necessary to include “Roma emergency” in the more general housing issue in Italy, which is especially urgent in the capital city, where Roma population, citizens and immigrants joined to claim the right to home.

Finally, as the presented active citizenships initiatives in the capital city show, the self-help housing for abandoned buildings, can convey the civic creativity and provide an effective driver of social mobilization and political pressure, against the government inaction.

It is necessary to return to invest in housing policies. The regional law of Lazio on self-help housing is useful to rethink the social housing building programs.

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ID 1434 | MODELS OF URBAN REHABILITATION UNDER NEOLIBERALISM AND AUSTERITY: THE CASE OF PORTO

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1 INTRODUCTION

This paper critically analyses the legal and institutional framework set up by the Portuguese government in 2004 to boost 'urban requalification' – the Urban Rehabiliation Societies (SRUs) – and its implementation in the city of Porto. Firstly, we present a diachronic analysis that identifies phases of continuity and change in models of urban requalification in Portugal. Secondly, we present the background for the SRU model and discuss the context in which it was implemented in Porto. Thirdly, based upon a qualitative methodology, which uses literature reviews, analysis of political documents, and six semi-structured face-to-face interviews conducted with local and government officials, we analyse practices of urban requalification3 within a specific urban requalification operation, in the Cardosas quarter, which is an example of a large-scale requalification operation promoted by the Porto Vivo SRU in a context of public-private partnership.

Discussion of the results of this operation contributes to the debate on the criteria for evaluating the success of urban requalification projects from both processual and substantive perspectives vis-à-vis their effects on families and neighbourhoods. A set of research questions was formulated with this purpose in mind:

- How have urban requalification strategies and goals been defined in the context of a neoliberal model which was implemented in a time of crisis and what role did partnerships with private actors play in that definition?
- What groups were targeted by the requalification projects and, regarding housing, were there affordability concerns that protected less affluent populations from increasingly hostile conditions for middle class families in the historic centre of Porto?
- Were the local population's interests and local heritage considered in strategies and implementation, especially in large systematic operations such as the Cardosas?
- To what extent did the Cardosas operation contribute to gentrification dynamics and to the explosive growth of tourism-related activities in the historic centre of Porto?

2 THEORY

Several studies have shown that the impact of rent regulation in the private rental sector varies greatly between countries and regions (see, for example, Moore & Dumming, 2017; Andersen, 2012, and Oxley, et al. 2011). They also have shown that reform of the first generation of rent control has followed different paths in different countries. In countries with strong state-led social welfare traditions, such as Germany, first-generation rent control has been replaced by softer rent controls complemented by incentives, such as tax concessions and direct subsidies to private landlords to provide housing at sub-market levels and means-tested housing subsidies to families. Meanwhile, in countries dominated by neoliberal ideas reform of first-generation rent regulation, which is associated with security of tenure (including protection from eviction), but also low rents and problems of maintenance, has led to deregulation and urban requalification subsidies which are not tied to conditions (e.g. the definition of lower prices or lower rents), leading to cycles of boom and bust (see Ball, 2016).

Scrutinizing the relation between urban requalification and systems of rent control and tenancy law, Altes (2016) notes that, whilst rules that protect tenants from rising rents may result in under-investment and the misallocation of housing, deregulation of rent control and tenant protection (against forced relocation) can lead to over-investment in real estate, make it more difficult for new households to enter the housing market as rents generally rise faster than incomes.

National and local housing policies are important to stimulate housing requalification but also to shape the effects of requalification on housing costs, the control of rent increases for sitting tenants, and to counteract speculation so that median and low-income groups are not denied housing opportunities in areas of high demand. These groups are increasingly affected due to the contemporary pressure on real estate markets brought about by financialization, which produces urban (re)development where real estate is treated as a 'financial asset' and investment locations are chosen according to its perceived return rate (Loon & Aalbers, 2017).

Local governance is a key intermediary in such processes, as public actors are playing the role of facilitators in the creation of financial assets (see Loon & Aalbers, 2017, pp. 222) The analysis of objectives that guide national and local policies, specifically political instruments that used to stimulate urban requalification and the way they filter external factors such as globalized finance or tourism, affecting the characteristics of national and local housing markets, is therefore crucial for those concerned with the transformation of cities.

3 GENERAL BACKGROUND 3.1. URBAN DECLINE OF PRIVATE RENTAL SECTOR AND INNER CENTRES IN PORTUGAL

Degradation, loss of resident population, and a growing number of vacant buildings have been severe problems in Portuguese city centres for the last decades. According to the 2011 Census, about a million buildings throughout Portugal are in need of repair and of these about 400,000 require significant works, with a greater concentration in city centres. In the case of the historic centre of Porto, where there is a total of 1800 buildings, about 34% were in poor or very poor condition, requiring deep interventions, and another 51% required small and medium-scale repair (Census 2011). Regarding the occupation of buildings, it is estimated that 19% of all buildings were vacant in the municipality of Porto in 2011. Accordingly, between 1991 and 2011, the population of the historic centre fell from 20,342 to 9,334 individuals, a loss of about half of the total resident population (Census, 2011).

The private rental sector decreased abruptly in Portugal between 1981 and 2011, from 40% to 20%, a reduction from 1,074,590 to 545,710 dwellings (Census, 2011). In the municipality of Porto, between 1981 and 2011, the private rental sector decreased from 67,373 to 43,302 dwellings.

In 2011, in Portugal 19% of total rent contracts were established before 1975, 34% between 1975 and 2005, and 47% between 2006 and 2011. Evidence shows that pre-1990 contracts are characterized by low rents. Moreover, about 15% of all rented accommodation in Portugal in 2011 still carried rents equal, or less than, 35 euros per month, where often senior tenants live with poor housing conditions[1]. In Porto half of a total of 43,302 private rental dwellings, equivalent to 21,084 have rents below 100 euros. Contrarily, the segment of contracts signed after 1990 is increasingly dominated by higher rents, due to a high demand from tourism activities, which has raised issues of affordability and tenant security from middle and low incomes families. In the historical Porto, after a period of stagnation that followed the 2008 global economic crisis, when the availability of credit was problematic, between 2010 and 2014, real estate sale prices increased 50% and by the end of 2014 rehabilitated dwellings had an average value of 2,370€/m2 (Porto Vivo SRU, 2014: 86).

3.2 URBAN REQUALIFICATION IN PORTUGAL AND IN PORTO

Legal changes in rent regulation (Law 31/2012) have been implemented with the aim of reversing the effects of decades of rent freeze. The 2012 new Urban Lease Act Law, aiming to implement the full

[1] It is worth noting that rent controls were first introduced in Portugal in 1910, but the freezing of all private sector rents was not implemented in Lisbon and Porto until 1948. With the revolution of 1974, in a context of economic recession and housing shortages, the freezing of rents was extended throughout Portugal. These rules allowed sitting tenants to remain in their houses without incurring increased housing costs and, owing to inflation, rents become almost symbolic, namely, designed for tenants of middle incomes who had hitherto paid very low rents. Because property owners have not traditionally made enough money for maintenance or renovation and tenants could not be evicted, the vast proportion of older housing stock has suffered dilapidation.

liberalisation of the rental market, set a five-year period of transition from the old (prior to 1990) lease contracts to a new regime of rents (free of rent control mechanisms), with the exception for low-income tenants or those with disabilities, where the rent increases should be compensated by housing allowances paid by the state. It was expected that full liberalisation accompanied by a new rent subsidy scheme, would come into effect in 2017, but the left-wing government increased the transition period by another five years.

Over time, several programmes have attempted to boost the renovation of the private rental sector building stock, being possible to identify different phases, in terms of strategies, instruments, and implementation. Two main phases of national policy for urban requalification can be identified: i) from 1986 until 2000, an approach that targeted private rented dwellings with old contracts and poor housing standards, and gradually adopted an integrated approach that aimed to combine small-scale housing interventions with social equipment, patrimony and cultural valorisation,; ii) from 2000 onwards, a neoliberal approach focused on public-private partnership to leverage private investment and generate trickle-down effects. The latter involved the creation of public-private partnerships to allow economic revitalization and operations of housing requalification, the Urban Requalification Societies (SRU, in the Portuguese acronym).

The first national framework for urban requalification was created when Portugal entered the European Union in 1986, the access to funds of the Community Support Framework enabled an important expansion of national investment in urban requalification, in matters of public space, slum clearance and the conservation of historic monuments and sites, but not of housing requalification, which was then considered a responsibility of national member states (Alves, 2017a).

The 'Programme of Urban Requalification' launched at this time by the central government in partnership with local authorities, aimed at the requalification of private rented buildings and involved two main instruments, one technical/ institutional and the other financial.

The first provided funding for the creation of Gabinetes Técnicos Locais (GTL) Local Technical that hired architects, engineers, sociologists, social workers, etc. in an attempt to support local municipalities in efforts of urban requalification, namely of historic centres Costa (2010: 398). When government financing ceased, many of the GTLs, whose activity was structured around social objectives and bottom-up approaches, became local municipal offices.

The second enabled the creation of a list of programmes of housing requalification that targeted private rented dwellings with old contracts and poor housing standards. In particular, the RECRIA (acronym for Special Reimbursement Scheme for the Recovery of Leased Property), and more recently the REHABITA (acronym for Regime to Support Housing Recovery in Ancient Urban Areas provided funding for landlords - to support the upgrading and maintenance of buildings and sitting tenants – and for tenants - housing allowances to cover the rent increases following housing requalification. In some municipalities, municipal housing services provided housing for the temporary relocation of sitting tenants during the periods of housing requalification, which was considered a great incentive for landlords to rehabilitate their properties. In the case of RECRIA, access to funding was conditional on the existence of at least one tenant in the building with a pre-1980 contract (i.e. with frozen rent values). However, the execution rate of this programme was lower than anticipated, since it demanded about 40% matching funds from the municipalities' own budget. Except for programme REHABITA, which targeted areas mainly coinciding with historic centres, the national programmes of requalification were not tailored for city centre needs. They were simply targeted to individual owners interested in carrying out maintenance/requalification in occupied buildings associated with old contracts and low rents.

Whilst national policy for urban requalification in the 1990s focused upon critical areas and gradually adopted an integrated approach that aimed to combine small-scale housing interventions with social equipment, modest public projects, patrimony and cultural valorisation, the 2000s saw a significant policy shift. There was greater focus upon public spaces, cultural facilities, streetscaping, pedestrianization schemes, and urban refurbishment. Large events such as the 2001 Porto European Capital of Culture (Alves, 2017b) and POLIS (Baptista, 2013), created after the Lisbon World Exhibition of 1998, are clear examples of this.

More recently, the European Bank of Investment (EIB) has become one of the most relevant funding sources for urban requalification. In 2008, the Portuguese authorities and the EIB signed a Memorandum of Understanding

for the application of the Joint European Support for Sustainable Investment in City Areas (JESSICA), which was deployed for country's structural funding programme (ERDF) from 2007-2013. This instrument funded municipalities, SRU, banks, investment funds or private entities involved in urban regeneration projects. The national program 'Partnerships for Urban Regeneration', operationalized this strategy during the period 2009-2013, through initiatives that were supported the requalification of historic centres, critical neighbourhoods, and waterfronts. In the historical centre of Porto supported 2 interventions (see next section)

In 2013, a new financial instrument using funds from the EIB was launched by IHRU for the requalification of buildings that are totally or partially occupied by sitting tenants with old contracts associated to low rents. It has a budget of around 50 million euros and is expected to induce both housing requalification and affordable rents. This was expected to capitalize on the effects of the new Urban Lease Act Law, which paved the way for greater flexibility in the renegotiation of open-ended residential leases between private landlords and tenants, by phasing out rent control mechanisms for old leases and imposing stricter limits on the possibility of transmitting the contract to first degree relatives.

Porto urban requalification policy followed closely the national phases mentioned above.

After the 25th April Revolution, in 1974, the state created a government agency, CRUARB[1] to promote the requalification of the riverside front of Porto. Its mission was ensuring that the "working class population that inhabited that area for a long time, in the worst conditions of housing and exploitation" could remain in the area (Alfredo, 1997: 78). The goal was to avoid evicting the poor as a result of rising property values deriving from the requalification works.

3.3 THE URBAN REQUALIFICATION SOCIETIES MODEL

Over 30 years, with public funding only, first from the Housing Development Fund and from 1985 onward as a GTL, when government financing ceased and CRUARB became a municipality project, municipal funding and national or European competitive bids, the CRUARB agency developed a model that was based upon buying degraded properties, though negotiation or expropriation, and developing projects of engineering architecture to rehabilitate derelict buildings. The rehabilitated buildings were either sold or entered the social housing rent market, meaning they had rents below market values. In 1992 access to Poverty III funding created the Foundation for the Development of the Porto Historic Area (FDZHP) that with CRUARB promoted an integrated programme of actions that combined urban requalification with more immaterial dimensions of intervention, such as of training for unemployed, support for children, etc. (Alves, 2017b). In 2001, the preparation of the Porto European Capital of Culture event led to investments that were mostly focused upon "public spaces, streets, cultural facilities, streetscaping, pedestrianization schemes, and new urban furniture" (Balsas, 2007: 232).

In 2004 the approval of new legislation concerning rent regulation and urban requalification led to the creation of the Urban Requalification Society (SRU) model. This institutional arrangement was based on the premise that, in order to tackle city centre requalification, local authorities need a lighter structure of governance and partnerships with national authorities and private actors. This model, that operates under a regime of exception providing the SRU with more entrepreneurial and discretionary processes of decision and delivery outside existing state bureaucracies, included the possibility of property restructuring and forced intervention through expropriation.

The Urban Requalification Law (legal decree no. 103/2004) created two institutional models for these societies, one in which the municipalities hold all the capital, and another in which societies enjoy capital from the municipality and the central state. The second model was implemented only in Porto, Coimbra, and Viseu, all of which remain active to date.

[1] Portuguese acronym for Committee for the Urban Renovation of the Ribeira/Barredo Area.

The SRU model puts great emphasis on strategic planning. First of all, municipalities and SRUs enjoy substantial freedom to define their strategy of action and priority areas of intervention (called Urban Requalification Areas – ARU). In these areas, special benefits apply automatically regarding national taxes (Value Added Tax for requalification works), and local taxes (namely, property taxation). In addition, specific action programmes may be approved – Urban Requalification Operations, ORU – with concrete goals and requalification programmes to be executed by SRU directly or in partnership[1].

It is a competence of municipalities in coordination with SRUs to rank and coordinate the various goals of urban requalification from the strategic to the operational stages, which means that, for the first time, there is policy decentralization in behalf of municipalities.

SRUs have the legal power to expropriate or force the sale of buildings that are in a poor state of repair with the aim of promoting their requalification, when all other options are excluded, considering that requalification is, in the first place, a duty of the owners, and the role of the SRU is primarily to enforce the duty. On the other hand, the legal status of the SRU model makes it easier to employ staff and contract commercial loans, and to implement faster licencing procedures, allegedly improving the cost-effectiveness of urban requalification.

Owing to austerity measures from 2009 onwards, tight debt controls were implemented in the municipalities and a rule enforcing financial sustainability for municipal companies was put into practice, leading to many SRU in small and medium cities being shut down and to strong pressure for financial sustainability. At the same time, changes in urban requalification laws in 2009 and 2012 introduced significant amendments to the SRU's instruments of action. Funding schemes for housing requalification to be used by private owners were drastically reduced and replaced by tax reductions and tax benefits. These changes increased the need for municipalities and the SRU to engage in partnerships that would enable higher investment.

4 PORTO VIVO SRU AND THE CASE OF THE CARDOSAS INTERVENTION

This paper scrutinizes the SRU model, by looking at the city of Porto, where historic centre degradation were very severe by national standards and SRU implementation represented a drastic change in both governance and policy goals. The paper focuses on a particular Porto Vivo SRU intervention, designated Cardosas Operation, which is an interesting example of SRU strategies for two reasons. Firstly, it was identified in Porto Vivo SRU strategic documents as a priority intervention area or pilot intervention quarter, meaning that it qualified for flagship projects aimed at inducing requalification in neighboring buildings and surrounding quarters. Secondly, an innovative implementation mode was used, intending to test partnership models and inspire future actions. In effect, requalification was not led by private owners but by real-estate promoters with whom Porto Vivo SRU established partnership contracts. Porto Vivo assumed important investments in this operation, such as the acquisition of buildings (expropriated or negotiated purchases from private owners), demolitions and constructions, namely a square inside the quarter and an underground parking space.

This project has generated strong controversy over the amount of public spending and goals of the intervention (supporting a luxury hotel and a high-end housing development), but also for the real-estate speculation that it generated, a result which is recognized by supporters as a sign of success and by critics as a negative effect. There was strong opposition also from academics and practitioners in the areas of architecture and conservation due to disregard of local heritage and the option to demolish many buildings and completely alter the quarter's urban design.

The research presented here is informed by two main sources of information. Firstly, upon qualitative documentary analysis, namely legislation, strategic documents, SRU execution reports, and a literature review on the topic. And secondly upon qualitative, semi-structured, face-to-face interviews with

[1] ORUs are approved by the executive and deliberative organs of the municipality and can be either simple ORUs (an integrated operation of urban requalification aimed main mostly at buildings) or systematic ORUs (which require a strategic programme and are aimed at both building requalification and qualification of infrastructures and public spaces and equipment).

staff/officials working in SRU (5), local authorities (2), and in the central institution responsible for housing policy (2). Interviews were conducted in Porto in 2015 and were later transcribed.

Bearing in mind that, depending upon the goals of the evaluation, its research object, and methodology, different results and knowledge can derive from the evaluation process, we framed an evaluation matrix based on two main fields of analysis fields and several associated indicators to be studied and documented, where possible, with quantitative data. Essentially, the focus of the research is upon underlying strategic principles and assumptions behind governance and operational choices, modes of implementation and, finally, their direct effects in in the hosing and residents' socio-economic profile (see Table 1).

Analysis fields	*Elements of study/ indicators*
Strategies and governance	Goals and principles embedded in the Cardosas operation, and their relationship with the broader strategy for the historic centre. The purpose of partnerships between Porto Vivo SRU and private investors, and how it was defined in terms of roles, costs, and the benefits for each partner. Perceptions of success/failure associated with the operation.
Physical and social impacts of requalification (the before and the after)	Changes in housing stock and structure (tenures, rent values, etc.). Changes in the state of conservation of the buildings. Changes in the residents' socio-economic profile (social status of the incoming population, evidence of displacement). Changes in economic activities (effects on the local economy in terms of new/old uses, etc.).

Table 1 – Analysis matrix

4.1 THE IMPLEMENTATION OF URBAN REQUALIFICATION SOCIETIES IN PORTO

Porto Vivo SRU was set up as a public capital company, where the central state (through the Institute for Housing and Urban Requalification, IHRU in the Portuguese acronym) owns 60% of the capital and the Porto municipality the remaining 40%. The creation of this company led to transference of competencies and resources from the municipality to the SRU. In terms of governance, this decision was preceded by a strategic study – the Porto Vivo SRU Masterplan - which delimited the historical centre as the main area of intervention by the SRU. By using statistical data and multivariate analysis techniques, the choice of the city centre was justified on two grounds: the high level of housing degradation and concentration of poverty and social exclusion in the historical neighbourhoods, and the existing economic opportunities related to tourism, heritage, and creativity.

The Porto Vivo SRU Masterplan defined a strategy of requalification based upon two main strategic guidelines (Porto Vivo SRU, 2005): Re-population, through attracting new residents, and economic revitalization, through the promotion of activities related to commerce, culture, and leisure that benefit from the tourism dynamics, which in turn derive from Porto historic centre's status as a UNESCO World Heritage site.

In strategic terms, the historic centre of Porto was defined as an ARU (the so-called Urban Requalification Areas – ARU) in 2012, and within this area several blocks were identified as priority areas of intervention or pilot areas to guide future interventions. It was also expected that the concentration of public investment in these priority areas would generate trickle-down effects that would attract private investment to neighbouring areas, stimulating a wave of private investment that allowed for the requalification of the whole city centre.

For each quarter targeted for priority intervention, strategic documents were drafted. In terms of strategies, instruments, and implementation, after more than 10 years of SRU intervention in the historic centre of Porto, we can identify three main types of intervention:

1. Direct requalification of derelict buildings owned by the SRU and designated for housing. The rehabilitated dwellings have been either sold or placed on the rental market. It is interesting to note that those that have been rehabilitated for renting are located in a deprived area, the Morro da Sé neighbourhood, benefitting chiefly from a €7,5m loan granted by the European Investment Bank, which has enabled the requalification of 32 buildings. It is also interesting to note that, of all housing stock in Morro da Sé, 47% needed deep interventions, 23% medium interventions, while

only 4% were in suitable for use. Furthermore, due to expropriation processes throughout the 1990s, 40% of all buildings was public property (SRU/municipality) and of these many were vacant or in poor condition. Of the total, before interventions by SRU, 80% of the buildings were already occupied by tenants and the remaining 20% by owners.

2. Urban Requalification contracts with private partners (e.g. the Carlos Alberto intervention) or real estate funds (e.g. Cardosas and D. João II operations), where Porto Vivo SRU participated with the expropriation of buildings, rehousing of sitting tenants, demolition, cleaning etc. These were, by and large, ambitious and expensive real estate projects aimed at selling for profit (on average, 1.900 euros/m2). The tenants who lived in the blocks where these operations took place were relocated to social housing districts or to Morro da Sé
3. Direct physical requalification of public space aimed at inducing requalification by private owners. This is the case of the operation in Mouzinho-Flores, contiguous to the Cardosas operation, which was funded by a national programme paid for using structural funds and Partnerships for Urban Regeneration.

4.2 THE CARDOSAS INTERVENTION

The Cardosas quarter occupies 7,485 square metres and is located in a transition area between Praça da Liberdade/Aliados boulevard (where Porto town hall is located) and the historic Centre (Figure 1). The requalification strategy for the Cardosas quarter was detailed in a document approved in June 2007, but the decision to intervene and the general strategy was undertaken in 2005. The minutes of a meeting of the Administration Board of the Porto Vivo SRU date from 2005 and already describe the decision to develop an ambitious and systematic requalification operation that would involve the social, economic, and urban revitalization of the quarter. The goal of mixed-use occupation (housing, commerce, and services), with car parking to support future residents and activities, is clearly stated in that document.

Figure 1 – Location of the Cardosas quarter in the Historic Centre of Porto

4.2.1 STRATEGIES AND GOVERNANCE

Drafted by a private consulting firm on behalf of Porto Vivo SRU, the Cardosas strategic document is structured in two parts. One describes the conditions before intervention, seeking to justify the need for a systematic intervention that targets a segment of the population with high purchasing power. The second details the strategy that must be followed to achieve this goal. Regarding the former, it states that prior intervention in the quarter there were 42 buildings with 92 owners. The document is, however, vague regarding characterization of the resident population. It states that six buildings were for housing purposes, but does not elucidate the number of residents, the number of families living there, or their specific needs. It also states that, 35% of the built area was used for commerce and services, and 15% was allocated to commercial storage.

The document defines a systematic strategy of requalification that aims to produce quality housing for a high- end market segment. Affordable housing at controlled costs and for rent is not envisaged for the quarter. With this purpose in mind, strategy has been drafted based on the following:

- The demolition of the buildings inside the quarter (11 buildings) to create a public plaza and (see below) underground car parking;
- The requalification of a historic palace overlooking Praça da Liberdade and a few minutes' walk from São Bento station, that became a luxury hotel[1];
- The restructuring of uses, promoting mixed use of qualified commerce and services on the ground floors and housing on the higher floors for new, and affluent segments of the population;
- The alteration of the existing built structure to increase space available for housing and other activities (merging two or more buildings to create more spacious housing). While the general façade was maintained, the back (interior of the quarter) had been totally demolished and reconstructed.

In a different section of the document, it is stated that the resident population will be relocated in other areas, without stating which, or the conditions thereof. It is clear, however, that the decision to displace and rehouse this population elsewhere relates to the understanding that they can afford the "higher standard" quality housing that will be provided there (SRU strategic document, 2007: 21). It is even stated that, as only a small proportion of the population live there, this will facilitate displacement and the success of the operation:

"Another aspect to be considered […] relates to the fact that, currently, the quarter has virtually no resident population, therefore the introduction of a 'new' population will, in theory, introduce no significant social conflict factors." (our translation) (Porto Vivo SRU, 2007: 24).

The document also states that it is likely and desirable that the renovated dwellings will be sold as second houses or to private investors interested in tourism-related business, such as short-term rentals:

"Excellent access to public transport, such as train, underground (qualified transports), and buses, may be an added factor of differentiation for this quarter, namely, for the segment which choses to have a second home in the city of Porto." (our translation) (Porto Vivo SRU, 2007: 24).

Whilst the strategic document recognizes the excellent access to public transport (metro and train station, bus), and the fact that alternative parks are available within 150m (Sequeira, 2011), the strategic document claims that a car park "is indispensable to make housing viable in the quarter", due to the current demands of the affluent population that is expected to occupy the area, both as residents and hotel guests, which are typically car users. (Porto Vivo SRU, 2007: 25).

Analysis of the strategic document reveals that it mainly proposes the need for deep intervention in the quarter based on evidence that it was underused[2] and in a poor state of conservation[3]. The SRU proceeded to expropriate some block-front buildings and invested €13M in expropriation of the core of the block to gain possession of 22 buildings. In the case of other buildings with requalification needs that were not subject to "forced sale", contracts were drawn up between owners and the SRU for requalification promoted by the owners themselves. An equal percentage of buildings remained in good repair. It should be noted that the SRU's Statement of Accounts for 2012 explains €7M of deficit by the high cost of expropriation, arrived at not by agreement with owners but by court decisions: "Judicial decisions in expropriation proceedings were above the amounts allocated in the framework of expert opinions requested by the SRU for this purpose." (Porto Vivo SRU, 2012).

In the case of the Cardosas operation, Porto Vivo SRU, as the project leader, assumed the costs of expropriation and demolition for park construction and public spaces, establishing a partnership with two private partners - Lúcio da Silva Azevedo e Filhos, S.A. (LUCIUS) and the InterContinental Hotels Group - for the requalification of Palácio das Cardosas. While LUCIUS was responsible for the construction, real estate development, and marketing of the housing, Intercontinental was responsible for the construction

[1] See https://www.ihg.com/intercontinental/hotels/gb/en/porto/prtha/hoteldetail
[2] technical inspections report that 24% of the buildings were empty and only 28% were totally occupied
[3] 57% of the inspected buildings were in poor condition, 17% were average and 26% had a good conservation state

and hotel management (see Table 2 for details of the partnership roles). For the hotel project, a real estate investment fund - designated First Oporto Urban Regeneration Fund (4F) - was involved as a financial instrument to support the operation.

The business plan of the Cardosas project, as submitted to JESSICA program for funding[1], defined that i) all of the project's construction and commercialization expenses are assumed by the private partner, and ii) the revenue obtained from the sale of commercial areas and houses is equally divided between the SRU and the private partner, while the amount received from the sale of the car park is almost all the private partner's: "Porto Vivo SRU and Lúcio will each receive 50% sales of residential and commercial areas (about €7.9M). In addition, Lúcio will receive the amount relating to be car parking sale (€6.5M)." (Deloitte and Parque Expo, 2009: 46).

The 4F began activity in June 2011, with an initial capital of €5M and acquired all the 40 buildings in the Quarteirão das Cardosas that were owned by LUCIUS, that is, buildings expropriated by Porto Vivo and transmitted to Lúcios, new buildings, however erected or under construction, inside the block intended for trade/services/equipment, parking, and possibly other real estate acquired by way of negotiations. (See Gaspar, 2014: 61-63).

	Porto Vivo SRU	LUCIUS	Intercontinental
Role	Project leader Expropriation, when necessary Mediator between Intercontinental Group and property owner regarding the hotel	Real-estate promoter Construction Sale of housing units Use a real-estate fund to support the operation: First Oporto Urban Regeneration Fund (4F) Lúcio was the sole subscriber of the 4F capital	Promotion and management of a hotel used a real-estate fund to support the operation
Cash inflows	Expropriation, demolition, and underground car parking costs	Construction and commercial costs	Investment and management costs (hotel)

Table 2 – Public-private partnership structure for the Cardosas operation
Adapted from: Sequeira (2011: 69), Jessica Evaluation Study, Gaspar (2014: 55-63).

4.2.2 CRITICAL ANALYSIS OF CARDOSAS OPERATION IN THE CONTEXT OF THE SRU INTERVENTION

Based upon nine semi-structured face-to-face interviews conducted in Lisbon and Porto at the beginning of 2015, we now aim to shed light upon how the SRU, local authorities, and the Institute of Housing and Urban Renewal (IHRU), that is, the government-run body responsible for supporting and implementing government housing policy in Portugal, assessed the Cardosas operation from the point of view of their impacts upon i) practices of urban governance (formal and informal relations between stakeholders within the municipality, across government levels, and in the context of public-private partnerships), and ii) on housing market dynamics (e.g. changes of tenure, rents etc.). The link between strategies of housing and urban requalification and issues of housing affordability for low- and middle-income families were broached when, for example, we asked about the impact of the operation on the provision of affordable rental housing (below market rates). Whilst some interviewees did not know in detail about the Cardosas operation, they were, however, familiar with the contents, methodologies, and purposes of the SRU model in one or more cities, which introduced new perspectives to the analysis.

Of those interviewees who were familiar with the Cardosas intervention they all recognize that this generated a high deficit for the public partners (values mentioned vary from seven to nine million euros). This was due to a wrongful evaluation of the costs involved in the Porto Vivo SRU tasks. However, the interviewees presented different explanations of the reason for such high deficits. In one interview (PS3), the construction of the square was decided during the project and exceeded initial costs. Another interviewee (CG2), mentioned that expropriation costs were above the expected and Porto Vivo SRU

[1] he goal of JESSICA (Joint European Support for Sustainable Investment in City Areas) is to support institutional investors, namely, municipalities and Urban Requalification Societies, to invest in requalification funded by Real Estate Investment Funds. It is important, however, to note that projects to be eligible for funding, which have to be framed by "integrated sustainable urban development plans".

argued that this caused the deficit. Another criticism regarding financial management involved the sale of the park to a private company for a very low price (100 thousand €) (CG1).

Because central government manages the majority of Porto Vivo SRU's capital, it was expected that this deficit would be financed with additional public funding. This led to major conflicts between stock-holders and closer scrutiny of the conditions of partnerships in future projects (PS3). IHRU interviewees stated that this deficit was not expected, as financial studies of the project estimated that it would generate profit from the sale of apartments: "The model defined for that operation was expected to be profitable […] the State decided to go forward, I am convinced, because it was not a waste of money. It was, in a certain way, a loan." (CG1).

When looking at the operation globally, besides housing, the major project was a luxury hotel, interviewees alleged that "1 € of public spending generated 16 € of private investment" (PS1), and that housing sales were highly successful, indicating that private partners achieved their goals.

In terms of the physical and social impacts of requalification, the Cardosas operation had several impacts regarding the transformation of the housing stock (e.g. tenures and typology structure, rent values), the state of conservation of the buildings, in some cases more renovation than requalification, economic revitalization of the area (with the creation of 19 commercial spaces), and changes in the residents' socio-economic profile, with the displacement of existing tenants (how many was not stated), and the attraction of 50 new luxury apartments (e.g. most one- or two- bedroom units). The sale of all new apartments at high prices indicates a transfer of tenure towards ownership but not necessarily for permanent use or permanent residents, but most for short rental. A high share of apartments is for short rental, as the transaction prices are not attractive for most families that showed an interest in the historical centre. (CG2) Interviewees who claimed the success of the Cardosas operation (PS1, PS2, PS3) argue that, from a commercial point of view, the operation as a whole was a success (PS1), showing that it targeted a type of demand that needed to be accommodated. When asked about the need for a more diverse social composition of the quarter, one interviewee argued that the inclusion of other social groups (low-income groups) is a fact in nearby quarters: "50m from the Cardosas we have the Morro da Sé" (PS3), a typical medieval district with narrow streets, difficult access and a concentration of derelict buildings, favouring traffic and drug use in some public plazas, associated with a bad reputation (Alves, 2017c). In the historical centre of Porto, rehabilitated housing for rental purposes provided by SRU for temporary or definitive relocations is concentrated in Morro da Sé, while some families are rehoused in social housing neighbourhoods.

The transformation of the physical built environment was also the object of strong criticism, for several reasons: LG1 mentioned the rearrangement of parcels (fusions of small buildings to create larger housing units); the lack of respect for architectural heritage; the car-friendly strategy, and the privatization of open space in the quarter which was initially designed for public use. In the words of one interviewee: "In the end, all that was left was a scenario, a square that is not a square, a hotel solution that gives me the chills, so from my point of view it is something that cannot happen again." (LG1).

Porto Vivo SRU representatives justify the need for the closing of the inner square after 9pm to avoid security problems such as vandalism and the presence of marginal populations (PS1, PS2). There is an underlying concern to create a safe environment for new residents. Whilst it was mentioned that this situation may be reviewed after the opening of commercial spaces on the ground floors (PS1), this has not happened and the central plaza remains closed at night.

5 DISCUSSION AND CONCLUSIONS

Housing dilapidation, poor housing conditions, and the decline of the private rented sector remain key challenges to historic Portuguese cities as the result of obsolete forms of rent control and housing policies focusing upon purchase rather than rental.

The model of "Urban Rehabilitation Societies" was created in a context of neoliberal framing of the role of the state and it became fully operational in the early days of austerity enforcement. The discourse and rhetoric of this policy model is framed by cutbacks in instruments of direct public intervention and employs the view (both ideological and practical) that intervention must rely upon private investment. This is

apparent in the two main strategies set up by the central state to boost urban requalification, that is, the liberalization of rent markets, and the setting up of governance models that encourage public-private partnerships vis-à-vis quarter-based operations of urban/housing requalification, chiefly SRUs.

Local authorities, which in the context of SRUs became key actors in the definition of strategies of urban and housing renewal, both in terms of the selection of priority areas for intervention, that is, the definition of goals that should guide intervention, and policy implementation, have been 'steered' towards policies designed to increase real-estate prices (Van Loon & Aalbers 2017).

The Cardosas operation is an interesting case to illustrate the many pitfalls of this model of urban rehabilitation (e.g. governance, forced displacements, social-spatial income polarization), as it was promoted by Porto Vivo SRU, which is owned by the central state and Porto municipality, and diverged from the fundamental principles and goals of previous models (e.g. CRUARB) that aimed to promote housing rehabilitation for social purposes and promote a rental market accessible to the more vulnerable living in the city centre (Alves, 2017a).

By funding deep restructuring of the Cardosas quarter, both in terms of urban design and the social composition of the area, [SRU] acted as intermediaries in the financialization of the real-estate market in Porto, reinforcing the income gaps between the poorest and the wealthiest neighbourhoods of this historical centre.

The process is widely documented. The urban renewal operation of Cardosas transformed the mixed structure of the area, both in terms of population and economic activities, on which its historical identity is based, to offer the provision of new services and luxury housing affordable only for a few. Associated with architectural and infrastructural improvements and to territorial marketing, the urban renewal operation meant real estate prices rose and led to the expansion of property ownership. This was accompanied by forced displacements and a non-intervention policy regarding the use of rehabilitated housing for temporary accommodation (e.g. short rental destined for tourism), so as to attract further investment and expansion of activities in the area, in accordance with a global market perspective (chiefly tourism and real-estate).

It should be noted that SRU strategy in large-scale partnership projects found strong opposition and the Cardosas project became the focus of counter-action, as the interviews demonstrate. Firstly, due to the high financial deficit of the SRU, it legitimated criticism of the society's governance model, justifying the central state position of backing away from requalification policy implementation. This deficit also made apparent the appropriation of public investment by private interests, accompanied by widespread public criticism of the use of public money to fund high-end real-estate developments. Secondly, contestation of the planning and design of the project by academic and practitioner movements raised awareness of heritage protection. Thirdly, due to pressure from a boom in tourism activities, housing affordability has become a major issue for local populations hence a topic of political debate.

What new elements does this case bring to our knowledge of gentrification processes?

1. The effect of globalization and financialization was enhanced because local capital was low and a very profitable investment opportunity was available;
2. Governance restructuring under a neoliberal model provided favourable conditions to the entry of market-led interests (such as a partnership model, lack of public scrutiny, and no coordination of goals between central and local authorities);
3. The state made no effort to counterbalance these trends and actively supported them as a result of austerity.

As emphasized by Pugalis, based on other neoliberal experiences (Pugalis, 2016), the SRU model provides a resignification of the concept that is inherent in requalification policy. Requalification that once focused upon the provision of decent housing for city centre populations, and in the 1990s to the provision of infrastructure and public amenities, paved the way in the 2000s for a more systematic market-led approach which in Portugal has been reinforced by neoliberal and austerity policies. The SRU model provided the governance instruments that made possible its implementation in the case of Porto, leading us to question whether, with good governance, the outcomes would have been different (Clark, 2014).

In this regard, we claim that measures could have be undertaken for the production and preservation of affordable housing, so that increases of rent would be limited and adapted to middle-class housing needs and demands. To do so, models of urban governance should be reviewed to ensure accountability regarding respect for policy guidelines across all stages of action (from strategy to project implementation), while the funding of public institutions, such as SRUs, should be designed to relieve dependence upon private investors and ensure that no public funding is used to increase profit in speculative operations, but to limit such profit.

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ID 1485 | SOCIAL HOUSING AND REHABILITATION OF CENTRAL AREAS: THE EXPERIENCE OF ZEIS 3 IMPLEMENTATION IN SÃO PAULO, BRAZIL

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ABSTRACT: The debate on urban interventions in central areas is probably one of the most controversial issues among architects and planners. Depending on how state and market act on the production of space, the development of certain urban areas occurs or their decay. In response to the decline process, the governments of several cities of the world have been developing urban policies of intervention in these central areas, basically in two ways: through their eradication, or through their rehabilitation. Recently the implementation of social housing policies has been defended as a strategy to cope with city centre decline. The aim of this paper is to analyse the case of São Paulo, Brazil. Over the last hundred and fifty years it has grown very quickly, presenting both rise and decline processes. Since the 1970s the municipality has been implementing several plans in order to revert the decline, and recently with the aim to provide social housing. The paper is divided into this abstract and four more sections. First a little historic appraisal of the public responses to the decline process, followed by a view on the rise and decline of São Paulo city centre. The next section will analyse the policies proposed and implemented by the municipality for the centre and then analyse the implementation of ZEIS 3, a type of inclusionary zoning, searching to understand it results in a rehabilitation process. This paper is partially result of a post-doctoral research project financed by FAPESP (São Paulo State Research Support Foundation), Process # 2015/26447-7.

1 URBAN POLICIES FOR CENTRAL AREAS

The debate on urban interventions in central areas is probably one of the most controversial issues among architects and planners. Since cities are socially constructed, they are constantly changing, growing or declining in response to changes in the societies in which they are embedded. Depending on how the state and the market interact on the production of space, the development of certain urban areas occurs, with the appearance of new economic activities and social classes, or their decay, with the end of these activities, economic decline and migration (Couch, 1990).

In response to this process, the local authorities of several cities have been developing urban policies for intervention in these central areas basically in two ways (Nobre, 1994): the first would be its eradication, caused by the renovation of its built environment; the second would be its rehabilitation, through improvement projects.

After World War II, the consolidation of Modern Urbanism and Architecture, following the modernist precepts of the CIAMs and the Athens Charter, led to the adoption of reconstruction policies based on the renewal of the urban fabric (OECD, 1983). The need to affirm the birth of a new period and the break with the painful recent past, technological development and capital inflow from the Marshall Plan allowed the reconstruction of several European cities, much influenced by Le Corbusier's ideas.

The United States, despite not having suffered from the destruction of the war, also adopted the process of urban renewal in order to combat the process of “degradation” of the central areas (Rapkin, 1980). In order to eradicate the slums in these areas, generally residence of the poor afro-descendant population, the Federal Government established the Federal Housing Act in 1949, which provided federal resources for

the expropriation and remodelling of these areas and the construction of peripheral housing complexes. The harmful physical effects and social impacts on these excluded groups made this law to be known as the Federal Bulldozer (Anderson, 1962).

A questioning of this process started in the 1960s. The destruction of pre-existing urban form and the removal of settled communities, usually low-income, ended up causing strong popular reactions, causing urban riots in many cities. Urban and sociological studies were made, criticizing the effects and consequences of this process due to the problems arising from social ties disruption and the expulsion of areas with a concentration of jobs and services (Jones, 1979; Knox, 1982). At the same time, the awareness of the environmental burden related to the destruction of a sound built environment and the historical importance of the urban fabric also questioned these interventions (Couch, op. cit.).

From the 1970s on, new urban studies began to work with the concepts of building rehabilitation and community development in various European cities, such as Amsterdam, Bologna, Madrid, Rotterdam and Venice. In the United States, the Federal Government, under pressure of the booming of the Civil Rights Movement, launched the Model Cities program, which provided assistance to cities and community groups to rehabilitate deteriorated areas occupied by low-income population. (Rapkin, op. cit.)

Recently the studies for central area rehabilitation have been working with the concept of compact mixed use cities. One of the main aspects of this concept is the construction of social housing as an important element in this process. In addition to central area repopulation, social housing construction has a social justice aspect, as it allows low-income class access to the city, jobs and services.

2 SÃO PAULO CENTRAL AREA RISE AND DECLINE

The São Paulo Metropolitan Region (SPMR) is located in the Southeast region of Brazil, standing out as the largest Brazilian urban agglomeration with 19 million inhabitants, of which 11 million in the city of São Paulo (MSP) in 2010 (IBGE, 2010). Besides the MSP, it is formed by other 38 municipalities, extending by eight thousand and five hundred square kilometres, equal to 10% of the national territory. Its Gross Domestic Product (GDP) was € 256 billion in 2010, accounting for 19% of the Brazilian GDP (74% in services and 26% in industry). Despite all this wealth, the metropolis has presented an uneven development, whereas 63% of the residents earn less than five MW – minimum wages (less than € 1,144) and only 6% earn more than twenty (more than € 4,576).

The Metropolis developed due to the concentration of economic activities related to great cycles: coffee trade with Europe from late 19th century on; import substitution industrialization from the 1930s on; deindustrialization with tertiary sector growth since the 1980s. Historically, middle and high income populations have settled in the most central areas of the metropolis, where commercial activities, jobs, services, public equipment and the best infrastructure are concentrated (Villaça, 1997). On the other hand, the low-income sectors were “expelled” to less privileged areas in relation to these factors, living in a high level of precariousness in slums, favelas and peripheral illegal settlements.

As seen in the previous section, the rise and decline of urban areas change according to how the State and the market intervene on the city. In the case of São Paulo, the central area rise and decline occurred over the last century, following the metropolis rapid and recent development. During the first three centuries, the city remained in the adjacencies of the historical hill, site of its foundation. Coffee plantation and export from São Paulo State and European immigration in the middle of 19th century resulted in an intense economic development with impact on the urbanization process.

The accumulation of capital was drained to the real estate sector, resulting in urban sprawl over the adjacent farms along the railroad. The economic development brought a greater division of labour and social stratification resulting in spatial segregation. The city expanded in all directions, but selectively. To the west, the terrains of slightly wavy topography and rising altitude were appropriated by the elite. The lowlands, to the east segregated by the Tamanduateí floodplain and the railroad, were left to the low-income class.

The Santos-Jundiaí railroad construction caused the valorisation of the Northwest sector, as the the Luz Rail Station made the region the main gateway to the city. During this period, urban planning in Brazil was

influenced by European experiences, resulting in central area improvement plans for the main cities of the country (Leme, 1999). Following these concepts, the main public works of the time valued the Central Area, through the construction of new avenues and expansion of the existing ones, construction of parks, gardens, squares and public buildings, such as the remodelling of Anhagabaú Valley, the construction of the Patriarca Square and the Municipal Theatre, as in figure 1.

The urban legislation of this period reinforced the valorisation of the central area. The Code of Postures, which was the main existing legislation, prohibited the installation of so-called “nuisance” practices, such as tenements and slaughterhouses, in the “city perimeter”, in an attempt to keep this area exclusive to the São Paulo elite (Rolnik, 1997). At the end of the nineteenth century, the expansion of the upper classes rose toward South, developing Vila Buarque and Higienópolis neighbourhoods, reaching Paulista Avenue, moving away from the working-class districts. From the early twentieth century, this expansion went south towards the Pinheiros river floodplain, in an Ebenezer Howard “garden city” model development.

Figure 1 – Anhagabaú Valley in 1920s.
Source: http://smul.prefeitura.sp.gov.br/historico_demografico/img/1920/teatro-sao-jose_grande.jpg

From the 1920s on, São Paulo has consolidated its position as the industrial centre of Brazil. High rise development and commercial specialization caused the centre loss of residential function. The 1930 Avenues Plan resulted in the construction of a series of radial roads, reinforcing the city centre valorisation and low-income peripheral sprawl. From the 1950s to 1960s, Paulista Avenue became the new elite centre, while the Central Area became the popular centre, being progressively abandoned by the bourgeoisie.

Between the 1980s and 2000s, the centre decline was intensified as large public and private investments developed a “new metropolitan centre” in the Southwest Zone of the city, along Pinheiros River embankment (Nobre, 2000). These investments resulted in a large increase of vacant commercial buildings in the Central Area, which old buildings could not compete with the new development in those regions. Between 1990 and 1998, while the city's vacant commercial stock grew by 32%, the Centre vacant commercial stock increased by 55%, reaching almost 600 thousand square meters, 60% of the city commercial vacant buildings, though the Centre concentrates only 40% of the built stock (Nobre, op. cit.).

The City Centre decline was accompanied by the continuing low-income peripheral sprawl. Between 1991 and 2000, peripheral districts and municipalities, located in environmental protected areas (mountain ranges and watershed areas), gained 360 thousand inhabitants, with a growth rate of 6.3% per year, well above the metropolis average of 1.6% (Nobre, 2004).

Paradoxically, during this period the central districts were the ones with the highest population decline in spite all the existing infrastructure (São Paulo, 2006). From 1980 to 2000 the ten central districts lost almost 200 thousand residents. This led to an increase in vacant residential properties, growing 55.6%, from 270 thousand to 420 thousand, specially the residential vacancy that went from 10.6 to 14.5% of the building stock. Around 40 thousand residential vacant units were located in the central area districts (9.2%

of total residential vacancy). According to IBGE data, the ten central districts were among those with the highest residential vacancy rate, with an average of 18.4% of vacant properties, as seem in table 1.

	Population		Growth	Households	Vacant	Vacancy Rate
	1980	2000				
Metropolitan São Paulo	**12,588,725**	**17,878,703**	**1.8%**	**6,531,119**	**728,171**	**13.1%**
City of São Paulo	**8,493,226**	**10,434,252**	**1.0%**	**3,554,820**	**420,327**	**14.5%**
Bela Vista	85,416	63,143	-1.5%	33,848	5,479	21.9%
Bom Retiro	47,588	26,569	-2.9%	10,807	1,821	21.8%
Brás	38,630	11,505	-2.3%	11,622	2,789	26.8%
Cambuci	44,851	28,620	-2.2%	11,370	1,910	19.5%
Consolação	77,338	54,301	-1.8%	29,577	3,694	18.1%
Liberdade	82,472	61,850	-1.4%	29,392	5,283	20.9%
Pari	26,968	14,521	-3.0%	5,817	1,223	23.3%
República	60,999	47,459	-1.2%	30,849	7,007	25.5%
Santa Cecília	94,542	71,111	-1.4%	36,171	6,343	21.5%
Sé	32,965	20,106	-2.4%	11,410	3,055	29.4%
Total Central Districts	**591,769**	**412,185**	**-1.8%**	**210,863**	**38,604**	**18.4%**
Central Districts Population Loss		**-179,584**				

Table 1 - Population growth and household vacancy in Metropolitan, City and City Centre of São Paulo.
Source: São Paulo, 2001b.

3 PLANS AND PROJECTS FOR SÃO PAULO CITY CENTRE

The first responses of the Municipal Government to the City Centre decline date from to the 1970s. At that time, the plans had a strong emphasis on issues of historical heritage and traffic control, based on the idea of urban rehabilitation, proposing the expropriation and restoration of historical interest buildings and the creation of a pedestrian sidewalk circulation system approximately seven kilometers long (Emurb, 1979).

In the 1980s, despite various proposals nothing was implemented. The diagnoses elaborated by such studies already identified a centrifugal growth/peripheral expansion and proposed the population densification in the central area, through zoning revision. At that time, the only actions implemented were the construction of tunnels that deviated through-traffic from the central area, recreating the Anhagabaú Valley Park and the restoration of the Municipal Theatre.

Luiza Erundina´s Office (1989/1992) proposed a “Return to the City Centre”. In addition to finalizing Anhagabaú Valley works, it promoted several urban projects public competitions for the neighbourhoods around in the Central Area, implemented a program of slum tenements improvement of and brought the City Hall from the middle class area to the City Centre, seeking to move the axis of municipal power to the popular city.

It dates from this office the Anhagabaú Urban Operation, a project that aimed at City Centre improvement, making better use of vacant and underutilized properties, encouraging the preservation of historical heritage and residential use in the area. It provided exceptions to the land use legislation and the building code, allowing higher FAR (floor area ratios) and the transfer of development rights for listed buildings.

Although all the benefits proposed, there was few interest of the real estate market, since until the end of the project in 1994, only seven proposals had occurred, consuming only 13% of the additional building stock (Nobre, 2009). The higher densities allowed in the new of FARs did not constitute sufficient incentive to attract new investors to the City Centre.

The following two offices, Paulo Maluf (1993/1996) and Celso Pitta (1997/2000), despite continuing the discussions about the central area, changed their focus favouring the development of large real estate projects in the city’s Southwest Zone, where the highest income population lives, concentrating heavy public investments in several road works and removal of favelas, valuing even more urban development in this area.

Despite this, it was during this period that the PROCENTRO – City Centre Urban Requalification Program was created. The diagnosis presented in its creation document defined as the main problems of the Centre deterioration the difficulty of traffic access, circulation and parking; obsolescence and insufficiency of the real estate stock and deficiency of personal and patrimonial security (São Paulo, 1993). The proposals were a result of the discussions of the municipal government with central area businessmen who wanted to reverse the process of Centre decline, bringing back the elites. Despite all the incentive to urban renewal contained in the PROCENTRO projects, it also caused little interest from real estate market.

The Martha Suplicy administration (2001/2004), instead of just stimulating real estate development as an urban renewal strategy, decided to propose a new plan for the Centre, based on functional and social diversity, seeking to emphasize housing, employment, culture, leisure and education activities in this region. Social housing implementation became one of the main strategies of this plan.

For that reason, this office changed the composition of the PROCENTRO council, now coordinated by the Secretary of Housing and Urban Development (SEHAB) with a more diversified representation of the society than the previous one, adding representatives of professional institutions (lawyers, architects and engineers) and also from the housing movement. In 2003, after signing a € 145 million loan with the Inter-American Development Bank (IDB), the Central Area Rehabilitation Program – Ação Centro was launched coordinated by the Municipal Urbanisation Company (EMURB) responsible for City Hall major works.

The Ação Centro Program contained five lines of action:

1. Reversal of the real estate devaluation and recovery of the residential function;
2. Transformation of the economic and social profile;
3. Rehabilitation of the urban environment;
4. Improvement of transport and mobility;
5. Institutional strengthening of the Municipality.

The reversal of the real estate devaluation and recovery of the residential function would be obtained through the revision of the legislation, implementing the Social Interest Special Zone – Type 3 (ZEIS-3). The ZEIS-3 is a type of inclusionary zoning where at least 40% of new development area must be social housing units. The type 3 were enacted in areas with vacant land or underutilized buildings in the City Centre.

In order to reduce vacancy, the 2002 Strategic Master Plan defined that any building with more than 80% of its area unoccupied for more than five years in the central area could be expropriated by the municipality if it remained vacant. This was in accordance to the 1988 Federal Constitution that defined the conditions of urban property social function.

The “Living in the Centre” Program (Programa Morar no Centro) was also implemented, promoting social housing in the central area, handing by the end of 2004 many social housing developments[1] and favela upgrading financed by the Federal Saving Bank (CEF – Caixa Econômica Federal).

Complementing these actions, the Law of Selective Incentives was enacted providing tax exemptions for new companies and development in the central area, and both the Municipal and the State Government brought 11,500 public servants from various municipal and state departments to work in the City Centre, resulting in the recovery of local commerce, specifically bars, restaurants and small services.

The next office, Serra/Kassab (2005/2012) revised the Ação Centro program, causing a reversal in the ongoing process. The Nova Luz Project proposed the expropriation of several blocks near the Luz Rail Station, known as “Crackland”, to promote an urban renewal process based on an information technology pole development, many poor families were evicted from vacant buildings, and the City Hall pardoned millionaire debts in property municipal taxes of several vacant buildings.

[1] Asdrubal do Nascimento, Baronesa de Porto Carrero, Olarias, Residencial Parque do Gato, Riachuelo, Riskalah Jorge and Senador Feijó social housing developments.

4 SOCIAL HOUSING PRODUCTION IN THE CITY CENTRE AND THE REVISION OF THE ZEIS 3

Despite the changes in the “Living in the Centre” program, some social housing production occurred, often by the initiative of the residents themselves and not so much of the government. According to the Instituto Polis (2013), since the 1990s there have been 44 occupations of vacant buildings, accommodating almost 10 thousand families in the central area. However, the response from the government was three times smaller than the problem, since 2001 only 2,833 housing units were produced, of which 709 were financed by CEF, 858 by CDHU (State of São Paulo Housing and Urban Development Company) and 1,266 by the Municipality.

Some old buildings were renovated for the low-income population and the works were carried out by small contractors (Gatti, 2015). In their research on the implementation of the ZEIS 3, Samora & Hirata (2013) state that between 2001 and 2010 10,317 units were launched with 70 square meters of floor space and maximum price of € 1,800/m². Of this total, 3,567 units were located in ZEIS, or 35% of the total. The highest concentration of construction permits in ZEIS 3 occurred between 2006 and 2010, when 2,673 units were launched, 56% of the total period. According to them, new private development followed middle-class models because as 90% of the buildings constructed are in tower blocks of more than 10 floors and 44% of buildings have underground parking areas. By these parameters it can be affirmed that the population of low income was not met as predicted before. On the other hand, public developments followed the traditional patterns of social housing, as 44% of them are five floor high buildings to avoid lift costs.

The 2002 Master Plan earmarked one million square meters as ZEIS 3. By 2013, 51% of this area had already been consumed for real estate projects. Of this total, only 23.8% was built for public social housing; 22.1% was lower middle-class private dwelling; 22.2% was high-income development and 31.9% social facilities. This process of rehabilitation of the centre resulted in an increase of 63,800 new residents and the construction of 40,700 new homes in apartment buildings (Kara-José, 2013). The 2002 São Paulo Strategic Master Plan (Law 13,430/2002) was scheduled to be revised in 2006, but the proposal for revision was not completed in the last two municipal administrations. The review was started in the first year of Fernando Haddad office (2013/2016) through a broad discussion process and it was approved on July 31, 2014.

The master plan revision would be an opportunity to review the implementation of the urban planning instruments detailed in the 2002 Plan. Many of them did not achieve their goals in the way they were designed because they were not properly applied by the administration that followed its approval. In the case of ZEIS one can identify multiple aspects of conceptual misunderstanding, the inapplicability of its fundamental principles and the need for revisions considering the urban transformations over the last decade.

The new 2016 Master Plan brought significant advances in the viability of housing for low-income families: it increased from 964 to 2,542 the total number of ZEIS perimeters and from 145 to 478 the perimeters of ZEIS 3, destined almost exclusively for families earning less than three MW (€ 729). The most importantly change was the enactment of mechanisms to create land banking for the production of social housing, through the ‘Solidarity Quota’, resources derived from the large scale urban development projects (called Urban Operations) and the allocation of resources from the Urban Development Fund (FUNDURB). With the ‘Solidarity Quota’, any enterprise with a computable area above 20 thousand square meters must donate 10% of its built area for social housing, on site or on other land, or donate land equivalent to 10% of the total area project or donate an amount in cash equivalent to it to the FUNDURB (Gatti, 2015).

The creation of a land inventory for housing production is one of the major advances of the New Master Plan proposal, since it allows the municipality to face one of the greatest difficulties of housing management, which is to acquire land that is well located and therefore highly valued for social housing production. The areas earmarked as ZEIS are intended to guarantee the permanence of the low income population in their places of origin and to reserve parcels of land throughout the urban perimeter for the production of social housing, especially in the central areas, where the price of land makes it quite impossible the access to housing for the poorest population.

However, during the ten years ZEIS implementation after the 2002 Master Plan, the production of social housing in well-located areas only benefited families earning less than three times the minimum wage when was associated with public housing programs, produced on a small scale. On the other hand, the private market, which was responsible for the production of social housing and lower middle-income housing in combined enterprises in ZEIS, limited the service to families with incomes between 5 and 6 MW, since there was no obligatory percentage to attend lower income families.

With the new Master Plan, two social interest income brackets were created: Social Housing 1 (HIS 1) from 0 to 3 MW; and Social Housing 2 (HIS 2), from 3 to 6 MW. Priority was given to housing production for HIS 1: at least 60% in ZEIS 1, 2, 3 And 4; in order to guarantee the housing service for the poorest, who are majority of those who inhabit the perimeters of ZEIS and the highest percentage of the housing deficit. Even so, the most vulnerable section of the population, with incomes less than one MW, may not be included in the housing program if the local authority does not assume this commitment, since there is no minimum percentage allocated to it in the perimeters of ZEIS. This was a current debate during the review of the Master Plan, which was left out of the proposal because of the difficulty in measuring this demand. It is a population that lives in slums, favelas or even in the streets, and is at the limit of informality. This demand requires a specific housing policy other than that of housing finance with transfer of ownership, in order to reverse its condition of abandonment.

Considering that social housing production in ZEIS for lower income brackets has not happened over the last ten years and that the revision of the Master Plan has sought to join efforts to this, focusing on the role the government should play in this process, the question is whether the implementation of the resources as proposed by the new Master Plan will respond to this new expectation. If a major effort has been made to earmark new perimeters of ZEIS 3 in underutilized areas occupied by precarious housing with potential for housing production, should not resources be provided for the acquisition of this land and their production? The resources of the Solidarity Quota and Urban Operations are not prioritized to be applied in areas of ZEIS. The resources of FUNDURB are destined to acquire land ‘preferentially in ZEIS 3’, but not necessarily. According to the Master Plan rapporteur in the City Council, councilman Nabil Bonduki, making land available outside ZEIS would further expand the stock of land, since land already earmarked as cheaper ZEIS would be more easily acquired by other instruments. However, if there is no public initiative in housing production in ZEIS, these recorded lands may be frozen and idle, which would not necessarily be a bad thing, considering that these areas would still be ‘saved’ for future social housing production. The aggravating factor is that these areas are constituted predominantly by a population living in slums and in a precarious housing situation and that will continue without any prospect of improvements in their housing conditions so soon. Considering these aspects, the municipality should move towards the acquisition of these areas inside the ZEIS.

Nevertheless, for the viability of acquiring land, even if not exclusively in ZEIS, there are many sources: the solidarity quota, urban operations, FUNDURB and the instruments of property social use induction (PEUC – parcelling, construction and compulsory use of land), progressive property tax for unused land and buildings, real estate consortium, municipality right of preemption and abandoned buildings and land reclamation. But there is no reserve of resources specifically for the production of new units or renovation, especially in the area of ZEIS, whether for purchase or lease.

Although public resources can be earmarked for housing production, its priority allocation in the new Master Plan is for the acquisition of land. The main rationale for this was the priority to solve the land issue, since land prices are the biggest obstacle to the production of housing and the construction can be financed by other sources, such as the My House, My Life Program (PMCMV – Programa Minha Casa, Minha Vida), a Federal Program that finances housing acquisition and construction. With a land banking this difficulty would then be overcome for the production of well-located housing for the poor.

However, public policies must seek not only for financing the acquisition of housing through transfer of ownership, as it will continue to be inaccessible for the most vulnerable sections of the population, that cannot meet the requirements of formal financing, nor afford condominium expenses and new costs of formal housing, nor those whose work dynamics require residential mobility. The long-term instability of this model must also be considered, since changes in the economic or political conditions may compromise the granting of subsidies, not securing the tenure of the residents.

4.1 CHALLENGES OF PUBLIC POLICIES IN ZEIS 3 AFTER THE MASTER PLAN REVIEW

Considering the challenges for the ZEIS 3 to become viable as an instrument for access to housing and permanence of the poorest population in the central areas, a research was initiated under the current FAUUSP-FAPESP post-doctoral program to verify the performance of the municipal public policies on the areas earmarked as ZEIS after the revision of the Master Plan. Among the policies underway, three active policies on the areas of ZEIS are being verified: the application of instruments that induce the social function of property, whose notification of the PEUC will be dealt with here, the application of Municipal Fund (FUNDURB) resources and the housing policy guidelines of the new Municipal Housing Plan. The survey will still have the data updated with the end of the current municipal management and will also present the survey on the approval of enterprises in ZEIS 3 that used the rules of the new Master Plan approved in 2014, in order to verify who are the developers in ZEIS, what type of development is being produced and which demand is being met.

Regarding the application of the instruments that induce the social function of property, they were regulated by the Master Plan and implemented by the DCFSP – Department of Control of the Social Function of Property, inside the SMDU – Urban Development Municipal Department. The three instruments that induce the social function of the property will be given successively, in the following order: Parceling, Building and Compulsory Use (PEUC), Progressive Urban Territorial Property Tax (IPTU Progressive in Time) and Expropriation through Payment in Securities Public Debt, to be initiated by notification of the owner of the urban land not built (property with an area above 500 square meters with FAR equal to zero); underutilized (property with an area of more than 500 square meters whose FAR is lower than an specified value); and where there is at least 60% of the area not built for more than one year. From the notification by the PEUC, the owners will have up to one year to present a project, two years to start the works and five years to complete them. After a period of five years, the progression of the IPTU rates can be initiated, and after five more years the expropriation can be done.

ZEIS 2, 3 and 5 are considered priority areas for the application of the instruments that induce the social function of the property, among others, which also include the City Centre, amongst other areas. The PEUC notification was initiated within the ZEIS inside Urban Operations from the fiscal registry of the Finance Department. This department crosses the data from plot areas with the built-up areas, providing the data for the identification of underutilized and non-built properties. For unused real estate, there is no database, only a study on vacant buildings. The identification of the unused ones is the great challenge for the City Hall, since it is done through surveys, by a reduced team, and from the reception of information from municipal councils and social organizations, as well as more recently the implemented Collaborative Map by the City Hall to identify the social function of property ownership. From the crossing of ZEIS perimeter data with PEUC notifications made available until August 2016, it was possible to identify the notification of 116 properties reported in ZEIS 3 (of the 749 existing perimeters), compared to the 258 mobile units reported in ZEIS 5 and 544 Buildings reported outside of ZEIS, according to the following map, where it is possible to visualize the low incidence of areas of ZEIS 3 reported by PEUC.

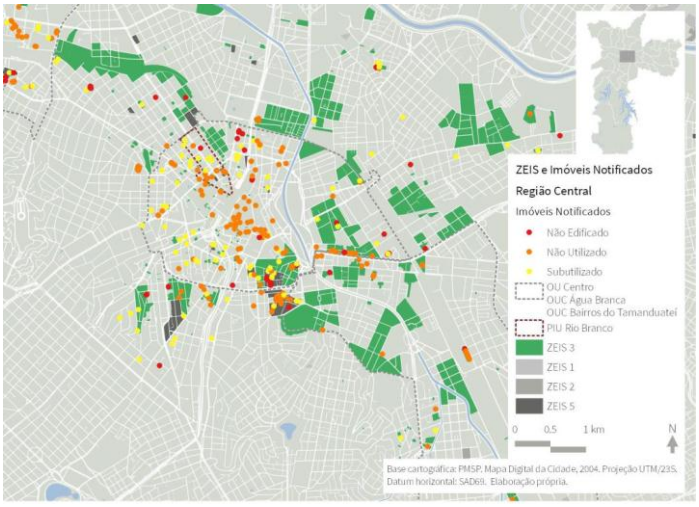

Figure 2 – ZEIS and Buildings notified by PEUC in the central area.
Source: elaboration by the authors

The municipality justification for the low incidence of notifications is mainly due to the characteristic of ZEIS 3, where there is a high incidence of buildings built, but not used, or of irregular use and occupied by precarious housing, such as tenements, which in practice are in use. And it is precisely these properties that do not have a database for notification, depending on surveys and cross-checks of data from sources other than the official databases.

Buildings occupied by housing movements, for example, or illegally occupied, are not notified, so that the City Hall does not legitimize repossession processes, thus constituting against the right to housing of the occupants. However, of the 544 properties reported outside ZEIS, 349 correspond to the unused category within the perimeter of the City Centre Urban Operation, which may be justified by the notification of buildings identified in the surveys.

5 FINAL CONSIDERATIONS

The Ação Centro Program proposed an integrated rehabilitation of the central area with a plural vision, based on: the recovery of urban space and public buildings; the promotion of new commercial activities; the definition of a strategy of occupying vacant land with social housing; the promotion of public policies for vulnerable groups. So, the program aimed to promote both the functional and the social diversity of the area. Change of the municipal administration has considerably modified the program, focusing on urban renewal of an elitist character in the Luz region.

The attempts to fix the low income population as a resident in this region ended up encountering resistance from the owners, who did not want to lose the expectation of their land valuation. The part of the Program that was implemented managed at least to reduce physical decay and housing vacancy. The arrival of thousands of civil servants and the recovery of urban space and public buildings, despite not reversing the production dynamics of the metropolis, managed to attract private investments in the occupation and recovery of several properties, without causing a large expulsion of the low-income population. However, the current political forces seem to direct the current public policies for the Central Area to a process of renovation of its urban and social fabric.

There was an omission of the municipality that resulted in the non-implementation of the social housing units sufficient enough to meet the demand. The ZEIS 3 tool, designed specifically to meet the lowest income strata (up to 3 minimum wages), was not working and social housing in the city center continues to face many threats. The Federal My Home, My Life program implementation resumed to credit and housing financing, with a paradoxical effect, as it ended up causing a rise in land prices throughout the city and in the country (property values doubled in only five years).

Finally, a new proposal for the implementation of housing developments in the center was launched by the State and the Municipality, in the model of a PPP in which only 16% of the 20,221 units envisaged are destined to the lower income strata. So far, it seems that the occupation of empty buildings promoted by housing movements is the only way to ensure the right to stay and fight for decent housing in the central area for the lower income most vulnerable groups.

The cross-referencing and knowledge of the motivations for which there is little incidence of PEUC notifications in ZEIS 3 show us how existing instruments to guarantee the social function of property need to be articulated with a specific housing policy for precariousness existing in areas of ZEIS 3, in order to achieve the objectives inherent to the demarcation of central areas destined to the production of housing of social interest. The lack of an action policy focused on the perimeters of ZEIS can contribute to the maintenance of existing housing precariousness and to the idleness of these areas, since with the review of the Master Plan, prioritizing the perimeters of ZEIS for HIS 1 make difficult to the private market to undertake land in areas earmarked as ZEIS 3.

Considering the impossibility of the private market to produce housing for the lower income brackets in well-located areas, the new Master Plan reinforces the role of public power as a promoter of social housing in the ZEIS perimeters in order to reverse the 2002 Master Plan logic, which focused the responsibility for this production on the private market. We still have to understand how and with what housing programs the ZEIS will fulfill their role as a tool for democratizing access to land. Municipal Management will need to be committed to the acquisition of land in areas earmarked as ZEIS and in the application of resources for

a social housing production that is not only linked to housing financing, but also to the creation of a public park that promotes access to housing without transfer of ownership and guarantee the permanence of the poorest in real estate valued areas.

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ID 1520 | COLLABORATIVE HOUSING SHAPING NEW FORMS OF URBAN REGENERATION: AN ITALIAN APPROACH, THE CITY OF TURIN

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1 INTRODUCTION

The concept of “collaborative housing” encompasses various perspectives on the housing issue: from the scale of single architectural project to the broad neighbourhood dimension, involving different actors and networks and with a specific attention towards social capital and the role of the community. The main research question of this paper is whether a collaborative housing development has an effect on the larger neighbourhood. The aim is addressing the topic focusing on the urban regeneration/revitalisation effect, in order to understand if collaborative housing can be an aid against social exclusion and marginalisation related to housing distress. Therefore, the author intends to investigate whether the development of collaborative housing can be a mean to increase social cohesion and strengthen community involvement.

The Italian case study can contribute to an international comparison: Italy constitutes a particular territorial context in Europe due to the scarce investment on public housing and the irregular attention of national governments and national policies on the social housing sector. This case allows to discuss the definition of collaborative housing in a historical and place-specific perspective.

The practices developed in Turin, a metropolitan city in the North-West of Italy, show a comprehensive approach to the housing issue. In Turin public and private local stakeholders promoted a general frame of actions to deal with social exclusion and marginalisation related to housing distress. The city’s approach indicates that collaborative housing can promote new forms of intervention in the urban contexts.

The city of Turin is also a national well-known pilot case for urban regeneration practices, strategic planning and integrated approach to urban problems. In the past decades the local government has fostered the debate and the development of innovative practices to tackle social and economic challenges: the city had to deal with the post-industrial phase, re-inventing its identity, image and vision for the future and managing socio-economic inequalities. Therefore, the theoretical framework implies the reflection on the national housing policies and the path-dependent dynamics taking place in the country and in the local case study.

The variety of housing practices established in Turin shapes a broad scenario of different tools and mechanisms to reach various forms of housing distress and social inequalities. The analysis of these practices contributes to both the definition of “collaborative housing” and the focus on typologies, actors and residents involvement, values and tenures. The reflections on these forms of collaborative housing are linked to their future challenges: financial and temporal sustainability in the long term, the relation with the other welfare sectors, and the role of private actors.

2 COLLABORATIVE HOUSING

Since the 1990s many European countries have seen the development of a wide range of selforganised forms of collective housing provision. These take a variety of shapes, including Community Land Trusts (CLTs), co-housing, residents' cooperatives, self-help and self-build initiatives, experimental work-life communities, ecological housing communities, new settlements based on (local) community asset ownership, etc. While not entirely new, this recent wave of collective self-organised housing feature some new aspects and approaches, including concerns for wider social inclusion and cohesion as well as affordability and higher environmental sustainability standards.

"Collaborative housing" has been adopted by many researchers and practitioners as an umbrella term to encompass the wide variety that these forms of housing can take. The term suggests that collaboration among residents in housing provision represents one core aspect of all different models (Fromm, 2012; Vestbro, 2010). The international literature refers to a broad variety of experiences with the characteristics of co-housing (see the special issues of the journals: Built Environment 38/3, 2012; Urban Research & Practice 8/1, 2015). Therefore the focus of research on collaborative housing is mainly on its ability to ease residents' daily living tasks and improve residential social contact within a self-created community (Fromm, 1991; McCamant & Durret, 1988; Vestbro, 2010); less so on their effects on the larger neighbourhood as a stabilizing and instigating force, in the provision of services, or as an aid to the needs of specific groups of residents.

In this paper the meaning of "collaborative housing" will be stretched encompassing not only cohousing, but also other forms of housing sharing services, promoted by public and private actors, involving not-for-profit associations and supporting the daily lives of residents.

3 ITALY: IRREGULAR ATTENTION FROM THE STATE AND HIGH HOUSING DEMAND

The strength of traditional social housing policies has ended with the neo-liberal turn and the withdrawal of the State from housing as a welfare sector. In some European countries important strategies are still developed by the national state but the Italian situation is different. Italian housing policy is traditionally residual and oriented towards home ownership. After the strong investment in housing after the Second World War, during the 70s and 80s housing sector registered the withdrawal of the State from this policy. Then, from 2000s national Italian governments enforced various contrasting policies. Every government has promoted different mechanisms to address housing need, focusing on specific categories of people and implementing specific tools. This turnover has created a variable picture of Italian housing policies. Different laws and plans have started targeting the institutional and legislative framework in order to reform the sector and promote rental housing, but public-private partnerships (especially triggered by the system of real estate funds introduced lately), cannot be considered as the solution for the pressing and urgent housing need. Today, a structured response designed strategically for the long-term housing system would be the most important achievement for the country, surpassing the fragmented and short-term initiatives of the past decades. Neo-liberal turn and welfare cuts are pushing to enhance the importance of private actors and self-made solutions. This tendency, which is common to all Europe, implies a certain degree of spatial imbalance, since not all territories can afford wise self-initiatives, ethical private investors and local authorities that promote empowerment of their communities.

Families and social structure have changed in the last decades, so the housing demand have become highly fragmented. The number of family members has decreased and been transformed, the population has grown older and the number of families has increased (formed by only one or two people) compared to the past[1]. The family structure has also changed with the new forms of couples, since divorces, unions, separations have created single-parent families or families with different parents. Spatial variability has diminished. Moreover, internal mobility has undergone a reduction, and the process of migration towards the biggest cities is not so strong anymore. Home ownership is strong and has kept increasing (Indovina, 2005).

[1] Birth rate has decreased since the 1960s, while the life span has improved (longevity can be calculated as around 80 years nowadays).

Families, as in other Southern European countries (Allen, Barlow, Leal, Maloutas, & Padovani, 2004), play a main role in solving housing issues. Family networks substitute the State providing help to find accommodation and/or economic resources. If the national housing policy can be considered weak and never able to cope with the demand, solidarity has played an important role in compensating for the welfare state's weaknesses. Despite these attempts, the whole problem was not solved and the housing market has proved to be the foundation for many social and economic problems, especially considering the imbalance between housing demand and supply (Governa & Saccomani, 2009).

Housing deprivation no longer concerns only traditional low-income families but new, numerous and heterogeneous population segments, which were not previously affected by this problem (Tosi, 2007). Moreover, the changes in post-Fordist societies and the impact of the globalisation process, mainly related to labour market flexibility and to the widely feared risk of unemployment (Clapham, 2006) has given rise to new forms of social fragility and poverty, which has strong consequences for housing needs.

Real estate agencies have developed and are now ruling the sales market. The cooperative sector has been strengthened, while real estate developers keep polarising (Boeri, Lanzani, Marini, & Associazione Interessi Metropolitani, 1993). A real estate boom could be observed from 1997 to 2005, housing prices increased by 51%, in big cities property sales rose by 65% and rent prices grew by 85% (Anci-Cresme, 2005). Public-private partnerships and negotiation practices have become more common, and so has the use of different financial resources.

A clear picture of the housing demand is hard to get in Italy. In terms of quantity, demand-related data are partly measurable with no clear details about how many people have temporary housing needs or who has affordability problems in the private housing market. Both the number of people in the lists for social housing and the total amount of public dwellings are registered, so the public housing situation is better defined. For instance, in Turin there are around 18,000 subsidised dwellings[1] with around 10,000-13,000 applicants each call (13,000 in 2014). Every year only few hundreds of dwellings are freed and change their tenants. Adding the number of families with emergency housing conditions (e.g. eviction) and the ones at housing risk to the waiting lists would strongly increase the demand's numbers.

The high degree of differentiation among local contexts, regions, provinces, municipalities, North and South of Italy shapes the Italian scenario. The housing need is pressing throughout the country, shaped by different local characters (changes in the housing demand, number of empty dwellings, percentage of illegal housing or squatting in public housing, etc.). Urban dimension, extent of housing needs and local actors influence the outcome of practices. Despite these local differences, the subsidised housing sector responds to a small share of housing hardship and is unable to offer a solution for all applicants. Therefore, considering the current data about the impact of the financial crisis and the growing socio-economic inequalities in Italian cities, housing can be acknowledged as one of the main pillars of welfare to be addressed in order to improve social cohesion and social inclusion at a national scale.

Despite the controversial national scenario (various governments' turnover), in the local contexts the concept of social housing has been expanded and various types of interventions are now part of public housing policies (Caruso, 2016). Public authorities (Municipality, Regional Administration and territorial housing agency) are making an effort to take care not only of the most vulnerable classes of the population, but also of different categories of people with housing needs. In fact, the cities' public entities and their private not-for profit actors acknowledge the growing diversity of the housing demand. The measures adopted focus on the differentiated demand, namely young people, the elderly, temporary residents and immigrants. The intention is to adapt housing policies to social groups that are experiencing housing hardship or which are at risk of housing deprivation.

[1] Instead, the main metropolis in the North-West of Italy, Milan, has about 60,000 dwellings and 1.3 million citizens. The size of subsidised housing also influences its management in terms of financial resources to maintain it, managerial capabilities, social services to support the inhabitants and avoid social polarisation and social exclusion.

4 TURIN: FROM URBAN REGENERATION TO HOUSING PRACTICES

Turin, the regional capital of Piedmont, counts about 900,000 inhabitants and is located in the North-West of Italy. It has always been an industrial city, the hometown of the car factory FIAT. Nevertheless, the city has been looking for a new identity since the 1990s, and new cultural and economic sectors have been promoted to surpass the Fordist image. The city has a past of one-company-town linked to the automotive sector and FIAT industry, then in the post-Fordist phase it became an experimental field for several spatial planning strategies (strategic plans, urban regeneration processes, urban development projects changing its urban structure). Housing policies in Turin were developed in the last decade without any form of advertising: there was a temporal agreement in favour of housing as priority among public authorities (Region and City Council), local bank foundations (ethical investors), and tertiary sector.

During the past 25 years, changes in social, economic and physical domains marked a huge transformation for the city of Turin. From 1993 a change in the national electoral law allowed the direct election of the Mayor and Turin is a good example of the "turn" of Italian politics at a local level. Various forms of urban development were implemented following the Masterplan (1995). The urban structure was transformed by substituting industrial areas (especially those located along the railway system, which is now mainly underground) with public and private housing and public buildings. This axis is called the backbone, spina[1]. The local government's priorities, defined since the mid-90s, have enabled Turin to implement many innovations in terms of urban policies, above all in the field of urban regeneration (Regione Piemonte, 2004) and strategic planning. Progetto Speciale Periferie (PSP, Special Project for the Peripheries) was an integrated programme of urban regeneration initiatives organised in various neighbourhoods by applying the area-based integrated approach. A Pilot Project of Urban EU initiative (called "The Gate") and an Urban 2 initiative took place in Turin, (in the area of Porta Palazzo and Mirafiori, respectively). Furthermore, Turin was the first city in Italy to promote a voluntary strategic plan, which involved the city's actors. The city experimented with this tool twice in the 2000s. A third strategic plan was developed in 2015.

In 2006, the city hosted the Winter Olympic Games. And since then it has made every effort to attract and organise a large variety of cultural events (Rossi & Vanolo, 2013). The old industrial spaces have been transformed and a new season of real estate expansion has taken place. Numerous cultural and sports buildings were built to host the Games and other events. The Olympic buildings have generated issues about the re-utilisation of cultural and sports buildings and the sale of several new residential constructions in the free market. Nevertheless, it is also important to highlight the presence of subsidised and assisted housing in Olympic housing projects[2]. Meanwhile, focusing on the infrastructural field, the first metro line was built, the second one is currently being designed and various car sharing and bike sharing have been launched. The scenario of projects, initiatives, strategies and urban development show a city with multiple paces and interests; precisely, the political élite demand and promote competitiveness (economic transition, Olympic Games, international events); hence, innovative approaches and tools (urban regeneration, strategic planning, place-based approach) are applied to overcome social polarisation and reinforce social cohesion.

For instance, different public authorities at the city level (i.e. planning, social services, police forces) have cooperated to target neighbourhoods presenting complex problems with an integrated approach (Saccomani, 2004). If this was a time to experiment with urban policies and develop the capacity of "discussing and deciding" to govern the change (Bagnasco, 2008), the physical developments promoted by the Masterplan were implemented without particular concern for the social dimension. In the wake of other European cities, Turin exploited its urban development to reinforce the real estate sector and the so-called neo-liberal policies (Moulaert, Martinelli, Swyngedouw, & Gonzalez, 2009; Moulaert, Rodríguez, & Swyngedouw, 2003), paying scarce attention to architectural quality and the integrated approach.

During the past decade, public and private actors have developed several housing initiatives in the territorial framework of Turin. Coming from different perspectives and points of view, various stakeholders have implemented housing solutions to meet a broad range of needs. Despite the scarce financial

[1] The current Masterplan, approved in 1995, supported the revitalisation of the real estate sector. Building production has been accelerated following the idea of transforming the areas close to the railways and dismissed industries. The sector has fallen from 2008.

[2] For instance, 342 units of one of the Media Villages built for the Olympic Games were transformed into social housing. In the Athletes Village, 204 units were converted into social housing.

resources, virtuous actions have dealt with the housing issue and were unable to solve it but can be considered as “pillows” slowing down the impact of public housing residualisation and the financial crisis.

Public actors (Piedmont Regional Administration and the City of Turin) triggered the launch of local housing policies through a programming phase and specific attention towards the differentiated housing demand. The work of public authorities has been combined with the initiatives of bank foundations[1] and the services sector (associations and not-for-profit organisations) in order to shorten the gap between demand and supply, dealing with structural issues of the Italian housing system.

The city of Turin has three documents (norms and plan), which must be taken into account when describing its housing policy in the last years:

- change in the city’s Masterplan by providing 10% of agreed housing in a new housing development (over 4,000 m2) (Variante 37/02, art. 6, section 10bis Norme di Piano) in order to increase social housing and promote the social mix in new urban developments;
- guidelines promoting the social mix in the neighbourhoods where urban regeneration programmes are in force (Municipal Council Decree no. 06990/012 of 31/08/2004);
- municipal Housing Plan 2009-2010 (Piano Casa, D.C.C. 205/2008) that describes the actual situation and defines the strategies and initiatives for the next years.

The first two tools represent the intent to improve the social mix in both the new urban development and the older subsidised neighbourhoods. The financial character of these measures is important, precisely the city is not investing big amounts, but alternative procedures (low-budget) are established in order to encourage social polarisation in the city. Following the first norm, the Municipality has the pre-emptive right to purchase flats within 12 months or else the flats will be rented out as agreed housing. Imposing this norm to private housing developers can be considered a burden for the private housing development sector, while new social housing flats are increasing the supply without a real public investment.

The guidelines promoting different forms of action are, instead, meant to improve the social mix in social housing neighbourhoods. For instance, guidelines promote the creation of “special lists” of people who can access social housing. If normal waiting lists are defined according to economical, social and health criteria, “special lists” can include elderly people, young couples, migrant workers waiting to go back to their countries, disabled people and police officers. Using “special lists” allows to mix the traditional most vulnerable people with these categories of population, thus re-balancing the community.

Turin’s Housing Plan frames the housing situation in the city in 2008, but it also promotes several initiatives that were already implemented in the previous years:

- a public agency of intermediation for the private rental market called Lo.C.A.Re. established in 2001 and extended to the metropolitan area from 2010; it provides economic incentives and guarantees owners an economic contribution for the tenants; since 2001 this initiative has supported around 4,000 tenancy agreements;
- new temporary residences for various categories of people (temporary city users, elderly, single parents, etc.) in housing need (called: Social Hotel “Sharing”, Social Collective Residences, Supportive Condo); the beneficiaries are individuals or families needing a dwelling for a limited amount of time (18 months maximum) for economic, occupational or family problems; in some cases, specific categories of people are added to these projects in order to complete a path towards housing independence with social services; public or private services are present in the buildings in order to assist both inhabitants and the neighbourhood’s citizens, thus maintaining relations with the rest of the urban area; some of these residences can be considered part of urban regeneration initiatives due to their transformational power to change dismissed buildings and areas;

[1] In Italy bank foundations play the specific role of ethical investors and complementary promoters of social policies. The general goal of these bank entities is to provide services and activities of general interest, which have a value for the community. These are not-for-profit entities and, according to Italian law (Legislative Decree 153/1999), they can operate in specific sectors, such as education, health, charities, religion, social housing and local development, civil rights, care of the elderly, sports, scientific research, environmental protection, art and cultural activities. In the housing and social housing sectors, they can invest in urban regeneration projects, in public-private partnerships, and they can provide public services.

- promotion of forms of co-housing, called Supportive Co-housing (Coabitazioni Solidali): since 2007 the city has experienced young people settled in subsidised neighbourhoods in order to support integration and cohesion in the multi-problematic social housing settlements, but also promoting young people's independence from their original families; the young residents offer the community 10 h/week of voluntary work, and the municipality gives them a 90% discount on the rent; the positive outcomes of this project have led to its application in other areas of the city;
- support of the private rental market and of evicted families; a specific form of local subsidy ("Safe from Eviction Fund", Fondo Salvasfratti) was created through a partnership between the municipality and the local bank foundations (Compagnia di San Paolo and Fondazione CRT[1]); the fund is used to find an agreement between families evicted from private rental dwellings and the owners in order to keep the families in the dwellings or to find other suitable accommodation; another subsidy ("Rent Supporting Fund", Fondo per il sostegno alla locazione) supports vulnerable families paying a private market rent, and is provided throughout Italy; such a tool allows to financially support the vulnerable families, which could not access subsidised housing due to the lack of dwellings;
- organisation of the public real estate assets of the city of Turin, including the sale of public dwellings owned by the city outside its boundaries, purchase of new dwellings, specific forms of agreements between private developers and the municipality, and the implementation of the Masterplan's norms (Variante 37/02, explained previously) to obtain new dwellings; the goal of the municipality is to recover financial resources and invest them in new dwellings, thus increasing its assets;
- support young citizens in order to promote their housing independence; several measures are guaranteeing loans and subsidies to younger generations to promote their access to the rental market or to home ownership, but also the availability of public dwellings or other forms of temporary housing.

The city intends to provide differentiated solutions to meet the various housing demands by targeting the various market niches (subsidised housing, housing subsidies, rental market, etc.). The different measures show the public interest for specific categories of people like the elderly, migrants, temporary users of the city, young people with precarious jobs, evicted families, etc. The city's officers working on these issues are those who were previously involved in urban regeneration projects. They can be considered genuine institutional capital. They promote the integrated approach and cooperation with other public sectors (social services, health, police, etc.).

The city of Turin tackles different challenges with these initiatives, namely social mix, housing affordability, low rental market percentage, provision of services in some neighbourhoods, etc. The whole scenario shows the general goal of improving living conditions in the city.

As stated above, the two local bank foundations are also investing in housing to meet the housing need. In particular, Compagnia di San Paolo's housing programme (Programma Housing) promotes experimentation of new housing models and practices, financing of housing initiatives (basically partnerships between the services sector and public authorities), and housing funding. The bank foundation has established a real estate agency called Stesso Piano, similar to the municipal one, to support young people in the private rental market; and two temporary residences hosting vulnerable families and people experiencing housing distress, entrusting the residence to actors of the tertiary sector. Associations and NGOs are financed by this entity in order to address the housing need of specific categories of people (women, elderly, migrants, etc.) with pilot projects. The initiatives of Compagnia di San Paolo seem similar to those proposed by the city; in fact, they constitute a complementary actor providing housing solutions and funds for social experiments.

[1] In Turin there are two bank foundations that provide several local services and activities, either as sponsors or promoters. Compagnia di San Paolo and Fondazione CRT are active and important actors in the city and many cultural and artistic initiatives, educational and health programmes are financed by them. In particular, Compagnia di San Paolo is the sponsor of various initiatives and projects in the housing sector and has a specific programme called Housing Programme (Programma Housing).

5 CONCLUSIONS

Turin's practices are acknowledged as new service arrangements (in terms of organisational structures, processes and types of service offers) in the local welfare system concerning the economic and political frameworks (funding, decision-making procedures and participation). They draw on the city's urban regeneration and integrated approach (as streams of values), including both bottom-up and top-down elements, and various local stakeholders (public and private at different scales) implement a variety of practices.

The path-dependency character is based on the traditional integrated approach of the city's urban policies but also on the urban regeneration phase that strongly affected social housing neighbourhoods.

These characters can be clearly noticed in housing initiatives with focus on a multiple goal policy (social, physical and environmental) promoted by public-private partnerships, the use of inclusive tools, concern for the most problematic social housing neighbourhoods and vulnerable citizens.

On the other hand, the territorial specificity is related not only to municipal public authority and its institutional capacity (institutional milieu or capital). The team of civil servants employed in the public housing sector is the one that was previously in charge of urban regeneration projects with an integrated approach (URBAN initiative projects and other programs)[1]. Their skill can be recognised not only in the way they cooperate with different public authority departments and deal with multiple dimensions of a social and urban challenge but also in the joint action with other local stakeholders (bank foundations, regional public authority, services sector). This cooperation allows experiments and improves the definition of new strategies.

Despite the absence of strong actors in the social housing sector (such as housing associations present in Northern and Central Europe), the partnerships among public and private actors shows a coherent picture of Turin housing policies towards differentiation and interest in new flexible and temporary forms of response. Management of the existing stock is an expensive duty in Italy, especially for the conditions of the old social housing buildings. In the case of Turin, the city takes care of some housing pilot projects with a guiding role (temporary housing residences, social/supportive ones) and makes an effort to maintain a sort of social support in older social housing neighbourhoods (i.e. initiatives about social mix and insertion of young people) that are well-known for their social issues focused on by former urban regeneration practices.

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ID 1521 | THE DEVELOPMENT AND IMPACTS OF CULTURAL URBAN REGENERATION IN BEIJING-WITH CULTURE QUARTER, 798 ART DISTRICT AS EXAMPLE

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1 INTRODUCTION

Urban regeneration and cultural urban regeneration are familiar terms in the western planning field, because of the long-term practices and researches. According to academics, cultural urban regeneration is an urban revitalization approach revolving around culture. For instance, the North Quarters in Manchester reconstructed and transformed from cotton manufacturing into a cultural quarter, providing job opportunities, forming galleries and workshops clusters, fostering multi-culture inclusion and beautifying the environment.The cultural quarter which gathers cultural activities, production and consumption in previous dilapidated place has been practiced rather successfullyin western cities. Factually, homogeneity, over-commercialization, gentrification, disparity of society and short-term effects are also appeared in cultural quarters in the late development stage. For many developing countries where urbanization and urban regeneration are underway at same time; the "cultural urban regeneration" is an advanced term which requires explanation, analysis and discussion. As the world's fastest urbanized developing country, China faces emerging urban problems such as economic structure transformation, environment pollution and heritage conservation. In recent 10 years, more cultural events and cultural projects are held or constructed in Beijing and attract attentions from international planning field. It should be admitted that the political, economic and social contexts in Beijing are distinct with western cities; thus, whether the concepts of cultural urban regeneration and cultural quarter practice in Beijing should be proved

Generally, there are three steps in this research; literature review, data collection and finally analysis and discussion. The concept of cultural urban regeneration and cultural quarter, impacts of cultural urban regeneration in both sides are reviewed in the second section. To face international readers, Beijing and Chinese planning systemis briefly introduced. After data collection, results are discussed, revolving around

798 Art District, in terms of the development process, current situations, physical, economic, social and political impacts. To summarize the research, the key findings are finally discussed for further studies.

2 LITERATURE REVIEW

2.1 CULTURE URBAN REGENERATION

Cultural urban regeneration is a specific approach in the whole range of urban regeneration; thus, descriptions and definitions start from urban regeneration. In the west European context, Couch claimed (2003) that Arab-Israeli war in 1973 is the turning point of economic growth followed by social segregation, physical deprivation and environmental problems. Generally, urban regeneration is defined as a response involving strategies, policies and projects to survive run-down cities in physical, economic, social and environmental aspects (John and Evans, 2008). Urban regeneration covers the problems about urban areas, urban processes and urban people without fixed principles, and the contents are also flexible due to diverse characteristics of cities (Tallon, 2013).The development of urban regeneration is supposed to adapt to the pace of the urban change (Tallon, 2013), and because of this, there are different features of urban regeneration in different periods.In the early stage, the urban regeneration emphasized the physical transformation, for example, the slum clearance was proceeding in Europe (Haussmann's refurbishing in Paris) and America (Couch, 2003). During 1980s, social inclusion and economic initiatives were integrated in urban regeneration process with physical revitalization in west European countries (Couch, 2003; Vickery, 2007). Following that, the increasing urban population and environmental pollution raise the attention of the environment in urban regeneration process (Tallon, 2013).

In the late 20th century when the economic and social situations have been changed from manufacturing economy to knowledge economy, the cities in most western countries and several cities in south world have been influenced, entering the post-industrial era (Bell and Jayne, 2004). Culture which refers to production and consumption of art rather than only "high art", as the core point of city economic development was considered by UNCHS (Habitat) in the globalizing transition process (Wansborough and Mageean, 2000). This economic structure change also manifests the increasing of people capitals and the demand of cultural consumption. People trace the post-modern culture (clothes, music and films) to show their lifestyle; in the meantime, governments set place-marketing strategies to create distinguish identities and enhances competitiveness through culture (Wansborough and Mageean, 2000). In order to cope with demand of cultural consumption and keep prosperous economic growing, culture was recognized as an engine, contributing to holistic urban regeneration and solves multifaceted urban problems (Tallon, 2013).

The way of urban regeneration revolves around culture is classified into three models by DCMS (2004): culture-led urban regeneration, cultural regeneration and culture and regeneration.

Culture-led urban regeneration: This regeneration mainly sets cultural activities as driver and catalyst followed by economic, social and physical performances, resulting in impacts on different dimensions (DCMS, 2004, pp5).

Cultural regeneration: It is an integrated process that cultural activities connect with other economic, social and environmental activities in implementing an area strategy (DCMS, 2004, pp5).

Cultural and regeneration: Regeneration process just uses the feature of cultural activities which are not integrated with area strategies and projects (DCMS, 2004, pp5; Vickery, 2007).

Although there are separate meanings of each ideal model, actual practices may intersect between these models. In the case of Albert Dock, cultural activities should conform to the intention of Mersey River environmental conservation. Therefore, three models can be roughly named as cultural urban regeneration.

2.2 CULTURAL QUARTERS

There are several methods of cultural urban regeneration which consists of culture quarters, carnivals and festivals, sport-led regeneration and other developments without precise names. Cultural quarters is one of

them mainly concerned and practiced in cultural regeneration process (Tallon, 2013). The role of people in regeneration has been underlined by Turok; correspondingly, creative class is a key element of cultural quarters. Additionally, Florida (2005) regarded artists, designers, actors and elite in creative thinking as core members and their related activities should be gathered into a cluster to improve competitiveness.

Culture quarters can be thought into symbolic and physical perspectives. In symbolic perspective, cultural quarters should compass diverse activities dominated by cultural production activities and entertainment consumption behaviors (Tallon, 2013; Roodhouse, 2010). Apart from creative class, other people from different social backgrounds, different scales of enterprises and even government departments are responsible for these activities (Montgomery, 2003). On the other perspective, the cultural quarters are normally located at precious historic areas in run-down areas covering at least a round area with 400-meter radius (Tallon, 2013; Montgomery, 2003). Moreover, cultural quarters highly focus on the public realm where activities are held, such as friendly footpaths. Beyond that, the lasting time of activities is suggested to extent until night (Montgomery, 2003). There is a gap between the ideal image and real performances; therefore, whether culture quarter bring long-term and effective benefits to cultural regeneration is vital to be measured.

The process of emerging and managing a cultural quarter which is briefly classified into two modes is complex and various attributed to local circumstances. Participants including creative class, diverse types of enterprises, organizations and governments all engage in at different phrases to procure their interests. Several focused cultural quarters; Soho in London, New York's Lower East Side, and the Left Bank in Paris emerged because of fertile cultural capitals and potential cultural facilities connecting with abutting learning and innovation zones through a bottom-up method which means cultural quarters are formed spontaneously (Montgomery, 2003; Roodhouse, 2010). Cultural quarters will also be deliberately established as a regeneration policy, which refers to another top-down method (Montgomery, 2004). The primary step of cultural quarter is to beautify the physical environment to attract and sustain the cultural-related production and consumption, regardless of whether establishing modeis adopted (Roodhouse, 2010). Importantlyregardless of whether establishing modeis adopted (Roodhouse, 2010). Importantlyregardless of whether establishing modeis adopted (Roodhouse, 2010). Importantly

2.3 THE IMPACTS OF CULTURAL URBAN REGENERATION

Cultural urban regenerations are popularly adopted by cities in the global scale, because positive impacts of cultural urban regenerations extent to physical, economic, social and cultural aspects. The refurbishment of dilapidated buildings protects valuable heritages and upgrades physical appearance in surrounding areas (Tallon, 2013). Not only cultural industries and employments are inspired, but also other related industries such as tourism integrated with cultural urban regeneration are thrived (Tallon, 2013; Yang, 2012; Roodhouse, 2010). Through active participation, the senses of identity are created and different stakeholders achieve their targets in these creative, inclusive, and vitality venues (Tallon, 2013). To the culture itself, it is diversified and strengthened, which enhances the cultural power in local, regional even national scales (Yang, 2012).

On the other hand, cultural urban regeneration projects may suffer from troubles and cause negative consequences. Homogenization of cultural regeneration shows in physical landscape, cultural images and economic activities (Tallon, 2013). Over-commercializationis always connected with gentrification and social exclusion that impoverished residents are firstly forced out; gradually previous artists or small and medium-size enterprises in these areas leave owing to high rents (Tallon, 2013). Additionally, elderly people and children are always excluded by unsafe environment with high commitment rate and improper night activities (Tallon, 2013). For example, the participants are biased toward young adults, creating drinking culture and young-dominated culture with several unhealthy even illegal behaviors, which differs with the purpose of inclusion and multicultural interaction (Jayne, Holloway and Valentine, 2006). Therefore, the impacts and the efficiency of government interventions are significant to be evaluated in short-term and long-term.

2.4 WHETHER THERE IS CULTURAL URBAN REGENERATION IN BEIJING

There may be a wondering whether there is cultural urban regeneration in China which is only a developing country; after all, cultural regeneration is dominated in developed western countries. Compared with other developed countries, China experienced the urbanization, industrialization and tertiarization at the same time under particular Chinese political and economic system transformation (Yang, 2012). Cities with different urbanization contexts facing different issues, triggering Chinese urban regeneration in physical dimension (Zhai and Wu, 2009). During that time, the urban regeneration was limited in housing; similar with European countries, the property-lead urban regeneration became a trend in late 1990s, but the over-commercialized implementation in this method aroused consideration of balanced development (Zhai and Wu, 2009). Central government published the “Scientific Outlook on Development” and “Harmonious Socialist Society” in series and both of them define the innovative role of “culture” in urban regeneration (Zhai and Wu, 2009). Due to that, the objectives of Chinese urban regeneration are filled with the meaning of cultural and social inclusion and community harmony (Zhang, 2004). Following international and domestic development tendencies, cultural urban regeneration attracts more attentions and becomes a fashion in China.

3 THE BRIEF INTRODUCTION OF BEIJING AND CHINESE PLANNING SYSTEM

3.1 THE BRIEF INTRODUCTION OF BEIJING

“Beijing is the capital of People Republic of China, a national political and cultural centre and an international modern city”, defined as the nature of Beijing (Beijing Municipal People’s Government, 2004). Beijing covers 16410.54 km2 located in the north of HuabeiPlain. It consists of 14 districts and 2 counties with 21.148 million permanent residents up to 2013 (Beijing Municipal People’s Government, 2016). In term of political aspect, China adopts the system of people’s congress which means that the all power of state belongs to people who will exercise state power through the people’s congress at different levels (The National People’s Congress of People’s Republic of China, 2016). Beijing as the capital of China, it holds a large number of political conferences and events; additionally, the national political and administrative institutions and departments are situated in Beijing and the 172 foreign countries having diplomatic relations with China set their embassies in Beijing (Ministry of Foreign Affairs of the People’s Republic of China, 2016). Through political associations and contacts, Beijing is a significant node in the world. After 21st century, Beijing gains opportunities to hold cultural events, festivals and exhibitions to achieve cultural communication.

3.2 THE EVOLUTION OF PLANNING SYSTEM IN CHINA

The evolution of planning in China is corresponding with the development of Chinese society. After establishing the People’s Republic of China, the government had the first sense of urban planning and city development in 1950s when the industrial projects were funded and supported by former Soviet Union (Wu, 2015). Moreover, the first five year economic plan was published in 1953 to guide the economic development in physical aspect, which implies that the urban planning is an instrument of ideology transformation and political control (Wu, 2015; Yeh and Wu, 1999). Because of the political failure in the late 1950s and 1960s, the sprouting urban planning was abandoned. However, the national government was still powerful to decide city population, land use, economic structure and development (Yeh and Wu, 1999). At local level, governments had less power to organize the city developments, caused by the centralization of national power (Wu, 2015). Experiencing economic reform and opening-up in 1980s, the national government recognized the importance of planning; thus, the City Planning Act was proposed in 1990, when was the first time to identify the statutory state of planning and strengthen the power of local governments to decide developments and land use (Wu, 2015).

Since 1990, the statutory planning system with two-tier has been set. Specifically, urban mast plan belongs to the upper tier. It should decide the development objectives in different periods usually from 5 years to 20 years, the nature of city, population size and urban structure (Wu, 2015; Zhang & Tao, 2010). Moreover, it is also supported by other supplementary plans such as district plans (fenquguihua) and specific plans (zhuanxiangguihua) (Wu, 2015). The legal requirements are fixed, but the new concepts of

urban planning; cultural heritage conservation and sustainable development are adopted in master plan (Zhang & Tao, 2010). The lower tier is the detailed development control plan to regulate the urban land use, building height, building density, road hierarchy, green space, distribution of infrastructure and even the underground space to guide the developments sustainably. Similar with urban master plan, the detailed development control plan is supplied by detailed construction plan (Wu, 2015; Xia & Tang, 2010). By the evolution of planning system in China, stakeholders, international consultancy companies and residents who previously were not involved in the planning system engage in this planning process. However, the functions of their contributions are limited in real practices because planning process still tightly connects with centralized political power and economic development goals (Wu, 2015).

Figure 1 - Two-tier Structure of Statutory Planning System in China

4 THE DEVELOPMENT AND IMPACTS OF 798 ART DISTRICT

4.1 THE DEVELOPMENT OF 798 ART DISTRICT

Without the initial intention by municipal and district governments, the embryonic form of 798 Art District was set up spontaneously and occasionally. The Chief of General Affairs and Coordination Office in Beijing Administrative Committee of 798 Art Zone, Wang Li described this self-development process in a Chinese Proverb, “favorable climate and geographical position and support of the people”. Specifically, the China Central Academy of Fine Art moved from Wangfujing to Wangjing where it is close to the current 798 Art District in late 1990s. At that time, the Sculpture Department in this academy searched a suitable workplace for a large sculpture work; Lugouqiao Anti-Japanese Portrait (Huang ed., 2008). Because of industry re-adjustment and suspended proposal of “Beijing Electronics Town” built upon current factories, the factories planed to rent vacant factory warehouses temporarily to receive rents for compensating laid-off workers. Taking an account of warehouses in Bauhaus style with high ceiling and comfortable natural lighting, the first renting contract was signed. After that, artist; Sui Jiangguo, publisher; Hong Huang, etc, who study abroad or have advanced art concepts set up their work studios in 2000. Gradually, dozens of individual artists, art organizations such as Beijing Tokyo Art Projects, and art clubs moved into this area, gathering diverse forms of art and culture (Huang ed., 2008).

However, the Seven Star Group which consists of 797, 718, 798, 707, 700 and 701 factories and 11 institutes forced the artists out and prohibited Dashanzi International Art Festival (Current Name: 798 Art Festival) to achieve revitalization of old factories in schedule, even though the motion of preserving 798 Art District was approval by Beijing National People’s Congress in 2004. Under the coordination by the Jiuxianqiao Local Committee Office, the Art Festival preceded as usual. Since 2004, 798 Art District has been prevailing. Chen Xingdong Space for Contemporary Art and Galleria Continua Italian Gallery were both launched; the Germany and Austrian prime minister visited 798 Art District in 2004 and 2005 separately. The chairman of European Commission even delivered his wish that the 798 Art District should be maintained to Prime Minister of China Wen Jiabao in 2005 (Huang ed., 2008). After experiencing the conflict between artists and Seven Star Group, Beijing municipal and Chaoyang district government considered that the 798 Art District should be regulated to lead a safety and well-operated creative district. Therefore, the 798 Art District was authorized as the “First Batch of Beijing Creative Cultural Industry

District" in 2005, and then Beijing 798 Art Zone Administration & Development Office was established by the Chaoyang district government and Seven Star Group (Ye, 2010). Although Beijing 798 Art Zone Administration & Development Office offered services and regulated, coordinated and handled issues in the district, it did not have administrative power to regulate public affairs because it was only a company. In order to effectively organize the 798 Art District, the Beijing Administrative Committee of 798 Art Zone with administrative power directly lead by Chaoyang district government was set in 2010 (Beijing Administrative Committee of 798 Art Zone, 2014). In recent years, Beijing municipal government offered the supports officially and powerfully. Following the objective of booming culture industry in Beijing Master Plan 2004-2020, to diversify artwork exhibitions and platforms, perfect art work trade market, create innovative brands, enhance creative education and integrate with other industries (Beijing Municipal People's Government, 2004). 798 Art District is one of them to be built as an international contemporary art communication and creation center and consist of art studios, art educational institutions and art incubators to inspire artwork creation and trade (Beijing Municipal People's Government, 2014).

Depending on the bottom-up method contributed by individual artists and art organizations in the early stage (late 1990s-2006), and the top-down method cooperated by governments, artists and art organizations from 2006 to present, 798 Art District as typical cultural quarter is established.

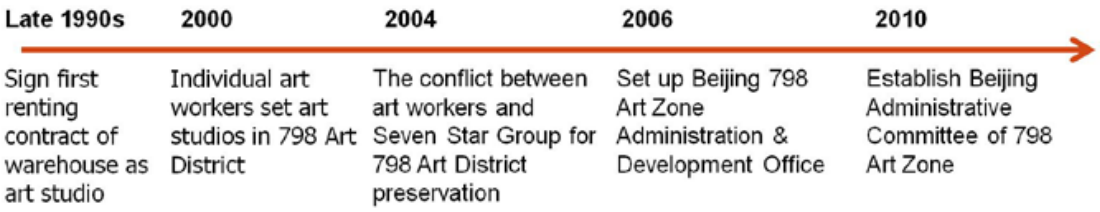

Figure 2-The Timelind of 798 Art District Development

4.2 THE PRESENT SITUATIONS OF 798 ART DISTRICT

Figure 3 – The Administrative Participants of 798 Art District Figure 4- Structure of Committee

798 Art District is located in the northeast of Beijing along the Airport Expressway and Jingshun Road. The core area of 798 Art District is 300,000 m2 roughly bounded by Jiuxianqiao North Road, Jiuxianqiao Road and Wanhong Road. Up to 2014, there were over 500 institutions ranging from galleries, artists' studios to various cultural organization specialized in animation, media, publishing and design consultation, clustering with fashion shops, bars and restaurants. They totally cover 230,000 m2 building area (Beijing Administrative Committee of 798 Art Zone, 2014). Entering a relatively mature development phrase, the participants in the management are various including representative artists or institutions, Seven Star Group and Beijing Administrative Committee of 798 Art Zone. Generally, they undertake different parts; Seven Star Group as property owner reaches renting agreements with every renter and advertises the 798 Art District to be welcomed; artists and institutions primarily operate their own art creations successfully and then cooperate with Seven Star Group and Beijing Administrative Committee of 798 Art Zone to hold cultural events. The Beijing Administrative Committee of 798 Art Zone plays a significant role in district management through guiding the cultural development in a rather uncontrolled environment, creating communication opportunities and the art work trade market, guaranteeing the safety of cultural activities and building construction and supervising illegal behaviors.

4.3 THE PHYSICAL IMPACTS OF 798 ART DISTRICT

The most apparent impact of 798 Art District is shown in physical aspect, which can be described in two phrases; form 1960s to 1990s and from 2000 to present. In 1957, the previous joint factory in 798 Art District is a rather urbanized area comparing with vast agricultural land.As the national announcement of building wireless component joint factory in currently 798 Art District was published in 1951, the joint factory was guided by German Democratic Republic because of weak economic power and construction experiences in China (Huang ed., 2008). The booming industrial phenomenon depressed in 1990s when the industry structure transferred and factories waited for constructing “Beijing Electronics Town”.

The positive physical impacts produced started in 2000 when large number of art workers and cultural institutions firstly refurbished the warehouses and workshops. Figure 5 indicates that the Bauhaus style warehouse is kept in original structure with physical refurbishment. After transformation, the interior decoration represents the features of every artist and cultural institution, blending into particular industrial housing. At that time, different forms of street artworks such as sculptures and graffiti have already appeared to creating creative atmosphere, but the necessary infrastructure is still lacked.

Visitors were frequently lost without correct guide and the streets were congested and messy with visitors, vendors and rubbish. Caused by clearance of partial factories and studio refurbishment, 798 Art District seldom has having green spaces and public spaces with proper street furniture. After intervention by the government and Seven Star Group through 180 million and 10 million Yuan investments in 2006 and 2014 separately, 7 public toilets, lighting system, 207 uniform transport signs in five levels and supervision and security system were all installed and improved (Sohu Culture, 2008). The roads in 798 Art district is renamed as 798 Road, 798 West Road, etc. Furthermore, broad roads, refurbished sewerage system, water-proofing system and multi-story parking building, create pleasing environment for art workers and visitors.

Figure 5 - The previous Bauhaus style warehouse is transferred into Pace Beijing art Gallery

Although the physical conditions have been progressed after investments and managements, several tough original problems are still left and new conflicts and problems emerge constantly. The personal salvage stations along the 718 Street with big trucks and tricycles, which caused a smelled and dangerousstreet environment. Even though Administrative Committee bans the informal trading on the street, the street vendors are still rampant especially on the weekend. Additionally, the periphery areas of 798 Art District is vacant with rubbish dumps and vagrant dogs and cats. Superficially, the green spaces beautify the environment and attract people, but several artists against that and said 798 was an art district rather than a garden; thus the green spaces should be created in suitable places (Ye, 2010). Actually, the use rates of these public spaces are various depending on weather and air quality. In the winter and summer with low or extremely high temperature and poor air quality, there is almost no person; on the contrary, visitors always enjoy public spaces in a sunny day with good air quality and pleasant temperature. Although infrastructure is updated, the original physical appearance is negatively influenced by dismantling valuable constructions. The cars still park along the street, resulting from the shortage of parking guides; nonetheless, there are 11,799 m2 parking spaces (Sohu Culture, 2008). The accessibility of 798 Art District is problematic; there is no subway station provided in the 500 m walking area. Visitors could only get access to 798 by buses or private cars. Even they close to Jiuxianqiao Road, the 798 Art District is hard to be found because it is hid by high-rise buildings without artistic features.

4.4 THE ECONOMIC IMPACTS OF 798 ART DISTRICT

Since the economic structure adjustment in 798 Art District is stepwise, the economic contributions of 798 Art District is also gradual. In terms of industry structure, the previous industrial dominated structure is replaced by service dominated structure, gathering over 500 cultural institutions increased from 64 in 2004 and 354 in 2007; among of that, 25 are overseas institutions (Beijing Administrative Committee of 798 Art Zone, 2014). Being mixed, not only cultural institutions, but also restaurants, bars and shops formulate the current economic structure. Significantly, the economic influences radiate from cultural urban regeneration in 798 to over 10 surrounding art districts such as 751 Art district and Caochangdi Art District (Sohu Culture, 2008). In the process of structure transition, the employment number is over 10 thousand and gross income surges 300 million every year (Xu & Li, 2012).

Because of artistic reputations and curiosity of people, the number of visitors reaches eightfold growth from 500,000 to 4,000,000 during 10 years (Sohu Culture, 2008). However, similar with other cultural quarters, 798 Art District faces commercialization, which is the most controversy problem in the cultural urban regeneration. There is a distinctive approach relying on the particular administrative power in China. In order to keep the nature of art district, the administrative committee requires the property management company belong to Seven Star Group to formulate a preferential rent policy for cultural institutions. In detail, they will not renew the contract with other recreation stores such as Karaoke and public bath center. Determining by the type of tenants, two or three-year rent contracts are designed for cultural institutions; the rent will be low than the average rent: 3.5RMB/square metres per day (approximately equal to £0.37), but for restaurants or bars, the rent contract only lasts one year with 7~8 RMB/square metres per day rent (approximately equal to £0.75~0.86). Therefore, the tenants are dominated by cultural institutions, in accordance with the character of art district. To be honest, the result of this method is controversial that individual artists are still unable to afford rents and are forced out without financial support, after all, the rent in 2004 was only 0.6 RMB/square metres per day (approximately equal to £0.06) (Xu& Li, 2012). Aimed at this result, Wang stated that the transformation was led by the market spontaneously and it was unpractical to recall the artists back in 798 Art District where the bustling environment was unsuitable for art creation. The planners, Chen and Li also expressed that art creation existed in a freedom and peaceful environment which only appeared in the early stage of 798 Art District development. Besides, Li pointed out that the real art creation did not emphasis the industry agglomeration; it was a personal creation behavior.

The prosperous economic development contains defects. In spite of over 10000 people getting employment opportunities, the number of laid-off workers for previous factories is more than new jobs. 798 Art District just provides jobs for another group of people. On the other hand, the art work commonly trade in Hong Kong or overseas because of high tax rate in the mainland China. Even though the first national cultural bonded centre was launched in 798 Art District in 2012, which was aimed to inspire the artwork trade with the simply trading process, tax depreciation policy and fast networked transaction, the galleries in 798 Art District are only used as displaying platforms, (China Economic Net, 2012). Consequently, the tax and employment contributions of artwork trade are less than expected amounts.

4.5 THE SOCIAL IMPACTS OF 798 ART DISTRICT

As an art district, the social impacts are direct and profound in 798; besides, the former history of 798 Art District and location contexts produces political impacts. Initially, 798 Art District keeps group of buildings in Bauhaus style with artistic value, reflecting the history of 718 joint factories.Chinese contemporary art which expresses issues of Chinese society in a critical viewis publicly displayed in 798. Relying on the affluent cultural resources, the administrate committee and cultural institutions organize and hold diverse forms of activities to encourage people with different backgrounds to be involved. 798 Art Festival, 798 International Children Week and fashion showsattract different aged participants. For reasons of these attractive points, over 4 million domestic and international visitors have a tour in 798 Art District every year. Almost 30~40% of these visitors are from overseas; thus, the multi-culture intercourse and collide are frequently occurred in 798. Because of high artistic quality, 798 Art District gradually forms an art signal and wins domestic and international reputations. For example, 798 Art District was awarded as one of the 22 municipal art center in the world by Time in 2003 (Sohu Culture, 2008). Without being fear of visiting 798 at night, safety condition is well performed and managed in 798 Art District by administrate committee through the necessary supervision system, strict night visiting regulation and less proportion of bars.

The popularity is considerately produced among foreigners compared other sightseeing spots in Beijing. Diplomatic relations and cultural interactions with other countries and organizations have been enhanced since 2004 through dozens of celebrities visiting 798 Art District, including previous French President Nicolas Sarkozy (Sohu Culture, 2008).Wang also gave an example that a 100-200 m2 art gallery with a small exhibition might be visited by 10 even 20 embassies, reflecting the essential role of 798 Art District as a media for unofficial political communication. It also has domestic political influences through government interventions and management to achieve patriotism education and ideology propaganda.

Figure 6 - The paintings in So Kun Solo Exhibition Figure 7 - The sculpture made by Song Dong

Although the social influences of 798 Art District have constantly expanded since 2004, the negative impacts are obvious. Most laid-off workers leave their previous working and living places caused by dismantled dwelling and low incomes. Only small part of them undertake less-skilled and low-paid jobs such as security men or cleansers in 798 Art District where they are not actually interested in. They thought their memories were gone with the disappearance of daily life in factories (Zhang and Chen, 2012). Not only they are excluded, 798 are less welcomed by elderly people and low-income people. According to the survey which researched 605 visitors randomly in 2005, young visitors (aged 20-30) take 57.4% of total visitors and the average age of visitors is only 29; in addition, 44% of foreign visitors receive over $ 2000 (approximately equal to £1387) every month, while domestic visitors earn over ¥ 5000 (approximately equal to £537), who are from middle or high class in their countries. Besides, 91% of visitors are well educated and receive undergraduate degree (Wang, 2007). There is a tendency that more low income people visit 798 art district, but the general structure of the income and age of visitors do not change. From that, the periphery and exclusion issue are evident and severe. For the political influence, Li stated in another side that the artistic atmosphere was less freedom compared to previous environment without government intervention; thus, the creative productivity decreased.

5 SUMMARY

798 Art District is a mode of cultural urban regeneration in Beijing. This research clarifies the establishing process and the role of different participants. In the physical and symbolic perspectives, 798 Art District clusters diverse cultural production and consumption activities in a former run-down factory area, covering 300,000 m2. Relying on deteriorated factory conditions, geographical position and supports of the creative class 798 Art District was spontaneously established. Similar with other cultural quarter, 798 Art District is remained after struggling with property owner and local governments in the second development phrase in top-down method. The Beijing Administrative Committee of 798 Art Zone represents local government engages in the regular operation and management with Seven Star Group and creative class in the district. Importantly, the Beijing Administrative Committee of 798 Art Zone takes more responsibilities compared with other property owners and organizations in western culture quarters, supervising the illegal behaviors, establishing trade market, etc.

In terms of physical impact, Bauhaus style warehouses in 798 Art District have been conserved; upgrading green infrastructure and transport system also contribute to physical transformation. Generally, the goals of creating and enhancing cultural industry and integrating cultural industry with other industries have been achieved, which is demonstrated by the increasing number of visitors and cultural interactions in 798 Art District. Since the government takes more responsibilities than western countries in cultural regeneration projects such as 798 Art District, political power should not be ignored.

However, 798 Art District still has several negative impacts described in Literature Review. Over-commercialization is illustrated by similar physical environment, economic behaviors and social activities before official interventions. With diverse strategies: variable rents for different tenants, the art activities and commercial behaviors are relatively balanced. The problem, gentrification is not prevented, which experiencestwo phrases. Initially, the original residents or workers in factories move out, and then the local stores or individual art studios are forced out. Additionally, 798 Art District is more exclusive for young, high-skilled and high-income groups. The political constrains for art creation and cultural activities which is irregularly occurred in western countriesexist in 798 Art District, hindering its development in a certain degree.

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ID 1527 | UNDERSTANDING TERRITORIAL DIFFERENCES AND SCALE EFFECTS WHEN EVALUATING HOUSING CONDITIONS USING CENSUS DATA: THE CASE OF PORTUGAL

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1 INTRODUTION – HOUSING PROBLEMS IN EUROPE

The EU development strategy for the next decade (Walsh, 2012) has as a strategic priority the identification of mechanisms for enriching quality of life and reducing social-spatial inequalities. For that, rather than focusing exclusively on economic growth, regions should enhance place resilience and reduce their vulnerability at various scales (Murphy and Scott, 2014). One fundamental scale is that of housing and related services. Indeed, for the past two decades a large array of factors have contributed to increase the housing problems and vulnerabilities of European countries, such as the decline of public investments, the restructuring of social services' systems, the reduction of the consumption capacity, and also the internal disparities and domestic policy decisions that eventually led to the most recent economic crisis (Carballo-Cruz, 2011, Dellepiane Avellaneda and Hardiman, 2010, Eichengreen et al., 2014).

In the countries of Southern Europe in particular (Portugal, Ireland, Italy, Greece and Spain), housing bubbles have burst (notably in Ireland and Spain, see Dellepiane Avellaneda and Hardiman, 2010, Whelan, 2014, Carballo-Cruz, 2011), youth unemployment, dissatisfaction and emigration have dramatically increased (Cairns et al., 2014), and severe austerity measures have been implemented (Murphy and Scott, 2014). These and other factors have led to decreases in levels of happiness, life satisfaction and quality of life (Anderson et al., 2012, Bell and Blanchflower, 2011), have affected employee job satisfaction, commitment, and self-regulation (Markovits et al., 2014), and have had increasing social risks, for vulnerable groups as immigrants, low waged workers or youths (Cairns et al., 2014) and in terms of poverty and social exclusion (Frazer and Marlier, 2011).

The housing market itself, often used as proxy for cost of living and life satisfaction (Garrido-Yserte et al., 2012, Murphy and Scott, 2014), has been more than often associated to financial volatility and social vulnerability (e.g. Loutskina and Strahan, 2015, Martin, 2011, Whitehead et al., 2014, Donald et al., 2014, Priemus and Whitehead, 2014, Whitehead and Williams, 2011). Indeed, the urban economy is very sensitive to housing, and the effect is larger in localities more financially integrated (Loutskina and Strahan, 2015). Thus, falling housing prices and transactions since 2010, mortgage debts and overdue loans, limited credit from banking institution, unemployment in the construction industry and the simple fact that supply far exceeds demand, have all, to a greater or lesser extent, contributed to increase the state of housing problems.

Even so, this is not just a question of economics. More and more, housing is perceived as a freedom right (King, 2003) rather than a socio-economic claim. Housing, and access to housing, is, undoubtedly, the most visible side of the social conditions of populations, and decent housing is essential for maintaining an acceptable standard of living, by providing warmth, security, safety and privacy (Nepal et al., 2010). The recent impact of elements such as the crisis have only exacerbated housing problems that were already long standing, related to social exclusion and social cohesion. Certain groups in deprived areas, for example, like low-income households and young families, face daily the struggle to meet housing expenses in an unaffordable housing market (Somerville, 1998, Frazer and Marlier, 2011, Healy and Hillman, 2008). As well, prolonged home staying of youths at the parents' house has also become a relevant problem (e.g. Cairns et al., 2014), producing a negative impact upon their capacity to enact housing transitions. Non-coincidently, these examples relate exactly to the two main conclusions of the European Report 'The State of Housing in the EU 2015' (Pittini et al., 2015): (i) there are more people without a proper home today in Europe than in 2009 (the high point of the crisis); and (ii) there are not enough affordable homes available in most European countries to meet the increasing demand.

On one hand, the EU regards housing as a major cause of economic and social instability (Whitehead et al., 2014). On the other, decent and affordable housing is regarded as an important tool in addressing social exclusion and maintaining social cohesion (Frazer, 2005, Nepal et al., 2010). Thus, the problems related to housing, and particularly to the socio-economic inclusion of low-income households and other vulnerable social groups, are considered a priority in new European directives, in a sense that stronger policies and regulations need to be established (Matos, 2012, Donald et al., 2014). However, this is still, recognizably, a major challenge (Pittini et al., 2015). Many social housing traditional systems in European countries are declining due to budget cuts and political change (Boelhouwer and Priemus, 2014, CECODHAS, 2012) and there seems to be a lack of a common housing policy in Europe, particularly in terms of a long-term stable framework for the affordable housing sector (Pittini et al., 2015).

First, European housing markets are very heterogeneous (for example Northern and Southern markets are recognizibly different, see Balchin, 2013, Elsinga and Hoekstra, 2005, Allen, 2006, Holdsworth and Irazoqui Solda, 2002, Priemus and Dieleman, 2002) making it very difficult to propose one-size-fits-all policies (Pittini et al., 2015). Second, the economic crisis is still ongoing and essential empirical data of recent years is thus unavailable, or at least incomplete. Consequently, former models that can properly measure and regulate housing problems at the European scale; explain the effects of the socio-economic crisis on the housing sector and housing conditions; interpret the differences in resilience between national housing systems in Europe; and predict the impact of recently adopted measures, are still to be properly developed (CECODHAS, 2012, Priemus and Whitehead, 2014).

This being so, at this stage, authors address the importance of continuing to monitor change, for example by developing indicators that help understand cause-and-consequence effects (Méndez et al., 2015), and formulate hypothesis based on the comparison between different experiences (Priemus and Whitehead, 2014, Méndez et al., 2015). According to Guerra (2011) an essential step may involve taking an holistic approach to address the deteriorated housing conditions that still persist today (derelict buildings, overcrowded dwellings, lack of basic living conditions), as well as the inherent social consequences (debt, eviction, homelessness, growth in waiting lists for social housing). More precisely, models and policies should adapt to the profound changes of the past decades, including (but not limited to) the economic crisis, the austerity measures, the new models of housing intervention and the increasingly complex social realities and lifestyles, which are, more than often, unfairly distributed (Guerra, 2011, Frazer and Marlier, 2011, Méndez et al., 2015).

Consequently, the most recent studies on housing problems and housing vulnerability have developed indicators that are multi-criteria and consider both objective/economic indicators and subjective/social indicators, such as Murphy and Scott's (2014) housing vulnerability index, which established a link between household vulnerability and localities that contained oversupply of houses and younger population in rural areas in Ireland; Nuuter et al's (2015) housing sustainability index for ranking European countries; Carmo et al's (2015) logistic regression model for assessing vulnerabilities and inequalities in the access to housing in Lisbon; or Pendall et al's (2012) multivariate regression model to analyse the relationship between potential personal or household vulnerability and potentially precarious housing conditions in metropolitan areas in the United States. As well, other studies have dwelled on how housing conditions cope with climate change, extreme weather conditions or natural disasters (Barbosa et al., 2015, Vincent and Cull, 2010, Van Zandt et al., 2012) or even on how housing itself can be the instrument to reduce the vulnerability to these conditions (Tipple, 2006).

2 PURPOSE AND METHODOLOGY – SCALE MATTERS?

Regardless of how housing and social problems and vulnerabilities are measured and interpreted in recent years in the literature (the debate regarding it is vast and thus out of the range of this paper), it would be unrealistic to assume that they are evenly distributed across social and territorial levels. Consequently, to achieve more cohesive communities, many research projects and policy programs have addressed spatial unevenness, spatial segregation and social mix through the evaluation of housing conditions and housing policies (Cassiers and Kesteloot, 2012). But if on one hand these policies have been criticized for being based on little tested assumptions and showing only limited results (Cassiers and Kesteloot, 2012, Musterd and Andersson, 2005), on the other hand they have, recognizably, been structured only around the problems of specific territorial areas. According to Battaglini and Annunziata (2014) policies seek elements of temporal and territorial stability in everyday life, but this stability has many times been achieved at the expense of disregarding matters of scale.

Since the turn of the millennium, the debate around how 'scale matters' has been continuous in the literature across a wide range of thematic areas, notably, for example, in climate change (see Wilbanks and Kates, 1999, Neil Adger et al., 2005). However, the same degree of attention has not been given when addressing problems related to housing conditions and social vulnerabilities. Precisely for that reason, very recently authors like Cassiers and Kesteloot (2012) or Donald et al (2014) have reinforced the need to address social-spatial inequalities across a wide range of spatial scales, mainly at the subnational and urban levels. 'The State of Housing in the EU 2015' Report also supports this idea, by stating that, because European housing markets are so heterogeneous, "the best way, indeed, to observe the markets is at national and even regional level, since the needs of the metropolitan areas, which become increasingly dense, differ a lot from the ones of the rural areas." (Pittini et al., 2015).

However, there is still a somewhat stiffness of scale in responding to these directives and analysing housing conditions, as studies either regard solely local scales (e.g. Carmo et al., 2015, Murphy and Scott, 2014, Pendall et al., 2012) or national scales (e.g. Nuuter et al., 2015), but not both. In Portugal, for example, João Ferrão (2014) has discussed how public policies only take into account the national level, evaluating various phenomena as if the country were a point. The author states, quite rightly, that although somewhat small when compared to other European countries, Portugal has enormous geographical, housing and social diversity. Thus policies, particularly cohesion and sectorial policies, should not be a-territorial nor should they oversimplify the segmentation between coast and inland; urban and rural; and metropolitan areas and the remaining country. By doing so, they take the risk of concealing the actual magnitude of problems and the location of many problematic areas.

Consequently, stemming from this debate and considering Portugal as a test case, the purpose of this research is to test and evaluate whether scale-of-analysis matters when addressing the issue of housing problems and vulnerabilities. A straightforward methodology is used where four territorial levels are analysed in turn through housing data; the national, the regional, the municipal and the borough levels. The analysis was conducted at two different time frames (2001 and 2011) corresponding to the last two population and housing Census in Portugal, which supplied the data for this research. Based on the most problematic issues identified at national level, three indicators of housing problems and vulnerabilities were selected: (i) the state of decay of buildings (derelict or requiring medium to large repairs); (ii) dwelling overcrowding; and (iii) dwellings lacking basic amenities. These indicators were analysed on the remaining

territorial levels, thus enabling direct comparison, the pinpointing of problematic hotspots and the highlighting of territorial disparities. Then, hypothesis testing, namely t-test for dependent samples (in the comparison of any two scales) and repeated measures ANOVA (in the comparison between the four scales), was applied to look for significant differences between spatial readings at different levels. In the final section, the research question is taken up and debated, in order to understand whether the territory should play a more important role in the integration of public policies for housing.

3 A PORTRAIT OF PORTUGAL'S HOUSING STOCK – NATIONAL AND REGIONAL LEVEL

In the last 30 years, the housing offer in Portugal has significantly increased and comfort levels of dwellings have also considerably improved. Nonetheless relevant housing problems, mostly associated to socially vulnerable groups, have persisted over the decades. Towards the end of the 20th Century, housing problems in Portugal were largely associated to the rapid growth of the Lisbon and Porto metropolitan areas. Several authors identified the causes for these problems (Ferreira, 1987, Ferreira, 1993, Serra, 2002, Guerra, 2011), namely the return of residents from former Portuguese colonies after the 1974 revolution; the intensive rural exodus from the interior to the coastal cities around the same period; the lengthy freeze of rent values (which contributed to the deterioration of the housing stock and overcrowding); the lack of social housing and its poor construction quality (leading to the rapid deterioration of buildings); the concentration of disadvantaged social groups in social housing neighbourhoods (and respective social consequences); and the outbreak of illegal construction and of precarious, run-down dwellings, recently exacerbated by the arrival of many economic immigrants from Africa and Eastern Europe.

Today, Portugal is living in a well-known scenario of economic and social crisis (succintly described in Cairns et al., 2014). Unemployment has risen from below 7% of the working population in the early 2000s to 14% in 2014 (PORDATA, 2015) with obvious consequences to the investment in housing. Portugal was a country with high transaction rates at the beginning of the century (Whitehead et al., 2014), a consequence of the increasing demand and social relevance of owning individual private housing with specific characteristics (location, materials, architectural design), fuelled by bank mortgages (Guerra, 2011, Matos, 2012). However, there was a massive and consistent fall both of housing transactions and housing prices since 2010 (Whitehead et al., 2014, Matos, 2012), at the same time that average credit valuation for home loans has had a negative variation, representing a greater stiffness in conceding credit, a reduction of housing loans and a drop in housing demand, not accompanied by a decrease in supply. If in the early 2000s companies needed an average time of 7-8 months to sell a house placed on the market, in 2013 that time had increase to 17 months (PORDATA, 2015). This caused huge problems for the mortgage and housing markets and the bankruptcy of many construction companies (Whitehead et al., 2014, Matos, 2012). But it also contributed to worsen living conditions and increase social inequalities, as there has been a significant increase in overdue rent/mortgage payments, in cries for counselling on mortgage and debt management, in the number of houses repossessed by the banks, in the waiting lists and types of profiles applying for social housing, and in the number of families filing for insolvency (PORDATA, 2015). As in Portugal there was (and is) a deep culture of home ownership, many families were forced to relinquish the main destination of most of their savings, and as the budget available for social housing is decreasing, the most vulnerable groups are having no choice but to seek overcrowded poor quality accommodation, and the risk of homelessness increases.

The analysis of the data from the last two population and housing Census in Portugal, 2001 and 2011 (INE, 2001, 2011, see Table 1) helps to trace this evolution in Portugal's housing stock. The increase in the number of dwellings in the country after 1974, by decade, was always greater than 20% (Matos, 2012) representing the massive investment in new housing. And even though the rates eased over time, this increase was never really accompanied by the total number of inhabitants. As Table 1 shows, the housing stock continued to grow significantly between 2001 and 2011 (an increase in 12.2% of buildings intended for housing and in 16.2% of dwellings), whereas the Portuguese population in that period only increased 1.0%. Moreover, 91% of these new inhabitants have come, not from births, but from migration, and the elderly population has increased in almost 20% since 2001 (INE, 2011). Overall, the country only increased in about 200.000 inhabitants, but gained 800.000 more dwellings, i.e. there were four new dwellings for each person.

The housing boom was able to replace older construction thus, theoretically, increasing the quality of dwellings. The number of buildings in the country constructed before 1960 has reduced by a third, and about 30% of the housing stock was built in the last two decades (Table 1). Of the Portuguese regions, the Algarve (at the South of Portugal) and the Madeira Island showed the greatest increases in housing stock from 2001 to 2011 (24% and 23% respectively – see Table 2), a growth that can mainly be attributed to the considerable rise in tourism. These are, naturally, the regions also possessing the youngest housing stocks. The lowest increases were observed at the North of Portugal and in the Alentejo region (around 10%). The inland regions as well as the greater metropolitan areas of Lisbon and Porto contain older housing stocks. Yet it is to be noted that the regions around Greater Lisbon and Greater Porto contain younger housing stocks – intense suburban construction in the last decade and good conditions of access to housing credit are the cause.

	2001	%	2011	%	Variation (%) 2001-11
Population	**10356117**	**100.0**	**10562178**	**100.0**	**1.0**
Elderly population (+65)	1693493	16.4	2010064	19.0	18.7
Total number of buildings	**3160043**	**100.0**	**3544389**	**100.0**	**12.2**
Buildings constructed before 1960	955858	30.2	624279	17.6	-34.7
Buildings constructed between 1991 and 2001	606644	19.2	558471	15.8	-7.9
Buildings constructed after 2001	-	-	510005	14.4	-
Derelict buildings (medium to very large repair needs)	584985	18.5	400615	11.3	-31.5
Total number of conventional dwellings	**5046744**	**100.0**	**5866152**	**100.0**	**16.2**
Total number of conventional dwellings of usual residence	3551229	70.4	3991112	68.0	12.4
Ratio 'Conventional dwellings / buildings'	1,59	-	1,66	-	-
Total number of conventional dwellings of usual residence	**3551229**	**100.00**	**3991112**	**100.00**	**12.4**
Overcrowded dwellings	568886	16.1	450729	11.3	-20.8
Dwellings without water supply	54396	1.5	23579	0.6	-56.7
Dwellings without bathtub or shower	223916	6.3	76924	1.9	-65.6
Dwellings without any amenity	3753	0.1	5637	0.1	50.2
Non-conventional family dwellings	27319	0.5	6612	0.1	-75.8

Table 1 –General features of the housing stock in Portugal for 2001 and 2011 Variation 2001 % 2011 % (%) 2001-11 Population 10356117 100.0 10562178 100.0 1.0 - Source: INE, 2001, 2011

	Building increase from 2001 to 2011 (%)	Conventional dwelling increase from 2001 to 2011 (%)	% of buildings constructed since 2001	Year	% of very derelict buildings or with medium to large repair needs	% of overcrowded dwellings	% of dwellings without bathtub or shower
North	9,96	11,64	14,60	2001	21,05	18,56	8,28
				2011	12,12	11,69	2,50
Center	12,06	7,98	13,88	2001	17,57	10,29	7,02
				2011	11,49	7,20	2,13
Lisbon	13,80	16,17	13,46	2001	17,37	16,99	2,21
				2011	10,62	12,91	0,85
Alentejo	9,69	4,50	12,45	2001	16,85	13,72	9,71
				2011	11,00	9,11	2,71
Algarve	23,91	23,98	18,40	2001	15,20	16,65	6,92
				2011	8,81	14,29	2,23
Azores	12,83	16,32	18,16	2001	16,65	21,48	5,67
				2011	7,39	16,11	1,34
Madeira	22,94	28,76	17,73	2001	16,71	29,69	6,80
				2011	12,52	22,52	1,92

Table 2 – Housing stock data, by regions, for 2001 and 2011
Source: INE, 2001, 2011

The number of dwellings per building has also increased from 1.6 in 2001 to 1.7 in 2011. This indicator is larger in the greatest metropolitan areas in the country, Lisbon (3.3), Setúbal (just South of Lisbon; 2.5) and Porto (2.3), whilst the remaining regions have primarily single family homes (averages ranging from 1.1 to 1.3 dwellings per building) (INE, 2011). The Azores display the lowest figures (around 1.1).

With the renewal of the housing stock, the comfort and the state of conservation of buildings/dwellings has also improved, both at a national and a regional scale. The percentage of derelict buildings having medium

to large repair needs has decreased in the order of -30% nationwide from 2001 to 2011 (Table 1). Over two thirds of buildings in the country were deemed in good state of conservation and hence do not need repairs. Madeira Island has the highest percentage of derelict buildings with medium to large repair needs (12.5%) and the Azores the lowest (7.4%) (Table 2). The most significant improvement was witnessed precisely in the Azores, with the percentage decreasing from 16.7% in 2001 to 7.4% in 2011, and in the North region, with values decreasing from 21.1% to 12.1% in the same ten year period. The percentages related to dwelling problems have also decreased from 2001 to 2011. The number of overcrowded dwellings has decreased to 11% nationwide (Table 1), with the archipelagos of Madeira and Azores displaying the highest percentages (23% and 16% respectively – see Table 2). This value has also decreased to below 10% in 2011 for the Center and Alentejo regions. The fact that the size of households is dropping dramatically in Portugal may also contribute to reduce the problem of overcrowded dwellings.

Non-conventional family dwellings, namely tents, rudimentary wooden homes, mobile homes, improvised buildings or others also decreased considerably (-76%) since 2001. This success is partly attributed to the Special Rehousing Program, introduced in 1993 (Decree-law 163/93, of 7th May, amended by Decree-law 271/2003, of 28th October). This decree's major goal was to eradicate non-conventional housing mainly from the two largest metropolitan areas of Lisbon and Porto. It allowed local authorities and other agents to use government funds for building social housing in order to rehouse those families that were living in precarious accommodations. Significant reductions were also achieved in the number of dwellings without basic amenities as piped water supply or shower facilities (reductions of around 60% - Table 1). As of 2011, no region in Portugal displayed a number of dwellings without bathtub or shower above 3% (see Table 2). However, the number of dwellings of usual residence without any amenity constitutes the only national indicator which has increased between 2001 and 2011. This may signify that derelict dwellings that were previously unoccupied/abandoned have become occupied in the last ten years, causing further social and health problems. Further strain is also caused by the fact that 60% of the elderly population is living either alone or in exclusive company of other elderly people (an increase of 28% since 2001), often in unsuitable conditions.

4 SPATIAL DIMENSION OF HOUSING PROBLEMS – MUNICIPAL LEVEL

When looking at national statistics, there is no question that housing conditions have, overall, significantly improved in the last decade, both as a result of public and private initiatives. If this has been heralded as a significant achievement, it stems nonetheless, as Ferrão (2014) points out, from an a-territorial perspective of analysis that can be concealing the actual magnitude of existing problems and the location of many specific problematic areas. Actually, as discussed in the previous section, several authors (Guerra, 2011, Matos, 2012, Whitehead et al., 2014) have shown evidence of smaller scale housing problems in Portugal that elude, to some extent, the national/regional overview. At this scale, it can be established that some regions are obviously more problematic than others, but even regions which overall have displayed positive improvements from 2001 to 2011 may still contain areas at risk. Therefore, such a wide and vague glance may not suffice at a time when the debate and proposal of place-specific territorial policies is on the political agenda, not only of Portugal, but of the European Union.

Consequently, two additional levels have been added to this analysis: the municipal and the borough level (next section). Through the analysis of the national and the regional level (previous section), a decision was made to select three main representative indicators of housing problems in Portugal; (i) the state of decay of buildings (derelict or requiring medium to large repairs), that represent over one tenth of the total housing stock in the country; (ii) dwelling overcrowding, occurring in one in every ten dwellings; and (iii) dwellings lacking bathtub or shower, whose number dropped by more than half from 2001 to 2011 but still represents one of the most problematic issues concerning housing salubrity conditions (see Table 1). Each of these problems was mapped at the municipal level for the years of 2001 and 2011 (Figures 1 to 3). The percentage values obtained consider each municipality as a separate entity; for example, the percentage of derelict buildings is obtained by dividing the number of derelict buildings in a given municipality by the total number of buildings in that municipality. The figures illustrate first the overall major improvements in housing conditions that Portugal witnessed from 2001 to 2011, but second they confirm how misguiding a national/regional analysis can be, as many problems still persist in vulnerable localities.

Figure 1 represents the number of derelict buildings, by municipality, in 2001 and 2011. The images illustrate well how the national average has significantly decreased in the ten year period, with the dilution

of many hotspot areas, but also point out to how this phenomenon is clearly territorialized, thus constituting an important source of information for national public policies concerning the rehabilitation of the built environment. Derelict buildings are still a problem especially in urban areas of the Center and Northern regions of Portugal that, with the exception of Madeira, also appeared as the most problematic areas in the national/regional analysis (Tables 1 and 2). The southern region of Alentejo, on the other hand, has had a significant improvement at municipal level from 2001 to 2011, although such improvement is less perceptible at regional level. As it can be seen on Figure 1, the Alentejo municipalities closer to Spain have had a decrease of 10 percentage points, or more, in the ten year period, whereas those closer to the Atlantic Ocean have had a much smaller decrease of the problem.

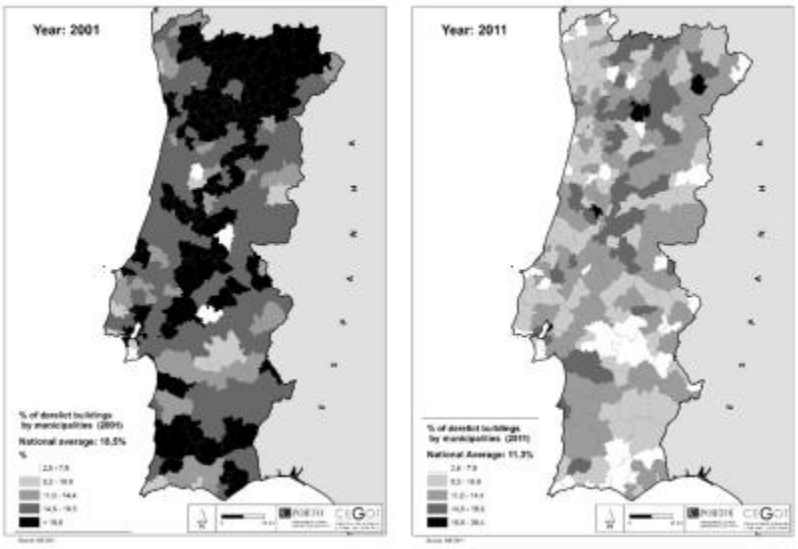

Figure 1 -Derelict buildings by municipality, in 2001 and 2011 (data source: INE, 2001, 2011)

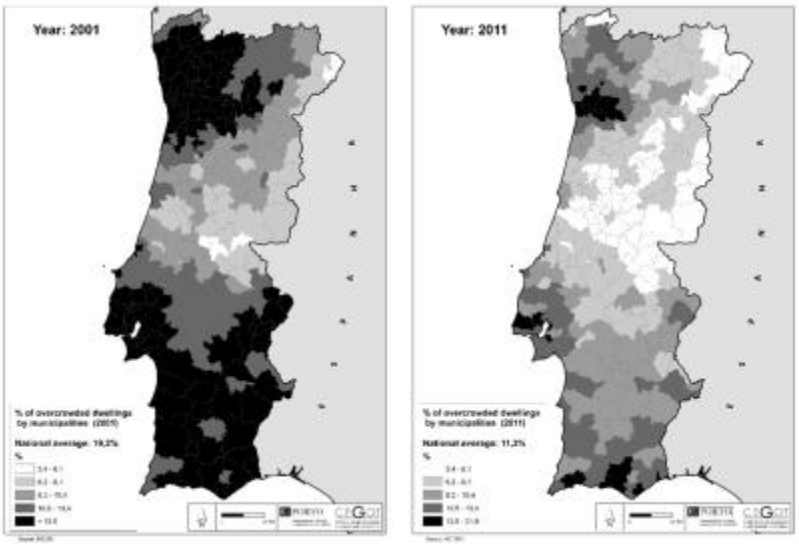

Figure 2 -Overcrowded dwellings by municipality, in 2001 and 2011 (data source: INE, 2001, 2011)

Dwelling overcrowding (Figure 2) is another problem that has seen a relevant reduction at municipal level from 2001 to 2011. In 2001 (Figure 2, left) problematic areas are unequivocally identified as being the northwest region of Portugal, the metropolitan area of Lisbon, and the greater extent of the south of the country. In 2011, this problem has been significantly reduced to specific areas, notably the extended outer rim of the metropolitan areas of Lisbon (municipalities of Sintra, Amadora, Odivelas and Loures) and East of Porto (Cinfães, Marco de Canavezes), as well as some municipalities in the southern Algarve and Alentejo regions (Figure 2, right). Identified problems in the areas around Porto, Lisbon and the Algarve somewhat coincide with those found in the regional analysis, albeit with less definition, but again, the evidence of problematic hotspots in the Alentejo region is exclusive of the municipal analysis.

Comparatively, the municipalities of the interior and the centre of the country have very few overcrowded dwellings, particularly in 2011.

Finally, Figure 3 displays the number of dwellings lacking bath or shower, by municipality, in 2001 and 2011. If in 2001 most of the country, with the exception of the Lisbon metropolitan area and other by-the-sea municipalities, had comparatively medium to high problems of this nature, in 2011 they have mainly remained inland. Whereas most municipalities of the West of the country have practically solved this problem, hotspots still remain in some municipalities in the north (Baião, Cinfães, Resende) and in municipalities closer to the Spanish border, something which was not really perceived through the regional analysis. However, both the municipal and the regional analysis coincide in revealing that the borderline between the Algarve and Alentejo is the most problematic area in the country regarding dwellings lacking bath or shower.

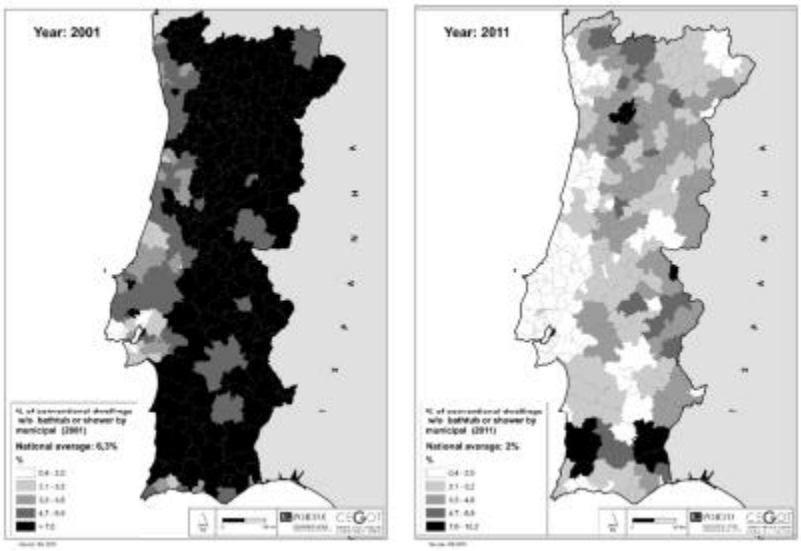

Figure 3 – Dwellings lacking bath or shower by municipality, in 2001 and 2011 (data source: INE, 2001, 2011)

5 ZOOMING IN ON HOUSING PROBLEMS – BOROUGH LEVEL

The fourth, and last, scale of analysis selected in this research was the borough level. As in the previous section, color maps were produced representing the geographical distribution, at this scale, of the same three variables: derelict buildings, dwelling overcrowding, and dwellings lacking bathtub or shower, both for 2001 and 2011 (Figures 4 to 6).

As seen above, new housing stock does not necessarily mean that the problem of building deterioration is solved, because of the poor construction quality of the last thirty years and the lack of funds from public and private quarters to carry out maintenance. Even so, obviously, physical deterioration affects older buildings the most and, therefore, the most problematic areas identified were those in traditional areas of older construction, i.e. historical centers, particularly of Lisbon and Porto, and many other urban centers in the country both in the Ccenter and interior northern regions (Figure 4). In this case, this is, overall, very similar to the outcomes of both the regional and municipal analysis.

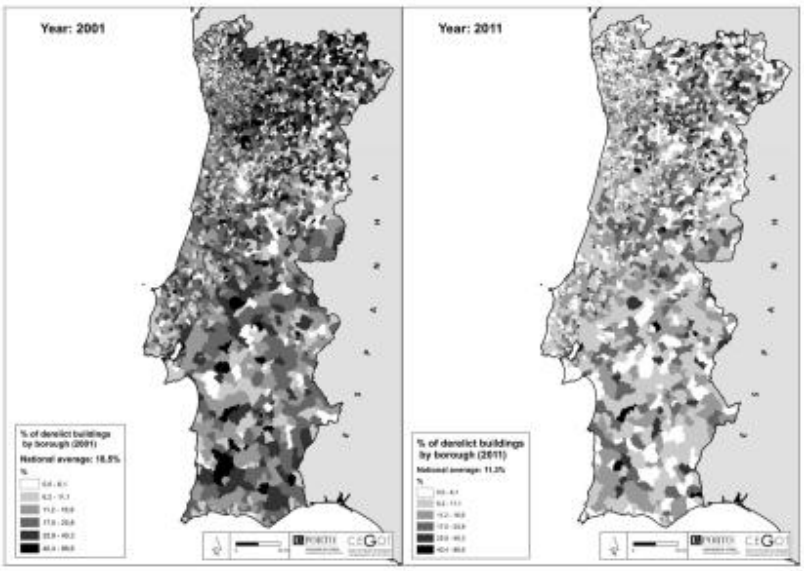

Figure 4 – Derelict buildings by borough, in 2001 and 2011 (data source: INE, 2001, 2011)

Overcrowded dwellings (Figure 5) have seen considerable reductions since 2001 in the littoral north, Lisbon and southern regions of Portugal. Nonetheless, there are still some severe hotspots, primarily located in densely populated areas, where inhabitants possess low school qualifications and scarce economic resources, namely in the north and in the Archipelagos of Madeira and Azores. Although the identified problems in the areas around Porto, Lisbon and the Algarve coincide, generally, with those found in the municipal and regional analysis, a closer attention should be given to the northern region. In the regional analysis, this region displays a percentage of overcrowded dwellings inferior to that of Lisbon and the Algarve, and the municipal analysis (Figure 2) shows three concentrated hotspots corresponding to each of these regions. Only in the borough analysis (Figure 5) it can be seen that the extent of the problems covers a much larger geographical area in the north.

Lastly, Figure 6 shows how the number of dwellings lacking bath or shower has had a significant improvement at the borough level from 2001 to 2011, particularly in the interior and the north of the country. At this level the worse situations are still found in the rural areas in the north, the inland centre and especially in the mountainous regions of Algarve, at the south of the country. This is in line with the regional and the municipal analysis that, overall, revealed the most problematic area to be between Alentejo and Algarve.

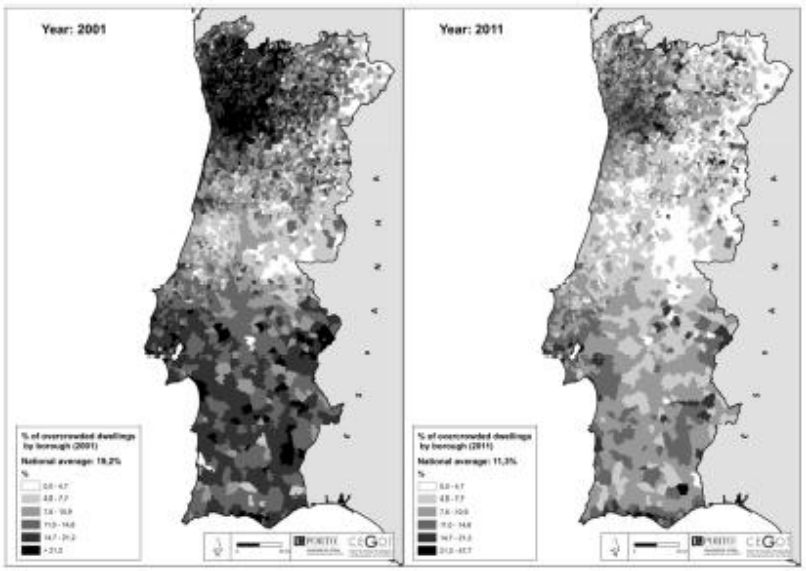

Figure 5 – Overcrowded dwellings by borough, in 2001 and 2011 (data source: INE, 2001, 2011)

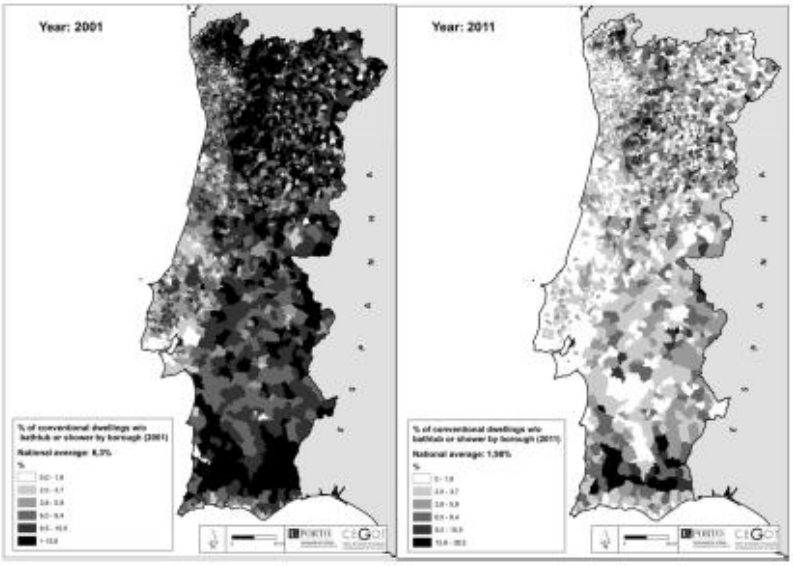

Figure 6 – Dwellings lacking bath or shower by borough, in 2001 and 2011 (data source: INE, 2001, 2011)

6 STATISTICAL COMPARISON OF THE FOUR SCALES OF ANALYSIS

In the previous sections it has been discussed that there are some perceptible differences between the problematic areas identified at different territorial scales. To further understand if these differences between scales are, statistically speaking, significant, parametric hypothesis tests were applied to the universe of the

4.241 (in 2001) and 4.260 (in 2011) boroughs of Portugal. Considering the three variables that have been analyzed in greater detail in the previous sections (% of derelict buildings; % of overcrowded dwellings; % of homes lacking bath or shower), each borough was characterized by four different values; i) the respective value at borough level (Figures 4 to 6); ii) the value of the municipality in which the borough is in (Figures 1 to 3); iii) the value of the region the borough is in (Table 2), and iv) the value for the country (Table 1). This last value is, obviously, the same for all boroughs.

In this way, 24 values were attributed to each borough: four for each scale, for each of the three variables, for each of the two years in analysis (2001 and 2011). Consequently, parametric tests for related samples were used to identify differences of means between scales. T-test for dependent samples were used for the comparison of two scales, and repeated measures ANOVA tests were used for comparisons between more than two scales. The confidence level used was 95%, therefore for p-values above 0.05 we could accept the null hypothesis (H0), i.e. that there are no significant differences between scales of analysis. The tests were applied at national level and by regions. P-value results are displayed in Table 3.

Looking at the universe of around 4.260 boroughs in Portugal it can be seen that there is indeed a significant difference between the four scales of analysis for each of the three variables and in both years (p-value = 0.000). Looking at every two different scales in turn, the same conclusion can be drawn, and the p-value is always rounded to 0.000 with the exception of the comparison between the municipal and the borough scale for the variable '% of overcrowded dwellings' in 2011 (p-value = 0.038, see Table 3). This means that, considering a higher level of confidence (e.g. 97%) the null hypothesis would be rejected and thus it could be argued that no significant differences between these two scales actually existed when reading this variable. Basically, this would mean that the analysis of hotspots and the definition of specific territorial policies could be addressed, in this case, at municipal level, instead of the borough level.

Because the results for the entire universe of boroughs in the country were more than likely to reveal significant differences between all scales and across all variables, as it was the case, the tests were repeated for each region in turn. In this case, for each borough, the value for the country and for the region is the same and hence no National-Regional analysis can be performed.

The analysis by regions shows perceptible differences across variables and across regions. Comparing the four scales of analysis simultaneously, the archipelagos of Portugal (Madeira and Azores) are the only ones that show no significant differences between scales of analysis, namely when the variable '% of derelict buildings' is considered. In Azores this happened only in 2001 (hence the scales now display, overall, different values), yet in Madeira this happens for both years. This lack of difference between scales for these regions and this variable is completely confirmed by the t-tests for each pair, with a few exceptions (e.g. a rejected test for the National-Municipal comparison in the Azores in 2001).

Test	Repeated measures ANOVA		t-test for dependent samples											
Scale	All scales		National-Regional		National-Municipal		National-Borough		Regional-Municipal		Regional-Borough		Municipal-Borough	
Census Year	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
Nationwide														
Derelict buildings	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Overcrowded dwellings	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,038
Dwellings lacking bath or shower	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
By regions														
Alentejo														
Derelict buildings	0,001	0,016			0,000	0,128*	0,589*	0,059*	0,476*	0,446*	0,008	0,010	0,009	0,013
Overcrowded dwellings	0,000	0,000			0,000	0,000	0,000	0,000	0,297*	0,007	0,072*	0,111*	0,005	1,000*
Dwellings lacking bath or shower	0,000	0,000			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Algarve														
Derelict buildings	0,002	0,001			0,000	0,000	0,117*	0,068*	0,799*	0,736*	0,109*	0,115*	0,111*	0,111*
Overcrowded dwellings	0,025	0,000			0,429*	0,000	0,158*	0,037	0,005	0,002	0,009	0,000	0,313*	0,051*
Dwellings lacking bath or shower	0,000	0,000			0,000	0,000	0,000	0,000	0,002	0,001	0,000	0,000	0,006	0,001
Center														
Derelict buildings	0,003	0,000			0,000	0,000	0,822*	0,000	0,003	0,000	0,006	0,000	0,070*	0,007
Overcrowded dwellings	0,000	0,000			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,262*	0,847*
Dwellings lacking bath or shower	0,000	0,000			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Lisbon														
Derelict buildings	0,000	0,000			0,003	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,003	0,007
Overcrowded dwellings	0,001	0,000			0,000	0,000	0,000	0,000	0,322*	0,021	0,535*	0,417*	0,211*	0,694*
Dwellings lacking bath or shower	0,000	0,000			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
North														
Derelict buildings	0,000	0,000			0,000	0,000	0,000	0,000	0,006	0,004	0,000	0,000	0,002	0,000
Overcrowded dwellings	0,000	0,000			0,000	0,000	0,000	0,000	0,000	0,004	0,000	0,000	0,000	0,001
Dwellings lacking bath or shower	0,000	0,000			0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Madeira														
Derelict buildings	0,263*	0,234*			0,046	0,872*	0,524*	0,989*	0,779*	0,042	0,483*	0,185*	0,504*	0,900*
Overcrowded dwellings	0,000	0,000			0,000	0,000	0,000	0,000	0,002	0,000	0,002	0,000	0,649*	0,238*
Dwellings lacking bath or shower	0,000	0,010			0,000	0,010	0,000	0,017	0,000	0,003	0,001	0,009	0,282*	0,189*
Azores														
Derelict buildings	0,107*	0,000			0,020	0,000	0,727*	0,000	0,062*	0,027	0,139*	0,026	0,455*	0,233*
Overcrowded dwellings	0,000	0,000			0,000	0,000	0,000	0,000	0,473*	0,032	0,718*	0,108*	0,255*	0,988*
Dwellings lacking bath or shower	0,008	0,000			0,085*	0,000	0,194*	0,001	0,082*	0,683*	0,003	0,015	0,013	0,010

*p-value greater than the significance value, i.e. H_0 accepted

Table 3 – P-value results of the parametric hypothesis tests for 2001 and 2011

Actually, it is precisely this variable, '% of derelict buildings', that presents less significant differences across territorial scales, particularly in the Islands and in the southern regions of Alentejo and Algarve. In Alentejo the similarities occur between the National-Borough and Regional-Municipal scales, whereas in the other three regions they are mostly transversal between all pair comparisons in both years, with the exception of the National-Municipal comparison. The Lisbon and northern regions always present significant differences between scales for this variable in both years, and the same occurs in the Centre region, for 2011. The variable '% of overcrowded dwellings' follows a similar, yet less perceptible, tendency, displaying less differences between some scale comparisons in the Azores, Alentejo, the Algarve and, notoriously, Lisbon, where no significant differences are found between the regional, the municipal and the borough scale.

On the opposite side, the variable 'Dwellings lacking bath or shower' always reveals that the values are significantly different between any two scales, with the exception, again, of the Islands, yet mostly for 2001. In fact, this is a common tendency of the analysis. With the exception of the Municipal-Borough comparison, where the values for 2001 and 2011 are mostly similar, in the other pair comparisons, in most places where no significant differences were found for 2001, they occurred in 2011. This happens, for example, in the analysis of the '% of derelict building' both for the Center and the Azores, of the '% of overcrowded dwellings' for the Algarve, or of the '% of dwellings lacking bath or shower' for the Azores, at various scales. The opposite hardly occurs in the analysis; e.g. the readings for the National-Municipal

comparison of the '% of derelict buildings' in Alentejo and Madeira. This is a significant find as it reinforces the idea that territorial policies for the Horizon2020 period need to be devised at a more focused scale than before, to take into account the significant differences between spatial readings that have appeared from 2001 to 2011.

This should be particularly more pressing at municipal level. Indeed, it is highly perceptible that the Municipal-Borough scale is the one presenting the less amount of differences, particularly in the variable '% of overcrowded dwelling', whose test was accepted for every region except the North, and '% of derelict buildings' in Algarve, Madeira and Azores. It is noticeable how in Madeira there are no differences between the reading of these two scales for every variable and both years. When planning by regions, the municipal scale should then be considered enough to address the specificities of the territory.

As seen before, National-Borough, National-Municipal and Regional-Municipal similarities are scarcer, occurring mostly for the variable '% of derelict buildings' in Alentejo, Algarve and the Islands. Furthermore, every region except the North and the Center display some particular instance where there are no significant differences between the values measured either at the borough or municipal scale and the regional scale. The North region, however, is the only one which always displays asymmetries between scales, and hence should be the one subject to a more careful regional and local planning agenda concerning housing problems.

7 DISCUSSION AND CONCLUSIONS

This paper intended to answer the question of whether scale-of-analysis mattered when evaluating housing conditions and consequently when designing public policies intent on reducing housing problems and vulnerabilities. According to Battaglini and Annunziata (2014) territorial policies "have to be place-based, site specific and embedded into the territorial complexity that is changeable and evolves over-time". This is even more pressing in a post-crisis scenario, where profound socio-economic changes have occurred which have affected the housing market and housing conditions (Guerra, 2011), particularly because these changes can be different across spatial scales (Cassiers and Kesteloot, 2012, Donald et al., 2014). As there are evident territorial disparities between countries but also between regions within the same country, many authors have urged for better tailored regulations and policies (Donald et al., 2014, Matos, 2012, Whitehead et al., 2014). However, planning practices have not yet systematically taken into account multi-scalar territorial perspectives, or rather, studies have focused either on wider, national scales (e.g. Nuuter et al., 2015), considering countries as points-on-a-map (Ferrão, 2014) or have been more place specific in evaluating housing conditions, focusing on local scales (e.g. Carmo et al., 2015, Murphy and Scott, 2014, Pendall et al., 2012). By not considering that places may have several geographies at different scales, the 'scale matters' debate, so prominent in other fields, has mostly been absent from studies on housing problems, and hence this research presents an original first step towards that debate.

The same three variables (% of derelict buildings; % of overcrowded dwellings and % of homes lacking bath or shower) were calculated at national level, by regions, by municipalities and by boroughs, and the value of the four scales has been associated to each borough for comparison. Geographical disparities in all indicators have been found, and several local hotspots at municipal and borough level have been highlighted that eluded national and regional views. In the last section, through statistical comparison, it was possible to prove that different regions require different territorial approaches to policy design, depending on the problem to address.

The variable '% of derelict buildings', for example, displays little significant differences across territorial scales in several regions of Portugal, implying that it could be well catered at a higher territorial level. On the contrary, the variable '% dwellings lacking bath or shower' displays significant differences across most territorial scales, meaning that the smaller the scale when addressing this problem the better, as its geographical dispersion is very precise. However, the municipal scale may be enough when evaluating these problems, as many similarities, across all variables, were found between the municipal and the borough scale. In the smaller insular regions of Portugal; the Madeira and Azores islands located in the Atlantic Ocean, as well as in the Algarve, this phenomena is always most prominent. The North region, on the other hand, displays the greatest differences between scales. It could be argued that these differences are also dependent on the way regions are structured, but there appears to be a sufficiently identifiable

pattern on this analysis of indicators and scales to support the proposed construct. Further comparative studies, with a greater amount of variables, should be pursued to further prove this point, but the fact remains that the scale of analysis may indeed be a determining factor on the design of effective territorial-based housing policies. This is more relevant when it is determined that from 2001 to 2011 similarities between higher and lower order scales of analysis have dissipated, thus corroborating the urges of Battaglini and Annunziata (2014) and of the 'The State of Housing in the EU 2015 Report' (Pittini et al., 2015) for more local, place specific approaches in the Horizon2020 period.

More than two decades ago Rémy and Voyé (1992) argued that dwellings had increasingly become the space of identification for the family, and the basis for the organization of everyday life. To have proper home is a freedom right (King, 2003), and citizens have transformed their homes into an extension of themselves and their existence, and this is truer in the countries of Southern Europe where a culture of home ownership and a home-for-life exists. In the last decades, with the aid of European Structural Funds and through rehabilitation and social housing programs, Portugal has significantly improved its housing conditions, but the numbers can be deceiving. First because a downturn, spurred by the economic crisis, the shortage of public and private resources and the reduction of credit from banking institutions, has led to a decline of the purchasing power of families, causing indebtment and insolvency, and to a cut in social housing benefits, something which may force vulnerable groups into poor quality accommodation or even homelessness. And second because the data may be read at the improper scale, concealing the actual magnitude of housing problems by neglecting specific local hotspots.

Therefore, after nearly thirty years of public policies promoting real estate investment, they now need to address issues of building rehabilitation, comfort and overall housing quality to overcome social-spatial inequalities in terms of housing conditions and access to housing, as preconized by European guidelines. To do so, it should be considered that the territory plays a central role in the integration of public policies for housing, and that scale does matter. At the same time, however, it would be a highly unfruitful waste of resources to develop specific strategies for every borough or every municipality and, true enough, in some cases the differences in readings between these scales and higher order ones are inexistent. It thus appears crucial, at this point, first to recognize that multi-scaler territorial approaches are needed to evaluate to what extent policy design should take into account the specificities of countries and regions; but second that policies should be flexible, avoiding unrealistic one-size-fits-all solutions in order to adapt to the size and characteristics, not only of the territorial scales they are focusing on, but of the specific problems themselves. To think policies at different scales and from different perspectives is a complex process, not common in planning practices, but it is one we should build towards, in order to produce a proper territorialized housing policy, responding to the European common goals but at the same time adequate to the different realities of our countries and regions.

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ID 1563 | SUPPORTING INNOVATION IN REHABILITATION INITIATIVES FOR DEPRIVED NEIGHBOURHOODS: A MULTI-LEVEL PERSPECTIVE

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1 INTRODUCTION

The rehabilitation of deprived urban neighbourhoods through area-based and integrated approach has assumed importance on the European and many national agendas for over thirty years (Berg et al., 1998; Couch et al., 2011). Such approach, rather than focusing on improving the social, economic, housing and urban condition of individuals or households with low incomes and specific needs with no regard where they live, pursues the same objectives by concentrating on specific (deprived) geographic areas.

In some countries the experience of area-based initiatives has been long and weighty in terms of resources allocated, and has anticipated European initiatives, namely the URBAN Community Initiative. In other member states, including Italy, vice versa, when introduced by the European Union's initiatives in a limited number of target cities and towns, this approach was considered an absolute novelty (Parkinson, 1998; Carpenter, 2006; Dühr et al., 2010; Seixas and Albet, 2012).

Area-based and integrated approach to urban rehabilitation assumes wide and variable meaning in different contexts according to different European, national and regional policies. Also the terms used change in relation to the specific problems to be emphasized but also to the political rhetoric aiming at stressing the novelty of urban policy undertaken. Regeneration, for example, is a term used recently at the EU (and Italian) level to indicate urban policies aiming at improving the “quality of life”, in the broadest sense, in deprived areas (EU, 2015). But this term implies different approaches: while some consider local communities or neighbourhoods as the very object of regeneration, others use various policy instruments to improve the urban economy to the benefit of the inhabitants’ economic well being (Cochrane, 2007). Some approaches are physical, property-led or business driven, some others focus on the urban form and design, on cultural industry or health and well-being, some others emphasize community-based, social economy (Colantonio and Dixon, 2010). In addition, the term urban regeneration in continental Europe appears to be rather indeterminate in its outcomes compared with the Anglo-American context in which this and related terms were originally coined (Rossi and Vanolo, 2013).

This paper will focus on area-based integrated initiatives aiming to rehabilitate deprived urban areas. Typically, these initiatives include ‘hard’ measures, such as physical restructuring or upgrading programmes in specific areas, and ‘soft’ measures, such as fostering skills, social capital, and building capacity of people (EU, 2015).

The evaluation of the impacts of these interventions on the areas where they were implemented highlights the difficulty to deal with the complex causes behind deprived areas, which relate to processes of differentiation, segmentation and urban segregation as structural elements of the social-spatial dynamics (Harvey, 2012). In many cases spatially targeted urban policies were unsuccessful to lessen poverty and improve neighbourhoods in the worst areas. Changes often implied that refurbished areas became gentrified; problems and people were shifted to other areas thus not the poorest people got the advantages (Atkinson, 2000; Uitermark and Loopmans, 2013). Property-led approach to urban rehabilitation, on which important urban programmes focused in the UK (Imrie and Thomas, 1994; Colenutt and Cutten, 1994; Turok, 1992) and elsewhere (Porter and Shaw, 2009), was unable to fight social exclusion and contributed to increased inequalities. Moreover, in the face of recession and economic crisis, such approach is likely to trouble mostly economically and financially marginal places, projects, and people (Parkinson, 2009).

However, denouncing distortion and rhetoric of area-based approach is not a request for terminating community capacity-building and local-level initiatives, as even critical literature argues (Swyngedouw et al., 2002). The dismantling of universalist social policies, which paralleled the shift to spatially targeted and place-focused approaches, has overburdened these policies with excessive expectations. The European experience of area-based initiatives suggests that there is a need for an approach that combines aid to

both ‘people and places’, that is mainstream economic and social protection policies which complement and reinforce more specific urban policies (Atkinson, 2001).

At the end of the first decade of 2000, the economic and financial crisis revived interest in place-based integrated policies for urban regeneration (Urbact, 2015). Increasing inequalities in European cities make it a crucial challenge to continue to experiment such policies in order to improve deprived neighbourhoods. This challenge is supported by the new European cohesion policy (Barca, 2009). Novel urban policies should be founded on area-bases integrated policies that are able to link interventions coming from different government levels (supranational, national, regional and local) (Subirats, 2016). After decades of experimentation, there is a consciousness that this approach is still to be considered a very powerful and innovative method of public action, but it is not an easy one. It requires learning from experience and keeping channels open for innovation (Urbact, 2015).

From these findings comes the focus of this paper on how to trigger and support innovation in area-based integrated actions for rehabilitation of deprived neighbourhoods. This is a crucial issue for contexts that lack a long run experience in this field. But it is also important in countries where in the last decades a property-based approach to urban regeneration prevailed. Apart from the perverse results of such approach, the economic recession has significantly changed its feasibility margins.

The paper is divided into the following sections. Section 2 provides a summary of researches on frameworks for the analysis of innovation dynamics in spatial planning and urban governance. Section 3 describes the framework known as Multi-Level Perspective (MLP) for the analysis of innovations in socio¬technical systems. The paper then proposes a revised MLP framework to investigate leverages and key resistance to change in the the design and implementation of an extensive integrated initiative promoted in 2006 by the Apulia region in Southern Italy[1] and implemented in deprived neighbourhoods at the local level (Section 4). The research on which the empirical analysis is based draws on systematic regional data on individual integrated programmes, on their implementation monitoring, on interviews with involved actors, and on the direct experience of one of the authors who has been a regional deputy president of Apulia regional government with responsibility for housing policies from 2005 to 2015.

2 FRAMEWORKS FOR THE ANALYSIS OF INNOVATION DYNAMICS IN SPATIAL PLANNING AND URBAN GOVERNANCE

Social innovation scholars (Moulaert et al., 2005, 2007, 2013) have made extensive research on innovation processes in the planning field. Although there is not a single definition of social innovation, that concept is mainly associated with the improvement of the quality of life in neighbourhoods and local territories through renewed social relations at the community level. It has thus three main dimensions: a product dimension, i.e. the satisfaction of human needs as they are perceived by local communities; a process dimension, i.e. changes in social relations linked to governance issues; an empowerment dimension, i.e. an increase in the socio-political capability and access to resources by local people (Moulaert et al., 2005).

Within this literature, “agency” of innovation is usually considered to be at the local level, while the other levels are framed as path dependent flows of actions, with a rather passive role in the dynamics of innovation (Moulaert et al., 2007). This literature shows different possible interplays across levels. Several case studies show the mushrooming of innovations in the interstices of established institutional settings and their radical opposition to them, which often resulted in their incapacity to challenge hegemonic forces (Novy and Hammer, 2007). Other cases show a gradual withdrawal of the grassroots experiences from the initial radical perspective towards formalisation, professionalization and possibly co-optation within the institutional boundaries set by new public management models (Christiaens et al., 2007). Other cases finally show some forms of inclusion of partners from outside the local context, which sustained the operation of socially innovative initiatives in different ways (Moulaert et al., 2010).

[1] Apulia is one of the fifteen ordinary-statute regions that together with five special-statute regions cover all Italy, with a population of 4.1 million people, an area of 19,347 sq. km, 258 municipalities, 8 municipalities with the role of provincial capitals.

In general, social innovation scholars maintain the need for specific innovation episodes to challenge established governance discourses to be able to produce wider alternative social action (Moulaert et al., 2007), and they recognise the need to connect episodes of social innovation to formal institutional systems to sustain them and increase their impact on higher scales (Moulaert et al., 2005; 2010). Nevertheless, a comprehensive framework to analyse evolutionary pathways of innovations is not developed.

An interesting discussion on innovation dynamics in urban governance is made by researchers from sociological institutionalism in planning (Healey, 1997, 1999, 2007; Vigar et al., 2000; Cars et al, 2002; Fainstein, 2000; Gualini, 2001), who have applied a social constructivist frame and a relational view of social action to understand institutional dynamics, thus contributing to connect the phenomenology of micro-practices to wider structuring forces. In this field, an interesting debate on innovation has been developed as a critique of state-centred interventions in promoting changes in the formalized way of "doing government" and of social engineering approaches to institutional design aimed at the creation of more efficient infrastructures for urban performance.

In particular, Healey et al. developed an interesting framework to analyse the institutional relations of governance dynamics (Coaffee and Healey, 2003, Gonzalez and Healey, 2005, Healey, 2006). This was built on a more dynamic conception of Luke's three levels of power elaborated by Dryberg (1997) and on Giddens' conception of the interaction of structure and agency (Bryson and Crosby, 1992; Giddens, 1984). The framework expresses the three levels in terms of: the level of specific episodes of interactions, which are characterized by power dynamics of interpersonal relations; the level of governance processes, with power relations embedded in organized institutional practices and deliberately manipulated by strategic actors; the level of governance culture, with a deeper level of taken-for-granted assumptions, culturally embedded habits and routines (Coaffee and Healey, 2003). According to this framework, transformation in urban governance cannot be claimed unless all three levels change significantly (Coaffee and Healey, 2003; Gonzalez and Healey, 2005).

Level	Dimension
Specific episodes	*Actors*: key players—positions, roles, strategies and interests *Arenas*: institutional sites *Ambiences (interactive practices)*: communicative repertoires
Governance processes and 'mobilisation of bias'	*Networks and coalitions* *Stakeholder selection processes* *Discourses*: framing issues, problems, solutions, interests, etc. *Practices*: routines and repertoires for acting
Governance cultures	*Range of accepted modes of governance* *Range of embedded cultural values* *Formal and informal structures for policing discourses and practices*

Figure 1. Levels and dimensions involved in governance dynamics (source: Coaffee and Healey, 2003).

Transformative effects are thus produced only when governance innovations move from episodes to regulatory practices, i.e. when "the learning experiences, network-building and mobilisation capacity developed in these episodes of governance, and specifically those centred around place qualities, accumulate the power to shift 'mainstream' politics and administration" (Coaffee and Healey, 2003, p. 1980). To endure, specific episodes have to become institutionalized in the routines of governance practices and change governance culture (Coaffee and Healey, 2003; Gonzalez and Healey, 2005, Healey, 2006). The core question is thus: "What does it take for innovations in particular episodes to be translated into 'mainstream' practices, in ways which transform the mainstream rather than just incorporate new ideas and practices in ways which neutralise threats to established practices and the various power relations embedded in them?" (Coaffee and Healey, 2003, p. 1983). Put it in another way, how can specific innovation episodes have a "destabilizing role, creating challenges and opportunities across the landscape of urban governance through which quite different relations and power dynamics could emerge to shape the future governance culture"? (Coaffee and Healey, 2003, p. 1996).

Despite some cases observed by Healey et al. (see e.g. Coaffee and Healey, 2003) showed how local episodes of institutional changes were prompted jointly by top-down (national agenda aimed to modernize local governance) and bottom-up forces (local political pressures), the framework in its initial version only acknowledged the "agency" of innovation at the local level and disregarded the importance of wider "opportunity structures" in which episodes of innovations are situated and of exogenous forces to generate a pincer movement to force change in embedded urban governance cultures (Gonzalez and Healey,

2005). These are added in subsequent versions of the model, where Healey tried to combine more explicitly the initial conception of the levels of governance with the Geddesian relation between structure and agency by emphasising the reciprocal influence of each level with another through rules, norms, material resources and framing ideas (Healey, 2006). In this model, transformation initiatives are produced by the interplay of rules, resources and ideas coming from different levels and not only located at the local level. Figure 2 represents this refined model of governance dynamics.

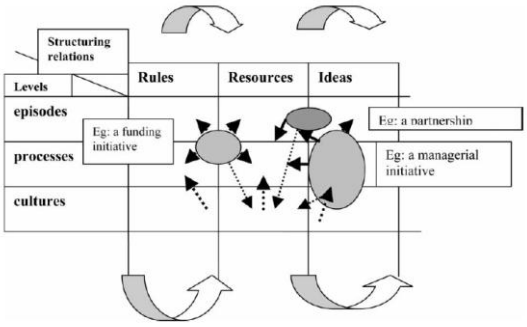

Figure 2. Transformation initiatives in governance dynamics. *Note:* Although laid out as separate levels and structuring dimensions, in any actual instance these all interact

Figure 2. Governance dynamics in transformation initiatives (Source: Healey, 2006).

For the purpose of our study, the interest for this framework comes from its capacity to adopt a multi-level approach to innovation dynamics, although it does not identify specific transition pathways across levels. A limitation of this framework is nevertheless its exclusive focus on institutional dynamics, thus its neglecting of the technical dimension of innovations, which, in the opinion of the authors of this paper, constitutes a core part of innovations in spatial planning and urban governance. The transitions to new approaches to urban rehabilitation include both an institutional and a technical dimension, that are worthy of consideration.

Next section will also show how the framework developed by Healey et al. can be included within a more general framework dealing with socio-technical innovations, which can be used to explain innovation dynamics as well as to identify catalysts and barriers for change.

3 A MULTI-LEVEL PERSPECTIVE ON INNOVATION

This section deals with the description of a framework known as Multi-Level Perspective for the analysis of innovations in socio-technical systems, which the authors maintain can be usefully applied to analyse innovation dynamics in the area of urban rehabilitation.

This framework has been developed in the broad field of innovation studies, on the basis of insights from evolutionary economics – in particular the concepts of regimes, technological trajectories, path dependency and niches (Nelson and Winter, 1977, 1982) – from sociology of technology – in particular the idea that technological innovations are socially constructed through interactions between engineers, firms, policy makers and consumers (Bijker et al., 1987; Hughes, 1987; Bijker, 1997) – and from neo-institutional theory – in particular the idea that actors do not act in a vacuum but are embedded in deep-structural rules, shared beliefs and norms that guide their perceptions and actions (Giddens, 1984). It addresses the study of innovations at the level of socio-technical systems, i.e. a system encompassing not only its technological dimension but also changes in user practices and cultural meanings, institutional structures, policy, markets, scientific knowledge and infrastructures (Kemp et al., 1998; Elzen et al., 2004; Geels, 2004). In these systems transitions are considered as co-evolutionary processes, which involve many actors and social groups and take place through complex dynamics among them.

The field of urban rehabilitation can be considered a socio-technical system; its technical dimension is made of different types of planning instruments at different scales (including strategic plans and programmes, regeneration initiatives, …). Innovations in the technical tools used to develop rehabilitation

interventions interact with user practices and cultural meanings (how local communities frame rehabilitation interventions, which involvement is required from them in the development of such interventions, …), institutional structures (which governance frameworks can enable new regeneration plans to be developed and carried out, how they interact with existing government structures, …), policy (which regulatory, normative and strategic actions are developed to orient territorial transformations), markets (how private firms can be partners of the regeneration initiatives, …), scientific and technical knowledge (which skills and competencies professionals involved in plan making have and how they can develop new scientific and technical competencies required by innovative rehabilitation interventions) and infrastructures (how changes at neighbourhood level interact with infrastructural networks at the urban scale e.g. in terms of utilities' connection, mobility, etc.).

The MLP specifically elaborates a framework to address transitions in socio-technical systems emphasising a co-evolutionary and non linear approach (Rip and Kemp, 1998; Geels, 2002, 2005). That framework distinguishes three levels at which and across which change dynamics take place during a transition.

The lower level is the level of niches, which act as "incubation rooms" for radical novelties and protect them from normal market selection (Schot, 1998). Niches may be R&D laboratories, small market niches whose users have special demands (e.g. the military) or subsidised demonstration projects (some area-based integrated initiatives mentioned in section 1 fall in this category). The literature on strategic niche management usually identifies three important niche-internal processes (see e.g. Kemp et al. 1998; Hoogma et al., 2002). In the first place, niches provide location for learning processes to happen in relation to various dimensions: technological components, organizational issues, market demand, user behaviour, infrastructure requirements, policy instruments, symbolic and cultural meanings, scientific and technical knowledge. Learning takes place through cycles of actions (experimentations), sensemaking and adjustment of cognitive frames like in the enactment-selection-retention model proposed by Weick (1995). According to this model, actors first do something in the world on the basis of existing cognitive frames, then they interpret outcomes of actions, and finally retain meaningful data within cognitive frames through data accumulation or frame alteration. Learning of this type thus happens during co-construction of niche-innovation experiments and is socially developed among different actors involved (Raven and Geels, 2010). Secondly, niches provide the locus for the articulation of expectations or visions, which give direction to internal innovation activities and to learning processes. Finally, niches are the places where social networks are built and strengthened to expand the social and resource base of niche-innovations and to increase their legitimacy (Kemp et al. 1998; Hoogma et al., 2002).

The meso level in MLP is the so-called "socio-technical regime". This concept builds on Nelson and Winter's notion of technological regime (Nelson and Winter, 1982), that refers to cognitive routines, beliefs, norms and heuristics shared by engineers and designers in a technical community. It is also similar to the concept of "technological paradigm" used by Dosi (1982) to explain why technological development is mainly channelled along technological trajectories through incremental innovations. In socio-technical regimes, the deep-structural rules that coordinate and guide actors' perceptions and actions in a Giddensian manner (Giddens, 1984) do not belong to engineers only, but they also shape perceptions and actions of other social groups like users, policy makers, civil society, scientists, capital banks, public authorities, etc. In MLP the notion of regime thus introduces a structuralist element in the perspective, which is used to explain several lock-in and path dependence mechanisms of development trajectories (Geels, 2004). Because of the regimes, changes still occur, but they proceed almost predictably in certain directions, giving raise to stable trajectories. This also explains the dynamic stability of socio-technical systems.

The macro-level is then called "socio-technical landscape". It represents the wider exogenous context, which influences niche and regime dynamics. It refers to several aspects like macro-economic trends, deep cultural patterns, macro-political development, etc., which may include physical aspects influencing the socio-technical system like physical infrastructure or smart grid development (Rip and Kemp, 1998). The socio-technical landscape represents the greatest degree of structuration, which is beyond the control of individual actors.

The core point made by MLP is that innovations in socio-technical systems come about through the interplay between dynamics at multiple levels. Figure 3 provides a description of the dynamics of each level and the way they interact dynamically in the development of socio-technical transitions. Although

each transition pathway is unique, MLP identifies key steps in the dynamic interaction among levels, which can explain transitions.

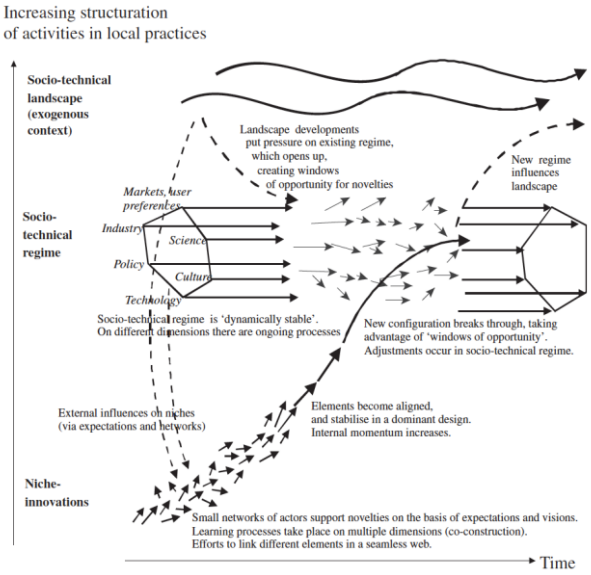

Figure 3. Dynamics of socio-technical transition according to MLP (source: Geels and Schot, 2007).

After a stage of experimentations of different designs in niches, which may be externally influenced by the meso-or by the macro-level through expectations and size of support networks (Geels and Schot, 2007), niche innovations may at some point build internal momentum, as rules and user preferences become stabilized in a dominant design. At this point, if “windows of opportunity” are opened up at the regime level thanks to pressures put by landscape development, new configurations emerging from niches may break through (Geels, 2002). This may create changes in the socio-technical regime, which may eventually influence landscape development. On the other hand, failures in transitions may occur when niche-innovations fail to build sufficient momentum or suffer setbacks, or when windows of opportunities for niche innovations do not materialise due to insufficient tension in existing regimes.

With this framework, the MLP thus tries to explain transitions in socio-technical systems doing away with simple causality and linear explanations. It employs a co-evolutionary and systemic approach based on the acknowledgement of processes on multiple dimensions, which link up and reinforce each other in a circular causality. Secondly, the MLP emphasises the importance of agency, as experimentations, trajectories and multi-level alignments are all enacted by different actors from different fields (market, industry, science, policy, culture, technology). In this way, the MLP is able to deal with the core analytical puzzle of transitions, namely the oscillation between stability (due to several lock-in and resistance mechanisms) and change. At the same time, it succeeds in identifying links among apparently disjointed dynamics happening at different levels, ranging from the micro-level where radical alternatives are developed and tried by pioneers, social movements and other actors outside the existing regime and landscape levels.One limitation for the application of this model to the field of urban rehabilitation is the under-theorization of the institutional and governance dynamics in the transitions. The six pillars highlighted in the socio-technical regime encompass markets/user preferences, industry, policy, technology, culture, science; thus the institutional and governance dimension of innovation is somehow restricted within the policy dimension. Because of this, the authors of this paper propose to enrich this model by adding a specific institutional/governance pillar, whose dynamics and specificities can be understood on the basis of the literature on innovation in urban governance discussed in section 2. The revised framework is shown in Figure 4.

The MLP framework has so far been applied to several fields, including water supply and sanitation (Geels, 2005), energy (Verbong and Geels, 2007), transportation (Geels, 2012), organic food and sustainable housing (Smith, 2007), urban infrastructures (Maassen, 2012). More recently the MLP has been applied to urban studies (Hodson and Marvin, 2010, 2012; Coenen and Truffer, 2012; Hansen and Coenen, 2015), in the attempt to highlight the influence of spatial dimensions and place specificities in sustainability transitions. These studies thus investigate transitions at the level of the city.

This paper proposes an application of a revised MLP framework to the field of urban studies as well, focusing on innovation in the area of urban rehabilitation.

4 THE TWISTED PATHS OF INNOVATION IN REHABILITATION INITIATIVES FOR DEPRIVED NEIGHBOURHOODS IN APULIA REGION

4.1 A VARIETY OF DISPERSED (AND MISSED) INITIATIVES

In Italy the initiatives for deprived neighbourhoods have developed along with the reduction of welfare and social services, the persistent lack of a national urban policy and even of a national housing policy, after the decentralisation of this responsibility to the regional governments at the end of the 1990s (Padovani, 2011). State investment in housing has been progressively decreasing since the late 1970s, and the limited available public funds were channelled almost entirely towards the so-called "complex programmes". These are new planning instruments that include a wide variety of area-based initiatives funded by the Ministry of Infrastructures through competitive bids among the cities, adopting different terminology, approaches and methods, which produced an archipelago of isolated, episodic, uncoordinated local experiences[1]. The feature that all these programmes share and that differentiates them from other European experiences is that these new planning instruments with strong predominance of the physical aspects on social, economic, and cultural ones.

Thus, only partial convergences can be identified between such national programmes and the initiatives launched by the European Union: Urban Pilot Project (1990-1997) and URBAN programmes (1994-2000). Indeed, the prevalence of physical actions characterizes also the implementation of the URBAN Community Initiative in Italy[2]. The term "integrated action" has been interpreted in very different ways during the experimentation both of the "complex programmes" (Cremaschi, 2001; Padovani, 2002), and the URBAN Community Initiative (Tedesco, 2005). Many regional and local governments still show difficulty to promote integrated actions that move beyond the aims, methods, and achievement of urban renewal, considered as a process of essentially (more or less thorough) physical change (Couch, 1990, 2). The ability to develop new capacities for introducing integrated actions into the ordinary course of events appears limited (Lingua, 2007; Palermo and Ponzini, 2015).

Notwithstanding this, literature shows that URBAN led to significant results in terms of governance experiences and learning processes in the involved Italian cities (Frank et al., 2006), in line with the general trend of a more relevant impact on the Southern European countries lacking of long-standing national urban regeneration policies (Atkinson and Zimmermann, 2016). But the explicit objectives of such initiative, i.e. to promote innovative area-based strategies and reinforce and spread knowledge and experience greater research insight.

Before 2005 the Apulia regional government had never developed neither an urban rehabilitation initiative nor a programme for public housing. Some municipalities had experienced a number of area-based and integrated programmes promoted by the European Commission and the national government.

The Urban Pilot Projects and the two URBAN Community Initiatives involved a limited number of municipalities, mainly provincial capitals[3]. The national programmes initially involved few municipalities, again mostly provincial capitals. Later, in 2002, the Contratti di Quartiere II (Neighbourhood Contracts) involved 15 medium-small towns and only two provincial capitals (Barletta and Lecce). But this initiative started only in 2008. The implementation of all these programmes, which was entrusted jointly to

1 Programmi integrati di intervento and Programmi di riqualificazione urbana (1992), Programmi di Recupero Urbano (1993), Contratti di quartiere I (1997), Contratti di quartiere II (2002). On the evolution of urban renewal policies in Italy see Governa and Saccomanni (2004).

2 Physical/environmental regeneration accounted for 62 per cent of expenditure in Italy, as opposed to just 10 per cent in Denmark.Expenditure on employment and entrepreneurship ranged from 52 per cent in the Netherlands to just 18 per cent in Italy (Carpenter,2006).

3 Brindisi was the only municipality that benefitted from the Urban Pilot Programme (Second Phase, 1997). URBAN I (1994-1999) was implemented in Bari, Foggia and Lecce, URBAN II (2000-2006) in Mola di Bari and Taranto. In Bitonto and Brindisi was developed Urban Italia, a special national initiative that funded the twenty municipalities that had been ranked after the ten admitted to the funding of URBAN II.

municipalities, regional government and the Ministry for Infrastructures, is varied. Some never started, others are still under way, and these include also initiatives that were funded in the early 1990s. Moreover, like in most parts of Italy and with the exception of some well-documented local experiences (Palermo, 2001; Governa and Saccomanni, 2004), these programmes were seen as a way to relax the rigidity of the traditional master plans. Thus, the judgment of failure of these programmes in Apulia does not seem to be too severe.

4.2 THE NEW REGIONAL INITIATIVE

The European integrated urban rehabilitation programmes and national “complex programmes” depicted above represent the regional background knowledge for the regional area-based integrated initiative launched in Apulia in 2006.

This initiative, defined as “Integrated programmes for the rehabilitation of peripheral neighbourhoods” (hereinafter referred to as the Italian acronym "PIRP"), aimed at spreading rehabilitation practices in deprived urban neighbourhoods through an area-based and integrated approach. It was an ambitious initiative in a context characterized by modest experience in this field, and a traditional regional housing policy incapable of meeting the needs of the most vulnerable social classes and assuring the right to housing, interpreted as the right to live somewhere in “security, peace and dignity”[1]. Funded with 93 million euros, the PIRP was part of a large regional programme for public housing[2]. This was a policy objective of great importance for the left wing government set up in 2005, for the first time (surprisingly) ruling Apulia Region after decades of centre and right governments, and strongly determined to radically change inter alia the spatial planning and urban governance practices that had consolidated for decades in the region. The term “peripheral” does not indicate the neighbourhoods’ topographic position and physical distance from the city centre, but their condition of deprivation and marginalisation. This is represented through significant indicators of disadvantaged socio-economic situation as well as the shortage or degradation of infrastructure and services. Therefore, the historic centres in such conditions were eligible areas.

Municipalities were to base their PIRP proposals on an idea of neighbourhood’s regeneration aimed at creating (or recreating) place attachment and social space. The regional call required that the programmes be developed with the active participation of the inhabitants, in order to meet people needs, desires and expectations, and improve their well-being. Integration was interpreted both in the physical dimension, in order to avoid urban mono-functionality and segregation, and in the socio-economic dimension, to activate effective actions against social exclusion. Finally, the PIRP call for proposals asked for projects that demonstrated to save environmental resources (energy, water and soil), reuse abandoned areas, reclaim polluted sites, restore soil permeability, enlarge and improve pedestrian and green areas in order to create "kid friendly neighbourhoods".

The PIRP initiative encouraged 122 municipalities to experience 129 area-based integrated initiatives[3]. This high number of programmes was the result of intense supportive activities. The regional government directed, encouraged and accompanied local initiatives’ design through the promotion of thematic seminars and exchange of experiences on programme’s innovative key issues and an electronic forum aiming not only to provide answers to specific questions but also to foster the exchange of ideas and experiences among the participants. It defined in detail the evaluation criteria for selecting the initiatives in order to avoid the trivialisation and distortion of the innovative features of the programme. Precise points were assigned to each aspect of the programme, stressing those that were supposed to be more innovative in the local contexts (Tedesco, 2009). Notwithstanding this, both the design and implementation of local programmes show relevant differences among the various involved municipalities which deserve examination.

1 According to the definition of the UN Committee on Economic, Social and Cultural Rights.
2 This included also interventions for the rehabilitation of public housing, rehabilitation of vacant dwellings for rental housing, and social housing allowances, for a total of 207 million euros.
3 Provincial capital cities could apply for two programs.

4.3 GRASPING THE MULTI-DIRECTIONAL DYNAMICS OF INNOVATION DIFFUSION

This section uses the modified MLP framework in order to investigate the different performances of design and implementation of PIRPs in the light of the multi-directional dynamics of innovation diffusion linking this programme to the EU and national area-based and integrated initiatives (see figure 4). MLP will help to understand not only whether and to what extent these experiences left trace in the region, but also which kind of innovation has penetrated into the local contexts, if those directly involved in innovative programmes show differences from contexts that were not implicated, and what can be considered the major catalysts for innovation.

Innovation was the key-word for Urban Pilot Projects and an explicit goal included in the launching of URBAN Programme (CEC, 2002). In the intention of the European Commission both these initiatives had a clear demonstrative character. This implies that the URBAN 'core approach' should be 'transferable' from one context to another. These initiatives can thus be considered niche-innovations with respect to the design and implementation of the PIRP programme in Apulia region. They give direction to two flows of learning processes: vertical flows, which involve the different levels of government implicated in the initiative,, and horizontal flows, which involve different actors at each level.

On the other hand, national "complex programmes" contributed, together with connected changes in national norms and regulations that had to be directly applied or transposed by the regional legislation, to strengthen the socio-technical regime that shape perceptions and actions of regional and local institutions and social groups. In Apulia, a region characterised by 'sclerotic' urban planning practices and a powerful construction sector,, the local actors deeply involved in entrenched modes of urban governance (politicians, public and private planners, architects, engineers, construction companies) had perceived these programmes in an opportunistic way: as an additional source of funds not to be missed and an chance to force urban planning rules to make extra-profits.

The PIRP initiative was entrusted to the regional social housing department. This had managed various phases of the national "complex programmes" implemented in the Apulia municipalities, while had been completely excluded from EU initiatives. Their approach was based on the consideration of the private sector as largely coincident with power groups linked to the construction sector, while ignoring the involvement of local organizations, cultural, social and environmental associations and, above all, the inhabitants of deprived neighbourhoods. In order to remove probable obstacles to innovation due to the one-sided representation of private sector as well as to lock-in and resistance mechanisms typically affecting public organisations, the deputy president responsible for social housing enlarged the decision arena. She involved in the design of the PIRP objectives and call for proposals, the regional tenants' unions, social housing agencies, representatives of the national association of municipalities, and the most important environmental and welfare associations.

As a result, the PIRP was the first initiative in Apulia that involved extensively and consciously in area-based integrated programmes, alongside the municipal officials and the actors traditionally active in urban development, local organizations, cultural, social and environmental associations and, above all, the inhabitants of deprived neighbourhoods.

In the design of PIRP two learning flows triggered by the URBAN niche-innovation influenced the decisions at the regional level: one comes from the EU level and the other from the local level. On the one hand, the URBAN approach inspired an interpretation of area-based and integrated approach emphasising public participation and social-economic dimensions over the physical ones. On the other hand, what had been learned by the URBAN initiative implementation at the local level gave suggestions for improving the PIRP programme. In particular, in order to avoid opportunistic criteria guiding the choice of target areas, i.e. le selection of the most central and visible rather than the most disadvantaged ones, more than 30% of the PIRPs evaluation score (60/170) was assigned to area-based indicators of socio-economic and physical degradation and deprivation.

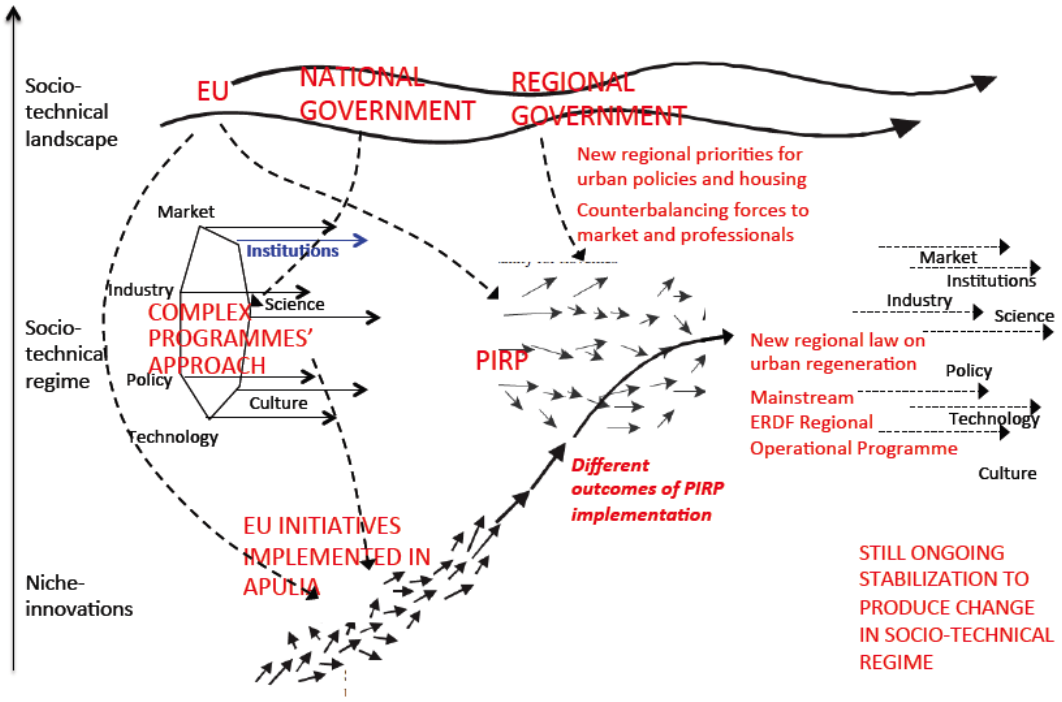

Figure 4. Dynamics of socio-technical transition in the case-study (modified Geels and Schot's MLP framework)

Moreover, a perverse effect of the implementation of the URBAN programme in Apulia historical centres was the rise in real estate values and the consequent eviction of inhabitants (Palermo and Savoldi, 2002). In order to prevent these undesirable processes, the regional programme included a specific financial support in favour of low-income inhabitants of the historical areas to be used to restore their houses or in favour of owners wishing to rent the vacant houses to low-income categories for 8-15 years. Such a focus on the protection of residential functions avoided the economic-functional specialization and consequent morphological segregation that impoverish many historical areas, and that make these areas renewed as neighbourhoods not for daily living but to be visited.

The examination of the PIRP implementation in the capital cities that experimented the URBAN programme highlights the failures in transitions that characterise such niche-innovation. The URBAN initiative was unable to build sufficient momentum to spread innovation within the municipalities that had been involved in the programme8. Thus, one could expect some horizontal learning flows coming from the success of these experiences, at least in terms of organizational capacity and process innovation. On the contrary, these cities had great difficulty in starting and implementing the proposed programmes.

A deeper investigation of these PIRPs reveals that the existing socio-technical regimes dominating the major cities were an obstacle for innovation. The huge participation of construction companies, sometime competing for the leadership of the programme, some other assuming the guidance, caused a slowdown and recently even a stop in the implementation. Cognitive routines, beliefs, norms and heuristics shared by technical actors in unity with economic interests, supported or in any case not opposed by the local political power, gave rise to implementation processes that tended to replicate the opportunistic attitude assumed in the "complex programmes" experience. There is more. A landscape level event, namely the economic and financial crisis started in 2008 and still on going in the local housing market, has heavily affected these initiatives, to the point of vanishing some of them.

The systematic inquiry into the implementation of the PIRP programme brings to the fore that small and medium-sized towns were more able to grasp the potential of key innovations activated by the regional government. In most of these contexts we observe product innovation, i.e. the satisfaction of inhabitants needs; a process innovation, i.e. changes in social relations linked to governance issues; an empowerment dimension, i.e. an increase in the socio-political capability and access to resources by neighbourhood communities (Moulaert et al., 2005). The greater 'proximity' and more dense interactions between inhabitants and decision-makers allowed these communities to make their voice heard, to become an active part of the process, and to exercise control over the implementation of the programmes,

up to the technical construction site. This stimulated also engineers and architects to innovate their techniques, get out of their professional routines, and find low cost technical solutions aiming to help inhabitants to manage and maintain facilities and common areas. Contrary to what one might expect, the small towns were much more dynamic also in PIRP implementation. The smaller and simpler organizational structure avoided the problems of lack of coordination and cooperation that occurred in larger cities when the integrated approach made it necessary to combine skills and financial sources from various municipal departments.

The political discourse, which for the first time in Apulia attributed centrality to the rehabilitation of deprived neighbourhoods in connection to the right of the city, found greater spaces for penetration in contexts in small and medium towns. The main reasons for this surprising outcome seem to be the robustness of socio-political ties and the lack of strong economic interests able to direct rules, resources and ideas to their advantage (Healey, 2006) and to oppose resistance to change.

The regional government considered the PIRP programme as an important, extensive and long cycle of experimentations, which triggered learning processes that were not to dissipate, and that had to be exchanged with other experiences and helped to steadily penetrate into everyday practices. To this purpose various initiatives were undertaken: inter alia the approval of a regional law on urban regeneration (No. 21 of 2008), and the adoption of the approach and devices provided by this law in the mainstream ERDF Regional Operational Programme for 2007-2013, and then 2014-2020, as well as in regulations and guidelines that direct ordinary regional and local planning practices.

In developing these instruments, the regional government took into account both the positive and negative impacts of experimentation. Two aspects are worth mentioning for their importance in the Italian debate on area-based initiatives. In major cities, unlike in small towns, the choice of target areas was independent of any strategy to ensure the achievement of the overall objective of combating spatial inequalities and social exclusion in the most disadvantaged areas. Notwithstanding the high rank assigned to area-based degradation and deprivation indicators, interest groups succeeded in influencing the selection of target areas for the regional call for their own benefit. Thus, the regional law No. 21 of 2008 requires the selection of areas to be based on a city-wide "urban regeneration strategy", designed with the active citizens participation and approved by the City Council. The strategy must be based on a detailed examination of the conditions of deprivation and degradation in the different city districts, and must condition the choice of neighbourhoods where regeneration actions are to be developed. The approval of such strategy came to be a prerequisite for applying the priority axis for “urban development” included into Apulia ERDF Operational Programme 2007-2013 (320 million euro), which was entirely devoted to urban regeneration. This did not completely eradicate opportunistic attitudes, but induced municipal officials and local communities to understand that their old land use plans had deeper limitations than rigidity, and opened spaces for civic participation and increased awareness about urban degradation and deprivation problems. This approach is tending to stabilize at the regional level: the approval of the "urban regeneration strategy" according with law No. 21/2008 is an essential prerequisite for applying for funds under the 2014-2020 “urban development” priority axis, according to the call for proposals presented in 2017 by the regional government for partnership agreement. This is a way to obviate the excessive incrementalism characterising the area-based approach not only in Apulia region (Governa and Saccomanni, 2004)

5 CONCLUDING REMARKS

This paper has analysed innovation dynamics in urban rehabilitation of deprived neighbourhoods by combining existing frameworks developed in the field of social innovation and sociological institutionalism with the MLP framework developed in innovation studies, so far applied to several fields including urban infrastructures, food and housing, and sustainability.

The application of a revised MLP framework to the area of urban rehabilitation revealed two main advantages for the analysis of innovations compared to established models. First of all, it allowed to broaden the range of actors and processes involved in the innovation process as well as the levels to which they belong and act in transformative practice. This result was particularly important in the area of urban rehabilitation, where European, national, regional and local levels interact and influence each-others. Secondly, it helped to overcome a perception of innovation as proceeding from bottom-up,

grassroots practices to subvert higher level structures and governance systems. In this respect, the multi-level perspective employed in this paper showed the nested hierarchy of processes and the bi-directional influencing dynamics of change. Furthermore, this paper revealed the influence of place specificities on innovation dynamics and demonstrated the importance of investigating the specific places, where niche practices find barriers for their penetration, and the places were innovation unfolds.

The use of the above-mentioned analytical framework strengthened the investigation of the complex socio-technical processes of design and implementation of area-based and integrated actions for deprived neighbourhoods, and led to a wider conceptualization of drivers and barriers for innovation and change in such initiatives.

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ID 1567 | INNOVATION MANAGEMENT TECHNOLOGY STANDARDS AS A TOOL FOR PARTICIPATORY STRATEGIES IN URBAN REGENERATION OF PREFABRICATED HOUSING ESTATES

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1 INTRODUCTION

The central goal of the project is to investigate the living environment of low quality in residential areas in the cities, which mutually need improvement and regeneration in the scope of future sustainable urban development. The most problematic questions are being raised during the last decades about the marginal and post-socialist prefabricated housing estates built during the 1950-80s in EU. However, the inhabitants as core users of these housing areas are not fully participating in the development initiatives for revitalization on one hand, and have not been given due attention by the city to express their needs and expectations on the other hand. The main documents which contextualize the research are EU Urban Agenda and, especially, the New Urban Agenda by United Nations Conference on Housing and Sustainable Urban Development (Habitat III), which give value to the citizens; recognize the importance and prioritize their participation in the city development, urban regeneration. The research is focused on the development of interoperable connections between urban environment of low liveability and the inhabitant through participation strategies, understanding the role of innovation (regenerative and participative) for efficient public participation. It is considered to narrow this focus to Poland as the case study country because Poland is one of the countries in Central Europe, which received post-socialist prefabricated large housing estates built between 1960 and 1990 with population of over 8 million people, flats in large housing estates are estimated as 35% of the overall number of dwellings in Poland.

In the context of the above documents by European Commission and Habitat III the research objectives are summarized in the following layers of the research: (a) prefabricated housing Estates and social housing policies; (b) development of public participation in urban development (regeneration of residential areas) in the framework of European Standards. These correlated layers are directed to achieve the main

research hypothesis: (a) the retrieved matrix of indicators of living environment of prefabricated large housing estates and societal needs of inhabitants sets the core in regeneration program; (b) the interoperability of European Standard CEN/TS 16555-1:2013 (Innovation Management) and participatory strategies in urban sustainable development envisages an innovative linkage element between urban regeneration project management and participatory process. This becomes especially important at the time, when R&D&I European Standards as national standards in Poland have not been adopted yet. The research comprises collaboration with Portugal (CIAUD, FA ULisboa) in the scope of participatory strategies for urban development as one of the countries which also has not implemented these standards by now. In the fall 2016 this research project was submitted to POLONEZ, that is the National Science Centre (Poland) fellowship program, co-funded from the EU H2020 Marie Skłodowska-Curie Actions.

The use of the transdisciplinary approach in correlated urban categories 'city – inhabitant – knowledge&innovation' expects impact on the mechanism for improvement of the level of living environment in the cities and human settlements, their smart sustainable development for the societal benefit, which are among the Europe 2020 targets and priorities.

2 CONTEXTUALIZATION OF THE RESEARCH

The main documents, which contextualize the research, are EU Urban Agenda, the New Urban Agenda by United Nations Conference on Housing and Sustainable Urban Development (Habitat III). These documents envisage the mutual role of the citizen as the participant in the city development and urban regeneration, defining a "participatory" (New Urban Agenda, 2016) city, which "achieve sustainable integrated urban development" (New Urban Agenda, 2016) by leveraging innovation.

The framework of Europe 2020 Strategy (European Commission, 2010) states mutually reinforcing priorities for smart, sustainable and inclusive growth. These three directions envisage developing of knowledge and innovation; resource efficient, greener environment; social and territorial cohesion as drivers for future economies throughout the Union. The mechanism of achieving the goals set by Europe 2020 requires the translation of these goals into national targets and trajectories. Smart growth receives a productivity gap due to a lower level of innovation, insufficient use of information technologies, and reluctance in some parts of our societies to embrace innovation. According to (European Commission, 2010) "smart growth means strengthening knowledge and innovation as drivers of our future growth".

The Europe 2020 targets and priorities are interrelated on the level of living environment in the cities and human settlements, their smart sustainable development for the societal benefit. Almost three quarters (72.4 %) (Eurostat, 2016) of the EU-28's population lives in the urban environment. And the quality of urban life in cities, towns and suburbs demands its improvement.

In this context, the European Commission, expresses its concern for future cities in "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions the urban dimension of EU policies – Key features of an EU Urban Agenda" COM/2014/0490 final" (European Commission, 2014) and refers to the principles of the European sustainable urban development model synthesised by Cities of Tomorrow, which describe future cities as: places of advanced social progress; platforms for democracy, cultural dialogue and diversity; places of green, ecological or environmental regeneration.

It is acknowledged in the New Urban Agenda (New Urban Agenda, 2016) that in the sustainable development of cities and human settlements citizens "play an active and unique role in development initiatives". The Agenda underlines as one of the main feature, that it envisages in the cities and human settlements, that they: "are participatory; promote civic engagement; engender a sense of belonging and ownership among all their inhabitants; prioritize safe, inclusive, accessible, green and quality public spaces friendly for families; enhance social and intergenerational interactions; and foster social cohesion, inclusion" (New Urban Agenda, 2016, 13 b).

Among the main interlinked principles and commitments of New Urban Agenda (New Urban Agenda, 2016) are: (a) "leave no one behind <…> by enhancing liveability; by ensuring integration in the urban space; by ensuring public participation providing safe and equal access for all; by providing equal access for all to adequate and affordable housing"; (b) "ensure sustainable and inclusive urban economies, by

<…> leveraging high competitiveness and innovation"; (c) "ensure environmental sustainability, by promoting sustainable use of land and resources in urban development, by building urban resilience.

In the above context, future development of the cities correlates the categories of (a) knowledge and innovation, and (b) social cohesion translated to the goals on national level. EU Urban Agenda COM/2014/0490 final and, especially, the New Urban Agenda by United Nations Conference on Housing and Sustainable Urban Development (Habitat III) (New Urban Agenda, 2016) give value to the citizen; recognizes the importance and prioritize his participation in the city development, urban regeneration.

The above documents are contextualizing the research and are opening further contemporary questions and possibilities of research on participatory processes in urban regeneration: how to understand the innovation in participatory engagement for contemporary sustainable city; what is the nature of correlation between the categories 'city – inhabitant – knowledge&innovation', their interoperability in participation strategies. The definitions of 'participation', which are used during the last decades, consider its meaning as "a varied set of initiatives that are committed worldwide to dealing with scenarios in transformation" (Falanga, 2013). Participatory engagement of the citizens to the development of the settlement faces the challenges during the process: from the involving of the inhabitants until the conclusion stage. How do participants envisage and percept 'What city do they need?' What tools may influence of the effectiveness of public participation?

Therefore, we argue to understand the participatory process also as service and product during urban development and regeneration projects in the sustainable city development. This approach opens the possibility for the development of public participation in urban development in the framework of European Standards as European Standard CEN/TS 16555-1:2013 (Innovation Management). The wide use of this standard is not developed yet among the all countries in the EU, because not all the member states have not adopted it on their National levels. That is why it became important to identify the case countries, which still haven't implemented these R&D&I European Standards as national standards, and have not efficient results in public participation during urban development projects. The special interest is put on participation in urban regeneration of prefabricated housing estates as living environment of low quality in residential areas in the cities.

Concern on better measures of innovation in service sectors, non-technological innovation, innovation linkages and appropriate tools of analysis for policy makers is addressed in Oslo Manual (OECD and Eurostat, 2005). Manual used as a contextual framework for the understanding the role of innovation (regenerative and participative) in the research as innovation in service and non-technological product. Along with the Manual the use of Standards of Innovation Management will give the possibility to approach the conditions in the process of participatory strategies in urban development.

The structure of European Standard CEN/TS 16555-1:2013 Innovation Management foresees the parts: innovation management system (CEN, 2013); strategic intelligence management (CEN, 2014a); innovation thinking (CEN, 2014b); intellectual property management (CEN, 2014c); collaboration management (CEN, 2014d); creativity management (CEN, 2014e); innovation management assessment (CEN, 2015). According to CEN/TS 16555-1:2013 Innovation Management System (IMS) is defined as "set of interrelated or interacting elements of an organisation to establish innovation policies and objectives, and processes to achieve those objectives". The tasks to achieve the effectiveness of processes have been underlined in the Communication, "A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy to 2020" COM (2011) 311 final European Commission (2011).

The paper looks at the developed justification of the case countries and objectives of the research; defined case studies in the scope of the central goal of the research; the project working framework and methodology design; discusses expected societal impact of the Innovation management technology standards as a tool in participation process in urban regeneration of living environment in the cities.

2.1 JUSTIFICATION OF THE CASE STUDY COUNTRIES AND OBJECTIVES OF THE RESEARCH

The project aims to investigate the living environment of the low quality in the contemporary city with the process of participatory strategy. The large housing estates of prefabricated dwellings are described as the typology of housing with: “negative phenomena leading to the social and physical degradation of these areas, referred to as the large housing estate syndrome” (Szafrańska, 2013); monotonous, often not safe environment (Wrana, 2014); lack of safety feeling of security (Szafrańska, 2015); bad image; need of technical rehabilitation; “the challenge to secure neighbourly relations is <…> increasing” (Droste and Knorr-Siedow, 2005). Thus, the living environment of large housing estates of prefabricated construction is recognised as living environment of low quality. The number of flats built between the 1960–1990s in large housing estates in the socialist countries of Central Europe (Knorr-Siedow, 1996): Bulgaria – 55%, CSFR – 66%, GDR – 48%, Poland – 61%, Romania – 49%, Hungary – 52%. Poland is among the countries with the highest quantity of dwellings (61%) in prefabricated housing estates built during the 1960-90s. The special interest in the project is put on Poland as case study country that received post-socialist prefabricated large housing estates, which challenge in regeneration of these residential areas and involvement of inhabitants to participatory process in urban regeneration of prefabricated housing estates as living environment of low quality in residential areas in the cities.

The participatory process in EU cities receives two main strategies as: participation in the process of projects for urban development; participatory budget. In Poland both of these ways of participation obtained strong and weak sides during the procedures (Feltynowski, 2015). Therefore, the importance of future implementation of interoperable mechanism between knowledge and the city, innovation and consumer, smart city development and participatory engagement, contributes to the harmonization of procedures leading to development of smart sustainable city for the societal benefit.

The structure of the research is set in two main layers, which build the context for the research objectives. These layers are: (a) prefabricated housing Estates and social housing policies; (b) public participation in urban development (regeneration of residential areas) in the framework of European Standards (Innovation Management).

The outlined context of the case study country of Poland according to these interrelated two layers of the research is as follows:

a. Poland is one of the countries in Central Europe, which received post-socialist large housing estates built between 1960 and 1990 with population of over 8 million people (Węcławowicz, 2007), flats in large housing estates are estimated as 35% of the overall number of dwellings in Poland (Szafrańska, 2013);
b. participatory strategies of two types are used in Poland: participation in the process of projects for urban development (Law Dz.U. 2003 nr 80 poz. 717 for spatial planning and development) (Ustawa, 2003); participatory budget started in 2011 in Poland. Poland is among the Member States that has not adopted the European Standard CEN/TS 16555-1:2013 (Innovation Management – Part 1: Innovation Management System) on the national level yet. This standard aims knowledge transfer and allows its implementation within the multidisciplinary scope.

The researches of the last decade explore the problematic features in prefabricated large housing estates in the scope of Poland (Szafrańska, 2013; Szpytma, 2014), local cities as Lodz, Lublin (Wrana and Skoczylas, 2014; Ostańska, 2009, 2011; Jarocka-Mikrut and Glen, 2014; Skoczylas, 2016) in particular. It is stated by Szafrańska (2013) that “twenty years of the socio-economic transformation in Poland show that so far no comprehensive strategies of transforming large-scale housing estates have been devised yet, and solving this problem has been postponed until an indefinite future.” The research by Szafrańska (2013) concludes that “modernization (humanization) of large housing estates requires the involvement” of local communities (inhabitants) and central and local authorities, “the correlated and integrated actions of these actors should take into consideration the needs of residents”.

The process of public participation in urban development in Poland is in the scientific debate (Kaczmarek and Wójcicki, 2016; Feltynowski, 2015; Gawroński et al., 2010). In case of Poznań it had been experimented the Internet tool “in the form of a geo-survey in GIS, the first of this kind to be conducted in Poland, successfully eliminated the problem of the insufficient representativeness of traditional consultations” (Kaczmarek and Wójcicki, 2016) and stated that “it is necessary to improve the decision

process in urban spatial planning by augmenting the traditional forms and instruments of public participation with new ones". They should offer the possibility of greater participation and a wider social representation than the traditional consultative meetings.

Justification for tackling specific scientific problems by the project. In Poland regeneration of prefabricated post-socialist housing estates has only recently been acknowledged as well as the suggestions of implementations of new schemes of public participation, while explorations of interoperability of European Standards for Innovation Management Systems in urban regeneration, as a whole and residential areas of low liveability in particular, in the cities and active types of participatory strategies are absent from the academic debate. There is a gap in existing research about public participation in urban regeneration of post-socialist housing estates in regional city of Lublin that verifies the importance of the planned research hypothesis as innovative interdisciplinary approach to the existing problem of quality of prefabricated living estates. Existing process of public participation in urban development receives more problems and questions, then positive results because it lacks an innovative linkage element which has to connect effectively the city inhabitant and administrative authorities, urban regeneration project management. It means that public participation as a tool for public consultation in spatial development of the city is not effective now and not enough to become a interoperation mechanism, thus need to be investigated for innovative changes. Meanwhile, "local governments often fail to tap into the experiences, ideas, and resources of civic actors when identifying and defining problems and challenges that call for innovative solutions" (Sørensen and Torfing, 2016).

The correlated layers of the research are directed to achieve the main research hypothesis: (a) the retrieved matrix of indicators of living environment of prefabricated large housing estates and societal needs of inhabitants sets the core in regeneration program; (b) the interoperability of European Standard CEN/TS 16555-1:2013 (Innovation Management) and participatory strategies in urban sustainable development envisages an innovative linkage element between urban regeneration project management and participatory process. This becomes especially important at the time, when R&D&I European Standards as national standards in Poland have not been adopted yet. The aim of this hypothesis is in innovation and knowledge transfer for efficient practices and results.

Thus the research objectives of the project are summarized in two layers and set as following:

a. prefabricated housing Estates and social housing policies: (a.1) identifying the representative case studies for complex analysis of the prefabricated housing estates in Poland (Lublin: LSM, Stanislaw Moniuszko quarter; Krakow; Warsaw); (a.2) identifying interconnection between prefabricated large housing estates and challenges in social housing policies in Poland; (a.3) development of matrix of bottom-up and top-down indicators of prefabricated housing estates and societal needs of inhabitants as the core in regeneration program;
b. development of public participation in urban development (regeneration of residential areas) in the framework of European Standards: (b.1) identifying the initiatives, realised projects and projects in progress on urban regeneration of residential areas with involvement of inhabitants in Poland and abroad; (b.2) analyzing the interconnection of the authorities, construction enterprises, research institutions and participatory process in the context of the European Standards CEN/TS 16555-1:2013 (Innovation Management – Part 1: Innovation Management System) and Parts 2-7 (CEN, 2014a-2015); (b.3) analyzing participatory process (case studies) in the framework of Innovation Management Technology Standards and Oslo Manual as service and product in urban development and regeneration projects in the sustainable city development: challenges and potential; (b.4) determining and providing recommendations on linkage element between urban regeneration project and participatory processes for innovation in urban sustainable regeneration.

In the development of the Strategic Plans for Urban Rehabilitation, which in Portugal focus on territorial units with enormous influence on the life of the citizens, it is possible to verify the weak affluence to the public participation in the contexts of the planning of the city and its development. This weak affluence on the destiny of the city is worrisome when analysed from a qualitative perspective. It is also necessary to analyse the different contexts where these phenomena occur and to frame them in the respective social, administrative or methodological frameworks.

The presence of Portuguese case studies is also related to the need to promote a broad comparative framework that allows the involvement of different administrative, social and methodological matrices, and not only with the absence of the CEN standard, which allows for clarification more sustained from good and bad practices in public participation associated with urban development. It is planned to analyse and verify approach to CEN/TS 16555 (Parts 1-7) in the scope of participatory strategies in Portugal as the case study country. It is observed that the public participation in spatial development in Portugal receives similar to Poland weak sides of the process: low involvement of active citizens; lack of toolkits to improve public participation and its strategies; “contradictions and delays in the evolution of urban policy in public participation” in Portugal case (Tulumello, 2016).

Scientific interest of the cooperation in the project (Research Centre for Architecture, Urbanism and Design (CIAUD), Faculty of Architecture, University of Lisbon Portugal) in the scope of participatory strategies is based on documents New Urban Agenda (New Urban Agenda, 2016) and Communication on strategic vision for European standards (European Commission, 2011) which contextualize the interests around innovation, necessary standardization procedures and importance of future implementation of R&D&I European Standards as national standards in the countries as Poland and Portugal, since none of the listed countries adopted the European Standard CEN/TS 16555-1:2013. This fact establishes cooperation in WP3 and WP5. The cooperation aims also on (a) identification of public participation within Lisbon Metropolitan Area (MA); (b) regulations on public participation in public policies in Portugal; (c) qualitative and quantitative analysis of public participation in Lisbon MA.

2.2 JUSTIFICATION OF THE CASE STUDIES CONTEXT

2.2.1 PREFABRICATED HOUSING ESTATES AND SOCIAL HOUSING POLICIES IN POLAND

Contemporary Poland received more then 70% of prefabricated housing blocks, which include 50% of panel housing built between 1946 and 1992 (Ostańska, 2009). 21% of population lives in post-socialist large housing estates in Poland. Among the Polish cities Lublin with the population of 325049 (BIP, 2015), received accordingly flats in prefabricated post-socialist large housing estates. The attractiveness of the city for the people who would like to live here is the responsibility of the authorities. And Lublin has to develop its advantages to become attractive and health urban place. Lublin-city of Inspiration – this is the brand marking approach of the City Council for smart, sustainable and inclusive growth. But there are still difficulties with the strategic view for the development of the city. Among the actual questions is the quality of living environment of post socialist housing estates in Lublin (Wrana and Skoczylas, 2014; Ostańska, 2009, 2011; Jarocka-Mikrut and Glen, 2014; Skoczylas, 2016):

- processes of strong and multifaceted social, physical, and economic degradation;
- the low quality of technical exploitation of the prefabricated living blocks, for instance: heat losses in the structure of the multi-family housing block;
- limited activation of engagement of inhabitants to bottom-up upgrading processes.

These features remain the perception of the prefabricated large housing estates as the ‘typical housing standard’.

2.2.2 INNOVATION MANAGEMENT TECHNOLOGY STANDARDS: RESIDENTIAL AREAS IN FUTURE CITY

The Innovation Union (IU) states the priority for R&D&I development. The EU flagship initiatives for innovative development, assumes the reinforcement of knowledge and innovation as drivers for future growth, promoting knowledge and innovation transfer throughout the Union. The mechanism of mutual interoperability of innovation in knowledge, research and development sets the crucial goal to achieve output of growth in societal benefits. The transfer process needs to use interoperable standards by the Members of the EU. In this context, the importance of future implementation of Innovation Management European Standards as national standards in Poland and Portugal becomes great priority, since they have not adopted the European Standard CEN/TS 16555-1:2013 Innovation Management - Part 1: Innovation Management System.

European Commission, expresses its concern for the required standards production that enable the effectiveness of processes, in the Communication, "A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy to 2020" COM(2011) 311 final (European Commission, 2011). This carries out the Regulation (EU) 1025/2012 and the European Council conclusions of March 2014, which recognize the importance of European and International standards. It becomes of mutual importance the understanding of the use of CEN/TS 16555-1:2013 in the scope of urban development of sustainable cities.

2.2.3 PARTICIPATORY STRATEGIES IN URBAN REGENERATION OF RESIDENTIAL AREAS

The value and necessity of participation in the regeneration of prefabricated housing in Poland is stated by Dmitruk (2014): ”The way of correct approach by the city authorities to the renovation of panel housing estates, along with the need to involve local residents to social discourse is crucial in the whole process”. Nevertheless, the obligatory process of public participation in urban development projects regulated by (Ustawa, 2003) is analysed in the example of project in Lodz by Feltynowski (2015) which raised the next weaknesses as: “Polish law allows participation in urban planning procedures, but not everyone wants to exercise this right”; citizens “do not participate in public discussion; this is the main problem of the Polish regulations”; “only 14% of remarks to the land-use plans are taken into account; some remarks are unfounded” and thus “not included into the land-use plans”. The case of Poznań (Kaczmarek and Wójcicki, 2016) underlines problems as: “public activity was found to be low, with poor attendance at consultative meetings”. And it was stressed by Kaczmarek and Wójcicki, 2016 “that it is necessary to improve the decision-making process in urban spatial planning by accommodating not only traditional but also new forms and instruments of public participation”.

These broader contexts raise the necessity of exploration of: indicators of living environment in prefabricated housing Estates in Poland and challenges in social housing policies; use of the CEN/TS 16555-1:2013 in the field of public participation in regeneration of residential areas towards a future sustainability; development of participatory innovative strategies in urban regeneration of residential areas.

In January 2017, Sintra City Council, a city that integrates the Lisbon Metropolitan Area, presented the Report (Relatório de Discussão Pública: ARU Queluz/Belas, 2017) on the weighting of the public participation it received as part of the presentation of the Queluz / Belas Strategic Urban Rehabilitation Program (Programa Estratégico de Reabilitação Urbana de Queluz-Belas, 2017). This public discussion, as well as the respective publicity of the Urban Rehabilitation Operation project, allows the development of a process of participation, through the involvement of local actors in the definition of land planning policies, in compliance with the provisions of article 17, paragraph 4 of the Legal Regime of Urban Rehabilitation, in conjunction with Article 89 of the legal regime of territorial management instruments (Legal Regime of

Territorial Management Instruments) approved by Decree-Law no. 80/2015 of May 14. Note, therefore, the tax nature (imposition), of a legal and administrative nature, for the development of processes of public participation.

The process of public participation takes place over a period of 20 (twenty) days. The publication of this period of public participation is carried out in the Diário da República, a national newspaper (Correio da Manhã), as well as on the Sintra City Council website and the Collaborative Territorial Management / Procedures In Progress Program (PCGT / PEC)) of the General Directorate of the Territory. Additionally, two public clarification sessions were held in the areas of influence of the Urban Rehabilitation Area, as well as versions available for consultation of the documents that comprised the Queluz / Belas Urban Rehabilitation Strategic Program: (a) at the Municipal Department of Environment, Planning And Land Management, D. Afonso Henriques Square, Sintra; and, (b) at the website of the Sintra City Council. From this period of public consultation, and publicity, resulted in 6 participations of different representativities: (a) one belonging to a political party; (b) one belonging to the citizens' movement; (c) a local company; and, (d) three citizens.

The Queluz / Belas Strategic Urban Rehabilitation Program covers a territory with 518 ha, with a total of 59,662 individuals, and a population density estimated at 11,528 inhabitants / km2. It is therefore evident, despite efforts to the contrary, the lack of interest of a very significant part of the population (99.99%) in the

procedures associated with the development of the city of Queluz / Belas, making it pertinent to identify the motivations leading to the presented scenarios.

3 PROJECT WORKING FRAMEWORK

3.1 RESEARCH DESIGN AND METHODOLOGY

The paradigm of a New Urban Agenda in the main EU and UN documents, and EU Communication (COM (2011) 311 final) "A strategic vision for European standards" contextualise underlying scientific methodology. The methodology design is built for two layers of the research, and use the next methods accordingly:

(a.1) data collection for the case studies residential areas analysis includes (projects, urban plans, technical observation, sociological survey of inhabitants);
(a.2) content analysis of social housing policies documents;
(a.3) qualitative and quantitative analysis to build a matrix of bottom-up and top-down indicators of prefabricated housing estates and societal needs of inhabitants as the core in urban regeneration program;
(b.1) qualitative analysis of projects on urban regeneration of residential areas, which include the involvement of inhabitants; SWOT in participatory strategies;
(b.2) approach to CEN/TS 16555-1:2013 by analysis of structural elements of innovative management in technology standards Parts 1-7 (CEN, 2013-2015) in the scope of urban regeneration and participation process; identification of analysis criteria of participants of urban regeneration project, which are based on CEN/TS 16555-1:2013; analysis of interconnection of the authorities, construction enterprises, research institutions and participatory process in the context of the European Standards CEN/TS 16555-1:2013 (Innovation Management – Part 1: Innovation Management System) and Parts 2-7 (CEN, 2014a-2015);
(b.3) identification of analysis criteria of public participation in urban regeneration, which are based on CEN/TS 16555-1:2013; analyzing participatory process (case studies) in the framework of Innovation Management Technology Standards and Oslo Manual as service and product in urban development and regeneration project;
(b.4) determining and providing recommendations on linkage element (autonomous mechanism, independent expertise, efficiency evaluation) between urban regeneration project and participatory processes for innovation in urban sustainable regeneration.

The methodology design comprises the next steps according to the above research layers and methods: data collection for the case studies in Poland of prefabricated residential areas (Lublin: LSM, Stanislaw Moniuszko quarter; Krakow; Warsaw) analysis (projects, urban plans, technical observation, sociological survey of inhabitants); content analysis of social housing policies documents; qualitative and quantitative analysis to build a matrix of bottom-up and top-down indicators of prefabricated housing estates and social needs of inhabitants as a tool to approach urban regeneration program. The results of this layer will identify the data of the quality and challenges of living environment in the case studies of prefabricated housing estates built during the 1960-80s in Poland.

As most of the regeneration of prefabricated housing built in the 1960-80s in Poland in the large housing estates was made providing only complex insulation of the blocks (Wrana, 2014), it becomes important to analyse the realised projects of urban regeneration of residential areas not only in Poland, especially those, which deal with prefabricated post-socialist dwellings and involve inhabitants to public participation. The realised examples of urban regeneration of prefabricated housing estates built in the 1960-80s (Germany, Halle, Leinefelde, etc.) with participatory approach allow analysing the achieved quality of 'new' living environment of the neighbourhoods and the types of all parties of the project. SWOT analysis of public participation in case study countries (Poland, Portugal) will give the qualitative evaluation of their results. Approach to European Standard CEN/TS 16555-1:2013 is the context analysis of the standard with the aim to identify the criteria, structural elements of innovative management from the standard for participatory process in urban regeneration project, as well as for other parties, which are connected in the project. The qualitative analysis of public participation in urban regeneration together with other parties as authorities, construction body, research institution, their interconnections, will give the wider view of the

contemporary challenges of the role of the inhabitant of the city in urban regeneration of their living environment. This step will allow to outline the points of interoperability of the participation process, in particular, and technology standards CEN/TS 16555-1:2013, identify the analysis criteria based on it. The aim of the analysis of participation process as service and product in the framework of Innovation Management Technology Standards and Oslo Manual is to identify and build the structure of linkage element between urban regeneration project and participatory processes. This linkage element will embrace the structural elements of the above Standards (strategic intelligence management; innovation thinking; intellectual property management; collaboration management; innovation management assessment, expertise, efficiency evaluation) for innovation management in urban sustainable regeneration of residential areas.

3.2 WORKING PACKAGES

The main tasks for the research are comprised in the next Working Packages (WP) (Tab.1) and list of actions:

WP	Description	Tasks
WP1	Prefabricated housing Estates	Selection of prefabricated residential areas for the case studies in Poland (Lublin: LSM, Stanisław Moniuszko quarter; Krakow; Warsaw); Application for the site plans; Analysis of selected case studies (projects, urban plans, technical observation)
WP2	Social housing policies in Poland	Social housing statistics and policies in Poland (stat databases, regulation documents)
WP3	European Standards CEN/TS 16555	European Standards CEN/TS 16555 (Parts 1-7); Analysis of urban regeneration projects, which include participation of inhabitants; Approach to CEN/TS 16555 (Parts 1-7) in the scope of participatory strategies and other bodies of urban regeneration projects;
WP4	Case studies	Prefabricated housing estates and regeneration practices: qualitative analysis, SWOT (Poland)
		Public participation strategies in the urban development projects (Portugal)
WP5	Participatory strategies	Regulations for participation in urban regeneration;
		Participatory process in EU member state (Portugal)
		Sociological survey in case studies (program, pilot survey, survey, interpretation of results)
WP6	Public dissemination	Urban Lab (summer school) Workshop: "My city – my dwelling"
		Exhibition of the results of the workshop (school, community centre)
		Publications of articles in the general press
WP7	Conclusions	Interoperability of CEN/TS 16555 and participation in urban regeneration; Recommendations on linkage element 'urban regeneration project - participatory process'

Table 1 - Working packages during the research project

4 CONCLUSSIONS: EXPECTED SOCIETAL AND INNOVATIVE IMPACT OF THE PROJECT RESULTS

The project explores the actual problems in the development of cities, especially in the urban regeneration of low quality of living environment in panel prefabricated large housing estates on the example of Poland, and underlying to the main EU and UN documents, which state the concern and mutually reinforcing priorities for smart, sustainable and inclusive growth. The exploration of the tool for development of interoperable connections between the urban environment of low liveability and inhabitants' sustainable participation is suggested in the context of technology standard CEN / TS 16555-1: 2013, which is not implemented in Poland on the national level. The use of the transdisciplinary approach in correlated urban categories "city-inhabitant-knowledge and innovation" expects impact on the level of living environment in the cities and human settlements, their smart sustainable development for the societal benefit and effective public participation.

Innovation management technology standards are put to the research to explore their application as a tool for participatory strategies in urban regeneration. This approach is suggested as the one that envisages the use of official documents of CEN / TS 16555-1: 2013, which are on the stage of adoption on members' national levels, as well as Urban Agendas by EU and UN, Oslo Manual and European Communications by EC as: COM(2010) 2020 final; COM/2014/0490 final; 2020 COM(2011) 311 final. Here the importance of the exploration of the opportunities of the applied use of Standards and Manual in the interdisciplinary scope gives the framework for their application in the main goal of the project as regeneration of the living environment for the inhabitant. Thus the project will explore the structural parts of the Standard (Innovative Management) on the example of participatory strategies in urban regeneration project. A new linkage element (entity, organisation, third body, other) between participation process and urban project management, with the aim to receive effective public participation, will embrace explored structural parts as: strategic intelligence management; innovation thinking; intellectual property management; collaboration management; innovation management assessment, together with added expertise and efficiency evaluation.

The implementation of European Standard for Innovation Management requires an transdisciplinary approach and therefore the use of different disciplines and environments: from urban and landscape design and architecture to construction, from SME and R&D Centers to Public stakeholders methodological approaches. The use of CEN / TS 16555-1: 2013, which is applied for R&D&I management in Europe, and European Urban Agenda, are key factors for the development of case studies.

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ID 1575 | THE PRODUCTION OF COMMON SPACES IN BUILDINGS OF VILA VIVA AT ´AGLOMERADO DA SERRA´, BRAZIL

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1 THE PRODUCTION OF SPACE IN 'FAVELAS'

The production of space in Brazilian 'favelas' is spontaneous, continuous and self-produced -and often, self-built. There is a diversity of uses of public and private spaces, such as everyday life, work and play. The occupation process is precarious and requires an active procedure in interaction among neighborhood residents to improve common facilities. The existence of the 'favela' comes from the process of exclusion of the working class in Brazilian cities.

Belo Horizonte, capital of one of the most populous states in Brazil, is a planned city that was only established 119 years ago, and yet has multiple illegal occupations. Since the beginning of its construction there was no space in the urban zone for the builders. In the history of the city, the state has tried to change 'favelas', with removals or transformation of the spaces where poor people live.

In 2005, the construction works of the Vila Viva Program for urbanization begins in 'Aglomerado da Serra', one of the biggest 'favelas' in the city. It includes the paving of streets -most of them less out of a necessity for the population and more so as a municipal mandate, in order to remove a large part of dwellers of low socioeconomic status -, creation of parks -that prohibited popular access and were abandoned augmenting water supply, sewage collection and the construction of buildings. The buildings were constructed to resettle a small part of the original dwellers of 'Aglomerado da Serra' that were removed from their houses. The production of spaces is a heteronomous process, as it is with formal city.

The adjustment of people that used to live in 'favelas' to these buildings is difficult and many of them sell the apartments even before the distribution of contracts. They miss the plants and the raising of animals that played a part in their domestic economy. Kids are not allowed to stay in the streets that lead to the buildings, as they used to do in the 'favelas'. There is no place in the houses to have parties or barbecues on the weekends, which was common before. The markets are very far from the buildings, creating everyday life problems, and people are not allowed to conduct any economic activities in the buildings. However, life in the 'Aglomerado da Serra' was transformed with the interventions of Vila Viva, creating new necessities and demands, such as the use of cars.

In spite of the prohibitions of the Program, after the implementation of Vila Viva the dwellers are still producing spaces. New uses, adaptations and even interventions are remodelling the heteronomous space with some everyday interventions. Children use the entrance of the buildings to play and some people have even started to sell products and services at home with plaques to announce their new activity. Some transformations of space have begun to emerge, like accommodation of common spaces for plants, animals and barbecues. People come up with solutions for the creation of seats and barbecue supports with the materials they have at their disposal. Forms of privatization of these common spaces are present too, such as parking spaces and mechanic services.

This action-research discusses with those who use and produce the common spaces in how this can be understood as a form of transgression or as real change in conditions of relevance to everyday life of the dwellers. The method of action-research was developed by Thiollent (1986) and leads to actions and seminaries with the participation of dwellers.

The group was formed during the visits to photography, distribution of flyers, photography workshops and for indications of other residents. Working aged, adult men and women, aged 25-60 is is social and economical characteristics of the group. They are part of the working class, or the new middle class, as some authors understand it, like Souza (2012). Some of them work at the Edson Pisani School, especially those in Building 1 (Figure 1). In cultural terms, they are educated, some with technical training, and at least one of them is linked to religious institutions, especially Evangelical Churches. This resident, besides

working, studies at night and takes care of her mother. There are local leaders, such as D. Lourdes, who have already worked on improvements in the village.

With regard to changes in common spaces, most actively participate in interventions, being responsible for obtaining materials, labor and the organization of space in general. Often, they are trustees of the buildings and promote improvements constantly, whether they are approved and supported or not by the other residents.

2 INTERVIEWS

When I first arrived at the building 1 to mark the interviews, the residents were performing daily activities. In this building, Dilson and Marcelo were installing lighting in the outdoor area, where the barbecue grill was. In the other buildings, the dwellers were resting, or watching television. I marked them from the March 8th to the March 13th and I began the interviews with the dynamics, to introduce the subject by a logic of the practice and the manipulation of images, since the logic of the speech is less involving for them. It showed first the satellite view of the buildings, which generally creates a lot of interest in locals in locating in the territory. Along with it, I showed some pictures of the uses and interventions I made in the photographic essays and asked them to indicate where each action occurred, and what they thought about it, whether it was in common use or reflected individual interests. The first dynamic often resulted in comments on the solutions found. Then I quickly drew the plan of the building with the common spaces and asked what uses and actions took place in these spaces. I also asked about existing problems, even if they had no apparent solution. The Fiscal Exercise, which was part of the listening exercises developed by Livingston (2006), inspired the dynamics.

The third dynamic, still about the plant, was analogous to the Project of the dweller exercise, in which residents are asked to imagine new uses (Livingston, 2006). In the case of individual interviews, I asked the residents to put themselves in the place of proposers (even if it were something institutionalized, such as the City Hall or a constructor with the technical knowledge to do so) and point out where the uses could take place. This dynamics was important to broaden the residents' imagination and create a greater interest in the proposal and stimulate the mobilization of the residents, depending on the actual viability of the interventions planned.

Then, the questions began, which I systematized in an open script, for a semi-structured interview (qualitative research). Below there are the questions suggested in the script:

- "How long have you lived here? How did you get here? Was it self-construction? Did you plant or raise animals?"
- "Is there anybody in your neighborhood before the removal living in the same building?"
- "How does the condo work?" Is there a liquidator in the building?
- "Is there a little box or storage room in the condo beyond the beads and water?"
- "Do you think to stay in the building or move?"
- "How do you use common spaces? Are there rules for use?"
- "Is there something in collective space that creates some sort of nuisance?"
- "Have you ever been disturbed by anything in the neighborhood?"
- "What do you like least and what do you like most in common spaces?"
- "Have you ever interfered in the common spaces?"
- "Would you like to intervene in some way in these spaces?"
- "Does anyone in the house have any skills or skills?"
- "Would you sell something or announce any service if that were allowed in the buildings?"
- "Do you think the City Hall would approve the uses and modifications?"
- "Do neighbors come together for improvements?" For example, tinkering with collective space, fixing roof -or even for events and parties.
- "Would you like to plant and to raise animals?"
- "What public spaces (squares, parks) that most attract your attention in the city? What do you think about them?"
- "Who does the maintenance and cleaning of the collective space? Is there relay between neighbors?"

We would usually talk in collective use spaces, or in the access street, sitting on the kerb, or in the apartments of the residents. Often family members accompanied the interviews, as in one case that the family was watching television at the time of the interview.

Informal conversations occurred because when I took the opportunity to ask quicker questions. I interviewed Paulo's wife but the initial intention was to interview Ruth, who lives below the UMEI, in Rua São João. I arrived at her apartment (she had moved since my first contact with her) and talked to her and the two people that lived in her apartment. They told me to talk to Paulo and his wife, who live in apartment 402 in the same building, even if they did not get along very well. The wife of Paulo (the husband was absent at the time of the conversation) explained to me that the disagreements happened because the couple did not adapt to the building, since it had always lived in buildings before but the organization is different. The family is middle class, which I deduce from the decor of their apartment, the speech of the wife and the buildings in which they lived previously (because she told me how it was to live there). The wife said that she and her husband tried to implement improvements to match the way it worked in the other buildings in which they lived. However, the other woman, who told me to talk to her, was an alcoholic and came to vandalize the building itself, ruining the entrance gate and sometimes, especially when under the influence of alcohol, fighting with neighbors. The conflicts in this building seemed interesting to me, especially with regard to Paulo's family, who intends to leave the apartment.

Participants (Residents who were interviewed, sorted by date of interview):

1. Luciana, Rua Nossa Senhora de Fátima, 08/03/17 (building 6).
2. Dilson, Rua São João, 20, 11/03/17 (building 1).
3. Reysla e Gabriela, Rua São João, 20, 12/03/17 (building 1).
4. Thalia, Rua das Pitangas, 12/03/17 (building 3).
5. Dominique, Rua Nossa Senhora de Fátima, 12/03/17 (building 6).
6. Valdimir, Largo da Castanheira, 12/03/17 (building 5).
7. Lourdes, Rua da Mangueira, 12/03/17 (building 2).
8. Marcelo, Rua São João, 20, 13/03/17 (building 1).
9. Cláudia, Rua São João, 179, 13/03/17 (building 4).
10. Neighbour at Rua São João, 20, 13/03/17 (informal conversation -building 1).
11. Paulo’s wife, 12/03/17 (informal conversation -building 7).

In the individual interviews, there was some positive and negative questions that were discussed, and there was a lot of different approaches depending in the building in which they live. I discovered some interesting things about people and the use of the space around the buildings, which was reflected in the interventions in the common spaces. The goal of the individual interviews was to identify conflicts and problems in the common spaces of the buildings, the dynamics of production of the space by the residents, uses of common spaces and neighborhood relations.

Building 1 has a trustee, who at the time of the interviews was Reysla and by the end of May became Dilson. Dilson says that they divide the accounts and contribute monthly to a small box (collection of R $ 20.00 per resident), which is destined for small bills and expenses with maintenance, such as they had for the lighting they installed on the day of the meeting. The building is well organized but, despite that, they do not do many condominium meetings, according to Dilson. A quite different case from of building 1 is that of building 2; the interviewed resident, Lourdes, says that the condominium of her building did not work. At first, only Lourdes and S. João (from apartment 102) paid the bills, but at one point they stopped too. Currently, there is no trustee and no one pays condo, so the light has been cut. However, this case was the only one among the buildings analyzed in which there was no agreement among the neighbours.

In building 3, of Thalia, the condominium works. In building 4, the interviewed was Claudia, who said that there is a trustee, who does the maintenance in the building, and who pays the condominium. In building 5, the trustee is Valdimir's wife, the resident interviewed, since 2007 (that is, since the move to the building). He said that he "always took care" of the building. Valdimir said that as in building 1, besides the accounts they reserve money for the condominium fund. However, despite the coincidence, this happens in a few buildings. In building 6, for example, there are some conflicts. When I arrived at Luciana's house to do the interview, she and her husband were looking at the bills, among them the beads and water bills related to the condominium. Accounts were lagging behind the lack of cooperation from some neighbors, she said.

Regarding the cleaning of the common areas, there are discrepancies regarding the care of the residents with the spaces. In building 6, each neighbor clears only their immediate area, but the largest area, which is from the ground floor, is all for Luciana to clean, as she said. There is no relay or collective discussion about it. In buildings 1 and 5, because they are more organized, cleaning takes place regularly. In building 4, Cláudia said that they are doing maintenance in the building, and that the cleaning of the collective space works with relay, every day who has the time does. In building 7, Paulo's wife told him that she moved in 2016, and soon she and her husband worked on transformations, such as buying a large hose with which to clean common spaces more easily. Paulo's wife and husband tried to take care of the garden and to plant, but there was no adherence of the other residents to the idea, which was left behind. She told me that they always lived in buildings and that they bought the apartment thinking it would work like the other places they lived. However, they had problems with the neighborhood for seeking improvements to the building. By the end of 2016, she and her husband had worked to make changes, but they gave up because of the behavior and reaction of the other residents. She said there was vandalism from the gate they had installed for safety; she said also that people (who were not even residents of the building) would be using the hose she had bought without control, wasting water.

The individual interviews were important to begin the process of investigation and start discussions about the theme of the research. Those discussions were deepened in the collective conversations.

3 COLLECTIVE CONVERSATIONS

The purpose of the collective conversations was to propose a collective discussion on individually raised subjects, to define the topic of approach and to seek notes for the next step, the seminar. They occurred near to March 21st. They were enlightening regarding existing consensus and conflict of interest. In addition, they served as a first collective articulation and introduction of questions of the theoretical lens.

The script used to guide the discussion is summarized below:

- Start by citing the main problems raised in the buildings, ranging from garbage thrown in common areas, high bush, bad land for planting, noise until late, to the lack of organization of the residents.
- Question whether the occupation of common spaces can be related to the change or adaptation to the apartment or to some aspect of it.
- Ask how the coexistence between the residents of the building occurs.
- To raise discussion on the theme of the research, related to spaces of collective use in the buildings of Vila Viva of Vila Nossa Senhora de Fátima. Check relevance of the theme to the residents.
- Ask how the construction work (and design) of the interventions that have already been done. Seek to understand if the interventions already carried out were decided collectively -and with what degree of engagement of the other residents, whether to support the idea, whether to give idea, to build or if was a resident from top to bottom.
- Cite plans for the improvement and spatial qualification of the different buildings: leisure area, coexistence, parking, kiosk, common vegetable garden, vertical garden etc.
- Collectively reach a final outline of the situation, according to criteria of desirability and feasibility.
- Understand if someone has participated in a similar process and what are the expectations of each.
- Discuss which intervention priority is best accepted by the majority.
- Discuss "space of collective use", public and private space and control, access and maintenance of spaces.
- Discuss the concept of "spatial quality": what does it mean for them?

Participants:

1. Valdimir, Cláudia (his wife), Adilson (baiano), Zé Maria (Cláudia’s father), Adriana, and Zulmira (building 5).
2. Lourdes, S. João, Dalva, and her daughter (building 2).
3. Luciana, Deividson, and Dominique (building 6).
4. Marcelo, Dilson, Manuel, Gabriela, and Maria Lúcia (building 1).

Those conversations were very relevant to get to know about the collective use of the common spaces, and to observe the conflicts there exist in this use and between people's interests. In the building 1, apparently there are no conflicts and the dwellers are like friends, supporting each other and making this place a good place to live. In building 2, the relations are not as good as in the building 1, and the condominium does not work. In building 5, Valdimir makes interventions and use the common space, but has been transformed in a private space, that was only appropriate to him; other residents criticize the use of water, for example. In building 6, there are some conflicts too, as the use of common spaces, which was to be for the dwellers but was occupied by some workers and merchants of the surrounding.

4 SEMINAR

The preparation of the seminar came from the organization of themes of discussion that was raised on the individual interviews:

- Condominium and rules of use of the common spaces
- Cleaning and maintenance of the common areas
- Neighbourhood relationships
- Problems that neighbours and people create
- Problems and advantages of the construction and the everyday life -Problems of no maintenance of the common spaces
- Uses, actions and interventions that take place in the common spaces
- Transformations that they imagine for the space
- History, how and when they moved to the building
- Public spaces
- Manual habilities, initiative and personal positioning
- Pretension on moving or staying at the apartment

These themes interrelate in many points, and have been deepened in the collective conversations. A game is proposed as interface of discussion. The operation is described below:

One of the dwellers present himself, saying where he lives and the more important questions relate with the common spaces. Then, there are disposed some pink cards with excerpts from individual interviews on the upside down; one dweller is invited to begin the game, selecting one of the cards. He starts a discussion about the theme described and answers the questions that are in the card. The game stops when everybody has already picked a pink card. The intention with this first game was to bring into discussion the relations of the neighbours and discuss with the dwellers that are participating of the research that relations, the possible causes and potential solutions. This step was inspired, not only by the methodology of Thiollent (1986), but also by the culture circles of Freire (1967).

The second step was to show images of my research as graduation student, that presents public spaces as streets being or not used according to the surrounding and the constructions. The third step was to bring in a more systematic way the thought of the authors related with the action research. There is the attempt, throughout the discussions, to bring and introduce thought of Lefebvre (1999), Arendt (2010), and Souza (2006) to a language and logic more accessible and bring discussion on urban society, spheres social, pubic and private and collective autonomy.

The participants of the seminar were:

1. Dilson, Rua São João, 20 (building [1]).
2. Valdimir, Largo da Castanheira (building 5).
3. Cláudia, Largo da Castanheira (building 5).
4. Zulmira, Largo da Castanheira (building 5).
5. Carlos, Largo da Castanheira (building 5).

[1] then started the next step, the third game, and went explaining the cards in order. I started with card 1, which illustrates a public space of quality and spontaneous use, as opposed to the privatized space of card

4.1 THE INTERACTION WITH THE RESIDENTS DURING THE SEMINAR

The interface was fundamental for the researcher to leave his dominant position in relation with the participating residents. The seminar took place in the common area of the building 5. Initially, each resident introduced himself, saying where he lives and how long he has lived there. Valdimir was the first, speaking that he has lived in the building for almost 11 years and that he works as a doorman. He talked about his animals, dogs and chickens and duck. He said that "he lives in the best building to live in". Dilson introduced himself, saying that he also lives in a good place to live, that there is no mess and that he tries to "organize, leave more or less in order"; said also that he is now the apartment manager, when Valdimir asked, saying that he was also the apartment manager of his building. Valdimir also asked if they charged a cashier month in addition to the bills of water and electricity and Dilson said that it is zeroed, that they charge only when there is something to arrange or some maintenance demand.

Then I started the first game with the locals. I asked everyone to choose pink cards and Valdimir left with number 3, whose first question was, "Do you keep in touch with somebody from your original neighborhood?" He replied "in the specific case, there are (...) many people who lived very close". I asked if they lived in the same house as the family of Claudia, who are neighbors of the couple, but said no.

The next question was: "What were the main issues among neighbors before the removal?", and Valdimir replied that "what exists of the removal is the insecure person, whether it was going to be good or not, about the aspect that lived before." He was referring, possibly, to the high-risk areas where many people lived. He said that "it was not good before", and he added: "I always lived near a lot of ravine, so when it rained, the foot of the wall went up to a height, so it was a little greenish, in the building you do not have it. (...) Rain falls, sun falls, you're dry the same way, you do not have that mud that you had before. " He said he thinks differently from general thinking, told the story of a lady (Martha) who died of depression because she moved to one of the buildings. But he "liked it, we like the place, it's a quiet environment, up there is a lot of houses on top of the other". Valdimir continued: "The term 'Aglomerado' itself, has come to speak of agglomeration as? You have made a house here, your house has ended here, the other one already comes and already amends another one here. (...) You do not see an urbanized or organized thing, no matter how much they try... even when you urbanize the 'favela', the alley, everything cemented (...), it is urbanized but did not put in order as it would have to be". "There is no maintenance, so in my way of thinking, for me, the building is too good, quiet."

Valdimir talks about the space where the seminar took place: "You have to see here at night (...). Lighten up here, it's a good thing, you can come sit here if you want to chat, make a fire... Look at the wood there, the wood so low down there".

He read the last question on the card and replied, "Many have changed, see?" Repeats the question, "Where did the original neighbors go?" Claudia said, "They went to worse places; it is not that the place is bad, the person who does not do the place: there is no bad place", while Valdimir continued with the question:" Or did they stay in the place?" and replied: "Look, a lot of people have changed, for example a boy who had here with us on the top floor, he no longer lives here anymore, he moved inland, rented apartment. But I at least think so: most of the people who changed back or want to return. Why? People can live in the mountains, live in the 'favela', but there is one thing: you are inside the capital. To Praça Sete [de Setembro], you will walk. How many health posts do you have here? UMEI [Municipal unit of early childhood education], how many UMEIs do you have?". He quoted the posts and the UMEIS and concluded: "So it's just dumb that shift. Because you find everything here".

He spoke about other cities and said that he finds everything messed up, that there is no movement in the city, "everything is stopped". "I think so: as soon as you leave the capital, you've already lost a lot. The mayor is another, the councilmen are others, and the administration is another". He told of his father, who lives in Ribeirão das Neves (MG) and is very different there, and said that the old residents come back, "every once in a while we meet them out there. They sell the house and live in the 'favelas'". It showed where there were invasions in the immediate landscape, where new residents are occupying green areas.

Then it was Dilson's turn to speak about the number 5 card. The first question on this card was, "What actions are going on in the common area of your building?", and Dilson replied "Every once in a while we gather there, Marcelo and his family make a lot of barbecue. And cleaning, right? That we have to do cleaning in the area, (...) give a general there". Valdimir asked if "they got to put the floor there" and Dilson

replied that "no, the stairs are the same way". And he went on: "So, what happens is, barbecue, every now and then, it's not always, and we always give maintenance and cleaning".

Dilson continued with the questions: "Would you like to take care of animals in your house?" And respond that "in apartment, not at all. For me, no", while Valdimir commented, "I have four ", referring only to the dogs, who live inside the apartment. Dilson continued: [when] "we lived up there, we had a house, there was a lot of land. Then my mother had chicken, duck duck, had everything know? It had mango feet, guava foot, urucum" and Valdimir completes: "It was another experience". Dilson continued: "Then we could have these things, now in the apartment I think it will not work, no".

Valdimir told us about the duck: "they left it for me. Actually it's not mine, what happened: the neighbor moved there from the fourth floor and the paw crashed. So he did not take his paw up, he left the pair of ducks". And about the chickens: "It's because everything was so small, I said 'I'm going to leave it there with the ducks.' He said that "the duck eats a lot", every morning he has to buy something for him to eat. Dilson read the last question: "Is your building leafy?" And responds "woody, no. Huh? There is only that little tree, that seed, that it is born anywhere" and Valdimir interrupted: "that plague! That is not a plant, it's a pest to me" and Dilson defended: [but]" it breaks the branch! [Helps solve a problem]".

Dilson read the continuation of the last question: "Do you agree that it isolates the sound?" And replied, "Yes, it depends". Valdimir said "No, but this is physics, right? Isolates even...", and Dilson completed: "If you have enough, right?". Valdimir continued: "Whatever noise you enter here, oh, on the side of there, you may know that the tree holds [the sound]." Dilson said, "Sure, you go into the Baleia's forest there, 'everything is happening around you, you're there ... in the country there, you're screaming, yelling at you, you're just going to see them 'So [there] from the moment you [reach] ten, five meters from them... In the case there of ours, it does not isolate" and Valdimir interrupted saying" no, in yours does not have because it is also more leaked right? They are more open. And another thing: the movement is much larger than the size of the trees", referring as 'movement' the automobile traffic on the avenue. "Certainly," Dilson replied.

We passed to Claudia, who had taken the card number 2; the initial question was, "How does the cleanliness of the common spaces in your building work?" Claudia replied, "The cleaning here is weekly, right? So we do what we can. Because everyone here works and there are elderly people who can not help either, right? (...) We even understand, I prefer that I clean myself, my brother cleans too, we give him an 'x' value to him -not according to what he has to receive, but how he lives here too, it also helps in that way. There's Vladimir, too, who helps out there in the garden too, he weeds... so we stay like this, take turns. And as I only stay here at home weekend and not always, I only clean Saturday or Sunday. Then during the week have to keep this, this custom stayed, only clean Saturday or Sunday". She also said that she tries "to convince the residents that it is not to put trash in the door... because there are no people who collect this garbage. The trash is right there, and everyone leaves early in the morning, so it does not cost anything to get there. Or if you're lazy at night, going to sleep, put it in the tank". She said that they already had serious problems with neighbors because of this and that, having four dogs, gives "that lot of thing", if they did not want to put it in the bin would be uncomfortable also for the other neighbors. Cláudia concluded: "Every one has to have the awareness that he does not have to put, right? The trash bin is right there, just take it there. And if everyone does this, it's very good".

The next question was, "Do the neighbors help clean these spaces?", and Cláudia said that she had already answered, but Zulmira added: "Dominga helped, right?" And Claudia said that "she helped, I did the same, help as best you can, right? (...) If he's there, he helps. But I prefer that only one helps me to have no problem, because a lot of people end up is messing up, so two people is enough". She went on to the next question: "Do the neighbors throw garbage in the common areas?" and replied, "No, they do not do. They started throwing a liter of milk out the window, I went there, I 'cut', but it was immediate, they do not do this anymore".

She came up with the last question: "Do you think that the City Hall should help in the maintenance of these areas?" to which she replied: "I think so, not directly inside the building, but around" and Valdimir agreed "around, I also think, like here like this", pointing to the ravine.

I finished the first game, and then started the next one. I gave some illustrations and asked if they would know what space it is. The residents looked at the illustrations and Valdimir was the first to try to find out (illustration 1 -figure 3), saying, "this is Savassi out there" and I told him that, in fact, that space was in the

Prado neighborhood (at Belo Horizonte, MG). So I asked about illustration[1] (figure 4): "I wanted to know if you would like to live in such a place?" And Valdimir replied: "no, no, we like 'it's bush, we're an animal'" and he added: "I do not want, not at all, I step in front of those mansions there, I look at them like that, I say, from that place I just want... the money. Not worth it". I commented: "I also wanted to show [with the illustration] that it is not because there is money that is good".

I proceeded to card 4 (figure 6), based on Arendt (2000), differentiating two historical moments: Ancient Greece and modernity. Valdimir commented on the first, "I think I took this part in school" and I mentioned the existence, in antiquity, of a private and a public sphere (the last, more valued in relation to the first). The private sphere would be related to the maintenance of life and work, while the public sphere has as its central activities action and discourse, that is, the exercise of politics by free men. Valdimir completed: "boasting his feats". I have contrasted this reality with that of modern society, when the private and public spheres cease to make sense, since values that are originally private become public, such as individual wealth and work. Valdimir commented, "Are not [more important] today to have more than to be? Today is more to have than to be (...); you are educated properly, you do not have to be anything if you have money. (...) More than being, they are inverted values" and I agreed, adding: "instead of collective wealth, individual wealth has relevance". Thus, the social sphere would emerge, which values work; the important thing now would be to follow a normalized behavior, to act as expected by society. Valdimir then asked: "[would be like] pretending? Almost this, right?" to which I replied: "you have to look like...", and Valdimir completed "...you are normal, but you can be crazy" and everyone laughed. "For a person to live in society, he has to live politically correct. If you do not accept society, you live there in the bush. If you do not take orders (...), there nobody will give you order, nobody will say anything, nobody will charge you your goods, no one will charge you to bathe, you can stink there in the bush. But within society you will not do it, because that does not fit in society". And I concluded by saying that today, instead of having public spaces, we have social spaces, and Valdimir added: "convivial [spaces]; the squares, the malls". I went on to say that the common spaces of the buildings, however social, could have the potential to become public spaces, even if not accessible by anyone -as I already knew that the access issue is delicate for them -but spaces of discussion and search for collective autonomy. Valdimir commented: "not necessarily here, right? Why does not it work like that, right people? Everyday is not... That's a theory, it's a good theory!" and some people laughed. I then finished the last step of the seminar.

4.2 PICTURES

Figure 1 -Map of the buildings. Source: Google Maps (modified), 2017.

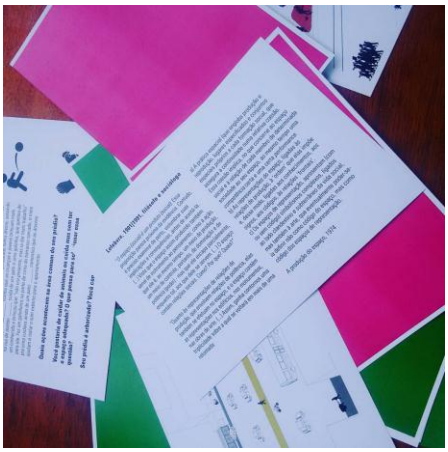

Figure 2 – Cards from the Seminar. Source: Débora Moura, 2017.

[1] Then we went to card 3 (figure 5), and they asked me what the critical area would be. I explained the timeline, the types of city, and I spoke of the total urbanization of society, of Henri Lefebvre (1999).

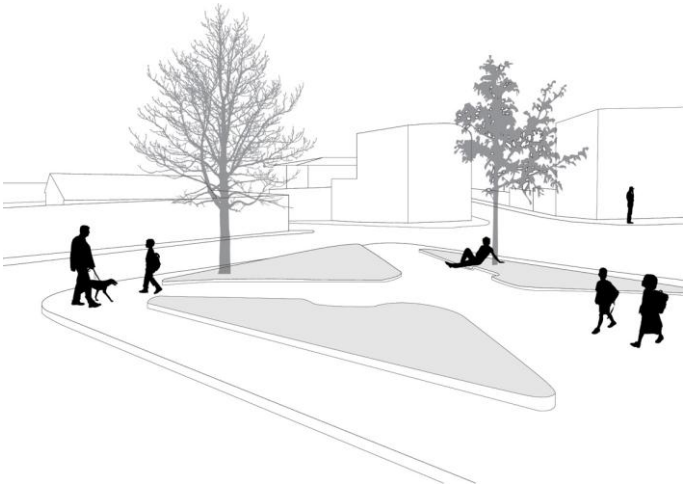

Figure 3 – Illustration 1. Source: Débora Moura, 2017.

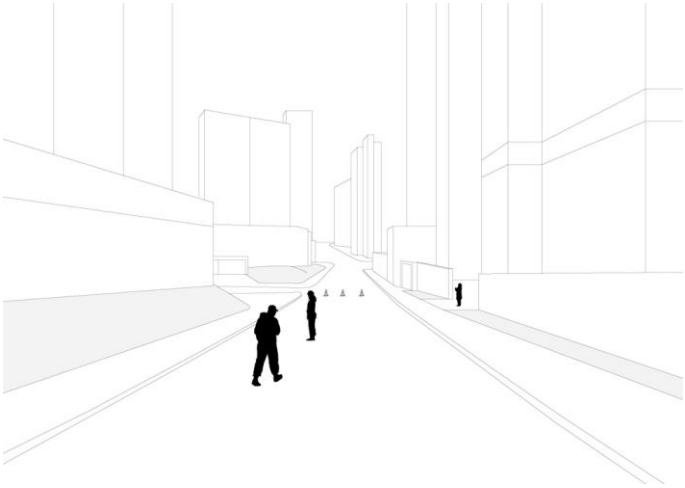

Figure 4 – Illustration 2. Source: Débora Moura, 2017.

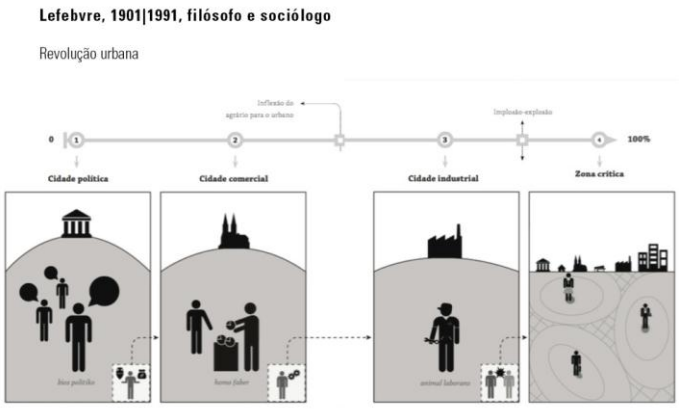

Figure 5 – Green card 3. Source: Débora Moura, 2017.

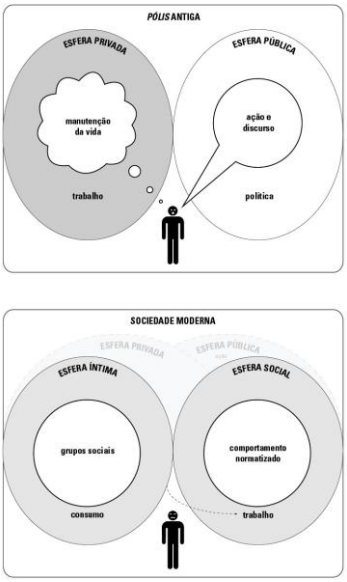

Figure 6 – Green card 4. Source: Débora Moura, 2017.

5 CONCLUSION

The actions were relevant to understand the thoughts of the dwellers about the common spaces, the neighbor relationships and the production of space -as developed by Lefebvre (2000), in building constructed in 'favelas'. The individual interviews, the collective conversations and the seminar were important steps that demonstrate these thoughts of the people and the opinions of the neighbors about the themes of the everyday life.

The action-research is in process, and the next steps include the realization of woodworking and metal workshops and the collective interventions in common spaces. The intention is to transform the perception of the production of space as a possibility to make those places more suitable to everyday life.

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ID 1580 | FEDERAL MY LIFE MY HOUSE ENTITIES PROGRAM: A CASE STUDY ABOUT HIGH QUALITY HOUSING PROVISION IN BRAZIL

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ABSTRACT: This paper deals with the topic of self-build housing and local facilities in Brazil and Netherlands, as part of the comparative research "Between self-regulation and formal government: the challenges of self-build housing and facilities, BESEFOGO". Self-build is defined as the practice in which people produce their own house and (collective) neighborhood facilities. This can be with or without the hiring of outside expertise (architect, constructor, workers etc.) or official funding outlets (bank loans, mortgages etc.). Formal institutions and governance systems face increasing difficulties in both countries to satisfy the need for good quality, affordable housing, which is an important condition for socially sustainable urban development. Brazil has a long history of low quality informal self-build housing areas that currently face the challenge to improve regarding tenure security, safety and access to basic needs like sanitation, energy, water and public transport. São Paulo has a long history of innovative policies regarding self-build housing. Initially, the self-help housing occurred mainly on individual lots purchased in peripheral areas, slums and squatter areas. In general, this form of self-help was domestic with possible help of friends and relatives, bringing together groups to a collective building task force. During the last two decades, self-help and collective task forces were steadily incorporated by government housing programs. Programs like São Paulo's local Self-Management Housing Program (1989-1991), the statewide São Paulo's Self-help Program (1995) and the federal Solidary Loan Program (PCS, 2004) and My Life My House Entities Program (PMCMV-E, 2009) show the consolidation of a different housing production in Brazilian context. The main research question is: how is the capacity for self-regulation in practices of self-build housing and facilities related to formal governance and regulation domains and how can this relationship be optimized to create more socially sustainable forms of urbanization? This paper analyses as specific case study: Ipiranga Building Project, a retrofit project of an old public empty building in São Paulo central area. This is the first renovation project of an existing building ever approved by federal government program PMCMV-Entities. The building was used as a Justice Court House during the 1970's and 1980's. It was left empty after 1992. The housing movement -ULCM – Unificação das Lutas de Cortiços e Moradia (Tenements and Housing Struggle Union) – occupied the building the first time in 1999 and again in 2007. In 2009 the housing movement succeeded to negotiate a donation of the 15-story office building for housing use. In 2012 the donation was reverted into a concession for housing purposes. It is the first time the concession is used within PMCMV-Entities and it also important because it changes de usual Brazilian public housing policy based on private property. The building was transformed completely remodelled and have now 120 apartments with areas ranging from 25.00m² to 58m², a ballroom and support areas for families with incomes up to 3 minimum wages. This paper analyses the opportunity of high quality affordable housing in central areas based on self-help and participative practices in the recent Brazilian experience.

1 HOUSE VERSUS HOME

Dream, shelter, home, place, domestic space, private space, social right, property, status, merchandise, investment, rentier, real estate speculation, freedom, security, problem, crisis, credit guarantee ¬in Brazilian society there are several meanings and values related to housing. The listed words have an adjective function or come from a direct relation of cause and effect.

Such diversity mirrors the scope and complexity of the theme, with meanings, conflicts, representations, materialization, causes and consequences. The direct confrontation of some of these words shows important relationships: Dream -Merchandise, shelter -property, place -status, social right -crisis, domestic space -rentier, home -credit guarantee, investment -house -speculation, problem -freedom. Such combinations are numerous, each one presents a different issue, focus, or context, with conflicting conceptualizations and approaches, interacting on different aspects -economic, social, environmental, physical -in different areas -architecture, sociology, law, economics, with different expectations -but always disparate looks on the same object (Rossetto Netto 2017).

They are facets of the same issue that exposes their tensions and limits. Housing is necessity, it is product, and it is right that can only be universalized through public policies.

The construction of this narrative that will approach the Brazilian housing scene starts from the primary function of housing, the "dwelling" as the need of every person. To live is to supply the basic needs of man in space, and in this way, more than occupying a place there is a need to exist. In order to exist, the space is occupied and physical and social needs are demanded.

A conflict in placed since housing is primary human need with high added value. And this need, in our extremely unequal capitalist society, has, besides its "use value", a disproportionate "exchange value". These exchange value is much higher than the financial resources of a large part of the Brazilian population.

In the Dictionary of Brazilian Architecture HOUSING is defined as: Place where one lives. It constitutes in architecture, the shelter or shelter that protects the man, favouring its life in the double material and spiritual aspects. Act or effect of dwelling. Home address. Residence (Corona & Lemos, 1972).

2 HOUSING POLICY IN BRAZIL

Historically, the access to housing for the low-income population in Brazil was obtained, in general, in a precarious way and consisted of three basic types of houses: tenements, favelas and land subdivision in the outskirts of the city, including homeownership and self-building. Since the beginning of 20th Century, favelas have been the landmark of the city of Rio de Janeiro. However, since the mid-century, a house in a shanty town has been an important option for the low-income population not only in metropolitan areas, but also in almost all the Brazilian medium-sized and big cities (Pasternak & D'Ottaviano, 2015). The growth of the Brazilian cities throughout the second half of the 20th century was characterized by the configuration of two distinct cities: a legal city, consolidated by the implementation of official land parceling (regularized), usually located in central areas, and designed for housing of middle and upper classes; and an illegal city, designed for housing of low-income class, characterized by the implementation of illegal (or irregular) land subdivision in the peripheral regions of cities, by the consolidation of favelas in diverse areas and by the provision of rooms in tenements in central historical districts.

In 1960, the urbanization rate in Brazil was 44.7%; since then, the concentration of the population in urban zones had gradually grown, changing from 55.9% in 1970 to 67.6% in 1980, and reaching 75.6% in 1991. The 2010 Census indicated that 84.36% of the Brazilian population lived in urban areas.

The demand for housing, urban services and infrastructure has followed the similar process. Brazil, like other countries of the Latin America, has presented an intense process of urbanization, mainly in the second half of the 20th century. In 1940, the urban population represented 26.3% of the total. In 2000, it was 81.2%. Such growth seems to be more impressive if we consider the absolute numbers: in 1940, the population living in cities was 18.8 million of inhabitants, and in 2000 it was approximately 138 million. Therefore, it was verified that in sixty years the urban settlements were increased in order to house more than 120 million people. (...) It is a gigantic movement of building a city, necessary for residential settlement of such population as well as their needs for work, supply, transportation, health, electric power, water, etc. Although the path taken by the urban growth has not responded satisfactorily in this space were established. In any case, offhanded or not, all of the 138 million inhabitants live in cities" (Maricato, 2002:16). The urban growth of the population has concentrated, mainly, in the peripheral regions of the Brazilian cities. In absolute numbers, during the last 40 years the urban areas incorporated virtually 108 million of new dwellers. The final result are cities with extensive peripheral areas, with a big concentration of inadequate housing located in favelas and illegal land subdivisions. Due to the lack of an efficient housing policy for low-income population, the informal housing market has been conclusive in the configuration of our cities (Pasternak and D'Ottaviano, 2015; D'Ottaviano and Quaglia-Silva, 2010).

Until the mid of 1980s, the local government and even the federal government strictly followed the legislation when dealing with such phenomena: according to the regulation, a city should not deal with this use of land. Favelas, for example, were seen as provisional housing and as an illegal solution and, for this reason, were ignored by the government.

According to public policies, innovative experiences, such as the intervention in favela areas of Rio de Janeiro, in the 1950s and, then, in São Paulo, in the 1980s, have paved the way for a new understanding of the ways in which the government could act in the vast irregular areas of the Brazilian cities. Under legal basis, the new Constitution of 1988 advanced by defining the need for an urban policy, as indicated in its articles 182 and 183 – Chapter II – the Urban Policy.

The closing of Banco Nacional de Habitação (National Housing Bank), responsible for the construction of big peripheral housing developments, and the new Federal Constitution marked a period of bigger participation of the cities, including in relation to the housing policy.

The approval of the Statute of the City (Federal Law 10.257), in 2001, defines the right to a city, the right to a respectable house and the social function of property as some of the paradigms of the national urban policy.

João Pinheiro Foundation (2016) estimates that the Brazilian housing deficit in 2014 was 6,068,061 units, 83.9% for families with incomes of up to 3 minimum wages (MW) and 48.2% due to the excessive burden on rent.

The methodologies used to calculate the housing deficit and the Brazilians housing plans show that not every housing problem requires the construction of a new house, and when the new houses are needed it is for families that cannot afford to pay for the unit. The range of housing needs mentioned is eye catching when looking at Brazilian cities. But one must look at the city in a complete and comprehensive way: in some cases the problem is wide open, in others it is spatially separated, but there are also those in which the issue is diffused, scattered or even camouflaged. In each of them the lower income population must find alternative ways to access a house, usually on informal ways (favelas, tenements houses, invasions). It is not by chance that such "solutions" are currently the major housing problems of most cities, especially in large cities.

Methodologically, the João Pinheiro Foundation established a reference for calculating the housing deficit diffused by the country, through the composition of different forms of housing needs: those caused by housing and urban inadequacy, and the demands resulting from demographic growth. In the case of economic attraction poles, such as the Metropolitan Region of São Paulo, the demand stemming from economic dynamics is added.

Recently, in July 2016, the Municipal Department of Housing of São Paulo municipality (Sehab-SP) presented to the population the Notebook for discussion of the Municipal Housing Plan (PMH). This document counts the housing needs from updated numbers of the 2010 IBGE National Census, calculations of the Information System for Social Housing in the City of São Paulo (Habisp) from April 2016, the research of the Foundation Institute of Economic Research (FIPE) for the street population, in addition to the prediction of population growth of the municipality until 2024. Although preliminary, the quantification demonstrates the scope and diversity of the problem. There are different situations of urgency that require different forms of action.

In the composition of the deficit related to housing precariousness, the PMH counts as precarious settlements, in addition to the historically well-known ones -favelas and irregular subdivisions -the irregular housing complexes and the tenements. And in a pioneering way in the country, it adds to this amount the population in situation of street (homeless), understanding this group also as a housing problem. The figures presented for this type of housing demand depict 830,192 households in favelas and irregular subdivisions (445,112 in favelas and 385,080 households in irregular subdivisions), it considers the existence of 20,702 households in irregular housing complexes and indicates the existence of 80,389 households in tenements in the Municipality. The existence of 15,905 homeless in the municipality is added to this universe.

In addition to housing needs related directly to housing and urban precariousness, the PMH discussion notebook counts as housing needs the Family Cohabitation (103,664 households for income brackets of up to 6 SM), Excessive Rental Rent (187,612 households), Excessive Housing Dwellings (47,443 households for income brackets up to 6 MW), in addition to Demographic Growth with additional housing needs of type HIS 1 (up to 3 MW) and HIS 2 (up to 6 MW) by the year 2032 -a portion of the population corresponding to the family income of up to 5 Minimum wages -and premise of 3 inhabitants per housing unit, totalizing 147,151 households (Rossetto Netto 2017).

3 HOUSING IN CENTRAL AREAS

Besides the discussion of the housing deficit we would like to introduce the discussion about what kind of low income public housing were should produce. We note that the best way to meet the rights to housing and the city is through well-located housing what can be understood as have a place where the family nucleus is more appropriately equipped with urban life quality, equipped with public facilities, consolidated urban infrastructure (transportation, health, education, sanitation, culture and leisure), as well as the provision of services and jobs.

Well-located house are not confined to a single consolidated region of the city. In a large city like São Paulo, with expressive intra-urban dynamics, the places with high quality urban life are occupied by higher-income families, or are empty central spaces that have remained outside the real estate interests, or are subnormal enclaves (favelas or slums). The favelas are precarious housing solutions that break up with the formal urban logic of the environment and allow access to employment for lower income families close to their houses (Nakano 2015).

Therefore, a Housing Policy for the centre can reverse socio-spatial segregation identified in the process of emptying the centre (Villaça, 2001). Guaranteeing access to the well-located housing allows the existence of different social classes sharing a democratic space in the city centre. City centre housing policies are a way of breaking conception that only those who can afford the market prices can have access to well-located housing.

In São Paulo all the social housing city centre housing programs are results of the housing movements demands and political action since the 1970's Urban Reform Movement (Silva, 2000; Tsukumo, 2007), and also through the empty buildings organised occupations that started in the late 1980's (Silva, 2000, 2007, Anitelli and Tramontano, 2016). These actions aim to consolidate the revision of the traditional housing projects based on large housing estates implanted peripheral and unstructured areas and without jobs, demanding daily enormous displacements of masses of workers inside the city.

The historical process of urban growth in São Paulo, begun at the end of the 19th century and intensified in the first half of the following century, was based on the Rich Center-Poor Periphery model, in which the central area, a historical site of excellence valued and in the process of verticalization, expelled the lower income population to peripheral areas.

In the first half of the last century, the elite began to move to a sequence of real estate launches, Campos Elíseos, Higienópolis, Pacaembú, the Paulista avenue and Jardins neighbourhoods, which were well suited to modernity and social homogeneity. Sponsored by the State this displacement of the upper classes generated an emptying process at the central area, followed also by the displacement of large companies to other areas of the city, promoting the "decadence" of the centre, and an important socio-spatial segregation that is now São Paulo must important characteristic (Villaça, 2001).

This emptying process generated abandonment and underutilization situations were many high-rise buildings had only the first floor occupied by commercial activities. In other cases, the entire building had been vacated and sealed, like a box intended for storage. Many of those buildings owners failed to honour their taxes, making their property a speculative liability within the city.

Tsukumo (2007) presents the ideological structuring that reinforced this process, with the formation of the idea of degradation, reflecting the popularization of the centre, and the formation of the idea of emptying, motivated by socio-spatial segregation. Although other neighbourhoods emerged as highly valued segregated spaces, São Paulo city centre has never been completely devalued, with a strong popular dynamic. Ferreira (2012) points that the central area concentrates around 17% of formal jobs in the city.

To this ideological structure is added elements raised by Frugoli Jr (2000), such as the abandonment of the Centre by the Real Estate Market with the change in urban legislation, which reduces the coefficient of use (CA) of the lands of the region, fear of violence by the upper classes and the implantation of new infrastructures in the periphery.

The population loss of the central region persisted until the last decades of the last century, when new urban phenomena were also identified in the city, such as peripheral growth, the proliferation of favelas,

the emergence of new centralities and the dissemination of upper classes peripheral fortified enclaves (D'Ottaviano 2008).

The central area demographic dynamics inversion occurs at the turn of the XXth Century to the XXIst, however Nakano (2015) shows that this inversion does not change the inequality in the forms of housing provision for low income families.

4 MY HOUSE MY LIFE ENTITIES FEDERAL PROGRAM

The federal government's My Home My Life (PCMV) housing program was launched in 2009 (PMCMV-1 – Federal Law 11.977), and featured two more issues, PMCMV-2 in 2011 and PMCMV-3 in 2015. Each stage had a total number of new housing units as a goal to be achieved, with a budget corresponding to the specific percentages of the three different service ranges, Group 1 (0 to 3 MW) -Group 2 (3 to 6 MW)-Group 3 (6 to 10 MW). Each group has different grades of subsidy, which was the most important innovation of the Program.

Group 1 has the biggest subsidy, up to 90 % of the housing units' total value. With this subsidy, the PMCMV made possible for the first time to attend low-income families, and transformed smaller incomes into solvent demand for market production. With a national scope, the diversity of urban realities is met with the establishment of maximum values paid for each unit production according to the size and location of the municipality.

The Program was created based on economic objectives to cope with the 2008 global crisis, ignoring the entire structure of the existing national Housing Policy – SNH (Sistema Nacional de Habitação – National Housing System), PLANHAB (Plano Nacional de Habitação – National Housing Plan), SNHIS¬FNHIS (Sistema e Fundo Nacional de Habitação de Interesse Social – Social Housing National System and Funding)-and electing private initiative as a promoter to achieve volume and agility. According to Cardoso (2015), the Program implementation process was fast and intense, based on the existing housing programs structures and also in the operation and management experience from the contractors.

As Group 1 production is heavily subsidized, the Program determinates minimum patterns for the housing units that includes size, materials and typology. With that the Program establishes a market anomaly once the Group 1 units are equal to or even better than those for Groups 2 and 3, since for these bands there are no previous requirements, generating commercial harassment on the production of the Group 1. The market seeks to rebut this issue by providing enterprises with better locations and differentiated products such as club condominiums and condominium-closed houses.

Another important point raised by Rossetto Netto (2015) is that as the Program has a physical goal and a pre-determined budget, it is possible to observe a dispute over resources among the Program's different groups, motivated by the economic agents who helped to format it (shimbo, 2010). Defending the PMCMV as a State Policy, the private formulators defend the permanence of the program to allow the agents involved a safe environment for proper planning and the consolidation of the Social Housing Market segment.

This structure of the Policy and the implementation of the program have other consequences. The various ranges, modalities, prices per unit, norms and ordinances issued are forms and attempt to adapt the PMCMV to a large diversity of needs, including for production in the central area. On this dynamic strategy, Loureiro, Macário and Guerra (2014) emphasize that:

"In PMCMV, as in other public policies, there is no clear separation between formulation and implementation, both in terms of participating actors and in relation to the decisions taken in its course, that is, part of the policy design was redefined at the moment of its execution as The response of the government and the management bureaucracy to the social demands not contemplated, the restrictions imposed by the control bodies and even the criticism of specialists and social movements" (Loureiro; Macário and War, 2014 p.24).

In São Paulo the PMCMV production was mostly concentrated in Groups 2 and 3. The Program enabled very few projects in Group 1 although it should be the Program priority as it concentrates more than 80% of the housing deficit.

The PMCMV -Group 1 has two different modalities: the MCMV-FAR (Housing Leasing Fund) and the MCMV-Entities (MCMV-E), each one with a different a set of rules. Despite this, the target audience and the expected maximum values per unit are the same as the minimum specifications of the product and the source of the resources that are fed by the General Budget of the Union (OGU).

The central difference between the two modalities is in the promoter agent. For MCMV-FAR the promoter is a private economic agent, with direct action in the civil construction sector, who is responsible for all the construction work. For MCMV-E non-profit private entities are responsible for the projects and work. In Brazil these entities are mostly housing cooperatives that are not included in the civil construction production chain but act politically to guarantee the right to housing for their associates.

As reported, the attendance of this income group was only possible given the high amount of subsidy predicted by the Program, thus achieving unprecedented within the Brazilian Housing Policy by attending the lowest income range of the population with volume, scope and certain continuity.

The requirements for the beneficiaries' framework in the program are: they cannot be holders of active real estate financing in the country, nor be owners of residential property in the national territory; cannot have any kind of direct or indirect housing subsidies with Federal Government funds (FGTS, FDS, FAR, FNHIS); cannot been contemplated before in a housing program; have no restrictions in any of the federal system or federal revenue..

The value allocated to the operation, in the case of a construction company, is the maximum value per unit and is not limited to construction costs alone. The same happens in the MCMV-E and in the execution of the work the entity can choose different construction regimes, being possible the Self-management by self-construction, by mutirão or by direct administration, or co-managment (shared management) through the global work contract for a company construction company. In this modality, the maximum value per unit provided for the range is only possible for the global works regime, with the direct contracting of a construction company to take over the work of the enterprise. For all options linked to self-management there is a reduction of 8% (eight percent) of the maximum value per unit. For builders, the process requires working capital for the execution, since the remuneration of the program is given by measuring the service performed and for the entities there is the advance for the execution of the next month

In the composition of the Investment, the enterprise can count on a counterpart of the States, Municipalities and, in the case of MCMV-E, on the part of the final beneficiaries.

All costs of the operation -direct costs of land, project, technical advice, work administration, work execution, taxes, fees and related fees, social work, including the administration of the operating bank - must be paid by the project revenue: the amount raised by multiplying the number of units by the value of the operation plus the counterparts.

This format, which adopts as reference the maximum value for the production of a housing unit, was established by the PAR, and should guarantee: minimum square footage for unit, minimum architectural specifications as unit area, measurements of environments, finishes, beyond of specific percentages for budget and operation items, such as a maximum of 15% of the value to purchase the land, 1.5% -3% for the project, 1.5% or 2% for Social Work, among others.

The amount of the financing, which the beneficiary will pay, refers exclusively to the transaction value, the amount released by the MCMV without counterparts. This amount is amortized over a period of 120 months, with families paying instalments corresponding to a maximum of 15% of gross family income. The difference in the value of the financing is assumed by the FAR or FDS in the form of a non-refundable subsidy, divided into 120 benefits.

In the case of the city of São Paulo, the enterprises could also count on the possibility of contributing up to R$ 20,000.00 (U$ 6,000.00) per unit through the Casa Paulista -State Government Agency, once the program architectonic and urbanistic specifications are met. And since 2014, an additional contribution from the municipality, of same value, through the Casa Paulistana Program was approved.

In addition to the direct subsidy to the beneficiary, the program also has production subsidy through the Special Taxation Regime (RET), in which there is the unification of federal and state taxes levied on housing production, with the definition of a value of 1% on the total cost of work for collection. The Municipal Service Tax (ISS) is exempt for PMCMV-Group 1. The RET is also available for the others Program groups, but with incorporations values differentiated by 4%.

Within the market segment, the format established for the PMCMV -Group 1 is understood as construction at cost price (Rocha Lima Jr, 2009). This range is not attractive to real estate developers, since the operation to be carried out is cost-effective, respecting the minimum specifications of the Program, without profit margins within the values practiced. And Gregorio (2013) demonstrates that even when working at cost, the result margins are negative with variations of more than 5% in deviations in the behaviour of key variables, such as construction costs, requiring a strict monitoring and control system.

Marques and Rodrigues (2013) point out the low production of MCMV-Group 1 in the São Paulo Metropolitan Region (RMSP) -about 35% of the total -almost half of the national average, and accounting for only 7% of the deficit of this specific band. If the representativeness of RMSP is already low, production in the city of São Paulo is also small, as it is verified that up to the middle of 2015, the largest municipality in population of the country had about 1% of the total produced in Group 1. In the central region, the projects are practically non-existent, reinforcing the peripheral pattern of low-income housing production. In this region, the authors only identify PMCMV-Group 2 and Group 3 production. (Rossetto Netto 2017).

The values of the land and the valuation of the central region, as well as the increase of a new middle class with capacity for payment, also potentiated by the Program itself, weigh on this competition. And so, housing in the Centre contradicts the foundations of MCMV: the primacy of private initiative involved in choosing which products to offer, where to deploy them and who to destine them, freely exploiting land rents. (Anitelli and Tramontano, 2016 p.86)

5 THE IPIRANGA BUILDING

The Ipiranga Avenue project is paradigmatic as a case study as it is an existing building reformation project for the PMCMV-Group 1 using the Entities modality. The project was possible after a partnership between Integra (Technical Assistance Studio) and Unificação das Lutas de Cortiços e Moradia – ULCM (Housing and Tenements Struggle Unification) – an old partnership between architecture and engineering technicians and one of the São Paulo housing movements.

The Ipiranga project is a reform with change of use. The building located at Avenida Ipiranga, 1225/1235 - Santa Ifigênia, approved in 1965, was purchased by the Federal Government on April 1, 1970, to be used by the 2nd Region Regional Labor Court. Until the beginning of 2000's the building was hosted 23 Conciliation and Trial Boards of the capital.

The first approach to the property was made in 2007, with negotiations initiated by the at the São Paulo State Department of Patrimony in São Paulo (SPU-SP). The feasibility process began in 2009, with the donation of the property to ULCM, and its contracting took place in August 2014. The works began in the end of 2014.

Despite the approach and prospection of ULC, the real destination of the property for housing production was only possible in 2006, under the government of then President Luiz Inácio Lula da Silva, in which Provisional Measure 335 was issued, transformed in the following year into Law n No. 11,481 (May 31, 2007), providing for the allocation of properties belonging to the Union Patrimony for social housing purposes.

In the survey conducted by the housing movement, which resulted in the construction of the Ipiranga Avenue building, the movement attempted to occupy SPU's property located at Avenida Cásper Líbero, 88, during the Scream of Excluded in September 2007. At the time of entry of the building there was an approach of soldiers of the Army present there, since the property had already been destined to the Brazilian Army. This apparent failure opened the possibility of identification of the building of Ipiranga, its occupation and following negotiation together to Secretaria de Patrimônio da União – SPU (Secretariat of the Union Patrimony).

At the first moment ULCM start a direct negotiation with the SPU. As the negotiation did not work, the movement occupied the building for a short time during 2009.

With the progress of the housing movement negotiations with SPU-SP, through the Working Group, considering the guideline for better utilization of the own nationals with potential of use for housing purposes of social interest, and with the deepening of understandings on the issue , in September 9th, 2009 the SPU issued Ordinance No. 179 in which declared a list of 33 properties in the State of São Paulo of Public Interest, with the building of Avenida Ipiranga in the list of these properties.

Implanted in plot with 520.00 m², the building has 7,123.00m2, 18 floors -underground, ground floor, mezzanine, 15 Floors with 3 Types, and penthouse. The project enabled 120 UH with footages varying from 24.47m² to 46.21m², through the MCMV-Entities. The inauguration scheduled for March 2017 had to be postponed because of the federal financing bank rules.

The contract established the following resources:

- PMCMV – R$ 76,000/unit (US$ 23,000)
- São Paulo State Government / Casa Paulista – around R$ 20,000/unit (US$ 6,000)
- São Paulo Municipality / Casa Paulistana – around R$ 3,900/unit (US$ 1,200)
- São Paulo municipality budget was need due to the reduction of the federal transfer and consequent extension of the schedule. (Rossetto Netto 2017).

Figures 1-3 – Ipiranga Building and renovation project (Integra 2014) (Camila D'Ottaviano 2015)

Figures 4-7 – Ipiranga Building – Renovation Work

Figures 8-9 – Ipiranga Building Dwelleres Meeting (Cecília Andrade 2016)

Figures 10-13 – Ipiranga Building – Renovation Work (Camila D'Ottaviano 2016)

6 CONCLUSIONS

We understand that the only way to achieve the desired right to housing is through the understanding that housing are both need and product. Housing in a central area, as proposed by the Ipiranga building project, presented in this article, aims to ensure in the context of the city of São Paulo full housing with access to all urban attributes of the city -infrastructure, services and public equipment, economic dynamics and employment opportunities, culture and leisure democratic supply, easily accessible and connected by the abundant public transport network. São Paulo city centre is a extremely qualified space, that was historically abandoned by the richer families.

Proposing housing in the Centre for the lower income families is, therefore, to attack spatial segregation and social disparity through the same action. It is a guarantee of rights possible only through political action, with a public policy that enables trough housing a new redistributive access to the city, that provides a more democratic city in which inequality is not abyssal. Guarantee the right to housing and to the city for the lower income families is also to provide dignity and life meaning instead of mere survival (Rossetto Netto 2017).

A democratic Housing Policy needs a change in its productive base by altering its traditional patrimonialist logic, since the need is to live and not possess goods, besides understanding the reality of the city Centre, the specificities of the urban fabric, requiring change in the size of the interventions and incorporating the requalification of existing buildings as a premise, recycling the built heritage and the way to build the city at the same time. They are essential attentions related to the productive costs, including ensuring urban quality, meeting the specific demand profile and understanding the environmental appeal for the area, as well as for the growth of the city (Rossetto Netto 2017).

The analysis of the dynamics in the central area of São Paulo and its housing aspects since the end of XXth century, as well as the actions from the real estate market, the housing movements and public agents and public programs reinforce the importance to encounter the priority demand to guarantee democratic space, reuse of existing buildings, guaranteeing the public offer of housing.

For the feasibility of central areas social housing the first challenge to be faced is the land issue. The value of land and of real estate in central areas almost always makes social housing projects unfeasible.

The Brazilian legislation (City Statute) indicates that all property must fulfil its social function. However, in the legal sphere, the social function of property is always overlaid by the right to property.

In this sense, the Ipiranga Building project is paradigmatic because, despite all the restrictions and difficulties, it shows how it is possible to provide a housing project for the very low income population with a high standard architectural project in a central area, with the participation of the housing movements and not based on private property.

Figures 14-16 – Ipiranga Building – Inauguration (Camila D'Ottaviano, December 2016)

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ID 1603 | PROGRESSIVE CONVERGENCE BETWEEN PRIVATE AND PUBLIC INITIATIVES IN CITY PLANNING AND URBAN POLICY: THE CASE STUDY OF KERAMEIKOS

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1 INTRODUCTION

Urban rehabilitation is defined as a process of improving deprived urban environments through enhancing the physical structure and varying the density established within urban areas. Major initiatives have been introduced to attract residential, transport, economic and leisure uses and activities, resulting in mutations of the spatial, social and economic structure of urban spaces (Nobre, 2002).

During the last decades a great amount of urban and social studies has started to acknowledge the significant role and useful experience of these processes in cities on specific case-studies across the world. The de-industrialization and the loss of manufacturing employment in many urban areas have led to the prevalence of consumption-based, arts-led forms of economic regeneration intended to tackle urban problems (Raco, 2002). Extending this discussion to the Athenian context, this paper examines the strategies of urban rehabilitation-regeneration and gentrification in relation to arts-led regeneration, as well as the effects of the progressive co-ordination between private and public urban development initiatives in Kerameikos. This case study serves towards an optimum understanding of the phenomenon, analyzing the practices followed by local authorities and private investors in the regeneration scheme alongside their spatial, social and economic implications. More specifically, the study approaches urban governance policies, focusing on urban enhancement practices and particular policing measures which aim at the extraction of "social pollutants" from certain city neighbourhoods (Urry, 1995).

International competition among cities has led to the implementation of policies favoring investors and private capital to the detriment of the local population (Harvey, 2000). Further to a brief assessment of the evolution of urban policies in the Athenian context over the last thirty years, the paper interrogates the social and spatial landscape of Kerameikos, taking into account the obstacles posed by the financial crisis in implementing and evolving the gentrification agenda and, consequently, in developing the real estate market. Urban enhancement interventions regarding both the physical environment and the social composition had been made in the pre-crisis period, however the outburst of the economic crisis put an end to an era of soaring land prices and to the “intrusion” of higher income groups. It is worth noting that the population composition has been partially dominated by distinct cultural groups of middle-low social strata.

This paper consists of three parts. An analysis of gentrification and urban regeneration practices is provided in the first part, followed by a description of the urban policies and tactics exercised in Athens, and particularly in Kerameikos. The concluding section provides insights into the prospects of participatory planning to encompass and express the voices of all the social groups living in Kerameikos.

2 URBAN REHABILITATION AND GENTRIFICATION

Since the 1980s, emphasis has been laid upon the potential of cultural policy to function as a tool for achieving urban economic regeneration objectives. The policy framework regarding urban governance has undergone significant changes. The convergence between culture and economics in urban policies since 1990 has been characterised by an expansion of city marketing techniques and city branding strategies (Garcia, 2004). Nowadays, the urban policies are re-directed by emphasizing on cultural forms and symbols as dominant elements of the productive strategy, whereby culture is increasingly commercialized. Due to the developments and needs of the economy, and to the rapid cultural penetration in many fields of production, policy focus is shifting from production to consumption and from material to culture (Scott, 1997, Harvey, 1989). Kong highlights an impressive surge in private-public partnerships (PPP), whereby developers, banks and companies of national and international significance join forces to administer urban issues of cultural economic policy (Kong, 2000:387).

Consequently, cities adopt cultural policies as a means to transform the physical and aesthetic aspects of space – along with their meaning, aiming at its sanitising in the interests of capital accumulation. Additionally, policy discourse now targets the urban historical fabric and the rearrangement of buildings and roads (Uzun, 2002). Along with the ongoing urban regeneration, residential transformation processes have been an important issue in the political agenda. This process leads to the spatial exclusion of impoverished groups, as places are gentrified in the interests of property-led regeneration. Urban policy aims to encompass the new middle-class preferences boosting public-private partnerships in housing regeneration. The underlying principle of these policies is to reduce the abandoned and dilapidated aspects of the inner-city neighbourhoods, attracting the middle classes instead of involving a wider social base (Atkinson, 2010).

Therefore, urban rehabilitation practices in many urban areas go along with the gentrification process. The gentrification phenomenon concerns the physical change in tandem with the socio-cultural capital in living spaces (Holcomb and Beauregard, 1981). Furthermore, gentrification involves the displacement of lower social strata, leaving room for the upper social groups to take over the inner-city areas. Many theorizations of regeneration highlighted the role of culture and capital as the main drivers of gentrification trends. This paper emphasizes the role of public-private partnerships on the implementation of gentrification, as an engine of urban regeneration. This incorporates the use of cultural facilities and practices sponsored by local authorities and private agents as promoters of regeneration projects and associated gentrification phenomena. Stressing the cultural factor, Ley describes artists – whose habits and practices constitute the immense expression of the ‘post-industrial civilization’ – as the 'stalking horse' of gentrification and revalorization of the city neighborhoods (Zukin, 1988:5, Ley, 1996).

3 URBAN POLICY IN THE ATHENIAN CONTEXT

Being the Greek capital, the metropolitan area of Athens concentrates half of the national population, accounting for the multiplicity and the differentiated tensions within its urban fabric. Similarly to most European metropolises, especially in Southern Europe, the inner city centre of Athens is socially mixed: the particularity of its socio-spatial morphology is linked to the vertical form of social segregation due to the multi-storey buildings of the antiparohi system[1].

Since the 1990s, urban policies in Greece have activated mechanisms and promoted regeneration projects for the enhancement of derelict historical heritage sites through land use conversion. The declining center of Athens has undergone a significant transformation, being subject to urban regeneration

[1] "Antiparohi system is related to the system where promotion is co-exercised by small owners and small construction firms in ad hoc joint ventures to produce small condominiums "(Alexandri, 2012:18)

initiatives. Like many cities of rich historic background, Athens has been the epicenter of urban regeneration mechanisms for reviving the declining inner urban areas. Over the past thirty years, Athens has attempted to foreground its history and culture as the key-driver in urban policies, in order to stimulate regeneration interest. A rising awareness of historical and cultural importance forced public administrators to proceed with the implementation of projects that aimed to promote its international role. History and culture were identified as key to Athens regeneration. Although the state and the local authorities put forward proactive planning, putting Athens to the 'European cities' map, they often disregarded the social and cultural needs of the local community.

The 1985 Regulatory Plan of Athens defined the boundaries of its Historic Centre. Historic buildings, which preserved their original attributes and presented an architectural interest, were listed. Historic and ancient monuments were protected with regeneration schemes, also reinforcing the cultural aspects of Athens. The Regulatory Plan of Athens has changed by virtue of the law 1515/1985, in order to promote projects for reshaping Athens in the vision of the 2004 Olympic Games, and to boost the city image that required its spatial, social and economic mutation.

The Municipality of Athens and the Unification of Archaeological Sites S.A – a private company owned by the Ministry of Culture – proposed the creation of pedestrianisation "Great Walk", linking

Acropolis to other important archaeological sites in the city centre. This regeneration action aimed to highlight the history of the city by intervening on the public spaces, archaeological monuments and sites, buildings of neoclassical architecture, green spaces and traditional neighbourhoods. Simultaneously, urban policies were carried out to improve and maximize infrastructure use in the urban core. The construction of a series of subways and tram lines minimised distances and had a significant impact on the spatial structure of land uses, as well as the trajectory of adjacent neighbourhoods. In addition, the museum of Acropolis, launched in 2009, is a flagship project aimed to boost the city image and to attract tourism, having a "Guggenheim effect". The museum of Acropolis representedthe potentially exclusionary and polarizing nature of gentrification effects (Moukoulis, 2008:50). As an outcome of the urban rehabilitation of past decades, the interest in the historic centre housing stock has been increasing since the mid-2000s. The urban regeneration strategy promoted by the municipality and the state has had severe impact on land uses and values. In particular, the "Great Walk" conduced to the rise of land values in areas of immediate proximity, and to the creation of cultural uses – especially in old industrial districts – improving the prospects of gentrification.

According to Maloutas (2011:38), "there is no evidence of significant gentrification in Athens central neighbourhoods", given the structure of the housing stock and small-scale ownerships, as well as the absence of large-scale urban interventions. However, the affluent population never abandoned the city centre due to its historic value: the impact of this choice can be largely observed on smaller-scale infrastructure regeneration through locally induced social upgrading of certain traditional working-class neighbourhoods (Maloutas, 2004; 2011). It is indeed the case that "inner city enclaves are experiencing gentrification processes: Artists, higher income groups of affluent suburbs, young households "have established themselves in the Historic Center (Alexandri, 2011:9). In the more recent years the rhythms of gentrification have decelerated and land prices have diminished to the pre-crisis levels.

3.1 KERAMEIKOS

Although Kerameikos falls under the jurisdiction of Municipality of Athens, its geographical confines are defined differently by the institutions and urban studies. In this paper, it is considered the area which is bounded by Avenue Piraeus, Iera Odos, Konstantinoupoleos, Achilleos and Deligiorgi streets. These axes are chosen to include a district with uniform socio-spatial characteristics, several areas of which were subject to interventions made by public and private initiatives. It is worth mentioning that many residents and urban studies of the area called it Metaxourgeio. We adopt the name of Kerameikos due to the archaeological site of Kerameikos, one of the largest local authorities of ancient Athens. According to the General Urban Plan of Athens (Government Gazette bulletin 80D/4.2.1988), the case study constitutes the district of Rouf. Additionally, the neighbourhood is in close proximity to the central squares Omonoia and Syntagma, and to important archaeological sites such as Acropolis (Taxiarchi, 2007).

The residents used to be immigrants Muslims of Thrace, who resided in derelict buildings whose former residents were immigrants from Bulgaria, Poland, Russia, Egypt and Albania settled in the area in the 1970s. Another proportion of the immigrants settled in the area came from Asia – mainly China. The former residents of the neighbourhood are mostly retired (Taxiarchi, 2007).

The morphology of Kerameikos is a result of its historical urban evolution, pre-war buildings, antiparohi buildings, vacant lots, brothels, Chinese community shops, derelict houses, restored buildings, neoclassical and post-modern architecture. Many former warehouses, workshops and craft industrial buildings have been converted into postmodern leisure, art and cultural sites. Attracted by its multiculturalism and its history, many old and new residents and tourists wander in the streets, visiting the alternative cafes, wine bars and artistic spaces. At the same time, undocumented immigrants, drug addicts and other vulnerable social groups have settled in abandoned buildings of the district. During the 2000s, the neighbourhood was characterised as a centre of illicit drug and sex trade activities accommodating people under miserable and de-grading conditions.

After mid-2000s new spatial and socio-economic patterns are being shaped in the district, changing its identity and character. The study area is in state of transition, subject to public and private initiatives as well as to the economic crisis effects. Nonetheless, many researchers, media, politicians and residents refer to the social mutation of the neighbourhood through gentrification as a mean to boosting the image of a European metropolis.

Figure 3.1: The neighbourhood of Kerameikos Source: : National Technical University of Athens, Own Elaboration

3.2 PUBLIC AND PRIVATE INITIATIVES IN KERAMEIKOS

In terms of planning policies and strategies, the interventions of state and local authorities have determined the evolution of the area of Kerameikos and accompanied the process of socio-spatial transformation. The gentrification took place in Kerameikos mainly via private practices, forced by the partnership between public and private sector. The study area is affected by the practices of public institutions – Municipality of Athens, Unification of Archaeological Sites of Athens S.A, the Ministry of Culture, the Ministry of Environment and Energy, and the Ministry of Citizen Protection – that have developed programs of re-imaging and regenerating the city of Athens through cultural activity and special events.

The neighbourhood of Kerameikos constitutes a part of Athens historic centre as defined by the Presidential Decree –Government Gazette bulletin nr. 567D/13.10.1979-which provides for development management policies to avoid the substitution of the housing stock from the antiparohi system. Furthermore, during the 1980s the Ministry of the Environment and Energy listed thirty buildings. As a result, the study area was abandoned, due to the inability of many households to cope with the

improvements and conversion of listed buildings. Thus, many buildings are abandoned and demolished by their owners due money scarcity, in fear of any compulsory maintenance of their house as listed. In the 1980s, many fires had broken out probably because many owners wished to exploit their property through the construction of new, more profitable buildings. The Presidential Decree of 1984 -Government Gazette bulletin nr. 33/A/84-prohibited the disturbing uses, the renewal of their operating licenses, the increase of horsepower and the establishment of new industries. Most of the traditional industries of Kerameikos were forced to leave. The expulsion of disturbing uses such as garages and engineering workshops resulted in the desertification of the building stock and the progressive change of the productive base of Kerameiko (Taxiarchi, 2007)..

The Local Plan -approved by Government Gazette, bulletin nr. 80/D/1988-describes the district as degraded and anticipates the reduction of construction factors and the restoration of interesting buildings facades and housing stock. That is, the study area is included in the districts intended for "purification". This policy aimed to stimulate residential uses and to improve quality of life. It also included interventions in shaping the historical physiognomy of the centre, the improvement of its image and its functionality through imposing stricter traffic regulations, implementing building renovations and retrofitting and pedestrianisation. Furthermore, the local plan proposed to include the district to the gridded archaeological sites of Athens. It was also proposed to revitalize the archaeological site of Public Sign – the ancient graveyard of Athens, and to turn it into a park (Alexandri,2014).

In the begging of 1990s, many planning proposals and public intervention acts suggested the urban regeneration of Kerameikos. The Council commissioned planning consultants to undertake a number of urban environmental improvement plans. Between 1990 and 1995, the Environmental Study Corporation undertook the upgrading survey of the area. The first plan of urban environmental improvement described the district of Kerameikos as "the most deprived district of the city centre where its extensive habitation is still conserved.

This district is very interesting due to its traditional and historical elements as part of the Athenian history" (Municipality of Athens,1993:10). It was also proposed to transform Kerameikos into a residential center and an area of trade and history. In other words, "it was suggesting its transformation into a cultural hub" (Alexandri, 2014: 5). In addition, the enhancement of the urban environment launched the reduction of roads' lanes, the establishment of parking spaces and selective pedestrianisation, as well as the installation of two metro stations, a tram line and bus lines to serve particularly the inner of the district (Municipality of Athens,1993: 122).

The social infrastructures are not estimated with regard to the current population but with the prospect of a social recomposition that will emerge through the rehabilitation programs (Municipatily of Athens, 1993:91). That is, the current societal context of the neighbourhood isn't taken under serious consideration. This highlights the role of regeneration schemes as to the displacement of old residents and underprivileged social groups by the influx of middle-class newcomers. The future population is expected to be more stable and homogenous than the current one, since upgrading programmes lead gradually to the removal of a significant number of the improverished population, specifically the undocumented immigrants. On the other hand, it was believed that immigrants who would remain as permanent residents would ultimately be integrated into the local population. (Municipality of Athens, 1993:90-91).

Public Sign, Iera Odos and the Silk factory were designated as special urban regeneration schemes related to the improvement of neoclassical houses, the demolition of abandoned houses and the amelioration of local public spaces through pedestretation, unification with other archaelogical sites and through the creation of a square. The Silk factory, as the neighbourhood's landmark of architectural heritage was turned into the municipal gallery of Athens in 2010, after five years of renovation and in reference to the area's history.

The plan of urban regeneration-rehabilitation placed particular emphasis on the protection of historical and traditional elements of the neighbourhood, aiming to revitalize the traditional neighbourhood in tandem with the "back to the city" movement. Thus, the central and local state enacted the plan of urban regeneration by a presidential decree of 1998 -Governement Gazette, bulletin nr. 616/D/98. The latter established the use of the area as "general residence" (Taxiarchi,2007). Therefore, it led to the creation of surplus value in many central areas, satisfyng the speculative interests of investors (Alexandri, 2014).

At this point, it is worth noting the systematic trend towards delaying, regarding the adoption and implementation of decrees and local plans in Greece. In the case of Kerameikos, the local plan was elaborated in the 1980s, the survey of urban regeneration and the presidential decree in the 1990s, while throughout this period the characteristics of the neighbourhood had been changing. The regeneration projects are either implemented partly or not implemented at all. However, some projects already announced have been implemented gradually and only with the support of private sector initiatives, namely of Oliaros company. The pedestrianisation of Iasonos street has been implemented by Oliaros after the pressures for further regeneration actions.

Since the 2000s, various programs and actions of urban policies were designated to encourage the improvement and upgrading of historically interesting neighbourhoods, and to provide suitable conditions for the attraction of private capital and for the rehabilitation of Kerameikos. Public and private partnerships were formed to attract private capital and to get involved in the urban rehabilitation process. Gentrification was the consequence of public urban regeneration policies and incentives to private investments, leading to the replacement of working-class and underprivileged social groups by the "new middle class" in Kerameikos. The increase of the rent gap brought about a rise in exchange land values (Smith, 1996) that caused the spatial "ostracization" of lower income groups and, overall, of the "marginal" population (Alexandri, 2014). Entrepreneurial urban politics towards investors and developers have been implemented in Kerameikos, as in many European cities (Harvey, 1989). As an outcome of the urban upgrading process of the last decades, the interest of the entrepreneurs and realtors in Kerameikos housing stock increased. Thus, housing investment was redirected to Kerameikos neighbourhood, thereby entailing a rent gap. The investors have taken advantage of surplus value created in Kerameikos due to the beautification projects. Mostly, the private investments in the neighbourhood were closely related to a vision of middle-scale projects.

In 2001, the state's interest was focused again in Kerameikos by the "Survey of recognition and proposals for interventions for the district of Metaksourgeio" undertaken by the company of A. Karydi. This survey was a part of regeneration proposals and beutification practices of the historic center of Athens and the preparation of the city for the Olympic Games of 2004.

Since 2001, the state took a step back and let the private capital, cultural ONGs and artists to form and gentrify the study area. The AthensX4 was an initiative of Unification of Archaelogical Sites SA in line with the Ministry of Environment and Energy that had been approved for the neighbourhood of Kerameikos in 2010 in the context of an architectural competition. AthensX4 competition aimed to promote a city block and the elimination of the intermediate streets by increasing the green spaces.

Nowadays, the "Great Walk" is implemented in parts. The last part was added in 2007 at Pireaus Avenue, opposite to the study area. In addition, the Unification of Archaelogical Sites SA was abolished in 2014. It is worth noticing the rise of exchange land values in the adjacent neighbourhoods of "Great Walk." The AthensX4 project, as an urban regeneration action for the promotion of Athens, testifies the cooperation of the state (Ministry of Environement and Energy and the City Council) with banking institutions (National Bank) and the European Union, whilst promoting private and public partnerships (Ministry of Environment and Energy, site).

The Oliaros S.A, a property development company, has shown interest in the potential of gentrification in Kerameikos. The Oliaros S.A is the owner of 4,5% of building stock in the area, namely 65 estates. "OLIAROS believes that with the right approach and collaboration with both private and public sectors KM can become a leading socially inclusive model neighbourhood" (Oliaros Blog)°. Its vision is to re-energize Kerameikos by introducing a new urban cultural identity. Oliaros proposed a partnership with local state and relative "stakeholders to adopt a common vision, and create the right conditions to attract occupants and investors back to the City Center" (Oliaros Blog). A part of newcomers, gentrifiers and Oliaros co-founded a non-profit organization in 2006, called KM (Kerameikos-Metaxourgeio) Model Neighbourhood, seeking to change the identity of Kerameikos and to create a model neighbourhood.

KM Model Neighbourhood has taken a series of initiatives to transform Kerameikos into a socially inclusive model neighbourhood, putting pressure in Municipality of Athens to achieve its objectives. One of their actions was a 'guerilla gardening' demanding more public and green space as well as better quality of everyday life in the city centre. They transformed many plots into green spaces and allotments. They also participated to the revitalization of Public Sign supported by the municipality of Athens (Oliaros Blog).

In 2007, the company GEK TERNA S.A built a block of expensive apartments similar to "lofts" that attracted the new residents and the upper middle-class gentrifiers. As the company claims "the construction of this complex was intended to give a special and refreshing character in the area and to be an attractive alternative to creative people who are looking for creativity and quality in the centre of Athens" (GEK TERNA Site).The apartment prices in the GEK complex are high, compared to the average selling prices in the rest of the study area. The design of the block is considered to be out of keeping with its surroundings. The prices target the middle and upper social classes, attracting new residents. Thus, GEK implemented this project in order to invest in the area and to create a new real estate market.

Additionally, Oliaros and artists co-founded a not-for-profit organisation ReMapKM and launched for the first time Remap in 2007. ReMap is a biannual art exhibition in abandoned and derelict buildings in Kerameikos, hosting projects of artists and galleries from all over the world. ReMap provides maps of the installations to the visitors who can freely access buildings in Kerameikos. "ReMap has collaborated with the Athens Biennale, Kunsthalle Athena, Deste Foundation, the Museum of Cycladic Art, as well as with smaller institutions and initiatives, altogether introducing a higher and broader level of engagement with contemporary art in Greece" (ReMAP Blog). Nevertheless, the economic crisis and the generalised social uncertainty has prevented the organisation of this art international platform in Athens since 2013.

Immigrants and gypsies who used to live in the abandoned housing stock were evicted by the buildings of ReMap, as the landowners wanted to sell them or conceded them to Oliaros. The impoverished population has been evicted and displaced directly by this art exhibition. It is obvious that the neighbourhood cleansing from underprivileged groups was provoked by the artists and non-profit organisations (Tzirtzilaki, 2009). KM Model Neighbourhood implemented the street regeneration of Iasonos streets by pedestrianisation which was presented to the Municipality Council.

Oliaros was invited to present the main aspects of KM projects in a meeting hosted by the Deputy Minister of Development Mr. Notis Mitarakis and Invest in Greece, and attended by several government officials and administrative executives. (Oliaros Blog). The Athens Mayor Kaminis and the Deputy Minister of Development Mr. Mitarakis expressed their commitment to cooperate closely and proposed the integration of three urban development plans of Oliaros to Urban Development Fund for Attica under the JESSICA Initiative for the Region of Attica (Joint European Support for Sustainable Investment in City Area) – a separate block of European Investment Bank (EIB). In the region of Attica, the investments of integrated plans for sustainable urban development are delivered to urban projects via the National Bank of Greece in its capacity as the Urban Development Fund for the Attica Region. The proposals of Oliaros are the construction of '18+ Student Housing', a specialized market of Greek and international creative products (Street Market), and the creation of creative entrepreneurship (Oliaros Blog).

The implementation of these projects will create suitable conditions for attracting "creative" people of the middle and high class, and the interest of investors and other realtors, resulting to the rise of land values and the change of land uses (Smith, 1996). Therefore, the socio-spatial change of relations and characteristics consist the future vision of the private initiatives over the study area. In this context, the gentrification process in Kerameikos is the outcome of private and public partnerships. The company Oliaros did not implement any of the previous projects, expecting the right investment opportunity in terms of the potential of gentrification. In addition, these projects have been put on hold because of the current financial and political status of Greece. Oliaros promised to commence activities "as soon as tax circumstances become more favorable and the State takes action towards the reversion of the continuous depreciation of the City's center" (Oliaros Blog).

In 2011, the Ministry of Environment adopted an urban regeneration program and the neighbourhood of Kerameikos was characterized as a 'zone of special regeneration' providing tax incentives related to the restoration and reuse of buildings in the historical center. The guiding principle of this decision was therefore to encourage building rehabilitation and to establish favourable conditions for the attraction of private promoters interested in upgrading the area of Kerameikos. In particular, a tax exemption related to the costs of building restorations was provided to the owners or to the tenants of buildings who wanted to proceed to the restoration of residences, listed buildings, building facades, shops and offices. These incentives concerned the owners and investors who had the financial ressources and the capital to rehabilitate or purchase the estates and enabled them to better establish themselves in the area. This philosophy of tax benefits has played a strategic role in getting the realtors, private promoters and middle class to invest and settle in Kerameikos.

The Ministry of Citizen Protection had a significant role to play, drawing middle-class people back to the city centre on the expense of lower social, ethnic and racial groups. In the mid-1990s, the police station of the study neighbourhood was merged with one of the Omonoia area. The delinquent behaviours were increasing due to the absence of state in terms of policing the area, resulting to the stigmatisation of the area. The police surveillance project "Xenios Zeus" – in the context of rehabilitation of Kerameikos – proceeded to massive arrests of migrants who had settled in Kerameikos by "cleansing" the urban space from unconventional people or behaviors. This strategy has excluded marginalized population, projecting them as a problem of the city centre (Pain and Smith, 2008). The new waves of immigration of the past years, mostly undocumented, added to the context of the economic crisis and threatened the safety of the new middle class.

In fact, the private initiatives approached the issues of the neighbourhood in the vision of a "model neighbourhood" based on investors' interests by promoting social exclusion practices and creating specific local conditions to the inflow of investment capital. The collaboration between private and public sector engage strategies seeking to create an artistic and "creative" environment, encouraging the potential of gentrification while ignoring the socio-spatial inequalities.

The absence of the state in terms of social policies leads to the progressive sovereignty of gentrification by allowing the urban transformation and the mutation of social structure for the sake of economic benefit. In other words the artists were the "stalking horse" for the needs of promoters, investors and local authorities to revalorize Kerameikos.

4 CONCLUSION – DISCUSSING THE NOTION OF PARTICIPATIVE PLANNING IN KERAMEIKOS

Nowadays, two kinds of gentrifiers co-exist in Kerameikos. Members of upper-middle class and the marginal gentrifiers – artists who created urban NGOs, immigrants, homosexuals, students. The upper class gentrifiers – through their initiatives and their participation in the aforementioned urban projects – put pressure on the authorities to regenerate the neighbourhood. However, the actions mentioned above did not embrace the participation of all the social groups that settle in Kerameikos (Alexandri, 2014). It seems that the gentrifiers participated formally or informally to the elaboration of the regeneration projects. On the other hand, the marginal gentrifiers experience similar realities. They organize a street carnival on spring seeking to project themselves as the alternative voice of Kerameikos (Alexandri, 2012). Hence, it seems that the participation of the citizens in the urban planning may slow down the eviction of the marginalized groups, thus creating a more sustainable and successfully mixed community.

In this sense, participatory planning-participative politics-is a notion-paradigm included in urban planning that aims to harmonize the different points of views among all the participants-citizens, as well as the marginalized groups of society (McTague, C. and Jakubowski, 2013). In addition, it involves the participation of the entire community in the strategy and management of urban planning processes (Lefevre et al, 2000). Participatory planning aspires to fill to the gap between all levels of governance and the local communities. The idea is that the government and the local programs such as urban regeneration move towards a reticular model using the bottom-up approaches (Smith, 1973). Consequently, the planners combine a diversity of interest groups in the process of decision-making by measuring the public opinion.

In Athens, the tools of 'urban governance' concerned mainly the public-private partnerships and quangos were implemented in the Athenian urban policies. These partnerships used extensively in large scale projects decreasing the civil society's participation in the decision-making process of urban policies (Maloutas et al, 2014).

Additionally, participatory procedures take place exclusively at the local level, as:

- " The legal process, which derives from the right of citizens (or institutions) to object before the Municipality regarding planning regulations imposed on their properties.
- The public participation process, with the so-called Neighbourhood Planning Committee (NPC), which is designated and elected by the inhabitants of the area. -The internet (e-government forums etc)" (CEMAT, 2014:70).

In 2010, the local administration reform introduced more independent sub-national decision-making processes (Chorianopoulos, 2012; Souliotis, 2013) providing the Metropolitan Governement of Athens with multiple responsabilities of developmental and planning nature. It was an initiative to adapt the Greek local government system to the EU's 'multi-level governance system' in order to benefit from the EU's funding (Maloutas et al,2014).

However, the sovereignty of the economic crisis 'cancelled' these strategies due to the reduction of the financial resources and led to a declining number of privatization programs controlled by Hellenic Republic Asset Development Fund. The greek urban policies are fully aligned with EU policies as the EU funds presented the only source for public investment. Additionally, the participation of the citizens organisations in municipal policies took place through a consulting body, rupturing the relations of political authorities and citizens. The result of these processes is the development of local movements and NGOs which try to cope with the consequenses of the economic crisis (Arampatzi and Nicholls, 2012). Nevertheless, these social movements have limited access to formal processes of decision-making and urban planning (Maloutas et al,2014).

Eventually, the challenge of this case study is to stress that the different needs and preferences of different groups can be identified, and that all the groups of the area can proportionally fullfill their needs; further, to cope with the lacks of economic ressources to actually implement the plans.

In conclusion, the participatory aspect in this case necessitates the use of a workshop format to ensure that all citizens(Levevre et al, 2000) – mainly the most disadvantaged – should be able to assess their current situtation and to engage the participation of individual knowledge in the urban problems while keeping the representation of all involved groups well balanced. This model could engage the participation of the groups or individuals in planning of participative activities and interventions corresponding to the objectives and criteria defined by the planners and the citizens' groups.

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ID 1604 | KNOWLEDGE AND VISIBILITY OF COHOUSING. ACCEPTANCE OF COHOUSING IN MADRID SOCIETY

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1 INTRODUCTION

The issue of housing and urban regeneration is not left out of the social context of globalization in which the society is immersed. It produces an alienation of the individual who is forced to live in spaces that do not always respond to the needs that his/her lifestyle demands.

This paper presents cohousing as a more social and egalitarian habitat movement in the urban context. It is a type of collective housing that mixes numerous common spaces with private spaces that guarantee the privacy of the individual. One of the fundamental features of this type of collectivity is the management of all common spaces by its residents, generating an integrated social coexistence of all the inhabitants.

The concept of cohousing generates different images in people, from ideological approaches to points of view related to sustainability or associations with the concept of commune. Other people see it as a different way of organizing their daily tasks in community, or as a cooperative. There is also the vision of cohousing as a more economical way of life. The different interpretations that it causes can be a sign of the increasing interest in this lifestyle.

This article is structured as follows. First, it tells what cohousing is and where it's come from. Second, it analyzes the knowledge of cohousing in Madrid society. Finally it gives some concrete examples of cases of cohousing in Madrid.

2 WHAT IS COHOUSING?

The term "cohousing" is a registered trademark of McCamant and Durrett. In their research McCamant and Durrett defines cohousing like a form of collective housing that vary in size, location, type of ownership, design and priorities but has four common characteristics, (McCamant and Durrett, 1988): 1.¬ Participatory process: residents organize and participate in the design and planning process for the housing development, and are responsible as a group for all final decisions 2.¬ Intentional Neighborhood Design; The physical design encourages a strong sense of community. 3¬ Extensive common facilities; an integral part of the community, common areas are designed for daily use, to supplement private living areas. 4- Complete resident management; residents manage the development, making decisions of common concern at community meetings.

In Denmark around 1960, people frustrated by the available housing options have developed a new housing type that redefines the concept of neighbourhood to fit contemporary lifestyles. They have built housing that combines the autonomy of private dwellings whit the advantages of community living. Each household has a private residence, but also shared extensive common facilities with larger group, such as kitchen and dining hall, children´s playrooms, and laundry facilities. Although individual dwellings are designed to be self sufficient and each has its own kitchen.

They wanted a place where children would live near playmates, where individuals would have a feeling of belonging, where they would know people of all ages, and where they would be able to grow old and continue to contribute productively.

Cohousing provides the community support that they missed in their previous homes. Cohousing is a grass¬roots movement that grew directly out of people´s dissatisfaction with existing housing choices. Cohousing developments are not targeted for any specific age or family type; residents represent a cross section of old and young families and singles.

Cohousing also differs from most of the international communities and communes which are often organized around strong ideological beliefs and may depend on a charismatic leader to establish the direction of the community and hold the group together. Most intentional communities function as educational or spiritual centers. Cohousing, on the other hand, offers a new approach to housing rather than a new way of life. Based on democratic principles, cohousing developments espouse no ideology other than the desire for a more practical and social home environment. (McCamant and Durrett, 1988).

Cohousing communities are unique in their extensive common facilities, and more importantly in that they are organized, planned and managed by the residents themselves. The great variety in their size, ownership structure, and design illustrates the many diverse applications of this concept.

In many respects, cohousing is not a new concept. In the past, most people lived in villages or tightly knit urban neighborhoods. Members of such communities know each others families and histories, talents and weaknesses. This kind of relationship demands accountability, but return provides security and a sense of belonging. Cohousing offers a contemporary model for re¬creating this sense of place and neighborhood, while responding to today´s needs for a less constraining environment.

Vestbro (2000) defines five types of collective housing in which there are three types of cohousing. The classification is the next.

First group is the collective housing with a central kitchen. In this group there are three types, the classical with employed staff, the cohousing communal work and the cohousing for the elderly people. Second group is another type of cohousing, Danish cohousing. The different between Danish and Swedish cohousing is that Danish is focus on sense of community and Swedish cohousing was born to reduce the burden of house work. Nevertheless, two models are similar. The third group is for service block, or integrated service center, in order to facilitate housework and communal participation. The fourth group of collective housing is for special categories like ederly people, students or residents with any dysfunction. And the last group is the commune, more than four person live and eat together usually in a large one¬family unit.

Whit this classification we can say that for Vestbro cohousing is a type of collective housing that share common areas, specially the kitchen and the dining room, and that intensifies the sense of community and help whit the housework. We can annotate that elderly cohousing is defines like a different type of cohousing.

For Martin Field cohousing is a particular style of neighbourhood development, based upon a creative combination of private and communal facilities (Field, 2004). Field picks up the definitions of cohousing from McCamant & Durrett (1988), Fromm (1991), Zahlle and Mortensen (1992) and Hanson (1996) and establish four principles of cohousing: 1.¬ Designing for intentional neibourhoods: Design features to maximize intentional and incidental social contact between the people living there. 2.¬ The minimum provision of private and common facilities; all residents have private and self¬ contained accommodation that is supplemented by other common facilities. 3.- Size and scale to support community dynamics; is important to achieve between creating common identity in a neighbourhood's residents alongside sustaining a sufficient level of privacy for each household in that neighbourhood. 4.¬ Residents´ control and management, the residents are the collectively responsible for managing the neigbourhood and its facilities.

He defines the four distinctive of cohousing neighbourhoods; cohousing combination of private and communal space, cohousing approach to designing for social interaction, cohousing focus upon sustainable dynamics and cohousing emphasis on collective decision¬making.

Like Meltzer remembered, the concept of cohousing is not new, it has roots in utopian, feminist, preindustrial western societies, where small communities used to live and sustain themselves by sharing resources, property and aspirations (Meltzer 2005).

Williams (2007) remember McCamant and Durrett to define cohousing, and resumes the four principles: 1.¬ Social contact design: the physical design encourages a strong sense of community. 2.¬ Extensive common facilities: as an integral part of the community common areas are designed for daily use, to supplement private living areas. 3.¬ Resident involvement in the recruitment, production and operational

processes. 4.¬ Collaborative lifestyles offering inter-dependence, support networks, sociability and security.

Communities comprise private units (in which households reside) and communal facilities.

They are planned based on social contact design principles that reportedly encourage more social interaction, helping to build more cohesive communities (Williams 2005)

The international cohousing association define cohousing as a type of collaborative housing in which residents actively participate in the design an operation of their own neighbourhoods. Cohousing residents are consciously committed to living as community. The physical design encourages both social contact and individual. (Cohousing.org)

Matthieu Lietaert (Lietaert , 2009) in her research defines cohousing as an models that is develop in an urban or semi urban context, but not in rural context. Cohousing communities have shown a constructive alternative to the growing atomization and loneliness of individuals in large cities. Lietaert defines six characteristics of cohousing; 1.¬ Participatory process. Cohousers manage the whole process from scratch, they can be helped by exporters but they are in the driver´s seat. 2.¬Intentional neighbourhood design. 3.¬Extensive common facilities, common facilities and activities must be given vital attention. 4.¬ Cohousing community must have complete resident management. It is fundamental that cohousers meet on a regular basic to take decisions. 5.¬ Absence of hierarchy; clear mechanisms are create to ensure that everyone gets a fair opportunity to express their ideas during the meetings. 6.¬ Incomes are separated. Cohousing community is not a commune.

Francesco Chiodelli & Valeria Baglione (2014) defines cohousing with five characteristics that are necessary and sufficient to define a settlement as cohousing. 1.¬ Communitarian multi-functionality: Cohousing communities are always characterized by the coexistence of both residential functions and communal spaces and facilities. These are intended for the community members, and are directly managed by them. Common spaces and facilities do not usually replace private ones, but do lead to the reduction of private housing areas 2.¬ Constitutional and operational rules of a private nature, Cohousing communities are characterized by rules of a private nature introduced by residents to guarantee and defend the specificity and working of the community 3.¬ Residents' participation and self¬organization, An essential characteristic of cohousing is the high degree of participation of the residents in the cohousing community's life. Generally speaking, this is true both in the community's constitution phase and in the daily management phase 4.¬ Residents' self¬selection The creation of a cohousing community is achieved through the self¬selection of future residents, generally, before the physical realization of the settlement. The recruitment of aspirant cohousers is carried out according to informal processes, of almost an empathic nature. 5.¬ Value characterization. The cohousing community is created and developed on the basis of certain values, more or less powerful or explicit according to the situation. This value characterization is essential to reach the aim, typical of all cohousing, to create 'a strong and vibrant community

After reviewing the definitions of cohousing since the beginning of the study and taking into account the evolution of both the history and the historical model, we will try to give a definition that serves not only to understand the concept, which is quite clear after the research but also to analyze the case of study that we face.

Cohousing is a type of collective housing that combines enough private space (houses) with a lot of common areas. The idea is to live in community and share the live in the common areas. We think that cohousing has several characteristics (Figure 1);

a. Voluntary and participatory process. The residents are involved in the process since the first step, it means that are they who look for a group of people that are interesting in this kind of lifestyle. And then, the residents will participate in the rest of the steps like to choose the site, design the project (private and common areas) and manage the community.
b. Design an intentional neighborhood and a kind of lifestyle. The design of the project must be intentional to maximize the social contact between the residents, it means that life in cohousing is a kind of lifestyle, is not only to share spaces, is to share activities and part of the lifetime, is to spend time in the management of the community and in the common life.

c. Size, scale and function of the spaces. It is important to say that cohousing provides enough private space to have a good privacy to the cohousers. The relation between the size of the private and common spaces will be proportionate. The function of the private space is the privacy and the independence of every resident. And the common areas are for the life in the community, it means doing things in commons whit the other residents, this space are not an extension of the private area. The extensive common areas are not residual, on the contrary, are the heart of the cohousing.
d. Residence management and absence of hierarchy. The residents are who takes the decisions of the community. For this process is important to have some rules, to the vote or to how make the decision. But is also very significant that there is not a boss or a leader in the community, in this sense each resident must have the same power of decisions.
e. Urban or semi urban location. Cohousing as an alternative to the growing atomization and loneliness of individuals in large cities must have an urban or a semi urban location. We think that cases like eco¬villages don´t respond to this characteristic, because tend to be more rural.
f. Non¬speculative, affordable housing. Cohousing was born like another kind of housing in a social context.

Cohousing is an expression of contemporary citizenship, citizens actively taking housing and environment situation in their own hand.

Figure 1 – cohousig definition

3 SURVEY ANALISYS

For this purpose, a survey was carried out (through an e¬mail campaign resulting in a sample of 110 people), which consists of two distinct parts, one related to the social group and type of household to which the interviewed person belongs, and another one related to the knowledge that society has of cohousing; both at an intuitive level (what does it suggest?) and at a rational level (once the concept is explained). (Appendix 1).

The results of the survey give us the little knowledge that Madrid society has about cohousing. Only one third of the sample claim to know that it is cohousing and once their cohousing definitions have been analyzed, we could say that only a quarter of them are close to the concept. The knowledge about the part of coexistence or sharing of spaces is appreciated, however nobody mentions the part of management, maintenance and participation of the same. There is, therefore, a more traditional cooperative vision, in which the involvement and participation of the residents is not a fundamental part of the way of life.

After knowing the definition of cohousing the majority of the sample (90%), thinks that it is an interesting idea, however only 56% of them would live this way.

Once known the movement of cohousing the main negative points pointed out by the respondents are the possible lack of privacy, community functioning and problems with residents. The main positive points are the common spaces, the economy of access to housing, participation in design and community and recovery of neighborhood life.

It is significant that half of the sample (50.90%) miss the common spaces in their home compared to only 20.90% who stated that they did not miss them. It should be noted that 28% of the respondents had not considered the possibility of having common spaces.

The most popular common spaces are in this order: parking for bikes (17), workspace (16), library (15), sports space (11), nursery (9), meeting rooms or common room (8), swimming pool (8), laundry (7).

Only 12.62% of the sample believed that common spaces would not generate problems in the community. A large majority believe that problems with common spaces would be abundant due to lack of agreements, lack of maintenance or misuse of them, as well as lack of involvement on the part of residents.,

At the end of the survey , when the concept of cohousing has been defined, people must to describe cohousing whit three words. The most recurrent words are; community (28/225), sharing (18/225), coexistence (9/225), saving (6/225), collaboration (6/225), socialism (6/225), sustainability (5/225), management (3/225), respect (4/225), commitment (3/225) and cooperation, (3/225).

The results obtained indicate that there is not enough knowledge of cohousing in Madrid society. The concept generates different ideas in people but not is the right concept in many times. This made people are not sure about the concept, it is not clear so is an unknown concept that generates respect.

In the other hand, when people know something about it, generally are interested in there and many times look like an attractive concept. It may mean that whit a greater and better diffusion of this movement, will be more people interested in it.

It is also important to re¬ mark that the idea of shared spaces frequently generates afraid, it could be because the culture, and because the wrong use of the shared spaces that people are used to do.

4 STUDY OF CASES

During the last years, several movements related to cohousing have appeared in Madrid. In this article, and as part of the visibility of the movement in Madrid society, we have analyzed three cases of associations or groups that are created around the idea of cohousing: Trabensol, Entrepatios and Jubilares.

All the cases of study work in the same property regime, a regime not very widespread in Madrid society and that seems to be suitable for this type of movements. This is the right of use regime and works as follows (Figure 2).

The main thing is that the property of the lot and the building is of the cooperative, and each resident is a partner of the same. This means that the property does not fall on the resident. To be part of the cooperative you have to be a member through a monthly fee.

In order to be part of the project as a future resident, an initial monetary contribution must be made, which will be returned in the event of abandonment of the project, it means, when the person ceases to be a resident. In addition to this initial fee, the resident contributes a monthly fee that covers the different expenses that have the maintenance of the cohousing project to which he belongs.

The characteristics of this property regime allow the resident to have the security of permanence in the accommodation, flexibility of abandonment of the same, saving and liquidity. As for society, it is a model that is not speculative, promotes social relations and values sustainability and architectural quality. The right of use is not hereditary, but yes the initial fee is provided.

Figure 2 ¬Right of use regime scheme

4.1 CASE 1: TRABENSOL

Tranbensol (Workers in Solidarity) begins with a group of friends who at the end of the 90s raised the problem of how to live the last years of life. Aware of the few possibilities present in society, decide to start thinking about a project which has an objective: to search together a satisfactory way to spend the last years of life. (trabensol.org)

They begin in 2000 with the formation of the group of people interested in the project, in 2002 they form the cooperative and start with the search of land in different municipalities of Madrid. They also start with a savings fund for the project. In 2006 they bought the land classified as rural in Torremocha del Jarama. They continue to search the architects and to form the groups of work of the cooperative. In 2008 they get the change of land use (from rural to urban) and start with the construction of the building. In 2013 they begin to live there (Figure 3).

The cooperative Trabensol has two fundamental characteristics, the property in regime of right of use and the organization of the same by groups of work, that even worked before establishing the cooperative. The basic principles of Trabensol are solidarity and cooperation.

Figure 3 ¬ Trabensol organization scheme

The Trabensol project brings together a group of people who already had experience in cooperatives and community supporters and citizen participation. It is not based on cohousing, nor does it take into account since they did not know it. However, both its process, design and operation closely resemble those of the cohousing movement.

The project consists of 54 identical housing units, in size, distribution and orientation; And with many common areas; Classrooms for workshops, library, gym, geriatric bath, socio-sanitary space, kitchen, dining room, laundry, large garden, orchard and greenhouse (Table 1).

Trabensol							
Stars	Number of cohousing	First cohousing	State	Number of units	Type of cohousing	Type of property	Location
2000	1	2013	Active	54	Serior	Right of use	Semi- Urban

Table 1. Resume table Trabensol

Now the admission of new residents in Trabensol are managed by a waiting list, when a resident leaves the accommodation or dies, the updated initial fee is returned to him or his heirs, and the next resident is accessed according to the waiting list. The requirements to be part of Trabnesol are to be between 50 and 70 years old, to have good health at the time of their adhesion; Have the financial resources that make it possible to acquire the participation in the property of the cooperative group and to be able to face the monthly quota.

Trabensol project is currently active and has a long waiting list. In addition, it has been perfectly integrated in the municipality, offering to the neighbors a new center with activities, since it is not a project enclosed in itself, but participates in the life of the municipality.

4.2 CASE 2: ENTREPATIOS

Entrepatios is in its origin a collective formed by a group of friends who are interested in cohousing because they are looking for different housing options. Entrepatios is born like an idea in 2007. This idea contains a component of claim; build houses that fight against speculation, with a social model, and more community.

Ten years ago take place the first movements, however, the most decisive steps start in 2012 when they already have a statutes and are a registered cooperative. Approximately 80% of the people who started with the collective are still in he. The intention is not to be a single group but to be several groups or several projects, although each resident only belongs to a cohousing project. (Bensadón, L, personal communication, February 1, 2017). The three pillars that guide Entrepatios are; Social, economic (ethical banking) and ecological.

During their career they have been close to getting two lots previously, but nevertheless finally it was not possible, either by the bureaucratic subjects, or by the financial ones. In this time has been interested enough people for the movement. It is important to say that there are many people who are interested in the moment in which there is a concrete plot of study, although it is not still bought, but that falls of the project if it does not leave that plot in particular. The stakeholders that remain are those who come attracted by the idea of cohousing and not by the location of the lot.

It is at the beginning of 2017 when they get a lot to carry out the project. Today they are developing the participatory workshops of project design. (Figure 4)

The main difficulty that have been found has been to find a lot and be able to access it. Their search has been in the private as well as the public area. Negotiations with public entities have been not fruitful, although they do indicate that there is some movement in favor of valuing cohousing as a model of housing facilitated by the public administration.

Entrepatios has a management adviser, Cohousing Verde, to facilitate the bureaucracy of the cooperative and a team of architects, for the design of the project.

Figure 4 ¬Entrepatios organization scheme

The current site where Entrepatios is doing its first cohousing is located in Usera, in "Las Carolinas" area, near the Almendrales metro. The property is managed by cooperative under the right of use. And the financing of the project has been made through ethical banking.

Entrepatios consists of 17 housing units. It is an intergenerational cohousing. Future residents range from 30 to 60 years. Couples with a child between 37 and 45 are predominant. (Table 2) (entrepatior.org)

Currently they are in the design phase, they have started with the common workshops, proposing what spaces they want to have and how they want to distribute them. Future residents have been divided into work groups in which each one advances aspects of the project and then put them in common, in meetings with all the participants. Decisions are taken in assembly and by consensus despite several rounds of voting are required. The homes that have been raised for this case are between 60 and 90 m2. The initial deadline for the design is 2 to 3 months.

The future community is self-managed where residents are the ones who make the decisions through processes of consensus, both the aspects relating to the management of common areas and relative to the acceptance of new residents. This does not mean that they do not continue to have some sort of management advice like the one they currently have.

Entrepatios							
Stars	Number of cohousing	First cohousing	State	Number of units	Type of cohousing	Type of property	Location
2004	1	2017	Planning	17	Intergenerational	Right of use	Urban

Table 2: Resume table Entrepatios Entrepatios

4.3 CASE 2: JUBILARES

Following a previous research work by its founders carried out since 2010, Jubilares made up in August 2012. Jubilares is an association and its objectives are the research, dissemination and promotion of knowledge about cohousing, as well as, cultural and social activities geared towards senior cohousing and support for the model of self¬managed elderly communities.

The architectural studio Milla, Mira and Navarro investigated since 2010 the housing possibilities for older people, the current standards and the needs of this social group. During their research process, they find different initiatives that are being developed by the Spanish geography without specialized advice. These groups are usually made up of older people who do not want to use existing residential alternatives to age, and who have the idea of doing it together. It is this movement that drives the formation of Jubilares that finally takes shape in 2012. (Del Monte, J, personal communication, March 3, 2017)

Jubilares association was born with the intention of forming a network of social support that can help each of its partners in the theme of seniors housing. They are oriented towards the senior cohousing and its fundamental principle is the personal autonomy. Each resident must own their life and their decisions. The assistance needed by each resident is raised through the integral care centered on each person, this type of care requires planning the actions adapting them to the idiosyncrasies of each environment and that the care plans are carried out in a participatory manner by the different agents and actors who cooperate.

In addition to meeting the needs of each person, the person is encouraged and supported to participate actively in the care process

The procedure to carry out the projects has 6 steps (Figure 5). The first step is a workshop in which needs are explained, resources and participants are adhered to. The second step would be viable, where the objective is to close the needs diagnosis and Resources as well as conduct a financial study. The third step would be workshop 1 of expansion and cohesion, with a duration of 3 to 6 months, in which the project is explained to interested people who are not yet part of the group. Subsequently workshop 2, design, where the cooperative is constituted with its statutes, formalized the purchase of land or real estate and is carried out the design of the project, has a duration of approximately 6 months. The fifth step is the construction of the building and edit the regulation of the cooperative. The last step is to live in the Jubilar, the Jubilar Cooperative, begins life in common with the active support of the association. (jubilares.es)

Figure 5¬Jubilares Methodology

During the time of the existence of the association Jubilares its main activity has been the dissemination. So far they have had several groups interested in the idea of living in cohousing but not all of them have continued. At the moment they have 9 active groups, one of them quite advanced already in phase three of the procedure, its location is in Torrelodones.

The profile of the people who are interested in the Jubilares association is a medium high socio¬cultural and socioeconomic profile. Most of them own one or more homes. The professions that more abound are the liberal ones and the professions. It should be noted that 70% of the persons concerned are women.

In the subject of the search of land or real estate have tried both the public and private roads. In this case they comment that it is easier to accede to the city councils if the collective goes of the hand of the association and not of individual way. They also mention that as time goes by the public administration sees with better eyes this type of accommodation. In the case of Jubilar propose to the public organisms that this type of house is similar to a project or even a social equipment for which they request the transfer of public land destined to equipment.

Although they have not yet come to buy any land, the financing method with which they propose to work is ethical banking. Likewise the model of property that they propose is the one of cooperative in the regime of cession of use. (Table 3)

Jubilares							
Stars	Number of cohousing	First cohousing	State	Number of units	Type of cohousing	Type of property	Location
2012	0	2017	Starts	24	Intergenerational	Right of use	Urban

Table 3. Resume table Jubilares Jubilares

5 CONCLUSIONS

Cohousing is still a very marginal phenomenon. In Denmark, the country where was born cohousing, and considered the most advanced country in this movement, cohousing represent only one percent of all housing. In Spain the percentage is smaller.

Cohousing can be characterized as a pragmatic response to demographic change and new lifestyles; reduce the cost of housing, including energy-bills, combat loneliness after professional life and organized the tight schedule of young middle class families.

This movement can be interpreted as a concrete response to many cities in the objective of urban policy: social cohesion, care for an aging population, local identities under globalization, healthy and child- friendly environments, locally based responsible economy, energy transition and participation in urban inclusion rather than of homogeneity and exclusion. (Tummers 2015)

Cohousing is not a new concept, but it has recently arrived in Madrid society, therefore the difficulties to carry it out are manifest.

The real situation in Madrid is that few people know what cohousing really is but there is a growing interest in this movement in the Madrid society, especially in the elderly. The concept is not clear now, but there are intention to make it known. Culture plays a fundamental role in the acceptance of cohousing. In the survey is verified the fear of people to share spaces, because they identify those common areas with problems, and not whit living in community.

The concept of cohousing generates different images in people, the more abundant are those ; community, sharing, and collaboration. There is a tendency to relate the movement to socialist ideology. There is also the vision of cohousing as a more economical way of life.

We can appreciate that senior cohousing is a more demanded model in Madrid society as an option for active aging and that it is more likely to be carried out due to the current economic situation of the interested parties.

In the analysis of cases we can observe several similarities (Table 4); 1.- All cases arise because the type of housing offered does not respond to the needs or expectations of the interested parties. 2.- In all cases it is observed the difficulty to carry out the process, since the time of the accomplishment of the same one is elevated (average of 13 years). This long time makes many people lose the illusion along the way, also makes many people have to opt for another housing option in that time interval. 3.¬ All have difficulties to find a plot. 4.- All Have an initial number of stakeholders that is decreasing along the way and that usually grow when seeing the project implemented and in operation. 5.- In all cases the same property regime has been chosen.

	Entrepatios	Jubilares	Trabensol
Type of movement	Collective- cooperative	Association	Cooperative
Intentions	Other lifestyle Life in community	Network of advice and support to cohousing	Solidarity and cooperation
Start	2004	2012	2000
Origin reasons	Homes against speculation	Divulgation Residential options	Search in common a satisfactory way to spend the last years of life.
Main difficulties	Find a plot	Continuity of stakeholders	Find a plot
Type of participants	Intergenerational	Seniors	Seniors
Type of property	Right of use	Right of use	Right of use

Table 4. Comparative table

Two of the cases of study, constructed (Trabensol) or under construction (Entrepatios), are residential complexes that meet the definition of Cohousing as we can see in the table 5.

Case/ characteristic	Voluntary and participatory process	Design an intentional neighborhood and a kind of lifestyle	Size, scale and function of the spaces	Residence management and absence of hierarchy	Urban or semi urban location	Non-speculative, affordable housing
Trabensol	Yes	Yes	Yes	Yes	Yes	Yes
Jubilares	Yes	Yes	Yes	Yes	Yes	Yes

Table 5. Observance characteristic of cohousing in the cases of study

For the development of more residential units type cohousing in Madrid it is necessary a support from the public administrations. Without public support it is difficult for a movement of these characteristics and, given the difficulties to find land, can progress satisfactorily. Cases, Entrepatios and Jubilares, have met with a public administration somewhat reluctant to this movement, but that seems to change their opinion little by little.

At the moment, the process to obtain a plot where carry out the development is very tedious and too extended in the time. This causes many of the interested parties to desist and are forced to opt for one of the existing residential options in the Market.

Without question the cases that we have studied here are pioneers in Madrid, and as such will be an example for others. Thus, they allow to advance in the diffusion, knowledge and experience of these movements. Their developments will carry with them more possibilities of new similar developments.

Time is an important factor in the process of implementing a new movement or concept in a society. As we have already pointed out, the Spanish culture is not the same as the Danish culture, and, what now generates doubts or fears, can become habitual and therefore, assimilated by society.

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APPENDIX 1: SURVEY

1.¬ Where do you live? 2.¬ Do you live for rent or in your own home? 3.¬ How do you live? Alone/sharing/whit my family/ separated/whit my couple 4.¬ How old are you?

5. Do you know what cohousing is? if not 6.¬ No, I do not know what Cohousing is. (Here we define cohousing and then continue the survey) if yes 6.¬ How would you define cohousing?

7. Do you think cohousing an interesting idea? Yes/ no 8.¬ Would you like to live this way, being part of a cohousing project? Yes/ no 9.¬ What do not you like about cohousing? 10.¬ What do you like or do you find interesting about cohousing?

11. Do you miss any common space in your home? (Laundry, bicycle parking, nursery, library, center of attention, workspaces ...) Yes/ no 12.¬ What common spaces would you like to have? 13.¬ Do you think that the management of common spaces by residents would be a problem? Yes/ no 14.¬ Why do you think that the management of common spaces can be a problem? 15.¬ Once the survey is done write three words that suggest cohousing.

ID 1635 | PROGRESSIVE CONVERGENCE BETWEEN PRIVATE AND PUBLIC INITIATIVES IN PLANNING AND URBAN POLICY: THE CASE STUDY OF KERAMEIKOS

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ABSTRACT: Public policy has been identified as the main driver of transformation of urban residential spaces including the processes of urban rehabilitation and gentrification. More recently, the partnerships between private and public sector can be recognized as a key driver of urban rehabilitation of declining inner urban areas. This article aspires to explore the uses of urban development strategies and tactics as tools of urban economic rehabilitation and gentrification of an old working-class neighborhood of Athens, ´´Kerameikos´´. This will be examined in relation to the arts-led regeneration adopted in inner-city rehabilitation initiatives. The area of Kerameikos is chosen to focus because of the transformative stage of redefinition both of its land's uses and social network. Following a brief review of the evolution of Athenian urban policies over the past decades, the paper analyzes the origins of urban rehabilitation and gentrification projects and explores the experience of private and public partnerships in Kerameikos. It discusses the tactics of rehabilitation that have developed in the neighborhood and the ways in which spatial and social structure of Kerameikos have been transformed.The socio-spatial context of Kerameikos permits a new regard in social and spatial mutations showing its particularities-accentuating the role of the economical crisis in the specific context of Athenian city center. The paper also underline the significative importance of cultural policy, the role of artists and of urban NGOs as catalysts for urban rehabilitation The paper ends with a reflection on the notion of participative planning and its potential as an integrated alternative to city governance and offers recommendations for further development within the Greek context.

1 INTRODUCTION

Urban rehabilitation is defined as a process of improving deprived urban environments through enhancing the physical structure and varying the density established within urban areas. Major initiatives have been introduced to attract residential, transport, economic and leisure uses and activities, resulting in mutations of the spatial, social and economic structure of urban spaces (Nobre, 2002).

During the last decades a great amount of urban and social studies has started to acknowledge the significant role and useful experience of these processes in cities on specific case-studies across the world. The de-industrialization and the loss of manufacturing employment in many urban areas have led to the prevalence of consumption-based, arts-led forms of economic regeneration intended to tackle urban problems (Raco, 2002). Extending this discussion to the Athenian context, this paper examines the strategies of urban rehabilitation-regeneration and gentrification in relation to arts-led regeneration, as well as the effects of the progressive co-ordination between private and public urban development initiatives in Kerameikos. This case study serves towards an optimum understanding of the phenomenon, analyzing the practices followed by local authorities and private investors in the regeneration scheme alongside their spatial, social and economic implications. More specifically, the study approaches urban governance policies, focusing on urban enhancement practices and particular policing measures which aim at the extraction of "social pollutants" from certain city neighbourhoods (Urry, 1995).

International competition among cities has led to the implementation of policies favoring investors and private capital to the detriment of the local population (Harvey, 2000). Further to a brief assessment of the evolution of urban policies in the Athenian context over the last thirty years, the paper interrogates the social and spatial landscape of Kerameikos, taking into account the obstacles posed by the financial crisis in implementing and evolving the gentrification agenda and, consequently, in developing the real estate market. Urban enhancement interventions regarding both the physical environment and the social composition had been made in the pre-crisis period, however the outburst of the economic crisis put an end to an era of soaring land prices and to the “intrusion” of higher income groups. It is worth noting that the population composition has been partially dominated by distinct cultural groups of middle-low social strata.

This paper consists of three parts. An analysis of gentrification and urban regeneration practices is provided in the first part, followed by a description of the urban policies and tactics exercised in Athens, and particularly in Kerameikos. The concluding section provides insights into the prospects of participatory planning to encompass and express the voices of all the social groups living in Kerameikos.

2 URBAN REHABILITATION AND GENTRIFICATION

Since the 1980s, emphasis has been laid upon the potential of cultural policy to function as a tool for achieving urban economic regeneration objectives. The policy framework regarding urban governance has undergone significant changes. The convergence between culture and economics in urban policies since 1990 has been characterised by an expansion of city marketing techniques and city branding strategies (Garcia, 2004). Nowadays, the urban policies are re-directed by emphasizing on cultural forms and symbols as dominant elements of the productive strategy, whereby culture is increasingly commercialized. Due to the developments and needs of the economy, and to the rapid cultural penetration in many fields of production, policy focus is shifting from production to consumption and from material to culture (Scott, 1997, Harvey, 1989). Kong highlights an impressive surge in private-public partnerships (PPP), whereby developers, banks and companies of national and international significance join forces to administer urban issues of cultural economic policy (Kong, 2000:387).

Consequently, cities adopt cultural policies as a means to transform the physical and aesthetic aspects of space – along with their meaning, aiming at its sanitising in the interests of capital accumulation. Additionally, policy discourse now targets the urban historical fabric and the rearrangement of buildings and roads (Uzun, 2002). Along with the ongoing urban regeneration, residential transformation processes have been an important issue in the political agenda. This process leads to the spatial exclusion of impoverished groups, as places are gentrified in the interests of property-led regeneration. Urban policy aims to encompass the new middle-class preferences boosting public-private partnerships in housing regeneration. The underlying principle of these policies is to reduce the abandoned and dilapidated aspects of the inner-city neighbourhoods, attracting the middle classes instead of involving a wider social base (Atkinson, 2010).

Therefore, urban rehabilitation practices in many urban areas go along with the gentrification process. The gentrification phenomenon concerns the physical change in tandem with the socio-cultural capital in living spaces (Holcomb and Beauregard, 1981). Furthermore, gentrification involves the displacement of lower social strata, leaving room for the upper social groups to take over the inner-city areas. Many theorizations

of regeneration highlighted the role of culture and capital as the main drivers of gentrification trends. This paper emphasizes the role of public-private partnerships on the implementation of gentrification, as an engine of urban regeneration. This incorporates the use of cultural facilities and practices sponsored by local authorities and private agents as promoters of regeneration projects and associated gentrification phenomena. Stressing the cultural factor, Ley describes artists – whose habits and practices constitute the immense expression of the 'post-industrial civilization' – as the 'stalking horse' of gentrification and revalorization of the city neighborhoods (Zukin, 1988:5, Ley, 1996).

3 URBAN POLICY IN THE ATHENIAN CONTEXT

Being the Greek capital, the metropolitan area of Athens concentrates half of the national population, accounting for the multiplicity and the differentiated tensions within its urban fabric. Similarly to most European metropolises, especially in Southern Europe, the inner city centre of Athens is socially mixed: the particularity of its socio-spatial morphology is linked to the vertical form of social segregation due to the multi-storey buildings of the antiparohi system[1].

Since the 1990s, urban policies in Greece have activated mechanisms and promoted regeneration projects for the enhancement of derelict historical heritage sites through land use conversion. The declining center of Athens has undergone a significant transformation, being subject to urban regeneration initiatives. Like many cities of rich historic background, Athens has been the epicenter of urban regeneration mechanisms for reviving the declining inner urban areas. Over the past thirty years, Athens has attempted to foreground its history and culture as the key-driver in urban policies, in order to stimulate regeneration interest. A rising awareness of historical and cultural importance forced public administrators to proceed with the implementation of projects that aimed to promote its international role. History and culture were identified as key to Athens regeneration. Although the state and the local authorities put forward proactive planning, putting Athens to the 'European cities' map, they often disregarded the social and cultural needs of the local community.

The 1985 Regulatory Plan of Athens defined the boundaries of its Historic Centre. Historic buildings, which preserved their original attributes and presented an architectural interest, were listed. Historic and ancient monuments were protected with regeneration schemes, also reinforcing the cultural aspects of Athens. The Regulatory Plan of Athens has changed by virtue of the law 1515/1985, in order to promote projects for reshaping Athens in the vision of the 2004 Olympic Games, and to boost the city image that required its spatial, social and economic mutation.

The Municipality of Athens and the Unification of Archaeological Sites S.A – a private company owned by the Ministry of Culture – proposed the creation of pedestrianisation "Great Walk", linking Acropolis to other important archaeological sites in the city centre. This regeneration action aimed to highlight the history of the city by intervening on the public spaces, archaeological monuments and sites, buildings of neoclassical architecture, green spaces and traditional neighbourhoods. Simultaneously, urban policies were carried out to improve and maximize infrastructure use in the urban core. The construction of a series of subways and tram lines minimised distances and had a significant impact on the spatial structure of land uses, as well as the trajectory of adjacent neighbourhoods. In addition, the museum of Acropolis, launched in 2009, is a flagship project aimed to boost the city image and to attract tourism, having a "Guggenheim effect". The museum of Acropolis representedthe potentially exclusionary and polarizing nature of gentrification effects (Moukoulis, 2008:50). As an outcome of the urban rehabilitation of past decades, the interest in the historic centre housing stock has been increasing since the mid-2000s. The urban regeneration strategy promoted by the municipality and the state has had severe impact on land uses and values. In particular, the "Great Walk" conduced to the rise of land values in areas of immediate proximity, and to the creation of cultural uses – especially in old industrial districts – improving the prospects of gentrification.

According to Maloutas (2011:38), "there is no evidence of significant gentrification in Athens central neighbourhoods", given the structure of the housing stock and small-scale ownerships, as well as the absence of large-scale urban interventions. However, the affluent population never abandoned the city

[1] "Antiparohi system is related to the system where promotion is co-exercised by small owners and small construction firms in ad hoc joint ventures to produce small condominiums "(Alexandri, 2012:18)

centre due to its historic value: the impact of this choice can be largely observed on smaller-scale infrastructure regeneration through locally induced social upgrading of certain traditional working-class neighbourhoods (Maloutas, 2004; 2011). It is indeed the case that "inner city enclaves are experiencing gentrification processes: Artists, higher income

groups of affluent suburbs, young households "have established themselves in the Historic Center (Alexandri, 2011:9). In the more recent years the rhythms of gentrification have decelerated and land prices have diminished to the pre-crisis levels.

3.1 KERAMEIKOS

Although Kerameikos falls under the jurisdiction of Municipality of Athens, its geographical confines are defined differently by the institutions and urban studies. In this paper, it is considered the area which is bounded by Avenue Piraeus, Iera Odos, Konstantinoupoleos, Achilleos and Deligiorgi streets. These axes are chosen to include a district with uniform socio-spatial characteristics, several areas of which were subject to interventions made by public and private initiatives. It is worth mentioning that many residents and urban studies of the area called it Metaxourgeio. We adopt the name of Kerameikos due to the archaeological site of Kerameikos, one of the largest local authorities of ancient Athens. According to the General Urban Plan of Athens (Government Gazette bulletin 80D/4.2.1988), the case study constitutes the district of Rouf. Additionally, the neighbourhood is in close proximity to the central squares Omonoia and Syntagma, and to important archaeological sites such as Acropolis (Taxiarchi, 2007).

The residents used to be immigrants Muslims of Thrace, who resided in derelict buildings whose former residents were immigrants from Bulgaria, Poland, Russia, Egypt and Albania settled in the area in the 1970s. Another proportion of the immigrants settled in the area came from Asia – mainly China. The former residents of the neighbourhood are mostly retired (Taxiarchi, 2007).

The morphology of Kerameikos is a result of its historical urban evolution, pre-war buildings, antiparohi buildings, vacant lots, brothels, Chinese community shops, derelict houses, restored buildings, neoclassical and post-modern architecture. Many former warehouses, workshops and craft industrial buildings have been converted into postmodern leisure, art and cultural sites. Attracted by its multiculturalism and its history, many old and new residents and tourists wander in the streets, visiting the alternative cafes, wine bars and artistic spaces. At the same time, undocumented immigrants, drug addicts and other vulnerable social groups have settled in abandoned buildings of the district. During the 2000s, the neighbourhood was characterised as a centre of illicit drug and sex trade activities accommodating people under miserable and de-grading conditions.

After mid-2000s new spatial and socio-economic patterns are being shaped in the district, changing its identity and character. The study area is in state of transition, subject to public and private initiatives as well as to the economic crisis effects. Nonetheless, many researchers, media, politicians and residents refer to the social mutation of the neighbourhood through gentrification as a mean to boosting the image of a European metropolis.

Figure 3.1: The neighbourhood of Kerameikos Source: : National Technical University of Athens, Own Elaboration

3.2 PUBLIC AND PRIVATE INITIATIVES IN KERAMEIKOS

In terms of planning policies and strategies, the interventions of state and local authorities have determined the evolution of the area of Kerameikos and accompanied the process of socio-spatial transformation. The gentrification took place in Kerameikos mainly via private practices, forced by the partnership between public and private sector. The study area is affected by the practices of public institutions – Municipality of Athens, Unification of Archaeological Sites of Athens S.A, the Ministry of Culture, the Ministry of Environment and Energy, and the Ministry of Citizen Protection – that have developed programs of re-imaging and regenerating the city of Athens through cultural activity and special events.

The neighbourhood of Kerameikos constitutes a part of Athens historic centre as defined by the Presidential Decree –Government Gazette bulletin nr. 567D/13.10.1979-which provides for development management policies to avoid the substitution of the housing stock from the antiparohi system. Furthermore, during the 1980s the Ministry of the Environment and Energy listed thirty buildings. As a result, the study area was abandoned, due to the inability of many households to cope with the improvements and conversion of listed buildings. Thus, many buildings are abandoned and demolished by their owners due money scarcity, in fear of any compulsory maintenance of their house as listed. In the 1980s, many fires had broken out probably because many owners wished to exploit their property through the construction of new, more profitable buildings. The Presidential Decree of 1984 -Government Gazette bulletin nr. 33/A/84-prohibited the disturbing uses, the renewal of their operating licenses, the increase of horsepower and the establishment of new industries. Most of the traditional industries of Kerameikos were forced to leave. The expulsion of disturbing uses such as garages and engineering workshops resulted in the desertification of the building stock and the progressive change of the productive base of Kerameiko (Taxiarchi, 2007)..

The Local Plan -approved by Government Gazette, bulletin nr. 80/D/1988-describes the district as degraded and anticipates the reduction of construction factors and the restoration of interesting buildings facades and housing stock. That is, the study area is included in the districts intended for "purification". This policy aimed to stimulate residential uses and to improve quality of life. It also included interventions in shaping the historical physiognomy of the centre, the improvement of its image and its functionality through imposing stricter traffic regulations, implementing building renovations and retrofitting and pedestrianisation. Furthermore, the local plan proposed to include the district to the gridded archaeological sites of Athens. It was also proposed to revitalize the archaeological site of Public Sign – the ancient graveyard of Athens, and to turn it into a park (Alexandri,2014).

In the begging of 1990s, many planning proposals and public intervention acts suggested the urban regeneration of Kerameikos. The Council commissioned planning consultants to undertake a number of urban environmental improvement plans. Between 1990 and 1995, the Environmental Study Corporation undertook the upgrading survey of the area. The first plan of urban environmental improvement described the district of Kerameikos as "the most deprived district of the city centre where its extensive habitation is still conserved. This district is very interesting due to its traditional and historical elements as part of the Athenian history" (Municipality of Athens,1993:10). It was also proposed to transform Kerameikos into a residential center and an area of trade and history. In other words, "it was suggesting its transformation into a cultural hub" (Alexandri, 2014: 5). In addition, the enhancement of the urban environment launched the reduction of roads' lanes, the establishment of parking spaces and selective pedestrianisation, as well as the installation of two metro stations, a tram line and bus lines to serve particularly the inner of the district (Municipality of Athens,1993: 122).

The social infrastructures are not estimated with regard to the current population but with the prospect of a social recomposition that will emerge through the rehabilitation programs (Municipatily of Athens, 1993:91). That is, the current societal context of the neighbourhood isn't taken under serious consideration. This highlights the role of regeneration schemes as to the displacement of old residents and underprivileged social groups by the influx of middle-class newcomers. The future population is expected to be more stable and homogenous than the current one, since upgrading programmes lead gradually to the removal of a significant number of the improverished population, specifically the undocumented immigrants. On the other hand, it was believed that immigrants who would remain as permanent residents would ultimately be integrated into the local population. (Municipality of Athens, 1993:90-91).

Public Sign, Iera Odos and the Silk factory were designated as special urban regeneration schemes related to the improvement of neoclassical houses, the demolition of abandoned houses and the amelioration of local public spaces through pedestretation, unification with other archaelogical sites and through the creation of a square. The Silk factory, as the neighbourhood's landmark of architectural heritage was turned into the municipal gallery of Athens in 2010, after five years of renovation and in reference to the area's history.

The plan of urban regeneration-rehabilitation placed particular emphasis on the protection of historical and traditional elements of the neighbourhood, aiming to revitalize the traditional neighbourhood in tandem with the "back to the city" movement. Thus, the central and local state enacted the plan of urban regeneration by a presidential decree of 1998 -Governement Gazette, bulletin nr. 616/D/98. The latter established the use of the area as "general residence" (Taxiarchi,2007). Therefore, it led to the creation of surplus value in many central areas, satisfyng the speculative interests of investors (Alexandri, 2014).

At this point, it is worth noting the systematic trend towards delaying, regarding the adoption and implementation of decrees and local plans in Greece. In the case of Kerameikos, the local plan was elaborated in the 1980s, the survey of urban regeneration and the presidential decree in the 1990s, while throughout this period the characteristics of the neighbourhood had been changing. The regeneration projects are either implemented partly or not implemented at all. However, some projects already announced have been implemented gradually and only with the support of private sector initiatives, namely of Oliaros company. The pedestrianisation of Iasonos street has been implemented by Oliaros after the pressures for further regeneration actions.

Since the 2000s, various programs and actions of urban policies were designated to encourage the improvement and upgrading of historically interesting neighbourhoods, and to provide suitable conditions for the attraction of private capital and for the rehabilitation of Kerameikos. Public and private partnerships were formed to attract private capital and to get involved in the urban rehabilitation process. Gentrification was the consequence of public urban regeneration policies and incentives to private investments, leading to the replacement of working-class and underprivileged social groups by the "new middle class" in Kerameikos. The increase of the rent gap brought about a rise in exchange land values (Smith, 1996) that caused the spatial "ostracization" of lower income groups and, overall, of the "marginal" population (Alexandri, 2014). Entrepreneurial urban politics towards investors and developers have been implemented in Kerameikos, as in many European cities (Harvey, 1989). As an outcome of the urban upgrading process of the last decades, the interest of the entrepreneurs and realtors in Kerameikos housing stock increased. Thus, housing investment was redirected to Kerameikos neighbourhood, thereby entailing a rent gap. The investors have taken advantage of surplus value created in Kerameikos due to

the beautification projects. Mostly, the private investments in the neighbourhood were closely related to a vision of middle-scale projects.

In 2001, the state's interest was focused again in Kerameikos by the "Survey of recognition and proposals for interventions for the district of Metaksourgeio" undertaken by the company of A. Karydi. This survey was a part of regeneration proposals and beutification practices of the historic center of Athens and the preparation of the city for the Olympic Games of 2004.

Since 2001, the state took a step back and let the private capital, cultural ONGs and artists to form and gentrify the study area. The AthensX4 was an initiative of Unification of Archaelogical Sites SA in line with the Ministry of Environment and Energy that had been approved for the neighbourhood of Kerameikos in 2010 in the context of an architectural competition. AthensX4 competition aimed to promote a city block and the elimination of the intermediate streets by increasing the green spaces.

Nowadays, the "Great Walk" is implemented in parts. The last part was added in 2007 at Pireaus Avenue, opposite to the study area. In addition, the Unification of Archaelogical Sites SA was abolished in 2014. It is worth noticing the rise of exchange land values in the adjacent neighbourhoods of "Great Walk." The AthensX4 project, as an urban regeneration action for the promotion of Athens, testifies the cooperation of the state (Ministry of Environement and Energy and the City Council) with banking institutions (National Bank) and the European Union, whilst promoting private and public partnerships (Ministry of Environment and Energy, site).

The Oliaros S.A, a property development company, has shown interest in the potential of gentrification in Kerameikos. The Oliaros S.A is the owner of 4,5% of building stock in the area, namely 65 estates. "OLIAROS believes that with the right approach and collaboration with both private and public sectors KM can become a leading socially inclusive model neighbourhood" (Oliaros Blog)°. Its vision is to re-energize Kerameikos by introducing a new urban cultural identity. Oliaros proposed a partnership with local state and relative "stakeholders to adopt a common vision, and create the right conditions to attract occupants and investors back to the City Center" (Oliaros Blog). A part of newcomers, gentrifiers and Oliaros co-founded a non-profit organization in 2006, called KM (Kerameikos-Metaxourgeio) Model Neighbourhood, seeking to change the identity of Kerameikos and to create a model neighbourhood.

KM Model Neighbourhood has taken a series of initiatives to transform Kerameikos into a socially inclusive model neighbourhood, putting pressure in Municipality of Athens to achieve its objectives. One of their actions was a 'guerilla gardening' demanding more public and green space as well as better quality of everyday life in the city centre. They transformed many plots into green spaces and allotments. They also participated to the revitalization of Public Sign supported by the municipality of Athens (Oliaros Blog).

In 2007, the company GEK TERNA S.A built a block of expensive apartments similar to "lofts" that attracted the new residents and the upper middle-class gentrifiers. As the company claims "the construction of this complex was intended to give a special and refreshing character in the area and to be an attractive alternative to creative people who are looking for creativity and quality in the centre of Athens" (GEK TERNA Site).The apartment prices in the GEK complex are high, compared to the average selling prices in the rest of the study area. The design of the block is considered to be out of keeping with its surroundings. The prices target the middle and upper social classes, attracting new residents. Thus, GEK implemented this project in order to invest in the area and to create a new real estate market.

Additionally, Oliaros and artists co-founded a not-for-profit organisation ReMapKM and launched for the first time Remap in 2007. ReMap is a biannual art exhibition in abandoned and derelict buildings in Kerameikos, hosting projects of artists and galleries from all over the world. ReMap provides maps of the installations to the visitors who can freely access buildings in Kerameikos. "ReMap has collaborated with the Athens Biennale, Kunsthalle Athena, Deste Foundation, the Museum of Cycladic Art, as well as with smaller institutions and initiatives, altogether introducing a higher and broader level of engagement with contemporary art in Greece" (ReMAP Blog). Nevertheless, the economic crisis and the generalised social uncertainty has prevented the organisation of this art international platform in Athens since 2013.

Immigrants and gypsies who used to live in the abandoned housing stock were evicted by the buildings of ReMap, as the landowners wanted to sell them or conceded them to Oliaros. The impoverished population has been evicted and displaced directly by this art exhibition. It is obvious that the neighbourhood cleansing from underprivileged groups was provoked by the artists and non-profit organisations (Tzirtzilaki,

2009). KM Model Neighbourhood implemented the street regeneration of Iasonos streets by pedestrianisation which was presented to the Municipality Council.

Oliaros was invited to present the main aspects of KM projects in a meeting hosted by the Deputy Minister of Development Mr. Notis Mitarakis and Invest in Greece, and attended by several government officials and administrative executives. (Oliaros Blog). The Athens Mayor Kaminis and the Deputy Minister of Development Mr. Mitarakis expressed their commitment to cooperate closely and proposed the integration of three urban development plans of Oliaros to Urban Development Fund for Attica under the JESSICA Initiative for the Region of Attica (Joint European Support for Sustainable Investment in City Area) – a separate block of European Investment Bank (EIB). In the region of Attica, the investments of integrated plans for sustainable urban development are delivered to urban projects via the National Bank of Greece in its capacity as the Urban Development Fund for the Attica Region. The proposals of Oliaros are the construction of '18+ Student Housing', a specialized market of Greek and international creative products (Street Market), and the creation of creative entrepreneurship (Oliaros Blog).

The implementation of these projects will create suitable conditions for attracting "creative" people of the middle and high class, and the interest of investors and other realtors, resulting to the rise of land values and the change of land uses (Smith, 1996). Therefore, the socio-spatial change of relations and characteristics consist the future vision of the private initiatives over the study area. In this context, the gentrification process in Kerameikos is the outcome of private and public partnerships. The company Oliaros did not implement any of the previous projects, expecting the right investment opportunity in terms of the potential of gentrification. In addition, these projects have been put on hold because of the current financial and political status of Greece. Oliaros promised to commence activities "as soon as tax circumstances become more favorable and the State takes action towards the reversion of the continuous depreciation of the City's center" (Oliaros Blog).

In 2011, the Ministry of Environment adopted an urban regeneration program and the neighbourhood of Kerameikos was characterized as a 'zone of special regeneration' providing tax incentives related to the restoration and reuse of buildings in the historical center. The guiding principle of this decision was therefore to encourage building rehabilitation and to establish favourable conditions for the attraction of private promoters interested in upgrading the area of Kerameikos. In particular, a tax exemption related to the costs of building restorations was provided to the owners or to the tenants of buildings who wanted to proceed to the restoration of residences, listed buildings, building facades, shops and offices. These incentives concerned the owners and investors who had the financial ressources and the capital to rehabilitate or purchase the estates and enabled them to better establish themselves in the area. This philosophy of tax benefits has played a strategic role in getting the realtors, private promoters and middle class to invest and settle in Kerameikos.

The Ministry of Citizen Protection had a significant role to play, drawing middle-class people back to the city centre on the expense of lower social, ethnic and racial groups. In the mid-1990s, the police station of the study neighbourhood was merged with one of the Omonoia area. The delinquent behaviours were increasing due to the absence of state in terms of policing the area, resulting to the stigmatisation of the area. The police surveillance project "Xenios Zeus" – in the context of rehabilitation of Kerameikos – proceeded to massive arrests of migrants who had settled in Kerameikos by "cleansing" the urban space from unconventional people or behaviors. This strategy has excluded marginalized population, projecting them as a problem of the city centre (Pain and Smith, 2008). The new waves of immigration of the past years, mostly undocumented, added to the context of the economic crisis and threatened the safety of the new middle class.

In fact, the private initiatives approached the issues of the neighbourhood in the vision of a "model neighbourhood" based on investors' interests by promoting social exclusion practices and creating specific local conditions to the inflow of investment capital. The collaboration between private and public sector engage strategies seeking to create an artistic and "creative" environment, encouraging the potential of gentrification while ignoring the socio-spatial inequalities.

The absence of the state in terms of social policies leads to the progressive sovereignty of gentrification by allowing the urban transformation and the mutation of social structure for the sake of economic benefit. In other words the artists were the "stalking horse" for the needs of promoters, investors and local authorities to revalorize Kerameikos.

4 CONCLUSION – DISCUSSING THE NOTION OF PARTICIPATIVE PLANNING IN KERAMEIKOS

Nowadays, two kinds of gentrifiers co-exist in Kerameikos. Members of upper-middle class and the marginal gentrifiers – artists who created urban NGOs, immigrants, homosexuals, students. The upper class gentrifiers – through their initiatives and their participation in the aforementioned urban projects – put pressure on the authorities to regenerate the neighbourhood. However, the actions mentioned above did not embrace the participation of all the social groups that settle in Kerameikos (Alexandri, 2014). It seems that the gentrifiers participated formally or informally to the elaboration of the regeneration projects. On the other hand, the marginal gentrifiers experience similar realities. They organize a street carnival on spring seeking to project themselves as the alternative voice of Kerameikos (Alexandri, 2012). Hence, it seems that the participation of the citizens in the urban planning may slow down the eviction of the marginalized groups, thus creating a more sustainable and successfully mixed community.

In this sense, participatory planning-participative politics-is a notion-paradigm included in urban planning that aims to harmonize the different points of views among all the participants-citizens, as well as the marginalized groups of society (McTague, C. and Jakubowski, 2013). In addition, it involves the participation of the entire community in the strategy and management of urban planning processes (Lefevre et al, 2000). Participatory planning aspires to fill to the gap between all levels of governance and the local communities. The idea is that the government and the local programs such as urban regeneration move towards a reticular model using the bottom-up approaches (Smith, 1973). Consequently, the planners combine a diversity of interest groups in the process of decision-making by measuring the public opinion.

In Athens, the tools of 'urban governance' concerned mainly the public-private partnerships and quangos were implemented in the Athenian urban policies. These partnerships used extensively in large scale projects decreasing the civil society's participation in the decision-making process of urban policies (Maloutas et al, 2014).

Additionally, participatory procedures take place exclusively at the local level, as:

- " The legal process, which derives from the right of citizens (or institutions) to object before the Municipality regarding planning regulations imposed on their properties.
- The public participation process, with the so-called Neighbourhood Planning Committee (NPC), which is designated and elected by the inhabitants of the area. -The internet (e-government forums etc)" (CEMAT, 2014:70).

In 2010, the local administration reform introduced more independent sub-national decision-making processes (Chorianopoulos, 2012; Souliotis, 2013) providing the Metropolitan Governement of Athens with multiple responsabilities of developmental and planning nature. It was an initiative to adapt the Greek local government system to the EU's 'multi-level governance system' in order to benefit from the EU's funding (Maloutas et al,2014).

However, the sovereignty of the economic crisis 'cancelled' these strategies due to the reduction of the financial resources and led to a declining number of privatization programs controlled by Hellenic Republic Asset Development Fund. The greek urban policies are fully aligned with EU policies as the EU funds presented the only source for public investment. Additionally, the participation of the citizens organisations in municipal policies took place through a consulting body, rupturing the relations of political authorities and citizens. The result of these processes is the development of local movements and NGOs which try to cope with the consequenses of the economic crisis (Arampatzi and Nicholls, 2012). Nevertheless, these social movements have limited access to formal processes of decision-making and urban planning (Maloutas et al,2014).

Eventually, the challenge of this case study is to stress that the different needs and preferences of different groups can be identified, and that all the groups of the area can proportionally fullfill their needs; further, to cope with the lacks of economic ressources to actually implement the plans.

In conclusion, the participatory aspect in this case necessitates the use of a workshop format to ensure that all citizens(Levevre et al, 2000) – mainly the most disadvantaged – should be able to assess their current situtation and to engage the participation of individual knowledge in the urban problems while

keeping the representation of all involved groups well balanced. This model could engage the participation of the groups or individuals in planning of participative activities and interventions corresponding to the objectives and criteria defined by the planners and the citizens' groups.

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ID 1674 | STATE-LED GENTRIFICATION AND DISPLACEMENT IN TARLABASI: AN END TO RESISTANCE?

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1 INTRODUCTION

Starting from the 1980s, central and local governments have been actively involved in neoliberal urban restructuring which is characterized by large-scale urban development projects as well as major urban renewal and redevelopment processes. There is an extensive literature discussing and evaluating the spatial and social impacts of urban renewal and urban redevelopment processes that intensely result in gentrification and displacement of existent residents. In most cases, the form of gentrification is state induced, and urban renewal and transformation projects lead to 'state-led gentrification', which eventually results in major displacement of the residents, creating adverse impacts especially for the vulnerable parts of the communities.

Against the negative impacts of these processes, resistance movements emerge. As Newman and Wyly (2006) indicate, residents develop strategies at individual and/or collective level to handle and overcome the adverse impacts of gentrification and displacement. In most cases, residents respond collectively to the risk of displacement. Collective mobilization through community organizations, neighborhood associations or grassroots initiatives may affect the processes of gentrification and displacement, although do not halt the large-scale urban renewal/transformation projects in many cases, but challenge the central and local authorities when the residents come together and endeavor to negotiate the conditions of these projects.

Istanbul has been subjected to a major restructuring process in the post-1980s, with neoliberal policies and an urban transformation agenda put into practice. As part of this wider restructuring project, Tarlabaşı renewal process was initiated in the 2000s, from then signifying mass demolition of cultural and historical urban tissue, and following gentrification and displacement processes. With Tarlabaşı Urban Renewal

Project, the efforts to clean out the area from certain groups including low-skilled and poor immigrants, low-income and disadvantaged groups became visible. Due to many factors, such as considerable

appreciation in values of properties and increasing rents, lots of people have been forced to leave the area. The urban renewal project has neglected the unique demographic, ethnic, cultural and social character of the area resulted from the changing social composition of the neighborhoods especially arising from international and domestic migration flows. The area, affected from a range of policies and planning interventions, has become a deprived settlement, leaving vulnerable groups to further exclusion and disadvantaged positions.

Since the renewal project started in the 2000s, several attempts have been made against the possible negative effects of the project on the residents. Many lawsuits were brought to prevent unjust treatment of local people by civil society organizations. Various platforms, non-governmental organizations and activist groups participated in the grassroots mobilizations. However, the renewal project has already negatively affected many residents due to increasing prices and rents, and displacement of many households. Moreover, many people moved out of Tarlabaşı removed from their existing social networks and businesses.

Therefore, the aim of this paper is to discuss the gentrification processes and resistance movements against the urban renewal projects and displacement, to explore collective movements and resistance attempts and question their roles in preventing the adverse impacts of urban renewal and transformation projects. Understanding the dynamics of the processes of gentrification and resistance movements are vital where ambitious and profit-seeking projects of the central and local governments in Turkey growingly ignore the social realities of urban areas and social problems vested particularly in disadvantaged neighborhoods.

In this paper, first, the concepts of gentrification and displacement are discussed in their relation with neoliberal urban development. Second, resistance movements against urban renewal and urban transformation projects are addressed. The impacts of urban renewal projects and gentrification are discussed based on the case of Tarlabaşı in İstanbul and the ongoing urban renewal project in the area. Based on this case, resistance movements and collective strategies are put forward, which emerged in the area to handle the negative impacts of gentrification and displacement.

2 NEOLIBERAL URBANIZATION, GENTRIFICATION AND DISPLACEMENT

Gentrification was first used as a concept by the sociologist Ruth Glass in 1964, in the conquest of houses in the worker's neighborhoods of London by the middle and upper classes, replacing these houses with luxurious housing units and changing the social character of these areas. Until the 1980s, the concept of gentrification, defined as classical gentrification (Lees et al., 2008), was used to describe and refer to the processes in the 1960s in which middle and upper classes settle the historical areas and inner-city neighborhoods where the working class or low-income people live, by displacing these groups.

Starting from the 1980s, with the change of the nature of these processes and an emerging neoliberal urban agenda, the meaning and scope of the concept has changed significantly. While in the previous periods, the depreciated historical buildings were rehabilitated by the upper and middle-income

groups, the residents leaving in these areas; after the 1980s, this process has started to take place in the form of destruction of the settlements and the construction of luxury residential and consumption areas seen as means of rent rather than the depreciation and restoration of the structures, while maintaining its feature of the displacement of poor and marginal parts of the society by higher-income groups. Particularly different from the gentrification in the 1960s, starting from the 1980s, it covers large-scale urban development and renewal projects emerged as policy goals, rather than unintended policy consequences.

Therefore, gentrification and displacement have been discussed as parts of neoliberal urbanization starting from the 1980s (Smith, 2002; Slater, 2006; Lees et al., 2008). While with the neoliberal period, the urban centers have been transformed into consumption areas of the middle and upper income classes through neoliberal policies and practices including the marketing of cities, preparation of local and global capital for investments, reorganization of urban centers as attraction points for tourists; lower-income groups, who

are situated at the bottom of the labor markets with low wages and under poor conditions, low-skilled immigrants as well as illegal immigrants and asylum-seekers have been taken away from the city centers. The central and local governments take direct and greater roles in the design and implementation of the gentrification processes (Lees, 2012; Sakızlıoğlu, 2014; Sönmez, 2014), called state-led gentrification.

The main motives of gentrification and displacement are discussed in Smith's (2002) study through his rent-gap theory and Ley's (1994) consumption-based theory. To expand on the origins and dynamics of gentrification and displacement as well as the relationships between these processes and neoliberal urbanization, David Harvey introduced the concept of 'accumulation by dispossession'[1] (Harvey, 2003; Harvey, 2008). Accordingly, Harvey claims that displacement comes out as a main policy instrument to transfer urban resources from the public sector to the private sector and from the lower classes to the higher classes. Gentrification and displacement, in this respect, are discussed within the scope of and as a part of contemporary neoliberal urban restructuring. The state is regarded as an active and leading actor of accumulation by dispossession, the elements of which are defined as privatization and commodification.

The economic priorities of the neoliberal period have motivated the central and local governments to undertake large-scale urban restructuring and major socio-spatial transformations that Brenner and Theodore (2002) conceptualize it 'urbanization of neoliberalism'. Neoliberal urbanism prompted the emergence of gentrification as a global urban strategy in the post 1980s and the 1990s (Smith 2002). Neoliberal urbanism has brought about large-scale urban development projects (Swyngedouw et al., 2002) as well as urban redevelopment processes accompanied by the displacement of low-income people from gentrified urban areas. Private developers and governments initiate new redevelopment projects attracted and marketed to 'affluent buyers'. The main argument is that these developments facilitate gentrification – as a result, neighborhoods suffer from displacement (Zukin, 1987; Ley, 1994; Smith, 1996; Zukin, 2008).

It is no doubt that the disadvantaged and vulnerable groups are affected the most from these processes. These groups, who are already suffering from financial problems and in need of affordable housing, are forced to have limited options on housing markets and move away from their neighborhoods.

Moreover, the current literature also draws attention to the loss of social networks as well as loss of social ties and place attachment as the negative outcomes of gentrification and displacement. An extensive literature points out severe impacts of displacement and dispossession for vulnerable and disadvantaged communities (Moulaert et al., 2003; Kuyucu and Ünsal, 2010; Sakızlıoğlu, 2014).

3 RESISTANCE MOVEMENTS AGAINST GENTRIFICATION AND DISPLACEMENT

In the face of the impacts of neoliberal urban policies and practices, cities have become the arenas where new and dynamic urban movements emerge, motivated by specific local problems and combined with global strategies. Linking local issues to the global debates over the right to the city (Harvey, 2008), these movements have been shaped by the engagement of local leaders and neighborhood activists, where the citizens and interest groups themselves have become the main actors. These grassroots movements enter the field of urban policy and governance by challenging the existing power relations, where the central and local governments increasingly remain inactive and/or insufficient to deal with the problems of urban residents.

These resistance movements and grassroots initiatives are rooted in urban social movements shaping globalizing cities and contesting neoliberalism, where these movements respond by addressing and challenging neoliberal urban policies, practices and their negative implications (Pickvance, 2003). Today, contemporary cities host a variety of struggles, fights for the demands and rights of immigrants, refugees, asylum-seekers, people having diverse gender identities and sexual orientations as well as other disadvantaged groups such as the unemployed and the homeless, not limited to racial and ethnic minorities and struggles of working class (Wacquant, 2008). Therefore, the homogenous character of the movements before the 1980s has evolved into a conceptualization with other aspects. New social movements after the 1980s conceptualized by Touraine (1981) and Melluci (1980) besides Castells

[1] According to Harvey, it is the accumulation of capital based on the dispossession of people of their houses, land, wealth and rights – in the context of contemporary neoliberal policy.

(1983), are characterized by interpersonal solidarity against bureaucracy and state power, reclamation for autonomous space, diverse social conflicts, identity claims and identity-based movements, new dominating classes, and so on, which brought to the agenda 'the right to difference' (Castells, 1983).

Those movements have been accompanied by urban protests and resistance against urban renewal/transformation and gentrification. Resistance movements and grassroots mobilizations against urban renewal, gentrification and displacement are widely discussed in the current literature (Newman and Wyly, 2006; Kuyucu and Ünsal, 2010; Lees, 2012; Lelandais, 2014; Sakızlıoğlu, 2014). A part of this literature discusses that these resistance attempts have emerged as resistance against neoliberal urbanism (Peck, et al., 2009; Mayer, 2016) where Lees (2012: 163) explains it as 'Part of resisting gentrification is about resisting dominant paradigms and gentrification is embedded in the paradigm of neoliberalism'. These resistance attempts against gentrification and displacement emerge not only as collective strategies to handle gentrification and displacement processes at local level, but also arise as part of global resistance to 'accumulation by dispossession' (Sakızlıoğlu, 2014). In this regard, the violation of human rights and the loss of properties of people trigger the proliferation of resistance movements against displacement and dispossession.

The literature on urban social movements focus on both organized resistance against urban transformation projects through neighborhood associations or grassroots mobilizations, and collective action of unorganized actors to claim their rights to urban space and amenities; that is, to live out their desired way of life (Lelandais, 2014). According to Newman and Wyly (2006), the resistance strategies, developed at individual or collective level vary from negotiation efforts to demonstrations through community organizations, anti-displacement campaigns or residents' individual efforts. Accordingly, the residents develop strategies at both the household and collective level to handle negative impacts of gentrification and displacement (Sakızlıoğlu, 2014).

4 NEOLIBERAL AGENDA OF ISTANBUL: THE POST-1980S

Istanbul, as the economic center of Turkey, has experienced major economic, social, and spatial restructuring during the neo-liberalization process of Turkey. Through neoliberal economic policies, the economic structure of the city shifted from industrial sector towards service sector. The government declined the public subsidies and investments in industry, but directed the private sector to make investments in the real estate, banking, finance and tourism (Sönmez, 1996). In this period, the economic targets on the city, which aim to achieve economic growth and increase the competitiveness, considerably affected the state's urbanization approach. To make Istanbul a point of attraction for national and international investments, central and local governments encouraged large-scale projects in housing market by giving incentives and making infrastructure investments (Öktem, 2011). In this respect, local authorities, allowed investors to develop new commercial and residential areas in the city. All these developments led to the generation of urban rent as a key tool of capital accumulation and urban development.

4.1 NEOLIBERAL URBAN POLICIES AND PRACTICES IN ISTANBUL

The 1980s are considered a breakpoint for Istanbul. After the 1984 municipality elections, the first metropolitan municipality mayor of Istanbul engaged in significant entrepreneurial interventions to revitalize the city and increase its importance on the global scale (Ekinci, 1994). During this period, making Istanbul a 'global city' became a common purpose, and the central and local governments aimed to upgrade the image of Istanbul as an important cultural and touristic city through tourism-led revitalization projects and major interventions in the historical center of the city (Sakızlıoglu, 2007).

In line of these purposes, the central government, local authorities and private sector highlighted the requirement of a new commercial center in Istanbul, and undertook major projects for the creation of new central business districts (CBD) within the city. In that sense, the central and local governments decided to stimulate the private sector to generate a new CBD along the Levent-Maslak axis (Öktem, 2011), with the growth of new high-rise office towers, hotel complexes and shopping centers. Enlil (2011) indicates that the construction of the two bridges over the Bosphorus increased the accessibility of Levent and Maslak axis, and stimulated the expansion of the CBD. Opening of Tarlabaşı Boulevard to revitalize the cultural

center of Istanbul, Beyoğlu and to provide an access between the new CBD and the old commercial centers was another major intervention regarding the 'neoliberal urbanization' of the city (Sakızlıoglu, 2007; Enlil, 2011).

Besides, in line with these purposes, the squatter areas in the city center transformed into apartment buildings and middle or upper-middle class neighborhoods. While the early urban transformation projects were proposed with the purpose of the transformation of the squatter settlements, the subsequent projects aimed to transform the historical and inner-city residential areas into new touristic and commercial areas and redevelop the decayed neighborhoods, which led to the rise of gentrification debates. Beginning from the 1980s and 1990s, the central and local governments have undertaken urban renewal and redevelopment projects into their agenda. The urbanization policies and practices in Istanbul have shifted towards the management of urban transformation projects, playing a key role in the neoliberal urbanization of the city.

4.2 RESISTANCE MOVEMENTS AGAINST NEOLIBERAL PRACTICES IN ISTANBUL

According to Lelandais (2016), the recent urban movements in Turkey are comprised of two major attempts. First of all, professional organizations have been active in resisting the recent urban development projects. Second, inhabitants and various neighborhood associations with varying focus and interests have come to the fore with resistance mobilizations with their opposition to neoliberal projects, with discourses of social justice and the right to the city.

Starting from the 1980s, with the gentrification and displacement processes, resistance movements emerged as the residents in transformed areas have been negatively affected. Against the urban renewal projects in İstanbul, neighborhood organizations emerge as the main actors resisting and fighting the negative impacts of these projects. They have actively involved in negotiation processes between local actors, private companies and residents as well as maintained legal struggle through petitions and courts, organized anti-gentrification campaigns and carried out various demonstrations and protests. In some cases, these grassroots initiatives have been exposed to state's reaction and police interventions, even violence and repression.

Many neighborhood associations have been established to protect the rights of the residents and undertake collective actions against urban transformation projects in İstanbul, such as Sulukule Platform and Tarlabaşı Organization as well as organizations in Gülsuyu-Gülensu and Güzeltepe neighborhoods. Moreover, one of the resistance movements against authoritarian government practices and urban transformation agenda was the Gezi Park movements where various activists and initiatives came together and organized grassroots mobilizations.

5 THE CASE STUDY: TARLABAŞI AND ITS SETTING

Tarlabaşı is a historical and socio-spatially deprived inner-city neighborhood in the northern part of the Beyoğlu District, which is one of the most important cultural, historical, touristic and commercial centers of Istanbul. Tarlabaşı area lies on both sides of the Tarlabaşı Boulevard, the main axis of the district (Figure 1). There are forty-five administrative neighborhoods in Beyoğlu. Tarlabaşı is not an administrative unit, but comprises eight neighborhoods in Beyoğlu, including Sururi, Kamer Hatun, Kalyoncu Kulluğu, Hüseyin Ağa, Bostan, Çukur, Bülbül and Şehit Muhtar Neighborhoods.

Figure 1 – Location of Tarlabaşı area in İstanbul

Tarlabaşı has always been a very mixed and diversified area, in terms of the concentration of various economic, social and cultural activities, as well as its population with diverse ethnic, cultural, demographic, and socio-economic backgrounds of the inhabitants. Located at the heart of Beyoğlu, the area and its population have long been affected from the political, social and economic development processes within the city and the country, as well as from the urban policies and planning interventions.

5.1 TARLABAŞI BEFORE THE 1980S

During the second half of the 19th century, while Beyoğlu (Pera) was developing as a residential area for upper classes, including tradesmen, bureaucrats, foreign bankers and the Ottoman elite, some neighborhoods like Tarlabaşı became the settlement areas of the middle and lower-middle-classes and workers of embassies. In these periods, Tarlabaşı area was mostly inhabited by non-Muslim minorities including Greeks, Rum and Armenians.

However, these communities moved out of the neighborhood with the changing political framework that excluded minorities, and a series of events and arrangements, such as the population exchanges in the 1930s, the introduction of Wealth Tax (1942-1944) and September 6-7 Events in 1955. The non-Muslim population were replaced by rural immigrants from the central, eastern and northern parts of the country within the rapid industrialization and urbanization era of the post-1950s.

Tarlabaşı area became an important destination for immigrants beginning with the 1980s (Dinçer and Enlil, 2003). The area attracted a huge wave of internal and international immigrants in the 1990s. First, Kurdish people escaping from the conflicts in the eastern and south-eastern parts of the country inhabited the neighborhoods in Tarlabaşı. Second, Tarlabaşı was inhabited by the international immigrants including the immigrants from Africa and the Middle East countries. The area also became host to Romani people and people with diverse gender identities and sexual orientations.

5.2 SOCIO-SPATIAL DEVELOPMENTS IN TARLABAŞI AFTER THE 1980S

Starting with the neoliberal period in the 1980s, in order to revitalize Beyoğlu district, large-scale infrastructure and urban transformation projects were initiated. Two major interventions radically changed the socio-spatial characteristics of Tarlabaşı (Dinçer and Enlil, 2003). First, İstiklal Street was pedestrianized, and the buildings along the street were restored and transformed into touristic, commercial and entertainment uses, including arts galleries, cafes, hotels, cinemas, shops, offices and business centers. Second, Tarlabaşı Street was widened and Tarlabaşı Boulevard was opened in 1986 by demolishing various historical buildings in the area. The primary aim was to link Beyoğlu through Tarlabaşı

Boulevard to the new central business district created in the Levent and Maslak Districts. However, while it increased the attractiveness of the area, it isolated Tarlabaşı from the rest of the district and the city. All these interventions resulted in socio-spatial segregation and social exclusion as well as physical and socio-economic deprivation (Sakızlıoğlu, 2014).

Following several legislative regulations that were designed to provide the foundation for urban transformation goals, an urban renewal project in Tarlabaşı was initiated by the Beyoğlu Municipality. With the renewal project, the efforts to clean out the area from certain groups including low-skilled immigrants, ethnic communities, and other low-income and disadvantaged groups became visible. Accordingly, the area was planned to be transformed into luxury residences, offices, shopping centres and hotels (Figure 2). It was claimed that with the new developments in the built environment and economic activities, there would be a plenty of opportunities for the residents and urban renewal would create new job opportunities, better services and infrastructure, and upgrade the social and economic well-being of the residents (Göksu, 2010).

Figure 2 – Views from Tarlabaşı after the Renewal Project (Beyoğlu Municipality, 2016b)

The project has still been in the implementation phase. In 2014, the Council of State (Danıştay) decided that the expropriations have not been in the public interest thus cancelled the expropriations and acquisitions made by the Beyoğlu Municipality. In addition, in 2015, the Council of State decided that the urban conservation area of the Tarlabaşı should be based on a conservation-oriented development plan and it should constitute an integral part of the plan with the planning principles. However, in November 2015, the Beyoğlu Municipality announced that four blocks in Tarlabaşı urban renewal area were put up for sale (Beyoğlu Municipality, 2016a; Beyoğlu Municipality, 2016b). Additionally, the Municipality has recently announced that office uses in the first stage will be completed towards the end of 2016 and the residences will be completed towards the end of 2017 (Taksim 360 Project, 2016).

6 IMPACTS OF THE RENEWAL PROJECT AND STATE-LED GENTRIFICATION IN TARLABAŞI

The aim of the Tarlabaşı Urban Renewal Project was declared as “to stop the collapse by renewing the area, to make the region safer, healthier, livable and integrated with the city, and to create a new life center in Tarlabaşı”. According to the dominant discourse, Tarlabaşı will be "rescued" from the socio-spatial depression and will be transformed into the “Champs Elysées of Istanbul”. The main motivation is that this transformation is vital both for the city’s and country's economic development. The aim is to make the area a touristic and commercial center and an attraction point, thus foster the economic development of the city.

Although the project was presented as essential for improving the living conditions of residents and the city image, it has not created better housing and economic activities in the area, but served the goals of urban clearance (Dizdar, 2013). The project developers (the local government and the private company) claimed that the renewal project would both upgrade the image of the area and move away the groups that negatively affect the social order. They used the project to reshape the area to attract high-income groups, entrepreneurs and foreign investors. While the project was being designated, the cultural, demographic and social characteristics of the area were not taken into consideration. Designed specifically for touristic activities, the project has ignored the demands and needs of the residents in the area and aimed to attract a different target group comprised of high and middle-class groups and tourists.

The renters with formal tenancy contracts were offered to move to Kayabaşı area, which is located on the periphery of the city, around 35-40 km distance to the city centre (Figure 3). However, since the number tenants with formal contracts was rather low, very few of them could benefit from this option (İslam and Sakızlıoğlu, 2015). Moreover, the movement from the area is an undesirable option for most of the people, since a majority of them works in the service sector jobs in the city centre. Most of the few residents who were able to buy houses in the housing estate in Kayabaşı moved back to the city centre around their old neighbourhoods since they could not have paid their instalments and could not adapt to the new conditions in a highly different setting and social environment than their existing living and working areas in Tarlabaşı.

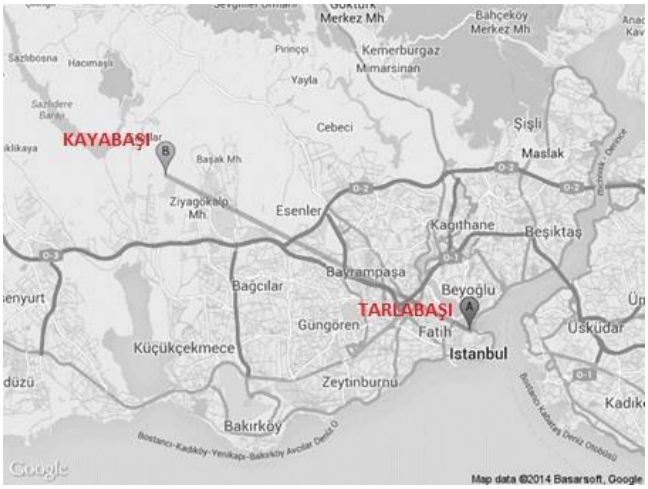

Figure 3 – Location of Kayabaşı in İstanbul

Therefore, the renewal project has already negatively affected many residents due to the appreciation in values of properties and increasing prices and rents, thus many people have been forced to leave Tarlabaşı, including low-income groups, immigrants and other disadvantaged groups. The diverse population composition of the area has undergone serious changes. Moreover, since the beginning of the project, many residents have suffered from the economic difficulties (loss of properties, etc.), decrease in the housing opportunities for low-income groups, increase in commuting distances, loss of jobs, and increasing distrust of the state and the local government (Sakızlıoğlu, 2014).

The project goes on, and Tarlabaşı still remains as an area with low-quality housing and jobs. In addition, the area continues to attract international immigrants and most recently, the asylum-seekers from Syria, who are struggling to live in poor conditions and begging or selling things in the vicinity of Taksim Square. Today, Tarlabaşı is characterized by the persistency of social problems, and it is not difficult to forecast that the transformation process will end without solving social problems but destroying the unique character of the area and its long-established diversity.

7 RESISTANCE MOVEMENTS AGAINST THE RENEWAL PROJECT

With the declaration of the renewal project and the initiation of the renewal process, the residents and civil society initiatives showed reactions and opposition. Since the beginning of the project, the residents, both the property owners and renters, non-governmental organizations, professional chambers and various

activist groups have been directly involved in the resistance movements and grassroots mobilizations against the renewal project and its negative impacts.

In this respect, the Association for Solidarity with Tarlabaşı Property Owners and Renters was established in 2008 to protect the rights of property owners and renters against the Tarlabaşı Renewal Project. Although the Association was founded as an organization of property owners, it enlarged itself by including the renters in the area. The organization aimed to inform residents and raise awareness regarding the possible impacts of the renewal project, and search for possible solutions to prevent unjust treatment of the residents. The Association endeavored to protect the rights of inhabitants through negotiation efforts between Beyoğlu Municipality and the private company that undertook the implementation of the project. To compensate the loss of property owners and renters, the Association presented a set of conditions (Sakızlıoğlu, 2014), including commercial space for business holders and shopkeepers; rent allowances for residential renters and renters who run their business in the area; and an extra compensation for business losses incurred due to the project. These compensations were not accepted by the Municipality. The private company announced that it can provide some spaces for commercial use by the businesses, however, the demanded rent allowances were not accepted. As a result, the Association withdrew from the negotiations, and started legal struggles to protect the rights of the residents (Sakızlıoğlu, 2014) and organized lots of protests and demonstrations.

In the following period, the Association applied several times to international courts and organizations, including the European Court of Human Rights (ECHR) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), using legal channels to fight the violation of the rights of the residents. In addition, the Association raised awareness about the project and its negative outcomes by participating various seminars and conferences organized by different institutions and organizations. Although these efforts drew the attention of media and raised awareness about the issue among the public.

8 DISCUSSION IN THE FACE OF THE RECENT DEVELOPMENTS AND INTERVENTIONS IN THE AREA: AN END TO RESISTANCE?

The resistance movements have weakened over time (Sakızlıoğlu, 2014; İslam and Sakızlıoğlu, 2015). Today, most of the organizations, like the Association for Solidarity with Tarlabaşı Property Owners and Renters are not active anymore. Although this association initiated the resistance in Tarlabaşı, used collective strategies in resistance movements and contributed positively to some of the pre-existing residents, it could not have prevented displacement nor stopped the implementation of the project.

Recently, some neighborhood initiatives in the area try to support vulnerable communities and fight against unjust treatments of disadvantaged groups. For example, Mülteciyim Hemşerim Solidarity Network tries to support refugees, especially Syrians in the area. This Network has recently organized a press conference named “Do not Touch My Neighbour!” (Mülteciyim Hemşerim Solidarity Network, 2016) with participation of many neighborhood initiatives. Tarlabaşı Migrant Solidarity Kitchen has also been active in creating solidarity networks among immigrants and asylum-seekers in the area. Tarlabaşı Community Center, on the other hand, has been working since 2006 to provide educational, social and psychological support to the residents of Tarlabaşı, especially children, youth and women. It also tries to enhance solidarity networks among the residents and assist disadvantaged groups in resolving problems they face.

Although these initiatives try to support disadvantaged groups, they do not provide long-term and effective solutions to problems in the area due to the continuation of the implementation of the project, the attitude and policies of the central and local governments as well as fragmented nature of these resistance attempts. Although the associations and several initiatives created a resistance, none of these attempts have been able to prevent the implementation of the project. Tarlabaşı is still suffering from social exclusion and other social problems including social and economic deprivation. Considering the recent developments, the historical, cultural and social destruction of Tarlabaşı cannot be avoided since the project has already gone through the marketing stage with a flashy website. It is not difficult to foresee that the gentrification in the area will accelerate with the completion of the project.

9 CONCLUSION

Tarlabaşı, which was already affected from earlier political events and developments that harmed the diverse character of the area, has become a victim of a series of neoliberal policies, and a range of radical planning interventions in the post 1980s. While these large-scale and 'prestigious' projects have been the ways of profit-seeking activities of certain stakeholders, they have also been important tools of devaluing differences and stigmatizing diverse identities and lifestyles within the area.

The results of these policies and interventions in Tarlabaşı have been harshly felt by its residents, leaving them suffer from physical deprivation, poverty, socio-spatial segregation, social exclusion and displacement. The impacts have been on the most vulnerable who are exempt from social and economic protection mechanisms: low-income groups, immigrants, and the Syrian asylum-seekers, struggling to live in poor conditions, working informally and sheltering in deprived buildings. On the other hand, due to the transformation project, many of the current Tarlabaşı residents have been bought out, and forced to leave the area, as their houses are sold off to private companies, waiting to be rebuilt or already demolished to enable the construction of upscale residences. Besides the material loss of the residents including loss of houses or businesses, many people have been moved away from their social and business-related networks. The new life in Tarlabaşı serves high-income and 'elite' groups, however, a majority of the inhabitants, with their diverse identities, cultures and lifestyles, do not fit in with this 'modern' and 'upscale' image of Tarlabaşı.

That is to say, the claims of the central government on "Urban transformation and renewal would lead to higher social mobility and better economic performance." seem to fail in practice. The ambitious and profit-seeking projects growingly ignore the social realities of urban areas and their population characteristics, and create new forms of injustice. Gentrification is a reality of Turkish cities like İstanbul, and seems to remain on the agenda in the upcoming periods. Although the associations and several initiatives create a resistance, none of these attempts are able to prevent the implementation of the renewal project as well as negative impacts on residents, as seen in Tarlabaşı case, unless the attitude and approach of the central and local governments change. As emphasized by Lees (2012), "The end point of resistance to gentrification has rarely been an outright victory".

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ID 1707 | GATED COMMUNITIES IN TURKEY AS A GOVERNANCE STRUCTURE: ISTANBUL CASE

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1 INTRODUCTION

The privately managed housing areas are the most common examples of decentralization of state centered governance policies and their transformation to society based management practices that can be seen in urban space. These housing areas called 'common interest developments' whose different examples can be traced over the world are such residential areas whose residents form some certain management structures to regularize common rules within contracts. Those housing complexes including various social, physical and environmental features; facilities, services and activity areas are managed by a user group consisted of residents or a representative government body with unique internal structures.

Those privately managed areas commonly known as CID are the fastest spreading housing structure around the world (McKenzie, 2003). CID, seen as a form of privatization of local government also symbolizes the reducing local government dependency and rising trust for market systems. CID areas, whose common characteristics are being privately managed, have various types in various names (McKenzie, 2003; Ruju, 2014; Tummers, 2015; Chiodelli 2015). Gated communities have become the most controversial type of CID included in CID literature which has been spreading over the world since the 1970s. The most well-known and accepted definitions of gated communities generally imply the privatization of public space and restricted access to housing area (Blake and Snyder, 1997). The common view explaining the emergence of gated communities refers to the safety need originating through the effect of global neoliberal restructuring over the social polarization (Tanülkü, 2012). In that sense, gated communities are the structures emerge in the urban space where social housing and public spaces lose their meaning, gentrificated, entrepreneur and privatized areas arise while urban regeneration works towards city center, mega projects and imbalanced development create neoliberal city (Hackworth, 2007). Those places isolated via physical and cultural barriers from the rest of the society are supported by an internal governance mechanism. Thus, a private governance mechanism operating certain rules to provide order and maintenance is applied for these housing areas (Atkinson and Blandy, 2009; Soja, 2000).

The studies based on gated communities show the existence of interactive processes between government and other actors. Those processes result in new urban forms by combining with each other (Tedong, Grant and Wan Abd Aziz, 2014). While those new forms cause new types of management, they also provide room to ponder how urban space is managed. Nevertheless, governments can affect the use or discharge of land on different levels. At that point, the concept of governance describes a wide perspective which refers to the coordination of activities stimulating the system and consisting of multiple actors and processes (Jessop, 1998).

Gated communities providing participation of other actors as well as governments create a self-governance structure by performing some functions which are originally met by the government. Therefore, it has been highly discussed that gated communities are qualified enough to provide basic needs and services better than public governmental bodies (Low, 2003). Gated communities referred to as 'micro governments' or 'so-called local governments' are accepted as a new type of regional organization and reform for institutionalization. That gated communities are generally accepted as private management areas empowers their image implying their self-sufficient and autonomous nature. While Bali (2004) emphasizes gated communities as self-sufficient small towns, Çınar, Çizmeci and Köksal (2006) describes

them as small municipalities having independence by being separated from municipalities. Cséfalvay (2011) the 1980ss that the distinctive features of gated communities are not the desire of the rich for being separated from society, privatization of public space, and a common ownership concept providing common use of certain services and facilities in terms of a club good model. Instead, the main distinction is the provision of local public services and goods by privatized procurement and conditions as well as the control of residents of their behavior. Most of the studies regarding the dramatic rise of private residential areas and gated communities have been focusing on their physical structure including fences, gates, security measures, etc. However, Crawford points out that the critical issue is to examine whether private housing areas are the new forms of self-governance or not (Crawford, 2003).

In that sense, it is seen that there is quite limited literature referring to the governance and relation networks between gated communities and planning institutions. However, while present studies have been taking that subject in terms of the demand side, they generally push the managerial relations of actor groups in the process into the background. The aim of this paper is to enlighten and criticize the managerial relations of gated communities in urban planning, to define the existence, competences and restrictions of actors as well as on which stage they participate into the process. This paper includes four sections. In the first section, approaches to managerial identity and existence of gated communities are examined through different examples from various countries. In the second part, the development process of gated communities in Turkey is presented. The effects of changing institutional structure and legal amendments on gated communities is discussed and their internal management dynamics and organizational relations are examined. In the third section, how to assess managerial features of gated communities via a project management approach is defined.

The project management steps and relationships between actors are analyzed through a case study. In the last section, managerial aspects of gated communities are evaluated as a whole.

2 GOVERNANCE RELATIONS OF GATED COMMUNITIES

The rise of the gated type of housing areas emerged in the USA and has been continuing rapidly since the 1980s around the world. This residential form sprawling over world geography has continued to increase because of safety issues, socio-cultural segregation or administrative reasons from the USA to Europe and Asia to Africa (Gooblar, 2002; Atkinson et al., 2005). The rapid growth of gated communities ultimately affects the ways of intervention and regulation towards them. Herewith, many scholars working on gated communities remark that those areas function as operational units (Zainudin and Hussin, 2015). Because regulating the behaviors of residents and conditions of property use while taking collective responsibility of managerial issues via legal arrangements have become a necessity (Atkinson and Blandy, 2006; Blandy and Lister, 2006).

According to Le Goix (2005), residents of gated communities mostly feel like club members who come together to benefit from some certain facilities rather than be a member of society. Therefore, these housing areas are identified with concepts like ‘club realm’ and ‘territorial club economies’ (Webster, 2001; Glazse, 2006). Although gated communities provide certain benefits to their residents via contracts, those contracts are also quite descriptive to regulate the rights and behavior of the residents, to define the limits of their life spaces and to determine common duties. Glazse (2003) claims that the club goods theory solely is not enough to explain the historical and regional development of gated communities. In fact, relations between governments, national, regional and local authorities should be analyzed to clarify the increase of gated communities (Atkinson and Blandy, 2005). In a similar way, McKenzie (1998) the 1980s that there are various outer powers beyond ménage à trois between developer, potential residents and the municipality playing in process. Consequently, outputs of the process may be affected by them.

Despite the diverse policies towards gated communities, an overall tendency shows that they are supported by local authorities. McKenzie (2003) -studying rapidly increasing gated housing areas around Las Vegas- states that local governments are quite supportive of gated communities. While municipalities support the increase of gated communities and their management by homeowner associations, land developers are also quite pleased with that tendency. Similarly, Wu (2005) expresses that local governments in China lean towards gated communities because they have positive effects on decreasing public service costs and burdens.

The managerial aspect and governance of gated communities is a broad subject including a large number of dimensions. Several studies have mainly focused on how related planning institutions, planning tools and various actors regulate the effects of gated communities on urban space. Grant (2005) examined the controllability of gated communities by local governments through the Canada example. In his work, Grant states that some municipalities have binding rules for controlling building height, gates and accessibility of roads and regulative conditions are set to design semipermeable areas. Besides, another restriction is the total area of a gated community which is determined as 20 acres at most. On the other hand, Landman (2004) states that the 1980s has the links between planning and gated community through enclosed neighborhoods and security villages from South Africa. Landman states that construction of enclosed neighborhoods is subject to the approval of the related planning authority and they are built according to planning guidelines, whereas security villages are constructed depending on the decisions of the municipal council on development and building permits.

The isolation and separation of housing areas dates back to old times in Israel whose ethno-national, religious, cultural, ideological and socio-economical structure is quite characteristic and has been through a segregation period since the beginning of the country. However despite their physical similarities, several structural differences are observed among gated communities built before and after 2000 (Rosen and Razin, 2008). Especially after 2007, NGOs in Israel have interfered in the problems and challenges caused by gated communities via legal procedures. NGOs putting environmental concerns to the forefront became quite interfering on gated communities locating on the coastline after the 1990s by binding practices. NGOs have become very effective in the control of marinas and their surroundings, prevention of recreational sites from the transformation to private housing and remove of the barriers restricting the accessibility of the coastline.

Another aspect of governance studies on gated communities is the discussion about how the sites use their managerial capacity to carry out the services and their duties. In this way, the concept of governance is mentioned through the tasks and services shared between the planning authority and developer. Gated communities are considered as positive tools to provide public order in South Africa where social segregation is very high because of socio-economic and political conditions (Landman, 2004). The rising crime rate and security needs of a society have encouraged the construction of gated communities. Eventually citizens have created pressure on local governments by demanding private housing areas. There have been two types of gated communities in Israel: enclosed neighborhoods and security villages. While roads remain as public domain in enclosed neighborhood, local governments become responsible for the construction and maintenance of public services. However security villages covering residential as well as mix use functions are mainly built by a developer. A study conducted in Johannesburg shows that residents of enclosed neighborhoods take on the responsibilities of municipalities and take over the maintenance of parks, walking trails, lighting etc. On the other hand, residents of housing areas have been continuing paying their monthly taxes to municipalities. In a similar way large security villages provide several facilities for their residents including golf courses, restaurants, shopping etc. Besides that, municipalities are glad about the property taxes gained by large real estate projects.

That gated communities are functional and operational units and act as governance actors which is another dimension emphasizing their self-governance function. On that point, governance and relations between actors gain importance. The internal management of gated communities and roles of actors can integrate with a series of legal tools regarding urban planning. In this way, the management of a housing area is guaranteed by planning laws and the contracts regulating on-site living conditions. For example in Singapore, common sharing arrangements in gated housings are met by the government. The government carries out that duty via building maintenance and strata management (Wong and Yap, 2003; Pow, 2009).

According to the law, all property owners participate into a joint ownership. Thus, property owners take the responsibility of service maintenance as they benefit from the common properties in the area. Performing tasks is provided by the Management Company (MC) consisting of residents. Every MC is in charge of the implementation of directives in law and collects the management costs from the right holders. Pow (2009) claims that this management system is a way of creating club economy within the borders of a gated community. Another country regulating arrangements related to common sharing in gated communities is Australia. Gated communities in Australia are separated into two groups: high rise buildings and master planned areas. Therefore there are two sets of laws regulating those areas (Sherry, 2009). While the Strata Schemes Act (1973) manages the development of high rise buildings and their title transactions, the Strata Schemes Management Act (1996) regulates managerial issues. On the other side, the Community

Land Development Act (1989) manages the land development process and title transactions, the Community Land Management Act (1989) arranges ongoing site management issues. By enforcing those laws, usage and maintenance of certain facilities could be allocated to specific housing areas. However Sherry (2009) states that commonly shared facilities and services in master planned areas are optional. Because of this, master planned areas in Singapore are generally generated without restrictive agreements. Thus, architectural restrictions in those housing areas are quite minimal and impermanent (Zainudin and Hussin, 2015).

As is seen, managerial conflict and complexity of gated communities is multidimensional. While a planning authority generates legal contents to control development and design conditions of gated communities, other regulations concerning internal management and service procurement of the sites are tried to be implemented. However gated communities emerge in different countries with different motivations diversifies approaches for them.

3 GATED COMMUNITIES IN TURKEY

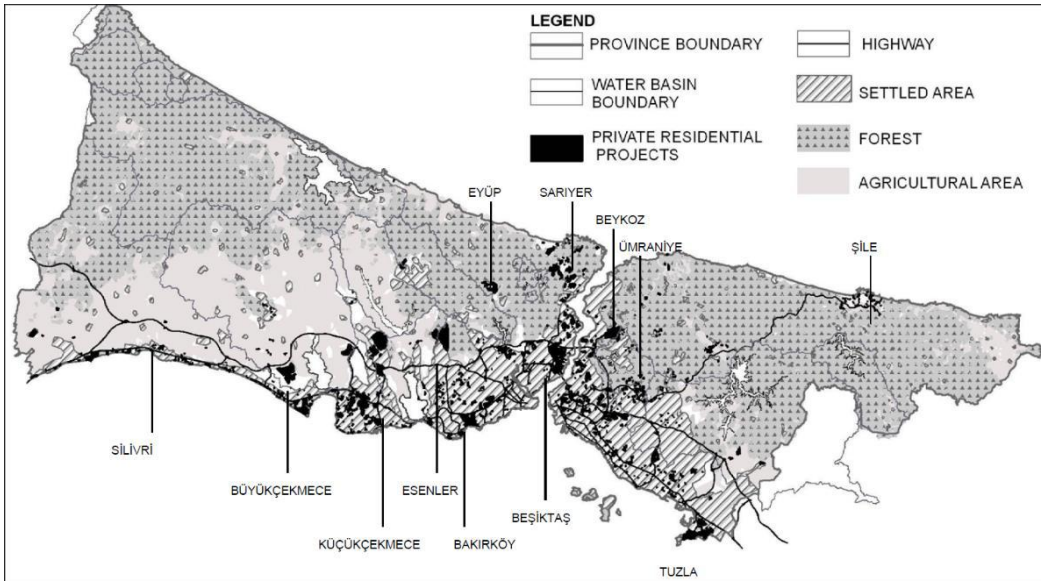
The emergence of gated communities in Turkey has developed in parallel with transition to liberal economy in the 1980s and they predominantly have been built right after 1990. Urban space came into prominence as a result of making the country attractive for investments and integrating it into global capital (İnal Çekiç and Gezici, 2009). In consequence of market crisis in the 1970s, participation and intervention methods of governments in housing market has changed drastically after 1980 (Geniş, 2007). Öncü (1988) states that rising housing demand, housing scarcity and lack of land for housing projects marked that period.

Metropolitan areas and cities entered into the process of being global cities with the pressure of new actors involving housing and the land market. The need for a central public institution -which is supported by certain funds to carry out housing policies- increased in the 1980s. As a result, a series of legal amendments were written and the Mass Housing Authority was established through the Mass Housing Law in 1984. This attempt aims to encourage all the actors in the construction market with the financial support of banks. Subsequently, other legal arrangements were done to attract medium and large scale construction companies and the housing market was tried to be revived. It is seen that municipalities and the private sector tried to be activated by government intervention in the housing market after 1980. Thus, liberal policies conducted have directed housing production towards the high income group. The capital reserved for housing production has focused on ‘new elites’ (new middle-income group working for finance, banking, tourism sectors, etc.). As a result, early examples of gated communities have started to surround urban space (Geniş, 2007). Gated communities in metropolitan areas have increased as a result of large scale housing development companies increasing right after the 1980s (Keyder, 2000). Those gated communities starting to develop under the economical and political flows of the 1980s have been sought as a new type of suburb because of their peripheral location (Kurtuluş, 2005). The reasons why gated communities have started to spread over peripheral areas are two-sided. While the first one is the desire of high income groups to move away from urban chaos by settling in more qualified areas, the second one is the aim of development companies to create outstanding life standards on the lands whose values are relatively lower but rents are high (Aydın, 2012).

One of the most effective and basic factors -apart from the transformation of social structure and changes of legal and institutional competences enabling large scale housing projects to be developed- has been large and undivided parcels on the periphery. When changes of housing policies are evaluated, the first examples of gated communities seem to have emerged in early the 1990s. In that period, housing areas surrounded by qualified facilities were built for new middle and higher income groups because of the easy access to relatively cheaper and bigger parcels on peripheral areas. Forestry lands and first tier municipalities hosted low-density and sprawled gated communities because of the legal interventions easing land development. However, the effects of neoliberalism sharpened during the 2000s. In that case, the government reflected privatization policies of the planning system and also it intervened in housing policy by restructuring itself with a collaborative and entrepreneurial role. In that context, the government has described tools to be used by public institutions on directing housing policies. MHA has been promoted with a series of new competences to control of the housing market (Candan and Kolluoğlu, 2008; Zariç, 2012). The neo-liberalized role of MHA has not only changed the scale, features and locations of housing investments but also triggered increases of those investments. As a reflection of this situation,

the site selection of gated communities in Istanbul has evolved over time and directed towards the city center by interventionist housing policies, planning implementations of MHA and the Ministry of Urbanism and Environment (MUE) and urban transformation projects. The drastic rise of gated communities in Istanbul has continued during the 2000s and according to Gulumser their numbers increased from 30 to 96 in 2004 (Firidin-Özgür, 2006). While the number of gated communities was assumed as 650 in Istanbul in 2005 (Perouse and Danış, 2005), Ozkan and Kozaman (2006) asserted that 20% of the housing stock consisted of gated communities. Besides, Aydın (2012) states that 552 gated community projects were released to the market between the years 2005-2009.

When the Istanbul case is examined, it is seen that housing areas including multi-storey buildings, high rise buildings and upscale houses are located mostly around the CBD and partially on peripheral sites. These housing areas developing mainly around the office buildings and shopping malls on the European side and around the CBD have started to rise in new urban development zones on the Anatolian side of city (Akgün and Baycan, 2012).



Map 1- Private Residential Projects in Istanbul (Özkan and Kozaman, 2006)

Gated community projects which have been developing since 2000 generally include different types of housing typologies like multi-storey housing, residences, villas. These sites built up on large-scaled lots not only include different housing typologies but also serve for various income groups like middle, middle-high or high. The laws and other regulations enforced after 2000 by central and local governments have triggered urban development directly or indirectly. Urban regeneration and transformation oriented laws providing extensive competences have encouraged housing developments.

3.1 CHANGING INSTITUTIONAL STRUCTURE ON GATED COMMUNITIES.

The role of the Turkish government in housing policies has changed over the years from passive to partially active and active. While the government currently undertakes the role of entrepreneur, it also acts quite collabratively with the private sector for housing investments. The broad authorities assigned to central government institutions and most particularly to MHA since the 2000s have been an significant role in the way in which housing investments are directed. The service provider /producer role of local governments previously assigned has evolved with the effect of globalization in the 1980s Thus, local governments have become tools to distribute those services. While urban governance organs have been considered as companies, citizens have also been defined as customers which features not the public administration but the public management. In that manner, cities have become the focus of capital flows through the transformation of resources transferred from the central government to municipalities (Bal, 2011). Therefore, social centred investments like housing policies have been replaced with private sector investments.

There have been several arrangements in accordance with the globalization tendency during the transition period from government investments to private sector based investments. While privatization based laws have been rising, the central government has downsized, and local governments and the private sector have been empowered (Karasu, 2009). The local governments have taken on the role of being entrepreneurs and collaborators have started to buy services from the private sector. The private sector has gotten ahead in procurement and distribution of basic services such as infrastructure, land development and housing production. That government has started to get strength from the private sector has encouraged market housing investments, but the social role of housing investments has started to be neglected. While the percentage of housing investments in government investments had been decreasing in the early 1980s, several precautions have been taken to enhance the sources supporting housing developments. The most important precaution has become the foundation of MHA in 1984. Thus, municipalities were passivated in housing production. After 2000, MHA´s financial resources and activity areas (from industrial areas to tourism, urban transformation etc.) have been extended. The foundation has empowered its identity of being an investor through expanded opportunities (Zariç, 2012). Besides, MHA has gained several expanded rights as a market actor such as investing in residential and non-residential projects, participating into revenue sharing agreements, being responsible for urban transformation projects, establishing a company, getting into a partnership, making /approving its own plans, providing construction permits and expropriating

Apart from the changing role of government institutions, another important issue concerning institutional restructuring is the role of the private sector. The large-scale housing development companies emerged between the years of 1990-2000 in Istanbul which has gotten into the international real estate market with the effect of the Marmara Earthquake (1999) has formed gated communities as a new type of residential structure.

As a result, a large number of companies making unprecedented amounts of mass-production have appeared in the housing market. Those companies paid attention to the need for segregation of new middle and higher income groups and regarded their housing demand. While housing supply in the market has been changing, national construction companies have started to take part in real estate investments by going into partnerships or benefiting from national /international credits and incentives. The private companies have entered into the process of rapid growth in the sense that the construction industry has boomed. While some companies have been producing relatively small projects on small lands, large scale companies have been developing large scale projects providing several facilities. Thus, large scaled construction companies and gated communities have entered into the institutional structuring schema of the housing market as new actors.

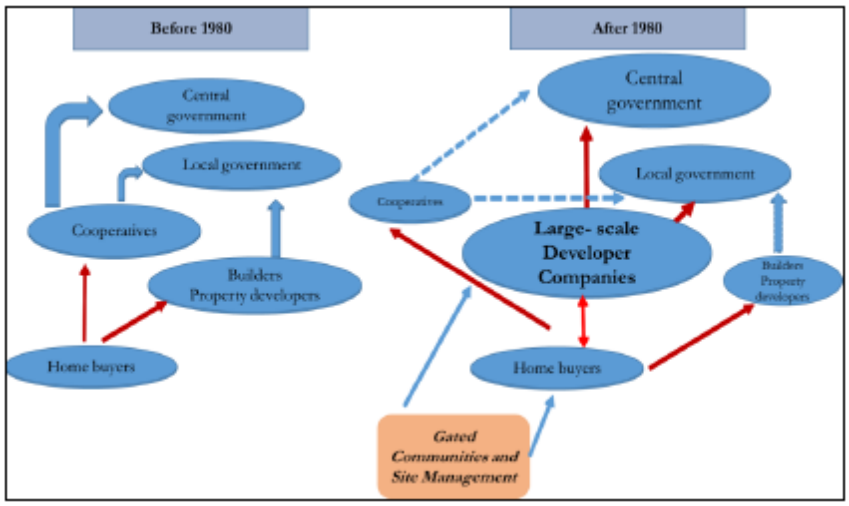


Figure 1- Institutional Structure of Housing Market after 1980

Gated communities having firstly located in peripheral areas and then in the inner city as a reflection of market penetration of national and foreign financed construction companies as well as changing socio-economical structures have their own governance capacity and management structure. Therefore, gated

communities form a governance unit all by themselves in addition to all these private sector institutions and other related actors which have been integrated into public-rooted institutional structuring.

Legal amendments and arrangements regarding residential areas are important tools supported by institutional changes. Those legal arrangements have included detached houses, cooperative housing and mass housing areas with different scales and typologies. However, the fundamental law emphasizing the administrative structure of gated communities is Condominium Law No. 634. In 2007, some additional changes have been made to this law to define 'Mass Houses' which is used for housing areas covering multi-parcels with multi-buildings. Besides that, Rent Law No. 6570 defines commonly shared areas in whole buildings under the title of 'common places'.

When carefully examined, it is observed that the concept of whole building defined by the law legitimizes gated communities. While the Condominium Law lays emphasis on internal management of gated communities, it also covers different issues like establishing management boards and regulating common expenses. However, the law is not descriptive to clarify the way of service procurement. Also, the link between service procurement and local government is not explained.

Apart from Condominium Law, other legal arrangements exist not directly related with management issues of gated communities but encouraging the increase of gated communities. These legal arrangements and housing typologies they have created in urban space are shown in Figure 2.

Period (years)	Economic Structure	Active Actors	Enacted Laws	Housing Models
1928- 38	Partial Liberal	-	Law Number 1593	-
1938- 50	Statist	•Central government •Local government •Cooperatives	Law Number 4570	• Single buildings • Squatters
1950-80	Conservative Statist	•Local government •Housing co-ops •Builders •Small -medium scale construction companies	•Squatter Law Number 775 •Cooperatives Law Number 1163 •Land Development Law Number 1164	• Squatters • Housing co-ops/ housing sites • Single buildings
1980- 2000	Liberal	•Central government •Local government •Private sector/ Large scale construction companies •Small -medium scale construction companies	Mass Housing Law Number 2985	• Single building • Mass housing • Gated communities
After 2000	Neoliberal	•Mass Housing Authority (TOKI) •Ministry of Environment and Urbanization (CSB) •Local Government •Private sector/ large scale construction companies	•4966, 5162,5273, 5793 ,5366 Laws (TOKI related law amendments) •Municipality Law Number 5393 •Disaster Law Number 6306 •Law Number 6360 •Decree Laws Numbered 644 and 648 (CSB related amendments)	• Gated communities • Single building scale rehabilitation/ transformation • Areal rehabilitation/ transformation

Figure 2- Legal Amendments and Their Spatial Effects

While the effect of privatization has increased with those legal arrangements since the 2000s, a central government agency, MHA, has been authorized to sustain housing policies. Housing supply policies carried out by local governments in previous periods started to be conducted by MHA which is an example of entrepreneur state. Market housing projects supported by MHA has formed a basis for the increase of gated communities surrounding metropolitan areas. MHA´s profit-oriented large-scaled housing projects on valuable lands and Ministry of Urbanism and Environment's authorization to conduct urban transformation projects have resulted in an increase of gated communities as well as large-scaled housing projects.

3.2 ORGANISATIONAL RELATIONS AND INTERNAL MANAGEMENT OF GATED COMMUNITIES

Gated communities are self-enclosed structures because of their managerial role as well as their separative role supported by physical restrictions which makes them inaccessible for public use. That those housing sites are generally operated by internal management units affects their relations with local governments in terms of public service procurement. Accordingly, this situation results in a differentiation of service providing. Besides, service providing and internal management mechanisms observed in gated communities make them more self-sufficient and self-governed. Those public services and other

residential facilities are produced for a fee and they are commonly shared according to the basic principles of ‘club goods’ or ‘club logic’ theories which taken from the idea of common ownership (Aydın-Yönet and Yirmibeşoğlu, 2015). The club goods theory is defined as a membership system whose services can only be used by the ones paying the price and assessing the way of service procurement in a hybrid structure which is neither exclusively private nor public (Manzi and Smityh-Bowers, 2005). However, this situation can cause gated communities to achieve autonomy to some extent. Eventually, these relations between gated communities

and local governments may make gated communities more effective for making planning decisions (Firidin- Özgür, 2006). Gated communities and their management organs reaching qualified economical resources and service diversity can use planning notions directly. Göktürk, located in the peripheral area of Istanbul, in the 90s set an example for this situation. Göktürk, preferred by developers because of its affordable prices, have hosted several gated housing projects over the years. In 1993, Göktürk was registered as a municipality shortly before the completion of one of the largest housing project in the region, Kemer Country. This new municipality prepared the plans of the Kemer Country Project including detailed local plans and revision plans (İnal- Çekic and Gezici, 2009).

Even though there have been several studies regarding different aspects of gated communities, the content of public services, service procurement processes and relations between the private sector, local governments and gated communities have stayed in the background. Thus, the relation between the operation of current local governments and the tendency of gated communities to produce their own social- technical infrastructure through their autonomous management stays in the background.

Perouse and Danış (2005) stated that gated communities are self-sufficient towns providing their own services with a claim of being secure, comfortable and semi-autonomous. While gated communities exceeding a certain size can afford their ambulance services, electric generators, water tanks, technical supports and water refining, those services can be provided by private companies. Çınar, Çizmeci and Köksal (2006) also mention in the 1980s that gated communities isolate themselves from local governments by creating their own micro municipalities, and they subsidize basic services such as roads, security, garbage and maintenance of common facilities. Bahçeşehir and Göktürk gated communities in Istanbul have been the typical examples of micro-municipalism. Those two gated communities were legalized and registered as municipalities.

Geniş (2007), who examined the Kemer Country settlement, defines the area as a self-sufficient town and private management area. Geniş also claims that the settlement is separated from the rest of the area not only functionally but also administratively. Geniş further states that Kemer Country residents and the site management unit are considerably effective on the urban texture of the settlement and even on the municipality and central government. Kemer Country, having its own management unit rules and security measures, has been providing its infrastructure and other services. The settlement is managed by a board consisting of shareholders which functions as a private local government. The residents were found more concerned with efficiency and quality of services but they were not interested in participating in decision-making processes.

Candaş (2007), studying gated communities in Istanbul, confirms that Kemer Country´s site management had a crew of 250 to serve the community. Those services include maintenance, repair, garbage collection, ambulance, and safety as well as intervention to architectural restrictions. Although there is a separate management unit, grouped villas also have their own managing agent.

Literature studies show that gated communities are considered as a financial support to maintain urban development, and they are largely encouraged by planning institutions. However, it is clearly noted that those settlements create privatized and autonomous managerial loopholes. Uncovering the organizational schema of gated communities in which they are established with external structures is significant to enlighten the administrative and financial relations. This situation requires there to be more explanations of management issues and the financial structure of gated communities in Turkey.

İşlek (2007) states that although mass housing projects had been retaining their dependence to the city until the 90s, the Kemer Country project developed in 1989 was a breaking point. İşlek further states that in the 1980s residents were encouraged to be a part of site management as a way of developing a sense of belonging. Ekdemir Kaya (2010), carrying out a study on three gated communities in Istanbul, points out that all of them are quite self-sufficient in terms of social services. Ekdemir Kaya also adds that those

settlements have homeowner associations (HOA). That managerial body establishes and operates the rules regulating common life. HOAs may impose architectural restrictions on features such as color, material, form to protect harmony. Ekdemir Kaya (2010) takes the study a step further and discusses relations between residents, HOA and the local government. The residents stated that they were not in need of being in direct contact with the local government after they moved to area. They also mention that the municipality neither represents them nor provides their needs, instead HOA is the responsible actor.

4 METHODOLOGY

This paper aims to examine the management capacity of gated communities through self- governance. The research discusses multiple processes starting with planning /construction periods and continuing with post-construction periods. This approach requires describing the actors involved in every single step. Four basic project management criteria (project management, process management, management sources and management tools) have been taken in that study which considers gated communities as a governance structure. Those criteria are defined based on Heurkens´s study (Heurkens, 2012).

Project management criterion covering processes from planning and land development to post-construction is divided into 12 steps in terms of this study. Those steps are taken as management events. The steps are defined based on Healey´s urban development model (1991, 1992) and Alexander´s (2001) land development processes. Other project management criteria were defined in addition to Alexander and Healey´s studies. These are sorted as decisions of plan making, making of plans, service maintenance /repair, procurement of new services, on-site managerial directives and management coordination.

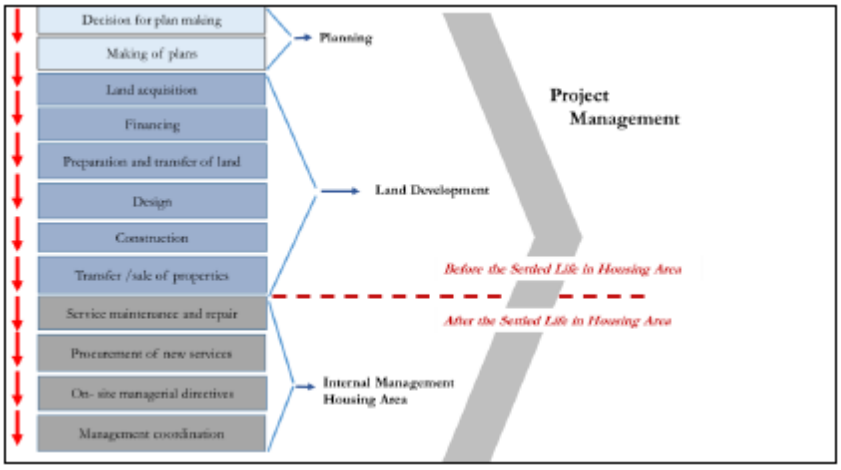


Figure 3 - Steps of Project Management

Defining actors and their roles on land development processes is significant to discuss management capacity of gated communities. While actor groups involved in housing development processes (including gated communities) in Turkey can be ordered as public sector (central or local government), private sector (developer and contractors), residents, site management units (dependent on developer or not), some services are provided via public-private partnerships. Which project management steps are operated by who constitutes a base to analyze management capacity of gated communities. However, those steps may include different actors and additional processes in every single urban development project. For this reason, only one case study area is reviewed to deeply analyze project management steps. In that context, the Avrupa Konutları Atakent 3 project in Istanbul was examined in terms of competences of actors and governance issues.

4.1 CASE STUDY: AVRUPA KONUTLARI ATAKENT 3

Within the scope of study, the housing project ‘Avrupa Residences Atakent 3’ in the borders of Küçükçekmece Municipality - which has been in the sphere of influence of the city center since 2000 while it was on the peripheral zone in the 80s- is discussed. The project started in 2010 and ended in 2011. The

Halkalı Gendarmerie Command land (19.3 hectares) on which the project is built had the highest land value of the region and it was claimed to be the most expensive land of MHA. The project stays within the borders of different planning areas and it was defined as a 'Mass Housing Area' by local land use plans and a detailed local plan in 2010. According to the detailed local plan, development rights were given as a detached order with a floor area ratio (FAR) of 1.65 while no limit or height criteria for buildings existed. Besides, it was also the 1980s that the housing project should be conducted according to the preliminary project which was approved by the Metropolitan Municipality. After that, the Mass Housing Authority managed the whole process of land development.

The land was constructed on after it was transferred to the Emlak Knout Real Estate Company which is a subsidiary of MHA. It was put out to tender and assigned to ARTAŞ Construction Company in compliance with the 'revenue-sharing model' for building works. ARTAŞ is one of the most experienced and long-established companies which has currently 14 housing projects in Istanbul. Apart from that, the company takes the management responsibility of housing projects which it produces. The project consists of 2262 dwellings, 16 commercial units, indoor and outdoor pools, health and sport centers, a tennis court, a multipurpose sports court, playgrounds, a kindergarten, car parks as well as a market, 2 cafeterias and a generator system which can only be used by residents.

The planning executive of Emlak Konut Real Estate Investment Company (Emlak Konut REIC) was interviewed in this study, examining managerial functions of gated communities to enlighten the relations between site managements, developer companies and public planning authorities. The 12 steps of the project management process and their lead actors were described through oral interviews.

DECISION FOR PLAN MAKING – MAKING OF PLANS

MHA has become the decision maker of the plan making process. After the transfer of ownership, MHA declared the area as a 'mass housing area' in accordance with its planning competences and legal rights. Hence decisions of plan making as well as preparation of plans belonged to MHA. The plans were approved by the Istanbul Metropolitan Municipality (IBB) according to the concerning law. As a result, development rights were determined by MHA.

LAND ACQUISITION

The acquisition of land was realized by MHA as the first step. The project area previously owned by the military was transferred to MHA without charge, and then MHA sold the land to its subsidiary, Emlak Konut REIC. However, there has been another land transfer period from Emlak Konut REIC to the developer. The model 'revenue sharing for land' was carried out to complete the transfer from Emlak Konut REIC to the developer. The model requires selling the land to the developer via the tendering procedure. The developer company assigning the maximum value for land wins the tender pursuant to the law. The company, ARTAŞ Group Construction, won the tender. Once the tendering procedure was over, ARTAŞ designated project details according to previously approved plans. Also, the number of total projected units, list of residential and non-residential units, saleable and non-saleable areas (social or technical infrastructure services commonly shared) were defined in detail. Apart from all these, the total cost and expenses of the project were clearly expressed in the application file. Afterwards the project was presented for Emlak Konut REIC´s approval. After the project was approved, preparation of land started.

At that point, another issue is that the dwelling units could be put up for sale since the project and list of total units were approved. The completion of the building process of the entire project is not required to sell dwellings. Thus, a part of construction costs starts to be covered in advance of project completion. Emlak Konut REIC and ARTAŞ also prepared and approved the 'site management plan' to be operated. At a later stage, operation of the site management plan was transferred to ARTAŞ.

FINANCING

This stage including the financing process of purchasing and the preparation of land is run by the developer. The developer winning tender also becomes responsible for further costs.

PREPARATION AND TRANSFER OF LAND

In Turkey, preparation of land generally includes building of social and technical infrastructures. All the expenses and costs are paid by the developer. Developers can either contract out certain tasks or build single-handedly. In the case study, it is confirmed that infrastructural services (electricity, water systems, telecommunication, generators, satellite receiver systems, etc.) were provided by ARTAŞ. Emlak Konut REIC did not fund or pay for costs. Because the developer is responsible for construction and post-construction periods as a whole in Turkey, transfer of land was not actualized.

DESIGN

Building and environmental designs of the project was designated by ARTAŞ. Once the tender was over, the developer and Emlak Konut REIC held a project review meeting and the project was approved. Thus, the project design stage was already completed right after the acquisition of land by the developer. It means that the project cannot be subject to changes.

CONSTRUCTION

Total expenditures and the organization of subcontractors in the construction period were met by ARTAŞ. Emlak Konut REIC did not make a direct contribution either actually or financially.

TRANSFER /SALE OF PROPERTIES

The sale of properties started with the approval of the total units list by Emlak Konut REIC and continued after the project was completed. An important issue regarding this stage is to understand how property sales are operated. Because the project was actualized according to 'revenue sharing for land' model, the developer transferred a certain part of the sales revenue to Emlak Konut REIC under the sales contract. While the sales revenue was collected in the treasury of Emlak Konut REIC at the first step, a certain percentage of revenue was transferred to ARTAŞ in part as a progress payment. The schema describing this stage are as follows.

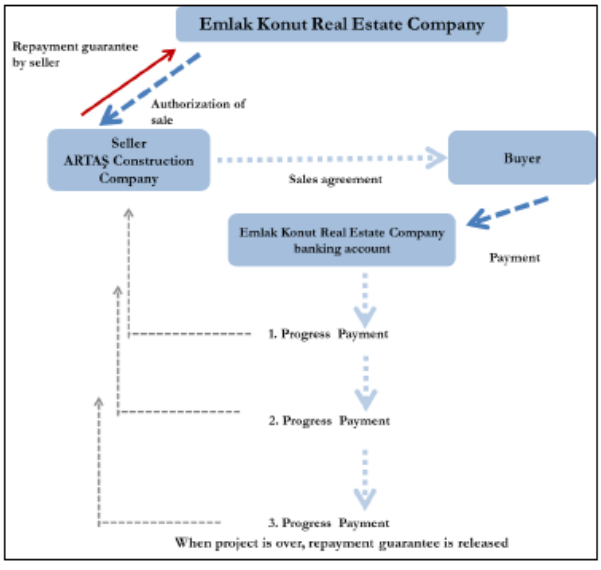


Figure 4 - Property Sales Process

As one can see, the authorization of sale is allowed by Emlak Konut REIC although property sales are operated by ARTAŞ. Besides, sales revenue is firstly collected by Emlak Konut REIC and then transferred to ARTAŞ in compliance with the percentage of work completed. For this reason, both actors are quite active and effective. Another aspect of property sales is other revenues that are gained through services and functions subject to sale. For example, the market which serves only for residents is a saleable

commercial unit. Once this commercial unit was sold, its sales revenue was transferred to ARTAŞ. In that case, site management is not given a share of the sale. On the other side, revenues and cost of sports facilities are under the responsibility of site management because those facilities are 'common areas' not subject to sale.

SERVICE MAINTENANCE AND REPAIR

The maintenance and repair of infrastructure and social services built up in the project area have been provided by ARTAŞ. Also, site management has been performed by a professional management company owned by ARTAŞ. This company is responsible for service maintenance and repair tasks according to the 'management plan'. There is a specialized support team to solve problems about interior modifications and other repair works. Other environmental and landscaping works are paid and organized by ARTAŞ. In addition to these, garbage collection service, safety and other sanitation services are carried out by the site management company.

PROCUREMENT OF NEW SERVICES

Procurement of new services including maintenance and repair costs are paid by the site management company owned by ARTAŞ. However, procurement of new services may not include social facilities, commercial centres, etc. which require additional building and structures. Emlak Konut REIC does not allow those types of additional developments after the project is approved. Other infrastructural additions such as refining systems, sewer system, and cogeneration are allowed to be built. The condominium owners' board have the right to demand new service procurement. The period of service procurement is actualized with the decision and approval of the general board. However, these types of changes necessitate revision of the management plan. The operation of the service procurement process is carried out by the site management.

ON-SITE MANAGERIAL DIRECTIVES

Directives and rules regulating on-site living conditions are declared to buyers via sale contract. Those rules are also defined with the management plan. The first management plan of the settlement was prepared by Emlak Konut REIC and ARTAŞ jointly. On-site living rules and regulations are published on the website of the site management. The operation and sustainability of rules are monitored by the site management board. Those rules include different subjects like the use of commonly shared areas, monthly fees, safety-cleaning- aesthetic issues, in-house maintenance / repair. The demand to revise those rules is discussed by the general board and then revisions are reflected in the management plan. Although the first management plan was prepared by both actors, further revisions and changes are recast and monitored by the site management company.

MANAGEMENT /COORDINATION

The coordination of management is operated by the site management. Different departments of the site management organ share primary tasks. The site management consists of 3 tiers connected hierarchically. Those tiers from top to bottom can be shown as: the board of management with 5 persons, the site manager and 5 primary departments dependent to the site manager. Those primary departments are public relations, technical works, cleaning, landscaping and security. Apart from these, there is an inspection committee with 3 persons.

The steps and their primary actors of the project management process which starts with the decision of plan making is schematized as follows. When the schema are examined carefully, it is seen that the developer is more effective than the planning authority on post-planning steps. Especially, project design and construction steps as well as on-site management are operated by the developer.

When all the processes and project management steps are considered, it is seen that the first two steps (decision of plan making and making of plans) are run by the central planning authorities (MHA and Emlak

Konut REIC) whereas further steps are primarily carried out by the developer and site management. The local government is not effective on any of those steps. The only interaction between the municipality and the gated community occurred in the planning and project approval processes. The housing project must be accordant with the preliminary project approved by metropolitan municipality.

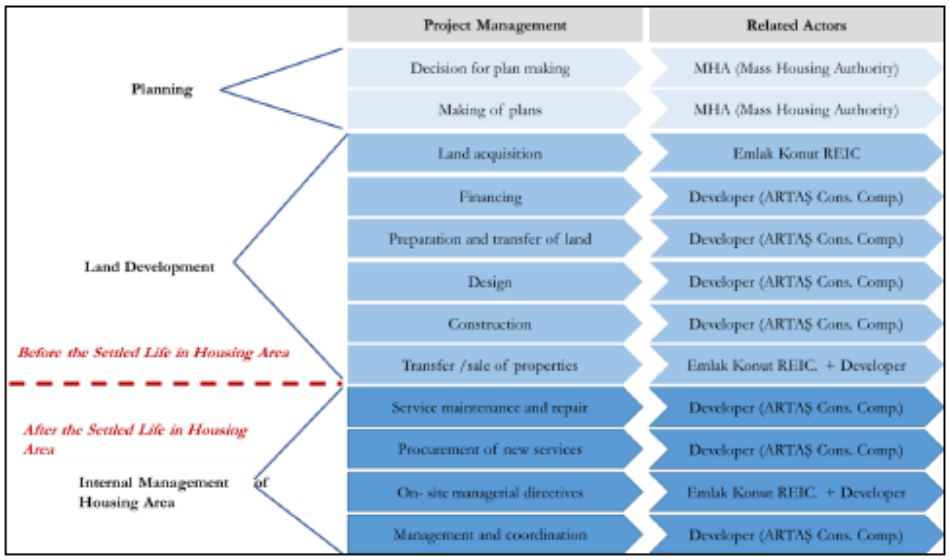


Figure- 5 Project Management Steps and Fundamental Actors

However, because development rights and construction conditions are quite unrestricted and there is no limitation concerning design, the developer is free and independent in the design process. Also, central and local governments do not intervene with the developer to regulate the type (housing, commercial, etc.) and number of functions.

Procurement of on-site services, operation of rules and managerial coordination are arrangements to preserve the existing situation and its operability, and they operate to make living conditions sustainable. And all those facilities are operated through the site management company owned by the developer.

5 CONCLUSION

The phenomenon of governance of gated communities includes several actors and processes. 'Management' of gated communities includes not only the actors inside the walls but also outsiders and the relations between. The capacities and competences of actors can change during the steps, starting with planning and progressing with internal management.

When several examples are examined, it is seen that certain management-related subjects stand out in gated community literature. The countries trying to regulate those housing areas via planning and design guidelines seem to focus on controllability of gated housing areas. On the other hand, discussing the roles of public planning authorities and the private sector on procurement of social and technical infrastructure is another aspect of governance. However, although the governance aspect of gated communities includes those issues, it is more than these. Defining the roles and tasks of actors and their relations is significant to discover operational characteristics of gated communities and to understand how self-sufficient they are.

Although there are different methods concerning land development and planning processes for housing areas, methods on which MHA is directly influential have become more frequent after the 2000s. While one of those methods is the 'revenue sharing model', it requires collaboration between MHA and the developer to some extent. While the central planning authority is active in the planning period, the developer is effective during the post-planning -more specifically on project design- period. The local government stays out of the process. Despite the fact that the central planning authority is competent on making plans, it also liberates the developer in terms of development rights and design. Whereas land preparation, construction and design steps are rather developer-centered, property sales start with

permission of the central planning authority. Because sales revenues are shared between the developer and MHA by nature of the revenue sharing model, both actors seem to be very active at this step. After the settled life starts in the housing area, the central planning authority withdraws from the process. Then the site management unit leads the next steps to preserve the sustainability of the housing area. The residents are not involved in those processes as decision makers or operators.

Accepting gated communities as administrative organizations surrounded by multilevel governmentality requires acknowledging interrelations between those areas and other management units (central or local government organs, developers, public/ semi-public/ private institutions, etc.). Even though the central planning authority is the prior actor starting and monitoring the housing development process, the developer seems to be the actualiser of the work. In fact, the central planning authority starting the process as entrepreneur and employer seems to withdraw voluntarily while the local government is passivated. Having said that, it is not entirely possible to claim that gated communities are fully independent areas having standard management structures. Other examples having different land development processes and actors may create distinctive management structures. Therefore, governance of gated communities is far beyond its boundaries.

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ID 1739 | POLICIES FOR AFFORDABLE RENTALS IN GERMANY AND SWEDEN – HOW DO HOUSING POLICIES GET IMPLEMENTED IN PLANNING AND REALISED IN GROWING CITIES?

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1 HOUSING POLICIES FOR AFFORDABLE RENTALS

Cities with a growing population are faced with the challenge to offer sufficient and adequate living space to all income groups. Those with medium to high incomes and a certain financial flexibility have of course bigger prospects to choose from a wider range of available housing offers within the cities. In contrast, for inhabitants with low to medium incomes, it's getting increasingly complicated to have access to affordable rentals, since the increasing demand for housing, e.g. because of the raise of single households, leads to rising prices and to a shortage of low-cost rental apartments. Further, increasing income differences and a large influx of refugees put extra pressure on the sector.

That trend is well known to decision makers in housing policy in almost all European countries. In order to develop appropriate housing conditions for all inhabitants and to ensure equal living space conditions, housing policies are formulated on federal and state level. For instance, suppliers as well as demanders of rental apartments get support by financial subsidies like housing benefits or tax amortisations. Furthermore, the cities are requested to implement housing policies into their urban residential planning documents.

1.1 SITUATION IN GERMANY

Germany is a "county of tenants". Nearly half of the German population lives in a rented apartment. In the cities, the value is still significantly higher, reaching 79% in Munich and 78% in Heidelberg in 2011 (Bertelsmann Stiftung 2012). Only Switzerland, compared to other European countries, has a lower home ownership rate than Germany. As a result, in Germany, funding programs that provide financial support to tenants are extremely important and have a long tradition, such as the Social Housing Promotion. Already in 1950, the first housing construction law came into effect and was replaced in 1956 by the second housing construction law, which was valid with amendments until the year 2001. The Housing Promotion Act was adopted on 13.09.2001 and entered into force on 01.01.2002. In the course of the reform of the federalism, the promotion of housing became the competence of the federal states. In 2007, some federal states, such as Bavaria (BayWoFG) and Baden-Wuerttemberg (LwoFG) have issued their own housing promotion legislation. As compensation for the federal financial assistance, which was overthrown by the federalism reform, the federal states receive up to 2019 annual financial support of currently 518, 2 million euros from the state on the basis of Art. 143 c GG (BMUB 2017a).promotion of housing became the competence of the federal states. In 2007, some federal states, such as Bavaria (BayWoFG) and Baden-Wuerttemberg (LwoFG) have issued their own housing promotion legislation. As compensation for the federal financial assistance, which was overthrown by the federalism reform, the federal states receive up

to 2019 annual financial support of currently 518, 2 million euros from the state on the basis of Art. 143 c GG (BMUB 2017a).

However, the legal provisions differ both from those of the state as well as from one another, particularly with regard to the income limits for Social Housing Promotion (see table 1) (WoFG 2001; BayWoFG; L-Bank 2017).

Level	Reference	Type of household	Maximum income limit (€)
Federal level	Net income	Single person household	12 000
		Two-person household	18 000
		Every additional person	4 100
		Every additional child	500
State Level			
Baden-Württemberg (e.g. Heidelberg)	Gross income	Single person household	47 600
		Two-person household	47 600
		Three-person household	56 600
		Four-person household	65 600
		Five-person household	74 600
		Every additional person	9 000
Bavaria (e.g. Munich)	Net income	Single person household	19 000
		Two-person household	29 000
		Every additional person	6 500
		Every additional child	1 000

Table 1 – Maximum income limits for the Social Housing Promotion

All persons living in Germany are entitled to housing subsidies if they comply with the legal requirements, such as the observance of the maximum income limits (WoGG). There are no entitlements to housing subsidies for recipients of transfer payments, such as unemployment benefit or income support under. The housing subsidy is calculated based on the household income, the number of household members to be considered and the monthly rent. By means of a reform, the housing subsidy increased since January 1, 2016. For the first time, housing subsidy have also become an alternative to basic insurance for low-income households (BMUB 2017b).

According to the Federal Statistical Office, the number of people receiving housing subsidies has declined in recent years. In 2005, a total of 810,864 households received the financial support, compared to only 460,080 households in 2015. In 2010, the number of supported households reached a peak of 1,061,487. Reasons for the fluctuations to be observed are, on the one hand, the reforms that have come into force over the years and, on the other, economic trends, such as the development of the unemployment rate (Destatis 2017a). In addition to the granting of a rental subsidy, many major German cities award residential certificates. With this certificate or permission a person/household is allowed to move into a publicly subsidized apartment at a fixed rental price. These two types of funding are granted to the tenant and are tied to the person and not to the apartment. It is a so called "subject promotion".

In addition to the promotion of the subject (the person itself stands in focus of subsidies), object promotion exists. The city acquires the right to rent the apartment to a legitimate person at a fixed rent and also determines who can move into this social apartment. For this purpose, the landlord receives a financial compensation by paying the difference to the usual comparison rent. However, the number of occupancy controlled flats is currently declining in Germany. In the past two decades, few new social apartments have been built or the occupancy renewed due to unattractive funding conditions for investors. Because of the negative population forecasts in the last years, the Social Housing Promotion was not focused by the politics. New construction activities especially in the lower price segment, was not considered necessary. The number of newly built social apartments was 24,550 in 2015. According to the report of the Committee on Urban Development, Building and Housing of the Federal Government and the federal states, the number of all new built apartments increased by 10,000 in 2016 compared to 2015. In addition to the new building, a large number of modernization measures were supported by the Social Housing Promotion.

Due to the currently low interest rate level, social housing promotion is currently still very unattractive for investors. However, there are other ways to convince investors to build or rehabilitate occupational dwellings. In urban development contracts, for example, a share of subsidized housing on the total housing stock or the assumption of social infrastructure costs can be agreed. Some German large cities, including Munich (SoBoN), have developed so-called building land models, which contain specifications

and quotas which are binding for every investor in the case of a building lease (Drixler et al., 2014). In addition to income, expenditure plays a decisive role in the establishment of funding programs.

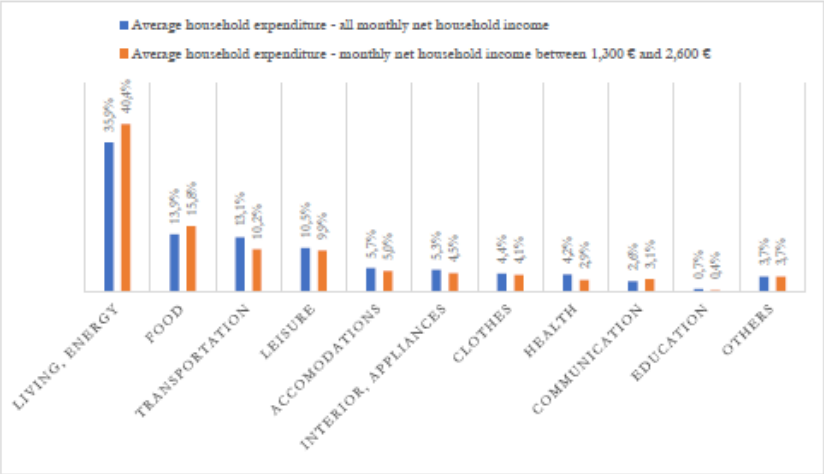

Figure 1 – Average household expenditure in Germany 2015 (Destatis 2017b)

Figure 1 shows the average household expenditure of a German household. The largest share, 35.9%, is spent on housing, energy and maintenance. Looking at the same graph for households with an average net income of 1,300 to 2,600 euros per month, the figure is 40.4% (Destatis 2017b). The lower the budget income, the higher the expenditure on housing. In contrast, the available living space decreases the lower the income is. In 2014, a low-income household lived on around 48 sqm, while a household with a medium-income had around 64 sqm, and a high-income household had a living space of around 89 sqm (BMAS 2017).

Due to the increase in refugee numbers, the situation in the large cities has become even more acute. The number of asylum applications filed in Germany has multiplied in the years 2014 to 2016. In 2013 a total of 127,023 applications for asylum were submitted, in 2014 202,834, in 2015 476,649 and in 2016 even 745,545 (BAMF 2016). All these additional people need living space. Because of the regulation, that everyone in Germany and also in Europe can decide where he or she wants to live, it is not possible to lead the development.

1.2 SWEDEN IN COMPARISON TO GERMANY

In Sweden, the quota of ownerships is with 70.6% higher than in Germany (51.9%, Statista.com 2017). The population is only a bit more than one tenth of Germany (9.8 Mio. people, Eurostat 2017), with a population density of 24.06 inhabitants per sqkm. Nearly half of the population lives in urban areas, while not less than one tenth lives in rural areas (see figure 2).

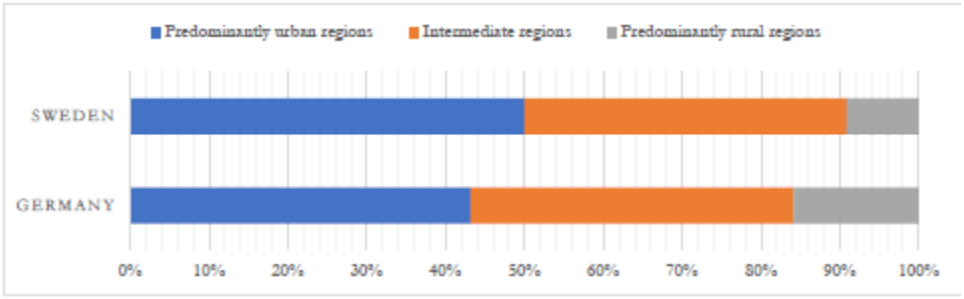

Figure 2 – Proportion of regional structure in Sweden and Germany 2015 (Statista.com 2017)

In Sweden, the quota of housing cost overburden rate is in cities 9.5% and towns and suburbs 6.5% and thus smaller than in Germany with 19.1% and 14.5% in cities and towns and suburbs, respectively.

Otherwise, the overcrowding rate is higher in Sweden than Germany: in cities, it lies at 18.7% and in towns and suburbs at 10.5% (Germany: 5.6% in both regions).

Housing prices have risen over 50% in Sweden from 2010 to 2016 (Germany less than 30% in the same period; Eurostat 2017). Summarizing it can be stated, that both countries are affected by a pressure at housing market in the cities and also in towns and suburbs.

Households with incomes above the maximum limits defined by the federal government or the federal states and thus are not entitled to a financial support or a residence permit have difficulties to find appropriate and affordable housing in many growing German and also Swedish cities. Due to the changed conditions, legal requirements at the federal and state level are no longer sufficient. The municipalities have the possibility to substantiate the specifications more precisely, to adapt them to their local conditions and to concretize them. The German promotional landscape has a long tradition and is much more differentiated than in Sweden. Particularly with regard to legal regulations at state level. One reason for this is the Federalism Reform, implemented in Germany in 2006, which enabled the federal states to have their own competencies in legislation. In contrast, in Sweden, all legal decisions are taken at the level of the federal government and thus do not permit specialization in regional peculiarities.affordable housing in many growing German and also Swedish cities. Due to the changed conditions, legal requirements at the federal and state level are no longer sufficient. The municipalities have the possibility to substantiate the specifications more precisely, to adapt them to their local conditions and to concretize them. The German promotional landscape has a long tradition and is much more differentiated than in Sweden. Particularly with regard to legal regulations at state level. One reason for this is the Federalism Reform, implemented in Germany in 2006, which enabled the federal states to have their own competencies in legislation. In contrast, in Sweden, all legal decisions are taken at the level of the federal government and thus do not permit specialization in regional peculiarities.

2 IMPLEMENTATION AND REALISATION OF AFFORDABLE HOUSING

At the moment there is also a gap in the supply of households between "poor" and "rich" in Germany and in Sweden. At this point, there is a need for action in the municipalities. A number of German and Swedish cities have already launched municipal promotion programs and have successfully applied them. Including, for example, the cities of Munich and Heidelberg in Germany, as well as the cities of Gothenburg and Stockholm in Sweden, the further course will be considered more closely. All cities have a high pressure in housing market in common. Munich is the city with highest rental and purchase prices in Germany. Heidelberg in contrast to Munich is significantly smaller, but has similar big problems providing affordable housing. The Swedish cities Stockholm and Gothenburg are chosen because of their problems within providing affordable housing, as well. Stockholm is the biggest cities and capital of Sweden, Gothenburg as second biggest city started a first pilot project for affordable housing.

2.1 THE CITIES OF MUNICH AND HEIDELBERG (GERMANY)

In the state capital of Munich, a building land decision has been taken into place in 1994, the so-called Socially Responsible Land Use (SoBoN). By means of this decision, developers and investors share the costs and burdens of municipal land-use planning and are obliged to establish a defined amount of occupancy-related housing. In addition, the city of Munich supports, with the so-called "Munich model", middle-income households as well as families with children, so that they can finance a rented apartment within the city limits. The income limits of the Bavarian Housing Promotion Act are the basis for the approval. Another communal housing construction program is the housing policy program “Wohnen in München” (Living in Munich), which is currently being updated for the sixth time and is valid until 2021. One of the focal points is, for example, raising the income limit to increase the number of eligible households to 50–60% of all households (Stadt München 2017a). A current project, which contributes to the urban development goals, pursued by the state capital Munich, is the new urban district “Prinz-Eugen-Park”. On the site of the former Prince Eugene barracks, in the east of the city of Munich, a new residential quarter is going to be built on a 30-hectare site. In 2014, the planning of around 1,800 new apartments, of which 50% are publicly subsidized apartments, started. Construction began in 2017. The first inhabitants

are able to move in by 2018. In addition to the municipal housing associations GWG and Gewofag, cooperatives as well as free developers are involved in the realization (Stadt München 2017b).

The city of Heidelberg promotes, apart from the residential property and rented housing for transfer beneficiaries, rented housing for "threshold houses". This subsidy is explicitly aimed at households whose income is higher than the limits for obtaining a residence permit. The funding amounts to a maximum of two euros per square meter of living space per month. For the “Bahnstadt”, a district newly built on old unused railway surfaces, a special program was approved. The main focus of the support is on young families. Rental allowances, as well as loans are granted for the formation of property. The promotion is, like the social housing promotion, also income-dependent. In addition to the “Bahnstadt”, new residential districts are currently being built on formerly military surfaces, so-called conversion areas. One concept envisages providing at least 70% of the housing stock to different users and income groups at low cost. 30% of these dwellings are to be used as condominium for threshold households (Stadt Heidelberg 2017).

2.2 THE CITIES OF STOCKHOLM AND GOTHENBURG (SWEDEN)

Reaction on the pressure on housing market and rising rental and purchase price was the formulation of building new stocks. Since 2014, Sweden has the goal of constructing 250,000 new flats by 2020. Stockholm’s construction aim was set to 8,000 units per year, and Gothenburg’s to 3,000–5,000 units per year. That meant a doubling of construction from present levels. The goals are not accompanied with a clearly defined plan, how to achieve the aims, only rental apartments, low-cost units in particular, should be prioritized. In Gothenburg, some projects will be promoted by reduced land prices. Also, the municipal housing companies have been taught to expand construction projects in order to supply 20–30% of the planned new units (Granath Hansson 2017)

As well Stockholm as Gothenburg own nearly 70–80% of the buildable land (Caesar 2015) and thus dominate the land market. Direct allocation is the main land allocation method: The cities can choose the developer they want and negotiate the conditions with them (Caesar 2015). A lack of transparency and clear price-setting methods are assumed of limiting and distorting competition in housing development, e.g. as they might shut out small and/or new players who lack contacts and insight into the process. This process is accompanied by the fact, that the price of land is estimated by internal valuations made by city employees, so the land market is very dependent on city land policy (Granath Hansson 2017).

Neither Stockholm nor Gothenburg has a subsidy program. Beneath, non-profits are almost not existent in Sweden. Even the Swedish municipal housing companies are expected to act on market-like terms. In Gothenburg, a first social housing project has been initiated with the aim to create 25% low-rent and 25% mid-rent apartments in a new development project. No investment subsidies are provided to the mainly public developers, but incentives in the form of low land prices, high acceptable rents in the remaining 50% of units, and promises regarding construction volume have been made. The project can be seen as a pilot project (Granath Hansson 2017).

3 CONCLUSIONS

In Germany there are currently more instruments available to support and promote affordable housing than in Sweden. One reason for this is, without a doubt, the higher proportion of people living in Germany. The large number of established programs is evident at land level, and particularly at municipal level. Both object and subject support are operated, which is generally considered to be positive. Nevertheless, Germany has not yet reached an optimal status quo. In order to tackle and resolve the challenges of the "affordable housing" more quickly and in a more focused way, it is necessary to improve the awareness of the problem (in politics) and to increase the financial resources (by the federal government and the federal states). Not always desired developments and processes (on the housing market) can be smoothly controlled and regulated. Especially at the municipal level, efforts should be made to react to concrete negative developments.

On the German examples of the cities of Munich and Heidelberg, it is clear that, on the one hand, permanent instruments and programs could be established, but innovative approaches and concepts could also be highly legitimate and effective. Up to now, Sweden has only been able to draw on experience

gained from a pilot project in Gothenburg on the topic of "affordable housing" with a focus on low-income households. But here, too, new long-term insights will be gained, which can be the basis for pioneering political decisions.

For Sweden and Germany, it is noticeable that households that are most exposed to the problem of finding an affordable housing are not well-known and cannot easily be identified as an independent group of the population (in statistics). This results in a significant action (for politics and science). Only when the affected actors (households) can be clearly identified and characterized on the housing market, convincing and effective measures can be derived and applied profitably. In addition to the households, which depend largely on state aid from a financial perspective, households with low but also medium income are less and less in a position to access affordable housing. These so-called "threshold households" are described and defined differently in the literature, and can also vary widely from state to state or from municipality to municipality due to different rental price levels.

However, threshold households are indispensable for the functioning of a municipality and need to be more focused. Unfortunately, the characterization and the quantification of this group of persons represents a barrier, which has so far been difficult to overcome, since the necessary statistics on income are not, or only to a limited extent, available.

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T11 | HEALTHY AND LIVEABLE CITIES

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The achievement of healthy and liveable cities is related to the development of the best practices not only on the health promotion, but also on the promotion of more inclusive cities. Urban problems such as: social and economic exclusion, poor air quality, traffic congestion, waste production, industrial emissions etc. faced by elected officials and urban managers are marked by strong social and territorial disparities as result of a multidimensional set of factors. In this context, public health policy changed from a focus on the disease to a more holistic and, at same time, territorialized perspective.

Since 1986, when the World Health Organization launched the Healthy Cities movement, policy and planning for healthy cities was centred on urban poverty, inclusion, participatory governance, as well as on social, economic and environment determinants of health.

In the more recent period, the increasing concern about creating healthier and more liveable cities in the political agenda is grounded on a sense of urgency and an ever more participative intervention and demands of different stakeholders. Policy actions and spatial interventions in areas like urban mobility, climate change, urban regeneration, resource use, health care, waste management, food systems, social inclusion or economic development, among others, are efforts that generally contribute to some effective improvements. EU is strongly supporting these actions and initiatives, especially integrative and innovative solutions in urban planning, technology, food systems and transportation through different formal and informal agreements, institutions and projects funding. However, the issue is also of contextual nature and strongly rooted in the values of particular city dwellers and economic actors and their capacity to change mind-sets and behaviour regarding urban production, consumption and living in general. It is believed that contextualising and building a long-term common purpose and co-responsibility among different stakeholders in pluralistic arenas will enable evolution of incremental improvements to a systematic change. In this aspect, the Track strongly relates to the Congress' theme: Spaces of Dialog for Places of Dignity: Fostering the European Dimension of Planning.

Finally, we encourage the presentation of papers focused on the discussion and presentation of initiatives and best practices for promoting and improving health and livability in our cities. We would also like to invite academics and practitioners to share critical and constructive, as well as normative and contextual perspectives about the extent of their possible replicability.

ID 1359 | THE RIGHT PATH TO HEALTH: THE WALKABILITY OF A EUROPEAN MEDIUM SIZED CITY CALLED GUIMARÃES

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ABSTRACT: The relationship between the act of walking and city space has been over the years object of numerous approaches both by academics and researchers. Nowadays there is an increase in empirical research, above all from areas such as public health, urban planning and transportation, that results from the application of measurement instruments both of the built environment (BE) and of walking, understood here as a form of physical activity (PA) with recognised benefits for health. The exploration of the BE-PA relationship is based on validated instruments that seek to clarify this equation. Developed in countries like USA, Canada or Australia these are less common in the European context. This paper intends to demonstrate that the combined use of information resulting from spatial audits and population surveys are important tools in the planning of proximity of medium sized cities like the case study, Guimarães, thus incorporating the human dimension in the planning process as advocated by Jan Gehl. The measurement instruments developed in recent years are diversified, containing objective and subjective measures. This research was based on the following BE audit tools: the Systematic Pedestrian and Cycling Environmental Scan; the Analytic Audit Tool; the Irvine-Minnesota Inventory; the Measurement Instrument for Urban Design Qualities; the Pedestrian Environment Data Scan; and the Microscale Audit of Pedestrian Streetscapes; incorporating too, the urban elements referred by Gehl. Despite the study aim focus on the development and confirmation of objective measures, two subjective tools were observed: the Neighborhood Environment Walkability Scale because is the most used internationally; and the Assessing Levels of Physical Activity for being that developed for the evaluation of environments for PA in Europe. In these studies, PA is usually measured using internationally validated questionnaires, such as the International Physical Activity Questionnaire (IPAQ). Thus, after identifying the city areas according to their degree of walkability, assessment tools of the variables to be explored were applied. So, a new audit tool was developed having as reference the above mentioned ones, Gehl theories, and the urban context found. With regards the inhabitants survey, PA evaluation questions were based on IPAQ, being reformulated to better understanding by respondents. Given the relatively small scale of the city of Guimarães respondents were asked to indicate on a map appended to the survey the routes they made to six utilitarian destinations and six leisure destinations in order to assess both transportation and leisure walking. The routes made by the subjects were mapped and correct destinations identified, being that, their features were evaluated according to the items of the developed audit tool. The assessments were made using CAD surveys, orthophotomaps, Google Street View and by direct observation through site visits. The developed audit tool presents itself as an instrument that can be easily replicated in similar contexts. Data collected allow the analysis of the correlation between spatial variables, reported walking levels and health indicators, thus identifying the elements that have the greatest relevance in this equation.

KEYWORDS: built environment; physical activity; health; spatial audit tool; inhabitant survey.

1 INTRODUCTION

Population's health has been from long an important issue for urban planners. Since epidemiological evidences relating sedentary lifestyles with an increase in non-communicable diseases, i.e. chronic diseases, appeared in the 70's and 80's of the 20th century, that physical activity (PA) and its relationship with the built environment (BE) has become a subject for different areas of knowledge such as, urban planning, transportation, public health or exercise science and physical activity (Sallis et al. 2004).

Walking, being a moderate form of PA, can help tackle one of the most burdensome problems in today's society if included in people's daily activities. So, in recent years, and informed by the BE-PA research, the walking environment has regained interest, walkability research became pertinent and urban design theories have been enlightened by scientific evidences. So, measurement instruments of both walking and

the BE appeared as valuable tools of evidence-based urban planning and, to some extent, determinant means of a conscious city healthy plan.

One of the European countries were physical inactivity is more worrisome is Portugal; 64% of Portuguese never exercise and 55% who said that had walked for at least 10 continuous minutes in the last 7 days reported having walked in total 30 minutes or less (EC, 2014). Thus, a high percentage of the Portuguese population do not accomplish the recommended levels of daily PA. Despite that, a huge effort has been made in the last decades by Portuguese municipalities to improve walkability conditions in urban areas. So, it is relevant to understand if, to higher levels of urban quality and walkability conditions correspond, better health behaviours.

In what regards the case study, it is important to know if a municipality like Guimarães, recognised as an example of good urban design practices, shows an increase in the overall walking habits and consequently in the health of its inhabitants. Therefore, this paper refers to an evidence-based research carried out in this social and urban context where, to measure PA levels and BE influences, multidisciplinary assessment methods were developed. Its main objective is to clarify what are the most relevant elements of the BE that affect PA levels, if the macro-scale features, as has been recognise in the literature, or, if instead, the streetscape elements appear as having more weight. Being its main purpose to produce evidences that inform the design and planning of healthy urban environments.

2 BACKGROUND

Assessment methods of BE and PA are important instruments on the planning process of healthy urban environments. The most commonly used instruments are those derived from subjective evaluations either from BE or from PA assessed by questionnaires. Objective measures of the BE, can be derived from spatial audits or result from the insertion of large amounts of data (e.g. census data) into Geographic Information Systems (GIS) (Brownson et al. 2009); whereas those from PA, come from detailed measures from pedometer, accelerometer, among others, being GPS also used to relate behaviour with environment, being sometimes, the information collected, also inserted into GIS.

Subjective assessed BE elements can range from land-use-mix or aesthetic to safety from crime and traffic (Brownson et al. 2009). Objectively assessed features inserted in GIS are mainly the three components of walkability indexes or the 3D's, density, diversity and design, that is residential density, land-use-mix and street connectivity, being distance to transit and destination accessibility less frequent (Cervero and Kockelman, 1997; Ewing and Cervero, 2010). Also considered as objective are the ones resulting from spatial audits, despite that, some of them, depend on individual evaluations from the technicians that perform the audit, being considered as subjective, like e.g. the feeling of safety or the pleasurable character of the environment towards walking (Brownson et al. 2009). The most common audited elements are those from the streetscape like, number of elements of street furniture, trees and lightening, land uses (i.e. commercial, residential), sidewalk coverage, street maintenance, existence of public spaces and recreational facilities, safety from traffic and crime, architecture and aesthetic appeal, among others (Brownson et al. 2009). Less measured are e.g. the numbers of people per street segment, level of noise, existence of dogs nearby, among others (Brownson et al. 2009).

There are several international validated instruments to assess the BE for PA. Those that are subjective are e.g. the Neighborhood Environment Walkability Scale (NEWS) (Saelens et al. 2003) or the Assessing Levels of Physical Activity (ALPHA) (Spittaels et al. 2009). Instruments that objectively assess the BE can be, at a larger scale, the GIS, and at a smaller scale, several audit tools as e.g.: the Systematic Pedestrian and Cycling Environmental Scan (SPACES) (Pikora et al. 2002); the Analytic Audit Tool (AAT) (Brownson et al. 2004); the most long the Irvine-Minnesota Inventory (IMI) (Boarnet et al. 2006); the one that attributes greater importance to the perceptual qualities of urban design the Measurement Instrument for Urban Design Qualities (MIUDQ) (Ewing et al. 2006); the pragmatic Pedestrian Environment Data Scan (PEDS) (Clifton et al. 2006); and the most recent and the one that embodies critically the features of the precedents the Microscale Audit of Pedestrian Streetscapes (MAPS) (Millstein et al. 2013).

In these studies, PA is usually classified by different domains, like: transportation walking, leisure walking or total walking; transportation cycling, leisure cycling or total cycling; active transportation (AT), being considered as walking and cycling for transportation; Moderate-to-Vigorous Physical Activity (MVPA);

Leisure-Time Physical Activity, among others. The International Physical Activity Questionnaire (IPAQ) (Booth, 2000) is one of the most used assessment documents for the PA internationally.

More recently, also in use, are mobile phones apps. These tools allow to geo-reference in space and in real-time PA. Access to social networking platforms like those from e.g. MapMyRun (Adlakha et al. 2014) or MapMyFitness (Hirsch et al. 2014) are also important tools, these provide large amounts of information on PA habits, permitting to revise the behaviour and relate it to the physical context. Another tool in use is the SenseCam, this is a wearable camera that each individual can transport, which permits to collect and contextualise e.g. AT of subjects (Oliver et al. 2013). Although these tools present considerable advantages, there is still a lot of difficulties in analysing the large amounts of data resulting from this kind of approaches.

GIS assessments rely on data previously collected and audits are made by in loco assessment or through Google Street View, since this has been validated as a reliable instrument for auditing streets environments (Rundle et al. 2011). Subjective assessments either from the BE or from PA are made by online, mail, telephone or face-to-face interviews. The use, in a study, of tools that generate objective measures of the BE and subjective measures of PA, has been considered as the ones that produce statistically the stronger associations, this is due to the fact that, when the BE is measured objectively less assessment errors are made, and when the PA is reported its different domains are better dissociated from each other (Ding et al. 2011). This is the case of the study here presented.

3 METHODS

First, we computed a GIS walkability map (developed elsewhere) to assess the macro-scale urban features (i.e. intersection density, slope, residential density, and land-use-mix) of the all county, city centre and centre parishes. The composed map results from the application of the equation: walkability = [(2 x intersection density) + (2 x slope) + (residential density) + (land-use-mix)] / 6. We chose 8 neighbourhoods to be studied, 4 that present a high walkability level and 4 with a low walkability level. Then, through literature search on the instruments that seek to measure the BE for PA and the PA itself, we made a critical analysis of the ones most used internationally, related them to Jan Gehl's urban theories and observed the social and urban context of the case study, to developed two instruments that clarify the reality found and could enlighten the BE-PA relationship at the micro-scale level.

Although this research focus on the development and confirmation of objective measure, two subjective instruments were observed, the NEWS which was developed by Saelens et al. (2003) and the ALPHA build up by Spittaels et al. (2009). The NEWS, because it is the most used internationally and the ALPHA, because it is the one used for evaluations of BEs for PA in the European context.

The NEWS evaluates resident perception regarding the neighbourhood BE related to PA namely: residential density; land-use-mix; access to services; street connectivity; quality and presence of places to walk or cycle; neighbourhood character or aesthetics (i.e. presence of trees, shade, litter, views, interesting things to look at like buildings and natural sights); safety from crime and traffic; and general neighbourhood satisfaction (Saelens et al. 2003).

The ALPHA has a similar structure to the prior, the NEWS, assessing: residential density; access to local facilities; quality and presence of places to walk or cycle; safety from crime and traffic; neighbourhood pleasantness for walk and/or cycle; street connectivity; and home, work and school environment (Spittaels et al. 2009). This tool focus both on the walking but also on the cycling environment which is an activity with more expression in Europe than in the USA, Canada or Australia (where the NEWS is more applied) and has as an advantage the fact that, in addition to neighbourhood assessment, includes the home, school and workplace environment to. These two tools allows to compare results across countries with similar urban morphologies being widely applicable to large sets of population once they rely only on telephone or internet surveys.

As Brownson et al. (2009) stated, audit tools are the most interesting instruments to assess the quality, appearance and sensations of a particular environment, since they rely on direct observation and their results can be easily translated into urban design directives. So, in addition to the subjective instruments referred, the NEWS and the ALPHA, several objective tools were compared, so the most used and

operationalised audit instruments reviewed were the above mentioned ones, the SPACES, the AAT, the IMI, the MIUDQ, the PEDS, and the MAPS. The choice lies in these, because they represent a complete sampling of what it is most used in this research field.

The SPACES was developed having as reference the Australian context and it is organised in four sections: the type of buildings/features; the walking and cycling paths; the street assessment; and the overall assessment (Pikora et al. 2002). It is a short and practical direct observation instrument that was designed to assess the road and its surroundings (Pikora et al. 2002; Lee and Talen, 2014).

The AAT assess land use environment, transportation environment, facilities, aesthetics, signage, and the social environment (Brownson et al. 2004). Including more items than SPACES was however developed to be easily applied in the field, being the average time spent per street segment of around ten minutes (Day, 2007). The AAT is specially adapted to capture information on BE features related to the transportation environment and land uses (Brownson et al. 2004).

The IMI is the most long containing 162 items, which are categorised into different groups: accessibility; pleasurability; perceived safety from traffic; and perceived safety from crime (Day, 2007). It is the most detailed and permits the evaluation of both macro- and micro-scale BE features allowing to assess e.g. the street pattern of an entire area or the detailed scale of a street environment (Lee and Talen, 2014, p.373).

As Lee and Talen (2014) postulate, quantitative measures tend to omit qualitative factors. There is where the MUIDQ audit tool fits. Based upon human behaviour research and on the work of urban design theorists like, Camillo Sitte, Kevin Lynch, Gordon Cullen, Jane Jacobs, Christopher Alexander, Jan Gehl, William H. Whyte, Amos Rapoport and others, the MIUDQ measures the levels of five qualities of space: imageability; visual enclosure; human scale; transparency; and complexity (Ewing et al. 2006). It seeks to measure subjective qualities of spaces through an objective method.

The PEDS was created for the United States reality and is based on the SPACES. The elements that are measured are grouped in the following: environment; pedestrian facility; road attributes; and walking and cycling environment (Clifton et al. 2006). It was developed to measure the physical environments, natural and built, related to walking (Clifton et al. 2006).

The MAPS (Millstein et al. 2013), and because it is more recent, tries to include both the teachings from urban design theories and the scientific evidence resulting from the application of the referred audit tools. It is based on the AAT and it measures: street design; transit stops; sidewalk qualities; street crossing amenities; and features impacting aesthetics (Cain et al. 2014). It was created to fill a gap in the literature, being appropriated to the measurement of the micro-scale features, measures considered as less explored than macro-scale ones. The MAPS include a short version, the MAPS mini version, with only 15 items.

Thus, we have: the identical SPACES and PEDS, easy to apply tools with reduced number of items; the AAT and the MAPS that assess similar features like land uses and transport related elements, being the last constructed having as reference the first; the IMI that includes the major number of items considered as the most complete; and the MIUDQ that seek to quantify the qualitative aspects of the urban design of street environments.

As stated, besides of the critical analyses of the referred audit tools, Jan Gehl's urban theories were also considered in order to compute the new assessment instrument. Jan Gehl in his book, “Cities for People” (2010), says: “A city that invites people to walk must by definition have a reasonably cohesive structure that offers short walking distances, attractive public spaces and a variation of urban functions” (Gehl, 2010, p.6); which can be translated into some parameters like, good density, high street connectivity, being aesthetically appealing and pleasant (i.e. beautiful architecture, presence of public art, existence of interesting urban furniture, having different things to look at, well design details, views, among others) and a mixed land use. Another of his postulates, is the importance given to the human dimension, which to him, is a key element of a good city planning (Gehl, 2010). Thus, the author points as important factors when planning a human scaled urban space, safety, protection, reasonable dimensions, urban furniture and visual quality (Gehl, 2010). Translating this to measurable features we have, traffic and crime safety (i.e. number of traffic signs and number of street lamps), elements that protect from climate conditions like trees and on-street shadings, dimension of different elements, street furniture and aesthetics. The author points also as deterrents of walking small sidewalk width, level of hindrance (i.e. number of elements at the sidewalk that function like opponents, disturbing walking activities), and time spent at crossings (Gehl,

2010, p.91), which were also included in the new audit being the last, measured by the existence or not of a walking sign at crossings. The author further advocates that there is no topic with greater importance to cities life than active, open and lively edges, with buildings that produce short units with many doors and carefully design details at the ground-floor level (Gehl, 2010, p.88). So, from this it can also be taken another lesson which can be included as some measurable feature like: number of doors, percentage of façade with greater transparency, and aesthetics. The author also points as important the number of people observed, level of noise, existence of places to sit and open views (Gehl, 2010). Whereas that in the case study some of the above mentioned features like, crime rate or level of noise were not determinant, and once the city in question does not present high levels of them, being not alarming, these were not included. In what concern the number of people per street, this was not included as one of the features because, it is beyond the scope of the case study here presented. Places to sit and existence of open views were also included. Many other things could be extracted from Jan Gehl's urban lively places theories but, as Zook et al. allege, there is a difference between places and features that support walking and those that lead to a sense of urban liveliness (Zook et al. 2012, p.216).

In addition, the urban context of the place to be studied is of great relevance when constructing a specific audit tool. Guimarães is a city located in the northwest of Continental Portugal that belongs to the Ave region, has an area of 240,955 km2 of which 2,6 km2 are green areas, with a population of about 158 124 inhabitants dispersed by 48 parishes being its population density of 656 inhabitants per km2 (CMG, 2017). The district is characterised by having a small centre and periphery with intense urbanisation and diffuse industrialisation developed along the valleys, road and rail system (Domingues, 2006). Its historical centre has been classified as Cultural Heritage of Humanity in 2001, the city was European Capital of Culture in 2012 and European City of Sport in 2013, because of that, along the years, many improvements in its streets, public spaces and buildings have been made both in the city centre and in the periphery, but in this last area much is still to be done. Thus, the city of Guimarães can be characterised as, having a centre relatively small, with streets and public places of great interest, its spaces can be characterised as presenting human scale, with outskirts with low levels of urban design quality, bad accesses and lack of basic infrastructures like sidewalks. So, the developed audit tool should be able to assess areas with diverse urban qualities, and above all, that are related to the propensity to walk.

Beyond space, the behaviour must be assessed to, in order to relate it with the features of the physical environment. The most commonly used instrument to assess different domains and levels of PA is the IPAQ (Booth, 2000). So, and in what concerns the inhabitant survey, the IPAQ questions were criticised and reformulated to better understanding by subjects. The IPAQ questions that were rewrite were those used to measure transportation walking, leisure walking and MVPA, leisure and work related (for more details on the IPAQ see, telephone and self-administer, long and short version in Booth, 2000). The inhabitant's surveys is also structured to collect information about socio-demographic variables, physical inactivity related diseases, subjects evaluation about Guimarães spaces and its qualities to contain walking, and routes made to six utilitarian and six leisure destinations by having a map appended to the questionnaire form.

4 RESULTS

The developed audit instrument, is divided in three parts, street segments, crossings and geographical area, is characterised as being short and practical and widely applicable, has its roots in the most recent audit tools, in the urban design theories and on the context of a specific environment which is typical of settlements from the diffuse urbanisation of the European countries, and its items, disposed by six groups which are, land use, sidewalks, traffic, structures and natural elements, distinctive architecture and public art, physical disqualification, and crossings, are these; 1) percentage of buildings per street segment with active uses at the ground-floor level; 2) percentage of street segment with sidewalk; 3) width of the major part of the sidewalk; 4) percentage of sidewalk damaged per street segment (or that has no sidewalk) 5) percentage of hindrance per street segment (or that has no sidewalk) 6) percentage of street segment that is covered by trees, awnings, or built structures; 7) how many lighting elements are present; 8) how many benches or other places to seat exists (including bus stops benches); 9) how many doors are present; 10) how many elements of urban furniture are present (including planter boxes); 11) what is the average height of buildings in this side of the sidewalk; 12) how many transit stops are present; 13) how many elements of traffic control are there (such as signs, traffic lights, on-street bumps); 14) the street is predominantly of three, two, one, or zero traffic lanes (pedestrian); 15) how many open views do you

observe for each side of the segment; 16) how many public spaces are present (e.g. parks, squares, gardens); 17) how many street trees are present; 18) how many public art elements are present; 19) percentage of distinctive buildings (distinctive, cultural or historical buildings, and landmarks); 20) what is the proportion of street segment that has windows on the ground-floor within a 15 meter of the sidewalk (or the street if there is no sidewalk); 21) what is the percentage of buildings and outdoor spaces that are not well maintained (e.g. presence of vacant lots, abandoned buildings, garbage, graffiti, broken windows, abandoned cars et al.); 22) how many pedestrian walk signals are present; 23) how many crosswalks are present; 24) how many sidewalk ramps are present. There are also seven items that assess the macro level features of the area in which the subjects lives that are: 25) walkability classification; 26) connectivity classification; 27) slope classification; 28) land-use-mix classification; 29) residential density classification; 30) number of street segments by routes; 31) number of crossings by routes. Thus, in total the audit tool has 31 items.

In what regards the inhabitants survey the questions proposed are: 1) do you walk during the week for at least 10 continuous minutes; 2) In the days that you walk, how many days of the week did you walk for transportation purpose (e.g. to do errands, go to work or school, go shopping, …), and how many days of the week do you walk for leisure; 3) how much time did you spent walking for transportation purpose; 4) how much time did you spent walking for leisure purpose; 5) how many days of a week did you practice physical activity or any activity that makes you sweat or increase your heart rate (e.g. playing any sport, dance, take care of the garden, do the housework, carry heavy weights) for at least 10 continuous minutes (please do not include walking); 6) in the days that you practice those activities how many time did you spent per day; 7) in Guimarães where did you walk most frequently; 8) do you go by foot to any of these destinations. Can you indicate the route that you make on the map; 9) which place do you like the most to walk in Guimarães, and why; 10) do you usually walk in another city, where and why; 11) what is your weight and height; 12) gender; 13) what is your professional status; 14) what is your education level; 15) do you have any of these diseases; 16) what is your age. Attached to the questions listed above the tool has also an appendix, an A3 map of the all city centre and its periphery neighbourhoods (the areas chosen according to their degree of walkability classified as high walkable or low walkable). The possible answers to the above questions are: 1) yes/no; 2) days per week for transport/days per week for leisure; 3) hours and minutes; 4) hours and minutes; 5) days per week; 6) hours and minutes; 7) neighbourhood/city centre/public park/other; 8) multiple answer school/work/supermarket/ grocery store/ market/pharmacy/... and other, and park/square/garden/gymnasium/coffee shop/restaurant/... and other; 9) free answer; 10) free answer; 11) meters/kg; 12)male/female; 13) employed/unemployed/retired/domestic/student; 14) basic/secondary/superior; 15) diabetes/ cardiovascular disease/dyslipidemia/osteoporosis/cancer/depression/other; 16) number of years. Thus, the questionnaire has 16 questions from which, two are open questions and two others are made in order to permit to geo-reference the subject's routes.

The two instruments are useful tools to assess both the BE and PA levels. Data from the two assessment tools allows the statistical analysis of the association between dependent variables (transportation walking, leisure walking, and MVPA) and independent variables e.g. those from the BE. The instruments presented have been applied to the field and the average time spent was of about 10 minutes for each. The spatial audit tool was developed in order that the assessments could be made through the computer, thus saving work time by sparing in loco visits, being possible to make the assessments at any time in any place. The units of analysis are the segment and the crossing, as is the case of the former. The inhabitant's questionnaire was developed to be appropriated to be applied in face-to-face interviews.

5 DISCUSSION AND CONCLUSIONS

It is widely accepted in this research field the use of validated instruments, above all, to permit the international comparison of results, but, the assessment tools available were not adaptable to the social and urban reality found. This is due to the fact that the majority of the existent instruments are developed in countries with social context and urban morphologies very different from the ones of the European reality of medium sized cities.

The assessment instruments constructed have their roots in urban design, transportation, urban planning, public health and physical activity research. The one that assess the BE, tries to include the most relevant elements of the walking environment of a medium sized European city. The questionnaire, seek to gather

the most important information on PA habits, behaviours, personal characteristics and opinions, in a quick toll that is easily applicable in a face-to-face interview.

The one that assess the space is influenced, above all, by the MAPS because, being this, the most recent, it contains the teachings of the former. Objectively assess the BE features instead of subjectively as is the case with the NEWS and the ALPHA, it is not so long as the IMI, it is oriented to assess the walking environment not having elements of the cycling one, like is the case of the SPACES and PEDS, because this behaviour does not have greater expression in Guimarães, it was attributed more relevance to aesthetic features than in the case of the AAT, it include some of the features that compose the MIUDQ, like percentage of ground-floor transparency, without including it in a subjective class or group, and does not include so few information like the MAPS mini version, or so many, like the case of the full version of the MAPS, allowing to develop a research without having to have a very large sample of subjects to make the statistical analysis possible and strong. Thus, the developed audit tool must meet the criterion of a short instrument in order to be possible to statistically analyse a sample of subjects not too big. The questionnaire critically evaluates the most used PA assessment tool, the IPAQ, proposing new and more easily to understand questions, assessing to, personal characteristics, behaviours, and opinions.

As the main purpose of the study is to assess the macro- and micro-scale features that affect PA levels, and as previously a walkability map was constructed and the macro features were already evaluated, the spatial audit tool proposed is ideal to assess the micro-scale elements of the streetscape. Thus, this is composed by elements of the previous audit tools referred, from some resulting from Gehl's urban theories and from the analysis of the urban context found. We search to gather in one small tool the fundamental elements of the street environment, adapting it to the urban reality of the European medium sized cities, that is why e.g. some urban forms, typical from North America, like the cul-de-sac are not present, as is the case of the MAPS.

We search to construct a small tool that includes items that can be easily assessed through the combined use of instruments like CAD surveys, orthophotomaps, and Google Street View, so it could be easily applicable. Thus, the developed audit tool is widely applicable and relevant, being small and practical in what to the field work might concern. The inhabitants survey allows the statistical analyses of the expected associations of BE and socio-demographic variables as well as those related to health i.e. PA levels, BMI and reported diseases. Thus, walkability was measured at different scales and its results were compared with behaviour and health outcomes. Through this analysis we can highlight what are the most relevant BE features of healthy urban environments if the macro- or the micro-scale as Cain et al. (2014) advocate. For a better and faster application, a tablet version with an interactive map should be developed.

Assessment methods of BE-PA equation are relevant instruments to the planning process of healthy urban places, through the developed audit tool and questionnaire we can assess the most important micro-scale urban features and related them with macro-scale ones, the behaviour and health of an entire population.

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ID 1385 | ASSESSING SPATIAL ACCESSIBILITY OF PHYSICAL FITNESS FACILITIES FOR OLDER ADULTS IN WINTER CITY: A CASE STUDY IN HARBIN, CHINA

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1 INTRODUCTION

The spatial distribution of public amenities and the spatial access to them has been a constant focus in geographical research for decades(Smoyer-Tomic et al., 2004). The government of China recognize the significance meaning of public health, the outline of the national fitness programme (2011-2015) (General Administration of Sport of China, 2011) was proposed. During the 5 years from 2011 to 2015, enormous Chinese citizen took participate in daily physical activities, however the quantity of space for physical activities always cannot meet citizen's needs. Accessibility to physical fitness facilities have received a growing attention as a public health concern in China.

There is another fact that the aging has become a more and more serious global society issue, the relevant research has pointed out that China's population of older adults might constitute a larger proportion than youngsters. They estimated that the 60-64yrs group will become the largest portion of population in 2050 and the 60 age and older might be the highest proportion of population in 2100(Banister et al., 2010, as cited in Zhang et al., 2012) . According to the national fitness report of China (General Administration of Sport of China, 2013), the aging group is the prime group who take participate in daily physical activities. Research has shown that adequate physical activities can be beneficial to older adults' health and relevant results have already showed that regular physical activity could reduce hospital admission and the mortality in chronic obstructive pulmonary disease to a certain degree(Garcia-Aymerich et al., 2006). In order to keep both mentally and physically health, it is important for older adults to do daily physical activities properly. For those older adults who live in winter cities, long and extreme cold temperature poses a major barrier to participate in daily physical activities. Poor accessibility to physical fitness facilities may lead to the decrease of frequency for older adults in winter cities. Considering this situation, the accessibility to physical fitness facilities may play an important role to keep good health of older adults in winter cities in both developing country and developed country.

Zhou et al. (2008) summarized that "spatial accessibility is a vital index in the relevant research on healthcare(Wang & Luo, 2005), job access(Wang, 2001; Wang & Monor, 2003),transport(Pooler, 1995), location analysis(Ying et al., 2006) and so on". However, there is a limitation on research related to spatial disparities by taking older adults as subjects in winter cities.

2 DATA AND METHODS

In this research, Nangang district of Harbin was take as an object to assess the accessibility of physical fitness facilities for older adults who took participate in daily physical activities. Nangang district is the most representative area of Harbin and Harbin is a typical winter city of China.

2.1 DATA

According to the equation of the two-step floating catchment area method, the data collecting was divided into 3 parts including the supply, the demand and the measurement of travel distance(Song et al., 2013). In this research, the supply part was represented by the area with physical fitness facilities, while the older adults who have the biggest potential to take participate in daily physical activity stood for the demand part. The travel distance measurement was implemented by Network Analyst of GIS 10.1 from the participant's home of older adults to the physical fitness facilities.

2.1.1 THE SUPPLY: PHYSICAL FITNESS FACILITIES

A total number of 551 areas with physical fitness facilities in Harbin has been investigated by the Harbin administration of Sport. In this investigation, Harbin administration of Sport has showed the statistic with details, they provided the most accurate and comprehensive source of the specific numbers of area with physical fitness facilities and their location in every subdistrict in 2015. In Nangang district which was the main object of this research, there were 278 areas with physical fitness facilities in this district, it can be seen that physical fitness facilities are clustered in the Nangang District (Figure 1). To well understand spatial distribution of physical fitness facilities for older adults in Nangang district of Harbin, currently each area with physical fitness facilities was geocoded in GIS 10.1. Nearest subdistrict index was calculated and density of physical fitness facilities was mapped by the implementation of kernel density estimation (Figure 5). Results of these analysis are reported below.

2.1.2 THE DEMAND: POTENTIAL OLDER ADULTS WHO TOOK PARTICIPATE IN PA IN WINTER

The study focuses on the Nangang district of Harbin which is the most important district in Harbin, the area is 116km2 with the total population of 1.27 million inhabitants. Important government agencies, organizations, CBD are gathering in Nangang district. It is also the district with the longest history in Harbin. Nangang district was divided into 18 subdistrict（Figure 2）. There are no more data for a smaller scale because subdistrict is the minimum research unit for demographic data, subdistrict was taken as the research unit in this study. Based on the data from the Sixth Population Census of China (the most recent census), the population of age over 60 is 235280 with the percentage of 18.54% and the population of age over 65 is 156520 with the percentage of 12.33%. Considering the definition of aging society by UNESCO, the issue of aging society becomes increasingly pressing.

To obtain more details about the demand, self- administrated questionnaires were applied in order to acquire basic information of older adults doing daily physical activity in the winter of winter cities in detail. 400 participants with 272 valid questionnaires were accomplished online. According to the result of self-administrated questionnaire, young elderly whose age in 60-69 has the biggest potential to take participate into the daily physical activity in winter among the older adults, with the percentage of 68.75%. In this research, young elderly (age in 60-69) was taken as the object for this research to represent the older adults group. The density of older adults who took part in daily activity in each catchment area varies differently (Figure 7).

Figure 1 - Location of area with physical fitness facilities Figure 2 - Subdistricts of Nangang

2.1.3 MEASURING TRAVEL DISTANCE

One of the most important parameters in spatial accessibility is the measuring of distance between the supply and the demand locations(Ngui & Vanasse, 2012). Measures including counting the number of facilities contained within census tract (Luo, 2004) to computing the number of facilities inside a given Euclidean or travel-time distance of demand location(Apparicio et al., 2008; Lovett et al., 2002) has already been implemented in GIS. In this research, based on the function of Network analyst of Geological Information System (GIS), Origination Destination was applied to measure the shortest travel distance(Radke & Mu, 2000) considering the scale of data resource. By using this analyst, the travel distance is measured based on the road system of city which can provide more accurate distance from participants' home to areas with physical fitness facilities. The road system of Nangang district is download by the Baidu Map form the internet (Baidu Map is the most accurate internet map of China). According to the results of questionnaires, since older adults mostly prefer walking time less than 15minutes, 3 thresholds of travel distance(time) were selected based on the walking speed of young elderly with 83.7m/min (Bohannon, 1997), which were distance of 5-minute, 10-minute and 15-minute walking distance.

2.2 METHODS

In this research, self-administrated questionnaire and two-step floating catchment area method were both implemented in order to assess the spatial accessibility of areas with physical fitness facilities.

2.2.1 SELF- ADMINISTRATED QUESTIONNAIRE

This self–administrated questionnaire was accomplished online from 2016.12.7 to 2017.1.17, there were a total accumulation of 400 questionnaires to 272 valid samples were collected with the 68% effective rate. Self-administrated questionnaire was generally used in health and health services' investigation(Bowling, n.d.,2001). Self-administrated questionnaire was applied in this research because self-administrated questionnaire could get more subjective responses than interview or other method of questionnaire in order to avoid exaggerated positive results in research of health-related questions like quality of life, engaging in behaviours and activities and so on(Presser & Stinson, 1998; Tourangeau et al., 1997; Vuillemin et al., 2000; Weinberger et al., 1996). In addition, doing selfadministrated questionnaire online can provide a more convenient access for interviewees to accomplish the questionnaire at any location in any time. In this research, self- administrated questionnaires were accomplished with the purpose of finding which group of older adults have the biggest potential of joining in daily physical activities and what characters of PA behaviors they have in the winter of the winter city. Since this study was focused on the

older adults of winter city, all interviewees were chosen in areas with physical fitness facilities of Nangang district randomly with the age over 60. Questions in the questionnaire were focused on acquiring basic information like where and when they chose to do daily PA, what is the average frequency and the time span of daily PA. The maximum length of time span from home to an area with physical fitness facilities by specific mode of transportation which is one of the most important parameters of the 2SFCA method was also collected. In addition, the disparity of PA behaviors' seasonal characters, especially in summer and winter was considered.

2.2.2 TWO-STEP FLOATING CATCHMENT AREA METHOD

The spatial distribution of public amenities within cities and the access to these amenities have been a central focus in much geographical research (Smoyer-Tomic, 2004). Assessing the spatial accessibility is vital to the allocation of public infrastructure. The government generally take spatial accessibility as one of the prime principles of public service distribution. Quantitative measures of evaluating spatial accessibility has been applied, including buffer zone method, minimum distance method, travel cost method(TCM). In this study, 2SFCA method was implemented because it need to take both the supply and the demand into consideration. In this research, 18 subdistrict was taken as the research object combining with the population of older adults who have the biggest potential to be participants of daily PA.

The first step, searching all population of locations k (demand location k) for each area with physical fitness facilities j within the threshold of travel time d0 from the catchment area j (area with physical fitness facilities j). Summing up R j which is the supply-to-demand ratio within this catchment area(Radke & Mu, 2000):

$$R\ j = \frac{S\ j}{\sum_{ke\{dkj \le d0\}} D\ k}$$

For the next step, searching each area with physical fitness facilities j (supply locations j) for each demand location i within the threshold of travel time form location i and summing up the supply-todemand ratio R j at those locations to obtain the accessibility $A0$ 1 at demand location i (Radke & Mu, 2000) :

$$A_i^F = \sum_{\{dij \le d0\}} Rj = \sum_{j \in \{dij \le d0\}} \frac{S\ j}{\sum_{ke\{dkj \le d0\}} Dk}$$

3 RESULTS

According to the data collected by the Harbin administration of Sport and the field research by us, in this research, the physical fitness facilities of Nangang not only include facilities for people doing sports, but also areas providing space for local citizen doing daily physical activities. In order to optimize the research, all physical fitness facilities are divided in to 3 modes' space based on their opening degree of locations which including: 1) space in neighborhood; 2) space in public space; 3) space in campus. The distribution of three modes of physical fitness facilities is shown in the figure 3.

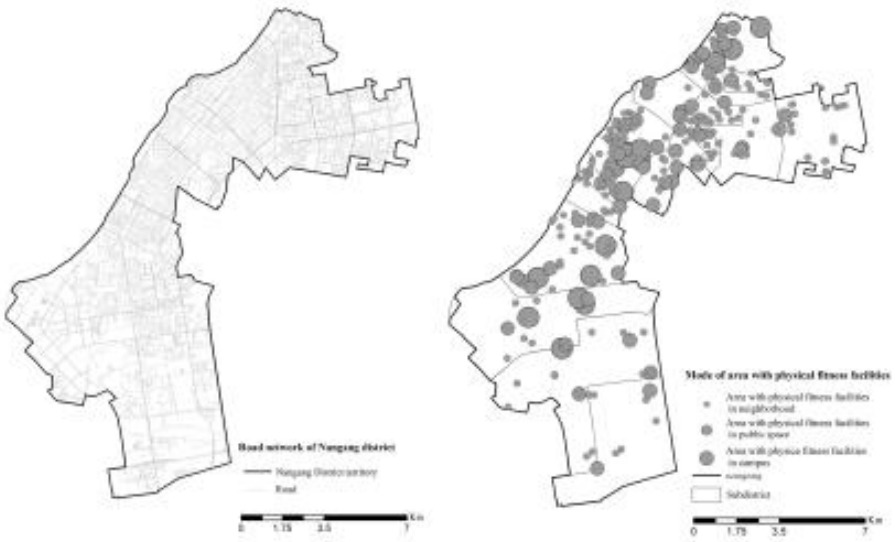

Figure 3 - Road network of Nangang district Figure 4 – Mode of area with physical fitness facilities

3.1 RESULTS OF SELF- ADMINISTRATED QUESTIONNAIRE

6 results were found from the self-administrated report on the physical activity behavior in winter of younger older adults in winter cities:1) older adults whose age was between 60-69 had the largest proportion of people who insist doing daily PA, which means young elderly was the group of older adults who has the biggest potential to take participate in daily PA; 2) most older adults keep doing PA in winter although winter cities' temperature in winter is extremely low, with a 24-hour average in January of only −18.4 °C (−1.1 °F) (Harbin Municipal Government, 2011); 3) the frequency of doing PA in winter is lower than that in summer, although young elderly insists on doing PA in winter, 23% respondents have a lower frequency in doing PA in winter than summer; 4) the time span of doing PA one time in winter is shorter than that in summer, within a percentage of 9% respondents spent less time on doing PA in winter than that in summer; 5) older adults have a tendency to choose a nearer place to do PA especially in winter, statistic showed that 6% older adults prefer a homenearer place to do PA, while the distance from home to area with physical fitness facilities seem not so much important in summer than that in winter; 6) for older adults, 15-min walking distance from home to area with physical fitness facilities are the maximum length of time that can be tolerated which has the largest proportion of respondents.

3.2 RESULTS OF ACCESSIBILITY SCORE BY IMPLEMENTED 2SFCA METHOD

By computing and evaluating the spatial accessibility index at the time of walking in 5 minutes, 10minutes, 15minutes. Our results show that significant difference of accessibility exists in each subdistrict. Within 5 minutes, the spatial accessibility score range from 0 to 0.067. Within the time of 10 minutes, the score of spatial accessibility ranges from 0 to 0.308. When walking-time increasing into 15 minutes, the accessibility score ranges from 0.018 to 0.713. Accessibility scores were calculated to show that evident spatial disparities exist in the research area (Figure 5).

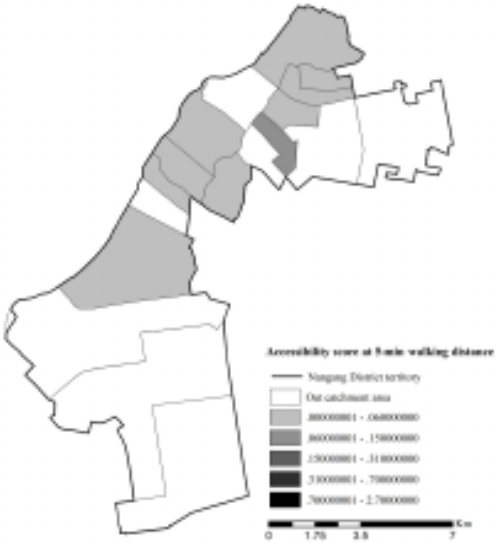

Figure 5-1-Accessibility score at 5-min

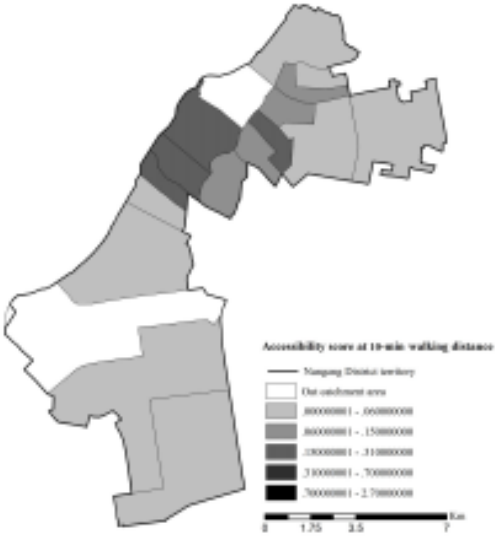

Figure5-2- Accessibility score at 10-min

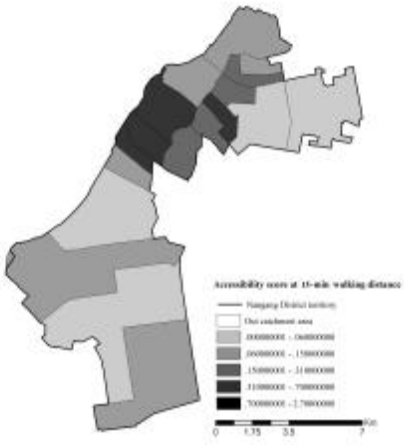

Figure 5-3- Accessibility score at 15-min

Figure 5 - Accessibility distribution within the threshold of 5-min, 10-min, 15-min

4 DISCUSSIONS

Based on the result of self- administrated report, 15-min walking distance is the maximum length of time for older adults walking from home to area with physical fitness facilities in winter in Harbin. In this research, 5-min、10min、15min were taken as the threshold and 2SFCA Mode was applied to assess the spatial accessibility of an area with physical fitness facilities. The accessibility score was defined in 5 levels which were “lower ” ,within the score range from.00 to .06 、“low”, within the score range from.06 to.15 、“moderate”, within the score range from .15 to .31、“high”, within the score range from .31 to .7、“higher”, within the score range from .7 to 2.7. Three facts were discovered in the research.

4.1 THE ACCESSIBILITY SCORE WAS LOW IN GENERAL IN THE WALKING TIME OF 5 MINUTES

Results in the figure 5 showed that spatial accessibility disparity vary greatly. Within the threshold of 5-min walking time, the accessibility of an area with physical fitness facilities in Harbin is low in general. There was 8 out of 18 subdistricts was at the out of catchment area with the accessibility score of 0. 1 of 18 subdistricts had an accessibility level of “low”, the other 9 subdistricts had an accessibility score of level of “lower”. As the growing of threshold, the accessibility score grows as whole. The area without catchment

has decreased into 2 subdistricts and the accessibility score of level “moderate” has increase into 4 subdistricts. There is no out of catchment area when the threshold increasing into 15 minutes. One subdistrict has an accessibility level of “higher”, 7 subdistricts has an accessibility level of “high”, 2 subdistricts has an accessibility level of “moderate”, only 2 subdistricts is left with the accessibility level of “lower”. According to the self-administrated, the maximum length of time from home to area with physical fitness facilities to do daily PA is 30min.From the Table 1, the growing tendency is evident that all accessibility score grow within the threshold grows from 5minutes to 30minutes. Even though the spatial accessibility score grows with the threshold, considering the situation that older adults prefer to choose a nearer place to do daily physical fitness facilities in winter, the spatial accessibility for older adults is still quite low. There is a fact that the allocation of amenities is irrational.

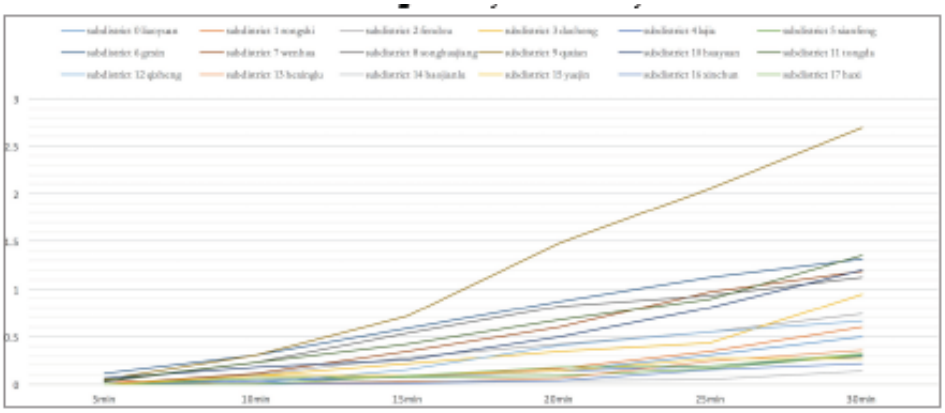

Table 1 - Growing tendency of accessibility score

4.2 THE CITY CENTER HAS HIGHER SPATIAL ACCESSIBILITY OF PHYSICAL FITNESS FACILITIES THAN OTHER DISTRICTS

From the Figure 5, it is clearly that the allocation of areas with physical fitness facilities was not even. The center of the city has the higher accessibility of physical fitness facilities than other districts. There is a tendency that the accessibility of an area with physical fitness facilities decreased from center to two sides gradually.

In Figure 5-3, 4 subdistricts have a higher level of spatial accessibility was shown and all these 4 subdistricts are in the center of city. It is obvious that city center has higher accessibility of transportation and higher density of road network, which make older adults get easier access to the city center to take participate into daily physical activities than other parts of city. Another fact is that most city events and activities happens in the city center since there are more amenities in city center than other parts of the city, which make daily physical fitness activities happens much easier and make city center has a higher density of physical fitness facilities than other part of the city (Figure 6). Considering the equation of 2SFCA method, 3 factors can affect the results which are population, location demand and the measurement of travel distance (time). The matching of population supply and the location demand is more rational in these 4 subdistricts. Comparing with Figure7, these 5 subdistricts who have higher spatial accessibility all have a moderate number of older adults’ population.

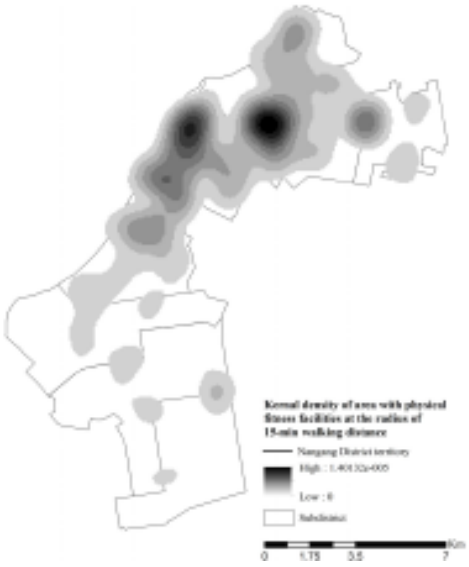

Figure 6 - Kernel density of area with physical fitness facilities

4.3 MISMATCHING BETWEEN THE PHYSICAL FITNESS FACILITIES ACCESSIBILITY AND THE POPULATION OF OLDER ADULTS

Based on population data from the Sixth Population Census and by Arc GIS 10.1, the density of young elderly (60-69) was showed in Figure 7. The cluster range from shallow to dark means the density from low to high. In order to optimized the research process, we divided the density into 5 levels, which are “lower”, “low”, “moderate”, “high”, “higher”.

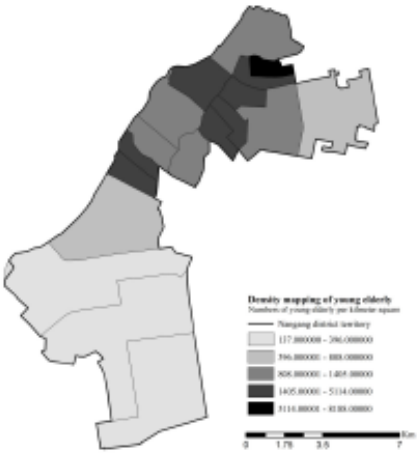

Figure 7 - Density map of young elderly

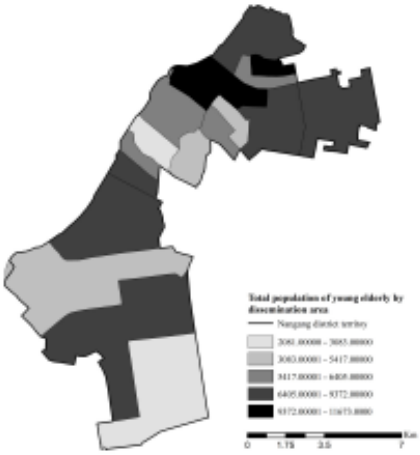

Figure 8 - total population of young elderly

Comparing the density map (Figure 7) of young elderly with the accessibility assessment within the index of 15 minutes (Figure 5-3), the subdistrict that has the highest density of young elderly does not have the highest level of spatial accessibility. The other 4 subdistricts who have the better level of spatial accessibility all have a moderate density of young elderly. On the other hand, those subdistricts with lower accessibility always within a lower density of young elderly. This mismatching phenomenon exists in 17 of 18 subdistricts with a percentage of 94.5%.

From the view of the total amount of young elderly population, the mismatching between the total population of young elderly with spatial accessibility is more evident (Figure 8). The accessibility score for 3 subdistricts with highest quantities of young elderly were in the level of moderate and low. 6 subdistricts have better quantities of young elderly have a spatial accessibility at a level low and level lower. At the same time, those subdistricts with higher accessibility of physical fitness facilities all within a moderate or low quantities of young elderly. That’s also prove the mismatching phenomenon between accessibility and population, which means the uneven spatial distribution of amenities exists in Nangang district of Harbin.

5 CONCLUSIONS

Access to physical fitness facilities will continue to be the focus of attention among those contentious issues in developing countries in the next decades. It is necessary to implement methodological methods of analysis in order to determine where is the proper location for areas with physical fitness facilities and other facilities or amenities, aiding in planning of amenities allocation in a more rational way. Our research has implemented the application of the 2SFCA method in order to demonstrated the phenomenon of the uneven distribution of areas with physical fitness facilities in Nangang district of Harbin by three facts from the results of the assessment, which including the spatial accessibility in each subdistricts vary greatly from each other, city center has a better accessibility of physical fitness facilities than other parts of city and the mismatching phenomenon exist between the accessibility of physical fitness facilities and the older adults’ population of each subdistricts. However, although 2SFCA method was testified that it can estimate the areas with accessibility of physical fitness facilities, more optimized method could be used to have more precise estimation on spatial accessibility in a more detailed resource. More detailed results could be discovered if there was more detailed data of the supply and the demand at the same time. Although it has limitation, this research is also a good example in the integration of GIS approached to the assessment of city amenities spatial accessibility.nsity map of young elderly Figure 8 - total population of young elderly

6 ACKNOWLEDGEMENT

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ID 1460 | RELATIONSHIPS BETWEEN HEALTH STATUS AND SOCIOECONOMIC AND HEALTH SERVICES INDICATORS DURING THE FINANCIAL CRISIS

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ABSTRACT: The literature has highlighted the association between social and economic determinants and physical and mental health. Several studies have stated that the positive correlation between socioeconomic status and health is different between countries and welfare states in Europe. On the other, the current financial crisis might have modified this relationship. Due to all the above, the aims of this research are to analyse the relationships between self-perceived health status and socioeconomic variables in Europe at NUTS 2 level (European regional statistical unit) focusing on the influence of the spatial factor during the financial crisis. Taking into account the focus on spatial effects, the analysis includes the continental regions and the closest ones, removing from the analysis the remote and far regions in order to assess the geographic influence. Moreover, in order to consider spatial relationships between regions, this research combines simple linear, spatial lag, spatial error and geographically weighted regressions. The analysis has related to the health status with macroeconomic indicators (income of households by inhabitant, GDP per capita in PPS and unemployment rate), social indicators (tertiary education rate and at-risk-of-poverty rate), and health indicators (crude death rate, hospital beds rate, life expectancy and medical doctor rate) during 2008-2014. Four models for each year have been designed using classical and spatial regression methods. The models show that self-perceived health is explained significantly by unemployment, risk of poverty, tertiary education and medical doctor rates for 2008, 2010 and 2014. In addition, life expectancy, hospital beds and death rates show collinearity worsening the models. Finally, the results support the objective of the research: the regression models improve when the geographical location and distance between analysis units are considered. Missing data and the lack of other interesting socioeconomic variables at regional level together with the ecological fallacy are the main limitations of this study. The results support the existence of contextual effects among European regions that varies the association between socioeconomic measures and health status throughout the time. The findings also points out the relevance of social context in explaining the differences in individuals' states of health. Thus, the spatial analysis have stated that the macroeconomic

indicators do not explain significantly the self-perceived health status in contrast to the social indicators during the financial crisis.

1 INTRODUCTION

The literature has highlighted the association between social and economic determinants and physical and mental health (Angner, Ray, Saag, & Allison, 2009; Bartley, Sacker, & Clarke, 2004; Wilkinson & Marmot, 2003). Several studies have stated that the positive correlation between socioeconomic status and health is different between countries and welfare states in Europe (Adams, 2003; Alvarez-Galvez, 2016; Alvarez-Galvez et al., 2013; Alvarez-Galvez, Rodero-Cosano, García-Alonso, & Salvador-Carulla, 2014; Eikemo, Bambra, Judge, & Ringdal, 2008; Frijters, Haisken-DeNew, & Shields, 2005). Income inequalities within countries could harm the self-perceived health status (Costa-Font & Hernández-Quevedo, 2012, p.; Nummela, Sulander, Heinonen, & Uutela, 2007; Wilkinson, 1996, 1997). In Europe, research has been focused on analysing this relationship, obtaining different and, sometime, unexpected findings (Fritzell, Nermo, & Lundberg, 2004; Grossman, 2000; Smith, 2004). Therefore, including income as explanatory variable is a necessary but not sufficient to disentangling the diversity and complexity of other social dimension that could also lead to these inequalities (Marmot, 2010).

In general, little attention has been paid to those social determinants that could have a direct impact on the well-being and health of populations. Álvarez-Galvez et al. (2013) compared the relationship between three different measures of socioeconomic status (income, education and occupational status) and the self-perceived health status for a sample of European countries during the period 2002-2008. They found that differences in self-perceived health in Scandinavian countries and Anglo-Saxon countries exhibits a higher relationship with economic dimensions (income and occupational status), whereas southern and eastern countries these differences are linked to educational differences. For example, in Spain, the universal access to a public health system has led to less difference in self-perceived health despite the rising income inequalities during financial crisis. On the other hand, occupational status and education gain in importance in a country with over-qualified workers that do not have working conditions with the pay levels in line with their educational attainment (Allen & Velden, 2001; Chevalier, 2003).

Therefore, to get a better understanding of the effects of crisis on self-perceived health status is necessary to include economic as well as social dimension. Moreover, all these variables should be studied within their spatial framework. Enriching studies in such a way allows a better applicability of public policies, improving the detection of those areas where shortage are discovered (García-Alonso, Pérez-Naranjo, & Fernández-Caballero, 2011) and the implementation of concrete actions. In addition, the range of variable selected to study the relationship with self-perceived health status can be enlarged (García-Alonso, Salvador-Carulla, Negrín-Hernández, & Moreno-Küstner, 2010; Moreno-Küstner, García-Alonso, Negrín Hernández, Torres-González, & Salvador-Carulla, 2008; Prieto-Lara & Ocaña-Riola, 2010).

Due to all the above, the aim of this research is to analyse the relationships between self-perceived health status and socioeconomic variables in Europe at NUTS 2 level (European regional statistical unit) focusing on the influence of the spatial factor during the financial crisis.

2 SCOPE OF STUDY AND METHOD

The analysis has related to the health status with macroeconomic indicators (income of households by inhabitant, GDP per capita in PPS and unemployment rate), social indicators (tertiary education rate and at-risk-of-poverty rate), and health indicators (crude death rate, hospital beds rate, life expectancy and medical doctor rate) during 2008-2014. Once analysed the multicollinearity, some of the independent variables had to be eliminated, that is, income of households by inhabitant, GDP per capita in PPS, crude death rate, hospital beds rate and life expectancy, remaining as risk factors the unemployment rate, tertiary education rate and at-risk-of-poverty rate medical doctor rate in study. We analyse different geographic areas that allow us to assess the global effect of the crisis at the level of European regions (NUT2), whose data are available in Eurostat and in the European Social Survey. Taking into account the focus on spatial effects, the analysis includes the continental regions and the closest ones, removing from the analysis the remote and far regions in order to assess the geographic influence.

Moreover, in order to consider spatial relationships between regions, this research combines simple linear, spatial lag, spatial error and geographically weighted regressions. The simple regression analysis finds a linear relationship between a dependent variable and a set of explanatory variables, by minimizing the sum of squared prediction errors, hence, least squares. The analysis assumes the errors have a normal distribution with mean of zero, homoscedastic and uncorrelated. When the variables has spatial correlated, these assumptions may not always meet. Thus, it is necessary to resort to other methods. To be able to introduce the spatial dependence there are two distinct ways: as an additional regressor in the form of a spatially lagged dependent variable or in the error structure. The spatial lag model is appropriate when the focus of interest is the assessment of the existence and strength of spatial interaction. Spatial error model is appropriate when the concern is with correcting for the potentially biasing influence of the spatial autocorrelation, due to the use of spatial data (Anselin, 2001). Finally, Geographically Weighted Regression (GWR) is other of several spatial regression techniques. This provides a local model of the variable or process you are trying to understand/predict by fitting a regression equation to every feature in the dataset. GWR constructs these separate equations by incorporating the dependent and explanatory variables of features falling within the bandwidth of each target feature.

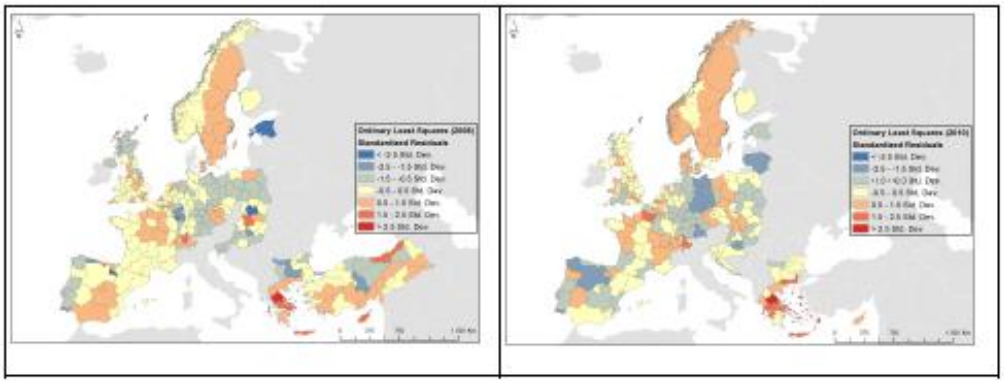
3 RESULTS AND DISCUSS

The results of OLS regression are shown in Table 1. During the whole period 2002-2008, it can been observed that the greater the educational level, the greater the self-perceived health status. Just the opposite happens with the relationship between unemployment and self-perceived health status. In addition, the relationship between deprivation and self-perceived health status gets worse along the period.

Variable	β Coefficient 2008	β Coefficient 2010	β Coefficient 2012	β Coefficient 2014
Constant	3.40***	3.28***	3.59***	3.79***
Unemployment	-0.03***	-0.01***	-0.00	-0.01**
Risk-of-poverty	0.02***	0.01***	-0.00	-0.01**
Tertiary education	0.01***	0.01***	0.01***	0.01***
Medical doctor	0.00*	0.00*	0.00	0.00***

Table 1 – β Coefficient of the OLS Regression
Source: Authors' elaboration.

Maps in Figure 1 show that self-perceived health status got worse across many European countries, especially for year 2012. Northern and Mediterranean areas exhibit the lowest values for the variable.



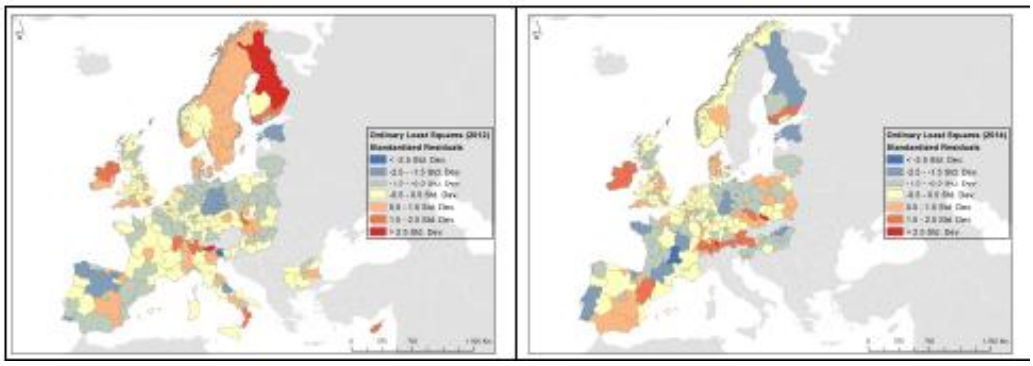


Figure 1 – Ordinary Least Square Regression 2008-2014. Source: Authors' elaboration

Focusing on SLR results (Table 2), similar but smoothed pattern than in the previous one can be observed. Tertiary studies and unemployment are significant along the whole period of study, this is an expected but weaker behaviour. On the other hand, the values for the lag variable indicates that this type of regression could not be appropriate for the study.

Variable	β Coefficient 2008	β Coefficient 2010	β Coefficient 2012	β Coefficient 2014
Health-lag	0.37*	0.8***	0.56***	-0.01
Constant	2.00***	0.40	1.46**	3.84***
Unemployment	-0.02***	-0.00	-0.00	-0.01**
Risk-of-poverty	0.01***	0.01**	-0.00	0.01**
Tertiary education	0.01***	0.01***	0.01***	0.01***
Medical doctor	0.00**	0.00	0.00	-0.00***

Table 2 – β Coefficient of the Spatial Lag Regression
Source: Authors' elaboration.

Maps in Figure 2 allow us to identify the smoothed effects in the decrease of self-perceived health status. This could indicate that effect of crisis on self-perceived health status appears lagged in the time, that is, the worst results appears since 2014.

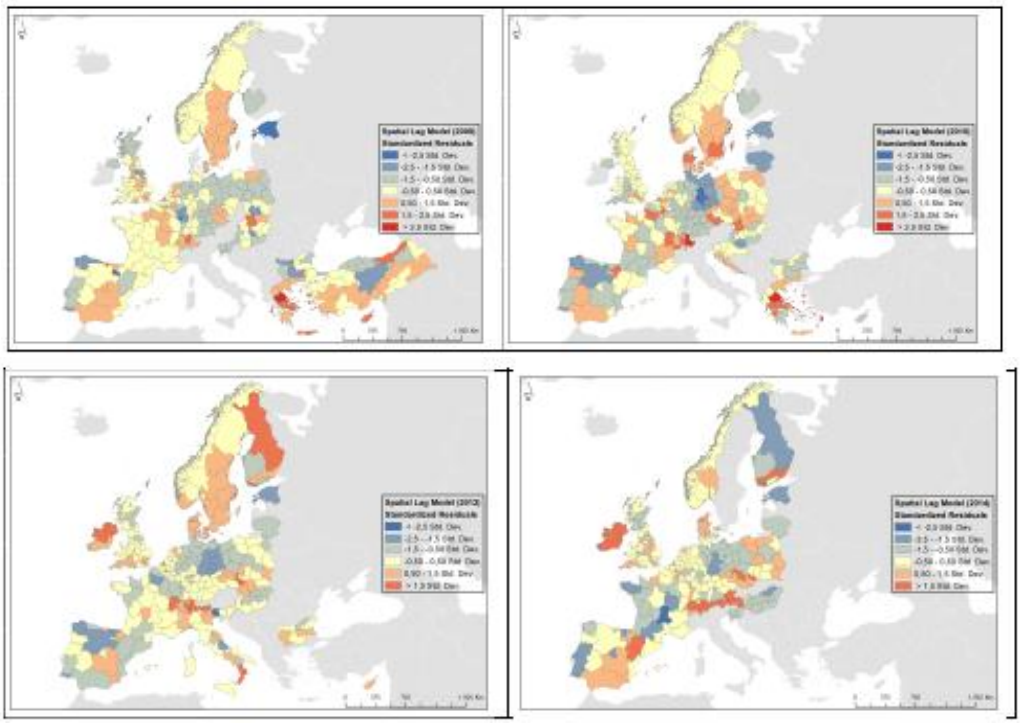


Figure 2–Spatial Lag Regression 2008-2014

Table 3 shows the result for SER. As in the previous analyses, education exerts a positive influence on self-perceived health status, which has remained more or less constant during the period, whereas unemployment and deprivation exhibits a negative influence, rising over the years, especially in 2014. In this occasion the medical doctor per inhabitant does not appear to have any influence on the explanatory variable, as in the cases mentioned above.

Variable	β Coefficient 2008	β Coefficient 2010	β Coefficient 2012	β Coefficient 2014
Constant	3.41***	3.51***	3.63***	3.78***
Unemployment	-0.02***	0.00	-0.00	-0.01*
Risk-of-poverty	0.01***	0.00	-0.00	-0.01**
Tertiary education	0.01***	0.01***	0.01***	0.01***
Medical doctor	0.00*	-0.00	-0.00	0.00*
Lambda	0.79***	0.85***	0.57**	0.15

Table 3 – β Coefficient of the Spatial Error Regression
Source: Authors' elaboration.

Maps 3 shows that self-perceived health status was worse in the Mediterranean area at the beginnings of the period of study. As time goes by, this situation spread among the remaining European regions. The worst situation is reached at the end of the period.

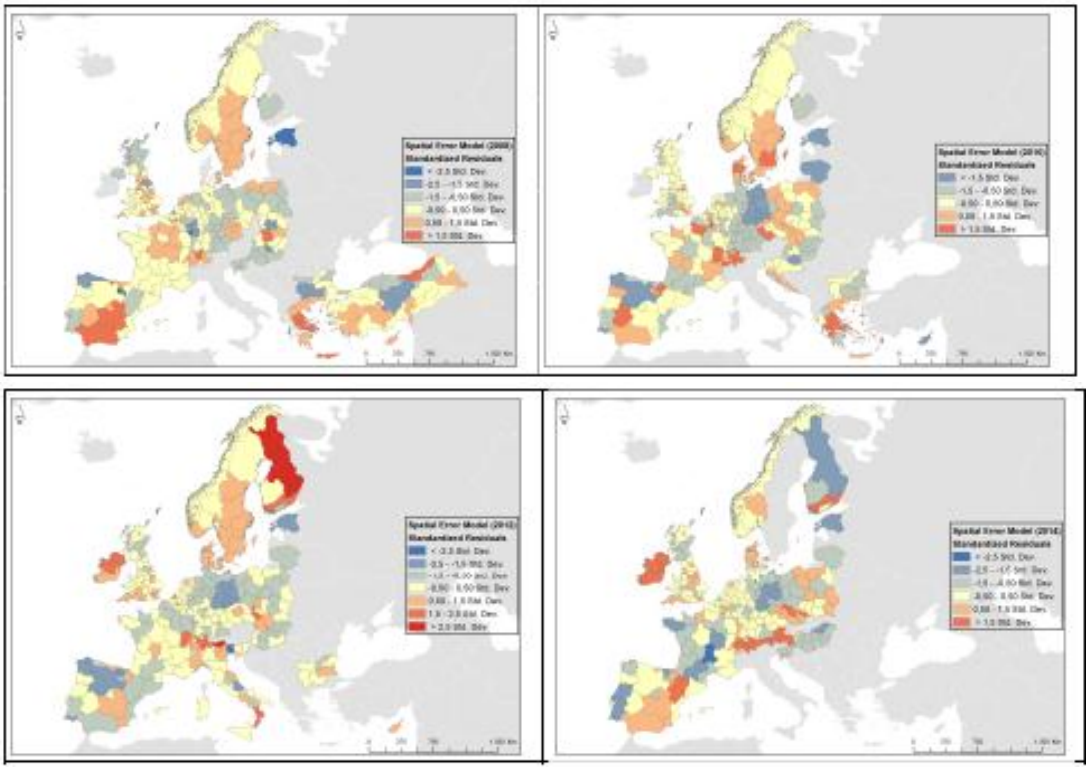


Figure 3–Spatial Error Regression 2008-2014. Source: Authors' elaboration.

Finally, the results for GWR (Table 4) indicates that the most parsimonious model amongst all the years correspond to 2012. This result is the same as in the three previous models, but the explained variability is slightly lower.

GWR	2008	2010	2012	2014
Residual Squares	5.70	4.90	7.10	4.89
Sigma	0.16	0.16	0.18	0.16
AIC	-193.94	-182.60	-135.62	-162.79
R^2	0.52	0.57	0.43	0.46
R^2 Adjusted	0.48	0.51	0.39	0.41

Table 4 – Statistics GWR
Source: Authors' elaboration.

Although maps in Figure 4 shows a situation quite similar to the previous one, the GWR model fits better the relationship among the explanatory variables and the self-perceived health status.

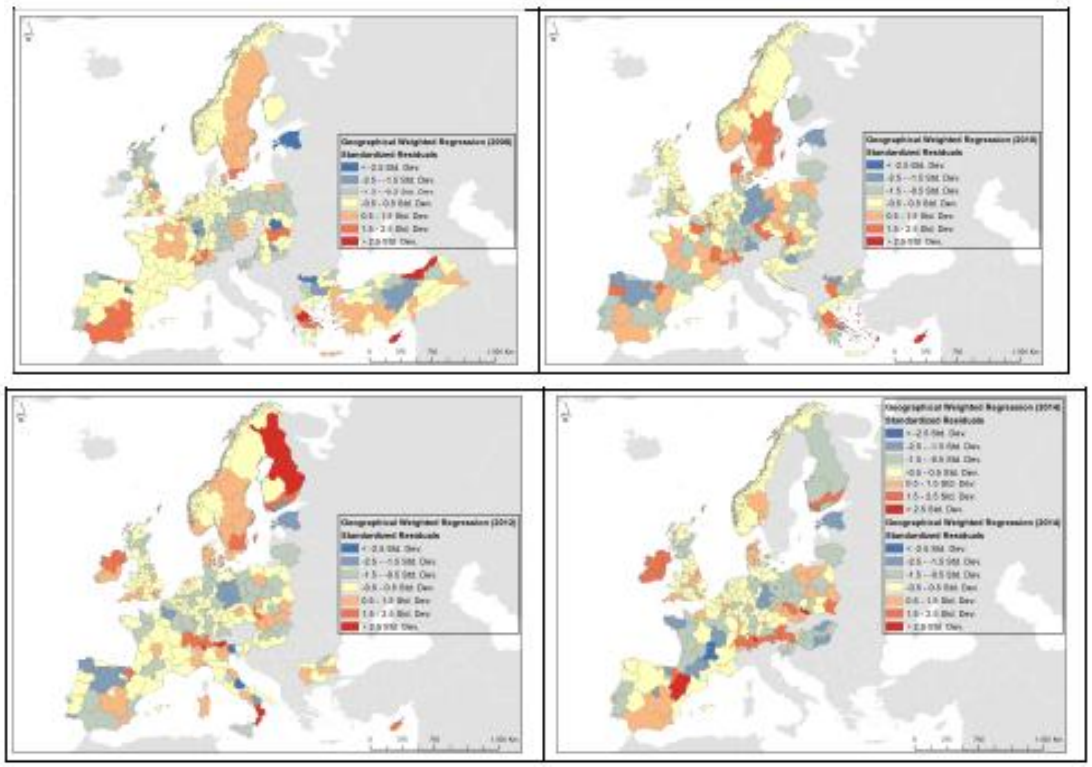


Figure 4– Geographically Weighted Regression 2008-2014. Source: Authors' elaboration.

After comparing the four models, it can be concluded that those techniques that taking into account the spatial factor seem to be more suitable to study the relationship between self-perceived health status and the selected explanatory variables, especially the GWR model. In general, all the explanatory variables has a slight effect on self-perceived health status, with the exception of the number of doctor per inhabitant that do does not exert any effect. Education has a positive and constant effect for the whole period, whereas unemployment and deprivation has a negative effect, which gets worse over the years, especially during the last part of the period. Finally, we can state that self-perceived health status gets worse over the years, reaching a peak in 2014. The lagged effects of crisis on the health can explain this. Even so, it should be noted that these effects are moderate since the variations of self-perceived health status is quite slight or non-significant.

4 CONCLUSSION

Missing data and the lack of other interesting socioeconomic variables at regional level together with the ecological fallacy are the main limitations of this study. The results support the existence of contextual effects among European regions that varies the association between socioeconomic measures and health status throughout the time. The findings also points out the relevance of social context in explaining the

differences in individuals' states of health. Thus, the spatial analysis have stated that the macroeconomic indicators do not explain significantly self-perceived health status in contrast to the social indicators during the financial crisis. However, the results for 2012 are contradictory and need further analysis.

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ID 1489 | URBAN GREEN SPACE AND THEIR IMPACTS ON PHYSICAL ACTIVITY LEVELS OF OLDER PEOPLE: EXPLORING APPROPRIATE METHODOLOGIES

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1 INTRODUCTION

Extended life expectancy and the decrease in the birth rate have led to a global concern of population ageing (Garin et al., 2014) and is resulting in increasing pressures on public health expenditure. Evidence has shown that physical inactivity among older adults is associated with higher mortality, morbidity and an increased burden of non-communicable diseases (NCDs) worldwide (Adams et al., 2014; Arango et al., 2013; Woodcock et al., 2011). Although regular physical activity (PA) brings health benefits, there are high levels of physical inactivity within the general population. Worldwide, 31.1% adults are physical inactive (Hallal et al., 2012), in terms of older adults (aged 60 years and above) the proportion meeting physical activity guidelines ranged from 2.4 to 83.0% in a review of fifty three studies (Sun et al., 2013). In Europe, it was found that 60–70% of older adults fail to meet physical activity guidelines (Eurobarometer, 2010). Low levels of physical activity of older adults is clearly a very substantial public health challenge.

There is a growing body of research that examines the relationship between the built environment and physical activity (Handy et al., 2002; Nagel et al., 2008; Rech et al., 2012). It is widely recognized that physical activity is affected by a wide variety of built environment-related attributes, including street connectivity, residential density, land-use mix (Clifton et al., 2009; Lawrence D. Frank et al., 2005) as well as sidewalks, trails, recreational facilities, parks (Ferdinand et al., 2012), traffic density and speed, crime and safety and so on. (Ferdinand et al., 2012; Prezza et al., 2001). Besides, Physical activity can be categorized into four domains, including transportation, recreation, household and occupation, and each of these are influenced by different aspects of the built environment. For example, PA in the household and occupation domains appears to be less related to the relationships with the built environment (Van Cauwenberg et al., 2011), but transport and recreation offer key opportunities for interventions to promote health. This is critical for older adults who are more likely to suffer from a decrease in physical functions, and thus they are more vulnerable to be impacted by built environment barriers towards PA (Forsyth et al., 2009; Rantakokko et al., 2009). However, there is limited research focused on this specific demographic group (Van Cauwenberg et al., 2011; Cunningham and Michael, 2004). Therefore, it is imperative to enhance our understanding on the relationship between the built environment and physical activity, to

identify opportunities to improve the physical activity levels of older adults, as a strategy to help reduce in social and health care.

The built environment is a very broad and complex concept, among all environmental settings, urban green space (UGS) appears to play a prominent role in facilitating PA. UGS is defined as “all publicly owned and publicly accessible open space with a high degree of cover by vegetation, e.g., parks, woodlands, nature areas, and other green space within the city boundary” (Schipperijn et al., 2013, page 110). UGS provides important settings for physical activity at low cost, especially for leisure-time activities like walking and cycling (Veitch et al., 2012), and for generating wider psychological, physiological, social and economic benefits (Hunter et al., 2015; Veitch et al., 2014). The availability and accessibility of UGS appear to be closely related to increased levels of physical activity (Hunter et al., 2015; Schipperijn et al., 2013), which offers important opportunities to improve the physical activity levels of older adults. Recent studies show that higher levels of physical activity are frequently related to urban green attributes, including proximity (Kaczynski et al., 2009, 2014), size and design features (Kaczynski et al., 2008), walking/cycling paths, wooded areas, open spaces, water features, lighting, pleasant views, bike racks, parking lots, and playgrounds (Schipperijn et al., 2013). However, there are still inconsistences in this research field. For example, a research by Hillsdon et al. (2006) has found no significant relationship between access to urban green space and physical activity in recreational physical activity domains, contrary to some other studies. In another review of sixty papers, discrepancies existed cross studies addressing the relationship between greenspace and obesityrelated health issues (Lachowycz and Jones, 2011). A combination of conceptual and methodological issues may help explain for the mixed results among studies (Koohsari et al., 2015).

The fact that most research has been undertaken in the US and Australia (Hunter et al., 2015), may also explain some anomalies, so it is important to conduct further research in other parts of the world. Different counties may vary in urban morphology, street layout, population density, climates and socioeconomic status. Thus, research results and recommendations for the US or Australian cities may not be directly adapted to other contexts, such as European cities nor any other developed countries (Schipperijn et al., 2013).

Furthermore, a large body of research showed that the usage of urban green space engaged with physical activity is less desirable (Cohen et al., 2010; Edwards et al., 2015; Lackey and Kaczynski, 2009; Veitch et al., 2015). Most research is also cross-sectional and observational. Therefore, there is a need for further studies to identify the relationship between urban green space and physical activity, for older adults in European contexts and for this to be used to develop more effective strategies and recommendations to policy-makers, and other stakeholders.

This work examines this issue by focusing on the special role of urban green space and by reviewing the different methodologies that can be used to understand built environment influences on older people’s PA. To do this, we first review the ways of measuring PA in older adults, this is followed by considering the role of urban green space and finally suggests a research design for exploring this issue, using a case study from Belfast in the UK.

2 A REVIEW OF CURRENT METHODOLOGICAL APPROACHES

2.1 MEASUREMENTS OF PHYSICAL ACTIVITY LEVELS

A key element in evaluating built environment influence on PA is to gather accurate data on PA itself. Physical activity can be measured through a wide variety of methods, including self-report questionnaires, activity dairies, heart rate monitors, accelerometers, pedometers, and doubly labeled water (Prince et al., 2008; Sallis and Saelens, 2000; Sirard and Pate, 2001; Troiano et al., 2008). Indeed, there is a much greater body of research that has focused on children, adolescent and adults (Armstrong and Welsman, 2006; Baquet et al., 2007; Kohl et al., 2000; Sirard and Pate, 2001; Trost et al., 2000, 2002; Welk et al., 2000), compared to those over 60 years. Therefore, identifying reliable and validated measurements of physical activity for older people requires further evaluation.

2.1.1 SELF-REPORT MEASURES OF PHYSICAL ACTIVITY

Self-reporting is defined as self- administered or interviewer-administered questionnaires, activity logs or diaries, and for young children, proxy reports (Sallis and Saelens, 2000). Self-report measures are widely used and are a convenient way to assess physical activity. These are relatively simple to conduct and can gather data on domain-specific physical activity behaviors from a large number of people at low cost (e.g. i.e. older adults are walking for leisure or walking for transportation), but the overall daily physical activity patterns might not be accurately developed (Davis and Fox, 2007; Murphy, 2009).

Several self-reported physical activity questionnaires have been tested with adequate validity and reliability. An international reliability and validity study on International Physical Activity Questionnaire (IPAQ) was conducted by Craig and his colleagues in 14 centers in 12 countries during 2000 (Craig et al., 2003). This study concluded that IPAQ is a reliable instrument that can be used to assess the physical activity of a wide variety of demographic groups (18-65 years old) in diverse settings. Another physical activity questionnaire ¾ Global Physical Activity Questionnaire (GPAQ), was further developed from IPAQ showed content reliability and validity in a study carried out by Bull et al., (2009) in nine countries, suggesting that GPAQ is a reasonable instrument to monitor physical activity on general population worldwide. Age-neutral physical activity questionnaires such as IPAQ and GPAQ are widely used worldwide on large samples, as they are easy to conduct and require low budget. However, most age-neutral questionnaires focus on sport and recreational activity which has been shown only account for a relatively small proportion of older adults' daily physical activity (Washburn, 2015). Older adults tend to engage in more moderate intensity activities such as walking, and household activities such as gardening, with less sport and exercise (Davis and Fox, 2007). Therefore, physical activity questionnaires that are designed for general population may be less precise with older adults. In this case, some physical activity questionnaires have been intentionally developed for older adults, including Community Healthy Activities Model Program for Seniors (CHAMPS) (Carlson et al., 2012; Lim et al., 2005; Nathan et al., 2014; Td et al., 2006), Yale Physical Activity Questionnaire (Dipietro et al., 1993), Modi Wed Baecke Questionnaire for Older Adults (Voorrips et al., 1991) and the Physical Activity Scale for the Elderly (Washburn RA, 1999). These also provide good reliability and validity and have been employed in a large number of studies focusing on older adults (Washburn et al., 1993; Washburn, 2015; Washburn, 1999). Questionnaires that are exclusive for older adults are expected to provide more precise and valid outcomes than the age-neutral ones (Harada et al., 2001). Thus, it is higher recommended to employ questionnaires that are specifically designed for older adults.

However, self-report measures have inherent limitations, which have been widely discussed among researchers, demonstrating concern over the accuracy of self-report data on physical activity. Key issues here include social desirability bias resulting in over-reporting of physical activity (Warnecke et al., 1997), and recall bias, which may be a challenge when working with older adults. Recalling physical activity requires higher levels of cognitive ability and memory, while older adults are more likely to have poor memory and lower cognitive ability (Murphy, 2009; Sallis and Saelens, 2000). Moreover, fluctuations in physical and mental health may also reduce the accuracy of self-report (Rikli, 2000). Sallis (2000) pointed out that other selfreport instruments like activity logs and diaries also have limitations as well, they are limited by response rates and how much do participants could follow instructions. To overcome these limitations, objective measures such as accelerometers are increasing used in studies, with a key drawback of not being able to provide information on domain-specific activities.

In sum, it appears that self-report measures have specific advantages in obtaining information on the proportion of exercise achieved by different domains of physical activity and how these may be broadly related to relevant environmental settings. Self-report measures do have value in the role of clarifying the relationship between physical activity and the built environment of older adults, but if accurate amounts of physical activity need to be recorded, objective methods should be employed to increase the reliability and validity of physical activity data.

2.1.2 OBJECTIVE MEASURES OF PHYSICAL ACTIVITY

Objective measurements of physical activity are increasingly used to overcome the limitations of self-report measures. This has included the use of heart rate monitors, activity monitors and doubly labeled water. These can be complementary to self-report measures, and a combination of the two types of measurements can obtain even more accurate data on the patterns and amount of physical activity.

HEART RATE MONITORS

Heart rate monitors are primarily used for estimating approximate energy expenditure during PA. It has been demonstrated that heart rate is correlated with VO2 1and energy expenditure during physical activity (Welk et al., 2000). However, numerous factors can influence the accuracy of data collected using heart rate monitors. Melanson (1996) pointed out that other factors such as caffeine or stress can increase heart rate. In terms of older adults, they are more likely to take medication that may influence cardiovascular function, during resting and exercise (Rikli, 2000). Furthermore, in a study focusing on children, it was suggested that under active conditions heart rate outcomes were more significantly associated with direct observation measures compared with inactive conditions, this may result in an error of mean heart rate (Welk and Corbin, 1995). It I s widely recognized that older adults undertake different types of PA compared to young people who are more likely to participate in higher intensity physical activities for longer time. Older adults tend to engage more in moderate intensity physical activity like walking and household physical activities. Thus, it is logical to assume that the same errors may occur when researching PA in older adults. It has been suggested that heart rate monitors can be combined with motion sensing devices to reach a higher accuracy for data collection (Welk et al., 2000).

DOUBLY-LABELED WATER

Double-labeled water measurement is widely considered as a “gold standard” to measure accurate energy expenditure over time, both for lab and field-based studies on physical activity. It is a method that tracks carbon dioxide produced from metabolism to detect energy expenditure, using specific isotopes in labeled water (Murphy, 2009; Welk et al., 2000). However, this tends to be expensive and requires specialized expertise, so is not an ideal method for studies in larger field and epidemiological areas (Murphy, 2009). With respect to the older population, this technique may also be problematic in relation to older adults as some medication could impact water retention, or seniors may have medical conditions that influence the circulatory system conditions could also confound the accuracy of this technique (Rikli, 2000).

PEDOMETERS

Pedometers are instruments that can provide objective information on step counts, and they are less expensive than many other techniques such as accelerometer or doubly-labeled water, but have advantages and disadvantages similar to other motion sensors. They are easy to use but with less accuracy and precision. Lacking sampling abilities, pedometers do not provide detailed information on frequency or intensity of physical activity, so they cannot detect energy expenditure and physical activity patterns (Murphy, 2009; Welk et al., 2000). There are also questions of their use with older adults, because their accuracy decreases at low speed (Cyarto, et al, 2004; Le Masurier and Tudor-Locke, 2003) and with people who have gait patterns and obesity (McClung et al., 2000). Thus, pedometers might not be an ideal method for older people, although efforts have been made to improve the accuracy of pedometers working at low speed, such as equipped them with piezoelectric components. For example, the Stepwatch-3 is a pedometer with a piezoelectric component which could provide more precise data on physical activity at low speed than others (Foster et al., 2005).

ACCELEROMETERS

Accelerometers are enabled to measure physical activity objectively using motion sensors to record the amount, intensity (including approximate estimates of energy expenditure), frequency and duration of activity (Davis and Fox, 2007; Murphy, 2009). Accelerometers can assess PA on a minute-by-minute basis, over days or weeks if needed (Davis and Fox, 2007). Therefore, they have a significant role in studies that endeavor to identify the relationship between PA and the built environment. However, accelerometers are unable to capture what kind of activity older adults have performed. Therefore, with the absence of domainspecific information, we do not know the aims of physical activity in the older adult population (i.e. whether they are walking for leisure or for transportation).

However, Some researchers have also expressed concern about the accuracy of accelerometers due to the placement of monitors and the number of days worn (Murphy, 2009). In a lab-based study for older

adults, Sumukadas has found that even the choice of on which hip the monitor is worn can lead to different outcomes (Sumukadas et al., 2008). It is also suggested that participants' compliance with wearing protocols could pose a difference on the final outcomes. It might be problematic with older adults as they are more likely to suffer from poor memory and cognitive impairment, failing to attach the equipment in the required position on time (Esliger, 2009; Wilcox et al., 2001). However, a large sample study of healthy European older adults aged 70 and above, has shown high levels of compliance and few administrative problems in final results, demonstrating that accelerometer appeared to be a feasible instrument for assessing different aspects of physical activity in the old population (Davis and Fox, 2007).

From all reviews above, each measurement technique comes with its own advantages and disadvantages, there is no single method for a highly accurate measurement of physical activity for older adults. To summarize, before deciding which physical activity measurements to be employed, it is necessary to very critically reflect on what information is required to answer research questions. Considering the advantages and disadvantages of both self-report and objective measures, a combination of measures may be able to provide a more precise, comprehensive and valid assessments (Atienza et al., 2011; Harris et al., 2009), this appears to be a potential way to reducing bias and increase accuracy in physical activity assessments of older adults.

2.2 MEASUREMENTS OF URBAN GREEN SPACE AND THEIR RELEVANT ENVIRONMENTAL CONTEXTS

There is a growing evidence base suggests that green space is related to people's mental and physiological health (Ward Thompson, 2011), and that green space also creates economic, social and environmental benefits (Crompton, 2001; Kaczynski et al., 2009; Orsega-Smith et al., 2004). The links between general health and green space provision derive from contacts with natural environments, social interaction and physical activity (Ward Thompson, 2011). Therefore, it is logical to assume that welldesigned green space with high accessibility and availability could improve the physical activity levels of older adults and benefit their health. And thus, should be a strategic way to boost health ageing and ageing in place. However effective policy must be based on an accurate understanding on how public green space and their surrounding areas influence physical activity of older adults. Except for PA measurements for older adults, as has described above, measuring PA-related built environment variables is another key issue in this study area.

Built environment measurements can be based on both perceived or objective influences on PA. Subjective influences focus on questions including perceived safety, noise problems, self-rated quality of life and satisfaction with the neighborhoods (Burton et al., 2011; Carlson et al., 2012). Physical activity frequencies in the nearest UGS have also been examined (Schipperijn et al., 2013), usually by using checklists and questionnaires. As regard to objective built environment influences, key variables including street connectivity, block size, land use mix and residential density (Burton et al., 2011), often using Geographic Information System (GIS) (Dyck et al., 2011; Edwards et al., 2015; Leslie et al., 2007).

Technological developments are also providing new data and analytical opportunities, such as using Google Street View to capture a range of built environment attributes objectively, thus avoiding onsite survey (Kelly et al., 2013; Rundle et al., 2011). Meanwhile, most instruments have been focused on assessing the broad urban built environment and community environment scales, including housing (Iwarsson et al., 2007; Werngren-Elgström et al., 2009), neighborhood environment (Villanueva et al., 2014) and a broader urban environment context (Purciel et al., 2009), with limited emphasis on parks (Alves et al., 2008; Kaczynski et al., 2014). Furthermore, most studies pay attention to adults, adolescents and children rather than older adults.

These are clearly identified gaps amongst research related to physical activity, built environment and older people.

Although this review has focused on key attributes of urban green space, it is also important to note that these spaces functions depend substantially on their wider contexts. Thus, a number of studies have examined the qualities, attractiveness and size of parks, as well as the influence of proximity to parks, trying to explore if these variables are related to PA. (Cohen et al., 2010; Edwards et al., 2015; Kaczynski et al., 2009; Schipperijn et al., 2013). Relevant measurements of the built environment for physical activity

can be grouped into three categories: 1) perceived (self-reported) environment measures; 2) observational measures; 3) GISbased measures (Brownson et al., 2009).

2.2.1 PERCEIVED (SELF-REPORTED) ENVIRONMENT MEASURES

Questionnaires are widely used to gauge the influence of the built environment by interviewers or by self-administered methods. Brownson et al. (2009) review measurements for the perceived environment, including Perceptions of Environmental Support Questionnaire, Neighborhood Environment Walkability Scale (NEWS). NEWS is the most widely used to measure inhabitant's perceptions of the built environments (Brownson et al., 2004; Cerin et al., 2006), along with its abbreviated version ANEWS. Its reliability for youth (NEWS -Y) has been examined by Rosenberg et al. (2009), and future research will focus on a version for older adults (Cerin et al., 2006; Garin et al., 2014; Leslie et al., 2005; Saelens et al., 2003).

Meanwhile, some researchers continue to develop specific questionnaires for their own studies. for example, in the study by Schipperijn et al. (2013), used a questionnaire to rate the importance of different features in green space, finding significant associations between the preferred features and PA-related features. This suggests that instead of restricting research to physical activity-supported factors such as pitches, tracks and pavements, park users' self-rated preferences could also provide important insights for future research.

2.2.2 OBSERVATIONAL MEASURES

Unlike perceived-environment measures, researchers have developed measurements to observe the built environment using both in person and virtual tools. Table 1 illustrates observational instruments for the built environments can be used to measure different geographical scales. At the community level, there are instruments such as Neighborhood Active Living Potential (Craig et al., 2002), Physical Activity Resource Assessment (PARA) instrument (Lee et al., 2005), Senior Walking Environmental Audit Tool (SWEAT) (Cunningham et al., 2005), Neighbourhood Design Characteristics Checklist (NeDeCC) (Burton et al., 2011) et.al; at the park level, there are Bedimo-Rung Assessment Tools–Direct Observation (BRAT–DO) Instrument (Bedimo-Rung et al., 2006) , Environmental Assessment Of Public Recreation Spaces (EAPRS) tool (Saelens et al., 2006), the Public Open Space Tool (POST) (Edwards et al., 2013), System for Observing Play and Recreation in Communities (SOPARC) (McKenzie et al., 2006) et.al and at the trail level, there are Path Environment Audit Tool (PEAT) (Troped et al., 2006), Microscale Audit of Pedestrian Streetscapes (MAPS) tool (Millstein et al., 2013) et.al.

Geographical Scales	Instruments
Community level	Neighborhood Active Living Potential
	Physical Activity Resource Assessment (PARA) Instrument
	Senior Walking Environmental Audit Tool (SWEAT)
	Neighbourhood Design Characteristics Checklist (NeDeCC)
Park level	Bedimo-Rung Assessment Tools–Direct Observation (BRAT–DO) Instrument
	Environmental Assessment of Public Recreation Spaces (EAPRS) Tool
	Public Open Space Tool (POST)
	System for Observing Play and Recreation in Communities (SOPARC)
Trail level	Path Environment Audit Tool (PEAT)
	Microscale Audit of Pedestrian Streetscapes (MAPS) Tool

Table 1 - Observational instruments for the built environments

EAPRS is a very comprehensive instrument for measuring the physical environment of public parks and playgrounds, covering a wide variety of features, including paths, water areas, eating/drinking facilities, aesthetics and so on, and it shows high reliability (Saelens et al., 2006). It has been frequently used in studies to characterize the features of UGS (Edwards et al., 2015; Kane et al., 2015; Lackey and Kaczynski, 2009; Schipperijn et al., 2013). However, just as EAPRS is a very comprehensive audit tool, even a revised version has 646 items (Saelens et al., 2006), which is very time-consuming to conduct, thus an abbreviated version of EAPRS more physical activity-related and older adults-related is expected. SOPARC is another reliable and feasible instrument that focus on park usage and physical activity

behaviour (Wen et al., 2007). This instrument is commonly used among park-based physical activity studies (Cohen et al., 2009; Hunter et al., 2015; Tully et al., 2013; Veitch et al., 2014).

Other instruments, such as NeDeCC, which is used to measure residential environment at an individual level, can improve our understanding on how physical environments of an individual's house (from front door to wider community) affect their wellbeing (Burton et al., 2011). The Microscale Audit of Pedestrian Streetscapes (MAPS) is a another approach to measure details of streetscapes to create a activityfriendly environment (Cain et al., 2014; Millstein et al., 2013).

Technological developments such as Google Earth and Google Street View have stimulated built environment measurements that do not require on-site survey (James et al. 2016; Bader et al. 2015; Vanwolleghem et al. 2016; Rundle et al. 2011). Remote observation approaches such as the Public Open Space Desktop Auditing Tool (POSDAT) (Edwards et al., 2013) and the Computer Assisted Neighborhood Visual Assessment System (CANVAS) (Bader et al., 2015) have advantages of lower cost, less time consuming and an ability to larger and more geographically dispersed areas (Edwards et al., 2013).

2.2.3 GIS-BASED MEASURES

GIS-Based measures here refer to measures that utilize existing spatial data such as address and census boundary identification (Brownson et al., 2009). GIS-Based measures are frequently used to evaluate physical activity-related built environment variables such as walkability, proximity to UGS (Lawrence D. Frank et al., 2005). GIS-based measures offer very important approaches to make assessments on the built environment rapidly, but there are some concerns regarding the accuracy of GIS data (James et al., 2016) or the ways of using GIS-based measures to assess walkability, such as whether using footpath networks or road center lines as a proxy (Ellis et al., 2016) etc. These are described below.

ACCURACY OF GIS DATA

Lin et al., (2010) and Hajna et al., (2013) have suggested that GIS is an effective approach to measure walkability objectively. It comes with key advantages such as assessing large areas rapidly and make comparisons within and across study areas (Ellis et al., 2016). It has several drawbacks such as being reliant on routinely available spatial data and its reliability (James et al., 2016). Although the GIS measures has been approved validity and reliability by Purciel et al. (2009), there is still evidence has shown that only 28.7% data overlapped between national data sets and observer-verified data for a park located at St. Louis, MO (James et al., 2016). Thus, it is suggested that on-site survey is expected to improve the accuracy of GIS measures, especially for small scale studies. Indeed Schipperijn et al., (2013) recommend not simply rely on municipal data, but adding observer-verified entrance data to a new GIS layer for assessing the proximity to urban green space.

MEASURING WALKABILITY

'Walkability' is defined as "the extent to which the built environment supports and encourages walking by providing for pedestrian comfort and safety, connecting people with varied destinations within a reasonable amount of time and effort and offering visual interest in journeys throughout the network" (Southworth, 2005, page248). Walkability has been broadly considered as an indicator that positively correlated with higher levels of physical activity. Therefore, how best to measure walkability has great significance.

There are two key aspects for the walkability measurements, which are the use of footpath networks and road center lines respectively. Mostly, road center lines have been used to measure walkability, and indeed, in some urban morphologies, road center lines do reflect the full pedestrian network as mostly footpaths are being sidewalks along roads. This is more applicable to North America and Australia, as their urban morphologies characterized in gridiron layout (Ellis et al., 2016), and these have been the settings for most physical activity studies (Hunter et al., 2015). However, in the case of other urban forms with more segregated sidewalks, road center lines could be less effective as a proxy for pedestrian connectivity, potentially leading to distortions in walkability assessments. Chin (2008) and his colleagues have examined whether connectivity would be different when incorporating street networks or pedestrian

networks. The results turned out to be quite different, connectivity for some conventional neighbourhoods improved by up to 120% when pedestrian networks were adopted. In line with this study, another study in the context of the Norther Ireland also suggests significant differences between the two walkability indices from the results of Wilcoxon signed-rank sum tests, independent of the 5- minute and 10-minute network buffer zones (Cruise et al., forthcoming). Thus, in the cases of footpaths do not paralleled to roads, pedestrian networks appear to work as a more effective proxy than road center lines alone, taking into account that the influence of nonmotorized networks such as footbridges, trails through green space (Cruise et al., forthcoming; Ellis et al., 2016).

Therefore, in studies trying to explore the relationship between physical activity and urban green space, it is more reasonable to employ a network that reflects all potential paths for older adults. What is more, the walkability index has been developed and deployed mainly in the North American and the Australian context, there is, therefore, how accurate walkability could be measured with this index in the UK context is a question that worth to figure out in the next stage (Ellis et al., 2016).

MEASURING DISTANCE TO URBAN GREEN SPACE

From existing literature, it is not difficult to find that measuring distance to urban green space has attracted great research interest from researchers (Alves et al., 2008; Bedimo-Rung, 2005; Hooper et al., 2015; Oh and Jeong, 2007; Schipperijn et al., 2010). This is probably because that in line with previous studies, it is suggested that the frequency of use of UGS has significant association with the distance to it (Nielsen and Hansen, 2007; Schipperijn et al., 2010). Although we could not say that the increase in the frequency of use of UGS is absolute with higher levels of physical activity of older adults, but we can at least claim that increasing numbers of frequency of use of UGS is likely to improve physical activity levels of older adults. Therefore, how most effectively measure the distance to UGS is a critical issue needs to be addressed.

There are three main approaches measuring the distance to UGS: measured by self-evaluated distance, Euclidian distance and trail networks. In addition, if we take UGS area size in to consideration, it could also be measured by how many hectares exist with a pre-determined distance (Schipperijn et al., 2010). It is suggested by Herzele and Wiedemann (2003) that the minimum size for a community park is one hectare, although they admit that these suggestions are come from planning guidelines instead of empirical studies. In terms of other methods to measure the distance to UGS, contrary to convention wisdom which frequently judges self-evaluated distance with significant reporting bias. Schipperijn et al., (2010) and Scott et al., (2007) have found that self-evaluated distance works as a better proxy to indicate the frequency of use of UGS. Although this method has not been tested with reliability and validity among older adults, it underlines the importance of how individual's personal experience could make a difference to the use of UGS. In addition, using footpath network has been shown to be a more accurate method to measure UGS proximity than using Euclidian distance (C. Lee and Moudon, 2008; Oh and Jeong, 2007; Schipperijn et al., 2013).

METHODOLOGY DEVELOPMENTS AND CHALLENGES: THE COMBINATION OF GPS, ACCELEROMETER AND GIS.

The combination of GPS, accelerometer and GIS has been termed as spatial energetics by James et al. (2016), and it is defined as "the incorporation of high-spatiotemporal resolution data on location (e.g., GPS combined with GIS) and time-matched energetics (e.g., accelerometer to measure physical activity and sedentary behavior) to examine how environmental characteristics, space, and time are linked to activityrelated health behaviors" (page793). GPS data could provide time-indexed geographic coordinates, which can be used to indicate the locations participants has been; to measure the speed of movement; to understand behaviour among various locations (Jankowska et al., 2015). Using accelerometer to measure physical activity objectively are now available at low cost (Troiano et al., 2014). GIS is capable to assess large areas rapidly.

Developments in accelerometer, GPS and GIS offer us a distinct perspective of view to assess physical activity objectively with detailed and dynamic environmental contexts. With these technologies researchers are now able to put forward research questions about what kind of activities are undertaken at specific times in certain places. Spatial energetics data has largely overcome some drawbacks of previous

measures, for example, reporting bias from self-report methods, lack of environmental contexts by accelerometers or pedometers. The technology has leaded to a range of methodological development, while compared with traditional measurements such as hear rate monitors, pedometers, this method has a very high potential but because it is in its early stage of development, it still paces a variety of methodological challenges, across aspects of concept, analysis and ethic (James et al., 2016).

Section two of this paper has reviewed current methodological approaches that have been used in healthy planning studies. From this review, it is clear that each instrument has a specific purpose and there is no single way to obtain comprehensive and holistic data. It is important to identify potential bias within each instrument and reduce it as much as possible before the study formally begins. In the next section, we will consider potential data sources, leading to a discussion of a research design examine how urban green space could impact the physical activity levels of older adults.

3 EXISTING DATA SOURCES

3.1 OVERVIEW OF DATA SOURCE

This research aims to measure what attributes of urban green space may support and impede physical activity of older adults, and to offer recommendations for interventions can be made to urban green space to improve the physical activity levels of older adults. An enhanced understanding of physical activity behaviour of older people in green space will benefit wellbeing in society and reduction in further health burdens. With this aim, it is significant to capture the data on physical activity patterns, physical activity levels of older adults and the usage of urban green space. Using a case study from Belfast in the UK, this research draws data from three datasets (see table2): 1) the Northern Ireland Physical Activity Survey(SAPAS); 2) System for Observing Play and Recreation in Communities (SOPARC); 3) Healthy Urban Living and Ageing in Place: Physical Activity, Built Environment and Knowledge Exchange in Brazilian Cities (HULAP). SAPAS captures the overall physical activity levels of the general population; SOPARC captures the usage of local parks and HULAP offers detailed and dynamic activity data of 300 older adults. Supported by these three robust datasets, it is possible to build a comprehensive image on the physical activity patterns and physical activity levels of older adults.

Project	Time	Sample amount	Participants	Method
SAPAS	2009/10	4653	Adults (aged 16+)	Face to face interview using CAPI
SOPARC	2010/11	Not Pre-Determined	—	Direct observation
HULAP	2016-2019	A Minimum of 300 Participants	Older adults (aged 60+)	Questionnaire; GIS, GPS and Accelerometer.

Table2 - Overview of three data sources
CAPI: Computer-assisted personal interviewing

3.1.1 THE NORTHERN IRELAND PHYSICAL ACTIVITY SURVEY(SAPAS)

SAPAS assessed the physical activity levels of adults aged 16 years and over in Northern Ireland across four life domains including home, occupational, active travel and recreation. This survey was undertaken from 2009 to 2010, a total number of 4,653 participants was selected stratified randomly and be interviewed face to face using Computer Assisted Personal Interviewing(CAPI). It is a cross-sectional survey which provides robust and comprehensive national wide data on physical activity levels among adults. (Donnelly, 2010)

3.1.2 SOPARC STUDY IN BELFAST, UK

SOPARC (System for Observing Play and Recreation in Communities) is a direct observational tool that can provide information on context of parks, physical activity patterns among park users and their gender, activity levels and estimated age.

Unlike other methods including GPAQ and IPAQ which provide detailed data on a specific respondent, SOPARC is more likely to offer us a picture of random individuals' physical activity levels in the park context at a specific time point.

The instrument was conducted by Belfast City Council at six sites in Belfast, UK including Victoria Park, Orangefield Park, Flora Street, Dixon Playing Fields, Cregagh Glen, Civic Square and Clarawood Estate.

Observations was conducted from the last week in July 2010 and last week in January 2011. Thus, the use of a good range of urban green space of the general population can be provided.

3.1.3 HEALTHY URBAN LIVING AND AGEING IN PLACE: PHYSICAL ACTIVITY, BUILT ENVIRONMENT AND KNOWLEDGE EXCHANGE IN BRAZILIAN CITIES (HULAP)[1]

HULAP is a three-year project that was launched in 2016 by a research team with multi-disciplinary background from the United Kingdom and Brazil. The project addresses a wide variety of issues regarding urban planning, health inequalities and policy makers with an aim to enhance understanding of impacts of built environment on physical activity on older adults, providing evidence to relevant institutions or stakeholders to develop policies for increasing the physical activity levels of older adults and reducing health burdens in the future hopefully.

The project uses both objective and subjective data based on a sample of 300 older adults come from Northern Ireland aged 60 years and over will wear accelerometers (Actigraph GT3X) and Global Positioning System (GPS) (Qstarz BT-Q1000XT) for seven consecutive days and completing a short survey. These three datasets are all cross-sectional data with focus on physical activity, but varied from research methods, demographic groups, environmental contexts and so on. This offers robust data on different aspects of physical activity and the usage of urban green parks.

3.2 PROPOSED RESEARCH DESIGN

3.2.1 RESEARCH DESIGN

Figure 1 shows the elements of the study and how they are related. This includes appropriate physical activity measurements for older adults and the built environment measurements will be identified through literature review, meanwhile key gaps will be identified to refine research objectives. It also involves preliminary study of SAPAS and SOPARC data. Findings from the preliminary analysis will be complementary to and validated by HULAP project. The additional research could include further qualitative methods involving older park uses, such as focus groups.

As noted above, SAPAS will provide holistic and comprehensive data on physical activity of general population and will allow some insights into the overall physical activity behaviours of older adults; SOPARC gives direct observation data on the use of six parks in Belfast, UK and older adults activity with then and in the HULAP research project, it achieves data on physical activity of 300 older adults living in Belfast, UK objectively and subjectively. However, with only three hundred of older adults in HULAP, it is not clear how many of the participants will actual do physical activity in urban green space. In sum, the three datasets are complementary to each other, and provide useful insights for determining which interventions can be made to urban green space to improve the physical activity of the old.

[1] http://www.urbantransformations.ox.ac.uk/project/healthy-urban-living-and-ageing-in-place-physicalactivity-built-environment-and-knowledge-exchange-in-brazilian-cities-hulap/

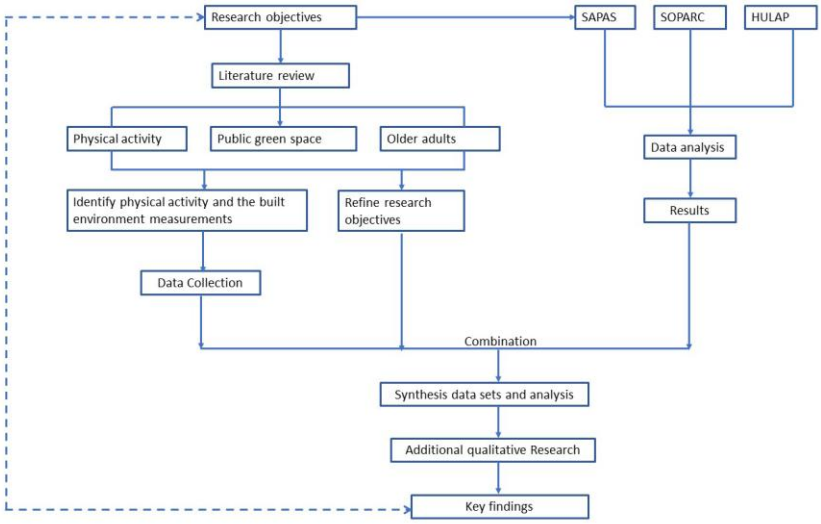

Figure 1 - Diagram of the research design

3.2.2 METHODS

Table 3 shows the three methods that will be used to collect the built environment data, including GIS-based measures; Environmental Assessment of Public Recreation Spaces (EAPRS) and Microscale Audit of Pedestrian Streetscapes (MAPS), each of these focuses on a different geographical scale. At the macro level, the GIS-based measures will be used to assess the walkability of the neighbourhoods around the six observed parks. The walkability index includes four components: residential density, intersection density and land use mix and retail floor area ratio (Frank et al., 2010). At the micro level, EAPRS is used to capture the features of urban green space. To further identify the relationship between the built environment and physical activity it is suggested that the segments between parks and participants' houses should be measured, using Microscale Audit of Pedestrian Streetscapes (MAPS). The approach will also contribute to the development of a new tool: MAPS for older adults. In terms of the physical activity measurements, approaches employed within the three data sources are listed in table 4.

Geographical scales	Macroscale	Microscale	
Object of measurement	Walkability	Street dimension	Park dimension
Quantitative measurement	GIS	Microscale Audit of Pedestrian Streetscapes (MAPS)	Environmental Assessment of Public Recreation Spaces (EAPRS)
Qualitative measurement	Focus group	Focus group	Focus group

Table 3 - Measures of the built environment

As noted above, this research has access to three robust datasets and combined with the use of these additional tools, it will be possible to address the key research questions. Additional qualitative research, using focus groups are scheduled to supplement and test the findings from literature review and data analysis.

Subjective measures	Physical activity questionnaire (From SAPAS)	Tailored physical activity questionnaire (From HULAP)	Intercept survey (From SOPARC)
Objective measures	Accelerometer combined with GPS and GIS		
Direct observation	SOPARC		

Table 4 - Measures of physical activity of older adults

4 CONCLUSION

This paper has reviewed a number of methods that can be applied to objectively and subjectively measure physical activity on older adults and the built environment including neighbourhoods, streets and green space. How best to measure physical activity levels of older adults and urban green space are two key issues in this study, improper methods may result in potential error in final results. Traditional physical activity measurements such as questionnaires, interviews and heart rate monitors, in addition with traditional built environment measurements such as perceived built environment measures and observational measures, they are appeared to provide single and static information. While spatial energetics research not only assess physical activity levels but also provide information across temporal and spatial units (James et al., 2016). It offers us novel perspectives on improving our understanding of how older adults interact with the built environment rather than single aggregate measures. Every method comes with inherent advantages and drawbacks, there remains no single way to capture comprehensive and solid data to deduce research questions. Before data collection formally begins, it is suggested to take different aspects such as research objectives, time, budget, and target population into full consideration leading to ideal research methodological approaches.

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ID 1557 | LASTING COMMUNITY WELLBEING EMBRACING HEALTH AND LIVEABILITY: COMPARISON OF LISBON AND TOKYO

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1 INTRODUCTION

Planners in many major urban areas are facing challenges affecting lasting community wellbeing (LCW), which is a key foundation for overall sustainability. LCW involves people's immediate and long-term satisfaction with decent individual and socio-ecological daily lives mainly within the scales of the neighbourhood and city-region. Community recognizes the multiple and flexible relationships of people, typified by mutual commitment and support. While the concept of community does not entail living proximity and geographical organization (e.g. on-line community, professional community, etc.), we use the concept here with emphasis on the maintenance of community in neighbourhoods, which are geographically organized areas for people living close to each other, but in many cases do not have (or have lost) community characteristics. Neighbourhoods could be considered the base level for community characteristics that are desirable for lasting wellbeing, and that build up to the city-region's level of community cooperation towards sustainability. In these terms, community is a useful perspective for considering the sustainability of daily lives.

With this perspective, comparative study of city-regions with different sizes, such as Lisbon and Tokyo, becomes possible because what matters for decent individual and socio-ecological daily lives within community (and potential or visible progress towards sustainability through them) at neighbourhoodscale is more shared than different. With recognition of what is similar, difference will be presented as a fascination (thus respectful and enjoyable), rather than something impossible to comprehend (thus fearful and hopeless).

This paper presents key features of LCW as an analytical framework and reports on an evolving comparative study of LCW centred on two city-regions – Lisbon and Tokyo – that are very different in size, history, culture and other characteristics. The viability of this comparison rests on the common features of

LCW, which embrace notions of healthy and liveable cities. The research takes a bottom-up approach informed by literatures related to LCW, each city's own forward-looking planning documents, current and emerging initiatives, public discourse and direct experience. Similarities found demonstrate the value of common features, while differences suggest the key importance of understanding contextual factors. This research also attempts to understand changes in mind-sets and behaviours regarding health and liveability among people in these cities.

2 SIGNIFICANCE OF COMPARING LISBON AND TOKYO

Lisbon and Tokyo are in many ways very different city-regions. For example, downtown Tokyo (the 23 Special Ward Area, formerly City of Tokyo) has as big a population as the whole of Portugal (around 9 million). However, both cities share the following characteristics that make comparison possible and interesting:

- Long histories - History as a city began in Lisbon around the 800 BC and Tokyo started to form its urban area in late 12th century.
- Traditional values – Both cities possess valued cultural heritages but old values often endorse unwillingness to challenge established practices.
- Vulnerability to seismic disturbances - The most recent and destructive earthquake disaster happened in 1755 in Lisbon and in 1923 in Tokyo.
- Unrivalled domestic centres – Both cities are unrivalled socio-economic centres of their countries, though currently both face a no- or low-growth economic future.
- An assumption that the economy is a "bottomless-box" - Unjustifiable levels of public spending have been persistent, even though they have not demonstrated net benefit to the residents' lasting wellbeing in the city-region.
- Urban sprawl – Lenient controls on growth have resulted in unclear urban borders.
- Ageing population – People over 65 years old are expected to constitute about 40% of the urban population by 2050 in Tokyo city-region and 35% in Lisbon by 2060.
- Neighbourhood-scale functions and identities – Many neighbourhood-scale livelihood activities are accessed by walking or cycling, such as grocery shopping and schooling.

Both Lisbon and Tokyo city-regions have maintained characteristics as connections of neighbourhoodscale communities despite the history of uncontrolled urban growth. Such neighbourhoods are based on traditional values and have ageing populations. These city-regions also share large amount of conventional public spending (continuous large-scale urban redevelopment projects) that have not been significantly challenged by the local residents, even though this spending focus has often neglected neighbourhood-scale community activities and not demonstrated net benefit to residents' lasting wellbeing. The shared issues and characteristics will inform LCW framework generated in the section 4.

3 METHOD

We compare how planning for LCW has been approached in Lisbon and Tokyo through comparison, with particular attention to five illustrative and emerging features: vicinity, sense of place, urban (and suburban) farming, safety and learning. The comparison rests on the application of the five features as a framework that recognizes the noteworthy LCW-related issues facing the two city-regions. The five features have been generated as a synthesis that combines: (i) attention to the broad literature related to LCW, (ii) professional experience in a multiplicity of urban assessment and planning cases over the years, and (iii) implicit attention to generic requirements for progress towards sustainability, founded on sustainability assessment generic criteria by Gibson et al (2005). We have undertaken literature reviews and field research in both cities before starting dialog among the researchers. A visiting researcher walked with a local researcher through the neighbourhoods in both city-regions. The literature reviewed focused on forward-looking planning documents from government organizations in both the cityregions, and journal articles relating to LCW. The researchers had a dialog based on the three kinds of information (first-hand knowledge from the professional experience and field research, issues recognized by the local planners, and LCW considerations) in order to narrow down the focus with insights. A framework based on emerging features and sub features was created and applied to describe situations and issues of LCW in

neighbourhoods and city-regions in Lisbon and Tokyo in an attempt to illustrate changes in mind-sets and behaviours regarding health and liveability among people in these cities. Then the results are compared to identify similarities and differences, strengths and gaps, and implications for future planning in Lisbon and Tokyo. This serves as a test to turn the LCW framework more generally applicable in other cities facing similar challenges.

This study does not highly prioritize quantified data analysis, although descriptive stats may be used to show general past trends. In contrast, many studies in neighbourhood indicators seek precise and unbiased predictions of neighbourhoods' future through quantified data analyses (for example, Kingsley et al 2014), which requires precise boundaries of neighbourhoods. As discussed in the following sections, this study addresses neighbourhoods as areas that have flexible and dynamic boundaries depending on personal capacity and preference in distance to walk and cycle to obtain goods, services and activities on daily basis, and build up to city-region. It does not require rigid setting of neighbourhood boundaries.

However, there are administratively defined areas with fixed boundaries, such as municipality and city, which may or may not fit to neighbourhood and city-region. In this sense, a municipality could also be a unit for community if it offers organizations or relationships for mutual help among people. Thus, the results of the study would inform not only individual residents, their groups and interactions between them, but also those who work for government bodies that administer municipality or wider areas.

4 FRAMEWORK

4.1 OPERATIONAL DEFININTIONS OF THE KEY WORDS

In this section we develop an analytical framework to discuss how planning for LCW is approached in Lisbon and Tokyo through comparison, which recognizes the noteworthy LCW-related issues facing the two city-regions. In order to do so, key words such as lasting, community, neighbourhood, city-region, and wellbeing require careful operational definitions, to understand what LCW means for this study. The operational definition of LCW combined with the insight to issues and characteristics shared in both Lisbon and Tokyo (see section 2) will help to consolidate the framework.

4.1.1 NEIGHOURHOOD, CITY-REGION AND COMMUNITY

In this paper community is understood as a relationship of people linked by individual participation, interaction and cooperation to support development of personal capacities for resilience and strengthen connections with other individuals and bodies who participate in groups such as families, schools, corporations, neighbourhoods, other organizations and collaborations of those (Murphy 1985 cited by Dangi and Jamal 2016, Buffel et al 2014, Khanlou and Wray 2014). Communities do not require living proximity and physical boundaries, and an individual may take part in multiple communities. Thus communities can overlap to form complex relationships of people. Most of the relationships, however, would stay within neighbourhood and city-region scale, where most of individual daily lives would go on physically and geographically.

Neighbourhood is a socially organized area with geographic location in which residents to go about their daily lives, living in reasonably close proximity but not necessarily being close friends or relatives (Elliot et al 2014, Kingsley et al 2014). Neighbourhood in this definition emphasizes a place where people have ability to obtain goods, services and activities on daily basis. Litman (2003, cited by Roseland 2012) calls this "accessibility", which assumes automobile and truck, transit, cycling and walking as modes, with focus on increasing transport system efficiency and safety through land use. Neighbourhood in this study advocates accessibility particularly by walking and cycling, considering that Lisbon and Tokyo have maintained vicinity of communites with ageing populations, as have many other city-regions. Such neighbourhoods would have flexible and dynamic boundaries depending on personal capacity and preference to walk and cycle some distance. In this sense, rigidly fixing and determining neighbourhood boundaries is not necessary, and probably impractical at least for this study. However, it is important to be clear about what neighbourhood means to inform creation of an analytical framework of LCW.

While the concept of neighbourhood does not necessarily entail functioning mutual support, having community characteristics is desirable for lasting wellbeing at the appropriate scale (e.g. mutual support among neighbours and people from local schools, etc). Many neighbourhoods of that sort build up to city-region (co-workers, school mates from city-regional high school or university, etc.) level within which community characteristics can also be found. City-regions can be grasped as structures of direct and indirect interdependence of people's activities, with context-dependent shifting boundaries over time, hopefully giving rise to diverse entrepreneurial and innovative outcomes (Scott, 2006, Collin et al 2003). With these notions, this study addresses the city-region as a flexible and dynamic area based on direct and indirect interdependence of people's activities for diverse entrepreneurial and innovative outcomes, connecting neighbourhoods with accessibility by transit as well as by foot and bicycle.

Overall, this study considers space of neighbourhoods as special areas with community characteristics building up to the city-region (also with community characteristics). The key organizational concepts are: - A neighbourhood as a socially organized area with flexible and dynamic geographic location to where people live in close proximity but not necessarily being close friends or relatives, and go about daily life with accessibility by foot and bicycle;

- A city-region as a flexible and dynamic geographic location based on direct and indirect interdependence of people's activities for diverse entrepreneurial and innovative outcomes, connecting neighbourhoods with accessibility by transit as well as by foot and bicycle; and
- A community as a relationship of people linked by individual participation, interaction and cooperation to support development of personal capacities for resilience and strengthen connections with other individuals and bodies who participate in groups such as families, schools, corporations, neighbourhoods, other organizations and collaborations of those.

4.1.2 WELLBEING

Wellbeing in a neighbourhood and city-region with community characteristics is satisfaction with individual life based on subjective evaluation of hedonic (looking for maximization of pleasure and minimization of pain) and eudaimonic (looking for realization of one's potential pursued through selfmotivated, self-disciplined and prudent efforts) richness of human wellness and happiness (Elliot et al 2014, Boniwell 2016). It is also the collective evaluation of equitable and healthy access to good quality of goods, activities and essential community assets and services (such as food and housing; working, learning and recreation; transportation, parks, natural area and public space; and healthcare) (Merric and Martin 2014, Litman 2003) backed by interpersonal relationships for mutual help.

Community wellbeing can be significantly affected by global issues, such as climate change, globalized economic activities, immigration and refugee. In many cases, however, communities have limited capacity to directly counteract such issues by mitigating climate change (Gibson 2017), influencing decisions of multi-national corporations, ending the conflict happening somewhere far, and so on. Therefore, important factors of community wellbeing are not only creativity for providing personal and social satisfaction, but also resilience as capacity to respond to and accommodate change and disturbances. These capacities are obtained by community's characteristics to support development of personal capacity for resilience and strengthening relationships with others in the collaborative groups.

4.1.3 LASTING

The term "lasting" covers both immediate and long-term time frames. The specific time lengths of the "immediate" and "long-term" periods vary depending on the context. Thus it is difficult and probably insignificant to precisely define the time frames of "lasting". However, when an operational definition is demanded, it is useful to look into implications for future generations who are powerless at the point of decision making, which implies more than 100 years ahead. Prolonging community wellbeing is based on the maintaining the integrity of socio-ecological systems (Oostrom, 2009) and maintenance of their life support functions, while paying attention to intra- and intergenerational equity (Kumagai et al, 2010). In this study, "lasting" implies the idea of embracing benefits of both current and future generations, and celebrating creativity and resilience of community for providing wellbeing. It entails behavior change and acknowledgement of culture including policy and governance. Culture as "that complex whole which

includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society.' (Tyler 1870: 1 cited by Avruch 1998: 6). A policy is like a road-map with defined objectives, priorities, rules and mechanisms to implement the objectives that provide guidance to subsequent activities, while governance can be understood as 'the totality of interactions, in which government, other public bodies, private sector and civil society participate, aiming at solving societal problems or creating societal opportunities' (Meuleman 2008: 11).

4.2 HOW EXISTING LITERATURES ADDRESS LCW-RELATED MATTERS

The literatures precisely addressing lasting community wellbeing have not been found, but there are articles providing insights about community wellbeing and related lasting values (see Table 1 for summarized contents). Both of the reports from Organization for Economic Co-operation and Development (OECD 2015) and Canadian Index of Wellbeing (CIW 2016) are based on their original indicators, which provide strictly parallel data sets to measure the current status of national-level wellbeing (member countries for OECD and Canada for CIW). Baldwin and King (2017) focused on social sustainability realized through public built environment promoting behaviors and mindsets that are good for community. Reviewing the literatures has revealed that this study shares many features with OECD (2015) approaches, which pay attention to such factors as housing, community (as support network), life satisfaction, recreation, health and safety. Also, Baldwin and King (2017) support our notion that sense of place is important for wellbeing.

This study recognizes the following possible issues relating to the approaches taken by the existing literatures. They inform framework creation for this study. The possible issues are:

- If the indicators were set too rigidly to obtain strictly parallel data sets, it would be difficult to pay particular attention to illustrative and emerging features of the case-specific situation of LCW.
- If the domains and indicators were too many, it would be difficult for wide variety of participants to understand the wellbeing situation in shared manner for deliberation.
- If the premise of the framework presents norms too rigidly (e.g. study and work for income to access to goods and services, behave well for community towards sustainability, etc.), similar problems as described above could occur.

Source	Lasting	Community	Wellbeing
OECD Better Life Index (2015)	The purposes are measuring the current status of wellbeing in the member countries, and encourage citizens' involvement in policy debate. Time scale behind the research is not clarified.	The "social connections" dimension is translated as "community", and defined as strong social network that provides emotional support and access to jobs, services and other material opportunities.	The 11 dimensions are: income and wealth; jobs and earnings; work-life balance; housing; environmental quality; health status; education and skills; social connections; civic engagement and governance; personal security; and subjective wellbeing
Canadian Index of Wellbeing (2016)	The purposes are to identify core Canadian values (wellbeing) and provide a comprehensive portrait of quality of life in Canada. Time scale behind the research is not clarified.	Focus is on "vital community" as a domain of wellbeing. Community seems understood as relationships among people, private, public and non-governmental organizations that foster individual and collective wellbeing.	The presence of the highest possible quality of life in its full breadth of expression focused on but not necessarily exclusive to: good living standards, robust health, a sustainable environment, vital communities, an educated populace, balance time use, high levels of democratic participation, and access to and participation in leisure and culture.
Baldwin and King (2017)	Social sustainability as people's quality of life now and in the future is sought. The premise is that planning and design of our public built environment should promote "pro-community behaviours" (behaviours and psychological responses that are good for community, as associated with social capital and cohesion).	Community is a groups or networks of people who share a common sense of belonging based on shared connections such as geographic proximity, interests, socio-demographic characteristics, experiences, emotional links or other common purposes.	A pro-community outcome that socially sustainable urban communities can achieve. Same as quality of life and health.

Table 1 – How existing studies address lasting community wellbeing

4.3 FRAMEWORK FOR LASTING COMMUNITY WELLBEING

4.3.1 LASTING COMMUNITY WELLBEING

Based on operational definitions and in face of the current state of the art above, this study describes LCW as satisfaction with individual life based on subjective evaluation of hedonic and eudaimonic richness of human wellness and happiness. It also includes collective evaluation of equitable and healthy access to good quality of goods, activities and essential community assets and services (such as food and housing; working, learning and recreation; transportation, parks, natural area and public space; and healthcare). The LCW is supported by interpersonal relationships for mutual help, which embraces benefits of both current and future generations, and celebrates creativity and resilience to prolong wellbeing at neighbourhoods connected by walking, biking and transit to build up to a city-region. It requires behavior change and acknowledgement of culture.

4.3.2 ANALYTICAL FRAMEWORK FOR LCW

The operational definitions of LCW provide a foundation for generating the analytical framework of this study. Issues recognized both in Lisbon and Tokyo (vulnerability to seismic disturbances, urban sprawl, ageing population, and unjustifiable levels of public spending), and common characteristics based on traditional values (unwillingness to challenge established practices and resilient neighbourhood-scale communities) also inform the framework creation.

Similarities shared by Lisbon and Tokyo revealed the value of the neighbourhood-scale communities, wherein people can feel sense of place and belonging, moving by foot and bicycle, connected by transit or other kinds of soft transportation to build up to city-region. Neighbourhood in this sense emphasizes human-scale setting, which is highly relevant for discussions of planning for embracing health and liveability. Vicinity as physical and mental accessibility by foot, bicycle, trams and other soft transportation provides people the feeling that desired wellbeing-related objectives are close by. It allows people to move based on their capacity and preference, providing sense of place as individual feeling of autonomy, belonging, and social-ecological integration. Such feelings are linked to livelihood activities such as local commerce, artisan production, local public amenities and life support services, and inclusive activities. These features are valuable for neighbourhood and city-region with ageing population.

In terms of resilience, recreating and maintaining urban (and suburban) farming are particularly important for city-regions with a history of urban sprawl to absorb shocks from future socio-ecological disturbances (Kumagai et al 2014), such as outgoing enterprises, incoming immigrants, and natural disasters. Urban (and suburban) farming also provides bases for local food production, ecological services, local public amenities, and learning about socio-ecological integration. Vicinity, sense of place, and urban (and suburban) farming together provide important basis for LCW, but they must come with safety particularly in terms of transportation safety, crime prevention, and reduction of disaster damages. Lisbon and Tokyo share significant vulnerability to seismic and flooding risks, which are at least partially multiplied with uncontrolled sprawl and continuous large-scale urban physical development that have not demonstrated net benefit to neighbourhood-scale wellbeing. This failure may be a result of public unwillingness to challenge established practices often coupled with inertia in adopting new routines to respond to new challenges. There is a positive side of being based on traditional values that has contributed to the maintenance of neighbourhood-scale communities in Lisbon and Tokyo. However, LCW requires behaviour change and acknowledgement of culture in order to embrace benefits of both current and future generations, and celebrate creativity and resilience of community to prolong wellbeing. People who favour traditional values need to learn for developing their capacities and engaging in meaningful deliberation about responding to new challenges (Kumagai 2016).

Based on the argument above, the following five key features and related sub features were identified, drawing on the literature and field research:

- Vicinity– physical and mental accessibility by walking, bicycling, trams and other soft transportation (less car-dependent), feeling that desired wellbeing-related objectives are close by and that collective social relationships are relevant to individual liveability

- Sense of place – individual feeling of autonomy, belonging, and socio-ecological integration (linked to livelihood activities such as local commerce, artisan production, local public amenities and life support services, inclusive activities)
- Urban and suburban farming – food production (local agriculture and aquaculture), ecological services (retaining permeable surfaces, biodiversity, improved air quality), absorbing shocks from socio-ecological disturbances, local public amenities, learning about socio-ecological integration (connectivity to the land)
- Safety – reduction of disaster damages (especially seismic and flooding), crime prevention, transportation safety
- Learning – capacity building for personal resilience and strengthened collaborations, realizing meaningful community deliberation.

The list of sustainability-related emerging features and sub features provides a framework as a new entity.

It was applied to the reviewed plans from both cities to obtain implications throughout comparison.

5 CASE COMPARISON

5.1 LISBON

The shift to prioritizing lasting wellbeing is recent in Lisbon municipal planning and perhaps often undertaken on other premises, while it is not consciously perceived as contributing to LCW. However a number of actions, including measures in the latest master plan, adopted in 2014, as well as the municipal strategy for climate change and the increased space for cycling and walking reveals increasing focus of concern, attention and investment on the quality of public space, green infrastructures, slow mobility, solutions of urban proximity and increased public engagement. In addition municipal programmes such as the BipZip that promotes local partnerships, are contributing to creating LCW. The five features of the LCW framework can be illustrated in Lisbon as follows:

VICINITY

- Neighbourhood regeneration and improving quality of life, for example by improving the proximity of services, facilitating soft mobility (walking and bicycling), creating walkable streets with no traffic, promoting local commerce and the sense of community
- Higher quality public space, with shaded resting areas, major urban riverfront restoration, reduction of traffic lanes and introduction of more street trees and green road dividers, to enable walkability and liveability, as well as the possibility of enjoying the public place.

SENSE OF PLACE

- Promotion of space multi-functionality, including day care centres, residential housing, nursing homes and multifunctional spaces for seniors, sport facilities and activities (open runs, marathons, etc.), encouraging a healthy lifestyle, and adoption of legislation to protect the local commerce
- Increased walkability and cyclability of the city, together with improved cafes and esplanades, also delivers an improved sense of place through a greater enjoyment of the city, which however is increasingly affected by exponential tourism in the city that starts to keep citizens away from the most popular places that feature Lisbon

URBAN AND SUBURBAN FARMING

- At least in the last 10 years urban and suburban farming has been promoted in municipal land, including abandoned farmlands in Lisbon city and region (in Lisbon municipality and other municipalities in the city-region) to help less resourced families compensate for their low family economic income

- Originally to promote urban farming and recreational activities, such green spaces are now accounted as means to increase ecological services (namely by allowing better water infiltration through increased permeable surfaces) and serving as adaptation measures to climate change, with a general approach to green infrastructures.

SAFETY

- Increased seismic resistance of buildings and the capacity of city run-off, namely linked to green infrastructures as adaption measures to climate change, with benefits to reducing exposure to flooding events.

LEARNING

- Innovative forms of public engagement, including participative budget design, programs for social innovation and start-ups to enable community learning processes, and attempts to mitigate unemployment, but also to engage the youth in creative activities

This is happening at the same time that tourism is exploding with levels of demand never seen before. Historical built heritage is being rehabilitated and conserved and new business development conditions are created to attract people and promote wealth generation activities. But no doubt there are also visible signs of the emergence of the five features listed above.

5.2 TOKYO

The latest annual planning reports issued by Ministry of Land, Infrastructure, Transport and Tourism (MLIT) on development of the Capital Region (MLIT 2017) is analysed here as the main information source through the lens of the LCW framework. The Capital Region consists of Tokyo's city region and its hinterlands. The plans for Tokyo still retain the long-standing assumption that economic growth can and should continue forever and will automatically deliver wellbeing (e.g., development of a more efficient road system including three ring-road expressways overarching the region for the 2020 Olympics and engineering-centred disaster prevention). However, the plan promotes and recognizes changes in mind-sets and behaviours regarding LCW embracing health and liveability among people living in the city region. These changes are illustrated according to the framework as follows:

VICINITY

- Promoting municipal plans to concentrate public facilities for elderly- and child-care services around train stations and networking them throughout redevelopment projects.

SENSE OF PLACE

- Encouraging remote working and/or fewer work hours to improve system modularity of businesses, and let people spend more time off work.
- Improving landscape, schools and other cultural facilities, urban parks, healthcare and welfare (elderlyand child-care) capacities (these items are recognized separately, but can be integrated in terms of sense of place).

URBAN AND SUBURBAN FARMING

- Putting abandoned farmlands back in production, promoting community farmlands, and recognizing multi-facet benefits (food production, ecological services, disaster evacuation, local amenity) of urban farmlands.
- Applying more biodiversity-friendly methods in public (shore protection) works.

SAFETY

- Prioritizing improvement of overall counter-disaster (especially against earthquake and flooding) capability (hard infrastructure, rescue plans and self help).

LEARNING

- Promoting government-led programs to build the capacities of NPOs (non-profit organizations) and individuals (MLIT 2014, TMG 2014).

It is evident that the official plans recognize changes in mind-sets and behaviours regarding LCW embracing health and liveability. However, the focus of the plans is still large-scale growth-oriented construction projects and the plans lack attention to their possible impacts on lasting wellbeing in communities. For example, the plans emphasize significance in developing more efficient road system (particularly for freight traffic of goods and industrial wastes), but they do not deal with consequent safety and environmental (e.g. noise, vibration and exhaust) issues for residents in the neighbourhoods. Also, urban and suburban farming is encouraged in the plans, but possible land contamination (due to industrial use in the past and 2011 disaster) is not clearly addressed. These characteristics imply unwillingness to challenge established practices as general mindsets of people in Tokyo. However, changes in mid-sets and behaviours towards more sustainable lifestyles is increasingly crucial, as it is highly questionable that such large-scale development projects are appropriate for a city with an ageing and declining population. Attentions to changes regarding LCW embracing health and livability have just emerged in the plans for Tokyo.

5.3 SIMILARITIES AND DIFFERENCES

The plans for Lisbon and Tokyo commonly recognize that conditions are being created that translate into a benefit of attention to matters related to LCW, and show some intention to promote actions such as small-scale farming on community lands with improved physical accessibility as well as a sense of belonging to a place. However, in both cities, unwillingness to challenge established practices coupled with inertia in adopting new routines to respond to new challenges is still visible in preserved overconfidence on engineering solutions and over-spending of public money relating to them. Also due to the same attitude, community learning has been largely government driven rather than community-based and independent. Overall, governments in both cities, rather than community organizations, have so far led initiatives to strengthen LCW-related characteristics. Even as if, like in the BipZip programme in Lisbon, the municipality aims to promote the programme through local partnerships with citizens, local organizations and the local commerce. But there are clearly insufficient bottom-up initiatives that start from citizens' initiative directly.

The differences include particular distinctions between the existing transportation systems in the two cities, as well as people's overall degree of passiveness to government initiatives. For example, Tokyo is planning for concentration of public facilities around existing train stations that are accessible by walking, bicycling or bus links, thus creating a vicinity space, while Lisbon addresses streets and districts for placing multi-functional facilities close to people. On the other hand, the residents in Lisbon have better chance to participate in urban decision making, for example through participative budgeting, better access to information on municipal planning and strategies, while those in Tokyo seem to demand less on such crucial means to engage more actively and effectively in urban decision making.

Features	Similarities	Differences
Vicinity	Improved physical accessibility and belonging are sought.	Solutions are different (Tokyo utilizes existing train station networks, while Lisbon takes street and district as unit).
Sense of place	Unwillingness to challenge established practices is evident.	Changing work style (for shorter work hours) is promoted in Tokyo. Lisbon encourages street community initiatives and small local commerce to create sense of place.
Urban/suburban farming	Small-scale farming on community lands is promoted.	Possible contamination must be addressed in Tokyo.
Safety	Over-confidence on engineering solutions is evident.	Information (maps etc.) is more accessible in Lisbon.
Learning	Government-driven community learning is leading changes.	The government-led programs are campaign for volunteer work in Tokyo,

Table 2 - Similarities and differences between Lisbon and Tokyo over the emerging features

5.4 STRENGTHS AND GAPS

An evident strength of both Lisbon and Tokyo is that neighbourhood-scale livelihood activities still remain there, so people in these cities maintain a sense of place and would well understand the notion of a city region as a collection of neighbourhoods. Another strength is that governments have started to initiate projects and programs that feature sustainability-related characteristics at the neighbourhood scale. But people are not willing to challenge government initiatives. Because the government decisions in both cities have predominantly engaged engineering-centred solutions, it is crucial to change the thinking, behaviour and understanding of development, to encourage learning to appreciate and apply non-engineering solutions, and to engage people effectively in dealing with complex issues and options. It is important also to encourage people to develop and apply their capacity to engage with the government decision-makers even when that engagement may challenge the established practices. The challenge is how to encourage such behavioural changes for lasting community wellbeing both among the government decision-makers and non-government people living there.

6 CONCLUSIONS

Throughout the study, we have observed signs of change in Lisbon and Tokyo, particularly in terms of promoting community farming and improving the quality of public space and physical accessibility to public service facilities. These changes suggest a shift in values from basic economic priorities to more LCW-related initiatives. But such actions have not been mainstreamed yet. Thus, as implications for future planning in Lisbon and Tokyo (and for other cities facing similar challenges), our study also suggests continuing challenges that call for needs to encourage:

- People's confidence and sense of independence to participate in community deliberations;
- More innovative behaviour by decision-makers, planners and community residents; and
- Greater emphasis on initiatives and public engagement at the neighbourhood scale.

LCW-related initiatives are promising and often attractive but also challenging. If LCW is assumed it may increase the sense of ownership of the community in relation to its living place with benefits to the urban management capacity that will then be shared with the community. However adopting LCW involve matters of great complexity and require significant changes in thinking and behaviour. In Lisbon and Tokyo, and probably in many other cities, mainstreaming LCW-related initiatives requires mutual willingness of the community residents and government decision makers to work together, to agreen on common grounds and share a common vision to the development of the city, even if it controverts past conducts. The neighbourhood with community characteristics, highlighting human-scale setting, offers an attractive base for innovative initiatives.

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ID 1577 | CONNECTING FOOD WITH PLANNING PROFESSION: A REVIEW PAPER ON THE DEVELOPMENT AND EVOLUTION OF URBAN FOOD PLANNING, EDUCATION AND RESEARCH

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ABSTACT: The food system has been noticed by planning profession since the World Health Organization launched the Healthy Cities movement in the1980s. As the result, countries gradually started to focus on the health, agricultural and urban food security issue and make efforts to create healthier and more liveable cities ever since. Food system has been regarded as production and consumption of food in general and could be divided into the policy and planning dimensions. Food policies are about agriculture, economic development, logistics and education can cooperate with each other in policy actions or how non-governmental organisations, farmers and other different stakeholders can work with the government. The spatial planning of urban food is related to how we can improve the access for people to get the healthy food and how to implement the sustainable urban food planning. In addition, urban design concerning the application of productive landscape and other tools are also parts of spatial interventions to urban agriculture and food city. Although food planning has gradually been discussed in recent years, there has been a lack of systematic review about this planning trend. In this paper, we reviewed the literature related to the subject of urban food planning since 1980. Through analysing articles in planning related journals, we created the literature maps and descriptive statistics that document the current development of food planning literature and organise them by the definition, themes, history, typology, evolution and future direction of food in connection with the planning research, practice and education. We wish to contribute to this emerging planning and design paradigm that concerning about food, public health, sustainability and the new rural-urban relationship.

KEYWORDS: healthy cities, food planning, urban agriculture, literature review, planning trend

1 INTRODUCTION

The food system has been noticed by planning profession since the World Health Organization launched the Healthy Cities movement in the1980s.This reflects the increasing public concern on the food safety, food security and its relationship to toward a healthy and liveable environment. Food system contains two parts, including production and consumption, and could be considered by its policy and planning dimensions. In the policy dimension, it is about the cooperation between agriculture, economic

development, logistics and education sectors or the relationship within governmental sectors, non-governmental organisations, farmers and other different stakeholders. The planning cares about the spatial domain, regarding the location of the agricultural land, the availability of food and how to achieve a sustainable food planning. As for urban design, it can be related to the productive landscape and other tools to raise the public awareness on food issues.

Food issues have been discussed in different disciplines and the purpose of this paper is going to identify the emerging themes and topics in food planning in order to identify the potential research gap in planning discipline. While growing number of papers on the food subjects published in planning literatures, there is no comprehensive and systematic analysis on how this subject has been discussion in our profession. Therefore, the goal of this article is to identify the trends in food planning, using online literatures as the database, to discussed the similarity and difference on the subject of discussion on the food systems and food planning by the general public, academia, and planning scholars.

2 LITERATURE REVIEW

Pothukuchi & Kaufman's(1999) ground-breaking work "Placing the food system on the urban agenda: the role of municipal institutions in the food systems planning place the food issue in the centre of attention in the contemporary planning literature. They pointed out the rationality of behind such advocacy:

"Air, water, and food are the three essentials of life. Clearly, it would be extraordinarily difficult to have high-quality human settlements without high-quality air, water, and food. Planners have been heavily involved in efforts to improve the quality of air and water through air and water pollution control programs. But the third leg of the essential life tool, food, has been virtually ignored by planners. If planners are truly concerned about improving human settlements, they need to incorporate food issues into their working models." (Pothukuchi & Kaufman, 1999, p.8)

Besides of the basic necessity of life, they also highlighted the food issues are planning issues due to its relationship to local economy, public health, quality of neighbourhoods, urban sprawl, and many others. An year after, Pothukuchi & Kaufman's(2000) in another article "The food system: A stranger to the planning field", further discussed the key food topics at that time and identify planning actions improve the food systems, with particular focus from the social equity of food accessibility. As the results, literatures on the food issues has emerged in the area of food deserts (Battersby and Crush 2014), food security(Lang and Miao 2013, Opitz In addition, we used "Food", "Agriculture" and "Farm" as keywords to define the food-related hot topics in the planning literature. Finally, we made the cross-comparisons among topics in these subsets of literatures. The hot topics are decided by its frequency of appearance on the web and ranked accordingly. The purpose of the comparison is to discover the research gap in food-planning research in urban planning discipline. (Figure1)

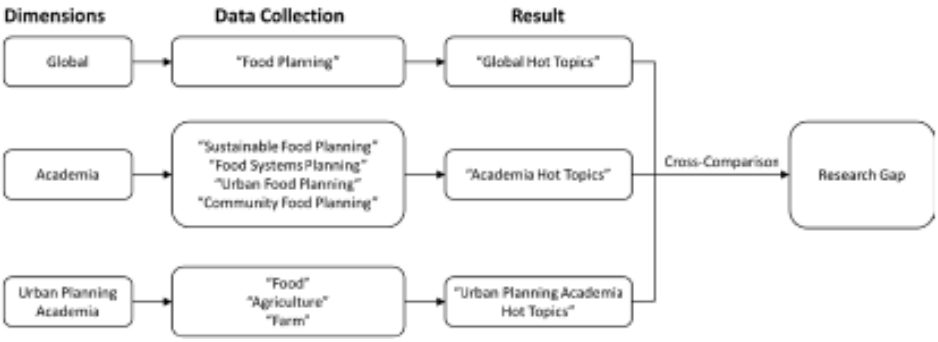

Figure 1 - Research Design

3 GLOBAL DIMENSION

The Google Trends website allows researchers to download data for almost all countries at no cost and to download time series of any search term's popularity over time (provided enough people have searched for it). For these reasons, Google Trends is an attractive data source for social scientists. (Mellon, 2013)

Here we use Google Trends as the primary tool to search “Food Planning” and find the popular theme of interest by the general public. The keywords are “food planning” and searching dates are defined from 2004/1/1 to 2016/12/31. There are two classifications," Related Topics" and "Related Queries", in the results of Google Trends. Each classification ranks interrelated topics in two ways, “top” and “rising”, and each way lists 23~25 words. In this research, we choose “Related topics” to analyse and 50 topics are collected in our database (Figure2).

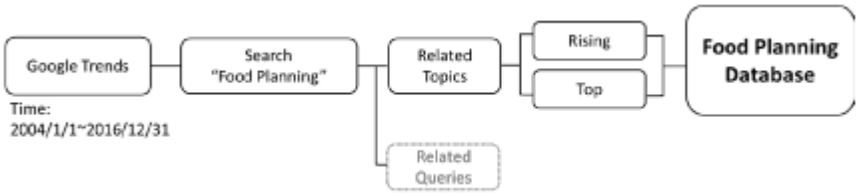

Figure 2 - The process of the global food-planning relate search

In the result of “Food Planning” searching, “Health” and “Nutrition/ Nutrient/ Academy of Nutrition and Dietetics” are in both ranking at the top and rising in the global food-planning discussions. This result shows that in the public pay more attention on food in relationship to health-related issues. Besides, it came to a conclusion that the popular topics in food planning in the world from 2004 to 2016 are dietary or entertainment-related. On the rising side, we see “Food security”, “Planning Commission”, “Vegetable”, “Food systems”, “Marketing” and “Business plan” are getting its popularity in the world. In this case, it reflects that the public are more interested in social and economic issues comparing to the spatial discussion, such as the urban planning which is appear in the last position of the ranking table. (Table 1).

	TOP	RISING
1	Food	Food security
2	Outline of meals	Month
3	Menu	Nutrient
4	Party	Food truck
5	Eating	Planning Commission
6	Health	Vegetable
7	Diet	Nutrition facts label
8	Plan	Breakfast
9	Event management	Food systems
10	Nutrition	Marketing
11	Budget	Buffet
12	wedding	Academy of Nutrition and Dietetics
13	Catering	Business plan
14	Cooking	Goal
15	Management	Budget
16	Family planning	Event management
17	Food and Beverage	Eating
18	Food Network	Health
19	Week	wedding
20	Company	Cooking
21	Wedding Planner	Management
22	Cost	Food
23	Fast food	Family planning
24	Dinner	Menu
25	Urban planning	Outline of meals

Table 1 - The searching results from the global dimension

In general, these topics are always discussed enthusiastically in the world, then gradually draw the academic attention. It might because the academic articles need more time to be published and lead to a lag concern on topics. Overall, the academia dimension provides a more detailed observation in the food planning. It is necessary and important to look into the academic literature to study the types of food planning issues had been discussed.

4 ACADEMIA DIMENSION

In the academia dimension, we have divided the keyword search into three part. One part is going to observe the number of different periods recognizing the time when it appeared lots of articles about food planning. Another part is going to find the hot issues in the academia dimension before 2016. The last is to identify important journals in this search.

Vitiello(2014) and Pothukuchi(2015) both discussed about the food planning from an evolution perspective. Use “Google Scholar” as the primary tool. We search “sustainable food planning” “food systems planning” “urban food planning” and “community food planning” to find literatures in four different scales. At the time scale, we take “1980” as the first time division because it is the time that World Health Organization launched the Health Cities movement. Besides, according to the publication date of “Placing the food system on the urban agenda. The role of civil institutions in food systems planning”(Pothukuchi and Kaufman 1999), it takes “2000” as another time division for the reason that the above article is famously regarded as the new millennium of the food planning (Figure3).

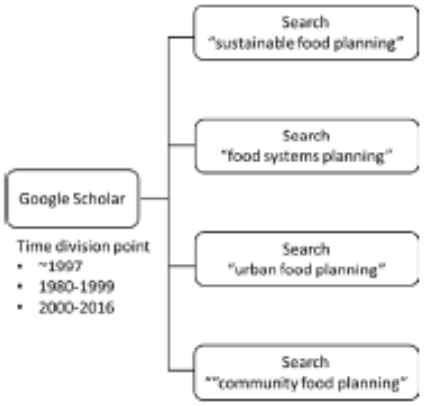

Figure3 - The process of the academia data search by different time divisions

The growing scholar attentions on food planning issues was after 2000, despite WHO launched Health Cities movement was 1986. Besides, “Food systems planning” was the topic that mostly covered among four levels and this can be made a conjecture that most of the people talked about the food issue on the country scale (Table2 and Figure4).

Keywords	~1979	1980-1999	2000-2016	total
Sustainable Food Planning	0	1	420	421
Food Systems Planning	2	31	757	790
Urban Food Planning	0	2	301	303
Community Food Planning	0	8	75	83
Total	2	42	1553	1597

Table 2 - The result of the academia data search in different periods

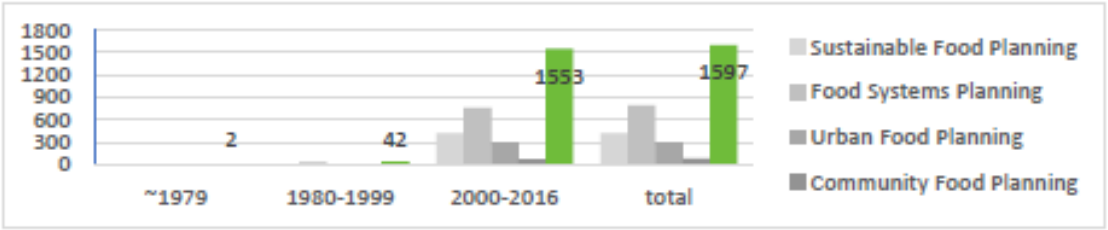

Figure 4 - The bar chart of the academia data search in different periods

To identify the hot topics among the academic research on food planning, we collected the 99 journal articles from “Google Scholar”, excluding the review paper, non-English articles, incomplete articles, theses and books. Second, we review the articles and selected those with keyword listed. Lastly, we categorize these keywords and put them in groups according to their similarity and rank them according to their frequency of appearance. (Figure5). Among those article database, there are only 66 articles contains keywords and 576 keywords in our database. “Agriculture”,” Policy”,” Local” and” Security” ranked as the top four keywords that appeared more than ten times.

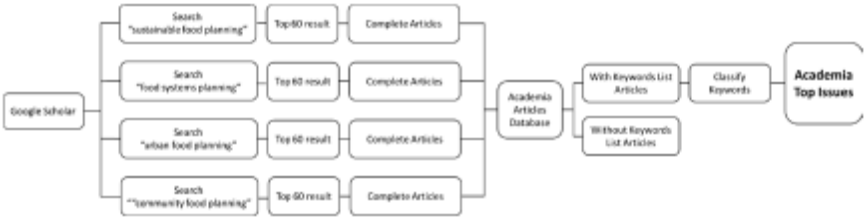

Figure 5 - The process of the academia data search

Times	Keywords
21	agriculture
15	policy
14	local
14	security
8	development
7	land
7	public
7	social

Table 3 - The table of the academia data search by Keywords lists

The above mentioned 99 articles also used to identify the journals that contribute to the food planning subject and with the important articles. Journals related to agriculture, justice, social and policy show the importance in this research. The table below list journals that included more than two popular articles in searching in google scholar. The most prominent journal in this analysis is International Planning Studies (Table4). International Planning Studies is a journal focusing on the challenges that urban, regional, and national and international levels facing in the planning.

Journal	**Frequency**
International Planning Studies	17
Agriculture and Human Values	9
Journal of Planning Education and Research	9
Local Environment: The International Journal of Justice and Sustainability	5
International Journal of Sociology of Agriculture and Food	3
Journal of Agriculture, Food Systems, and Community Development	3
Journal of the American Planning Association	3
Land Use Policy	3
Food Policy	2
Geography Compass	2
Journal of Environmental Policy & Planning	2
Journal of Hunger & Environmental Nutrition	2
Regional Studies	2

Table 4 - The journals with popular food-planning related articles

As urban planner, we need to be more sensibly aware of food issues in our lives(Pothukuchi and Kaufman 1999). Therefore, in the following research, we do the similar search on the urban planning literatures and identify the hot issues in the urban planning academia field and will be used to identify the potential research gap in the next step.

5 URBAN PLANNING ACADEMIA

First, we need to decide which journals are important in the urban planning academia. Second, find articles which have "food", "agriculture" and "farm" either in the title or in the abstract during 2000, the time has the significant growth, to 2016. Third, collect all listed keywords of selected articles and analyse the number of occurrences of words to point out main topics the urban planning academia (Figure6).

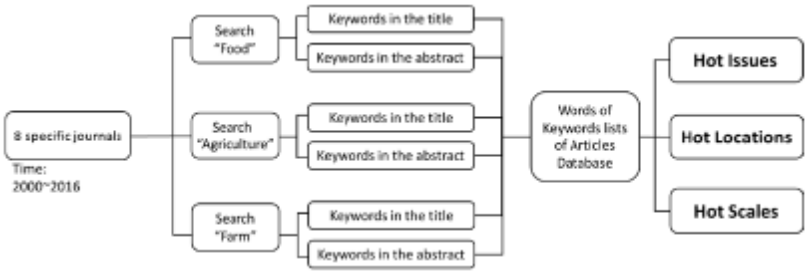

Figure 6 - The process of the urban planning academia data search

Referring to “Urban Studies & Planning Research Guide: Journal List” of the library of University of California, San Diego, we choose eight main journals and search the specific keywords to find food-related articles, including Environment & Planning A, Environment & Planning B: Planning & Design, Environment & Planning C: Government & Policy , Environment & Planning D: Society & Space, Journal of Planning Education and Research, Journal of Planning Literature, Urban Affairs Review and Urban Studies. There are 232 articles collected and 66 of them with keyword listed. The table5 below was the particular outcome which shows the words that mentioned more than 5 times, and these subjects are policy, agriculture, security, land and governance, that are mainly related to security or health. As we discussed in the literature review, the current literature on food planning are socially related. The spatial-oriented keywords, such as land, accessibility and the network show the relatively lower frequency in this research. As the result, we can conjecture current research efforts have made more attention on the social rather than the spatial terms.

Times	Keywords	Original Keywords
13	Policy	policy,policy-making,policy-mobilities,political-sensibilities,politics-of-possibility,political-ecology,new-political-spaces,food-policy,environmental-policy-making
12	Agriculture	urban-agriculture,agriculture,peri-urban-agriculture,agroecology,agrofood-standards,agricultural-change,agricultural-soil-carbon-projects
12	Security	biosecurity,food-security,Biosecurity,Biosecurity-governance,community-food-security,food-in/security,securing,security
10	Land	land-use,Conflicts-over-land,farmland-amenity,land,Land-grab,land-grabbing,landscape,land-scarcity,land-use-change,rural-land-management
8	Governance	governance,risk-governance,urban-climate-governance,urban-governance
7	Economy	bioeconomy,urban-economy,carbon-economies,economic-integration,evolutionary-economic-geography,local-economic-development,urban-economics

7	Accessibility	food-access,accessibility,physical-access,food-accessibility,open-access
7	Poverty	poverty,poverty-alleviation,poverty-dynamics,spatial-poverty-trap,urban-poverty
6	Desert	food-deserts,food-desert
5	Network	actor-network-theory,agrifood-network,alternative-food-networks,network-design,networks-of-practice
5	Environment	built-environment,environmental-lifestyles,food-environment,food-environments,obesogenic-environments

Table 5 - The table of the urban planning academia subjects searched by keywords

To put the spatial theme in the centre of food planning discussions, we further analyse the articles by its geographic location of study. We found most of the articles discussed the subjects or area in European countries, while South American countries did not attract the attention. Different regions have different food issues identified. For example, when it comes to European(Reynolds 2010), most of the food issues focus on the sustainable topics. When it comes to the North America (Cohen and Reynolds 2014, Pothukuchi 2010), Africa(Battersby and Crush 2014) or Asia(Lang and Miao 2013), the subject is socially related, in terms of health, justice and security (Opitz et al. 2015) (Table6).

Continent	Times	Country	Times	Original Keywords
Europe	34	Europe	8	Europe, European, Europeanising, Europe's
		British	4	British
		England	12	England, England's, Kingdom, Leeds, Cardiff, London
		Nederland	3	Dutch, Netherlands
		Belgian	1	Belgian
		Spain	1	Catalonia
		Germany	1	Germany
		Hungary	1	Makó
		Portland	1	Portland
		Spain	1	Spanish
		Sweden	1	Sweden
North America	22	America	11	America, American, Mississippi, Buffalo, California, San Francisco, Hawai'i
		Mexico	5	Mexico, Oaxaca, Toluca
		Canada	2	Canada, Canadian
		America	2	Detroit
		Guatemala	2	Guatemala
Asia	19	China	14	China, China's, Kunshan
		Japan	1	Hakuba's
		Russia	1	Russian
		Sri Lanka	1	Sri Lanka
		Turkey	1	Turkey

		Vietnam	1	Vietnam
Africa	12	Africa	12	Africa, African, Lusaka, Malawi, Zambia, Zimbabwe, Botswana, Burkina, Kenya
Oceania	5	Australia	5	Australasian, Australia, Vienna
South America	0	-	-	-
Antarctica	0	-	-	-

Table 6 - The geographic area of food-related research in urban planning

Nowadays, we talk about food issues always at a city scale. In the “Avoiding the Local Trap: Scale and Food Systems in Planning Research”(Born and Purcell 2006), it considered the food issues with a view to the scale. Authors thought that the local or community level was before other bigger levels, according to the ecological sustainability, the social and economic justice and the food quality and human health. It reminded the public that it should not draw the equal sign between the local food and the healthy food. The local healthy food is assembled by the concept of fresh, healthy, short distance, justice and so on. At the end of the article, it brought up that the network approach can offer an alternative solution to the local trap. From this point of view, the scale of discussed issues is also important (Table7). The provincial level was the most mentioned keywords, and secondary levels were global and city. We seldom talked about the national scale of food issues. and it might be the neglected point of food issue. National food issues are related to food distribution in countries. Besides, if we can discuss food issues from the perspective of the central government, food issues can enhance the importance to a certain degree. In addition, it is worth to be noticed that the local scale shows its number of occurrence out of the expectation. It shows the trend that the public began to concerned about the food in their neighbourhood. About all, food issues are extensively discussed in every scale.

Scale		**Times**	**Original Keywords**
International		14	global, globalisation, globalization, world
National		1	national
Regional		11	Regional, metropolis, metropolises, Metropolitan
Provincial	urban	13	cities, city, municipal
	rural	25	rural, ruralities, suburban
Local		8	communities, community, community-based

Table 7 – The scale table of the urban planning academia data search

When we looked into abstracts of every articles and sorted them into four themes, we can also get a similar result as the result of the analysis of keywords lists collection. According to Sustainable Food Planning (Andre Viljoen and Wiskerke 2012), it classify food-related topics into four domains: Social relevance, Environmental relevance, Economic relevance and Spatial relevance. In the social relevance, it concludes the health, the food culture, the sustainable lifestyles and the food consumption. And in the environment relevance, it is about the organic food, the food production, the ecological footprint, the waste management and the biodiversity. When it comes to the economic relevance, it always talks about the employment and income, the food growing supplies, the local trade and the food processing. In the spatial relevance, it is related to the public open space, the accessibility, the land use and the planning. Besides, in order to know the evolution of the urban food planning from 2000, we count the proportions of each subject in every year. There are 238 articles analysed in this study, and each article is categorized into one domain. On the basis of above characteristics, you can see the result of classification in the figure7 and the table6.

As you can see, the society domain always got the higher amount in every year especially after 2012. The amount of articles of the economy domain was always more than the environment domain before 2013, but recently the environment domain got the notice in the urban planning academia. As for the spatial domain, it got a lower attention of the urban planning academia. This might be a crisis because we should

put the most effect on the spatial operation in the urban planning. However, the result showed the opposite direction. Except the urban planning, there is seldom professional field that will care about the spatial issues. If the urban planner continues to ignore spatial food issues, we will come down to a terrible life quality and fall to build a sustainable food city.

	economy	environment	society	spatial	Total
2000	1	2	3	0	6
2001	1	1	1	1	4
2002	10	1	15	0	26
2003	2	2	5	1	10
2004	3	1	6	2	12
2005	4	3	5	0	12
2006	1	3	5	1	11
2007	3	4	7	2	16
2008	3	2	10	0	15
2009	1	0	3	2	7
2010	5	3	9	1	18
2011	5	3	4	3	15
2012	4	0	7	1	12
2013	1	1	6	0	8
2014	3	4	7	1	15
2015	3	3	14	1	21
2016	4	7	12	1	24
Total	**53**	**40**	**119**	**17**	**230**

Table 6 - The table of the urban planning academia data search by title

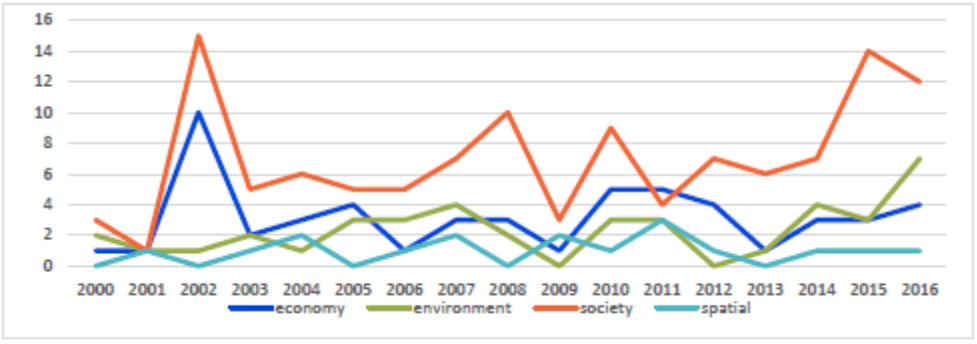

Figure 7 - The number of articles of each subject in every year after 2000

In all 17 articles about the space, most of them focus on the policy. There are eight articles related to the policy discussion. Reframing the foodscape: the emergent world of urban food policy(Moragues-Faus and Morgan 2015) talked about a new food governance system in Malmö and Bristol. It brought out this kind of new governance needs a close cooperation between governments and civic organizations. Even thought it might be a challenge to creative a local-based food planning within complex governance systems, we should not give up devoting to building a sustainable food city. Second more are seven articles discussed the accessibility and the location of the retail, food desert and the network in the urban area. Besides, there also two paper discussed the food land use. Planning on the Edge: England's Rural — Urban Fringe and the Spatial-Planning Agenda(Nick Gallent, Marco Bianconi and Andersson 2006) looked into the multi-dimension food planning, including the management, the policy and the land use, on the edge of cities which are always to be the rural area and related to the location of the food production. Colonist Household Decision making and Land-Use Change in the Amazon Rainforest: An Agent-Based Simulation(Deadman et al. 2004) discussed in a relatively smaller scale in the farm planning. We

discussed a lot on food issues but seldom tried to development a systematic food planning to those problems to create a sustainable food city.

6 CROSS-COMPARISON

Different topics show their importance in three dimension (Table 8). For example, “Health” ranks first in the global dimension but it ranks fourth in the academia and show the low importance in the urban planning academia. According to the concept, other topics in the ranking show the same meanings of their rankings.

	Global	Academia	Urban Planning Academia
1	Health	Agriculture	Security
2	Nutrition	Policy	Policy
3	Security	Security	Agriculture
4	Food Network	Health	Land
5	Economy	Justice	Governance

Table 8 – The ranking table of hot issues in different dimensions

We need to notice the subjects that are outside the urban planning but located at the global dimension and the academia dimension (Figure15). In general, the common subject is security and it is also the top three theme in all dimensions. It indicates that we have put lots of effort on it and followed it closely for a long time. Comparing the global dimension and the academia dimension, “Health” and “Security” are both critical issues. Look into the academia dimension and the urban planning academia dimension, besides security, “Policy” and “Agriculture” are both identical issues. Then regarding the global dimension and the urban planning academia dimension, there is no common subject except the security. It is a noteworthy view that the urban planning did not notice the issues that the global has already noticed on food issues, such as “Food Network” and “Nutrition”. These two subject are relative important in the urban planning academia

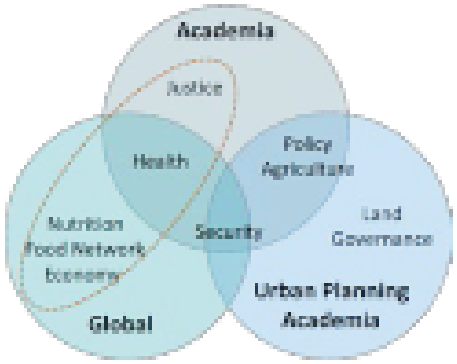

Figure 15 - The original diagram of hot issues in different levels

7 CONCLUSION

In the “The Food System: A Stranger to the Planning Field”, it also became aware of the similar situation. “Planning texts over the last few decades have provided a comprehensive overview of the planning profession while identifying several central topics. These include physical planning and urban design, land use, economic development, social planning, growth management, real estate development, public infrastructure, environmental planning, urban transportation, housing, historic preservation, and technology planning (Catanese & Snyder,1988; Chapin, 1972; Levy, 1988; So & Getzels, 1988). None of these texts includes planning for the community food system, and few of the specialisations described allude to the food system."(Pothukuchi & Kaufman, 2000, p.3)

Therefore, we need to focus much more on the spatial planning in the food system, such as how to connect the public space, the visual amenity, the transportation systems, the land use planning to the food systems in the future. As the “Feeding the City: Towards a New Research and Planning Agenda” concluded,” more comparative and comprehensive studies of the emerging urban food strategies are necessary to fully capture the potential of fast-growing cities in creating or recreating more sustainable social, economic and environmental linkages with their surrounding regions.”(Sonnino 2010). The

advantage and the importance of the urban planning is that we have a relatively greater power than other non-spatial professional fields in cities. We need to make good use of our particular tools to solve food issues, instead of staying in the discussion of social issues. Moreover, according to the study, we have already discussed lots of social issues of the food planning and got a roughly clear context. As the result, it is time to put our effort on the spatial discussion and think more comprehensively on the spatial food issues to creative a sustainable food city.

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ID 1582 | RESEARCH OF TRAVEL BEHAVIOR INFLUENCE FACTORS OF THE AGED AND SUGGESTIONS OF THE SENILE APARTMENT SITING

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ABSTRACT: This article aims to discuss the siting of the senile apartment from the perspective of travel behavior of the aged. The aged spend much more time on the indoor activities in the apartment than the travel behavior. However, travel behavior, an important component of human life, can energize the aged and motivate their socialization. Currently the siting of the senile apartment from the view of travel behavior remains to be studied. To select the proper siting of the apartment based on the physical and psychological characteristics of the aged as well as their transportation will energize them and promote them to participate in more social activities. Their social identification will thus be lifted. Their ability of independent living can be largely preserved and their life quality in the apartments be improved. This article is summarized into four parts. First of all, it proposes that the proper outing is significant for the health of the aged in the apartments by analyzing the outgoing characteristics of the aged from the physical, psychological, and social attribute perspectives. Second, the types of outgoing of the aged are analyzed. According to the outgoing purpose, the travel behavior of the aged can be categorized into four types: shopping, medical, leisure, and cultural pursuits. The outgoing types have different promotion on the aged and require different siting. Then it proposes the influence factors for the outgoing of the aged include the internal factors such as age, gender, financials, and the external factors such as distance and scale. Different outgoing purposes are influenced by different factors. The travel for shopping, for example, is influenced by the internal factor of financials and the external factor of scale. The travel for medical care is influenced by the age and the scale. The travel for leisure is influenced by the age and the distance. The travel for cultural pursuits is influenced by the age, scale, and distance. In the end, this article exhibits that the site selection of the senile apartment should be based on the reachability of the travel behavior for the aged. This article builds an evaluation system for the indices based on the influence factors. Some suggestions for the siting are proposed: 1) small business should be enough near the siting; 2) general hospitals should be easily reached; 3) nearby leisure and entertainment venues, and 4) cultural facilities should be considered. This article discusses the four types of outing and proposes the corresponding site selection strategies. However, problems still exist. Firstly, individual difference will lead to different effects. Secondly, a perfect siting for the apartment of the aged that satisfy all the requirements does not exist. Moreover, more factors including the scale of the apartment, the ground rent, and the planning, should be considered. Thereby, the most proper siting scheme should be planned in terms of the evaluation system of the indices. Proper siting will help the aged to merge into the society, identify with themselves, and enjoy their twilights years in the apartments.

1 INTRODUCTION

Population of the aged has reached 230 million in China by the end of 2016, consisting of 16.7% of the total population. The government provides income support for the aged as well as social, welfare and health services, meanwhile the old man will also be a significant opportunity for social products and services (eg Golledge and Stimson, 2013) 1 There will be a trend of development for the senile apartment from welfare towards aspects of professional, comprehensive, high-end, profitability, etc., and the senile need to focus more on high-level requirements of the aged.

Travel behavior is of great significance to the aged, which can promote the energy of the aged and stimulate their socialization. Further, Menec has shown that the higher the overall level of activity of the aged is, the stronger the sense of happiness will be, the greater the positive function of activity can reach, and the lower the rate of mortality will become (eg Menec, 2003). 2 However, at present, the majority of the senile apartments are located in the remote areas between the urban and rural with the advantage of the cheap rent, good environment, and large areas, which leads to serious problems such as no convenient transportation, inconvenient visit, and lacking of travel behavior. Especially some senile

apartments are closed, and the aged activities are limited within the old apartment. Compared with other time, the old man travel behavior time is very short.

The research on the aged travel behavior in the senile apartment is rare. Existing research is majorly performed from the perspective of maximizing the equity to meet the survival needs of the aged, failing to give full consideration to their physical and psychological needs. This article, based on humanization, attempts

to make the aged from making a living to enjoying their life from the perspective of outing actives. This article proposes advices of senile apartment siting, according to the physiological and psychological characteristics of the aged, the travel behavior influencing factors, and the influence of the facilities configuration space model over the travel behavior of the aged (eg Chai, 2010)3.

2 TRAVEL BEHAVIOR CHARACTERISTICS OF THE AGED

This paper studies on the people aged 60 and above, according to the actual circumstance and the retiring age of China. Stepped into the old age, the aged travel behavior will be affected by the changes of their physical, psychological and social attributes. The phenomena are specific to their group.

A series of changes take place in shape and the function of the body of the aged, and the sensory system are aging and declining. The psychological of the aged changed. On the one hand, they are prone to depression and loneliness, and to reduce travel behavior. On the other hand, the aged are easy to produce negative emotions including emptiness, wayward, restlessness and anxiety without good social activities and interests. The social attributes of retired old man change as they are turned into the role of bystanders and consumers from participants and organizers. The social network established through the jobs is lost, as well as the commuter travel and part of the social travel. They are becoming less sociable and have less living space.

Overall, the aged have less frequency, less time and shorter distance of travel behavior compared with the young (eg Feng and Yang, 2015). 4 The way of travel behavior for the aged reduces, with the main way by walking and by bus. The range of travel behavior is more onefold, and the frequency is relatively fixed.

3 CLASSIFICATION OF TRAVEL BEHAVIOR OF THE AGED

Travel purpose of the aged gradually changes from the survival travel to consumer travel (eg Feng and Yang, 2015). 5 This paper focuses on the aged residing in the senile apartment, who have less family fetter but more self-pursuit. According to the travel purpose, the travel behavior of the aged can be categorized into four types: leisure, shopping, medical needs, and cultural pursuits. The travel types have different promotion on the aged and require different sitings.

3.1 THE TRAVEL FOR LEISURE

Compared with the aged living in past who are only living for their families, the aged of contemporary era has more leisure time, and their leisure area radius is expanding. The leisure preferences are personalized and the recreational consumption is more diversified (eg Wang et al, 2011).6 In accordance with the extent of leisure activities, they can be divided into the home leisure and the outdoors leisure. In accordance with the contents of leisure activities, leisure activities can be classified as leisure for delight and leisure for fitness. Leisure activities of the urban aged are mainly for physical exercise and walking in the park. In this paper, the object of study mainly includes urban public green space at all levels.

3.2 THE TRAVEL FOR SHOPPING

The travel for shopping of the old man is different with the general consumers, mainly for the following reasons: 1. Less outing. The declining of the body function leads to the decrease of outing ability. 2.

Purchasing power decline. Most of the old man discourage consuming as their income falls. 3. Particular family role. Compared to the old man living at home, the aged in the senile apartment have thinner relationships with their children, and narrower range of the objects they need to buy as well as lower purchasing power. on the other hand, objectively, the elderly has more discretionary time, and their transportation cost is low; Subjectively, the demand for daily shopping of the urban aged is increasing, and their shopping intention is more abundant (eg Han, 2015). 7 In this paper, the object of study not only includes large business such as various shopping centers and supermarkets, but also includes convenience stores and street stores.

3.3 THE TRAVEL FOR MEDICAL

The travel for medical is a negative but necessary travel for the old. If we equip the senile apartment with enough medical devices, the old man can check-up, solve minor illness within the senile apartment, and can reduce the travel for medicals. However, there are only less than sixty percent of the senile apartment equipped with simple medical equipment, and up to twenty percent of the senile apartment have neither professionals, nor the basic medical devices (eg Wang, 2016)8. The smoothness of the travel for medical will reduce the worries of the aged, and it should be a factor to be considered in the siting of the senile apartment. In this paper, the research objects are mainly general hospitals and community hospitals.

3.4 THE TRAVEL FOR CULTURE PURSUIT

Among the five demands proposed by Maslow that will accompany a person's whole life, the emotional needs, the demands of belonging, esteem and value realization will not reduce with the aging body. Religious beliefs can provide relief for elderly people, eliminate the worry and fear of death, and eliminate their loneliness. The senile apartment should give them concern and support (eg Lei and Ban, 2014). 9In this paper, the objects of study are mainly all kinds of religious facilities.

4 ANALYZE THE FACTOR INFLUNCE FOR TRAVEL BEHAVIOR OF THE AGED

The main influence factors of the aged travel behavior include the individual social and economic attributes (internal factor) and the environmental factors (external factor). Individual social and economic attributes (internal factor) include social attribute, economic attribute, family attribute, and personal property; the environmental factors (external factor) include urban services, facilities supply and so on. This paper discusses the influence of the internal factors on all kinds of outside activities with qualitative descriptions, from the aspects such as age and gender. The analysis of the characteristics of different kinds of facilities space structures in quantitative ways is emphasized. The degree of influence is measured using the frequency of travel behavior as a positive index.

4.1 ANALYZE THE FACTOR INFLUENCE FOR THE TRAVEL FOR LEISURE OF THE AGED

4.1.1 INTERNAL FACTORS

Crawford and Godbey proposed the leisure constraint hierarchy theory, where constraints are divided into three levels including the personal internal restraint, the interpersonal constraints, and the structural constraints (Han, 2015). 10 As the age increases, the frequency of travel for leisure of the aged living in the senile apartment is reduced to an average of 3.02 times per week, which is lower than the aged outside; the range of travel for leisure of them shrinks. The leisure space distance of people over 75 years of age is most concentrated within 0.5 km, while the leisure space of people between 55 and 75 years of age is larger and concentrated within 3 km.

Genders have few influence on the travel for leisure. Travel frequency of the old woman living in the senile apartment is slightly higher than the males of the same age; leisure activity of the aged in the senile apartment is mainly concentrated within distance of 1 km. Within the scope of the leisure activity distance

of about 3 km, the proportion of men is higher than women, while the percentage of elderly women is higher when leisure travel distance is within about 1.5 km.

4.1.2 EXTERNAL FACTORS

The travel for leisure of the aged subject to the distance attenuation law in general, but there is a space phenomenon that discontinuous jumping concentrated. There is the phenomenon that leisure activities are concentrated at some certain distance bands, forming the nested circle-like spatial structure of leisure activity. Taking 30%, 60%, 90% as indicators, different circles of regions are divided into basic leisure activity circle, expanding leisure activity circle, special leisure activity circle and senior leisure activity circle, according to the proportion of activities focused. The circle where the leisure activity of the aged concentration accumulates to 95% is regarded as the boundary of leisure activity space.

Thus, the leisure space structure pattern of the aged live in the senile apartment can be summarized as follows:

I. Basic leisure circle (circle range of the distance from the senile apartment is 0 ~ 0.5 km). The senile apartment of small scales always tends to distribute in the community. The range of this layer roughly equals
II. to the community's scope where the senile apartment is located. The aged in this circle mainly utilize the green space in the senile apartment, the green space in the community, fitness equipment etc.
III. Expanding leisure circle (circle range of the distance from the senile apartment is 0.5 ~ 1.0 km). The range of this layer roughly equals to the range of the district's scope. The aged in this circle mainly utilized the green space of the district, flowers and birds market and the nearby parks.
IV. Senior leisure circle (circle range of the distance from the senile apartment is 1.0 ~ 3.0 km). The aged in this circle mainly utilized the city park, the square, the public green space and the elderly leisure activities organizations, etc.
V. Special leisure circle (circle range of the distance from the senile apartment is 3.0 ~ 5.0 km). A minor part of the young old may take part in some activities organized by the aged organization, to have a long journey.

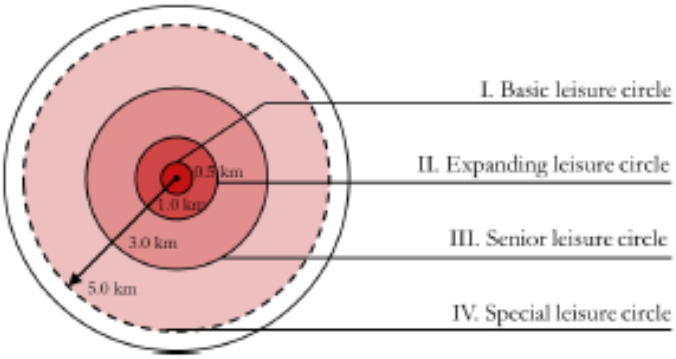

Figure 1 – the leisure Space structure of the aged in the senile apartment
Source: draw by author

4.2 ANALYZE THE FACTOR INFLUENCE FOR THE TRAVEL FOR SHOPPING OF THE AGED

4.2.1 INTERNAL FACTORS

Form the view of individuals, gender, age, income and family life cycle have a significant impact on the consumer behavior. In addition, the individual's consumption idea and attitude also affect the consumer behavior patterns. Research shows that a learned behavior takes up a large proportion of the consumption activities of the aged, especially of the lower level of daily commodity shopping. Depending on individual

experiences and habits, the process of making consume decision becomes simpler, and the consumer behavior becomes the daily repeated activities (eg Chai, 2010).

With the growth of the age, the frequency of travel for shopping of the aged decreases gradually. Especially after 75 years old, most old people don't go out for shopping; The space of consumer behavior is shrinking. The way of travel for shopping is simplified. And travelling on foot becomes the vast majority way to shopping for the aged.

Gender differences in: the shopping frequency of the old women is higher than the old man. The old women prefer the accompanied shopping, while more than half of the old men prefer to shopping alone. From the view of spatial distance, due to the discrepancy in trip modes, shopping space dimension of the old men is broader compared to the old women.

4.2.2 EXTERNAL FACTORS

The completeness of the commercial space layout has a direct impact on the characteristics of the space of the consumer behavior. For the aged, the spatial distribution affects their frequency of travel for shopping. The configuration of the community-level commercial facilities affects the lower-level commodity consumption activities. The configuration of the city-level commercial facilities affects the high-grade commodity consumption activities.

According to the spatial distances of shopping of the aged in the senile apartment, there is a rule that with the expanding of distance the shopping frequency declines. 65% of the shopping activities take place within distance of 0 – 1.0km to the senile apartment, and the drop rate of the frequency of the travel for shopping basically remains the same, but further than 1.0 km the frequency of the travel for shopping decreases much faster.

The spatial structure pattern of shopping of the aged live in the senile apartment can be summarized as follows:

I. the first concentrated shopping circle (circle range of the distance from the senile apartment is 0 ~ 0.5 km). 35% of the shopping activities of the aged live in the senile apartment are concentrated in this circle. This circle brings together the low level of business services, such as convenience stores, small supermarkets, small fruit shop, etc.
II. the second concentrated shopping circle (circle range of the distance from the senile apartment is 0.5 ~ 1.0 km). 30% of the shopping activities of the aged live in the senile apartment are concentrated in this circle, and the attenuation rate is 5%. This circle is the zone of transition for the commercial service facilities from low-level to senior, and it has brought together some medium-sized supermarkets and a small number of large supermarket.
III. the first dispersed shopping circle (circle range of the distance from the senile apartment is 1.0 ~ 1.5 km). 18% of the shopping activities of the aged live in the senile apartment are concentrated in this circle, and the attenuation rate is 12%. In this circle distributed large-scale supermarkets, shopping plaza, fruit supermarket, etc.
IV. the second dispersed shopping circle (circle range of the distance from the senile apartment is 1.5 ~ 2.0 km). 10% of the shopping activities of the aged live in the senile apartment are concentrated in this circle, and the attenuation rate is 8%. There are usually a number of senior business services, such as a large supermarket, markets, shopping plaza, etc.

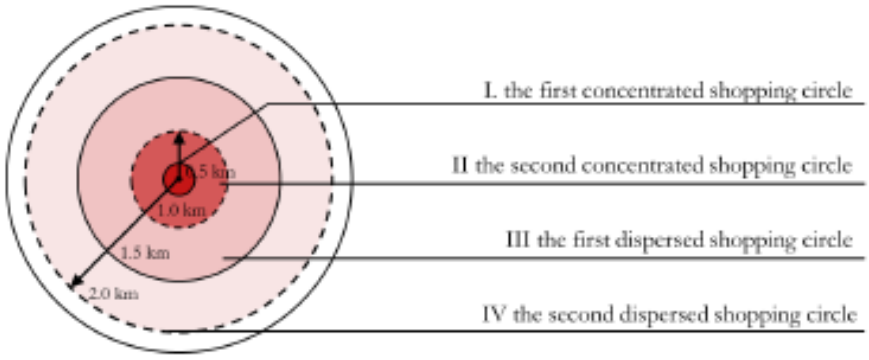

Figure 2 – the shopping Space structure of the aged in the senile apartment

Source: draw by author

Figure 2 – the shopping Space structure of the aged in the senile apartment
Source: draw by author

4.3 ANALYZE THE FACTOR INFLUENCE FOR THE TRAVEL FOR MEDICAL OF THE AGED

4.3.1 INTERNAL FACTORS

Age has significant effects on travel for medical needs of the aged. The nature law of gradual recession of the body leads to that with the increasing of the age, the monthly frequency of travel for medical needs increases gradually. Medical travel behavior differs significantly among individuals. The frequency of travel for medical needs is related to the aged body quality and the concepts of healthcare, and more importantly affected by distances, technology, prices, waiting time and other factors. In addition, whether the hospital is a health care fixed-point units also affects the choice of the aged. They would rather go to the further hospital if nearby hospitals are not healthcare fixed-point units. Therefore, the influence of this factor should also be considered. Compared to travel for shopping and leisure activities, the influence of distances on travel for medical is not so obvious within a certain distance.

Gender also plays an important role in the health function of the aged. Senile pathology and sociological studies have shown that women's health functions are inferior to men in many aspects. However, from the points of the statistical results, the difference in the frequency of travel for medical is not very obvious. But there are differences in the spatial structure of medical needs for the aged. More men than women tend to go further for medical services.

4.3.2 EXTERNAL FACTORS

Taking 30%, 60% as indicators, different circles of regions are divided into basic medical activity circle, expanding medical activity circle and senior medical activity circle, according to the proportion of activities focused. The circle where the aged medical activity concentration accumulates to 95% is regarded as the boundary of leisure activity space.

The spatial structure pattern of medical needs for the aged live in the senile apartment can be summarized as follows:

I. Basic medical activity circle (circle range of the distance from the senile apartment is 0 ~ 0.5 km). Within this circle, the aged mainly utilize the medical service of the community health service stations, as well as the medical service of the clinics inside the senile apartment. Excluding the activity of using the medical facility within the senile apartment, 20% of the medical activities of the aged live in the senile apartment are concentrated in this circle.
II. Expanding medical activity circle (circle range of the distance from the senile apartment is 0.5 ~ 1.0 km). The distance of this circle is also the limit range of travel for medical on foot. In addition to community health service centers, this circle has some high-grade hospitals.

III. Senior medical activity circle (circle range of the distance from the senile apartment is 1.0 ~ 3.0 km). This circle is far from the senile apartment, and the frequency of travel for medical tends to decline. But the decline rate is not obvious. This is because that the travel for medical taken within the circle mostly is seeking for senior hospital or municipal hospital. With the increasing of distance, the level of medical facilities is higher.

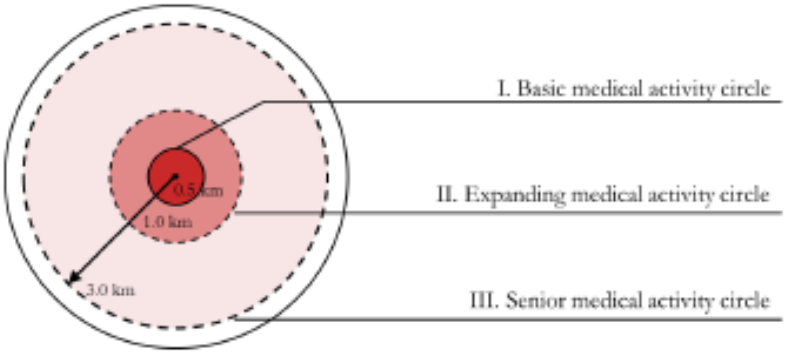

Figure 3 – the medical Space structure of the aged in the senile apartment
Source: draw by author

4.4 ANALYZE THE FACTOR INFLUENCE FOR THE TRAVEL FOR CULTURE PURSUIT OF THE AGED

4.4.1 INTERNAL FACTORS

During 2000 to 2010, the proportion of the aged who have religions remain between 14% and 17% (eg Huang et al, 2015)12. The religious participation rate of the aged in China is comparatively high, and it gradually increases with age increasing. Gender have great influences on religious travels. The percentage of women participating in religious activities is twice as much as the men. The believers among the aged living in the senile apartment at least take up more than 15%, where most have beliefs in Buddhism or Christianity. As a result, the distance of the religious buildings also needs to be considered for siting of the senile apartments.

4.4.2 EXTERNAL FACTORS

The aged who participate in cultural activities tend to have a strong will, and their travel resistance is comparatively stronger. But it is also restricted by external conditions that, since the distance of religious places is more than half an hour's drive, the frequency of outgoing for culture pursue plummeted. The size of the religious sites has little influence on religious travel of the aged. The numbers of religious places near the senile apartments are quite different. Some senile apartments have many nearby religious places, while some have little.

5 SENILE APARTMENT SITING EVALUATION INDEX SYSTEM

Space is an important carrier of the interact of the aged and the external environment. Reasonable spatial layout and construction can promote the travel frequency of the aged (eg Wan, 1994). 13 An evaluation index system for siting of the senile apartment is provided, that taking the aged activity space as the breakthrough point, and giving full consideration to the effects of external factors. Based on above analysis, the weights of external factors are different, mainly due to the fact that different purposes of travel behavior have different influence degree for the life of the aged, and different purposes of travel behavior have different demands on surrounding facilities. Thus, a reasonable evaluation index system will help to evaluate the location of the senile apartment intuitively and accurately.

Under the condition of a given temporal and spatial constraints, the time-space range that an individual could physically reach, is expressed in the space-time as space-time prisms or potential path area. To understand it from the angle of activity, the potential path area refers to the area an individual is able to get to, after a fixed activity, under the condition of guarantee that next fixed activity can be reached on time. It is the activity circle of the aged. The volume, the area or the number of opportunities for activity is likely to be used as measure index of accessibility (eg Chai, 2014)14.

The senile apartment siting evaluation index system is based on travel behavior of the aged from four aspects: the travel for leisure, the travel for shopping, the travel for medical, the outgoing for culture pursue. Each index can be divided into secondary indicators from the distance, radiation scope, scale and so on. Combined with literature review method, the Delphi method (invited 3 experts engaged in endowment facility from colleges, 2 experts engaged in social welfare from civil affairs bureau and 2 directors of department of the senile apartment to set up an expert panel, and determined the indicators after two rounds of feedback) and the actual situation of the senile apartment, build a hierarchical structural model of senile apartment siting evaluation index system based on outgoing activity of the aged.

goal level A	First level indicator (system level B)	Second level indicator (index level C)
main indexes of the senile apartment siting evaluation based on travel behavior of the aged	Travel for leisure	travel distance, Natural Environment
	Travel for shopping	travel distance, type
	Travel for medical	travel distance, rank
	Outgoing for culture pursue	travel distance, type

Table 1-main indexes of the senile apartment siting evaluation based on travel behavior of the aged
Source: draw by author

First of all, the secondary indicators are different in units and can't be compared directly. Thus, in the model the method of maximization of dimensionless is used to quantify the criterions. Then, we established an evaluation system with hierarchical structure, and determined the subordinate relations between the upper and lower level elements. Assuming that the upper level of element as a criterion have dominated relationship to the next level of elements, the corresponding weights are assigned according to their relative importance under the criteria. The assignment of the Criteria Importance weights based on the Intercriteria Correlation(CRITIC) method mainly includes the subjective experience method, analytic hierarchy process (AHP), principal component analysis (PCA), Delphi method, etc. The evaluation index system of the senile apartment siting evaluation based on travel behavior of the aged and the judgement matrix for comparison between every two indexes are presented by a comprehensive calculation which uses the expert method and Analytical Hierarchy Process (AHP), and the weight of each indicator were determined.

First level indicator	The primary index weight	Second level indicator	Secondary index weight	combination weight
Travel for leisure	0.28	travel distance	0.78	0.22
	0.28	Natural Environment	0.22	0.06
Travel for shopping	0.25	travel distance	0.63	0.16
	0.25	type	0.37	0.09
Travel for medical	0.35	travel distance	0.55	0.19
	0.35	rank	0.45	0.16
Outgoing for culture pursue	0.12	travel distance	0.36	0.04
	0.12	type	0.64	0.08

Table 2-weights of the main indexes of the senile apartment siting evaluation
Source: draw by author

The using of analytic hierarchy process (AHP) provides a new thought and method to evaluate the location of the senile apartment objectively and accurately. It is important to note that the demand of the index is relatively high. So, it is a tricky filter link in index, and must go through several rounds of discussions and modifications, and get the acceptance and approval of the authorities as much as possible. Only in this way, the results on the basis can have the meaning of the further promotion. Thus, this article took a more

lavish description to describe the internal and external factors, put forward the selection of quantifiable indicators, and light on expert review process and data processing.

The evaluation index system has many functions. Firstly, we can see the impact of external factors directly. For example, the distance of green space for travel for leisure from old apartment is the most important parameter that affects the travel behavior of the aged, and the distance of the culture facilities surrounding the senile apartment has the minimal influence; In addition, when other conditions are similar, the planning of site selection which is more advantageous to the aged can be evaluated by the evaluation index system, so as to provide a strong basis for site selection.

6 REFLECTION AND PROSPECT

This article discusses the four types of outing and proposes the corresponding site selection strategies.

1. There should be complete facilities around the senile apartment to stimulate the travel behavior of the aged. 2. Give priority to the demand of travel for medical of the aged. We should give priority to the most important needs of outgoing as the aged have a lot of travel behavior. Facility requirements are hard to be considered in every aspect in the selected location and the first consider is the most important requirements of the aged. Especially if the senile apartment cannot provide basic health care, the location should be near the hospital. 3. Relative to the scale and quality of green space, the distance from the senile apartments to the green space is the most important. 4. More small business should be distributed in the area close to the senile apartment. Relative to the large shopping centers, small business services surrounding the senile apartment is more important. 5. Although rarely aware of, the cultural facilities, especially the religious facility also have a strong role in promoting the travel behavior of the aged.

However, problems still exist. First, individual differences will lead to different effects. Second, a perfect siting for the apartment of the aged that satisfy all the requirements does not exist. Moreover, more factors including the scale of the apartment, the ground rent, and the planning, should be considered. Thereby, the most proper siting scheme should be planned in terms of the evaluation system of the indices. Proper siting will help the aged to merge into the society, to identify with themselves, and to enjoy their twilights years in the apartments.

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ID 1621 | MULTI-SENSORY APPROACH TO HEALTH-SUPPORTIVE AND AGEING-FRIENDLY HIGH-DENSITY URBAN ENVIRONMENTS

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1 INTRODUCTION

Design and planning actions to improve urban health and well-being are well-recognised as some of the key drivers and indicators of sustainable, inclusive and resilient urban and community development world-wide. Yet, due to rapid growth and transformation, increased densification, hybridisation and intensification, our cities continue to generate problems, stress, harsh conditions and inequality, instead of becoming healing, empathetic, inclusive and safe environments for all.

Our understanding and experience of the built environment are primarily built around multi-sensory, emotional and symbolic modes of exchange with space (Merleau-Ponty, 1962; Pallasmaa, 1996; Pérez-Gómez, 2006). Active multi-sensory and emotional dialogue with all environmental stimuli, including positive distractions, textures, materials, colours, signage, culture-specific clues, way-finding and overall aesthetic atmosphere, profoundly shape our understanding of the built environment and are vital for physical, psychological and social well-being of all ages. However, while architecture has immense potentials to engage the immediacy of people's experiences more effectively than other art forms (Holl et al., 2006), our contemporary cities are more than often either sensory overwhelming or sensory depleting, which results in physical, mental and emotional stress. Stress is the major cause of diseases, pandemic depression and death in the developed world (WHO, 2002), with more than 50% of deaths worldwide stemming from chronic non-communicable diseases that are instigated by the continuous exposure to numerous and intense stress conditions of contemporary cities (OxHA, 2008).

2 SCOPE AND OBJECTIVES

The contemporary shopping environments have long been criticised for manipulating with people's sensory and emotional reactions through employment of sometimes very sophisticated design 'strategies' (such as theming, 'total landscaping', 'mallification' and 'Disneyfication') in order to achieve higher consumption goals (Crawford, 1992; Dovey, 1999, 2010; Mitrasinovic, 2006; Pimlott, 2008-9.). Such strategies are seen as negative as they affect users' behaviour and well-being negatively as well as promote social exclusion. However, consumption represents a dominant part of our everyday practices today, and it is inscribed in almost all types of physical spaces we use. Since consumption is an inherently spatial, political, aesthetic, ethic and economic practice, "spaces of consumption are always produced as a field of forces, exchanges and interactions" (Styhre and Engberg, 2003, p. 120). Shopping malls have become influential model for various urban developments (including healthcare) and are tightly knitted into the everyday environment of many dense Asian cities, such as Singapore, Hong Kong or Tokyo. In these cities, they may arguably be seen as perpetual laboratories of "positive stress" (positive distractions), while blurring the boundaries between the indoor and the outdoor, private and public.

Accordingly, the scope of this paper involves investigation of the role of multi-sensory approach to achieving holistic healing outcomes, while focusing on contemporary shopping spaces, in spite of their manipulative design, quasi-publicness and profit-oriented motifs. Creating health-supportive and ageing-friendly environment goes beyond the bounds of healthcare and eldercare facilities as well as beyond hygiene, universal design and curing. The premise is that in order to trigger suggestive and positive relationships between space and users, all segments of urban developments would need to acquire an active role of healing.

The main objectives of this paper are:

- To review and discuss the role of multi-sensory experience in shaping health-supportive and ageing-friendly built environments; and
- To investigate the capacities of contemporary consumption spaces to overcome the mere consumption motifs and to acquire an active health-supportive role.

3 RESEARCH APPROACH AND METHODOLOGY

Qualitative approach employed in this study involves two main phases:

- Discourse analysis and research instrument development, based on a comprehensive literature review of theories and design practices related to multi-sensorial experience, health-supportive and elderly-friendly environment;
- A comparative case study analysis of four consumption spaces in Singapore and Belgrade, Serbia, which combined combines spatial explorations, first-person observations, participatory photo-journeys, multi-sensory mapping, interviews and on-site questionnaires.

4 MULTI-SENSORY EXPERIENCE – LITERATURE REVIEW

Sensory urban experience is not entirely new topic in architectural and urban design discourses, mostly stemming from the phenomenological approach and other disciplines, such as social sciences, human geography, anthropology, cultural theory and environmental psychology. At the beginning of the 20th century, a number of writers, including Georg Simmel (1997) and Walter Benjamin (1999), to name some, emphasised the importance of a multi-sensory approach for understanding rapid changes the modern cities of that time were experiencing. Human geographers, such as Relph (1976) and Tuan (1977), further focused on creation of the sensory and cultural meanings of places.

It has often been argued that people's senses have been considerably impoverished by monotonous environments and through the dominance of vision (Degen 2008; Pallasmaa 1996; Jay, 1993). According to Zardini (2005), due to an increasing preoccupation with the visual and the hygienic, standardisation and sanitisation, the perceptual sphere is under continuous erosion. Such a "trend" can be traced since the Renaissance and the Enlightenment, through rationalist, functionalist and modernist approach to design, in which the space should discourage close physical encounters (Degen and Rose, 2012). The result is either an aggressive and stressful environment or a "homogeneous sensory experience" (Erwine, 2014) of the "decorporealised space described by a fear of touching is a space dominated by the eye, where the body and tactile reality are extinguished by the dominance of visuality" (Diken, 1998, p. 72). According to Gibson (1986), however, the senses are not passive receivers, but rather aggressive seeking mechanisms, even though people are not aware of that most of the time. In this process of active and unconscious seeking, all bodily senses are involved simultaneously, with major effects manifested in space through their irrevocable interdependence. For Zumthor (2006), the main role of design is creating atmospheres to facilitate better and more diverse interactions with space. If understood as an elaborate choreography of theatrical and phenomenal experience, architectural space has the ability to evoke memories and emotions, trigger senses and represent associations; in other words, the sense of being 'here', 'being' and 'becoming' in the world.

In the recent years, there has been an increasing interest in the senses (e.g., Degen, 2008; Low, 2015; Urry, 2000), what Howes (2005) calls "sensory revolution", emphasising that sensory experiences are central to the design of urban built environments. Some of the main focuses of such studies and writings

include: relationship between the sensory and the social dimensions, cultural perception and history of sensibilities (Classen, 1993; Stoller, 1989), the notions of ambiance and atmosphere (Böhme, 1993; Thibaud, 2011) and design for the senses (Holl et al., 2006; Pérez-Gómez, 2006; Pallasmaa 1996, 2009; Zumthor, 2006).

Another valuable group of recent studies focus on mapping, analysing, and measuring sensory dimensions of urban spaces and everyday experiences (e.g., Adams et al., 2007; Degen, 2008; Degen and Rose, 2012; Malnar and Vodvarka 2004; Naghizade and Ostadi, 2014). Study by Lucas and Romice (2008) is one of the rare attempts to systematically employ sensory experience in urban design research and practice, based on notational systems and multi-sensorial multi-modality. Similarly, yet from sensory ethnographic perspective, Palipane (2011) developed a framework of sensory production of urban space based on socio-sensory perception and multimodal mapping technique for documenting diverse multi-cultural place-making practices. She argued that many recent urban regeneration projects failed to create environments that are sensitive to the existing demographic milieu and that promote activity of the neighbourhood, due to a focus on visual and spatial experience and a neglect of understanding the multi-sensory qualities of a neighbourhood as a whole. Research by Pink (2008) and Rogerson and Rice (2009) also link senses to place-making practices.

5 MULTI-SENSORY EXPERIENCE AND HEALTH- AND AGEING-SUPPORTIVE DESIGN

Demographic predictions state that by 2025 population aged over 65 will reach 10% of total global population (United Nations, 2015). It has also been predicted that by 2050 the number of the dementia patients will reach 131.5 million globally (Prince et al., 2015). Such estimates are even more dramatic in Asia, where by 2030 the elderly will reach 18% of total population, and 19% in Singapore. Moreover, the elderly of the future will be more educated and more independent; they will work longer and will thus have different needs and aspirations than the elderly today. It is, thus, important to enrich the understanding of the spatial, perceptual, emotional and support needs of the “new elderly” in order to design better urban settings that would enable more meaningful and joyful “ageing in place” and “active ageing” and enhance the overall well-being of all ages. Passive and isolated (non-integrated) support through provision of healthcare and eldercare facilities and services may not be sufficient for the new generations of the elderly. New paradigm in ageing-friendly design and planning sees non-healthcare environments in general, and housing environments in particular, as supportive and therapeutic devices for the new elderly who are encouraged to build up their physical and mental ability levels at different stage of ageing. While the designing according to universal design principles is already a norm, it should be further challenged to stimulate the elderly both physically and mentally, promote walkability and social interaction, inclusion and care. In this sense, multi-sensorial experience, including textures, materials, colours, signage, culture-specific clues, way-finding and overall aesthetic atmosphere become the agenda for new architecture and urban design that is sensitive and supportive to all ages.

This is further emphasised by a number of recent studies that acknowledged the associated declines in sensory and cognitive functions with ageing (e.g., Crews and Campbell, 2004; Humes et al., 2013). For instance, by the age of 80, almost 50% of the older adults have some elements of motor impairment (Buchman and Bennett, 2011), about 40–45% of adults older than 65, and 83% over the age of 70 report some degree of hearing impairment (Cruickshanks et al., 1998) and 60% of people aged above 80 show problems with odour identification (Murphy et al., 2002). Sensory impairments, particularly in vision, hearing and motor functions, not only increase the risks of developing various diseases, such as Alzheimer’s or Parkinson’s disease (e.g., Mesholam et al., 1998), but also have an immense impacts on almost all aspects of daily living of the older adults. Some of these include problems with physical activity and mobility, navigation and spatial orientation, challenging the elderly in performing basic daily life activities (Haanes et al., 2014), increasing risks of falls and accidents (Lopez et al., 2011), communication difficulties (Heine and Browning, 2004), social withdrawal, lower levels of independence and autonomy (Andressen and Puggaard, 2008; Heine et al. 2013), depression (Capella-McDonnall, 2011; Chou, 2008) and poor quality of life (Chia et al., 2006; Fischer et al., 2009).

Various non-verbal methods are now used in (some) dementia care and nursing homes to stimulate the senses, increase alertness, reduce agitation and re-establish the sense of self-hood, namely sensory

stimulation, multisensory stimulation (MSS), multisensory environment (MSE), and 'snoezelen' (Lykkeslet et al., 2014; Riley-Doucet, 2009; Vozzella, 2007). However, many of such methods still remain in the realm of "decoration", "special rooms" and "treatment strategies", neglecting the capacities of spatial design (of both indoor and outdoor environment) to embed carefully orchestrated multi-sensory stimuli and in such a way become integral and active component of care and provide continuous healing benefits, in terms of both treating sensory impaired conditions and slowing down sensory and cognitive decline of the elderly adults.

A qualitative study of nursing homes by Bengtsson and Carlsson (2005) emphasised the importance of the outdoor environment for the older adults, with key design aspects related to users' comfort (sensitivity to weather, familiarity, security and calmness) and to access to surrounding life (capacity for outdoor activity, sensual pleasures, surroundings as a way to keep up to date and social potential). Many studies pointed out various elements of senior housing design that enhance residents' social well-being, including green outdoor spaces to facilitate senior residents' social integration in the inner-city (Sugihara and Evans, 2000). Sensory and aesthetic ambiental qualities surrounding nursing home may alleviate stigma and negative public's perception of nursing homes and the elderly and contribute to their better physical and social integration with the surrounding communities.

Stress has been widely understood in its negative connotation – as distress. However, research in environmental psychology suggests that human well-being is fostered when physical surroundings provide a moderate degree of positive stimulation (Berlyne, 1971). Hans Selye (1978) first introduced the term 'eustress' which refers to good or positive responses to external stressors. A person's state of health is determined by the degree to which an individual's (positive) supporters respond successfully to various (negative) stressors. Roger Ulrich's (1991a, 1991b) 'Theory of Supportive Healthcare Design' involves 'positive distraction' in healthcare spaces, an environmental feature or element that incites positive feelings and holds attention without taxing or distressing the individual and in such a way blocks or reduces worrisome thoughts. Apart from psychological effects positive distractions also have positive physiological effects manifested in lower blood pressure and/or the lower production of stress hormones. According to psycho-neuro-immunology (PNI), negative emotions, particularly those that are chronically suppressed (such as depression, rage, fear, frustration, etc.) can have negative physical impact and in fact manifest as a physical disease. In other words, the illness originates in the misbalance of the immune system triggered by the psyche – the state of mind. On the other hand, positive emotions have positive impact on overall state of body and mind. Finally, Ulrich (1991a) recognises nature (waterscapes containing calm water, trees with broad canopy, deep landscapes and fresh flowers), smiling or caring human faces, pet animals, music and positive cultural artefacts as the most effective positive distractions. Similarly, in their "Attention Restoration Theory" Kaplan and Kaplan (1989) argue that the viewing of wild nature has a restorative effect in engendering physical and emotional relief from mental fatigue. As a result, patients exposed to views of nature have averaged a shorter postoperative stay (Ulrich, 1991a).

There is a growing agreement between researchers from various disciplines that well-designed and aesthetically pleasant spaces make people happy and satisfied, give them high self-esteem and, thus, positively affect their mood and health (Kolstad, 2001; Parker, 1990). As a result, happiness and positive emotions (stemming from an appreciation of the built environment) have received more prominent attention in more recent architectural design research. Finally, various medical studies have shown that "the psychological state of happiness" was a better predictor of coronary risks than any other clinical variable (Linton, 1995). The 'Total Healing Environment' is a concept emerged in healthcare and in response to the holistic understanding of health and well-being. It refers to therapeutic design that supports and contributes to the state of complete bodily, mental and spiritual health and well-being of a person. The 'Total healing environment model', developed by Patrick E. Linton (1995), also relies on the assumption that positive emotions have positive impacts on human health and that the most powerful healing potentials can be found in each human being. The model consists of two overlapping and interdependent continuums – between the external and internal environment, and between physical and psycho-spiritual environmental elements, and as such is essentially phenomenological. Birgit Cold (2001) states that we all intuitively know, consciously and subconsciously, what well-being is and how it feels, although this intuitive feeling is usually suppressed or overcome by cultural norms and social conventions.

The concept of therapeutic landscapes (sometimes inappropriately equated with therapeutic gardens) broadly refers to places that have capability of enhancing physical, mental and spiritual healing of their users (Gesler, 1992). While the core strategy include the creation of health supportive environments, the

concept also extends beyond the physical spaces to include every day and personalized place-related memories and promote healing benefits (Gastaldo et al., 2004). In other words, a combination of 'hard' and 'soft' design elements is required in order to boost a holistic sense of physical and social wellbeing through meaningful dialogue with spaces and among space users (Landry, 2000). Elderly and dementia-friendly environments, therefore, should not only seek to preserve safety and physical well-being, but also to empower communication and everyday activities (Prince et al., 2015).

6 CASE STUDY ANALYSIS: MULTI-SENSORY EXPERIENCE AND SHOPPING ENVIRONMENTS

This paper looks at 4 case studies of shopping malls in Singapore and Belgrade, Serbia. namely: VivoCity (shopping mall) and CityLink (underground pass-way and mall) in Singapore, and DeltaCity (shopping mall) and New Millennium (shopping centre) in Belgrade, Serbia, each representing different spatial configuration and the level of complexity, as well as specific relationship with its surroundings (Figure 1). The analysis consisted of spatial explorations and first-person observations, participatory photo-journeys, multi-sensory mapping, interviews and short on-site surveys.

7 PARTICIPATORY PHOTO-JOURNEYS

In each selected space, 10 participants were asked to pursue two photo-journeys followed by two in-depth interviews and a survey. The time of the walk given was limited to 30-45 minutes. All participants took their walks individually.

First – 'Seductive' Journey: During this walk, the participants took 10 photographs of whatever they wanted (except that they were not allowed to take photos inside any of the retail stores). In this journey, the participants were not informed of the purpose of the investigation in order to avoid possible biased outcomes. For the same reason, the route of the walk was not controlled. The intention was to indirectly explore the participants' first affective, emotional and sensory reading of the specific place, and thus uncover which elements of space attracted them most.

First Interview: After the first walk, all participants in their own words described their subjective experience and the overall atmosphere of space, without any interference of the investigator, after which they described each photograph using five keywords, and further elaborated on what exactly attracted their attention.

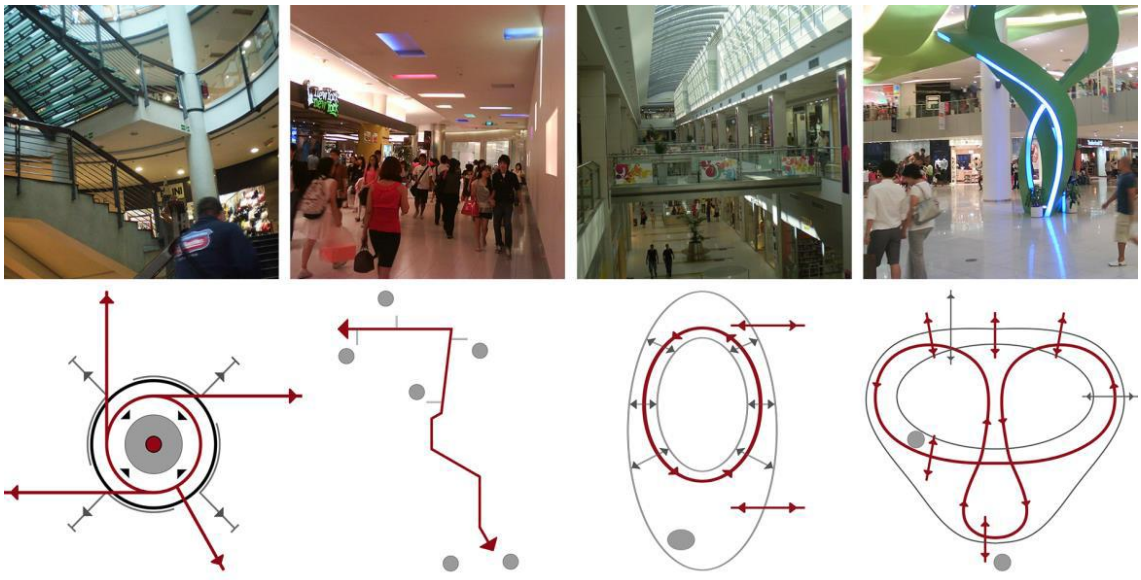

Figure 1 - Case studies [arranged according to the level of spatial complexity, from left to right]: New Millennium – 'centralised' type; CityLink – 'linear' type; DeltaCity – 'ring' type; VivoCity – 'infinite' type (Source: by author)

Second – 'Sensory' Journey: After the first interview, the researcher explained to the participants the purpose of his work. With that in mind, the respondents pursued the second journey and took another 10 photos, this time focusing on positive and negative multi-sensory stimuli available in space. They were allowed to take photos of the same spaces and elements again. In this more focused walk, the participants were asked to take a similar route, so that the outcomes from the two walks are more comparable. After the second walk, each participant explained the dominant sensorial stimulations and moods in each photographed space, and evaluated how pleasant or comfortable the detected stimulations were.

Survey: The final phase involved completion of a short questionnaire, based on environmental psychologists' research on atmospherics and the approach-avoidance behaviour method (Mehrabian and Russell, 1974; Donovan and Rossiter, 1982), as well as on 'sensory slider' and 'sensory radar' techniques proposed by Malnar and Vodvarka (2004) and Lucas and Romice (2008), respectively.

Multi-sensory Mapping: All the photographs taken by the participants were carefully mapped out, providing important information on spatial allocation and rhythm of sensory clues identified during the walks.

8 COMPARATIVE ANALYSIS AND KEY FINDINGS

The analysis of all the information gathered consists of photo-analysis, 'quasi-statistical' analysis of survey data and mapping and spatial analysis.

Photo-Analysis. The photo-analysis included photo-motifs and keywords assigned to photographs by the participants. Overall, interestingly, the most frequently captured motifs in both walks relate to social activities and shopping, followed by the space atmosphere (Figure 2). Natural elements and people, as parts of social space, are recognised as the most positive attractions in space, which lines with research findings on positive distractions in hospital settings (see, e.g., Kaplan and Kaplan, 1989; Ulrich, 1991a, 1991b). No significant difference between the motifs taken in the two journeys was noticed.

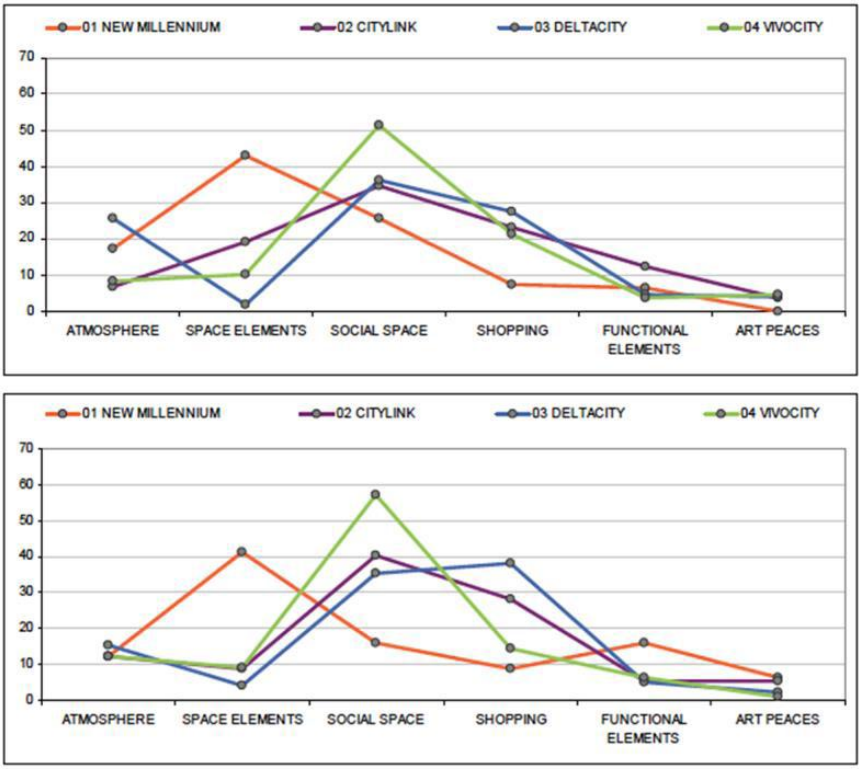

Figure 2 – Photo-motifs (Source: by author)

The keywords analysis shows that the participants predominantly tend to seek for positive stimulations in space (Figure 3). Moreover, they tend to perceive and describe the space more favourably after the second walk, which may be related to increased familiarity with space and so-called 'forgiveness factor',

which is defined as the voluntary “process that involves a change in emotion and attitude regarding an offender” (APA, 2006, p. 5). Once the user gets to know the space better, understands its logic and articulates his/her reactions towards it, his/her appreciation of space tends to grow in spite of the initial negative attitude. Such a finding may be particularly useful for the design of often stigmatised healthcare environments.

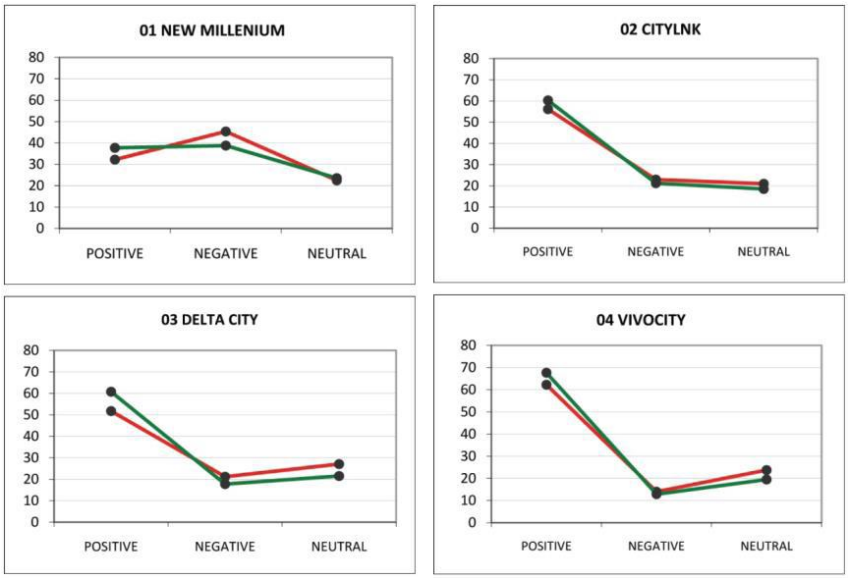

Figure 3 – Keywords (Source: by author)

Quasi-statistical Analysis. Key survey findings show that consumption space users tend to seek positive stimulation. The richness and arrangement of overall sensory information available in space considerably shape users’ subjective perception of and emotional response to shopping environments. Spaces with higher intensity and diversity of positive sensorial stimuli possess higher level of attraction (seductive value) and trigger higher sense of pleasure and happiness (Figure 4). Similarly, more complex, hybrid and organic typologies are perceived as more attractive and pleasant.

Sensory mapping. Similar findings are depicted through comparison of photos taken in two walks. A considerable number of photographs have been repeated in two journeys (Figure 5), which indicates the significant relationship between the initial reaction to space (seductive response) and the intensity of positive sensory stimulation. While showing the rhythm of most dominant seductive (red) and sensory (green) clusters (Figure 6), these complex yet quite consistent patterns show that complexity of space does not refer solely to its layout and interior-exterior relationship, but also to the arrangement and diversity of sensory ambiences.

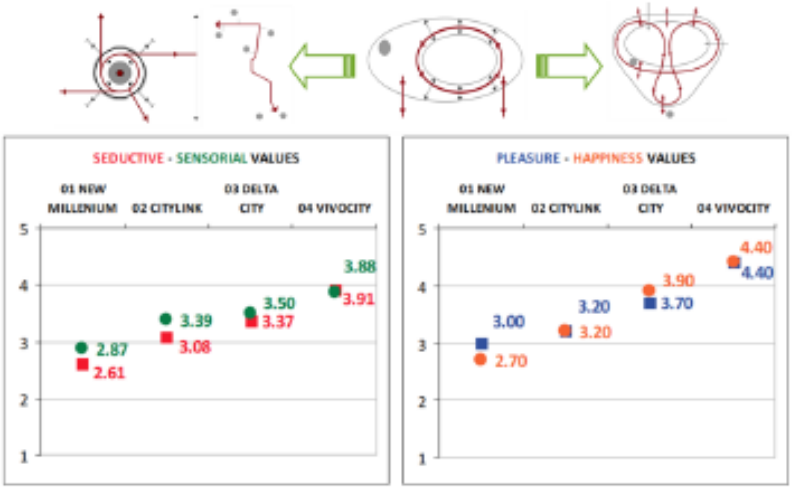

Figure 4 – Relationship between the seduction and sensorial richness levels (left);

Relationship between the pleasure and happiness levels (right) (Source: by author)

Figure 5 – Repeated photographs taken during seductive [top] and sensory [bottom] walks in DeltaCity, Belgrade, Serbia (Source: by author)

Figure 6 – Multi-sensory map of DeltaCity, Belgrade, Serbia – seductive walk (red) and sensory walk (green) (Source: by author)

Additional findings. Apart from the central guided themes that have been addressed by the participants during the interviews and that generally confirmed the ideas already advocated or explored in existing theory and research, a number of themes spontaneously occurred, without any guidance or intervening of a researcher. The themes are organised into three main categories, namely: bodily and mental self-awareness (ego), micro-events (surreal/hyper-real/phatasmagoric experience of space), and perception of health.

Bodily and Mental Self-Awareness (Ego). Bodily and mental self-awareness was addressed by participants in various ways, namely: narcissistic and intimate associations (self-reflection, memories, professional self), in relation to other people (familiar and unfamiliar), and in relation to space appeal (camouflage and mimicry, sense of being in place, performing conventionally less appropriate activities). Interestingly, the participants who showed greater self-awareness generally appreciated overall space more positively. Some of the responses are illustrated below.

NARCISSISTIC MOTIFS AND PERSONAL MEMORIES

CityLink06: This is a narcissistic shot. My name is Karthik and then you have “K” up there. This is actually BreadTalk sign. I also liked the lighting. (Figure 7 left)

VivoCity09: This is obviously a pillar. This is where I first met Fiona. She was waiting for me there and I couldn't find her. It is a place to wait and take a break from walking. (Figure 7 middle)

SELF-AWARENESS IN RELATION TO SPACE

VivoCity05: That's my foot on the warm wood. […] I like walking on wood, it stimulates your feet. You wear shoes every day and shoes are what you're supposed to wear in public. Usually when you take your shoes off, it's very private, it's your house, it's when you're on vacation. You don't take your shoes off in the office usually. (Figure 7 right)

Micro-events and Phantasmagoric Experience. During both journeys, the participants took a considerable number of photographs that may belong to the realm of phantasmagoric and surreal experiences, charged with temporality, irrational and subconscious aspects. These experiences include various non-programmed micro-events, often instigated by the juxtaposition of unexpected spatial elements and the subjective mind-mood states of the perceivers.

Figure 7 – Narcissistic Motifs, Personal Memories and Performing less appropriate activities (Source: by author)

An attempt at simulating the outdoor café areas and street atmosphere in CityLink underground mall or triggering illusionary cooling sensations in VivoCity (by providing an oversized statue of a snowman or a hanging figure moving in the air) are some of the examples (Figure 8). This is particularly interesting, since, due to the tropical climate, outdoor areas in Singapore are not very intensively used. People prefer air-conditioned space.

CityLink02: This one [photo] is a continuation from the food spaces. You walk on and you see the restaurants that are not behind glasses, but they are totally open. So you can sit anywhere inside; there is no mystery about it and it feels quite outdoor in a very indoor environment. It was a dinner time and it was pretty crowded so the sound coming from them [people] actually felt pretty good. You could staff in the restaurants and the waitresses talking to each other. It felt like you're really outside in the street. (Figure 8 left)

VivoCity02: What attracted my attention in this particular place is more of the snowman statue, I think, because it is huge, makes the mall feels friendlier and opposes to the heat. It doesn't really make me feel cooler, but with the fountain next to it, it actually brings freshness of to body and thoughts. (Figure 8 middle)

VivoCity08: This is quite funny. From far away I thought it was a real person hanging. It stands out. I think it's cute. It actually can move when the wind blows. That's when I realised that the wind was actually blowing. It's so hot out there. Sometimes you think there is no wind at all. (Figure 8 right)

VivoCity05: That was actually for the doll which swings in the wind. I like the wind, and then I found the doll. It was just windy atmosphere up there, fresh. (Figure 8 right)

Figure 8 – Street atmosphere in indoor environment, snowman in the tropics, wind-swinging sculpture (Source: by author)

Perception of Health. Through photographs and their explanations, the participants expressed common understanding of health and well-being, linking them to: natural elements, social activities (children, people relaxing and chatting) and hygiene. However, while the direct and visual access to nature has been highly appreciated by the participants, in certain cases it was somewhat counterproductive. A window may symbolise freedom, but bad views can alter the attention towards the more appealing interior of the mall. Other examples are related to restricted access to available outdoor space, even though the exit exists. As a result, the first positive impression turns into a disappointing one.

A small number of photographs also showed limited understanding or misunderstanding of health, such that smoking or fast-food were perceived as 'healthy'. Another set depicted negative associations towards health, referring to and using terms such as: the clinical and sterile environment, states of negative physical and mental conditions or illness (headache, distress, depression, claustrophobia, and even tombs and death) and the lack of safety coming from the subjective perception of certain materials and spatial elements.

9 CONCLUSION

Multi-sensory and emotional experience of space and active dialogue with all environmental stimuli, including positive distractions, textures, materials, colours, signage, culture-specific clues, way-finding and overall aesthetic atmosphere, profoundly shape our understanding of the built environment and are vital for physical, psychological and social wellbeing of all ages. Most health and space related theories and research concerned with multi-sensory experience predominantly focus on the design of (indoor) healthcare environments, demonstrating the various difficulties in their implementation and application (Goh et al., 2009). However, healing is no longer (as if it ever was) limited to the process of curing, neither only to healthcare institutions. Public space has traditionally been at the core of everyday life in cities, and its roles and capacities in (re)establishing itself as a focal point for the community and in supporting successful ageing-in-place and healthy active living need to be revisited.

Key findings in this study show that consumption space users tend to seek positive stimulations. To a certain extent, the consumption spaces are seen as laboratories of positive distractions, in which the richness and careful arrangement of overall sensory information considerably shape users' subjective experience and good mood. The presence of nature, micro-climate, wayfinding, access, safety and hygiene, but also subjective bodily and mental self-awareness, crowd and shared identity, social activities and phantasmagorical experiences, are perceived as important ingredients of "healing places" and as "stress fighters". While the findings indicate some capacities of contemporary shopping spaces to overcome the mere consumption motifs, trigger positive sensory, mental and emotional reactions in users, as well as boost their self-esteem, and, thus, positively affect their sense of subjective well-being, this does not mean that these environments are considered 'healthy'. These positive effects are clearly only the by-products of consumption experience.

Multi-sensory approach to consumption space design, however, may provide fruitful means for uncovering the capacities of all city spaces to become therapeutic and healing 'tools', prevent sensory and cognitive decline, alleviate stigma and negative public's perception of healthcare and eldercare environments, and contribute to their better physical and social integration with the surrounding neighbourhood communities.

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ID 1646 | ANALYSIS OF THE AIR FLOW PERFORMANCE IN WARSAW IN YEARS 2002-2016

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1 INTRODUCTION

1.1 WHY AIRFLOW IS IMPORTANT

Nowadays, more than a half of the world's population lives in urban areas. By 2045 this number is expected to surpass six billion, reaching 66 percent by 2050 (United Nations, 2014). People decide to choose cities as their living place for various reasons, such as developed labour market or wide range of services. Unfortunately, highly urbanised areas, despite their understandable economic and living-standard advantages, suffer from serious environmental and development problems caused by erroneous planning decisions.

City climate is clearly related to general climatic conditions occurring in a selected geographic region, however, it is also dependent on factors such as land use, building geometry or street canyon design. Luke Howard in his renowned work "Climate of London" 200 years ago proved that urban climate differs from the rural one and noticed the urban heat island (UHI) occurrence. Indeed, the city of Warsaw, an object of this study, is distinguished by a lower access of solar power, higher air temperature and shorter period of frost incidence as well as lower relative humidity, bigger cloud cover, higher rates of rainfall and lower wind speed (Stopa-Boryczka, Kopacz-Lembowicz, Wawer, 2001).

Rapid changes of temperature, wind and humidity also affect comfort and health of the people as well as energy consumption and air quality (Elliason, 1999). Thus it is important to enable achieving conditions of thermal comfort especially in a hot and humid climate, through increasing wind velocity (Kato & Hiyama, 2012). Ensuring proper airflow in urban areas should be one of the key environmental issues tackled by governments and city mayors. However, T. R. Oke points out that it implies a critical choice between four goals: to maximize shelter for pedestrians by not exposing them to strong winds, to maximize dispersion of pollutants and minimize their impact on inhabitants and vegetation, to maximize urban warmth and to take full advantage of solar energy. We have to take into consideration that large amount of harmful compounds detected in the air of urban areas where human activity is intensified is not only a result of increased emission but also an effect of the strong surface drag in rough structures and limited effectiveness of dispersion of pollutants (Suder & Szymanowski, 2014).

Therefore this study was set to analyse changes in morphology and terrain roughness in Warsaw in years 2002 – 2016 and related changes in city's aerodynamic properties, including ventilation corridors.

1.2 AIR FLOW CORRIDORS IN WARSAW'S PLANNING DOCUMENTS

The issue of air flow corridors and regeneration of air has been present in Warsaw's planning documents since 1916, when "The Initial Draft of the City of Warsaw Regulations", also known as "Tołwiński's Plan", named after the author, has been published. Tołwiński stated that: "the ease and recklessness which the builders of the city apply to taking away lands from its inhabitants (also citizens) is startling (Tołwiński, 1948). In order to prevent this issue from occurring he set down 6 air flow corridors consisting of continuous green areas, areas at the banks of Vistula river, as well as cemetery areas, all creating a sun-shaped system. On those territories total prohibition of building construction was enforced. Each of the following Warsaw's planning documents published before 1939 respected those guidelines.

During Second World War 84% of buildings located by the left side of the river were demolished. Such serious material losses lead to the creation of the Plan of Reconstruction and Restoration of Warsaw. That document, written in 1946, implied preservation of pre-existing air flow corridors and the emergence of the

new ones which were to be created by railway lines as well as lines of big city transportation. That plan marked 9 corridors in total; 6 green corridors and 3 transportation ones. In 1956 The General Plan for the years of 1955-1965 was created, preserving the sun-shaped system of air flow (Government office, 1956). Between 1965 and 1982, as the result of lack of one planning document for the whole Warsaw, one could observe gradual build-up of the corridors.

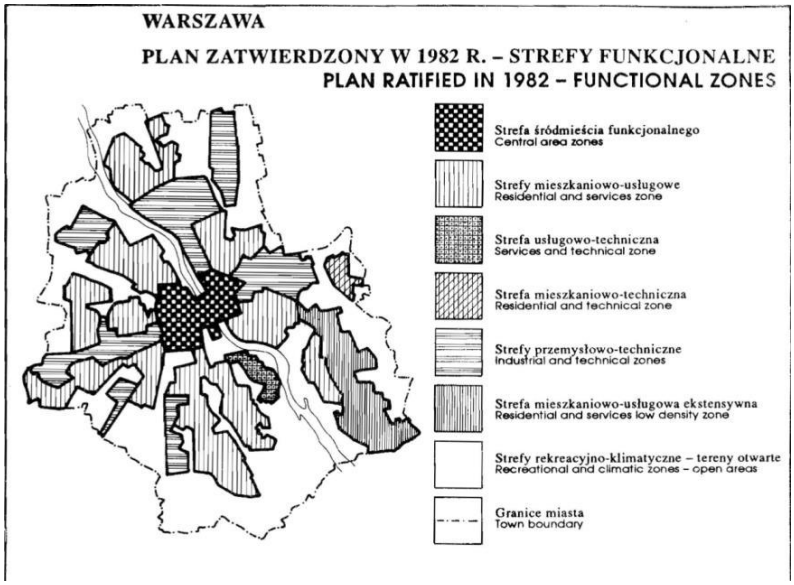
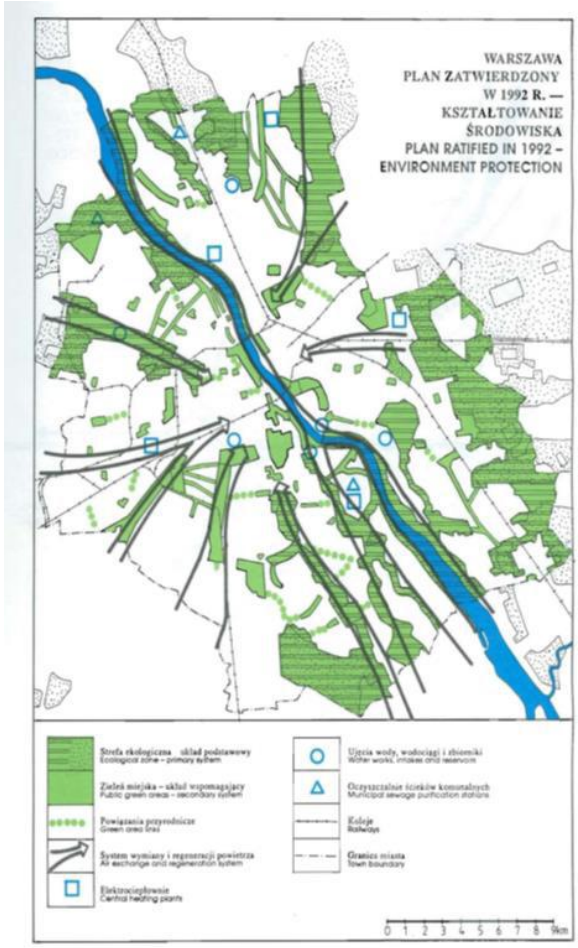


Figure 1. Air flow corridors in 1982 (white colour). Source: National Council of Warsaw, 1982.

In 1982 the Prospective Plan of General Spatial Development for the city of Warsaw was created, which changed the definition of air flow corridors in the city. Above all, it included short buildings territories as well as green areas, sport areas, and land lot areas. The plan named them “recreation and climatic spheres – open areas” (Rada Narodowa m.st. Warszawy (National Council of Warsaw), 1982).

Finally in 1992, Local Spatial Development Plan of the city of Warsaw marked 8 significantly smaller corridors than those proposed by the Plan of Reconstruction and Restoration of Warsaw (Rada Warszawy (City Council of Warsaw), 1992).



1.3 ISSUES CONCERNING AIR QUALITY IN WARSAW

Air quality in Poland has significantly improved since 90’. This was a period of rapid transformation of national politics and economy in post-soviet countries, including Poland. Over the years Poland as a signatory of international, and later European, conventions and programmes had to fulfil its obligations in terms of reducing emissions of pollutants, moreover it forced technological development in energy and industrial sector. Amount of annual emission of greenhouse gases in 2012 has decreased by almost 30% in comparison with 1988 (Krajowy Ośrodek Bilansowania i Zarządzania Emisjami (The National Centre For Emissions Management), 2014). However, Supreme Audit Office in 2014 claimed that norms of air quality established in European Union’s regulations and implemented in Poland had not been completely carried out by Polish government.

Figure 2. Air flow corridors in 1992 (arrows). Source: City Council of Warsaw, 1992.

Particles which are emitted into our atmosphere can cause adverse effects on human health and the condition of ecosystems. Human activity leads to the emission of gases such as sulphur dioxide, carbon monoxide, ammonia and volatile organic compounds, which subsequently can react and form new pollutants. Air can also be polluted by toxic metals or methane and benzene. However, the most harmful for our health are particulate matters with diameters of 2.5 and 10 micrometres (PM2.5, PM10), nitrogen oxides (NOx), tropospheric ozone and cancerogenic benzo-alpha-pyrene (B(a)P) (WHO, 2017). In 2013 PM2.5 pollution caused over 48 000 premature deaths in Poland. (European Environmental Agency, 2017)

Emissions of CO are still high, emission of B(a)P– even the highest in Europe (European Environmental Agency, 2016). World Health Organisation in 2016 revealed that 33 out of the 50 most polluted cities in Europe are in Poland. Results of annual valuations conducted by Inspectorate of Environmental Protection unequivocally indicate that low emission phenomenon deriving from commercial, institutional and household fuel combustion together with transport sector are the most responsible for inadequate air quality condition in Poland. In 2012 over 88% of total PM10 concentration limit exceedances were contributed by emissions connected with individual house heating. Poles use low quality fuels and combust waste in unsuitable installations as an effect of unsatisfactory social awareness, but also because of economic reasons (Ministerstwo Środowiska, 2015). Voivodeship Inspectorate of Environmental Protection reports that causes of line emissions of air pollutants exceedance in Masovia, where Warsaw is located, are lack of city bypasses, technically obsolete vehicles and bad condition of road surfaces. What is important, substantial influence on air quality has also the inflow of pollutants from outside of voivodeship as well as secondary emissions of gases (W.I.O.Ś (Voivodeship Inspectorate of Environmental Protection), 2016).

People in Masovian Voivodeship and Warsaw are mostly struggling with problem of air pollution caused by particulates such as TSP (Total Suspended Particles), PM10 and PM2.5 (IOŚ-PIB, 2016). In 2016 daily limit value of PM10 (50 µg/m3) concentration established by EU Ambient Air Quality Directive was exceeded in every zone of voivodeship. On Niepodległości avenue station, in a centre of Warsaw, this norm was surpassed 85 times, while the limit is set at 35 days a year (Figure 3). The average concentration of PM10 particulate was around norm (40 µg/m3 a year) yet maximum value of PM10 concentration noted in the central station equalled 552.7 µg/m3, exceeding a daily norm 10 times. To compare, in 2002 it was 215,8 µg/m3 while average year concentration was similar. There is a noticeable downward trend in the number of exceedances in years 2005 - 2016, however annual pollution values had not significantly dropped over that time and since 2012 they slightly fluctuate about acceptable limit (Figure 3).

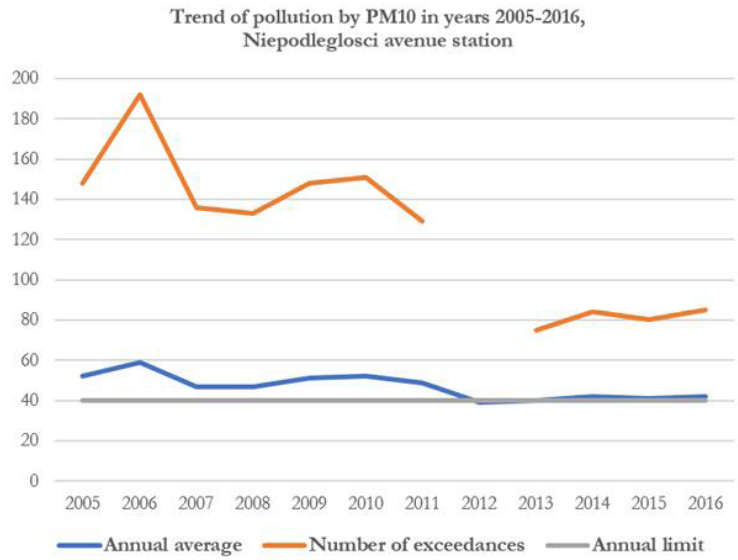


Figure 3. Trend of pollution by PM10 in years 2005-2016 on Niepodległości avenue station. There was no data about number of exceedances for year 2012. Source: own study based on data from Voivodship Inspectorate of Environmental Protection.

Spatial dispersion of concentration of substances such as: particulates, nitrogen and sulphur dioxides, carbon oxide and benzo-alpha-pyrene indicates that highest levels of air pollution occur in central districts of Warsaw, especially in Śródmieście. That situation motivated us to analyse how topography of the city can affect the airflow performance and to make an attempt of identifying barriers formed in urban and planning processes over time.

2 DATA

Data for the study were derived from Land and Property Register from Geodesy and Cadastral Office (Ewidencja Gruntów i Budynków EGiB), on the basis of an agreement between Warsaw University of Technology and the Office. Acquired Land and Property Register consists of buildings geometry, number of storeys in the buildings and the year of construction. 0,3% of the total number of records did not contain number of storeys and were excluded from the the first phase of the study (terrain roughness analysis).

More detailed data wereprepared for the air flow analysis. Building characteristics were obtained from Topographic Objects Database (Baza Danych Obiektów Topograficznych BDOT) for year 2014. Geometry and location of the buildings were validated using aerial photographies. Data concerning number of storeys for each building were complemented using aerial photographs and other sources. In both cases height of buildings was calculated using number of storeys multiplied by estimated height (3 m).

Meteorological data for the study was obtained from website Weather Online, generating forecast on the basis of international databases (WeatherOnline).

3 METHODOLOGY

Indicators and urban parameters were determined in order to obtain appropriate spatial development effects (spatial order). Basic urban indicators include intensity, density of buildings and weighted average building height, which provide information on the extent of usage of construction sites. These indicators should be interpreted together as they can provide sufficient information about the characteristics of the built environment and assess the quality of the place as a place for living. Moreover, in our study we choose these few urban indicators to see how urban morphology impacts air flow in the city. Our choice was mainly based on the study “Correlation between Urban Morphology and Wind Environment in Digital City using GIS and CFD Simulations” (Yin J., Zhan Q., Xiao Y., Wang T., Che E., Meng F., Qian Y., 2014) in which the relationship between specific indicators and city ventilation was investigated. It has been found that there is a correlation between urban indicators and wind conditions in the city - a strong linear correlation between building density and average wind speed at pedestrian level, while the intensity and average building height show a weak, but existing correlation.

In this paper the intensity of development (In, equation (1)) is calculated as the ratio of the total building area (PC) to the surface of the site (PT, and the site is a mesh net):

$$In = PCPT \quad (1)$$

The intensity of terrain development is complemented by information such as:

- building density (Gzab, equation (2),) is the index of the sum of the cubature of the building (K) to the site area (PT):

$$Gzab = KPT \quad (2)$$

- weighted average number of storeys (LK, equation (3),), is the ratio of the total area of the buildings (PC) to the built area (PZ) (the area occupied by the buildings):

$$LK = PCPZ \quad (3)$$

To fully understand mentioned formulas, it is necessary to clarify some terms (explained in standard PN-ISO 9836:1997):

- total area of the building - the sum of the area of all storeys of buildings in a given area, calculated in the outer contour of the wall / walls,
- built area - the sum of the floor area of all buildings in a given area, calculated in the external wall / wall contour,
- cubature of a building (cubic volume of a building (gross)) - the sum of the product of the total floor area and its height.

Urban standards/norms take the form of regulations defining the relationships between urban indicators and the appropriate capacity of communication service and the size / availability of service areas (shops, education, health, culture, recreation, etc.).

In Poland, urban norms functioned during the Polish People's Republic. But after 1990, as a result of system changes (as well as demographic determinants, the growth of the automotive industry and the conditions of housing investments and land prices), most of the assumptions became obsolete and the application of norms ceased to be justified. When formal limitations ceased, the practice immediately surpassed the normative framework.

In Poland for almost 30 years no central urban standards have been applied (under the Land Spatial Planning Act 1994 the competence to set local urban development standards was passed to municipalities). The lack of mandatory regulations establishing spatial health and social minima causes numerous abuses: the implementation of housing complexes with too dense development, lacking basic social infrastructure, public access to sports and recreation areas and access to public transport (Dąbrowska - Milewska, 2010).

Calculations of the indicators (Fig. 5 - 13) within the study were made in a cartographic grid 100m x 100m covering the whole area of the city. The net mesh area (10000 m2 / 1 ha) is the area for which the indicators were calculated.

In order reflect the location of buildings in the meshes properly, the layer of buildings was cut through the mesh. So when the building is in two mesh nets, it will be counted in both of the meshes according to what surface it occupies in each, not just one. Height of the building was calculated on the basis of number of storeys. Average height of storey was assumed 3m.

All calculations were made using ESRI's ArcGIS software.

The main aim of the project was to analyse changes in the morphology of Warsaw in 2002 – 2016 period and related changes in its aerodynamic properties. Methodology of the survey was based on methodology proposed by M. S. Wong et al. (Wong, Nichol, To, & Wang, 2010). Terrain roughness was analysed on the basis of the Frontal Area Index (FAI), a parameter for estimating aerodynamic resistance of the urban surface. FAI is the total area of the facets of buildings in an area, where windward facets cover these located behind them, divided by surface of the area (equation (4)).

$$\lambda_f = \frac{A_{facets}}{A_{plane}} \quad (4)$$

Test plot given in the study was defined by the square 500m x 500m grid net. Frontal area of objects depends on the direction of airflow. Moreover, each wind direction was weighted accordingly to the frequency of its occurrence in the analysed period: (N - 7%, NE - 6%, E - 15%, SE - 15%, S - 12%, SW - 9%, W - 27%, NW - 9%).

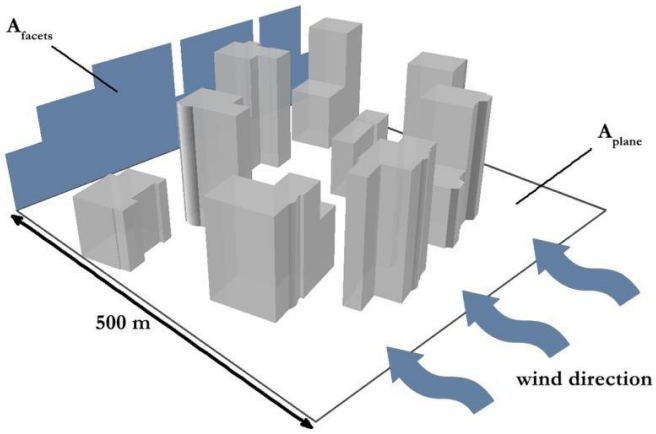


Figure 4. Data for frontal area index calculation. Source: own study.

Roughness index values gave basis to the wind corridor identification. For this purpose, 50m x 50m net grid was created and used for frontal area index (FAI) calculation, aiming to obtain results precise enough for a city scale study (Hsieh & Huang, 2016). Later, for each of four cardinal wind directions (W-E, NW-SE, N-S, SW-NE) was generated a grid classifying FAI for respective direction into ten classes . Then they were used as a distance weight grids for Least Cost Path (ESRI) analysis method generating a corridor between each pair from 144 barrier points chosen around the city's administrative border. Each pair was classified into the closest basic direction to a geographic azimuth between these points and a path between them was calculated on respective grid. That all identified wind corridors between sampled barrier points and throughout the city. In the following paper results for two most frequently observed winds are presented: W-E and NW-SE (Figure 18, Figure 19).

Airflow performance was visualized using computational fluid dynamics methods in Air Flow Analyst software. Elevation model was established using Airborne Laser Scanning data from 2011. Due to limited available computing power and marginal impact of the Warsaw landform on the results, elevation data was later ignored in the study.

4 RESULTS

4.1 URBAN INDICATORS CHANGE ANALISYS

Urban indicators calculations resulted in maps showing city-wide urban indicators for the years 2002, 2009 and 2016 (Fig. 5, 6, 8, 9, 11, 12). Moreover, it was possible to determine the change in these indicators in years 2002-2016 (Fig. 7, 10, 13). Analysis of the results allows us to designate areas of intensive urbanization in Warsaw and areas under-invested in recent years.

Increase in value of the indicators over the years could be observed, especially in Wilanów district, Ekopark estate, located in ventilation corridors Skorosze estate (very intensive multi-family housing without public space), Górce estate (along Obrońców Grodna avenue) and Młynów estate.

It is possible to observe the development of new buildings on the eastern side of the Vistula River - yet building intensity is relatively small and the predominant number of storeys does not exceed three storeys. The biggest changes are located on Praga Poludnie district.

On the west side of the Vistula, the intensity of development is intensified in the following districts: Żoliborz, Wola, Ochota, Ursynów, Mokotów and Włochy.

From the performed analysis an overall trend of supplementary development and diffused urbanisation can be observed. New developments adapt undeveloped terrains on the city outskirts, as well as along thoroughfares and railroads. Furthermore, a disproportion occurs between eastern and western part of the city. The north-eastern part of Warsaw characterizes less densely built up area than the rest of the city. This, combined with an insufficient coverage of planning document, results in spread of development of highly urbanised settlements.

In the context of the city ventilation project, this analysis allows to designate investments that are located within the city ventilation corridors.

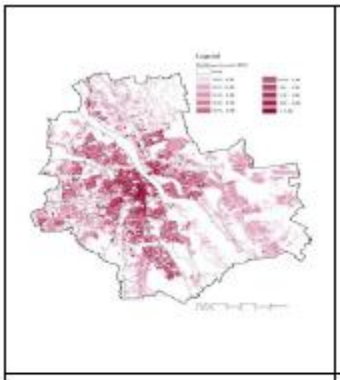


Figure 5. Building intensity in 2002. Source: own study.

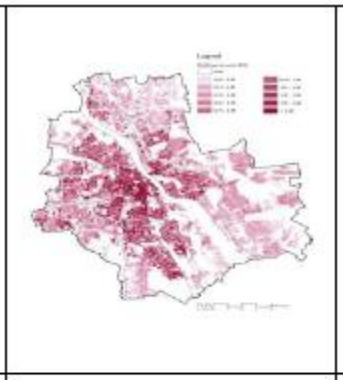


Figure 6. Building intensity in 2016. Source: own study.

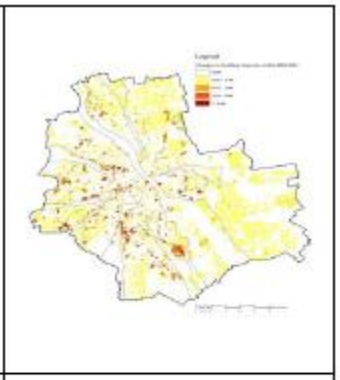


Figure 7. Changes in building intensity within 2002-2016. Source: own study.

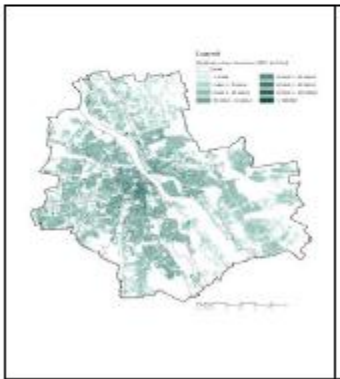


Figure 8. Building density in 2002. Source: own study.

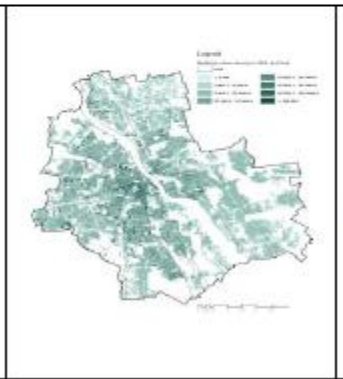


Figure 9. Building density in 2016. Source: own study.

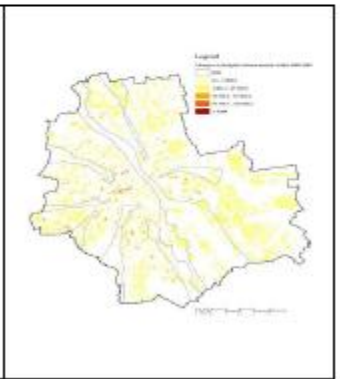


Figure 10. Changes in building density within 2002-2016. Source: own study.

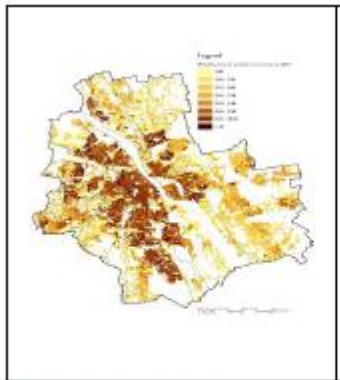


Figure 11. Weighted average number of storeys in 2002. Source: own study.

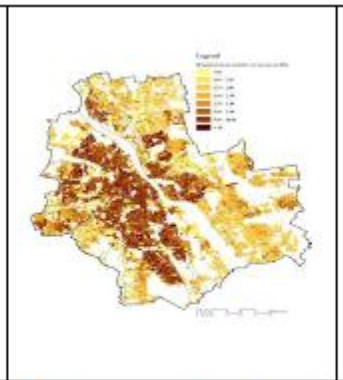


Figure 12. Weighted average number of storeys in 2016. Source: own study.

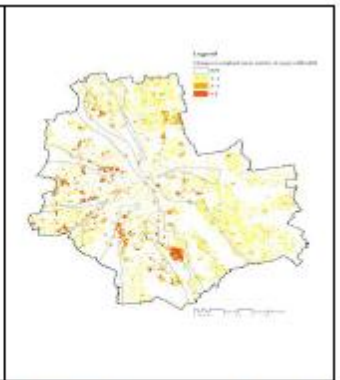


Figure 13. Changes in weighted average number of storeys within 2002-2016. Source: own study.

There is a noticeable increase in the intensity of development in corridors ventilating the city, which disrupts its natural ventilation. This leads to the formation of negative phenomenons such as smog or urban heat island (Stopa-Boryczka, Kopacz-Lembowicz & Wawer, 2001).

The above maps do not show which buildings were built on areas covered by local planning documents and which are not. This aspect is worth later investigation.

4.2 ROUGHNESS TERRAIN ANALISYS

As a result, we achieved FAI values in 2002, 2014 and 2016 (Figure 14, Figure 15); FAI percentage increase in 2002-2016 enables to identify areas where new investments have a particularly negative impact on the air exchange and air regeneration system in Warsaw (Figure 16).

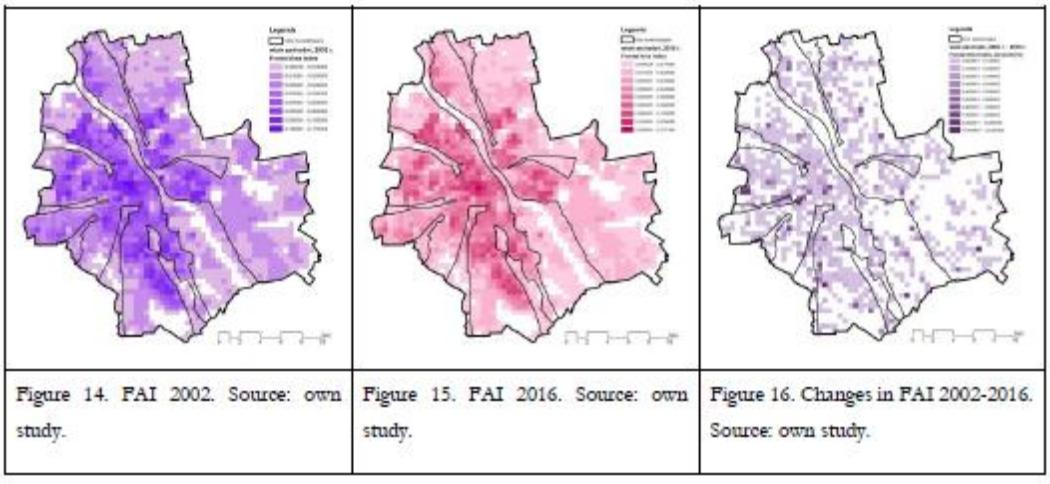


Figure 14. FAI 2002. Source: own study.

Figure 15. FAI 2016. Source: own study.

Figure 16. Changes in FAI 2002-2016. Source: own study.

The highest value of the Frontal Area Index was noted in 2016. The greatest changes in the indicator value during period 2002 - 2016 could be seen in the corridor of river Vistula and in the corridor of Bemowo district. The greatest changes in surface facades of buildings frontal to the west wind can be observed in the Western Railway corridor and in the Bemowo corridor. This is related to the passage of corridors, parallel to the direction of the west wind. Definitely a negative phenomenon that can be observed is the increase of the building density at the end of the Bemowo corridor and the narrowing of the western, Mokotów and embankment corridors (Figure 17), which may significantly reduce effectiveness of these ventilation areas.

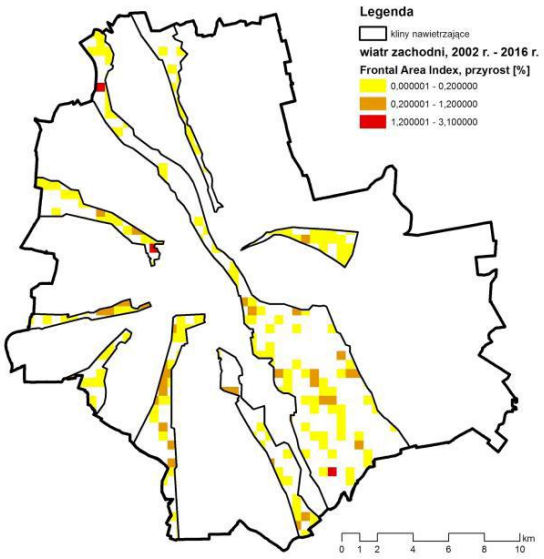


Figure 17. Changes in Frontal Area Index in Warsaw in 2002-2016 within ventilation corridors. Source: own study.

4.3 AIR CORRIDORS IDENTYFICATION

Least Cost Path analysis for two, most frequently observed winds (W-E and NW-SE) were generated (Figure 18, Figure 19). Analysis, basing on the terrain roughness indicator, used 50m x 50m grid and resulted in potential frequency of occurrence (standardized) of the air flow in given net.

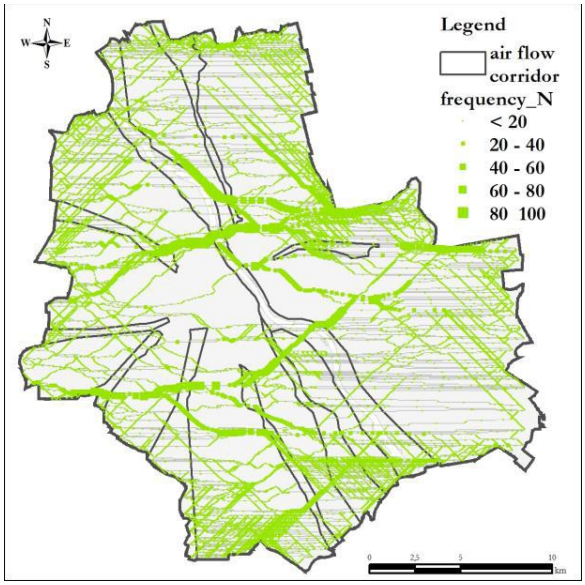


Figure 18. Least Cost Past analysis results, wind W-E, 2014. Source: own study

Airflow from western and eastern direction is highly evident. Its path goes through principal communication arteries. High probability of wind occurrence is visible on the dominant transportation corridors. Main paths can be seen along the railways, mostly along surroundings of Gdański bridge, Okęcie airport, allotments in Mokotów district and Arkadia Park, also at industrial plants near Grot-Rowecki Bridge and near the city boundaries (which might be a result of the methodology imperfection). What can be obviously seen from the model is that the city center is excluded from the ventilation system. Moreover, our predicted wind paths for the western wind do not coincide with the corridors designated in the Strategic Concepts of Conditions and Directions for the Spatial Development of Warsaw.

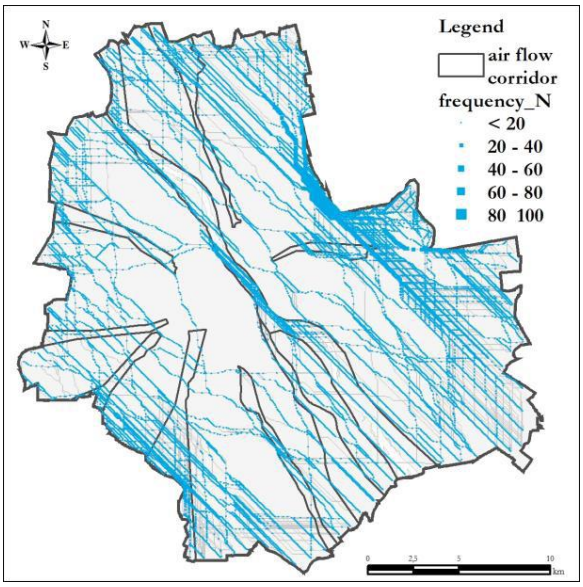


Figure 19. Least Cost Past analysis results, wind WN-ES, 2014. Source: own study.

Results of the Least Cost Path analysis for the oblique wind, northwestern-southeastern, approximately overlap with contours of eastern Bemowo, embankment and Vistula corridor. Winds representation here also misses the city centre; it dominates in the Vistula area, while the west wind is present in the communication arteries. In the south eastern part of Warsaw there is no definite course of the ventilation corridors (e.g. Wesoła district), which is in line with the model results for the oblique wind. The greatest value for the LCP is found at the eastern border of the city, but due to its location it is not clear for interpretation. Vistula river, as well as airport and railway areas, play a significant role for both wind directions.

5 DISCUSSION

Scope of our analysis was limited due to lack of reliable data concerning building geometry and cubature. Data derived from Geodesy and Cadastral Office had a limited number of records concerning year of construction of each building. Also, height of building was not always complete in the obtained database. Therefore, for air corridors modelling, data was manually complemented, which entails risk of errors. What is more, two sources concerning height of buildings were used. One was number of storeys provided by Geodesy and Cadastral Office and the other was our interpretation of aerial photographs, which could result in imprecise input of data for further study. In the future research height data should be obtained from airborne laser scanning.

Next generalization in the study was forced by no meteorological data available during the main phase of our research. The data was generated by using a model collecting information from international sources in Europe.

The other limitation was caused by the simplified methodology used in the study. Assumption that the height of the building is equal to the multiplication of number of storeys and their dimensions was necessary, however, it simplifies the building's bulk to a great extent. Moreover, adopted methodology does not take into account turbulence in airflow in a rough area and other movements related to fluids. We assumed a linear air flow through the city and the absolute limitation of its motion when encountering a barrier (building). It does not fully reflect the real movement, however, our goal is to develop a simplified model, while maintaining the required accuracy of the results. In the city scale research, taking into account the available computational power, such an approach may be sufficient. However, the results obtained should be verified in reality or in a different calculation method. Computational Fluid Dynamics software could be used only on a small part of the investigated area, which was caused by lack of available computing power for such analyzes and no funding of our research - which was a great limitation.

Misinterpretation of the results of the study could be caused by adopted grid division. While the urban indicators analysis and terrain roughness calculation were aimed at obtaining more general, viewable results; the Least Cost Path analysis gave more precise results (based on the 50m x 50m grid). Adopted mesh division could be misleading, especially when concerning thoroughfares: wide streets, potential air flow corridors, could be omitted in the analysis when divided between grid areas. In conclusion, it is highly advisable to use the smallest grid possible, although computing time and cost need to be considered.

Adopted methodology assumed arbitrary designation of points generating air streams, in equal intervals, along the city borders. This implies the occurrence of errors at the boundary of the study. In order to optimize analysis for the peripheral districts, the scope of the study should be extended, taking into account the adjacent municipalities.

Additionally, influence of the green areas was not included in the survey. Greenery is a factor of a great value, nevertheless not yet adopted in our methodology, due to its differentiated impact on the city climate. Green areas increase roughness of terrain and consequently reduce the speed of wind and simultaneously cool air and increase its humidity, which as a result stimulates air movement. Defining impact of the greenery requires further analysis and subsequently is to be included in our model.

6 CONCLUSIONS

Before World War II Warsaw was provided with airflow corridors full of greenery. Over the years, green wedges were degraded to marginal role in city-development politics. Consequently, green corridors was replaced by communicational arteries. Today, they mostly stretch alongside railways. Undoubtedly, these terrains are very attractive for new investment plans, therefore they should have proper protection.

Unfortunately, building in airflow corridors is possible due to decisions of building conditions (Decyzja o Warunkach Zabudowy i Zagospodarowania Przestrzennego). This document establishes ways of management and conditions of development of terrains not included in local zoning plan and in case it is not public purpose investment. However, this conditions do not have to be compliant with Strategic Concepts of Conditions and Directions for the Spatial Development of Warsaw (SUiKZP) regulation according to which terrains of airflow corridors ought to be protected. Generally, it is deficiency of

development strategies in Warsaw which makes new investments a kind of chaotic filling of empty, frequently green, spaces within a city.

Housing in Warsaw is concentrated on a left side of Warsaw, however changes in building intensity can be also observed on the other side of the Vistula River. Hence, there is a noticeable increase in the intensity of development in the corridors ventilating the city. Lack of municipal planning politics led to uncontrolled development of the airflow corridors. Moreover, not including proper protection of the airflow corridors in planning documents had an impact on aerodynamic properties of the city and its ability to ventilate. It also negatively affected green areas which play crucial role in air regeneration process.

Results of the study revealed that city centre, as the most densely developed area, has impaired airflow performance. Simultaneously, it is the area of the highest pollution levels, where accumulated pollution has no possibility to be dispersed. Therefore it is crucial to induce the air movement in the downtown area. Whereas it is unlikely it this district for buildings to be demolished and the development area to become less intensive, it is crucial to stimulate the flow and ventilation capabilities by other methods. This can be achieved through introducing high greenery that cools the temperature and increases its humidity, thereby stimulates its vertical motion (convection).

Contamination of air alongside with smog episodes are still a substantial problem in Warsaw and a real threat to its inhabitants' health or even live. There is no fully effective remedy, however authorities ought to use all possible political, strategic and financial tools to protect green terrains and make the city more sustainable. The key point is to reinforce planning politics and to include these assumptions in Strategic Concepts of Conditions and Directions for the Spatial Development of Warsaw study and to prioritise its regulations. It is also important to promote proecological behaviors among inhabitants to reduce pollution from individual sources. Furthermore, as it is line sources which are the main cause of these condition, it is recommended to reduce traffic in a city centre by all means.

The aim of the study was to analyse changes in the morphology of Warsaw and relate changes in its aerodynamic properties. It could not be done without ensured access to full, qualitatively good and available data from Land and Property Register, containing year of construction and height of the objects, as well as from Voivodeship Inspectorate of Environmental Protection, which could be analysed to illustrate real condition of air in chosen corridor. However, it is possible to calculate urban indicators using the actual height of buildings obtained by photogrammetric method, which would increase the accuracy of the analysis. Credibility of the results might also be increased by consideration of landform and land cover in future analysis. Moreover, the aspect of new buildings developed on the areas covered by local planning documents is worth later investigation. It means that standards and suggestions how to design housing to not disturb airflow are ought to be set. Also, according to our study, placement of airflow corridors does not coincide with paths of corridors obtained from modeling, which implies a need to carry out observations in situ to confirm our results.

In conclusion, proposed methodology for analysis of airflow conditions of a city to evaluate and create planning documents could be taken into consideration. It might appear to be a cheap but still effective tool for these purposes.

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ID 1654 | GEOGRAPHY OF ´´SUSTAINABILITY WITHIN URBAN FOOD STRATEGIES

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ABSTRACT: The whirling population growth that is affecting global cities is causing an enormous challenge to conventional resource-intensive food production and supply and the urgent need to face food security and sustainability concerns. Cities can be the starting points of these strategies and they need to strike a balance between the localization of their food chains, reconnecting food with its place of provenience, and the globalization and market pushes. Urban Food Policies or Food Strategies can provide an interesting path for the development of this new agenda within the imperative principle of sustainability. But which are the main components of these policies? Most the food plans include actions related to three main dimensions that falls within the umbrella of what the food planners call “food

sustainability" that are food security and equity, environmental sustainability itself and cultural identity and, at the designing phase, they differ slightly from each other according to the degree of approximation to one of these dimensions. An essential observation can be made about the relationship between these dimensions and geography. In statistical terms, the US and Canadian policies tend to devote a large research space to health issues and access to food; those northern European show a special attention to the environmental issues and the shortening of the chain; and finally the policies that, even in limited numbers, are being developed in the Mediterranean basin, are characterized by a strong territorial and cultural imprint and their major aim is to preserve local production and the contact between the productive land and the end consumer. This means that the relationships between food sustainability, public policies and the comparative study of the different cases are important in order to find solutions and ideas to future planning dispositions. Moving from these assumptions, my article, with primary and secondary data, would reflect on the current mapping of the Urban Food Policies, on the reasons why such priorities are located in those geographic areas and on the effectiveness of the practices they produce.

1 INTRODUCTION

The whirling population growth that is affecting global cities[1] is rising an enormous challenge to conventional resource-intensive food production and disclosing the urgent need to assure food security and respond to sustainability concerns. Even if it is a multi-scalar problem, cities are firstly required to deal with a practical challenge: setting policies, governance models, processes, and concrete territorial interventions to create sustainable food supply and distribution systems. Cities, in fact, can be the starting points of these strategies aiming at the re-localizing their food chains, reconnecting sites of food consumption with its production place, in spite of the globalization and pushes of the food market.

Within this landscape, the scientific literature is focusing on agro-food re-localization initiatives and on the idea of fulfilling cities' demand with local and environmentally sustainable products[2]. Coherently, several UFPs are adopted by urban governments in the attempt to limit the unsustainable provisioning of the city; they are oriented to a new geography of the food chain that gives birth to new food production practices. This increasing interest in UFPs is also consequent to the growing citizens' preoccupation about food quality.

Urban Food Policies, encompassing planning dispositions and governance processes, are contributing to a crucial international debate on sustainable, healthy and secure food provisioning of the city. Cities are therefore protagonists of a serious urgency (time is limited by the speed of population growth) and active agents in the creation and adoption of UFPs as answers to this urgency. Such policies are developed within rich and active political environments characterized by a dense local relational network and by rich international cooperation assuring important experiences sharing and transfer, as well as frequent fashion phenomena that risk to vacuum strategies and policies with respect to their initial goals.

Many UFPs are enabling and activating new food production practices, which are transforming land use and landscape production, and try to satisfy the initial objectives that have inspired the policies and strategies themselves. This explains why UFPs provide an interesting research field when challenged by the practices that they are activating and enabling in urban environments.

2 THE MAIN DIMENSIONS OF AN EFFECTIVE FOOD SYSTEM

What exactly do food planners mean by 'sustainable' food system? There are many different dimensions and sub-objectives that are stated in the general planning document as defining an effective food system, and what falls within the scope of the term 'sustainability' when dealing with food production and consumption systems. Strictly speaking, sustainability implies the use of resources at rates that do not

[1] FAO, 2014

[2] 2 Deverre C., Lamine C., 2009, Les systèmes agroalimentaires alternatifs. Une revue des travaux anglophones en sciences sociales, Economie rurale

exceed the capacity of the Earth to replace them[1]. In the objectives of these Food Strategies, an effective food system is encompassing a range of issues such as food security, health, safety, affordability, and quality; as well as the strength of the food industry in terms of jobs and growth; or still in terms of critical issues like climate change, reduction of biodiversity, water scarcity and soil pollution.

These exposed above are the main reflexive trajectories identifiable in the literature when exploring the dimensions of a food system, which are referred to at most when dealing of UFPs.

It is relevant to identify what sustainability is referred to in Urban Food Policies and which are its dimensions.

From a first exploration of the UFP literature, different dimensions appear to compose this concept which is far too complex and multifaceted.

Security. “Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences.”[2] It can be defined as a bi-modal problem because both under nutrition and over nutrition affect a regular and healthy nutrition choice of the consumers and provoke chronic diseases. This problem is reinforced by reliance that consumers still have on highly processed food sourced from distant locations.[3]

Equity. Another important dimension in UFPs, connected to the first one, seems to be the equal possibility for all ages, sex, social class and ethnic group to access to healthy food. All the discussions on “biological” food, sold at non-affordable prices are now under the lenses of the food policy designers. Alternative Food Networks, such as Slow Food’s Terra Madre forum or the Otago Farmers Markets, described by Parkins and Craig in their article[4], illustrate some attempts to deploy the cultural value of land and the existence of a different network where farmers are somehow protected by global market with public incentives and consumers are provided with affordable and short-chain food, in a virtuous circle. Morgan and Sonnino theorized that also Urban Agriculture and the idea of re-localization of the food production might contribute to the affordability and the decrease of the prices of food.[5]

The current neo-liberalist and individualist market trend is affecting also food production/consumption and threatening the way of life of small production farms that made up a large part of the (at least European) productive campaigns, based instead on a strong sense of community and mutual support. To react, it is needed to integrate "community economies" in order to sustain bottom-up changes and recreate what Gibson-Graham calls “ethic of care”[6]. In this direction, other researcher are trying to understand the critical role of social capital for mutual benefit and of networks in the creation and resilience of alternative food systems[7].

Environmental impact. This dimension is one of the most delicate because the current food production system is challenged by the degradation and loss the agricultural land also related to loss in biodiversity,

[1] A resource-efficient Europe – Flagship initiative of the Europe 2020 Strategy, http://ec.europa.eu/. The flagship initiative for a resource-efficient Europe under the Europe 2020 strategy supports the shift towards a resource-efficient, low-carbon economy to achieve sustainable growth.

[2] Food security is a flexible concept as reflected in the many attempts at definition in research and policy usage. Essentially, food security can be described as a phenomenon relating to individuals. It is the nutritional status of the individual household member that is the ultimate focus, and the risk of that adequate status not being achieved or becoming undermined. The latter risk describes the vulnerability of individuals in this context. As the definitions reviewed above imply, vulnerability may occur both as a chronic and transitory phenomenon. Useful working definitions are described below. Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food, which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern. (Fao Corporate Document repository, 2013)

[3] Patel, R., 2013, The long green revolution, Journal of Peasant Studies 40(1): 1–63

[4] Parkins W., Craig G., 2009, Culture and politics of alternative food networks, Food, Culture and Society.

[5] Morgan K.J., Sonnino R.,2010, The urban foodscapes: world cities and the new food equation, Cambridge Journal of Regions, Economy and Society, pp.1-16

[6] Gibson-Graham J.K. 2006, A postcapitalist politics, Minneapolis, MN: University of Minnesota Press

[7] Sonnino, R., Griggs-Trevarthen C., 2013, A resilient social economy? Insights from the community food sector in the UK, Entrepreneurship and Regional Development25(3–4): 272–292.

water scarcity, and resources depletion[1]. Even if the scale of intervention of Urban Food Policies is quite limited, cities can make the difference because they are at the same time producers of a serious urgency and the key actors for developing a response.

Cultural identity. Embedded in the definition of “Food security” there is also the concept of "culturally acceptable", that means that a consumer must have the possibility to access to food that belongs to his traditions and history and satisfies his preferences[2]. Furthermore, cities that are now experimenting the reconnection with the traditional productive vocation of their lands (for example the case of Langhe e Roero recognition as wine producers by UNESCO Heritage) can pass through a process of recasting themselves on the territorial hierarchy, with a new identity[3].

3 METHODOLOGY

Urban Food Policies represent one of the most frequently discussed themes in the context of sustainable development and food security studies, even if currently a small number of cities concretely developed an active UFP.

In this work were analyzed cities that published an official document, objectives and timing of implementation and some of those that are part of the Milan Urban Food Policy Pact (MUFPP), an international protocol, engaging the largest number of world cities for the development of food systems, based on principles of sustainability and social justice[4].

It was necessary to use both the scientific and the gray literature, as much of the news about sustainable food strategies, implemented or part of bottom-up initiatives, derive from informal sources, such as newspaper articles, specialist magazines, networks of professionals and interviews.

During the analysis of the different dimensions that compose the concept of ‘food sustainability’, made through case-studies literature and official documents, it was detected that in many cases the Urban Food strategies start their genesis from a specific need or entry point, such as health or environmental problem, and then have to cope with more different issues, interdependent between them.

For this reason, were identified three main policy approaches that represent the orientation of these urban strategies at their first stage.

4 DIFFERENT POLICIES APPROACHES

Along with the literature review and following three main dimensions, were identified three correspondent policy approaches that start their vision from different entry points and different needs.

FOOD SECURITY AND EQUITY

The first, initially developed in the USA (New York City), Canada (Toronto) and UK (London) faces a context where the food industry impacts upon the economic, social or environmental aspects of the city life. Supplying this huge, demanding and competitive market it provides employment for many tens of thousands of people, who work in settings as diverse as world-scale retailers, niche manufacturers and contract catering companies. Together, these economic opportunities contribute to the success of these cities’ world-class economy.

[1] Sonnino R., Moragues-Faus A., Maggio A., 2014, Sustainable food security: an emerging research and policy agenda, International Jurnal of Soc. of Agr&Food, vol 21, n 1, pp. 173-188

[2] Opitz I., Berges R., Piorr A., Krikser T., Contributing to food security in urban areas: differences between urban agriculture and peri-urban agriculture in the Global North, Journal of the Agriculture, Food, and Human Values Society, 2015.

[3] Sonnino R., 2014, The new geography of food security: exploring the potential of urban food strategies, the geographical Journal.

[4] http://www.milanurbanfoodpolicypact.org/

However, as many are slowly becoming aware, there are problems associated with this abundance; and the City both contributes to, and has responsibility for, some of these problems.

Too many people are suffering from obesity and this generates a health cost problem that, for example in New York City, was tackled with a strong federal intervention.

Here the first studies on public health related to food unsustainability started during the Bloomberg's mandate (2002-2013), when the city of New York received a huge federal grant to be oriented on obesity and chronic diseases researches. These new public concerns were in line with the general trend of Western countries always more interested in food quality, food security and sustainability of production and consumption. Furthermore, the city needed to reduce its public costs and the large spread of junk food related diseases were calling attention on the "American unhealthy way" and filling the hospitals of new cases. Therefore, Bloomberg launched the campaign "New York City Obesity Task Force Plan to Prevent and control Obesity"[1]. Many actors both public and private activated and created connections in order to share knowledge and participate in the construction of scientific grounds on food sustainability and security, until the municipality created a body dedicated to research and development, the Nyc Food Policy Center[2].

Equally, the city of Toronto and London, in their programmatic documents, state as first objective the construction of a health-focused food system.

Connected to this first policy approach focuses on the social problem of equal access to food and on the economic one of a fair market for small holders/producers and consumers. Even this approach in clearly observed in the US and Canadian cities, such as New York and Toronto where were set different initiatives in order to facilitate people that are not able to exercise the choices enjoyed by the majority to be part of a just food system[3].

FOOD ENVIRONMENTAL IMPACT

This approach, widespread in other cities of Northern Europe and Canada, focuses on the environmental impact of food on the supply of organic and regional food in the public procurement and on a sustainable food transport and logistics system.

Basically, these cities are working on the re-appropriation of the land and on agro-food re-localization initiatives, based on the idea of fulfilling cities' demand with local and environmentally sustainable products[4].

The aim of developing a sustainable peri-urban agriculture, in this specific geographical area, implies an evaluation of the production capabilities of the lands and of the weather conditions and risks to employ many resources.

FOOD CULTURAL IDENTITY

The third food policy approach is moving its first steps in a context characterized by a deep cultural awareness of the importance of food history and tradition, such as the Mediterranean basin.

[1] http://www.nyc.gov/html/om/pdf/2012/otf_report.pdf
http://www.nytimes.com/2013/03/13/opinion/mayor-bloombergs-anti-obesity-campaign.html
[2] http://www.nycfoodpolicy.org/
[3] http://tfpc.to/http://www.nycfoodpolicy.org/
http://www1.nyc.gov/site/foodpolicy/index.page
http://tfpc.to/
[4] Deverre C., Lamine C., 2009, Les systèmes agroalimentaires alternatifs. Une revue des travaux anglophones en sciences sociales, Economie rurale. people eat are homogeneous and standardized products, which come from a globalized non-place-based value chain.

In this region, the idea of concretizing a healthy and traditional food habit in a regulatory framework is relatively new and, for the moment, there are few examples of rising Urban Food Policy in France, Spain and Italy.

The main objective for all is to sustain the traditional agriculture and to rediscover the regional traditional recipes and products, reinforcing the re-connection between the food and the land of provenience. We can call this approach identity-based, because it aims to strengthen the regional food culture of the cities interested and recasting them on the territorial hierarchy, with a new identity based on a representative product.

This last group of policies tries to avoid what Ilbery and Kneafsey call "placeless foodscapes"[1], where the relationships between the food and the place where it is produced are broken and what most of

In all the approaches, the network is moving with a declared participatory approach and almost every month citizenship, non-governmental associations, researchers are invited to take part in public councils and to express their opinions in the field of food security and equal access.

One of the most active actor on the international panorama now is the city of Milano, that, starting from the signature of the Milan Urban Food Policy Pact (MUFPP)[2], is advocating an international protocol, engaging the largest number of world cities for the development of food systems, based on principles of sustainability and social justice.

This overview of examples of UFPs is aimed at capturing the most important contents and structures of the policies, the governance models and the most important imagined results and effects of the policies themselves.

5 FROM POLICIES TO PRACTICES. WITNESSES FROM THE CITIES

The three main policy approaches, briefly introduced before, result in many practices and initiatives, implemented in order to achieve the declared objectives.

Within the policies of the first approach, New York City food Policy strongly represents the relevance of food security and access for low-income families. The first lines of the Food Metrics Report of 2016 say:

"Food insecurity is the lack of access, at times, to enough nutritionally adequate food for an active, healthy life for all members of a household. Food insecure families may worry that food will run out before they have enough money to buy more, eat less than they should, or be unable to afford to eat balanced meals. New York City is committed to working towards a city where everyone has enough nutritious food to eat, through a range of initiatives in partnership with community-based and nonprofit organizations."[3]

To put in practice this aim, the city is running a program called Health Bucks that is a pioneering farmers' market incentive program that intended to reduce food insecurity among NYC residents by increasing access to and affordability of fresh fruits and vegetables through farmers' markets in low-income neighborhoods. Health Bucks was started in 2005 by the NYC Department of Health and Mental Hygiene (DOHMH). In partnership with local community groups, DOHMH District Public Health Offices (DPHOs) distribute $2 coupons — or "Health Bucks" — redeemable for the purchase of locally grown fresh fruits and vegetables at farmers' markets in the South Bronx, North and Central Brooklyn, and East and Central Harlem (DPHO areas). At farmers' markets accepting SNAP benefits via the EBT system, consumers have an added incentive. For every $5 in EBT purchases, an additional $2 Health Bucks coupon is provided, to be spent then or at a later time. Local community-based organizations (CBOs) in DPHO areas also distribute coupons directly.

[1] Ilbery, B. and Kneafsey, M., Producer Constructions of Quality in Regional Speciality Food Production: a Case Study from South West England , 2000, Journal of Rural Studies
[2] http://www.foodpolicymilano.org/en/urban-food-policy-pact-2/
[3] Food metrics report 2016

Data from the Food Metrics Report state that in some neighborhoods the redemption rate of these coupons was quite high and the city is working on collecting more specific data from the community-based organizations (CBOs) that are concretely distributing the Health Bucks coupons.

Another interesting example of the Security and Health-based policy approach is the Bristol Food Policy. In this case, the body deputed to the implementation and advocacy of the policy (The Food Policy Council[1]) published a specific and coherent aim:

"The aim of the Bristol Food Policy Council is to ensure that Bristol residents and visitors have access to Good Food. The Food Policy Council defines Good food as being: vital to the quality of people's lives in Bristol. As well as being tasty, healthy and affordable the food we eat should be good for nature, good for workers, good for local businesses and good for animal welfare.

To underpin this aim the FPC have agreed 3 principles:

Good for people – everyone should have access to information, training and resources that enable them to grow, buy, cook, and enjoy good food.

Good for places – the public and policy-makers should support and value food enterprises who promote local jobs, prosperity and diversity, and treat workers well.

Good for the planet – food should be produced, processed, distributed and disposed of in ways that benefit nature.These elements to underpin all food related work in the city Green Capital 2015[2] food priorities Building on the Bristol Good Food Plan the Green Capital 2015 food priorities are:

- Promoting healthy, affordable & sustainable food to the public
- Increasing access to affordable good food
- Making food growing/production visible across the city
- Scaling-up urban agriculture
- Encouraging healthy eating in schools
- Reducing wasted food
- Transforming catering & procurement"[3]

Even if it is relevant the mention of the city as Green Capital 2015, it is still guiding the principle of healthy food in the food policy. In this direction, the city implemented a pilot to offer Bristol inhabitants that are patients with long-term health conditions, access to community kitchens and nutritional advice – for example a ten-week course designed for people diagnosed with heart disease or diabetes.

Furthermore, the municipality directly funded Buzz Lockleaze, a community shop selling affordable fresh produce to the local community and encouraging healthy eating through training, workshops and volunteering.

Both in the NYC and the Bristol case, the focus on healthy food comes for a more general and historical problem of the city with the public health costs and with the spread obesity of their populations

In the environmental issues approach, addressed to reduce the food miles of the urban food system, many cities are implementing the promotion of peri-urban agriculture and of the growth of green belts, like for example Amsterdam food strategy that developed the Green Metropolis Plan[4] to preserve and develop the green areas in and around Amsterdam and is implementing many programs in the public canteens to improve the consumption of food produced locally and less invasive for the natural environment.

[1] The rationale for establishing a Food Policy Council is to create a high-level strategic grouping combining the different elements of the food system (including production, processing, distribution, retail, catering, consumption and waste disposal) with the common objective of achieving a healthier, more sustainable and resilient food system.
[2] The Bristol method, How to become a more sustainable food city. Bristol 2015 European Green Capital. https://www.bristol2015.co.uk/method/
[3] http://bristolfoodpolicycouncil.org/
[4] www.ccre.org/docs/amsterdam_food_strategy_vermeulen.ppt

Canada too, and, in particular, the city of Vancouver is demonstrating a strong interest in the "food print", the ecological footprint of food[1], that is the impact on the environment of the steps that constitute the food chain, from the production to the final consumption and include the depletion of different natural resources.

The first objective of the food plan is to increase the consumption of "local" food and its definition of "sustainable food system" is oriented on the preservation of the environmental well-being.

"According to our City of Vancouver mandate, The Vancouver Food Policy Council works to help improve food sustainability in Vancouver, where food is local

Why local and sustainable food? Seeking to increase local and sustainably produced food means:

- reducing or eliminating pesticides, fertilizers and hormones
- ensuring safe and fair working conditions for farm workers
- providing humane conditions for animals
- protecting and enhancing habitat and biodiversity
- and reducing energy consumption and polluting emissions in food production, processing, distribution and waste management.

Just and sustainable food system The City of Vancouver defines a just and sustainable food system as one in which food production, processing, distribution, consumption and waste management are integrated to enhance the environmental, economic, social and nutritional well-being of our city and its residents"[2]

Therefore, in 2009, on the eve of hosting the 2010 Winter Olympics, Mayor Gregor Robertson declared Vancouver's goal to be the Greenest City in the World by 2020. Building on a comprehensive city sustainability plan that includes targets for zero carbon, zero waste, and healthy ecosystems, urban agriculture and sustainable food systems emerged as a foundational plank in the city's greening strategy. Local food is one of 10 key action areas identified in Vancouver's Greenest City 2020 Action Plan, with a goal to increase city-wide neighborhood food assets by a minimum of 50% over 2010 levels (City of Vancouver 2010). In the 2013 Vancouver Food Strategy, the City of Vancouver made advancing urban agriculture (including community gardens and urban farming) one of its top five priority action items for advancing a just and sustainable food system in the city (City of Vancouver 2013). From the City's point of view, urban agriculture can contribute to the availability of local food through farmers markets, Community Supported Agriculture programs, community gardens, school cafeterias, and community centers. Urban agriculture initiatives may also contribute to the green economy and the advancement of public education and food literacy related to food production, processing and consumption in Vancouver[3].

The identity-based approach promotes and sustains the "traditional production" or a production that preserve the old traditions related to food. Many initiatives can better explain this trend, like Slow Food organization (SF) an international movement founded in Italy and operating in many countries, on all continents. It started in 1989 by launching a campaign that focuses on "Good, Clean, and Fair" food28. One of SF's operative tools is the Slow Food Foundation for biodiversity whose primary goal is the preservation of old traditions linked to food, with the specific aim of preserving the diversity of locally grown crops and traditional crop management systems. Over the years, the foundation has developed several projects; one of these is the Slow Food Presidia project, which started in 1998. The holistic vision that characterizes the SF approach is not limited to the environmental, social, and economic aspects of sustainable development;rather, while taking them into account, it tries to define a more complex pathway to preserve the existing breadth of knowledge for future generations.

There are not many examples of food policies that have a high level of approximation to this dimension, but it is possible to say that the tendency of the food plans based in the Mediterranean basin and, in particular in Italy, are strongly promoting a sort of "geographical belonging of food" and giving attention to cities and regions as cultural cradles of specific foods.

[1] http://wwf.panda.org/about_our_earth/teacher_resources/webfieldtrips/ecological_balance/eco_footprint/
[2] http://vancouver.ca/people-programs/vancouvers-food-strategy.aspx
[3] http://vancouver.ca/green-vancouver/greenest-city-action-plan.aspx 28 PETRINI C., FURLAN C., HUNT J., SLOW FOOD NATION: WHY OUR FOOD SHOULD BE GOOD, CLEAN, AND FAIR, 2005, RIZZOLI.

Such as the territorial food plan of Pisa, that made the food, its symbolic capital, its cultural and economic implications, a development lever for rural areas and characterization for the regional food system[1].

This is probably explicable with general social and cultural factors of these areas, where the different populations are deeply anchored in the food culture.

6 CONCLUSIONS

Cities all over the world are facing many familiar challenges, the unsustainability of the current food systems that are supplying our tables are a common obstacle. Most of the Urban Food Policy or, more in general, Food Strategies are focusing their efforts on the dimensions of food security and accessibility, environmental sustainability and cultural identity of the food. But the specific accent that every plan is putting on one of these issues, as more relevant than the others, is oriented and mediated by their local context. Urban food systems and politics inevitably depend on the features and circumstances of a city, including: historical and cultural factors, strength and basis of the local economy, geographical setting and natural resources, infrastructure, and societal and political factors, such as governance structures and the strength of the state and of civil society. Consequently, UFPs take different forms around the globe. Each one is dependent on its local context, which determines the aims, objectives and actions that are appropriate and achievable.

Finally, there is not a common model of “sustainable food system” nor a common set of tools or planning disposals that a city can implement to achieve this goal, but many different examples of good practices and wise public bodies that are trying to accommodate the new trend, considering the social, historical and geographical context and the local need of their regions.

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ID 1677 | WORLD EXHIBITION AS A TOOL FOR THE PROMOTION OF HEALTHY AND LIVEABLE CITIES: CASE STUDY MILAN, ITALY

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1 INTRODUCTION

Mega-events, such as world and international exhibitions, the Olympic Games, other sports and cultural events, are intrinsically complex processes. Their planning, organisation and realisation require the engagement of a large number of people and financial resources for the successful realisation of the event. In addition, the success of the event depends on numerous social, economic, political, spatial and other factors that are often unpredictable and can significantly increase effects of the event that can be recognised in long-term on the local, regional and national level.

While hosting mega-events, the attention of a large number of people from all over the world is focused on this specific event that has its own specific roles in the realisation of that event. According to Maurice Roch (2000) mega events involve combinations of political and economic elites, together with cultural elites and professionals that are operating within and between urban, national and international levels, and working together to produce the event and to manage their effects. They can be conceived as temporary “cultural and physical bridges” between elites and the people. In mega-events people are active members of international cultural movement and they are involved in international communication that is taking place.

Compared with other mega-events, world and international exhibitions last the longest and attract the greatest number of visitors. For the purpose of the exhibition, the most suitable site to meet all set-up parameters and for which it is desirable to conceive the long-term use is chosen. For every exhibition, the specific topic is set to which all participants correspond with the conception of their pavilion and presentation.

The exhibition topic is always in line with global trends and promotes the technology, science and progress towards the concepts of sustainable development.

In addition to the main event, during the exhibition in the city and region a number of accompanying cultural, scientific, professional, sport events are organised to promote the exhibition theme and can contribute to comprehensive positive effects. For this reason, world and international exhibitions can be considered as platforms for education and promotion of innovation and for a comprehensive awareness of the importance of the sustainability aspects and sustainable development for humanity in the 21st century.

Organisation of the exhibition can significantly contribute to the development of the host city and the region through numerous interventions in infrastructure, suprastructure and ecostructure, that are directly or indirectly related to the event, and remain as the exhibition heritage improving the overall quality of life of their inhabitants. (Petrović, 2009)

The aim of this paper is to show how world exhibitions contribute to the promotion of the health and liveable cities, putting emphasis on the world exhibition EXPO 2015 which was held in Milan, Italy.

2 WORLD EXHIBITION AND BUREAU INTERNATIONAL DES EXPOSITIONS

Although the roots of world exhibitions date back to the time of Mesopotamia and Ancient Egypt, the first modern world exhibition was held in London in 1851 under the name Great Exhibition of the Works of Industry of All Nations. In the period from 1st May to 11th October 1851, Great Britain with colonies and 25 countries from all over the world presented their achievements in industry, art and craft in Cristal Palace in Hyde Park that was visited by 6,039,195 visitors (Burau International des Expositions).

Great success of the first World Exhibition held in London led to the increase in frequency of the organisation of exhibitions. Exceeding frequency of 19th century exhibitions and disregarding established rules of the organisers in the early 20th century led to the need for institutionalisation and the establishment of legal frameworks for organising the world and international exhibitions. For this purposes and based on the Paris Convention of 1928 an intergovernmental organization Bureau International des Expositions (BIE) with headquarters in Paris, France was established with the aim to control the frequency, candidacy, selection and process of organising world and international exhibitions.

According to the BIE the main objectives of the exhibitions are: reinforcing the international relations, promotion of culture and education, encouragement of development of the city and region, careful actions in the environment from the aspect of sustainable development and urban renewal and experimentation with technical and scientific innovations of future development.

3 EXPO 2015 MILANO

The celebration of the centenary of the 1906 World Exhibition (held with the theme of transport on the occasion of the opening of Passo Sempione) prompted reflection on the reorganisation of such an event in Milan. In October 2006, the Prime Minister sent a letter of intention to the BIE, and the candidacy was confirmed in 2008. In the meantime, two thematic forums were held in Milan and Rome with the aim of discussing themes among international experts.

The company Expo 2015 SpA was founded for the organisation, realisation and management of EXPO 2015 Milano including the construction of infrastructure directly related to the exhibition site. In 2011, the company Arexpo SpA was founded in order to conduct the process of transformation of the exhibition area into post-exhibition period.

At the world exhibition Expo 2015 Milano there were 145 participants in the period from 1st May to 31st October 2015. In that period, the Expo site was visited by 21,500,000 visitors (Bureau International des Expositions).

A new vision of Expo's role was conceived. The intention was to interpret the event and its legacy in a new way including also thematic culture. Expo 2015 Milano strived to define a new thematic type of architecture and to focus on the relationship between human beings and nature. The pervading theme, engagement with visitors, involvement of counties in thematic clusters and contribution of enterprises and civil society were innovative aspects included in the concept of exhibition.

Expo 2015 SpA paid close attention to the sustainability of the event, which resulted in various programmes and projects through all stages of preparation and implementation of events based on the social, economic and environmental aspects of sustainability. Priority was on environmental sustainability and the use of advanced methods and technologies in construction Expo site and in organizing the event.

Expo Milano 2015 was the first exhibition that used tools to manage environmental, social and economic impact. The Event Sustainability Management System enabled the increase in overall level of sustainability. The planning phase, the preparation of site and implementation and management phase obtained the UNI ISO 20121:2013 certification. There were two special guidelines set in order to prevent, reduce and manage environmental impact related to the presence of participants on the site. Sustainable solutions were applied in planning, construction, dismantling and reuse of the pavilions and the implementation of green procurement criteria for the procedures in purchasing goods and services.

3.1 THEME FEEDING THE PLANET, ENERGY FOR LIFE

Nowadays food production and consumption have grown exponentially. Improper food production and environmental pollution have led to the need of thinking about how to feed nature, achieve balance between growing food requirements and methods of boosting production. Reflections should be directed on feeding the environment in which we live and from which we draw sustenance.

Therefore, issue which interweaves the environment and food, theme Feeding the Planet, Energy for Life was chosen for Expo 2015 Milano. The world exhibition is an ideal place for exchange of views through talks on food and sustainable use of resources, on the right to healthy, safe and sufficient food for the whole planet, sharing of production and consumption models that are respectful to the environment and social equality. It is also an opportunity to remind people of ancient techniques of food production and preservation of ancient knowledge and make researches for new technological applications.

The intention was that organizer and participants cooperate in order to present excellence in the methods, techniques and rules of food production, strategies to combine production with energy sources and the safeguarding of natural resources. (Expo 2015 Milano)

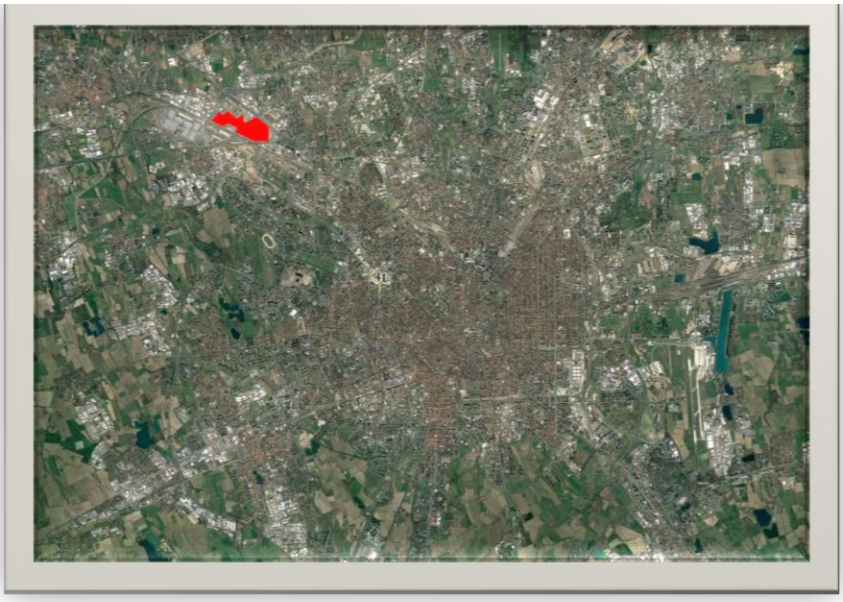

Figure 1 - Location of the Expo 2015 Site in relation to the City of Milan and its metropolitain region

3.2 EXPO SITE

For the purpose of the event, a location in the north-western part of Milan was selected, which was mostly unbuilt area and partly agricultural area. The selected area of 110 ha forms a part of the greenbelt of Milan (Parco Agricolo Sud and Parco delle Groane) and represents a significant link between rural and urban space. The area is easily accessible via the railway infrastructure (underground, regional and high-speed

rail lines) and the road infrastructure (A4 and A8 highways and bypass) and is located near the Rho-Pero trade fair complex. (Figure 1)

In 2009 group of five architect (Stefano Boeri, Ricky Burdett, Joan Busquets, Jacques Herzog and William McDonough) made a conceptual Masterplan for Expo 2015 site (Herzog & de Meuron, 2016). In the preparation of Masterplan, the great attention was paid to the following topics: actual theme of urbanisation, regarding limitation of the consumption of land, ensuring the permeability of the largest possible surface area, intelligent use of resources, possibility of reutilization of structures and materials in post-exhibition phase, encouraging of use of public transport, production of energy from renewable resources, sustainable waste management and internal water processing.

The exhibition site represented the Expo theme in its physical form. It was conceived as a single landscape, an island surrounded by a canal. Water, as a key element constituted an integral part of the site through a system of canals that were conceived on the model of network of rivers and waterways characterized for the Milan and Lombardy.

Figure 2 – Layout of Expo 2015 Site Milan, Italy

There were two main axes, Decumanus running east-west and Cardo running north-south. Pavilions of participant countries were placed along Decumanus (35m x 1500m) and the sites for Italy and its regions, provinces and cities were conceived along Cardo (350 m). Main iconic elements of the exhibition hosting the major events were places on the four cardinal points: the Mediterranean Hill, the Open Air Theatre, the Lake Arena and the Expo Centre. In total, there were 70 independent pavilions built, 9 clusters (Coffee, Rice, Cocoa, Spices, Fruit and Legumes, Cereals and Tuvers, Agriculture and Nutrition in Arid Zones, Islands, Sea and Food and Bio-Mediterranean), the Cascina Triulza pre-existing structure, 4 thematic areas (Pavilion Zero, Biodiversity Park & Slow Food, Children's Park and Future Food District) and one in the Milan Triennial complex and 5 structures for events (the Lake Arena, The Open Air Theatre, The Open Plaza, Auditorium and Conference Centre). Symbol of Italy's participation was the Tree of Life, a tower sculpture of steel and wood that produces sound and light shows with spectacular fountain displays. (Grimaldi, 2015)

Participants were given greatest freedom in design of pavilions, although their obligation was to offer interpretation to the exhibition theme (processes of agricultural production, technologies, research in food sector). In the pavilions, there were spaces for sampling and selling characteristic products.

Figure 3 – (1) The Mediterranean Hill, (2) The Lake Arena and Italian Pavilion, (3) The Tree of Life

The Cascina Triulza was the only pre-existing structure located within the Expo Site. It was a traditional farmhouse from the late 1800s (a total surface area of 7,900 m2, which was reconstructed for the purpose of Expo using sustainability criteria in compliance with the LEED NC standard (GOLD level certification). During the event, the structure hosted civil society with debates and exchanges of ideas and experience with the question of food, that is managed by the Triulza Foundation, a network of various national and international third-sector organizations.

Around 20% of the area was covered with vegetation. The buffer zone toward nearby motorways and railway lines was created by planting trees on the perimeter using planting techniques requiring limited maintenance. Great attention was paid to the landscape arrangement. There were 8 gardens, 3 major piazzas, 25 minor piazzas, The Mediterranean Hill, tree-lined rows of bushes arranged on the Expo site. (Grimaldi, 2015)

From the very beginning the idea was to reuse structures and equipment used for exhibition (interior furniture, outdoor and street furniture, bins for waste collection, plants, office furniture and equipment, expo village furniture). The green works and structures (seats, pergolas, paving) were planned for dismantling for reuse after the event. (Grimaldi, 2015)

The company Arexpo SpA with the majority of public capital has been conducting the process of developing and implementing the transformation of the area in the post-exhibition period. It was necessary to elaborate a Master plan for urban transformation of the whole area and to conceive a Business development plan. In 2016 guidelines of the strategic development plan and its evaluation were developed. It was conceived that in the area where the exhibition took place, the scientific technological park of international significance will be arranged. A science technology park (STP) should be dedicated to the research of the most advanced technologies in the fields of health, nutrition and sustainability, called project “Italia 2040 (Monaci, 2015). The Park is designed to facilitate knowledge transfer between universities, companies and research centres around the world.

The area, well-equipped with infrastructure and easily accessible has a high development potential and is appealing to both public and private Italian and international companies. The area is designed to live 24/7 thanks to mixed functions - culture, sports and entertainment, housing, the tertiary sector, shopping areas etc. (Arexpo)

3.3 PROJECTS AND PROGRAMS

Programme “Towards a sustainable Expo” aiming to stimulate and encourage greater attention to sustainability, was created by Ministry of the Environment and Protection of Land and Sea and Expo 2015 SpA. The intention was to limit the environmental impact, highlighting the most relevant solutions and disseminating them as a legacy of Expo. There were 4 categories: Sustainable architecture with references to the project for the Pavilions and Exhibition areas, Sustainability of food offered by refreshment of catering services, Application of green procurement criteria for furniture, packaging and merchanting.

Because the urbanization of Expo site caused the loss of 160 equivalent hectares in term of ecological value, there was a special ecological reconstruction programme conceived in order to balance the loss.

The area covered by the programme surrounds the exhibition site in the North West Milan. Expo 2015 SpA together with Regional Body for Services to Agriculture and Forests will carry out planned compensation interventions.

For the purpose of monitoring actions in all exhibition phases Expo 2015 SpA presented the Environmental Monitoring Programme – EMP (noise, vibrations, atmosphere, underground water, surface water, drinking water, waste water soil, eco-system, fauna and vegetation). Monitoring of same sensitive elements was made according to the further assessment method “Delta VIP”.

Expo 2015 SpA developed an Inventory to calculate greenhouse gas emissions produced by the organisation of the Expo (UNI ENISO 14064:2006 standard). If inventory estimation will be confirmed, the implemented initiatives would allow offsetting 100% of the emissions under the responsibility of the event through specified interventions (energy requalification projects for public buildings in Milan, Rho and Arese, purchase on the voluntary market of credits).

Smart city project Smartainability (“Smartness” and “Sustainability”) was conceived in Ricerca Sistema Energetico of the GSE Group in cooperation with Expo Milano 2015 and technical partners. The intention was to measure quantitatively and qualitatively how a city can result sustainable by using a “smart” technology.

Some specific actions were made during the event in order to ensure food safety (document inspections, sampling and analyses of food, equipment, environments and personnel) as well as to prevent food waste (collection of perishable products organized). Separate Waste collection was organised at the exhibition site that enabled the recycling and the production of various re-products.

During the Expo, there were numerous additional events under the name Expo in the City (exhibitions, talks, events of fashion and design, activities for families, sports and special concerts, recreational and cultural programme) held in the exhibition Site, in the city of Milan and its metropolitan region. (Figure 4) There were also international events organized related to sports (canoe, kayak and water-skiing world championship, amateur races) and recreation (a series of itineraries for walkers and cyclists to discover green and agricultural areas organized by the FAI).

Figure 4 – Accompanying events - Fashion week activities in Piazza Gae Aulenti

Thanks to the virtual environment, people interested in the theme of the event that were not able to visit Expo 2015 Milano, had an opportunity to make online visits that offered 3D exploration of the Site. The project allowed the greatest possible number of people access to the exhibition spaces increasing awareness of the importance of Expo Milano 2015 theme.

Spreading the events content was also taught through the implementation of school project. Teachers and students were invited to study Expo theme in classrooms and on the exhibition site. There were more than 170 Italian universities that joined the project “La Università in Expo”.

Programme Feeding knowledge, as a strategic initiative, aimed to develop and share knowledge as a main tool of finding concrete solutions for fighting food insecurity. The programme was the backbone for the setting up of a Euro-Mediterranean Centre of Knowledge for Food Security.

WE-Women for Expo programme placed female culture at the centre of Expo. Women participated in expressing themselves on nourishment for body and nourishment for freedom and intelligence and the alliance between food and culture.

Thanks to the project “Expo is Now” more than 500 meetings were organised between companies. There was a support to organize Business Forums on National Days.

The Milan Charter is a joint document that calls upon all citizens, associations, firms and institutions to unite their responsibilities to ensure future generations the right to food. Italian and international expert have worked to identify the primary issues regarding sustainable use of the world’s resources. It addresses 4 major theme within the right to food: the economic and productive models capable of ensuring sustainable development in economic and social spheres; the existing types of agriculture capable of producing a sufficient amount of healthy food without damaging water resources and biodiversity; the best practice and technologies to reduce inequality in the cities, where most of human population is being concentrated; and recognition of food not only as a source of nutrition but also as a key element of social and cultural identity. The intention was to adopt rules and policies at the national and global level capable of ensuring a fairer and more sustainable future for the planet. (Expo 2015 Milano; Expo 2015 SpA, 2015)

3.4 INTERVENTIONS IN THE CITY INFRASTRUCTURE, SUPRASTRUCTURE AND ECOSTRUCTURE

The exhibition was the occasion to revitalize the historic place and symbol of Milan Darsena - city dock. In the preparatory period of the exhibition, according to the project of architects Edoardo Guazzoni, Paolo Zizzatto and Sandro Rossi with Studio Bodin & Associés, the project of reshaping the ancient dock and adjacent spaces (investments of 19 million Euros) were realised to remain in the legacy of Milan and the Lombardy region. The project covered the renovation of the promenade, the rearranging of Piazza XXIV Maggio as a green area and almost completely pedestrian area, planting the garden and arranging the garden at the site of the former Bobino restaurant. Preservation of important artefacts like 15th century bridge, the remains of the Viarenna dock and the foundations of the 16th century city wall were enabled. New footbridge for pedestrians and cyclist connecting two river banks were conceived. The replacement of the old municipal market with a new structure along Viale D’Annunzio, a stretch of the Ticinello canal is reopened and redeveloped. (Grimaldi, 2015)

In the centre of Milan there was the Expo Gate built according to the design of Alessandro Scandurra. It was located between the Sforza Castle which was the epicentre of the world exhibition in 1906, and Via Dante as the strategic transportation axis. The Expo Gate was conceived as a first meeting place to present the Expo theme to the public. It was composed of two identical pavilions hosting different functions (ticket office and information desk, along with a small conference space and a shop a multipurpose space hosting a program of inter-cultural events and workshops) inspired by the criteria of sustainability, constructive economy and intelligence. The buildings look light-weight and airy during the day, while at night they become translucent, self-illuminated objects. An open-air public plaza is located between the pavilions, visually aligned with the Sforza Castle beyond. (Expo Gate / Scandurrastudio Architettura, 2015)

Figure 5 – Expo Gate as a part of a project Expo in the City (Expo in Città)

In 2008, an urban-architectural competition for the transformation of Cascina Merlata (50 hectares), located west of Cimitero Maggiore and south of the Torino-Milano highway, was carried out. The authors of the three-award-winning works (Paolo Caputo Partnerships, Antonio Citterio and Partners and Mario Cucinella Architects) were invited to jointly develop a new Masterplan (90 ha). The Masterplan (Caputo Partnership groups, Citterio-Viel & Partners, Antonio Citterio, Patricia Viel) was adopted in 2011 and included an area for the construction of the Expo Village (8 hectares). (Ordine e fondazione degli architetti, pianificatori, paesaggisti e conservatori della provinca di Milano, 2017)

The housing development Cascina Merlata, apart from housing, includes the accompanying public and social facilities (kindergarten, schools), the renovated Cascina Merlana with public facilities, commercial centre and urban park of 20 ha. The Urban Park forms a part of a system of “green strips” of Milan through which bicycle trails are passing all the way to the city centre. (Cascina Merlata)

In the first phase, the complex of 3 residential buildings (investor EuroMilano S.p.A.) located in the northern part of Cascina Merlata served as accommodation of the exhibition staff, and after the completion of the event was converted into subsidized housing. The heart of the whole project is the largest settlement of Social Housing in Italy consisting of 11 tower buildings, developed by different design studios (Cino Zucchi Architetti, Cappai and Segantini Associati, Mario Cucinella, Pura, B22, Teknoarch) that are developed according to the most advanced principles of sustainability for a district in class A and with zero emission.

Figure 6 – Expo village located within Cascina Merlata

The architectural concept was based on the premise that quality living is strongly influenced by the quality of public and/or private space in the surroundings. The buildings were organized around a central space, and organized as a configuration of three towers. A solar power analysis was conducted, evaluating the number of hours of direct sunlight per day on each surface: based on these variables, attention was paid to the orientation and size of transparent facade surfaces to optimize daylighting in each interior space. In the ground floors, there were communal spaces that accommodated green areas and spaces for collective use. Despite the limited budget for the project, the buildings achieved Class A classification. In fact, the inclusion of high efficiency systems (solar panels, district heating, radiant floor heating, air handling units) combined with highly insulated envelope (facade coating, low emissivity double glazing) enabled the reduction of annual consumption for winter heating. (Expo village, 2015)

In the preparatory period of the events, there were other interventions realised that were indirectly related to the event. The interventions were related to the restructuring of public facilities (schools) and infrastructures (roads), the Rho-Expo station was renewed, new lines of public transport were introduced etc.

4 CONCLUSION

The research shows that the organisation of world exhibition contributes to the promotion of the health and liveable cities on several levels.

By choosing a suitable event theme which is related to current problems in space, the reflection on the subject matter is stimulated, and the whole world responds to the set theme by building their pavilions and/or conceiving their presentation at the mega-event. The world exhibition in Milan strived to contribute to the current theme of food and sustainability in order to raise the overall awareness of their significance on the local, regional and global level.

Conceiving the event, construction of the site, conceiving and realising the subsequent use of the exhibition area are comprehensive processes involving a large number of experts from different fields. The sustainability concept that has been incorporated in all phases has encouraged all involved professionals to contribute to the sustainability of the overall project and to the sustainable development of the city of Milan and its metropolitan region. Liveability of the site in post-exhibition period depends on the adequate usage scenarios and facilities implemented in the area. According to Arexpo SpA plans, the former Expo 2015 site will live 24 hours a day thanks to a variety of facilities. The goals of subjects that are planned to be located in the Milan science and technology park serve the promotion of healthy and liveable city.

Interventions in infrastructure, suprastructure and ecostructure that are realised in the pre-exhibition period, directly or indirectly related to the event, contribute to the promotion of a healthy and liveable environment and improvement of the overall quality of life.

Social events organised during the exhibition are carriers of attention and audience not only from the host city and the region, but also the entire world. The exhibition period is characterized by organisation of numerous events that give the host city special liveliness and recognisability.

Along with this, carefully thought-out programs and projects in the function of the event have important roles, but also have their deeper significance for humanity (The Milan Charter) and remain as a lasting exhibition legacy.

It can be concluded that organisation of world exhibition Expo 2015 Milano can be considered as a tool for the promotion of healthy and liveable city not only on local level but also globally.

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ID 1678 | AN EVALUATION OF THE ACCESS TO NEIGHBOURHOOD PARKS BASED ON THE "NEED-BASED EQUITY": A CASE STUDY IN IZMIR (TURKEY)

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ABSTRACT: This study aims at contributing to the studies about how spatial distribution of neighbourhood parks in existing cities shape the opportunities for equitable access to "healthy environments" of the "need-groups"—here, low income groups, women, children, and elderly. Based on the "need-based equity," it evaluates such need-groups' "access" to neighbourhood parks in the central districts of Izmir, the third biggest metropolitan city in Turkey. It deploys "equity mapping" with the help of geographic information system to analyse and interrelate the basic data about the characteristics of neighbourhood parks and the population that is available in Turkey's context but relatively limited compared to European context. It comparatively identifies and evaluates the objective characteristics of the built and social environment at the city scale and relates the findings to the discussions of the relations between built environment, health and urban justice.

1 INTRODUCTION

Neighbourhood parks are ideally green open spaces in residential areas that can provide various opportunities to its users for socializing, improving physical and mental health and expressing own identities. Getting access to such opportunities is especially important for those whose life conditions may lead them to live close to their home and neighbourhood space—such as low income people, women with children, children and elderly. This study calls these significant and potential users of parks as "need-groups." Yet in reality, these need-groups do and may not have "perfect" access to neighbourhood parks, due to characteristics of the built environment that can be shaped by urban planning decisions or/ and social characteristics of these groups that can be easily ignored again by planning decisions.

This study argues that we need to examine the existing cities to analyse whether green public spaces (such as neighbourhood parks) are within walking distance especially to and in those neighbourhoods with high percentages of low income groups, women with children, children and elderly, which has been an ideal in urban planning and design traditions. Relying on an understanding of "need-based equity," we underline that examining the allocation of neighbourhood parks through the existing cities in relation to the questions of who gets what and why is necessary both to improve the purposes for healthy environments and also our ethical standing as urban planners (Talen 2010). Also, such analysis can improve our decisions about re-allocation of public resources through cities and about "efficient" urban planning and design of open and green public space (Boone et al., 2009).

Briefly, the idea of "need-based equity" suggests that in the redistribution of public resources, the groups that are traditionally disadvantaged due to their class, gender, race/ethnicity, age and so on should have the priority (Lucy, 1981). These are the need-groups for these public services, such as open and green public spaces. Based on this idea, we deploy "equity mapping" (Talen 2010) with the help of geographic information system to analyse and interrelate the basic data about the characteristics of neighbourhood parks and of population. We evaluate such need-groups' "access" to neighbourhood parks in the central districts of Izmir, the third biggest metropolitan city in Turkey. We use basic data that is available in Turkey's context but relatively limited compared to those in European context. It comparatively identifies and evaluates the objective characteristics of the built and social environment at the city scale and relates the findings to the discussions of the relations between built environment, health and urban justice.

2 LITERATURE REVIEW

This study considers neighbourhood parks as important for two major reasons. They are public open spaces and public service areas. Related to that, access to neighbourhood parks is necessary especially for those whose daily lives are bounded to neighbourhood and home space, such as housewives, children, seniors, and low income people. At its discussion about the importance of neighbourhood parks, this paper relates to both the researches examining social groups' access to public service areas as an issue of urban and environmental and also those investigating built environment's impact on individuals' physical and mental health (for a review, see Kent & Thompson 2014).

When interrelating these researches, this study situates the issues of built environment and health at the centre of the debates about urban justice, similar to an argument in urban geography, urban planning and politics (e.g., Boone et al. 2009; Byrne & Wolch 2009; Heynen et al. 2006; Pulido 2000). At this argument, urban parks appear as part of "environmental amenities" due to their characteristics providing various benefits and opportunities for improving health, environment, economy, and public life (Boone et al., 2009; Sister et al., 2011). Similar to a distant proximity to environmental disamenities, closeness or a short proximity to environmental amenities (such as public parks) is necessary to improve individuals' and communities' health and quality of daily life. Moreover, created by using public resources, the allocation of public service areas (such as parks) in the city must be taken as the spatial distribution of public resources. So individuals' access to these parks affect their and also public welfarei (Byrne & Wolch, 2009; Talen & Anselin, 2001; Talen, 2001; Wolch et al., 2005).

Yet in reality, the opportunities of benefiting from such amenities and public service areas are not equitable distributed among each urban area, community and dweller. This body of work overall criticizes that the existing conditions for people's access to public services, healthy living conditions, local democratic representation and similar public resources are unjust and getting worse especially for disadvantaged groups, such as the poor and low income population, elderly and children. Moreover, it argues for the necessity of an "equitable" spatial distribution (e.g., Harvey, 1973; Boone et al., 2009; Heynen et al., 2006; Marsh & Schilling, 1994; Talen 2010; Wolch et al., 2005) and planning and design (e.g., Loukaitou-Sideris 1995; Low et al., 2005) of public (service) areas built by public resources. Given that human health and also spatial distribution of public resources are criteria at issues of environmental and urban justice, so does the accessibility to urban public parks (Boone et al., 2009; Sister et al., 2010; Heynen, 2006; Heynen et al., 2006; Swyngedouw & Heynen, 2003).

2.1 HOW TO ALLOCATE (NEIGHBORHOOD) PARKS

When examining the accessibility to urban parks, studies emphasize to investigate either individual or structural factors or sometimes both. The former investigates majorly the users' socio-economic and park use characteristics, but rarely relate these to structural factors (e.g. Day 2008; Koskela & Pain 2000; Low et al. 2005; Loukatiou-Sideris 1995). The latter considers basically political, administrative, planning and design decisions affecting the allocation of parks, various characteristics of social and built environment and also interactions among these factors. Works in this group develop studies at city and neighbourhood scale, while only some is based on a perspective for equitable accessibility to parks (e.g., Heynen, 2006; Heynen et al., 2006; Sister et al., 2010; Wolch et al., 2005; Talen & Anselin, 1998; Talen, 2001).

Within the perspective underlining equitable accessibility to parks, some of these few studies underline the "procedural" (i.e., historical, political, administrative and socio-cultural) processes of park provision and allocation and perceptions about open green spaces and their use. Others or "outcome" oriented studies (Nichols, 2001) consider the current characteristics of built and social environment and investigates these usually at a spatial scale (namely, neighbourhood, park and park surrounding) yet with varying kind of collectible data and perceptions of "equitability."

Focusing on the distribution of parks as green public spaces at the city scale, the literature uses quantitative data about the geographical distribution of green public spaces and also of socio-economic characteristics of the city population as potential users. Accessibility is considered as individuals' easy reaching to and benefiting from these green public spaces for various purposes. Also, the ways of how to measure accessibility is considered significant in the consideration of equitable allocation of these spaces (e.g., Nicholls 2001; Talen 2010).

Moreover, these measurements can vary depending on four perspectives about “equitable accessibility” (see Crompton & Wicks, 1988; Lucy, 1981; Nichols, 2001). The works within “equality-based equity” can consider “accessibility” by counting number of public service areas in a specific region and equitable distribution as the equal distribution of costs and benefits among individuals or groups. In the case of urban parks, accessibility and equity is measured as the square meter of green space per capita or the budget spent for open green spaces in that region. This approach is criticized for considering city space as a simple geometry and also ignoring socio-economic differences among social groups and districts in the city and even discriminating against those whose needs, characteristics and choices are different from the dominant groups. Alternatively, considering potential users’ socio-economic and demographic characteristics, the “demand-based equity” can argue for the distribution of green spaces in the city according to dwellers’ demand for their neighbourhood. Yet this usually is determined by these groups’ capacity to get access to political power and mechanisms, which is not distributed equally and favours political “perspectives” (Talen, 1998; 2010). Similarly, “market-based equity” (or “those with money can get services”) favours a portion of the society.

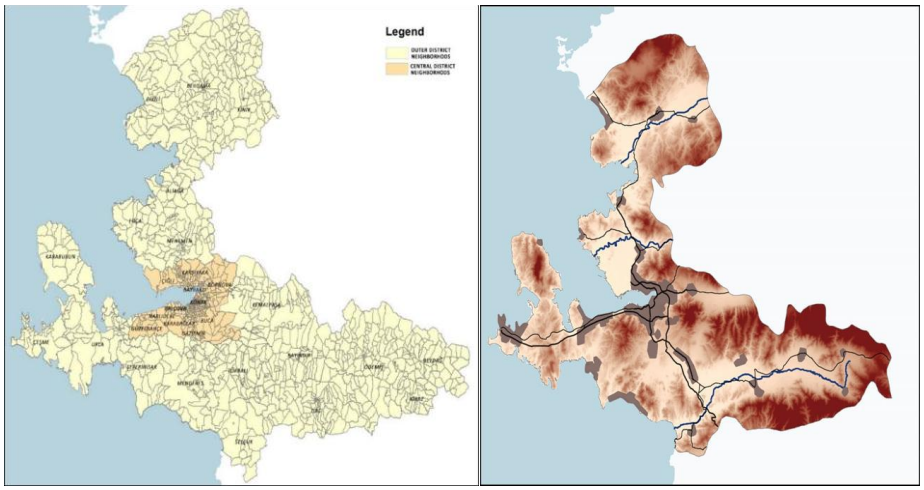
Another perspective argues for “compensation” (Crompton & Wicks, 1988) or “need-based equity” (Lucy, 1981). This considers some groups have been already disadvantaged in getting access to urban resources. However, the main problem is not these groups’ inequitable access to public service areas but their continuous experiences of socio-economic and spatial inequities because of their socio-economic characteristics based on class, race/ethnicity, age, gender and others (Byrne & Wolch 2009; Sister et al. 2010; Heynen 2006; Talen 2010). Thus, this perspective argues for the allocation of public resources and service areas to fulfil the needs of these disadvantaged groups. These groups are basically the poor and low income groups, racially/ethnically marginalized groups, children, seniors and those without cars and so on.

3 STUDY METHODOLOGY AND SITE

Based on the perspective of “need-based equity,” the studies that measure and investigate accessibility to (neighbourhood) parks deploy majorly with quantitative data about the spatial distribution of primarily population characteristics of the disadvantaged groups and also of characteristics (e.g., size and amenities) of green public spaces. Through the tools of geographic information systems (GIS) and using other multiple variables, they compare the relationships majorly between these two spatial distributions at the city scale and ultimately, aim at measuring the disadvantaged groups’ accessibility to green public spaces. Relating their findings to issues of urban justice, these analysis are called as “spatial equity” (Talen & Anselin, 1998) or “equity mapping” (Talen 2010).

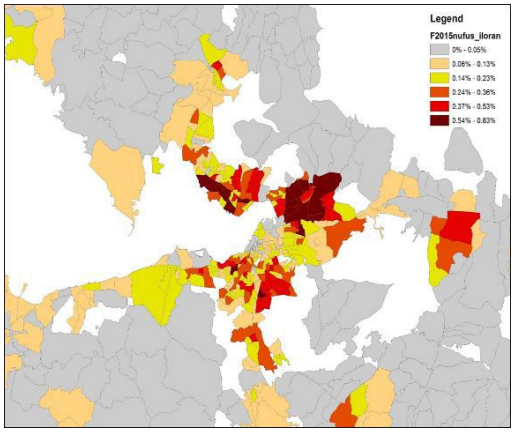
Deploying various kind of equity mapping, the literature focuses majorly on the cases at the city scale in the United States. These works deal majorly with quantitative data driven from “census tracts.” However, given the different forms and availability of data at city scale across the countries, there is a need to re-deploy this approach and method in different contexts with own available data. We aim at fulfilling this need through our case study with the data about Izmir Metropolitan Area and also central city of Izmir. In Turkey, the data about socio-economic characteristics is limited about sex, age, education level and so on at neighbourhood level, but lacks any information about income, wealth, race/ethnicity or political choices or so on. Also, if it exists and assuming that it is reliable, the data about green spaces is available by the municipalities but only about location and size. Also, when working as a unit of analysis, we must consider that boundaries of neighbourhoods are non-homogeneous.

Izmir is the third biggest metropolitan area of Turkey with a population near 5 million at its central and rural districts (Map 1 & 2). The central city with its 11 districts (out of total 30 of metropolitan area) extends along its bay area to the west and immediately on the hills to the east.

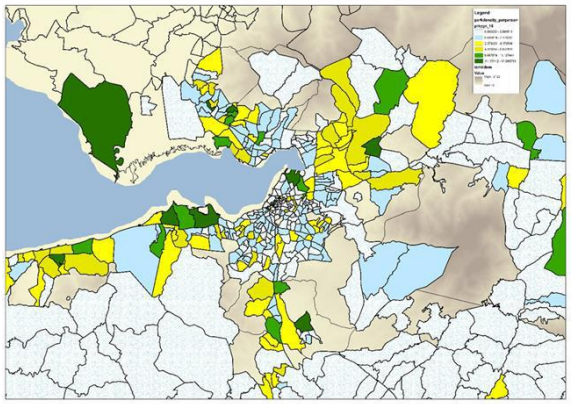


Map 1 and 2: Izmir districts and settlements.

With one of Turkey's densest urban population at its central districts, the city of Izmir has its major commercial areas at coastal neighbourhoods. With an education level higher than Turkey's average, the city gets high level migration especially from its hinterland cities with agriculture base and also south-eastern cities with high concentration of Kurdish people.

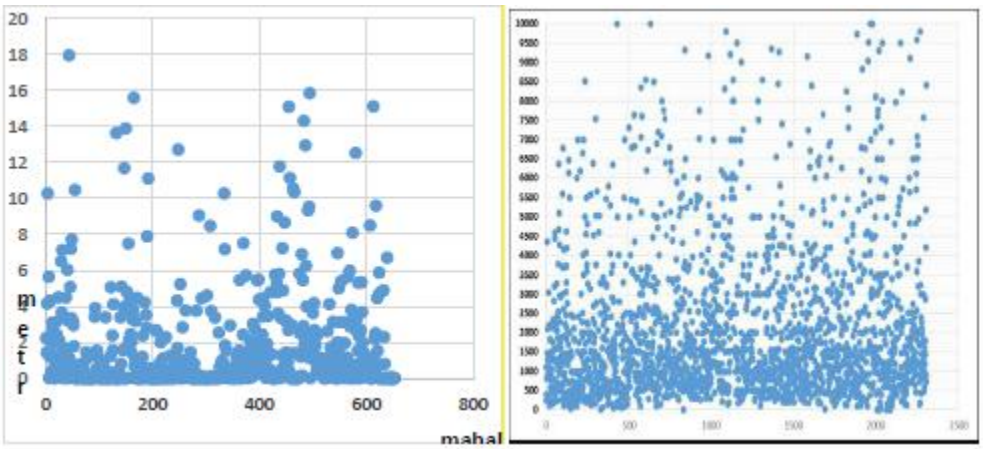


Map 3: Distribution of neighbourhood populations



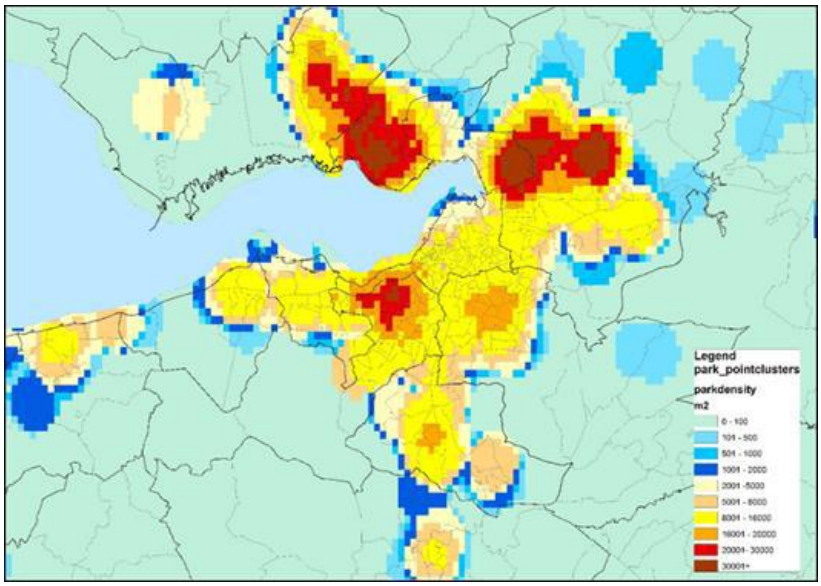
Map 4: Distribution of size of neighbourhood park areas per capita across neighbourhoods

While the central districts are the most populated areas of the metropolitan area of Izmir, the shares of neighbourhoods in these districts from provincial population (Map 3) and also the size of neighbourhood park areas per capita (Map 4) vary and tend to increase to the north and then to southeast. Yet still across total 657 neighbourhoods, the average neighbourhood park area per capita is around 2 square meter (Graph 1).



Graph 1: Size of park area per capita Graph 2: Distribution of neighbourhood park size

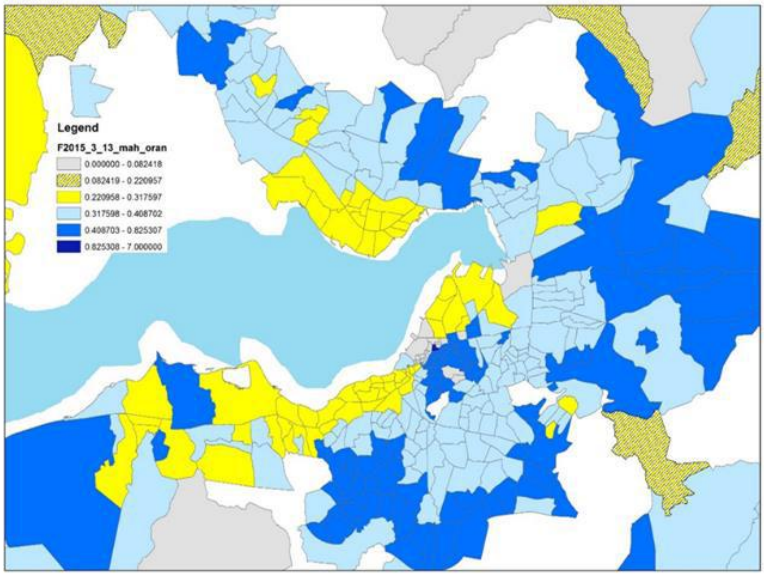
In central districts, the sizes of neighbourhood parks vary tremendously yet with a high concentration under 2.000 m2 and then under 500 m2 (Graph 2). Again the northern districts (Bornova and Karşıyaka) are richer with their major urban parks. When we examine the “impact area” or “clusters of the neighbourhood park areas through “point-density” analysis at GIS, the results again show certain districts with higher level than the others (map 5).



Map 5: “Clusters”/ “impact areas” of neighbourhood park areas according to “point density” analysis.

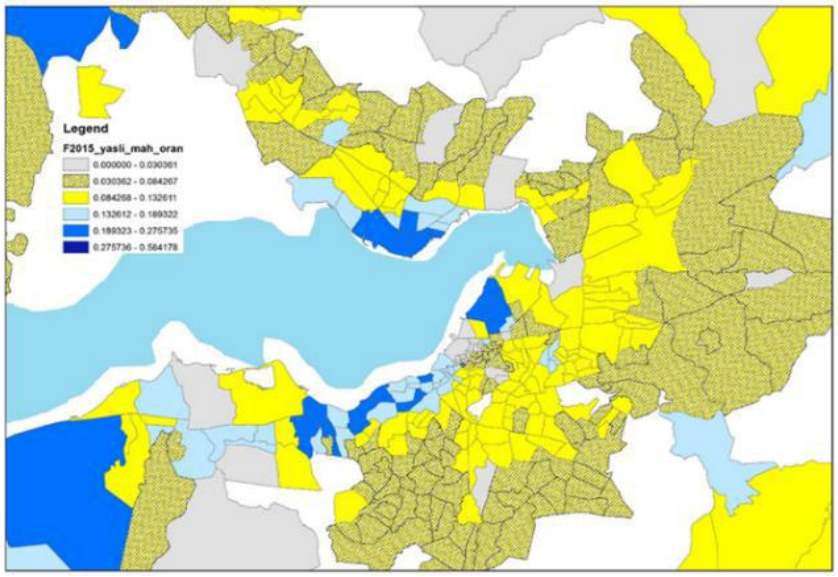
3. 1. DISTRIBUTION OF “NEED-BASED” GROUPS IN CENTRAL IZMIR

We can that the neighbourhood shares of total number of children (age 3—13) (map 6) and seniors (age 65+) at provincial level vary across the neighbourhoods but in opposite direction and between those along coastal line and on the hills. The former has higher shares of seniors (map 7).



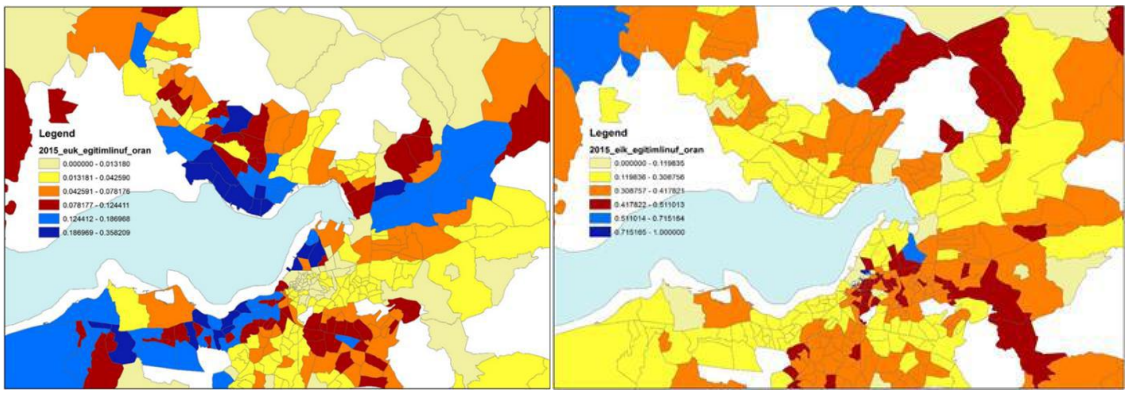
Map 6: Neighbourhood shares of total number of children at province

Also, determined by the number of students, big schools with children (preschools, elementary and secondary schools) and with teenagers (high schools) are located usually at the northern central districts of Izmir (maps to add).



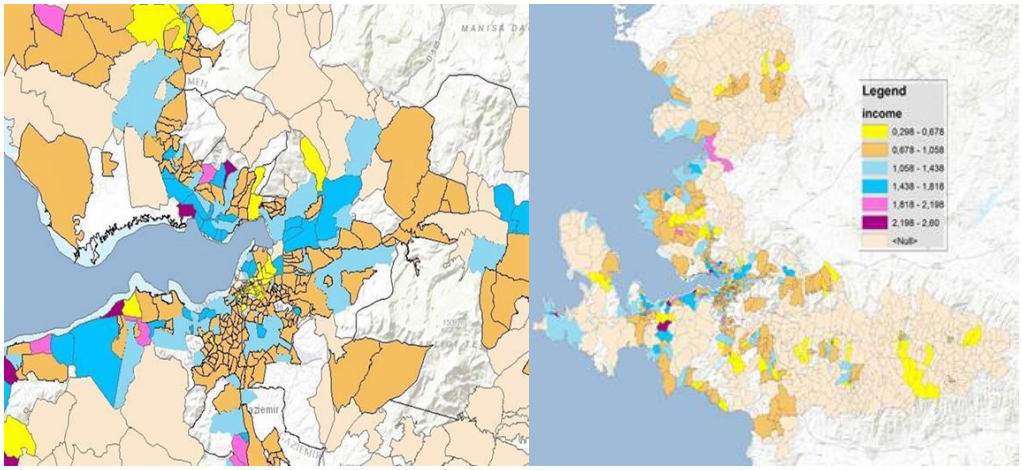
Map 7: Neighbourhood shares of total number of seniors at province

Another group of spatial distribution of population characteristics we examined as part of “need-based” groups is the education level. Similarly, the differences are apparent between the coastal and hilly neighbourhoods but also to the north with a high share of “women with high education level.”



Maps 8 & 9: Neighbourhood shares of total number of respectively “women with high education level” and of “women with low education level” of province

Finally, based on a sample data improved for another project, we have the distribution of income level per household. Those areas below the average income level of the sample (in brown and yellow colour) are those neighbourhoods outside the coastal and northern neighbourhoods.



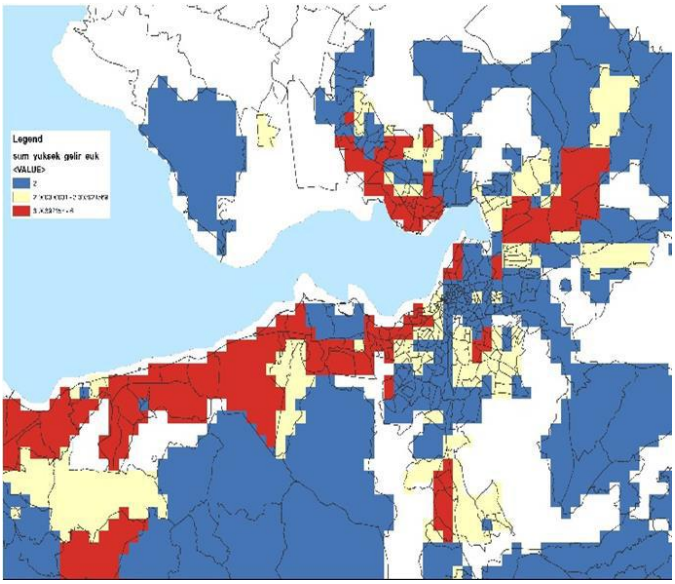
Map 10 & 11: Spatial distribution of household income level at central city and provincial level.

3.2. HOW TO RELATE CHARACTERISTICS OF NEIGHBORHOOD PARKS AND NEED-BASED GROUPS

In order to relate the neighbourhood parks’ and need-based groups’ characteristics, we developed both Pearson correlation and also regression analysis. Accordingly, we see that there is no correlation between education level and age groups, while there is linear correlation between income level and education level but none with age groups. Moreover, our regression analysis underline two major findings: i)Those neighbourhoods with higher household income level, low population density and higher education level by women tend to have more size of neighbourhood park area per capita. ii) at provincial level, at rural level the higher the income level and the size of age groups of 6-13 and 30-55 the higher is the size of neighbourhood park area per capita.

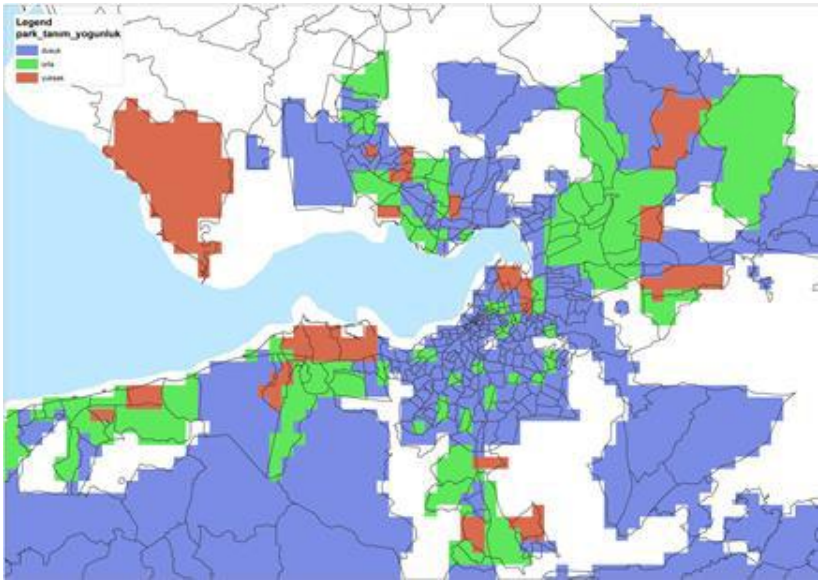
Relating to these findings (especially the first one) pointing to “significant” variables (education level by women, average income level, population density at neighbourhood level, and size of neighbourhood park size per neighbourhood), we deployed “overlay analysis” at GIS in order to “map” the “park rich” and “park poor” areas with need-groups. The results are:

Map 11 shows areas resulted by the juxtaposing of the average income level and education level of women. Accordingly, the areas with “high” values (red) extend along the coastal line especially to the south and again to the north including the hilly areas (Bornova). The areas with “medium” values (yellow) are those next to “red” areas. And the rest is with “low” values (blue).



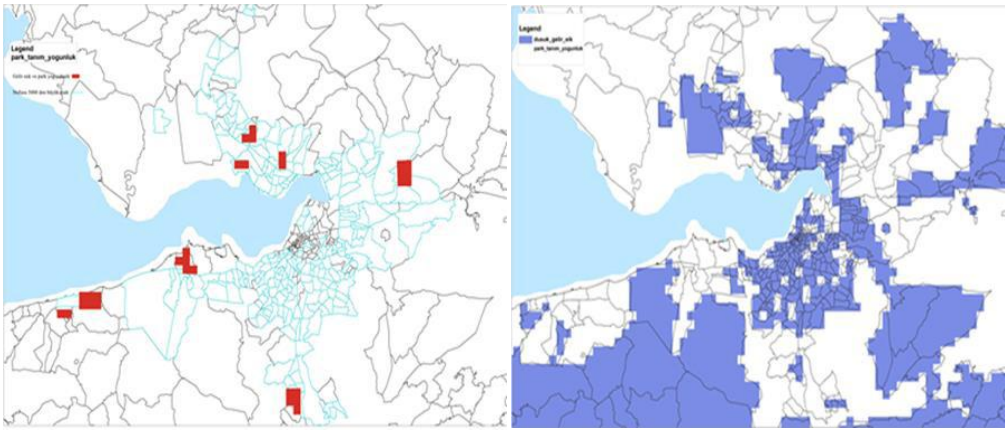
Map 11: Juxtaposing income and education level

Another map developed by “overlay analysis” is the spatial distribution of size of neighbourhood park areas per capita. “Red” shows again the “highest” values, “blue” shows the “lowest” values.

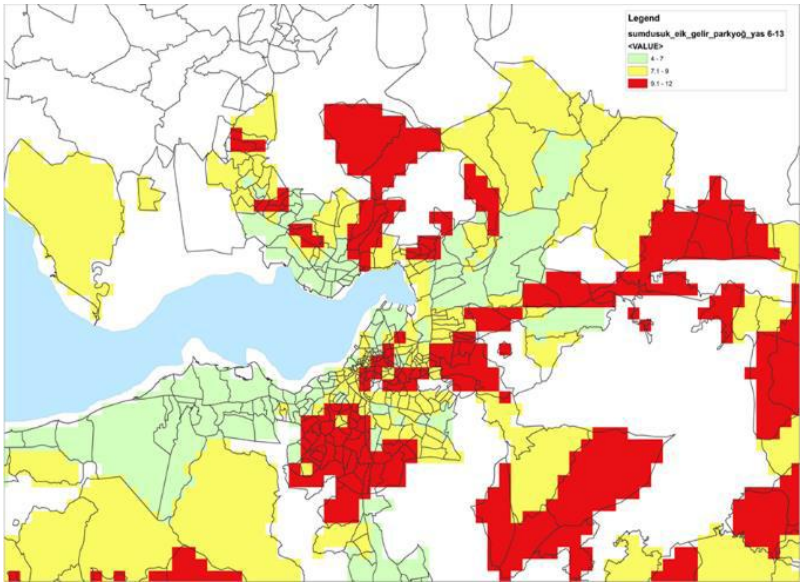


Map 12: Size of neighbourhood park area per capita (by “overlay analysis”)

Then we interrelated respectively “high” values and then “low” values at both of these two maps in order to find out both “park rich” areas and “park poor” areas according to population characteristics.



Map 13 & 14: Respectively “park rich” and “park poor” areas according to population characteristics



Map 15: Juxtaposing “park poor” areas with high level of shares of the age group of 6-13

Finally, we also took the age group of 6-13 (which appeared as significant at regression analysis earlier) into consideration especially for the “park poor” areas. The final map tells that “park poverty” in the hilly areas away from central coastal areas (in “red”) (Map 15) gets more dramatic especially for the children between 6-13 and their families.

4 CONCLUSION

Arguing that neighbourhood parks are important for improving body and mental health especially of those need-groups, this study attempted to map “park rich” and “park poor” areas in the central districts of Izmir especially related to characteristics of the population. Relating to the results of the regression analysis, we underlined the linear relation between income level, education level by women and size of neighbourhood park areas per capita across the neighbourhoods. These results have lead our priorities at the analysis (especially overlay analysis) at GIS. Our final maps point that “park poor areas” are those low income neighbourhoods with low education level by women and away from the coastline. Also, some of these “park poor areas” get worse, given that they have higher level of the share of age group of 6-13, that is children at elementary and secondary school level.

4.1 ACKNOWLEDGEMENT

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T12 | TOURISM, LEISURE AND GENUINE URBAN CULTURES

CO-CHAIRS: JARKKO SAARINEN; JOSÉ MANUEL SIMÕES; PIOTR LORENS

In the last 50 years, tourism has had a massified growth at an average annual growth rate of 6.5%. As shown by several authors, this was possible due to a combination of numerous factors, that range from the political, economic and social reasons (consecutive and considerable gains in free time among the general population; increasing purchase power of the population of several economic strata, growing internationalization and globalization of economies) to the technological ones (increase in mobility, generalize use of ICT). Worth mentioning are also factors inherent to the tourist sector (development of tourist offer, increment of competitive production formulae, selling and promotion of tourist real estate developments and services, growing internationalization of a multitude of heritage resources in value chains of tourist products).

Tourism is presently one of the driving activities of the world economy and a key driver and facilitator of globalization. Economically speaking, the tourist sector has a total annual turnover of 1.2 billion international tourists, being responsible for 9% of the world gross product and employment, and 6% of the world exports.

The tourist market is global and characterized by the increase, diversification and innovation of offers and segmentation of demand. The tourist experience tends to gain centrality in the moment of decision making considering the tourist products and destinations. However, cities continue to be the foci of major tourist attractiveness, reinforced by the growth of low-cost airlines. Cities are also the stage of touristification processes with some meeting rehabilitation and enhancement of material and immaterial heritages and local identities, whereas others stress the loss of character of places and repeat the standardizing prescriptions of the global economy.

ID 1318 | TOURISM INVASION? STUDY ON THE FUNCTIONAL TRANSFORMATION OF DWELLINGS AND POPULATION LOSS OF LOCAL RESIDENTS IN VENICE HISTORIC CENTER

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1 INTRODUCTION

1.1 THE EXCESSIVE TOURIST POPULATION BROUGHT BY THE UNIQUE SCENERY

Venice is the capital city of the Veneto region of northeastern Italy, with its main island isolated from the Adriatic Sea and surrounded by a vast shallow water area called the lagoon. In 1987, the main island of Venice and its lagoon area as a whole was assessed the world's natural and cultural heritage by UNESCO (the United Nations Educational, Scientific and Cultural Organization). What makes Venice unique is that it is not only a living city built on water with the ancient medieval urban layout, but it also remains plenty of well-preserved gorgeous palaces, brilliant churches as well as a huge number of architecture in different times and different styles.

Unique tourism experience on water has brought high reputation to the historic city of Venice, while problems related to the excessive tourism population have occurred at the same time. With the prosperity of the tourism industry, social problems like the inflation of prices, gentrification, depopulation, high rate of vacant dwellings has greatly threatened the living condition for aboriginals and the conservation of historic dwellings in the main island of Venice. What's worse, these problems could even interact each other to form a vicious circle. During the fifteen years from 1991 to 2005, the industries of Venice were shrinking in all sectors except for construction, hotels, banking and insurance, and academic research, which are all served for the tourism industry more or less_Da Mosto, 2009_. In this context, the employment rate of local residents has been continuously declining and thus their incomes are not enough to support the purchase of dwellings. As of 2011, the number of residents living in the historic center (main island) has been dropped to less than 60,000 people, nearly One-third of the population of the 1950s(Figure 1).

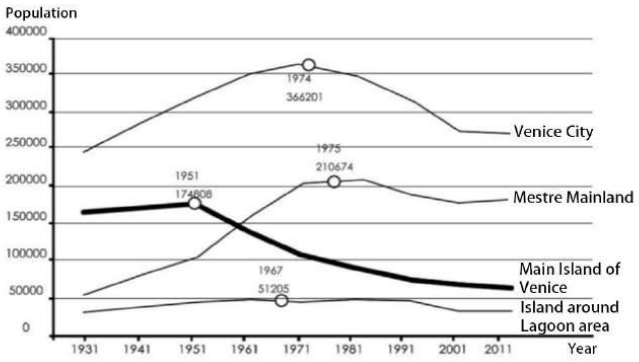

Figure 1 -The demographic changes in Venice (Sources: Da Mosto,2009)

1.2 THE DEPOPULATION OF THE VENICE MAIN ISLAND

Due to the environmental capacity constraints, there are some native residents who left the main island of Venice and chose the modern lifestyle with car preferences on the nearby mainland, which is more convenient and comfortable for them(Good, 2005). Meanwhile, there are also residents who prefer to take the water transportation so they move into the main island of Venice. Under such condition, it can be concluded that the demographic change due to lifestyle preferences almost does no affect to the total population. Objectively speaking, the economic restructuring brought about by the impact of globalization, coupled with the geographical restriction of the lagoon area, eventually lead the decay of Venice's

industry. According to the Venice Report, during the fifteen years of 1991-2005, on the main island of Venice, all the other industries were shrinking except for industries related to tourism services such as construction, hotels, bank, insurance and academic research. (Figure 2) In this context, the employment rate severely declines on the main land, and local residents can hardly support their own housing and lives by only depending on tourism services. What's worse is that the tourism-oriented urban developing goal has decreased the number of every-day services for residents such as the fair-price supermarkets, schools, hospitals, pet shops, barber shops and so on, thus enhancing the living cost for locals. All these factors are forcing local residents to seek for new job opportunities as well as affordable houses outside Venice.

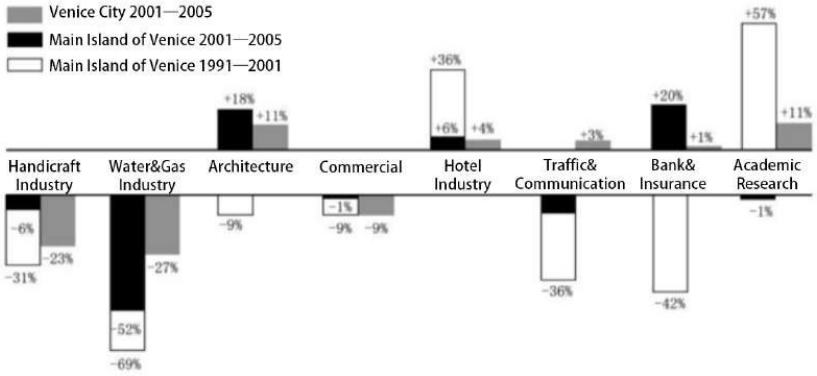

Figure 2 -Comparison of employment changes in various industries between the main island and the whole city of Venice from the year 1991_2005 (Sources: Da Mosto,2009)

Then this paper will raise the following questions and try to give an answer through analysis: What is the relationship between the demographic structure of the Venice main island and the stock of housing in the past 50 years? How does the relation between housing supply and demand change affected by the development of tourism industry? How does the tourism industry affect on the quality and function of the traditional housing on the island? Has the government taken any appropriate intervening measures to improve the living conditions of local residents and how is the impact?

2 THE IMBALANCE STRUCTURE OF SUPPLY AND DEMAND OF RESIDENTIAL HISTORIC BUILDINGS IN VENICE

2.1 THE IMBALANCE OF SUPPLY AND DEMAND

Since the 1950s, the population of Venice has been declining. In 1951, the average number of people living in per room is 1.34(Citta di Venezia,2012b), which means that generally speaking, Venice was in a state of housing tension: the total number of housing units and the number of rooms per set are both insufficient. After the 1970s, due to the out-migration, the total number of housing on the main island of Venice began to exceed the number of households, which means it began to have a housing stock of vacant houses. In accordance with the normal market disciplines, when housing supply increases, the falling price will stimulate demand, to ease the situation of local residents' moving outside and even to attract more Mestre mainland residents. However, the fact was that the number of local residents still continued moving out, so it can be concluded that phenomenon of living crowded is not the proper reason to explain the reduction of population.

Between 1951 and 2010, the number of households and the population of Venice main island is still decreasing: the number of registered households decreased by 40%; the population decreased by 65%__the decreasing rate of households is far less than the rate of population reduction. Compared with 4.9 people per household on average in 1951, the current average is only 2 people per household (Citta di Venezia,2012b). By calculating the data above all, we can know that the proportion of the reduction rate of households with more people has been decreasing the most, at around 95%. The reason is that considering the house area and the number of rooms, current housing stocks on the island are more

suitable for small family units, which led directly to the imbalance structure between different housing supplies and demands.

2.2 THE EXPLANATION OF THE IMBALANCE STRUCTURE OF SUPPLY AND DEMAND

Since the 1980s, people have tried to explain the declining of effective housing supply through two aspects: on the one hand, large number of historic residential buildings are used as rental estate instead of being provided to local residents; on the other hand, the house owner's failing to afford its maintenance costs also leads to the phenomenon of vacant residential buildings. In 2000 or so, by comparing the relevant data of gas, water, electricity payers and residents, it is possible to distinguish which buildings are vacant, which are still used and of which the residential functions have already been transformed, and then to show the analysis of the population loss and current condition of residential building use(Table 1).

Function			Number of units	Proportion	
Residential	Dwellings	Living function	23390	61.7%	
29.3& Non-residential	Hotels	Tourism	4810	8.4%	29.2%
	Private-owned	B&Bs	3800	9.4%	
		Other services	4610	11.4%	
Vacant	Vacant		3640	9.1%	

Table 1 -Statistics on the function of historicl buildings on the main island of Venice (Sources: Comune di Venezia,2010)

By putting the number of residents, the total number of housing units, the number of available housing needs no repair and the number of housing under functional transformation into the same coordinate system(Figure 3), it can be known that area A shows the demanding is far beyond the supply before the 1980s when the population in Venice is too much. After 1980s, B+C area says the total amount of housing supply exceed residents' demand. While area B means residential buildings that are vacant due to poor housing conditions or the owner's relocation, area C shows the residential buildings that can be put to the market without repair. However, there exist a large number of residential buildings offered to non-residents, including tourists, students, immigrant workers and so on. In 2000, this part of the housing occupancy ratio reached 29.3%. So if we consider excluding the above part from the available housing supplies, the real total housing supply for local residents cannot meet their demand actually. The overall area D indicates a housing shortage for local residents. To sum up, although the total number of available residential housing is increasing, the situation of supply shortage for locals has deteriorated to a severe structural imbalance.

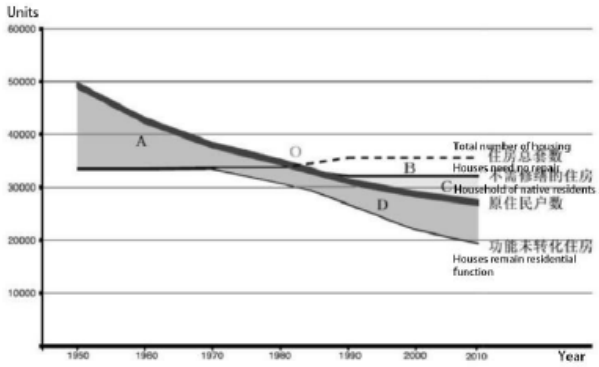

Figure 3 -The changing of supply and demand structure of residential housing on Venice mainland (Sources: Citta di Venezia,2012)

3 THE LIMITATIONS OF GOVERNMENT INTERVENTIONS

3.1 THE INTRODUCTION OF GOVERNMENT INTERVENTIONS

As mentioned above, the depopulation in the main island of Venice is directly related to the lack of housing supply for local residents. The urgency of repairing houses and the over-conversion from resident houses to non-residential houses have created great pressure on the residential market. Italian law No.798/1984 has specially provided a separate allocation of protection funds for the main residential area of Venice, trying to use government intervention to soften the impact by tourism industry on the market of resident housing. The object of this intervention is the public housing owned by the government and the ground floor space of private houses.

For the public housing, the government has taken measures to repair them and provide them as low-cost temporary housing for low-incomes. With the collaboration with the non-profit organizations of Venice and the UNESCO UK Council, the government has finished the repair of the 17th-century houses located at Calle Delle Beccarie. Take one of the buildings as an example: it consisted a number of single rooms before the repair and afterwards it turned to four sets of apartments (Figure 4). After the implementation of the project, the vacant space of public housings can be fully used with an affordable rent to low-income residents, while the government can also receive some rental income to cover the corresponding part of repairing spending.

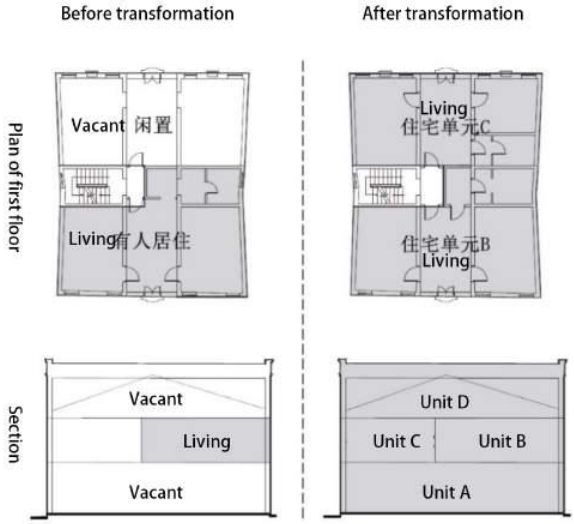

Figure 4 -The comparison between before the functional transformation and after (Sources: Good,2005)

The ground floor of historic buildings are not comfortable for living because of high humidity and difficulties on lighting and ventilation usually used for catering, job or retail function. On the main island of Venice, the housing units on the ground floor were the by-products at a population explosion period; there were 4,000 units, accounting for about 11.5% of the total Venice housing units, but of which more than 90% have been converted to non-residential use such as catering, retailing or workshop since decades ago. So what the government can do is only the transformation of the left 10% part, which has not been converted into non¬residential use, to contribute them to the local housing supply market.

From 1993 to 1998, the intervention programs on the public housing and the ground floor of historic buildings have succeeded to provide 749 sets of apartments and dormitories for the elderly and students, with a total of 52,000 square meters (Pickard, 2001).

3.2 THE LIMITATION OF GOVERNMENT INTERVENTIONS

In terms of heritage protection and improvement of living conditions for residents, the renovation of public housing has achieved great success. However, from the point of view of housing supply, the limitation of

the project is that the proportion of housing owned by government (public housing) is too small, only 4% of the entire dwelling market, so even if it was possible to refurbish and provide them with a low price to low-income local people, the number would be also very limited. On the other hand, cyclical floods heavily affect the housing base, every 20 years the canal is divided into sections to evacuate the water for repairing the building base, which creates greater financial pressure on social welfare funds.

As of 1998, of the £699 billion that the government subsidizes to the residential renovation projects, only 84% are released and 60% have been used, and only 43% of the projects are completed (Pickard, 2001). In addition, the more serious problem is that even if the buildings finish all the repairing procedures, they will be put into the open market facing to students, tourists and other participants who can provide high prices, so the local residents are still difficult to get effective housing supply.

4 TOURISM INDUSTRIES CONTINUE TO HAVE STRONG IMPACT ON THE HOUSING MARKET

4.1 HIGH DEMANDS OF SHORT-TERM ACCOMMODATION DRIVEN BY BLOOMING TOURISM INDUSTRIES

According to official statistics_Citta di Venezia,2012a_, residential buildings under functional transformation account for 8.4% of the total residential volume, with an even greater number of tourism-oriented conversions. According to the work report of Municipality of Venice called "Osservatorio Quarto Rapporto", the average selling price per square meter of the short-term housing available for tourism is 13.6 times(Table 2) the price per square meter of normal residential housing for locals, and the same situation happens in the rental market, visitors and other non-residents can pay the price 13 times than the residents can pay for a rental house. Due to the influence of tourism, the cost of materials, transportation, labor and others are all increasing, adding more financial burden on historical building maintenance, which is bound to increase the pressure of long-term residents. Driven by the blooming of tourism industries, the house owners are more willing to rent their houses, and instead, some owners will even choose to move themselves to the Mestre mainland for more economic benefits. To sum up, large amount of the temporary housing needs of tourists, students and related workers in the historical center of Venice, especially the short-term accommodation demand of tourists, are the biggest incentive for the transformation of residential functions on the island.

SELL	Non-residential		13.6	RENT	Non-residential	Short term rent	13
	Non-residential	After repair	1.7		Residential	Mestre mainland	2.5
		No repair	1.3			Other surrouding area	1.5
		Need repair	/				

Table 2 – The selling and rental prices for the housing on Venice main Island
(take the average affordability of local residents as 1)(Sources: Good,2005)

4.2 FUNCTIONAL TRANSFORMATION OF RESIDENTIAL BUILDINGS BY MARKET FORCE

The benefits of converting normal houses into hotels or B&Bs are such significant that a large number of owners ignore the protection requirements of residential buildings and change the structure of the building to make it more suitable for short-term living. After transformation, such short-term housings usually become hot resources with relatively lower price than the same level hotels on the website like Airbnb, Booking and others, which is a great attraction for tourists with limited economic budget. Although this transformation mode has been quite common on the island, still, the original function and layout of the house is more beneficial to the protection of historical buildings. The reason is that compared to short time rent space, there will be more functional spaces like kitchen, toilet, living room and study room which can maintain the original structure of the building, instead of changing the structures as well as the whole interiors to make one building separate to several simple units for tourist.

Taking a residential building in Dorsoduro community as an example (Figure 5), the original layout of three bedrooms and two bathrooms was reconstructed into two small apartments, including separate kitchens and living spaces, and rent to the short-term tenants at a price of 45 euros per square meter per month. This kind of space subdivision on the one hand provides more choices of flexibility for tourists, on the other hand, also gives house owners more benefits __smaller space means more profitable. In fact, the most favorable area in short-term rental market is of 50 square meters; on the contrary, the house of 120 square meters can only earn the lowest profit. (Good, 2005)

From the perspective of government management, it is difficult to supervise this informal housing division behavior which also does harm to the housing structure, and the government can only hold the attitude of acquiescence of such function transformations, which can explain why the number of residential units are increasing without additional constructions on the main island of Venice (see Figure 3). The decline in average living area significantly affected the quality of life of residents; the small size units cannot meet the needs of families with children. A study by the Municipality of Venice for the finance funding families can get for their first suite of house shows that this kind of funding is only valid when the demands and willingness of the residents can agreed with the market supplies. That is to say, if the residents demand 75-100 square meters of residential, but the market only offers 50-70 square meters options, the government cannot provide financial support because residents will complain the space is too small and turn to the Mestre mainland to seek a more spacious house with the same price. All these are resulting in the population loss of the main island of Venice.

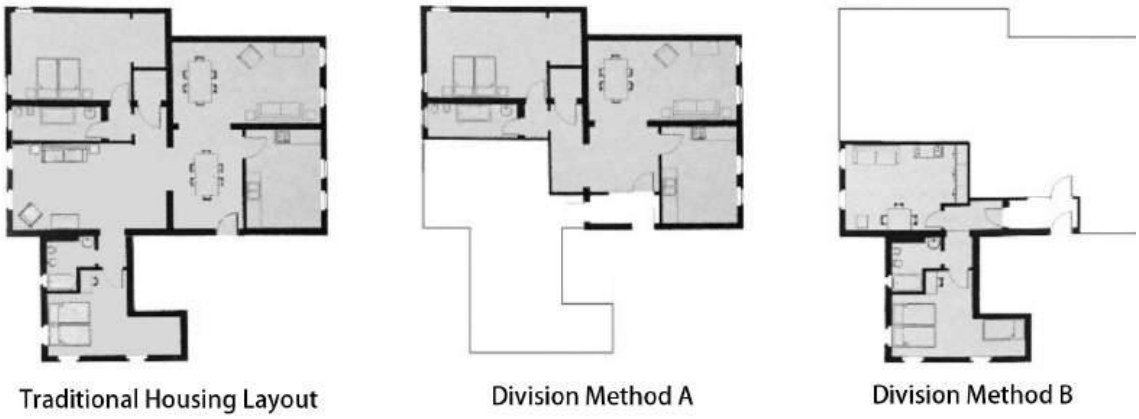

Figure 5 -The division methods in functional transformation of traditional housing (Sources: Good,2005)

5 THE VICIOUS CIRCLE OF THE FUNCTIONAL TRANSFORMATION OF RESIDENTIAL BUILDING ON THE MAIN ISLAND OF VENICE

The development of the tourism industries has great impacts on every aspect of Venice Main Island that, not only does the urban space slowly turn to tourism-oriented; also, the housing supply shows more preference towards tourist's choice. On the one hand, the number of public housing units owned by the government is limited, and the subsidy for refurbishment is not sufficient as well; On the other hand, the illegal conversion of private housing into tourism services happens continuously. Although the total number of tourists in Venice is increasing every year, the tourism taxes collected by government are still unable to balance the subsidy invested in solving the housing problem of the local population. The increasing cost of housing refurbishment due to excessive tourism has been a great burden for local government all the time. At the national level, the financial support for residential buildings has been reduced year by year, so at the local level, government lacks funds to invest in residential maintenance. With the strong pressure by tourism market, speculations appear in residential buildings and even public housing. By converting them into short-term accommodations or other hotels, restaurants, retail stores and commercial buildings, the original fair-price supermarkets, schools, hospitals, pet shops, barber shops which serve for local residents are of a sharp reduction, exacerbated the difficulties for locals to continue living here. Instead, they turn to the mainland suburbs to seek for a favorable inhabiting environment that can provide education, medical and other necessary services. It can be forecasted that with the prosperity of the tourism industries in Venice, the market forces will further catalyze the formal and informal functional transformation of

residential buildings towards tourism services, finally into a vicious circle as Figure 6(Russo,2000;Bernadette,2007), in which sense making Venice gradually lost its authenticity in living and original spirits of places.

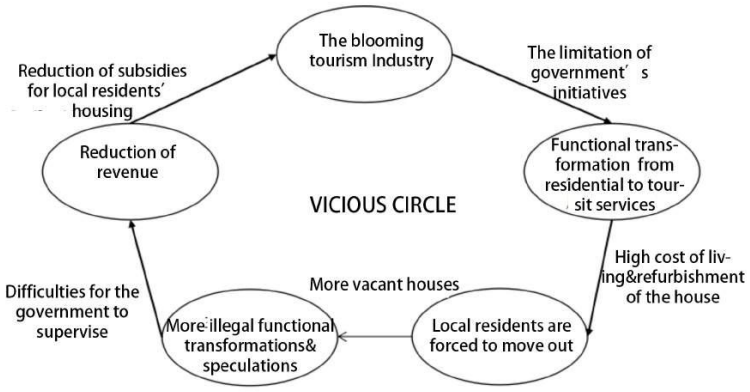

Figure 6 -The vicious circle of functional transformation of local residential housing on Venice main island (Sources: Author)

6 PROSPECTS: THE STRATEGIES TO DEAL WITH THE DEPOPULATION AND IMPROPRIATE RESIDENTIAL FUNCTIONAL TRANSFORMATION

Under the influence of market economy, the social problems related to the decline of Venice main island could be understood as the incompatibility between the housing demand and the supply structure. The continuous reduction of local residents is because the inflated cost of the housing market is not affordable for them anymore. Besides, government's shortage of funds for building refurbishment has undoubtedly given opportunities to those who do the illegal transformation just to attract tourists, resulting in serious consequences like exclusion of aboriginals and loss of authenticity. Therefore, the core strategy for the government is to strengthen the guidance and supervision of the transformation mechanism of historic dwellings, providing affordable residential units in the market and enhance the long-term living conditions for low-income residents as much as possible (Massiani and Santoro,2012).

The primary principle is to realize the significance of preserving the original resident's life on the main island of Venice. The traditional lifestyle of natives itself composes the most crucial part of the world-famous historic city. While stabilizing the residents of Venice to maintain social, economic and political stability, the awareness of building protection should also be considered carefully especially towards those buildings after or under functional transformation. Recognizing the informal conversion and illegal split into smaller units according to the gas, water and other bills, and try to acquire the housing property through public-private partnership, finally manage to recover the refurbish the building to meet the needs of local residents, at an affordable rental price.

Secondly, under the circumstances where the historic buildings are divided into different residential units and rent to different tenants, the government need to formulate detailed rewards and penalties through correspondent policies in the process of acquiring and rearrange the building, in order to avoid the possibility that multiple stakeholders' interests conflict with each other. Above all, the government has the right to make a legal penalty for people who subdivide the building against the preservation requirements for historic buildings of Venice.

Finally, to provide residents willing to live in Venice for a long time with subsidies to buy their first suite of housing, so that residents can compete with foreign tourists since they have a relatively fair competitive environment. These policies need to be strengthened, and a rigorous review and evaluation is also needed when it comes to any project including the content of functional transformation from residential to tourism services, in order to ensure the effective supply of local residential housing market(Musu,2011).

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ID 1330 | MAKING THE MOST OF THE EUROPEAN CAPITAL OF CULTURE. CULTURAL EVENTS AND SPATIAL STRATEGIES IN EUROPEAN PORT CITIES

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1 INTRODUCTION

Since the experience of Glasgow, European City of Culture in 1990, and Barcelona, which hosted the Olympic Games in 1992, European port cities have displayed a growing interest in hosting cultural mega-events – i.e. "large scale cultural (including commercial and sporting) events which have a dramatic character, mass popular appeal and international significance" (Roche, 2000, p. 1) – as a strategy to trigger or boost urban regeneration and local development (Qu and Spaans, 2009). Mega-events have increasingly been interpreted as chances to accelerate existing urban projects, to encourage discussions about future development scenarios and strategies, to improve local institutional capacities and to raise local communities' ambition. In other words, cultural mega-events are understood as potential drivers of urban development and as unique occasions for producing positive intangible legacies in the long term.

In this context, the European City/Capital of Culture (ECoC) programme has played a crucial role in the last decades. Major European port cities such as Rotterdam and Genoa attempted to capitalise their year as ECoC in order to deliver a renewed image and reposition themselves within global urban networks. Aarhus in Denmark and Paphos in Cyprus are the ECoC 2017, while Valletta and Rijeka have been awarded the title respectively for 2018 and 2020. Liverpool, ECoC in 2008, inspired the UK City of Culture initiative with the aim of extending the positive benefits of event-led and culture-led regeneration to other British cities (DCMS, 2009; ICC, 2012): so far, two port cities have been designated as UK City of Culture, namely Derry-Londonderry in 2013 and Hull in 2017. This interest appears to some extent fostered by a recognition of the potential contribution of cultural mega-events – such as the ECoC – to urban regeneration and development in port cities. In this context, legacy has become a key concept in the rhetoric of the ECoC, while the embeddedness of cultural strategies into long-term planning agenda is increasingly considered a precondition for achieving a positive legacy from the event (Smith, 2012), as well as for cultural mega-events more generally (Bramwell, 1997). Surprisingly, there is little understanding of

the extent to which the socio-economic and spatial strategies entailed by ECoC programmes are integrated – or ought to be integrated – to broader planning frameworks. This connection appears particularly relevant in port cities, where the rationale for the ECoC is associated with the need of responding to the profound structural socio-economic consequences of deindustrialisation and loss of maritime functions.

This paper discusses the rationale, the key questions and methodological approaches of an early-stage PhD research on event-led regeneration in European port cities. In particular, it aims to propose a research agenda and methodology to examine how event-led regeneration – driven by the ECoC – is embedded into broader frameworks and strategies of urban planning in European port cities and how it may introduce new planning concepts and procedures. Section 2 summarises the common structural changes and challenges that have been characterising the transition to a post-industrial economy in most European port cities, which set the rationale for event-led regeneration. Section 3 briefly reviews the literature on culture-led and event-led regeneration, as well as on urban regeneration in port cities, and on the ECoC programme. Section 4, presents the rationale for studying the ECoC in the context of port cities, identifying a few key research questions, on the basis of the issues and gaps arising from the literature review. Section 5, proposes a methodology to approach these issues, while section 6, gives account of the expected results of this study.

2 PORT CITIES IN TRANSITION

European port cities have historically been a key driving force in the spatial organisation of economies and societies (Hoyle and Pinder, 1992). Harbour areas and quays have contributed to the development of European urban culture itself, as public spaces and places of encounter. However, since the 1960s, major structural changes have contributed to reshaping this traditional port-city relationship. Technological developments such as containerisation, the increase of ships size and the reorganisation of maritime transport raised the need of deeper water, more space and greater accessibility (Hayuth and Hilling, 1992) which fostered the migration of ports to new locations outside the city and the consequent separation between port and urban functions (Hoyle, 1988). The abandonment of traditional harbour areas produced derelict urban environments in central urban locations and on waterfronts that set the rationale at the basis of the worldwide phenomena of waterfront redevelopment (Schubert, 2011; Brownhill, 2013; see section 2.1). Since the 1990s ports have been more and more interconnected to transnational networks (Meyer, 1999) and their fortunes increasingly depend on external phenomena on which they have no control (Hayuth and Hilling, 1992; Ducruet and Lee, 2006). In this context, the interdependency between ports and cities is weakening: ports are less dependent from urban labour markets, while cities may explore other thriving economic functions (Ducruet et al., 2010, in Hall and Jacobs, 2012). European port cities have had different fortunes in coping with these structural changes. For instance, Rotterdam and Hamburg managed to retain their role as maritime hubs and to diversify their economies (Hein, 2014; Savitch and Kantor, 2002). However, many of them – such as Hull in the UK – were unable to respond to these challenges and have experienced rising unemployment, urban decay and socio-economic decline.

2.1 WATERFRONT REDEVELOPMENT

Since the 1960s, derelict quays and traditional inner harbours have increasingly been perceived as strategic areas for pursuing extensive urban regeneration. Waterfront redevelopment projects began to be deployed in many port cities throughout the world with the aim of recovering the key role played by their centres (Meyer, 1999) and of re-launching these cities through the development of a single area (Bruttomesso, 2001). Schubert (2011) suggests that four generations of projects have characterised this worldwide phenomenon from the 1960s to the 2000s. First, a number US cities – in particular Baltimore – displayed project-led approaches to waterfront redevelopment in the 1960s. Second, many port cities across the world undertook larger-scale projects in the 1980s, for instance the redevelopment of London Docklands. Third, waterfront projects in the 1990s were characterised by a more participatory approach. Finally, waterfront redevelopment in the 2000s has been generally based on public-private partnerships in context of scarce public resources.

Despite being such a widespread phenomenon, many authors question that it has also been a worldwide story of success (Hoyle, 2000). Waterfront redevelopment projects have been criticised for having failed to meet their socio-economic and political goals (Hoyle, 1988) and for being renewed expressions of forces of capital (Malone, 1996). They have also been considered an effective means to affirm post-modern socio-cultural values (Nordcliffe et al., 1996) and city-making paradigms (Marshall, 2001) under the dominant discourse on neoliberal urbanism. However, the research on waterfront redevelopment, whether advocative or harshly critical, has focused on spatial and economic aspects, adopting quite a narrow approach to these complex urban transformation. More recent studies (Desfor et al., 2011) have attempted to widen the analytical approach to these phenomena, deploying innovative theoretical and methodological tools – such as assemblages (Brownhill, 2013) – to explore broader social and cultural dimensions of waterfront redevelopment.

2.2 CONTEMPORARY PORT-CITY RELATIONSHIPS

Today, ports and cities display an even more complex relationship (Daamen and Louw, 2016), which is only in part explained by technological developments and structural changes in maritime transportation systems and is becoming context specific (Daamen, 2007). Despite the abovementioned migration processes of port activities, major maritime ports are still urban (Hall and Jacobs, 2012) and, where there is a physical separation between ports and cities, their development trajectories are still closely interconnected (Daamen and

van Gils, 2006). However, while ports have shaped cities' development paths for centuries, the main spatial driving force is now the city (Wiegmans and Louw, 2011). Thus, the search for redevelopment of port areas and waterfronts is fuelling spatial, socio-economic and political tensions (Daamen and Vries, 2013) at the port-city interface (the liminal space between port areas and the city, see Hayuth, 1982; Hoyle, 2000), for instance between new urban uses and still thriving port functions or between new residents and professionals attracted by regenerated urban areas and former working class residents.

The literature on the port-city relationship, in particular from an urban perspective, displays extensive gaps and a clear separation between port and urban studies (Ducruet and Lee, 2006). Even though the classic spatial focus – too narrow to explain recent developments (Daamen, 2007) – has progressively been enriched by behavioural and governance approaches (Oliver and Slack, 2006), further work is needed to understand the social, cultural and political components of contemporary port-city relationships and their regional specificity throughout the world. In this context, event-led and culture-led regeneration at the port-city interface introduce a further perspective that is currently underexplored and suggest the need to investigate the impacts of such interventions on the port-city relationship and the broader trajectories of urban planning in port cities.

3 EUROPEAN (PORT) CITIES OF CULTURE

The literature on waterfront redevelopment recognised the growing relevance of the cultural dimension in waterfront projects. For instance, Meyer (1999, 48) suggested that waterfronts are privileged spaces for promoting a "culturalised urbanism", since they offer attractive locations to companies and institutions, in some way anticipating Florida's discourse of creative urban environments (Florida, 2002).

Culture-led regeneration is indeed closely associated with the redevelopment of former harbour areas and quays, as happened since the 1980s in many port cities such as Bilbao and Barcelona (García 2004), Newcastle (Bailey et al., 2004), Marseilles (Llorente, 2002) and Genoa (Porrello and Tommarchi, 2009).

3.1 CULTURE-LED REGENERATION

A growing body of literature has explored the contribution of culture to urban regeneration and the connection between cultural activity and local development goals (Bianchini et al. 1988; Bianchini and Parkinson 1993; Evans and Shaw 2004; García 2004). The contribution of culture to urban development has been recognised since the nineteenth century (Bassett, 1993), while cultural policies gained political

relevance in the 1970s (Bianchini, 1993b), for instance in the UK, approaching goals of community development (Lees and Melhuish, 2015). The 1980s represented a dramatic point of cultural turn for urban planning (Freestone and Gibson, 2006), characterised by a widespread dominance of economic development and urban regeneration (Bianchini, 1993b).

Classic critiques to culture-led regeneration projects in the 1980s interpret these interventions as a "carnival mask" (Harvey, 1989, 21) to cover social problems or as strategies fostered by a worst-case scenario when no other options are available (Zukin, 1995). Bianchini (1993a) identified three sets of dilemmas raised by such projects, involving spatial tensions between city centres and periphery, economic contrapositions between production- and consumption-oriented strategies, conflicts in funding between permanent and ephemeral events. On more recent projects, similar criticisms suggest that the delivery of cultural projects is easier than any investigation on structural social issues and that gentrification is the most likely output of culture-led regeneration (Miles, 2005), in which economic goals are dominant (García, 2004). For instance, public expenditure for culture-led regeneration has generated disappointment among local communities in port cities suffering high levels of unemployment, such as Bilbao and Marseilles (Llorente, 2002). The focus on flagship projects has been criticised for creating white elephants (García, 2004), disconnected from the context – including the waterfront – they are supposed to regenerate, eventually producing unused or unsafe environments (Evans, 2005). Standardisation represents a major risk, whereas the replication of successful strategies applied elsewhere erodes local identities and specificities. This is particularly evident in many culture-led waterfront redevelopments labelled as 'MacWaterfronts' (Daamen and Gils, 2006), which fuelled disappointment in local communities – sometimes expressed through activism and protests, such as in Hamburg (Desfor and Laidley, 2011) – about redevelopments that are perceived as alien and threatening, as happened in Liverpool (Llorente, 2002).

Past research on culture-led regeneration has been criticised of considering few successful cases as evidence that culture may contribute to solving urban problems (Miles, 2005) and being uncritically positive (Shaw 1999, in Evans and Shaw, 2004). Evans provides an interesting perspective when he observes that such research offers either uncritical case studies or unsupported harsh criticisms, fuelling a "culture of pessimism" (Evans, 2005, p. 7). Other critiques concern the focus on short-term impacts (Evans and Shaw, 2004), the reliance on fuzzy theories and the lack of rigorous evaluation criteria (Markusen and Gadwa, 2010). Despite the growing number of studies on culture-led regeneration, the research on this field appears to be still affected by the same theoretical and methodological issues observed in the last decades (Campbell et al., 2017), as well as by an evident economic focus in evaluation criteria. Future research should take into account tangible and intangible impacts on other urban domains, such as community wellbeing or governance landscapes.

3.2 THE EUROPEAN CAPITAL OF CULTURE

Since the 1990s, policy makers and urban commentators have increasingly been concerned with the potential of cultural mega-events in terms of urban regeneration and local development. In this context, the European Capital of Culture (European City of Culture before 2001) represents a particularly interesting case. Envisioned in 1983 with the aim of celebrating European diversity and promoting cohesion, it has progressively become a unique chance for cities to promote a new image and profile and to pursue urban regeneration and development. The first awarded cities since the launch of the initiative in 1985 – Athens, Florence, Amsterdam, West Berlin and Paris – were recognised cultural capitals and celebrated their year as ECoC through cultural festivals focused on fine arts. Glasgow, ECoC in 1990, represented a watershed in the history of the programme, as it was the first city to organise a year-round event and to embed its cultural programme into a broader strategy of urban regeneration (Bianchini et al., 2013). Many other port cities have then attempted to capitalise the potential of the ECoC in this sense, such as Rotterdam in 2001, Genoa in 2004 and Liverpool in 2008, while the connection between cultural activity and regeneration has become a common element of the ECoC itself.

In the last 15 years, these experiences have fuelled a growing body of research on the rationale and the impacts of the ECoC. For instance, Richards and Wilson (2004) analysed the impacts of the ECoC 2001 on different components of the image of Rotterdam, highlighting a positive impact in the short term. García (2005) evaluates the long-term impacts of Glasgow 1990 analysing media discourses and personal narratives. Griffiths (2006) uses discourse analysis to unpack the bids of three contenders for the 2008

title, Liverpool, Bristol and Cardiff, emphasising common discourses on identity as port cities, integration, connection between culture and social cohesion and of potential economic benefits of culture. Boland (2010) and Cox and O'Brien (2012) provide a critique of the 'Liverpool model', outlined in the Impact 08 study on the effects of the ECoC 2008 (García et al. 2010). Bianchini et al. (2013) explore the possible strategies of awarded cities for pursuing the symbolic, physical, economic and social dimensions of regeneration and suggest that, despite the difficulty of assessing the regenerative impacts of the ECoC, policy makers are increasingly interested in the initiative. Finally, Gomes and Librero-Cano (2016) compare economic performances of cities awarded the ECoC title with those of unsuccessful bidders, showing that awarded cities experience some extent of economic growth after the event. They also suggest that sociocultural, political and environmental effects are less investigated than economic impacts and that grounded evidence of benefits on the long term is still missing. The literature on event-led regeneration, as well as on culture-led regeneration more in general, is indeed dominated by an economic focus – which reflects the priority of economic goals complained by many critics – and displays little attention to other dimensions and potential impacts. Although the most investigated and cited case studies are indeed port cities, and presumably many others will follow, virtually no studies address event-led regeneration in this specific context and in relation to the interactions between urban and port functions. Furthermore, virtually no studies attempt to contextualise urban regeneration exercises within broader framework of urban planning, confirming a general disconnection – both in research and practices – of these phenomena from the development perspective of the city as a whole.

4 A RESEARCH AGENDA

This disconnection suggests the need to investigate the relationship between the ECoC and urban planning agendas, with a specific focus on port cities. Two key questions arise: firstly, how does the ECoC impact the port-city interface? Secondly, how does the ECoC relate to urban planning in European port cities?

4.1 THE ECOC AT THE PORT-CITY INTERFACE

Firstly, it is important to ask what is the effective role of culture in such processes of event-led regeneration. If the ECoC contributes to encouraging or accelerating processes of urban transformation at the port-city interface, forms of culture-led regeneration may indeed be incidental, with limited connection to broader processes of regeneration. Secondly, event-led regeneration that takes place in this complex geographical space affects a broader set of spatial, socio-economic and cultural phenomena that are seldom investigated or addressed in flagship projects or other redevelopments. New cultural infrastructures and regenerated spaces generate new socio-spatial relationships and conflicts, since they come to be adjacent to working class districts or still active port areas. This raises the question of whether new cultural activities, as well as their users, are welcome in such liminal environments and indicates potential conflicts between new 'sanitised' spaces and existing 'unsanitised' ones, suggesting a further dimension of the spatial dilemmas observed by Bianchini (1993a). This spatial juxtaposition and competition among port, (existing) urban and (new) cultural/leisure uses is perhaps the visible dimension of a more complex set of social, economic and political conflicts among actors with rather different – and sometimes conflicting – stakes (e.g. port authorities, transnational shipping companies, urban governments, local businesses, trade unions, and so forth). This 'urban takeover' on port functions and spaces appears to characterise the most recent phase of port-city relationships in many contexts (Daamen and Vries, 2013). Thirdly, a major issue concerns the kind of culture that is promoted by the ECoC in European port cities. If it is true, as emerged for instance from the analysis provided by Griffiths (2006), that the city's identity as a port is generally emphasised in ECoC discourses, we should ask whether the resulting event-led regeneration succeeds to promote a maritime culture founded on local specificities. The risk is indeed that European port cities import strategies from (supposed) successful ECoCs, pursuing standardised models of culture and regeneration that may generate a loss of specificity and may exacerbate socio-spatial tensions. Culture-led and event-led regeneration, through cultural initiative such as the ECoC, are chances for local governments and communities to frame their cities' profile and development trajectories. In this context, a key issue is the extent to which such processes produce local responses, arising from local specificities and maritime identity, against globalising pressures exacerbated by the evolution of world maritime trade.

4.2 ECOC PROGRAMMES AND URBAN PLANNING

The relationship between event-led regeneration and urban planning raises concerns of process, content of strategies and, finally, planning theory. In general, recent ECoCs adopt a governance model based on a separate delivery vehicle – usually a public company – responsible for the organisation and delivery of the event, which operates in collaboration with the local council (DG for Internal Policies, 2013). In addition, given the extraordinary and usually urgent character of event-related infrastructures, event-led regeneration strategies and actions may be programmed and pursued through ad-hoc plans. From the process perspective, this raises

the question of whether event-led regeneration is part of ordinary planning processes or it takes place outside planning procedures and arenas. In either context, cooperation between event and urban governance structures is a major concern. Considering the content of strategies, a key question is whether event-led regeneration contributes to shaping new development trajectories for European port cities and how these are embedded into urban planning practices. Finally, this call for integration between the ECoC and urban planning suggests a potential theoretical and methodological contribution to the latter. Since the ECoC, even in the case of an unsuccessful bid (ICC, 2012), encourages local communities to discuss the future of their cities, we should ask whether this produces new concepts and discourses that are developed even after the unsuccessful bid. Even though classic critiques of mega-events suggest that their exceptionality and urgent character may produce controversial practices (Hall, 2006; Smith, 2012), it may also be argued that they provide occasions of institutional learning and of experimentation.

5 TOWARDS A METHODOLOGY TO ADRESS EVENT-LED REGENERATION AT THE PORT-CITY INTERFACE

The two key research questions and the related issues mentioned in the previous section offer a different perspective on the ECoC and on event-led regeneration. This investigation requires further reflection on a suitable methodology that allows to go beyond the assessment of the economic impacts of the ECoC and to explore more intangible socio-cultural and political impacts in the complex space of the port-city interface.

5.1 APPROACHING A CASE STUDY ANALYSIS

A comparative case study analysis of the ECoC in a set of European port cities might not portray the whole complexity of this phenomenon. However, a deep analysis of a few case studies, approached using an individualising strategy (Robinson, 2011) and reported through an extensive narrative that gives account of the historical, geographical and political context of each locality, might help to explore the issues mentioned above. Such strategy lets context-specific issues to emerge, providing crucial background information to develop a more grounded understanding of the studied phenomena, and helps to identify those conditions that must be taken into account in order to compare such different contexts. The framework for the selection of case studies is a crucial element and it is based on four geographical and socio-economic criteria. Firstly, the ‘port’ character of cities: port cities could be understood as coastal or riverside cities that are closely connected – functionally and culturally, not necessarily in terms of physical proximity – to a maritime port, where port functions are, or have been, a crucial element of their economic base. Secondly, acknowledged that neither ports nor cities are static entities, trajectories of change are more interesting for the purpose of this study whereas they reflect processes of restructuring or repositioning: selected cities are either struggling to recover from the loss of traditional maritime functions or managing to introduce new strategic elements into their economic base. Thirdly, selected cities should have been awarded the ECoC title in the last twenty years and managed the event as a component of their strategy of urban regeneration and development. This ensures that longer-term legacy could be addressed and that the event has not been hosted as a mere special occasion with no impacts on local development. Finally, a comparable size is a prerequisite for the comparison. Considering these criteria, potential case studies are: Rotterdam, ECoC in 2001; Genoa, where the event took place in 2004 after the 1990 FIFA World Cup and the Expo in 1992; Liverpool, ECoC in 2008.

5.2 A MIXED QUALITATIVE APPROACH

In order to approach the case study analysis, I propose to adopt a mixed qualitative research methodology. A classic ex-post, qualitative and descriptive policy analysis examines local politico-institutional contexts and policy processes and contents. In terms of context, a background narrative encompasses key historical, geographical and political features, giving account of the decades prior to the successful bid for the event. The analysis of policy processes and contents involves the review of policy documents about the ECoC, as well as urban plans and other documents or statements related to urban planning and event-led regeneration, with a focus on the last twenty years. Further information is gathered through semi-structured interviews to key informants: ten to fifteen informants per locality are selected among port officials, policy makers, planners, culture experts and developers. This classic policy analysis, undertaken through content and process analysis, is then coupled by a discourse analysis, from an institutional perspective (Healey, 1997; 1999), which examines spatial concepts, narratives and vocabularies. Discourse analysis may be helpful in unpacking the rhetoric of the ECoC and of event-led regeneration, as shown by Griffiths (2006) and García (2005), as well as identifying the features that local communities and policy communities perceived as key local specificities. Mapping and other spatial representation techniques help to give account of the complex spatial, socio-economic and political tensions that event-led regeneration contributes to generating at the port-city interface.

6 DISCUSSING EVENT-LED REGENERATION AT THE PORT CITY-INTERFACE

This case study analysis may help to address comparisons between the different experiences, in order to highlight the differences displayed in local approaches to the ECoC and its regenerative impacts. This could help to fill one of the most evident gaps in the literature, which lacks any substantial reflection on how different approaches affect outcomes (as suggested with regards to cultural planning by Markusen & Gadwa, 2010). Despite the remarkable differences arising from context specificities and the uniqueness of places, as cities sharing the same specialisation and part of transnational networks of maritime trade, European port cities may also share common structural issues, such as the competition between urban and port uses and the conflict between different stakes, the tensions between global pressures – encouraging standardisation – and local forces that 'resist' through local responses and specificities, the attitude – in the case of Rotterdam – or the need – as happened in Glasgow – of developing the cultural dimension of the city's image alongside the profile of industrial port.

The three potential case studies also present context-specific problematics and unique approaches. For instance, Rotterdam explored the connection between modern architectures and water, which has become a major component of its image, as observed by Richards and Wilson (2004). Genoa addressed event-led regeneration building on its maritime identity, as suggested by the realisation of the Aquarium in occasion of the Expo in 1992 or the Galata maritime museum and the recovery of the lighthouse for the ECoC 2004. Liverpool adopted an opposite approach with regards to maritime heritage, prioritising issues of economic benefits over conservation. This provides relevant recommendations and suggestions for European port cities aiming to host the ECoC, as well as other cultural events. For instance, event-led regeneration in Hull fostered by the UK City of Culture (UKCoC) 2017 raises similar concerns.

The perspective of event-led regeneration in port cities helps to explore from a different point of view the complex port-city relationship, and to fill the traditional gap regarding broader socio-cultural impacts of cultural mega-events displayed by the literature, as well as to overcome the traditional spatial and static view of port-city relationships. It also explores political aspects of planning at the port-city interface, which have only recently been investigated by governance approaches to port studies (e.g. Daamen and Vries, 2013). For instance, the fluctuating port-city interface in Rotterdam offers an interesting perspective on the relationship between culture-led regeneration and strategic decisions on port development and competing urban-port uses.

A crucial feature of this study and the proposed approach is the connection between event-led regeneration and planning, which has seldom been explored in the literature. As mentioned in the previous sections, if there is a recognition that culture- and event-led regeneration are more effective when embedded into broader visions of future development, little knowledge has been produced about how this happens or how this connection ought to take place, both in terms of contents of strategies and of governance processes. In turn, governance episodes emerging from extraordinary practices and

approaches displayed by port cities involved in event-led regeneration might provide interesting insights for planning theory, as well. Such experiences may encourage innovative approaches and creative solutions to recurrent problems and may introduce new discourses and spatial concepts. For instance, in Genoa, the ECoC programme and the strategic plan explored issues of sustainability and legacy of event-led regeneration, introducing the concept of 'durability'. Governance episodes justified by the extraordinary character of a bid for the ECoC or of the event itself may then become part of ordinary governance and planning practices. New planning processes, discourses and strategies are as an interesting legacy of the ECoC as its economic impacts, albeit much less investigated. They may also fuel and enrich general debates on planning theory and practices.

7 CONCLUSION

In this paper, I presented the rationale at the basis of a PhD research – at its early stage – on event-led regeneration in European port-cities. The paper focused on the European Capital of Culture, formulating key research questions and proposing a methodology to address them. The starting point is the lack of any focus on port cities in the literature on event-led regeneration, albeit many port cities have been and will be awarded the ECoC title, as well as its extensive gaps concerning the complex dynamics at the port-city interface, the cultural, socio-economic and political aspects of event-led regeneration and its relationships with other domains of urban policy. Two key research questions emerge, regarding the impact of the ECoC on the port-city interface and its integration to broader urban planning frameworks. The proposed methodology involves a comparative case study analysis of the ECoC in a few European port cities, approached through policy analysis, interviews to key informants, discourse analysis and mapping. Such an approach to event-led regeneration provides recommendations for European port cities that will host either the ECoC or similar cultural mega-events. It also provides an innovative contribution to the debate on the future development trajectories of European port cities, on the evolution of the port-city relationship, on culture- and event-led regeneration and on its connection and integration to urban planning. In a context of growing interest on the cultural dimension of planning, it highlights potential contributions of event-led regeneration to planning theory and practices, arising from the discussion of governance episodes.

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ID 1378 | THE DIRECT AND INDIRECT IMPACTS OF MEGA-EVENTS ON EUROPEAN URBAN HERITAGE

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1 MEGA-EVENTS AS A PLANNING STRATEGY

For the last 150 years, mega-events have been used as instruments to define cities and distinguish them from one another. They have been praised as opportunities for innovation and cursed as overly bloated expenditures, both a blessing or a scourge for the modern and modernizing city. As cities have sought to compete not just nationally, but globally, the hosting of a mega-event has become a sort of qualifier or standard to be achieved. Ongoing discussions debate the professed benefits they bring to host cities and the reality of their legacy. The legacy of the event deals not just with a physical memory, but also a new image or brand for a city that has been projected through the event. Therefore, mega-events have been used as part of cultural and creative strategies to secure much desired global recognition and attract future economic investment (Horne and Manzenreiter 2006; Roche 1994, 2002; Short 2008; Young and Wamsley 2005). The first key aspect of events is the large public spending that accompanies them, introducing a range of physical and social effects on the city, such as new infrastructure projects or facilities (Ponzini and Jones 2015). Secondly, they can also serve as a focusing-event that introduces strict deadlines accompanied by huge expectations, the conditions that can induce actors to put aside differences in order to collaborate (McGillivray and McPherson 2012). These two qualities in particular, mass investments restricted to a hard timetable presents a potential for synergy or friction with the urban heritage of a city.

Generally, urban heritage is one of the more particularly sensitive areas of the city. The introduction of mass tourism, often one of the intended consequences of a mega-event can greatly impact both the physical and the social qualities of these spaces. The decisions made as part of these events can lead also to altering the physical appearance and substance of a place through either conservation or demolition of heritage. These changes can significantly alter or potentially destroy these valued areas of cities. The historic nature of a place can also inversely impact the planning of the event or potentially become a key part of the The direct and indirect impacts of mega-events on European Urban Heritage attraction. While physical changes may be the most immediately visible, the changes to the governance of heritage areas, as well as their definitions, can have the most lasting impact. Whether a city chooses to highlight and promote its built heritage as an integral asset can continue to determine how the city values and protects its heritage even long after the event has ended. The combination of heritage cities and mega-events is therefore one that contains great potential as well as risk and deserves further consideration and study. In the last several years, a number of high profile cities including Boston, Rome and Budapest have cancelled their bids to host the Olympic Games, citing extreme costs and low public support. To broaden the appeal of the Olympics and promote more sustainable practice, Agenda 2020 has established new guidelines.

Specifically, recommendation 2.2 aims to promote the re-use of existing infrastructures (Gold and Gold 2016). This shift could result in the Olympics being more integrated into the existing city fabric. The

previous bid by Budapest for the 2024 Olympics served as a good example as they specifically recognized the use of important historic locations throughout the city to serve as the venues for various events, integrating the games into the city itself more than has been the norm in recent years. With this changing paradigm of megaevents, the European context can provide beneficial examples of how to properly integrate large events within existing city fabric. Over the last thirty years, lesser known cultural mega-events have played an important role in the development of cities and have become a common strategy for cities to turn to. While large Chinese cities such as Beijing and Shanghai have hosted events including the 2008 Olympics and 2010 Expo respectively, if trends continue, smaller scale cities in China and elsewhere may also pursue cultural and sporting events to promote themselves at an international scale. As the Agenda 2020 recommendations become more common and mega-events are more integrated into the city itself, it will be important for cities to recognize and plan how to utilize these events for their greatest benefit. The cases presented herein provide three examples to consider and learn from how the urban heritage of a city can benefit or be put at risk by the significant investments and protracted deadlines of a mega-event.

2 THE EUROPEAN CAPITAL OF CULTURE A MODEL OF AN INTEGRATED MEGA-EVENT

The European Capital of Culture (ECoC) is a yearlong cultural program consisting of a series of events typically situated within the city. This event is one of the longest running continuous EU policies and the flagship cultural program for the European Commission. Beginning in 1985, the event has operated for 30 years with over 50 cities throughout Europe holding the much-coveted title of European Capital of Culture (García and Cox 2013). A key component of the program is the promotion of a distinctively “European culture” (European Commision 2014). The 50+ cities have interpreted European culture in many different ways, sometimes with traditional built heritage taking a leading role, while other cities have chosen to not include it within their programs at all. Typically, the activities of the ECoC are embedded directly within the city itself, with the potential to reference and actively include built heritage more than is typically possible with the Olympics, which have often resided outside of the city and relied more heavily on newly built infrastructure.

While the ECoC program may not be as renown as other mega-events, it has become the inspiration for a number of similar programs. There has been a UK City of Culture program since 2013 with many British cities desiring to participate following the success of the 2008 Liverpool ECoC. Since 1996 there has also been an Arab Capital of Culture initiative organized through the Arab League and since 2015 there has also been the Capitale italiana della cultura in Italy. With the ECoC program slated to continue until 2033, it is a mega-event worthy of continued study. Due to the content of the program and its direct relationship to the city itself, the European Capital of Culture is a relevant mega-event for which to examine how a megaevent adds value to the city itself, particularly its urban heritage.

The three selected case studies of Genoa 2004, Liverpool 2008 and Istanbul 2010 represent three very diverse cities in terms of the contents of their events, their planning systems and approaches to heritage.

In addition to hosting the ECoC, each city has also been recognized as a UNESCO World Heritage site (WHS) for being of outstanding universal value (OUV). While many of the other ECoC host cities also contain important urban heritage, the quality of being a WHS created another point of comparison between the three cases. The application process for WHS is an intensive process that guarantees these cities have valued their heritage enough to ensure its global recognition. The cases will be used to illustrate the great potential and risk they can pose to built heritage through a range of approaches.

Genoa 2004 was selected as the quintessential example of using a mega-event to regenerate the image of the city through a heritage-led approach. The WHS site of Genoa was actually recognized in 2006, two years following the event due to many of the restorations included within as part of a larger long-term strategy of the city that also included the 2001 G8. Liverpool 2008 was seen as an ideal counter point to Genoa for the study. Though the city received WHS status as “Liverpool – Maritime Mercantile City” in 2004, the heritage of the city was largely absent from the 2008 events. Eventually the site was added to the List of World Heritage in Danger in 2012 and presents an interesting opportunity to examine the long term effects of a city choosing to ignore its heritage within a mega-event. Finally, Istanbul 2010 was

chosen both for its focus on heritage, but also for taking the mega-event strategy and expanding it to the extremes within a global city. The planning of the event also different from the strategies of Genoa and Liverpool, revealing the diversity of approaches.

2.1 GENOA EUROPEAN CAPITAL OF CULTURE 2004

Genoa and its revival has generally been declared a success of a post-industrial regeneration (Gastaldi 2016; Bonfantini 2015). While Genoa clearly utilized the transnational mega-event strategy propagated by many cities, it is distinct for its usage of heritage as the key component. The story of Genoa's revival traces its origins to some early renewal projects in the late 1980s, followed by the Expo 1992 and considered finalized with the 2001 G8 and 2004 European Capital of Culture. Through all of these efforts, the historic city centre has played an essential role. The city's 'Golden Age of Reuben' occurred during the The direct and indirect impacts of mega-events on European Urban Heritage 16th and 17th centuries, when as an independent wealthy maritime republic the city was very wealthy and established itself as a centre of banking (Bobbio 2008, 2005a). While the city then enjoyed a period of continuous growth up until the 1970s, it entered a period of several decades of decline and shrinkage. This new scenario resulted from changing national and international trends (Bobbio 2008). By the 1990s, the city centre was in a serious state of degradation, disconnected from the waterfront and, despite containing a Medieval historic core and series of impressive Palaces, it was not known or recognized as a city of culture or tourism.

A key aspect of Genoa's approach was embedding the event within the wider plans for the city. Genoa presents a case where the plans for the city were molded around the event, specifically with the 1999 Strategic Conference and 2000 Operation Plan for the Historic Center. The city brought together the key institutions and actors to establish the goals of these plans to address the issues of tourism, education, development, livability and infrastructure (Comune di Genova 1999). Despite a complex web of projects and funding sources, the city used the strategic conference and the subsequent operation plan to succinctly guide the mass physical transformation of the city. The series of 16th and 17th century Rolli Palaces were selected to be restored in particular with the explicit intention of applying for UNESCO WHS status. This recognition was considered key in establishing the city as a cultural destination and became one of the main goals. The massive shift to focus so heavily on the heritage of the city was a significant change for a city that had not been considered a 'cultural' city during the previous century. These plans and the event reveal a new way of thinking about the city.

It was hoped that this investment in heritage would perform multiple tasks for the city. First, it formed the main theme and attraction for 2004. The idea was that the city itself would draw local residents and visitors back to the city center, both during the ECoC year itself and beyond. While a year of exhibits and concerts might prove exciting for a year, it was not believed to guarantee a long-term return on that investment (Da Molo, personal interview, 2016). Heritage was therefore tasked with creating both a previously non-existent tourism sector as well as an anchor to attract a new creative sector to the city to initiate the regeneration of the city. These expectations were quite high, particularly in a place where there was no strong presence of a tourism industry in a country already competitive in world-renown heritage offerings in cities such as Rome, Florence and Venice.

Figure 1) The Rolli Palaces. (a) Palazzo Bianco (b) Palazzo Rosso (source: author, 2016).

2.1.1 THE OUTPUTS OF GENOA 2004

Over 160 individual restorations and urban improvement projects were completed between the two coordinated mega events. A key to the proper completion of works was the pre-existing academic studies and research that allowed conservationists to make the best decisions for each individual structure restored (Carbonara 2001). In Genoa particularly, with its vast array of painted facades, it would have been nearly impossible to complete the work without seriously damaging their authenticity without such preparation. The works included the grandest palaces of the city: Rosso, Bianco, Tursi and Reale, the same first made famous by Reuben. The facades of a number of smaller palaces within the medieval core were also restored. Several other important projects were the pedestrianisation of several of the key streets throughout the city. These works both improved the urban quality of these spaces to make them more accessible and enjoyable as well as guarantee the long term protection of the city's heritage by significantly reducing harmful pollution. Without the advanced preparation and integration of the event into larger strategic city plans, it was possible to properly complete the restoration works despite the restricted schedule.

Figure 2) Newly restored and pedestrianised public spaces (a) Piazza Ferrari and fountain (b) Via San Lorenzo (source: author, 2016).

The incredible volume of works completed in Genoa through the event cannot be denied. The facade restorations revealed a previously unseen and unknown Genoa. At the time of the events, there were two key issues identified for the continued long-term success of the event. First and foremost, the continued regular maintenance of this newly restored heritage. Otherwise, the city risks eventually losing these structures or they will become even more expensive to restore when major future interventions are required (Alcozer 2005; Pittarello 2001; Storti 2005). Second, key developments were identified in order to continue the forward motion of the city, in particular the Ponte Parodi project, a large cultural and entertainment center on the waterfront (Alcozer 2005), and the Erzelli Citadel by Renzo Piano, a new research and technology district The direct and indirect impacts of mega-events on European Urban Heritage (Bobbio 2005b). The ability to implement these strategies without the extraordinary funding the city provided by mega-events is identified as a key challenge to overcome (ibid.).

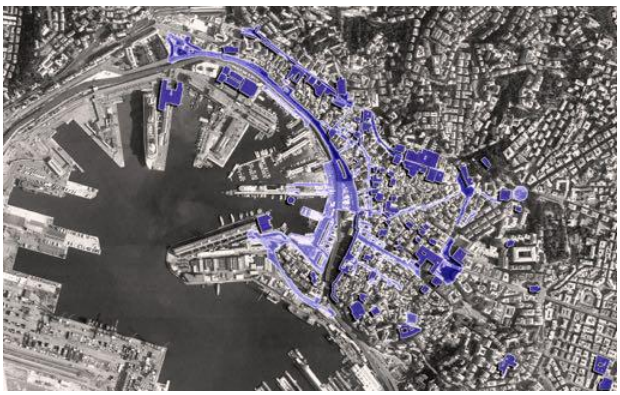

Figure 3) Map of the building projects and public spaces renovated for 2001 and 2004 (source: author, based on Osservatorio Civis).

2.1.2 THE LEGACY OF GENOA 2004

Of the nearly €650 million that Genoa invested in its heritage from 1993 to 2005, nearly a third was allocated for the 2004 event (Gastaldi 2009). To put this figure in perspective, the €200 million of the ECoC nearly equals the annual budget of the Ministry of Culture for restoration works for all of Italy (MiBACT 2017). 2004 represents a key point of change for Genoa in terms of tourism. Compared to the number of visitors 5 years prior to the event, there was a 20% increase during 2004 alone (García and Cox 2013). In 2005, the city received a total of 586,633 overnight visitors, which has since expanded to 801,833 in 2014, a 65% increase (Comune di Genova 2015). The heritage of the city has become a main attractor to draw visitors. Within a national context, the region that Genoa is located in, Liguria, is now the 4th most visited region in Italy. It seems quite clear, based on the available data, that the 2004 European Capital of Culture and the mass restoration works completed through the event have significantly and successfully contributed to establishing Genoa as a cultural destination. The other clearly stated goal for the city was the attainment of UNESCO World Heritage Site status, considered a seal of approval of the transformation of the city and its reputation. This achievement would confirm Genoa's place not only as an important facet of history, but also as an established cultural destination. In 2006, "Genoa: Le Strade Nuove and the system of the Palazzi dei Rolli", was recognized with WHS status. A majority of the listed palaces were restored during the works for the events.

Despite the significant number of improvements, the city yet continues to face a number of social and economic issues with the population continuing to decrease slightly. In large part due to the global economic crisis, the development projects of Ponte Parodi and the Erzelli Citadel have been significantly delayed and remain in the planning stages. The years following 2004 also witnessed a massive decrease in funding for preservation projects nationally (Bodo and Bodo 2016), thus the continued maintenance program has not been implemented as hoped. While the mega-event can therefore be a great force to organize and motivate actors, it often leaves a void that is difficult to replace. Therefore, the heritage-led approach can be effective in terms of rescuing the city's urban heritage and establishing a tourism industry, but, on its own, may not be enough of an attractor to revitalize all social and economic elements of a city. Therefore, while the significant investments in heritage throughout the city were well planned and implemented, this approach may have yet further benefited from greater integration with other innovative social and economic policies and strategies for the city to fully address the many needs of the city.

2.2 LIVERPOOL EUROPEAN CAPITAL OF CULTURE 2008

At the outset, many similarities can be drawn between the cases of Genoa and Liverpool. The trajectories of both cities nearly parallel one another since WWII. They have long functioned as important ports within their national contexts, but were heavily bombed and never quite recovered their former position following periods of deindustrialization. The populations of both cities have been cut in half from the start of the 20th century and they have focused on reestablishing new economic footholds. Perhaps unsurprisingly, Liverpool also intended to use the ECoC to replicate the success of other cities. In particular, Liverpool chose to emulate Glasgow (The Liverpool Culture Company Limited 2002), which hosted the 1990 European Capital of Culture. However, heritage did not play a significant role within the preparations or execution of the event. Therefore, the relationship between the event and the urban heritage of the city is drastically different from what was observed in Genoa and makes for a valid comparison. Liverpool is often cited by academics and other bidding cities as one of the most successful ECoCs ever (García, Melville, and Cox 2010). The event has been noted as playing a key role in revitalizing the image and economy of the city. The main question then is whether there can still be any benefit for heritage when ignored by an event, or, is there a significant risk to the long term viability and value of these areas?

Liverpool has over 2,700 listed buildings and 36 conservation areas (CA) with a total of 9% of the city has been designated as a CA (Liverpool City Council 2017). The city was also recognized as "Liverpool - The Maritime Mercantile City" by UNESCO in 2004 with the site consisting of the waterfront areas and a section of the city centre, so the city has a significant volume of built heritage. By the late 1990's, a coalescing of political, institutional and individual efforts occurred, culminating in a unified vision for the regeneration of the city (Cocks 2013). This conglomeration of actors included the North-West Development Agency, English Partnerships, Liverpool City Council and the newly created Liverpool Vision (ibid.). It is during this period that the city bids for and wins the ECoC, aiming to move beyond the previous

decades of decline and negative stereotypes to establish a Liverpool poised to become the 'Shanghai of Europe' (Paker 2008).

Leading up to the 2008 ECoC then, the heritage of Liverpool found itself at an interesting point. After decades of decline and abandonment, it had come to play a key role in the rebirth of the city starting in the 1980s and culminating in the awarding of WHS. While much of the heritage of the city can be found concentrated within the center, many important historic areas can be found spread throughout greater city The direct and indirect impacts of mega-events on European Urban Heritage region. As the population of the city has halved over the last 70 years, many important structures and neighborhoods now find themselves isolated and lacking their original context due to sprawl and slum clearance during the 60s and 70s. In fact, by 2009, there were still 440 listed buildings considered at risk, so the city's heritage did require further attention.

2.2.1 THE PLANS FOR THE CITY AND LIVERPOOL 2008

Like Genoa, the city also used a series of plans to create an overarching vision for the city, starting with the 20-year Regional Economic Strategy (RES). This strategic plan would provide the basis from which plans produced by Liverpool Vision and the city council would fit within with the 2008 ECoC coming to feature as a key deadline for the city to aim for and central to its regeneration. While plans like the City Centre Movement Strategy, Public Realm Implementation Framework, Townscape Heritage Initiative and other improvement schemes were created to guide public works, the program for Liverpool 2008 did not incorporate any restoration works. Therefore, while the city's original bid recognizes the importance of the city's heritage as a key asset that creates a 'rich environment' (The Liverpool Culture Company Limited 2002), it never comes to serve as a crucial component of the event itself. The intention of the city was that by reshaping Liverpool as an exciting and forward looking destination, the unused historic structures of the city would eventually benefit indirectly. Therefore, the protection of heritage areas was left to conservation focused institutions or the private sector, with the local government serving more as a coordinator or go between actor. While the city and event itself did not oversee the restoration of historic structures or areas, there were 10 restoration projects coordinated to re-open with the ECoC celebrations in 2007 (the city's 800th birthday) and 2008.

The most important of structure restored was St. George's Hall, a Grade I listed neoclassical building from 1854 that provided the city with law courts along with a town hall and concert room that came to serve as the site for many large public events during 2008. Liverpool University also created The Victoria Gallery and Museum in the original university building that has sat unused for the last several decades. There had been previous attempts to find a new function for the historic building, but the funding and motivation were never sufficient. With the announcement of 2008, the university felt an obligation to contribute and give something back to the city (Clough, personal interview, 2016). Therefore, the university agreed to restore the building and establish the gallery and museum, which unified pre-existing collections of the university in one location. Additionally, several historic buildings were restored as hotels in anticipation of the many visitors to the city during the year. While these physical works were nowhere as comprehensive as those in Genoa, the city did in many ways transform through the broader public rehabilitation plans and the opening of a new £ 1-billion private retail center, Liverpool One, which also aligned its grand opening with 2008.

Figure 4) The restored St. George's Hall (left, source: Tony Hisgett, Flickr) and
Figure 5) The Victoria Gallery and Museum (right, source: Author, 2016)

2.2.2 THE LEGACY OF LIVERPOOL 2008

Unlike Genoa, built heritage was largely absent from considerations of the event, yet that does not mean it has not been impacted as a result. With a rejuvenated interest in the city, the number of individual listed buildings considered at risk have been drastically reduced in recent years, despite the lack of restoration within the event itself. In 2009, there were 440 listed buildings at risk compared to only 66 in 2016. Many structures have been converted to hotels as well as residences, particularly student housing. Though the pure numbers are impressive, not all instances of buildings removed from this list would be considered conservation success stories. A series of renovations have led to the destruction and loss of historic buildings in the years since the ECoC such as the demolition of the Dale Street Georgian shops in 2015 and the Futurist Cinema in 2016.

The biggest development since 2008 for the heritage of Liverpool is UNESCO placing the city's WHS on the List of World Heritage in Danger in 2012. The main factor in UNESCO's decision has been the proposed, but not yet implemented, development scheme for Liverpool Waters by The Peel Group. Liverpool Waters is a £5.5 billion proposed scheme covering 60 ha located in and around Liverpool's northern docks, with portions situated within the WHS itself as well as in the buffer zone. Specifically, plans for several skyscrapers within the site have caused the most concern. Despite several design changes, UNESCO continues to deem the height of the towers a threat to the OUV of the site (UNESCO 2012). While the city has enjoyed WHS status since 2004, it has struggled to properly promote this international recognition. There are no clear markings throughout the city or maps to allow locals or visitors to understand when they are within the site. While reminders of the Beatles are an inescapable part of the city, one could easily be excused for not knowing Liverpool is in fact a WHS city. In addition to the physical condition of the city's heritage, the last 15 years have witnessed a clear shift in official policy towards preservation. While the 2004 Heritage Investment Framework placed the city's heritage as a crucial component for future development, the 2010 update framework does not highlight heritage in the future of the city other than The direct and indirect impacts of mega-events on European Urban Heritage through further cooperation with private developers (Liverpool City Council 2010). No replacement plan has been produced since its expiration in 2015. There has also been an ongoing reduction in the number of conservation officers devoted to the protection of heritage within the city council as faced with budget cuts.

Figure 6) The proposed Liverpool Waters Scheme (source: Chapman Taylor)

Liverpool maintains a tenuous relationship with its heritage. While it has a successful history of regeneration through heritage, that tradition has not been carried through the event or city plans. By 2008 there were still hundreds of listed buildings in need of repair that could have benefited from a mass program of restoration such as Genoa. Instead, the city chose to let the private sector take the lead in re-using and restoring its heritage through regeneration schemes. While this approach has at times resulted in projects that are well restored to a high quality, in others it has led to the demolition of sites. The main impact of the event can be observed through the secondary effects that have bolstered independent groups to align their actions with the event. This reliance on the intentions of external entities is a potential gamble that does not guarantee heritage protection or promotion. This case also suggests that the positioning of the event does come to impact long term thinking and policy of the city. Heritage has continued to take a backseat to the continued festivalization and new development of the city. The success of one mega-event may inevitably prescribe their future repetition as Liverpool now hopes to host future large cultural and sporting events. If this strategy comes at the expense of a long-term valuing of the city's heritage, instead of a coordinated effort, the results could be truly catastrophic. The current strategy in

Liverpool, as stated by the Mayor (Belger 2016), is that buildings are saved when viable. Therefore, regeneration seems to have become the ultimate motto/goal of the city. When heritage can benefit those processes it will be valued and included, but otherwise is viewed as a nuisance or something merely standing in the way of development.

2.3 ISTANBUL EUROPEAN CAPITAL OF CULTURE 2010

Istanbul is a case of extremes. It is a city with an 8,000-year history and the sheer scale of the city tests the limits of a mega-event and its ability to meaningfully impact such a large city. A cornerstone of the 2010 Istanbul ECoC was the heritage of the city. However, the approach of Istanbul relied far more heavily on public participation in determining projects with the event not integrated into a set of city coordinated plans guiding the works, as seen in both Genoa and Liverpool. This case therefore additionally explores the benefits and risks of a public participatory model for planning large events, a particularly unique feature of this case. The framework of institutions responsible for the protection of heritage sites is a fractured and complicated network. In Istanbul, these layers range from the involvement of local municipalities, central ministries, and international organizations. Once again, the responsibilities and jurisdiction of these actors are often unclear to outside observers as well as to the actors themselves leading to frequent disputes. As noted by Marquart (2014), the management of heritage in Turkey is in a constant state of change and evolution.

Though new powers were given to local level authorities in 2004, most of the power remains with central ministries. Under the Ministry of Culture and Tourism (MoCT) exists the General Directorate of Cultural Heritage and Museums and the General Directorate of Religious Foundations that separately manages Ancient/Byzantine and Islamic/Ottoman heritage sites respectively (Bonini Baraldi and Shoup 2014; Bonini Baraldi, Shoup, and Zan 2013). Therefore, the newly created 2010 Agency, the body responsible for managing the event, became an additional institution responsible for heritage within this already complicated web.

The most noted heritage sites in Istanbul are included in the Historic Areas of Istanbul, the four WHS properties located on the Historic Peninsula recognized in 1985. While the buffer zone comprises the entire peninsula, the four main areas are the Archaeological Park, which includes Topkapi Palace, Hagia Sophia and the Sultanahmet Mosque (Blue Mosque); the Suleymaniye quarter and Mosque complex; the Zeyrek area surrounding the Zeyrek Mosque (former Pantocrator church); along with the massive Theodosian land walls. Parts of these historic areas have suffered severely from decades of decay and neglect. This current situation has resulted from a variety of factors, including lack of resources and funding, both publically and privately (Çelik 2010). Laws promoting urban renewal, tourism incentive and prevention of earthquake damage have also significantly impacted historic through either their 'touristification' or demolition and reconstruction (Bezmez 2008; Candan and Kolluoğlu 2008; Çorakbaş, Aksoy, and Ricci 2014; Dokmeci, Altunbas, and Yazgi 2007; Günay 2010; Günay and Dokmeci 2012; Keyder 2010; Kocabaş 2006; Marquart 2014; Somuncu et al. 2005). In 2003, UNESCO announced that Istanbul's four WHS would be considered for inclusion on the World Heritage in Danger List. Of particular concern was the lack of a proper site management plan for the 4 WHS areas as well as the whole of the historic peninsula. In fact, the mission reports by UNESCO suggest utilizing the 2010 ECoC as a tool to restore threatened sites, recognizing the additional funding and urgency of the event as potential heritage resources (UNESCO 2006, 2008).

2.3.1 THE ISTANBUL 2010 PROGRAM

The direct and indirect impacts of mega-events on European Urban Heritage While the bid for 2010 started life as an entirely bottom-up proposal by several NGOs, the 2010 Agency was ultimately comprised of many central government actors with civil society groups losing much of their influence. As a result, there were varying intentions for the ECoC. For some involved, it was primarily seen as an opportunity to advertise the city on a global stage, with its heritage as the main attractor. However, other representatives of the 2010 Agency, proposed an alternative vision where arts, culture and heritage were localized to make them more accessible to local citizens in areas where they normally do not exist. In the end, both of these intentions are represented in some ways. The report by Ernst-Young (2011) notes that 49% (€ 137 million) of the total budget of the ECoC was devoted to the city's heritage. While a significant investment

for the city's heritage, Karaca (2013) argues that a mega-event should not have been necessary to ensure the financing of these restoration projects in the first place, but rather already regularly maintained and promoted.

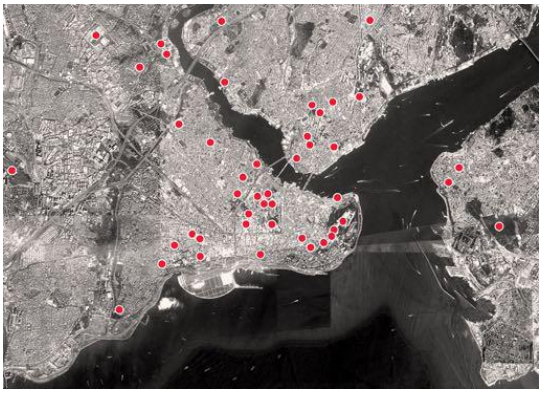

Figure 7) The spread of restoration projects for Istanbul 2010 (source: author)

In total, the event was responsible for over 50 separate restoration projects, several of which were in a severe state of degradation. The works range from religious, civil, military and even industrial sites spanning the Republican, Ottoman and Byzantine eras and ranged from some of the city's grandest and most well-known built heritage to rather small and virtually unknown sites along with several urban pedestrianisation schemes. The most notable monuments of the city that were worked on include Hagia Sofia, Sultanahmet Square and Topkapi Palace, the former home of the Ottoman sultans and the most visited museum in the country. The 2010 event also served as an opportunity to revitalize structures like the Vortvots Vordomon Church, which had been abandoned for over a century. This important Armenian heritage property likely would have otherwise remained left to decay as prior attempts to raise funding for the project over the previous decade had been unsuccessful. Notably, this project was the first ever Armenian cultural property to be funded by the Turkish Government, representing a significant step in the recognition of the country's diverse past and heritage. The Historic Wooden Home Repair Program implemented in the Zeyrek and Süleymaniye areas was another important project that brought together several existing institutions to not only restore some of the iconic wooden homes of Istanbul, but also to develop training programs to provide the skill sets and knowledge of traditional construction methods (Istanbul 2010 European Capital of Culture Agency 2011).

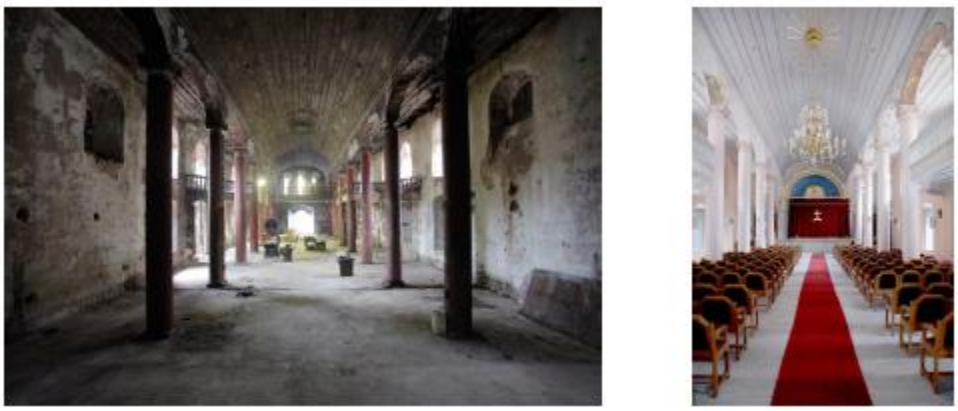

Figure 8) The Vortvots Vordoman Cultural Center (a) before and (b) following the restoration in 2010 (source: (a) Kevork Özkaragoz, (b) author, 2015)

In addition to the physical works completed, two important heritage plans were produced as part of the 2010 event: The Historic Peninsula Site Management plan (SMP) and the Sur-i Sultani Strategic Vision. These plans were both important attempts to secure the city's heritage for the future and generate a longterm vision that had been lacking. Unfortunately, neither plan has been implemented to the degree hoped for. The SMP seems to have lost the ability to cast a forward thinking vision for the future that could be effectively implemented. However, with the document's completion in 2011, UNESCO decided to

remove the Istanbul sites from consideration for the warning list. Additionally, the 2010 Agency was also able to bring together heritage actors from throughout the city that had previously not worked together. New networks were created between local actors with weekly meetings including academics, practitioners and elected officials to engage in conversations about the pressing issues facing the city and its urban heritage.

While the 2010 Agency was not exclusively a heritage body, it was in many ways able to 'fill the gaps' within the complex heritage network for a period of time.

2.3.2 LONG-TERM OUTCOMES OF ISTANBUL 2010

Overall, the 2010 ECoC contributed greatly to the city in terms of physical regeneration, management structures and promoting a culture of preservation of built heritage. However, while the event was used to impact a broad range of heritage, the hard deadline of the event and significant investments may not have been enough. First, over half of the projects were not finished in time for the event itself with many still left incomplete. In other instances, some completed structures have been left susceptible to future The direct and indirect impacts of mega-events on European Urban Heritage damage or excluded from public access. In 2012 the Istanbul Metropolitan Municipality promoted its level support of restoration efforts with a report entitled "Istanbul: Reborn in the Historical City" (IMM 2012). It cites an 860€ million investment between the years 2004-2012 in culture and tourism. However, of that total figure, only 113€ million were spent on actual restoration works, with the rest going mostly to advertising. However, a 2014 report calls into question the state of preservation of Istanbul's monuments and requests UNESCO to reconsider the properties for the World Heritage in Danger list. Specifically, the report sites ongoing practices at construction sites that have directly damaged the Theodosian Land Walls, one of the four WHS (Çorakbaş, Aksoy, and Ricci 2014). The urban regeneration schemes have continued to be implemented in historic areas, leading to their continued loss (Marquart 2014; Yetiskul, Kayasü, and Ozdemir 2016; Yildirim 2015).

Figure 9) Construction site at the Theodosian Land Walls (source: author, 2015)

The works completed as part of the 2010 ECoC represent an important turning point for Istanbul and the protection of its heritage, as recognized by UNESCO rescinding its possible inclusion on the Heritage in Danger List. In this case, the ECoC was responding to an emergency scenario in terms of the city's heritage. Without a doubt, many of the heritage assets of the city would yet be decaying and abandoned if it were not for the event. In this sense, the event has been invaluable in ensuring the continuation of these heritage sites for future generations. The efforts made for inclusivity and a participatory approach should be applauded, particularly in a context like Turkey where such practices are not common. However, this structure, which lacked a single cohesive plan for the event and was divorced from other strategies for the city resulted in reduced efficiency. While the event can be an effective engine to address short term and immediate problems, like the restoration of a decaying structure, it was not as successful in addressing the embedded systematic shortcomings in the existing complex governance structure of the city's heritage. Also, while the investment was significant, it was perhaps not adequate to meet the need of a city like Istanbul with such a vast heritage offering. Ultimately, in a city as large as Istanbul, it would be difficult for an event of any magnitude to dramatically impact in a cohesive and consistent way.

3 CONCLUSIONS: HERITAGE UTILIZING MEGA-EVENTS AS A TOOL

There are several key conclusions to be drawn from these cases that can be applied to historic cities hosting mega-events. As opportunities of great funding that allow for the promotion of the city and an occasion to unify actors within an accelerated timeline, they are capable of introducing a new heritage-centric focus to the city where one may not have previously exist. Genoa successfully used the event to first complete the necessary restoration of the urban core and then subsequently establish itself as a new destination, now known for its heritage and waterfront. While the city may yet have other issues it must continue to address, its heritage has been recognized by UNESCO and its tourism continues to grow. Therefore, for cities wanting to protect and develop their heritage sector, the event can be one tool to use. It can serve as a mechanism with which to protect heritage and address emergency situations of physical decay that otherwise might be lost. However, cities must be careful to properly manage and integrate such efforts into comprehensive and strategic city plans. While an event may be successful to initiate short term goals, a city cannot rely solely on the event, it must plan long-term to maintain and protect its heritage. Therefore, while increased funding and expedited delivery can benefit heritage, their focus and implementation are crucial.

While many physical restorations can be implemented, the event also can improve heritage management and policy. Istanbul included public participation, which could potentially broaden the scope and definition of heritage. However, when not connected to an overall plan, the outcomes can be diffused and not result in a cohesive outcome. Having the event embedded within larger plans also provides greater assurance that desired projects will be completed. Both a potential benefit and drawback of the mega-event is its restricted and steadfast deadline. While this aspect may motivate actors to work together and accomplish tasks on time, it can also result in rushed works that harm instead of protect heritage. Even if the physical restoration is properly carried out, but the long-term care, maintenance or use is not planned for, the site can quickly return to being at risk of degradation or abuse. Therefore, it's crucial to be well planned in advance and recognize the entirety of the task involved and adequately prepare with the appropriate research and planning for both the event and afterward.

Liverpool illustrates the potential for positive secondary effects for heritage from an event, but also the risk of sacrificing historic areas to development interests. Especially when an event is considered successful, but has not emphasized its heritage, it may lead to the city perceiving its heritage as being not as valuable an asset. Regardless of the inclusion of heritage as a focus of the event or not, each of the cases have faced their own struggles in the transition following the event, either in their ability to complete projects that were unfinished or in maintaining the overall initiative and drive following the event's close. While legacy planning is often mentioned as an important part of the process, it is typically far more difficult to implement, even when programmed in advance.

A clear issue in Istanbul, and a potential factor for many Chinese cities, is the greater the scale of the city, the more difficult to evenly distribute the impacts throughout the city while still creating a worthwhile outcome. While, the Shanghai Expo 2010 established a precedent for reusing industrial heritage The direct and indirect impacts of mega-events on European Urban Heritage (Sha et al. 2014), it was restricted to a single area. Therefore, the potential does exist for mega-events to serve as the impetus for innovative heritage renewal in vastly varying contexts, but these efforts can be greatly expanded upon. Ultimately, planning and preparation are a crucial element to best take advantage of the increased budget and time scale that mega-events provide. They can therefore indeed be a potential tool for conservationists and planners to use for the benefit of urban heritage while developing mega-events that are more sustainable and integrated into existing cities.

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ID 1421 | TOURISM AS ECONOMIC RESOURCE FOR PROTECTING THE LANDSCAPE: INTRODUCING TOURISTIC INITIATIVES IN PROTECTED AREAS OF ALBANIA

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ABSTRACT: The paper aims to investigate the relation between landscape and tourism, with a special focus on coastal protected areas of Albania. The relationship between tourism and landscape is mutually reliant: there is no tourism without landscape attractive features and, on the other hand, landscape needs economic resources to be conserved and protected. The survival of each component is strictly related to the other. Today, the Albanian protected areas appear as isolated islands, too far away from each other to build an efficient network and to avoid waste in terms of energy, economy and work force. This study wants to stress the importance of cooperation in terms of common strategies and the necessity of introducing a touristic sustainable model in Albania. Comparing the protection system of neighbor countries of the Adriatic-Ionian region and through a desk review on the best practices of protected areas that benefit from touristic activities, the study proposes the creation of the Albanian Riviera Landscape Park. This action will impact positively the whole southern Albania territory, introducing a sustainable tourism network aimed at valorizing the local heritage and stopping the coastal exploitation processes. The main output is the definition of future development scenarios in Albania with the establishment of new protected areas and the introduction of touristic initiatives.

KEYWORDS: Albanian Riviera, ecotourism, protected areas, tourism for landscape.

1 INTRODUCTION

> *"There is no tourist development without a landscape; it also seems that landscapes, especially those called cultural landscapes, need tourism as an economic activity to be sustained" (Goula et al, 2012).*

How can tourism and landscape coexist? Referring to the above quotation, those two elements are strictly interrelated. The absence of natural or cultural landscapes in a specific area means not only an absence of interest in visiting it, but, more generally, a lack of interest in developing and investing in it. On the other hand, when in an area there are one or more iconic (Dudley and Stolton, 2009) elements, the risk is to overdevelop it and affect irreparably its heritage components.

So, which are the tools for the pacific coexistence of tourism and landscape? One possible answer to the question is the institution of protected area systems. The role of protected areas is to gather valuable elements and protect them from market pressure, but also to valorize and make them accessible to everybody. In the specific context of a touristic developing region, the designation of a protected area aims to switch from a mass tourism destination to an educated and responsible one.

In this general framework, what is the potential of Albania? Due to its accelerated development process, the risk of exploitation is high. The strategic use of the protection system can offer the possibility to slow down this development process and better plan future steps that ought to be taken.

2 PROTECTED AREAS AND TOURISM: FOCUS ON BALKANS

Tourism "in protected areas produces benefits and costs [and] these effects interact often in a complex way" (Eagles et al, 2009). Although the environmental risks are high, touristic activities should not be avoided, but constantly monitored and well managed. Luckily there are a lot of best practices that subvert the negative opinion about touristic development. The new trends of sustainable, responsible, eco tourism started to be discussed in 90s, but there are many different points of view. Ecotourism, for example, is

defined as “sustainable tourism with a natural area focus, which benefits the environment and communities visited, and fosters environmental and cultural understanding, appreciation, and awareness” (IPS, 2010). In the last few years, ecotourism is becoming nothing more than a kind of environmental show business (Hintze, 2008). So how to avoid this risk?

Touristic activities are often presented and sold as “eco”, but then in reality they strongly impact the environment. But it is also clear that “tourism planning and development aims to take advantage of the interest shown by tourists to as to: (i) enhance economic opportunities, (ii) protect the natural and cultural heritage, and (iii) advance the quality of life of all concerned” (Eagles et al, 2009). In order to develop the correct touristic strategy to include in the park management plan, the natural and cultural features of the area should be clearly identified and categorized according to the IUCN protected area management categories. The following figure (Figure 1) defines the priority of “tourism and recreation activities” according to the IUCN Protected Area classification.

IUCN category	tourism priority
Ia - Strict natural reserve	-
Ib - Wilderness Area	2
II - National Park	1
III - Natural Monument	1
IV - Habitat/Species Management Area	3
V - Landscape Park	1
VI - Protected Area with sustainable use of natural resources	3

Key: 1 = Primary Objective; 2 = Secondary Objective; 3 = Potentially applicable objective; - = not applicable.

Figure 1 -Tourism and recreation activity priority in protected areas according to the IUCN categories (source Eagles et al, 2009).

The combination of touristic activities and protected areas is possible if allowed by relevant legislation and IUCN reference category. In the areas belonging to IUCN cat I (Ia -Strict Natural Reserve and Ib ¬Wilderness Area) and II (National Park), the human visitation is reduced to minimum excepted for indigenous communities who have the right to continue their activities on the territory. Categories III and IV are similar in objectives and different in subjects. IUCN cat 3 – Natural Monuments – includes small sites which are important mainly for their cultural heritage associated to significant biodiversity that needs to be protected, while the IV category (Habitat/Species Management Areas) has a more biological objective. In the last categories – V (Landscape Parks) ad VI (Protected Areas with sustainable use of natural resources) – the human and natural interaction is significant, favoring the development of ecotourism programs.

Balkans countries are rich in natural and cultural heritage -which represents a main potential economic resource, although every single country has a completely different approach to this theme. The following figure (Figure 2) shows the differences in protected areas’ extension in the Western Balkan countries, that are facing or close to the Adriatic and/or Ionian Sea.

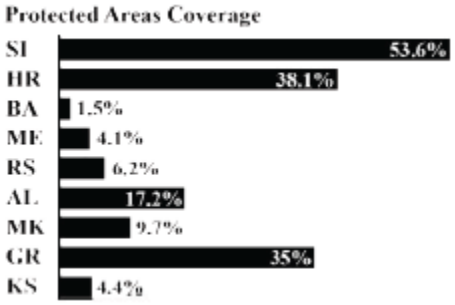

Figure 2 -Terrestrial protected areas coverage expressed in percentage (sources: protectedplanet.net and Mustafa (2011), further elaborated by the author).

Slovenia clearly represents a unique case not only for the Balkan region, but worldwide. With its 2407 Protected Areas, the Republic of Slovenia has more than half of its territory protected by law. Those PA mainly belong to the IUCN category III -Natural Monuments (1159), Natural Reserve (59) and Landscape Park (43). Croatia and Greece follow both with a high percentage, but with different features. Croatia has 82 Significant Landscapes (IUCN cat V) and 81 Natural Monument (IUCN cat III), while Greece counts around 600 Wildlife Refugees (generally allocated in the IUCN cat IV). Albania ranks forth with a total of 60 areas that belong mainly to IUCN cat IV (23) and II (15) (Albanian Ministry Of Environment, 2014). In Bosnia Herzegovina, Montenegro, Serbia, Macedonia and Kosovo there is a prevalence of Protected Areas in IUCN cat III.

IUCN category	hard ecotourism	soft ecotourism	other forms
Ia	*no*	*no*	*no*
Ib	*yes*	*no*	*no*
II	*yes*	*yes*	*no*
III	*yes*	*yes*	*no*
IV	*yes*	*yes*	*no*
V	*no*	*yes*	*yes*
VI	*no*	*yes*	*no*

Figure 3 -Compatibility/suitability of forms of tourism with IUCN's Protected Area Management Categories (source Eagles et al, 2009).

As previously mentioned, the IUCN categories depend on the natural and cultural features of the site and they influence the possible activities to develop. According to Figure 3, there are three possible typologies of tourism to develop in protected areas: hard ecotourism, soft ecotourism and other forms. Hard activities are considered the adventurous and wilderness outdoors experiences with few comforts, while soft ones are more causal and with some comfort (Eagles et al, 2009). For other forms it is intended all other typologies that do not fit perfectly the “ecotourism” definition. The most rigid category is obviously the Ia, which does not allowed any of them. All the others allow only hard and soft tourism. IUCN cat V – Protected Landscape is the only one to allow other forms of tourism in its territory. This category is considered the most flexible one, due to the fact that it often includes wide territories.

3 SLOVENIA AS BEST PRACTICE: SEČ

Slovenia is considered a best practice in the field of sustainable tourism in protected areas, not only for the percentage of area coverage, but also for the effectiveness of its management plans. The case study of Sečovlje Salina Nature Park is presented here for better explaining the positive relation between touristic activities and landscape protection. The data reported is the results of an interview done by the authors to the director of the Park Klavdij Godnic (K. Godnic, personal communication, March 16, 2017). The Sečovlje saltpans are fascinating wetlands (Figure 4) that present an interesting combination of amazing natural heritage and anthropic cultural landscapes with over one hundred of saltpan houses.

Figure 4 -Sečovlje Salina Nature Park (source: Peter Malovrh, available on flickr.com).

The Seč--which is “an area with ovlje Salina Nature Park in Slovenia is a Landscape Park IUCN cat V intrinsic natural value where the influence of people in shaping, maintaining and caring the environment is evident” (Nature Conservation Act, 1999). In the objectives of this category we can find “the creation of opportunities for enjoyment, well-being and socio-economic activity through recreation and tourism” (Stolton et al, 2013). The Sečovlje Salina Nature Park is a good experience in terms of management. The fact that this protected area belongs to a category that allows to organize activities and events is the starting point for any touristic development process, supported by a Management Plans that clarifies duties, responsibilities and limitations. In this specific case, touristic activities are related to sport and environment.

In the last two years, the number of tourists increased by 24% -from 32'000 visitors in 2014 to 42'000 in 2016. This phenomena is mostly related to the great number of activities organized in the park, such as guided tours, creative workshops and educational programs, sporting activities (e.g. biking, rowing, parachuting, surfing, sailing, etc.). It is noteworthy the fact that, according to the MP, all people that decide to take part in sportive or educational activities are considered “paying costumers”, although they do not enjoy all the park traditional touristic services.

Those activities generate an income of 200'000€/year that, summed to the 250'000€/year received from the government, are used for the 15 employees’ salaries and the park maintenance machines. The main difficulty in the economic management is the financial split of private and public activities, due to the fact that park is officially one body with one financial account. From an environmental point of view, the main risk is related to the possible pollution of the Adriatic water sea in the coastal area of the park.

4 ALBANIAN TOURISTIC POTENTIAL

> *Albania has an extremely interesting touristic potential. This potential is expressed in terms of natural heritage, as well as historical and cultural. Natural influencing factors are the favorable geographic and geo-touristic position, the variety of natural landscape, an appropriate clime, a rich water assets and rich flora and fauna system. From a historical point of view, the Albanian territory is widely characterized by cultural hotspots (Doka and Humolli, 2005).*

In the last ten years, tourism in Albania has changed drastically. Since 90s, the Balkans were considered one of the best backpackers’ travel destination. In 2011, Lonely Planet -world famous travel guide editor – ranked it as the first country in the top ten of must-visit world sites. The score was given according to topicality, excitement, value of money and attractiveness. This surely influenced the touristic trend and, in the following years, travel reports doubled and nicknamed Albania as the Europe Hidden Jewel. In addition to the above-mentioned data, tourism became a priority also due to EU strategies and a number of donor investments, because of the high economic development potential of this field.

In the EUSAIR – European Strategy for Adriatic and Ionian Region, Albania plays a fundamental role as coordinator of the forth pillar with Croatia: sustainable tourism. In a more specific way, the strategy aims to diversify the touristic offer and increase sustainability and responsibility in tourism management. In addition, EU adopts tourism as one of the priority measures in all cross-border-cooperation programs, focusing on preservation, renovation and capacity development. An example is the recently launched Interreg IPA CBC Italy-Albania-Montengro program, which has its Priority Axis 2 titled “Smart management of natural and cultural heritage for the exploitation of cross border sustainable tourism and territorial attractiveness” (Interreg IPA-CBC program, 2016).

In 2015, the Albanian Government drafted the National Touristic Plan (Niented et al, 2017), emphasizing the importance of tourism as national economic resource and providing the first guidelines for future development. The Manifesto Albania 2030 (Aliaj et al., 2015) strongly stresses the importance of sustainable tourism development, basing its considerations on real touristic data provided by WTTC – World Travel and Tourism Council – and local administrations. Aliaj also lists some of the country’s attractive spots – such as three main lakes (Shkoder, Oher and Prespa) and a network of small lakes both natural and artificial, a rich archaeological heritage (Butrinti, Apolonia, Durres, etc), numerous UNESCO sites as Gjirokastra and Berat.

According to the number of projects in progress (cfr Porfido et al., 2016), tourism has become a priority for a number of donors in Albania. The USAID, the World Bank, the AADF, Italian Cooperation, and the Albanian Development Fund all have a clear linkage to tourism, as a generator of local economic development and job creation. In territorial terms, the AADF through its Tourism Improvement District and Business Improvement Districts, is more focused on targeting specific areas in Albania, including key traditional historical towns such as Shkoder, Berat, Kruje, Vlore, Tirane, Gjirokaster and Korç

e. While the WB through its newly approved Integrated Urban and Tourism Development Project will be focusing on the southern qarks, mainly investing in improvement of infrastructure.

In the specific field of protected areas, the project NaturAL (“Strengthening capacity in national nature protection – preparation for Natura2000 network”), coordinated by Italian Development Cooperation (IDC) in synergy with Albanian authorities, aims to inform, communicate and educate young people, visitors, local communities, natural resource managers and all those interested in the importance of nature conservation in Albania and the role of its protected areas. One of the goals is to develop eco-tourism programs in protected areas, focusing on initiative typology, target visitors and management requirements and infrastructures.

5 PROTECTED AREAS AND TOURISM IN ALBANIA

Today Albania counts 59 Protected Areas, 4 of them under RAMSAR protection. In the past 10 years, the protected areas’ total surface has tripled, passing from 5% to the 17.2% (www.natura.al).

Albanian Protection Categories	IUCN	PA	tourism
a) Strictly natural reserve / scientific reservation	I	2	no
b) National Park	II	15	yes
c) National Monument	III	6	yes*
d) Natural managed reservation	IV	23	yes*
e) Protected Landscape	V	5	yes
f) Protected area of managed resources / with multi-purpose utilization	VI	4	no
-) Emerald Areas	-	25	-

*only with previous authorisation issued by the responsible body

Figure 5 -Albanian Protection Categories and Areas, in correlation with IUCN categories (sources: Albania Ministry of Environment and Law on PA, elaborated by the author).

Focusing on ecotourism potential, the protected areas’ law listed 59 protected areas divided in six protection categories (see Figure 5: Strict Nature Reserve, National Park, Nature Monuments, Managed Natural Reserve, Protected Landscape, Protected Area of Managed Resources) and 25 ecological Emerald Areas. The National Park category allows to perform seasonal touristic activities, as well as sailing boats and canoes, flying non¬military helicopters, aerostatic balloons and delta-planes, mountain climbing and other outdoor activities. For Natural Monuments and Managed Natural Reserve, a special ministerial permission needs to be issued. Protected Landscapes are territories larger than 1000ha with specific landscape features, in which activities are allowed. While in the Protected Area of Managed Resources, access and interventions are strictly monitored due to the high environmental risk.

Touristic activities are recognized and allowed by law in four Albanian protected areas’ categories, although two of those require previous authorizations issued by the responsible body. It is worthy to underline that 53 of 59 Protected Areas belong to those categories. In the entire country, only 6 areas are restricting access to authorized personnel. This evidences an important opportunity for transforming natural resources in fundamental economic ones.

6 FUTURE SCENARIOS: ALBANIAN RIVIERA PROTECTED LANDSCAPE

The famous Albanian Riviera (Figure 6), the south coast that starts from the Llogara National Park and ends in Saranda, is a promising touristic destination due to its unique natural landscapes, natural and cultural heritage. The whole area belongs to the District of Vlore (Qarku i Vlores) and counts 7 Protected Areas (Albanian Ministry of Environment, 2014) that cover 15% of the district surface and more than 200 Monuments of Culture, one of which is the UNESCO site of Butrinti. In spite of the importance of its heritage, only in the last years the Riviera started its "touristification" process. This delay is probably caused by the low-quality of the infrastructural system, which slowed down the "invasion", but unluckily the Riviera started to be affected by illegal constructions. One of these cases is the Club Med Resort in Kakome Bay, few kilometers away from Saranda and exactly in front of Corfù Island. The famous French touristic company planned a resort with 350 luxury villas on the base of authorization issued erroneously by the responsible bodies (www.independent.co.uk), fortunately the process was arrested after the protests organized by the local community in 2005.

Figure 6 -Albanian Riviera (source: Angelo Pedrotti, available at panorama-photo.net).

This paragraph analyses the possibility of transforming the whole Riviera in a protected area, in order to add a layer of security to the already existing legal restrictions. The main goal of the unified park is to connect the heritage to its territory in order to operate strategically on it.

From a technical point of view, the IUCN category V -Protected Landscape perfectly meets the Riviera features and needs, joining the necessity of protecting both the natural and the cultural heritage and introducing economic activities as tourism to boost the local development. It is also in line with the Albanian Law for protected areas (Republic of Albania, 2002). A Protected Landscape is protected area where the interaction of people and nature over time has produced an area with a distinct character, significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to the protection and support of the area and its associated values. As in the case of Sečovlje Salina Nature Park in Slovenia, this category allows to create "opportunities for enjoyment, well-being and socio-economic activity through recreation and tourism" (Stolton et al., 2013).

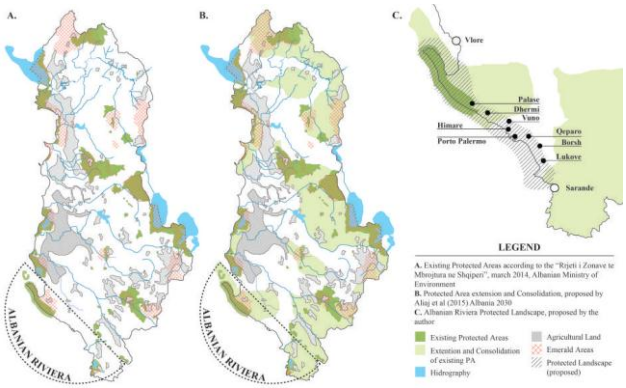

Figure 7 – Albanian Riviera Protected Landscape (source: Aliaj et al (2015), further modified by the author).

The touristic park product can be classified in two main categories: natural/landscape and anthropic/cultural. The first category includes all the natural resources that need to be protected, conserved and monitored through specific processes related to their biological features (e.g. biodiversity). The second one includes physical human interventions – such as ancient settlements both inhabited and abandoned (cfr. Figure 7C) – and activities from gastronomy,, production processes, immaterial cultural heritage, etc.

1. This strategy is based on four main pillars, developed according to the IUCN category assigned:
2. natural/landscape resources protection;
3. anthropic/cultural heritage valorization and re-use;
4. organization and connection of the resources;
5. information and coordination.

The fundamental strategic actions that should be adopted are:

a. to stop building new structures for accommodation and services purposes and to invest in the existing ones, boosting a process of recovering and valorization of settlement heritage. This action is in line with the idea of starting long-term processes aligned with sustainability requirements, whose effects will not be immediately visible;
b. to organize a slow mobility network, avoiding the construction of new infrastructures and reducing its impact on the environment through the adoption of alternative, soft, transportation means (bicycles, electric buses, kayak, etc);
c. to organize the touristic product under a single brand, to coordinate the information and activities, in order to avoid investments' overlapping and waste.

The creation of a protected area with a special focus on touristic activities will also positively affects the labor market, where local communities are encouraged to protect and sell their products. The management role of local communities is an important aspect, but it is not discussed in this paper.

In conclusion, the use of protected area designation aimed at slowing down exploitation processes is not considered a substitute for traditional urban standards, but rater an additional tool that reinforces such standards.

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ID 1431 | TOURISM, GLOCALIZATION AND URBAN REHABILITATION - TRANSFORMATIONS OF THE TOURISTIC ENVIRONMENT OF BAIXA IN LISBON

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1 INTRODUCTION

The tourism dynamics nowadays are the reflection of global and local interactions, verifying, with frequency, the confrontation between the preservation of the local values and their transformation according to the generalized tendency of the cultural patterns of consumption. This transformations, which are recognized for converting many of the trend tourism spots, involve diverse agents that end up arranging efforts to promote tourism locations. The most visible effects pass by a requalification of emblematic public spaces, or neighborhoods with a picturesque value and also areas with high commercial potential.

The urban rehabilitation strategies, with real estate valorization in mind, are also the central vectors for the touristification process. These transformations however raise some issues and possible problems. Some can be emphasized as the effects of gentrification, the heritage authenticity loss and the effects of urban cosmetic that overlap the preservation of the exceptional. On the other hand other positions claim that there should be an investment coordination as a way to avoid the degradation of historical centers or old city areas, which don't correspond with the current needs.

In this sense, this investigation contemplates a critical thinking on the tourism dynamics of actuality, through research on recent theories related with the theme. We try to focus on the relation between tourism and urban rehabilitation strategies, mainly on the oldest city areas. The case study is Baixa Pombalina in the Center of Lisbon. The choice was made due to the controversial application of this area to humanity heritage, as well as the strategies and safeguard plans content. We currently watch as big transformations unroll on Baixa under a bold urban rehabilitation, very visible on the rapid uses transformation and real estate dynamics. On this context we aim to investigate the value of Baixa and its narrow relation with the tourism strategies in the global and local interactions.

2 TOURISM AND URBAN REHABILITATION ON GLOCAL DYNAMICS

Tourism was initially more centered on demand has extended its incidences, pointing to a more complex tourism system, involving, tourist destination, transportation and the various industries associated. The prespective on the offer side highlights the importance of the economical activities, i.e., a business set that provides assets and services to travellers outside of their local residence, for leisure or business (Smith, 2007).

In this context, the cultural nature services are also included, where the cultural itineraries are emphasized and where it's also considered that cultural tourism covers more than the physical nature of monuments and notable buildings, contempleting intangible products (Gratton, 1996). The diversity and complexety of the tourism system points to other dimensions which extend the possibilities for a critical reading on the relation between tourism and territory.

We witness a growing importance of the thematic logics which are revealed on the touristic spaces, with emphasis on the urban tourism (Page and Hall, 2003). On this note, it's important to recognise the generating and inducing forces weight on the tourist imaginary (Ferreira, 2014).

Between the touristic election spots, we highlight the historical centers (Ashworth and Tungbridge, 2004), promotors of the territory in fragmented narratives, which are many times maladjusted of any sense of authenticity (Lew, 1989).

These forms of territory promotion are frequently served in a massified and distant way from the everyday places representing an alternative reality, with a certain ephemeral character, associated to the reasons and alternation of touristic flows.

The construction of public spaces, is frequently the reflexion of exterior forces, that when articulated they incorporate many of the local actors, exerting rapid transformations on the territory. These have effects, not only on the image or cosmetic of the spaces or buildings, but mainly on the economical and social component.

This composes a seeming factor of attractiveness for the touristic view and for the most competitive business oportunities which is many times accompanied by repulse and eviction of local population, by real estate pressure or even speculation associated with assets and services. This trend, which is expressed by the term of gentrification, also reflects the emphasize of specialized services, oriented for the touristic consumption, in detriment of a diversity of assets and services that support the daily life of neighborhoods.

Neighborhood attractiveness is many times associated with the deviation of its effective reality, where the social complexity is reduced to the tipical and picturesque of its rehabilitated old houses, or the routes of winding streets expedited and qualified to captivate the pedestrians. This change in orientation is

supported by attractive pavement and illumination, which recreates itineraries of confort and contemplation of the commercial spaces for the tourist.

The places authenticity is transformed in a tourist authenticity constructed for the visitors, where the playful nature of the traveler overlaps the dailylife of the residents.

Besides the tradicional touristic destinations, which reference the urban touristic microcentralities, it's also demonstrated the particularity of events that reinforce its atractiveness or that sometimes deflects it to new ephemeral routes (Getz, 2001). The shows, fairs or themed parties are the motto

of transformation for the landscape, the creation of new fluxes, although many times they have little expression without the events. They also reference the ephemeral imaginary which are constituted more in function of the event theme and less on the place where it happens, in this way they are spaces of opportunity available for the alternative city and the occasion.

The construction of touristic spaces is the reflection of a vast factor network, where the infrastructures and transports assume a central role. The rapid transition between origin and destination, due to modern transportation system, with highlight on the aerial, gives privilege to the instability and rapid superficial consumption of places. This phenomenon, in connection with the development of the information and communication technologies, contributes for a certain compression of the relation "space-time" – where the far approaches the context of the established networks, enhanced by the vast shared experiences in real time and online. The itineraries and the shared experiences interact contributing to new touristic space perceptions and also to the construction of new touristic places.

The alteration of the relation between space and place and of the own touristic social space construction contributes to new types of commitments between visitor and local, where the meaning of place changes among the global and local interactions – GLOCAL (Robertson, 1992). The touristic system dynamics reveal themselves more and more as integral parts of the planning system and also as strategical urban-touristic visions (Ferreira, 2011). Although the unpredictability and fragility of the touristic activity within the globalization effects on the trending touristic territories, this constitutes an appealing financial resource which deserves a critical deepening under the efforts associated to the competitiveness of touristic destinations.

3 TOURISM STRATEGIES IN LISBON FOR THE 21ST CENTURY

The tourism of the 21st century in Portugal, with highlight in Lisbon, reflects the development of globalization and urban marketing trends launched in the nineties. Between the principal emergence factors of the new touristic fluxes, the accessibility and transportation improvement is one of them. The modernization of these vital systems improves the flux of people and assets which reference the quality of the touristic demand.

These factors, associated with the increment of the planning instruments and the establishment of strategical visions, seek to narrow the relation between tourism and territory, revealing themselves as an essential contribute for the urban tourism positioning. It's in this new context, that tourism places are promoted and asserted on its various agents, from associations, companies, institutions and individuals, contributing to new views and strategical opportunities.

Between the various initiatives and changes connected to tourism in the national and local context, we highlight the creation of INFTUR in 2001, the extinction of the Direcção Geral de Turismo - DGT in 2006 and the creation of the public institute Turismo de Portugal (Tourism of Portugal) in 2007. A new national strategic positioning of tourism achieves expression in the preparation of a document which culminated in the presentation of the Plano Estratégico Nacional de Turismo – PENT 2008 (National Tourism Strategic Plan) defining the orientations for this sector. This document has been reviewed, with emphasis on 2011 version (PENT 2011), revealing the importance of new orientations on tourism due to the changes that occur, mainly after de 2008 crisis.

These document reflect many of the tourism system problems, such as product logics and tourism thematic and also a deeper knowledge on several segments of touristic demand. The approximations to

the definition of tourism strategies in the context of the great contemporary changes, on one hand, incorporates more open concepts and on the other, points to more precise actions on a short and medium deadline.

It's in this sense that the more recent proposals are developed, on the contents of the Strategic Tourism documents ET 2020 and ET 27, which demonstrate the necessity of a larger strategy convergence with the financial system, specifically on the community support boards.

On the wider tourism strategies expectations and their regional and local territory incidence, it's featured the dynamics associated with Lisbon tourism. The knowledge of Lisbon touristic space, taking in consideration the studies done in the 90's (Brito-Henriques, 1999), wins particular spotlight on the 21st century, through either national strategical references or by the various regional and municipal orientations. Although it's only through a series of three strategical tourism documents for Lisbon (TLx) that we can appreciate the increasing complexity of the tourism system: TLx 10 - 2007/2010, TLx 14 – 2010/2014, and the most recent TLx19 – 2015-2019.

These documents reflect an increasing complexity of the touristic system of Lisbon. The institutional changes and the production of tourism strategic orientations which reference Lisbon, allows us to identify a set of principles and actions with a substantial expression on the territory. Besides the statistical information that supports a better knowledge on the touristic dynamics, they also point to Lisbon's competitive perspective in a global context, when compared with other touristic destinations. In its contents we highlight a set of touristic micro centralities (already pointed out on TLx10), which indicate three main focus: the historical center of Lisbon, Belém in the occidental part of Lisbon and Parque das Nações, in the oriental part connected by the riverside axis.

These centralities, don't exclude other attractive focal points, which are the target for touristic promotion, representing however areas where there is a higher element concentration or recognized values in the touristic system.

In the three focus, it's identified the occidental area as a privileged memory of Manuelino and the discoveries period – the cultural and museum district. The central area represents the historical city, of the layers overlap, where the hills reveal themselves through the attractiveness of the picturesque, of the older neighborhoods confronted with the illuminist innovation in the post-earthquake planning of Baixa. The oriental area represents the progress – tribute to the occasional city, with the conquest of the city of events over the industrial heritage – the triumph of an alleged post-industrial city - the place of services, communication and new creative industries. From this new oriental city, the conqueror of public space, emerges a new urban and touristic centrality.

To each of these touristic centralities corresponds particular historical-urbanistic contexts, where beyond their relation with the touristic attractiveness, it's also shown their own dynamics associated with economical, technological and cultural factors, which interfere on the value of the social practices of leisure – "Lisbon is a trending spot", but it can stop being one!

The ability to receive hundreds of visitors has impacts on various levels and one of them is the quality of life and services to the people who live there. The touristic pressure is also accompanied by dilemmas on conservation and development, demanding commitments and placements between the public and private actors, in a way to give answer to development models intended for the tourism and territory connection. The relation between local residents and visitors is one-to-one, due to them having a high interaction, which shows a more or less friendly behavior from the locals towards the visitors, but also transmits a series of diverse external synergy to the visitors, influencing cities daily life.

There have been issued a series of warnings on the effects in Lisbon due to intense touristification, featuring the dangers of marketing addiction in Barcelona or even the adjectives for a "Disney-Sardinhificada" (Disney-Sardinified). Even after these warnings it's inevitable recognizing the effects of touristic expectations on urban requalification, even though it is done under a certain cosmetic – but the apparent beauty has also the function of attracting view to the essence domains.

Of course we can't close our eyes to superficial rehabilitations or to an alleged disfigurement of Lisbon's identity, but also it is necessary some opening to understand the identity transformations in a world in rapid transformation, where Lisbon appears to be emerging in a new culture of urban corporation.

In an effervescent urban tourism culture it's important to identify some of the main factors of change and their costs and benefits. In this process, it is essential to consider strategies of urban resilience, this means, the resistance capacity to the touristic flux breaks. Some more emblematic areas of the city are too exposed to touristic demand, they are initially considered as exceptional on a global context, but can quickly fall into triviality, losing its differentiator factor. In Lisbon, Baixa constitutes one of the main references of this context and should take on as a central observatory of the relations between tourism and urban rehabilitation.

4 THE PLACE OF BAIXA: HERITAGE, PRODUCT E CONSUMPTION

Lisbon is a city with unique characteristics, with highlight on its scenic value of its hills and silver background and blue estuary. It's a secular city, birthplace of globalization in the discoveries period, it wins particular highlight on the 18th century, when it's devastated by a huge earthquake in 1755, followed by tsunami and various fires, destroying great part of the central area. Heir to an unusual multicultural heritage and capital to one of the world major empires, the city faces a tragic scenery of destruction and ruins.

Reborn from the ashes and from the strong will of renovation of the minister José Sebastião Carvalho e Melo, future Marques de Pombal, the lower area of the city is the target of a great urban renovation. Although this operation was, during centuries, badly appreciated. Besides the unity value of the facades in Praça do Comércio, the operation was considered monotonous, of bad taste and of atrocious rigidity.

Between various tries to value the reconstructed area, it's pointed out the exception accomplished on some Art deco buildings performed on the transition to the 20th century. Apart from the diversity in some constructions, the functional dynamic that emerged contributed to the improvement of the urban life conditions, with new stores, shops and diverse activities which characterize the commercial bourgeois position at Baixa.

The value of this compared with the attractiveness of the old picturesque neighborhoods of Alfama, Castelo and Bairro Alto was diminutive. The first references with acknowledged value in Baixa illuminism and a type of pre-modernism on the operations emerges with modernist architects in the thirties and forties, like Pardal Monteiro, Keil do Amaral, among others (Tostões; Rosa, 2008). However, it's in the sixties with the investigation of José Augusto França that the Baixa reconstruction process wins a new protagonism and a focus spot on international illuminist architecture and urbanism (França, 1987).

Despite the attempts to recognize Baixa as a national and international heritage, it only achieves spotlight after the fire in Chiado in 1988 and the reconstruction process of this area, which was concluded at the end of the 90's, close to the transition to the 21st century. In the last decades we assisted to specific operations on the requalification of public space, mainly with turning Augusta Street pedestrian, the interventions in Rossio (Praça D. Pedro IV), Praça da Figueira and more recently in Terreiro do Paço (Praça do Comércio) contributing for the touristic attraction improvement in the central area of the city. These operations, together with the transportation improvement, mainly on the metro-train and boat interfaces, besides various projects that involve the requalification of waterfront areas, have contributed for the enhancement of the urban environment on the central area.

The attractiveness of Baixa is placed between the values of the illuminist innovation of the post-earthquake Pombalino planning and the noltagic "iconography" of the city's memories before the earthquake. From the old city, little is recognisable, seen only through fragments, supported by a dificult narrative which allow us to understand it as a whole. The city of illuminist reconstruction mantains a strong presence, surviving the alterations of their rigorous authors, the military architects and engineers from the illuminist urbanism school – Casa do Risco.

Nowadays Baixa is a product of many achievements, which surpass the initial vision of their authors, either by the functional dynamic achieved or by the requalification of its public spaces, especially distant from the initial vision. However, the vision of an area supported on the most modern infrastructures is still a present reality, which was able to adjust to the circulation and hygiene challenges over the ages (Figure 1). This premature sense of modernity is a testimony clearly visible and distinguishable compared to other contemporary processes.

Figure 1 – View of Baixa in nowadays. Source: author

The urban-touristic appeal of Baixa is however an open value and in discovery process. The essential guide lines to recognize the value of this area are based on the discipline and hierarchy of its street layout and the unity on the facades. But, this illuminist utopia, in a certain way achieved, was also overcome by other values rather difficult to identify and quantify, namely, the appropriation that each owner and leaseholders made of the interior beyond the facades – the interior of the building and its programs. We refer to the achievements of the Baixa architectures over time. Without a pre-defined building that gave support to the drawings of the facades, Baixa was built as a testimony to the necessities and wishes of a society that evolved through the next centuries. It's heritage has an extended set of factors, in a certain way unknown, and that are suffering constant confrontation due to the tourism's pressure and the new concepts of an either light or heavy urban rehabilitation, associated to the levels of damage of the building (Figure 2).

Figure 2 – Baixa and some of rehabilitation processes. Source: author

We distinguish therefore various levels of compromise between the tourism dynamics and rehabilitation ones, among others. On one hand, a strong incidence in public space requalification, with focus on turning commercial streets pedestrian; on the other hand the rehabilitation of innumerous buildings, which are effectively in a significant run-down state. This rehabilitation, however, consists on maintenance or rehabilitation of the facades, with a complete renewal on their structure, system and function. It's possible to verify an improvement on the environment of Baixa and an important urban hygiene operation, but it is also important to deepen its effects on the diversity of the social contents and functions.

In this sphere the tourist value and attractiveness of Baixa deserves a critical reflection, where we identify some aspects to considerate. The importance, not only on the illuminist geometric guide lines, but also of some architectural contents that surpass it and that compose a distinctive and irreversible factor. The new functions oriented for a new mass consumption society are competing with historical activities, heirs to specific production sectors, which are quite difficult to reproduce after their destruction. These heirs have revealed low capacity to resist towards the first impacts of real estate pressure. Thus is essential to have a deeper thinking on the effects associated with the appealing surge of trending touristic spots, which is happening with Lisbon, providing a sustainable competitiveness and learning from experience (good and bad) from other touristic destinations that are exposed to the same effects.

5 CONCLUSION

The relation between the tourism dynamics and urbanistic development aren't always easy to determine. Yet we identify a processes change, mainly on the most emblematic areas of the city, in which it's recognizable an increase on touristic fluxes and a modification on the image of the urban space and buildings.

The plea to urban rehabilitation, mainly, on the older buildings is a key factor in the attractiveness of touristic places, where the image of older constructions in decay is substituted by the superficial cosmetic and by the regeneration or renovation of contents, adjusted to the new tourism demand segments. It is also verified a change in the older activities like traditional commerce, where some of the stores, already with decades or even a century of history, are substituted by new establishments. The big fashion brands overlap local commerce, which is overcome or reinterpreted by the global exchange networks, not only on the level of the final image, but also on the production and distribution processes.

The living spaces also suffer the pressure of new offers in housing and hotel business, where the living is substituted by the overnight stay. The old neighborhood life is influenced by new commercial activities with an ephemeral and intense nature, overcoming the daily life bonds and its own rhythms, which start disappearing or diluting in another cosmopolitan reality. The traditional neighborhood is transformed in the picturesque touristified neighborhood. The access to these neighborhoods and to the resident houses are conditioned on behalf of the urban requalification strategies, which are guided by the increase of pedestrian only areas.

The daily city life and its functional diversity starts being fictional and transforms into the historical touristified city, where touristic imaginaries emerge, fragments of reality recreated by diverse authors under the most diverse itineraries. In this transformation process of the tourism places, we witness the reinforcement of post-modern geographies, where each one constructs their touristic fantasies, through interconnections that feed a collective tourist memory based on the evasion of daily life and on the multiple growths forms of places communication. These are some of the factors that confront the (re)definition of the tourism places like Lisbon, between old patterns of exception, which gave them recognition and the new sharing patterns that connect a new global network of urban-touristic competitiveness.

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ID 1507 | TOURISM IDENTITY IN SOCIAL MEDIA: THE CASE OF A CHINESE HISTORIC CITY, SUZHOU

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1 INTRODUCTION

The city's tourism identity has been emphasized in a contemporary tourism planning practice. Many studies on tourism planning and promotion have addressed that the investigation on local identities and tourism potentials in the development of the city's tourism strategy must go beyond the aspects of geographical space. With emerging social media communication and increasing crowd-sourced data, there is a great potential for engaging social media studies with tourism planning practice in order to reflect visitor's perceptions and subjective views onto the city's tourism strategies. This research seeks for a new approach of relating sense of 'spatial' place with 'digitally-presented' sense of place.

1.1 RESEARCH BACKGROUND

Tourism ecosystem has become increasingly globalized and extremely competitive. The development of global tourism identity and international reputation has been noticeable in the current tourism agenda in many cities across the world. The recent studies show that tourism in small and medium cities is in fact

often driven by standardized solutions for mass tourism with a greater emphasis on the city's major tourism attractions. In the context of tourism planning and promotion, the city's local tourism identity has been studied primarily based on geographical space and tangible tourism designations. Meanwhile, there is a wider acknowledgement that conceptualizations of tourism identity cannot be grounded in physical place anymore – for example, interpersonal relations, tourist activities, social networking. It is evident that uniformed tourist information and standardised tourism strategy can no longer closely connect to diverse interests of tourists and lead to an improvement in the quality of tourism environments. There are opportunities in late modern society, at least for people who are accessible to relevant communication technologies, for relating the identity of the city's tourism with digitally-presented tourists' perceptions and activities.

Many tourism designations across the world have employed the concept of 'smart tourism' and developed smart tourism solutions in various ways in order to facilitate the promotion of their tourism identity and provide an innovative information platform for tourists. In 2008, the State Council in China announced the importance of tourism industry in the strategic development of national economy. The words of professional tourism, digital tourism and smart tourism have been widely used in Chinese tourism industries (Huang, 2014). Prior study situated in China suggests that governments have played a primary role in building and regulating smart tourism instruments in the Chinese context. Many smart tourism projects in China provide similar functions and information, such as tourist information on scenic spots, ticketing, accommodations, public transport, and tourism facilities. However, key failures of smart tourism apps are due to listing fragments of tourist information without concerning diverse needs and interests of users. It is evident that uniformed tourist information and standardized tourism strategy can no longer connect well with diverse interests of tourists and lead to an improvement in the quality of tourism environments. However, there are opportunities in late modern society, at least for people who can access relevant technologies of electronically mediated communication, for relating the identity of the city's tourism with digitally-presented tourists' perceptions and activities.

1.2 RESEARCH AIM AND OBJECTIVES

The main aim of this research is to investigate the digital identity of the city's tourist designations as presented in online user-generated contents, and to explore possible uses of social media research in the tourism planning practice. It investigates the interplay between the city's digital tourism identity and the current tourism development strategy of the government. Key research questions include: where do the visitors of the city go to; what contents do they post in social media in relation to experiences and activities within the places they visited; how can we analyse the images and meanings of the city's tourism identity posted in social media; and, in what aspects of the captured digital tourism identity can be better informed to the tourism planning practice? The overall aims of the research are twofold:

1. To develop a possible evaluation framework to measure the digital tourism identity represented in social media ; and,
2. To outline possible recommendations to link a unique tourism identity perceived from social media data analysis to the tourism planning practice.

This research will employ a case study methodology. This is because the research is to investigate a 'contemporary phenomenon' in a 'real-life context' that can be only be satisfied by a case study methodology (Yin, 2013). To answer the above research questions, the city's tourism identity has been evaluated in four aspects: spatial analysis, temporal analysis, popularity analysis, and corpus analysis. The research framework is illustrated in Figure 1.

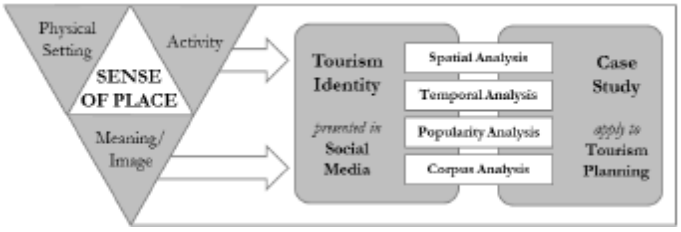

Figure 1 – Research Framework

2 CASE STUDY: CHINESE HISTORIC CITY, SUZHOU

2.1 SUZHOU TOURISM CHARACTERISTICS

The research follows a case study approach and conducts an empirical study on Suzhou, a historic city in China. Suzhou is located in Jiangsu Province in China (Figure 2), and has over 2,500 years of history. As one of important commercial centres of China since the 10th-century Song Dynasty, Suzhou has rich heritage resources and one of most famous historic water towns in China with the city's canals, stone bridges, and traditional gardens that were listed as the UNESCO World Heritage Sites in 1997 and 2000. There are 492 protected heritages in Suzhou, including 12 national heritages. Due to its water town image created by inner city canal networks, Suzhou is often titled as the 'Venice of the East' or 'Venice of China' (Pereira, 2004). Suzhou government also see the tourism potentials in association with the city's socio-economic development, as it stated in the 13th Plenary Session of the Eight Communist Party of the City. Suzhou's tourism strategies can be summarised in six headings:

1. International Strategy: promoting Suzhou's tourism globally to make Suzhou as an 'international first-class travel destination';
2. Branding Strategy: encouraging the revisit to Suzhou and improving the city's tourism reputations by enhancing the three brand image of the city, 'cultural tourism in an ancient town', 'romantic trip to a new town', and 'ecological leisure in Tai Lake'.
3. Integration Strategy: integrating tourism development with urban regeneration to improve the quality of life and revitalise the city's economy;
4. Information Strategy: facilitating tourism using ICT technologies, and promoting 'Smart Tourism' to develop a comprehensive tourism information platform;
5. Low-carbon Strategy: promoting the concept of green GDP with the development of low-carbon tourism and eco-tourism; and,
6. Marketing Strategy: structuring the market development mechanism with collaboration between government and enterprises.

Figure 2 – Location of Suzhou, China

Generally accepted criticisms on Suzhou's tourism practice are the monotonous tourism attractions and limited activities for tourists. Suzhou is well-known for its classical gardens. Although this dominant image of Suzhou brings a significant number of tourists to the city, this also restricts tourists to explore Suzhou beyond the gardens and experience diverse localities and culture. Suzhou has faced a challenge to rethink its tourism development approaches and strategies to diversify the tourism attractions and promote cultural tourism.

2.2 RESEARCH METHODS

This research analyses the city's digital tourism identity from crowd-sourced social media database. The research relates the analysis outcomes to enhance the city's tourism performance by employing innovative bottom-up forms of data collection and mapping of existing tourist's activities. This method supports the

involvement of international and domestic tourists in: mapping their own interests and resources; raising the visibility on existing place-based tourist activities; and, identifying potential local, cultural and symbolic resources, which normally are excluded from mainstream tourism routes. To support the case study, the research can be divided into four distinct parts: (1) conceptualisation; (2) social media survey; (3) data analysis; and (4) evaluation.

The first part of this research is to conceptualize the digital tourism identity based on theories of place identity and tourism planning through literature reviews. As there has been little analysis or evaluation on the use of social media study in tourism planning, the research has developed a possible evaluation framework to categorise diverse tourism identities represented in social media. Secondly, social media survey has been conducted based on evaluation framework developed. In this stage, the research employs a series of interviews to identify widely used social media sites in China, and a novel form of bottom-up data collection methods by using crowd-sourced social media database. The 20 most popular local tourism designations in Suzhou are selected as case studies, and much of survey data has been collected from representative social media sites in China. In total, 640 social media postings, which contain 3960 samples of text comments and images, have been analysed in order to understand the tourism identity spatially and temporally. Thirdly, with social media data collected, tourism identity has been analysed in four aspects: (1) spatial analysis to investigate the spatial relations between tourism designations; (2) temporal analysis to examine the temporal change of digital tourism identities; (3) popularity analysis to review digital tourism identities in 20 tourism designations, and, (4) corpus analysis to explore linguistic landscape of the user's comments posted in social media. Finally, the research findings have been analysed and articulated to investigate how social media research can be applied to the practice of tourism planning and management. To evaluate the Suzhou's tourism practice and activities, the research also uses the participant observation research methods to reflect the insights from the authors' own experiences of living in Suzhou and visiting the city's tourism designations.

3 CONCEPTUALISING DIGITAL TOURISM IDENTITY

The greatest concern over the disadvantages of social media study is perhaps the lack of theoretical framework that may provide little basis for systematic evaluation. This section explores how the tourism development has been engaged with social media research, and how the digital tourism identities can be evaluated in the basis of the place identity measurement framework.

3.1 TOURISM DEVELOPMENT AND SOCIAL MEDIA

In modern society, people can access to more information and use the information in their everyday life, and this is often described as 'Smart' (Du and Yang, 2013). New patterns of interaction between tourism and technology shift the tourism trend towards a sharing of information and experiences through digital communications. Smart tourism is now firmly on the agenda of tourism development across the world. This enables self-organised tourism more feasible and manageable, as individual tourists are able to collect comprehensive tourism information, services, and experiences from diverse online resources (Fu and Zheng, 2013). According to the Chinese government report, Advice on Accelerating Development of Tourism Industry (State Council), emerging smart tourism has greatly promoted the socio-economic and cultural development. In recent years, the development of the tourism-related mobile apps is vast. Many cities in China including Jinan, Wuhan, Chun'an, Tianjin and Nanjing have also launched 'smart tourism' projects in order to provide integrated tourism resources to tourists.

Another significant influence of smart technology into tourism is social media. Social media can provide direct services instantly to individual tourists with latest tourism information. Social media, as a new type of online media, creates interactive relations between users, and forms personal or business networks.

Once this relationship is formed, users tend to maintain the online relations and communications for a longer period of time (Zhang and Zhang, 2013). Social media communication in tourism includes not only information on tourism designations and its surrounding environments, but also their personal experiences and satisfactions. Online user-generated content has transformed the tourism markets and industries to be more interactive. This new media has also provided an opportunity for tourism industries to understand and respond to the needs and demands of tourists more quickly and systematically. Analysing user-

generated data can help understanding how the real-world works and finding patterns in human behaviours (Krumm et al, 2008). As social media is one of popular user-generated contents, data collected from social media could be a valuable asset to evaluate the place identity and overall image of places perceived from tourists (Zhu and Liu, 2011). There is a widely held view that social media study can contribute to investigating tourism identity of particular tourism designation from the tourist's experiences and understanding their behaviour.

3.2 COMPONENTS OF PLACE IDENTITY

In many previous studies, the concept of place identity has been defined as the contribution of place attributes to one's self-identity (Proshansky, 1978; Sabine, 1983; Proshansky et al., 1983; Rivlin, 1987; Korpela, 1989). Place identity is a sense of dependence and belonging of individuals to a certain place psychologically. Individuals experiencing a particular place can generate a certain symbolic meaning or emotional attachment. Place identity is not permanent. When place identity of the self becomes stronger, it will affect to the self-cognition on a place and behaviour of individuals (Zhao and Wu, 2013). A definition of place goes beyond a simple geographic location, and is attached to human activities happening in a place. Human activities include people's perception, lifestyle, diet, transport, events, and habits, to list a few. This human-centric approach of place identity is also closely associated with historical and cultural dimensions of a place. Different geographies, climates and environments influence inhabitants' life, habits, traditions and customs. The unique climate, historic stories and the legacy of the past enrich the cultural attribute of a place (Bernardo and Palma-Oliveira, 1977). While cultural and social aspects of place identity are emphasised in many literatures, there is no doubt that the physical asset of a place is the fundamental element of the place identity. Notably, the geomorphic features, landscapes, architecture styles, and materials are the primary foundation of the place identity. In a systematic approach to explaining the concept of place identity, Montgomery (1998) has applied the notions of physical setting, activities and meaning to the conceptual framework to define sense of place (Figure 3). With an attempt to combine physical and psychological elements of place, the three components of place identity can be summarised as follows:

- Physical Setting: scales, intensity, permeability, landmarks, built form, architecture, and public realm;
- Activity: diversity, vitality, street life, people watching, café culture, events, pedestrian flow, and attractors; and,
- Meaning/Image: legibility, symbolism, memory, sensory experience, knowledgeability, receptivity, psychological access, and fear.

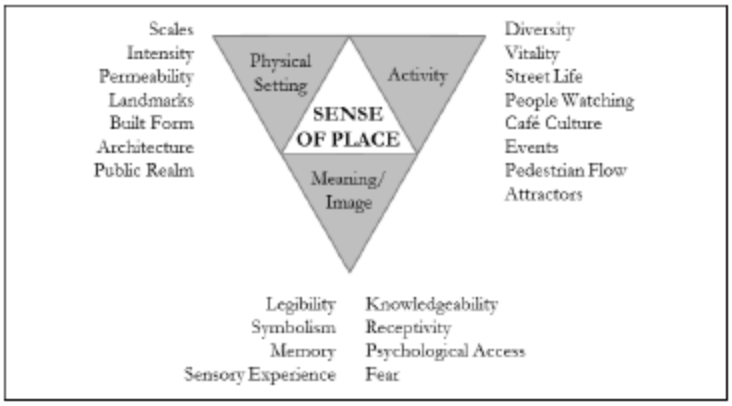

Figure 3 – Three Components of Place Identity (modified from Montgomery, 1998)

3.3 EVALUATION FRAMEWORK OF PLACE IDENTITY

Place identity is becoming prominent in the city's tourism development. Tourism development cannot be isolated from the city's locality, such as culture, lifestyle, festivals, local specialties, customs and other tangible and intangible features. Although it is critical reflect place identity in the development of the city's tourism strategies, there are operational difficulties in examining place identities. This is because the

description of place identity, which can be seen as phenomenological perspectives of the self, is almost impossible to communicate with others fully (Proshansky et al, 1983). While few human geographers (Sack, 1997; Duan, 1998) argued that place, as 'space', can be presented accurately in the aspects of geographic location and physical form, Relph (1976) addressed that psychological meaning is more important than physical environment or human activities.

It is clear that a concept of place identity is consistent with that of physical setting, activities and meaning. However, there is difficulty in applying the notion of physical setting, activities and meaning as an analytical framework for evaluating or quantifying place identity. This is mainly because there is considerable duplication between the three. There are also other challenges in terms of geographical scales of place. Place identity can be formed on micro (e.g. indoor environment, architecture, and landmark), meso (e.g. community, and city), and macro (e.g. region, state, and continental) levels of geospatial aggregation. These three components are useful to explain the concept of place identity, but it is difficult to separate each quality as a dependent variable. Therefore, there is the need to simplify the concept of physical setting, activity and meaning in developing an evaluation framework of place identity. In this context, the research has developed a possible evaluation framework of place identity that can be applied to social media research (Table 1).

Main Category	Sub-category	Descriptions
Physical Setting	Scenery	natural landscape, panoramic view, building skyline
	Topography	canal, streams, hills,
	Landscape	artificial landscape (i.e. gardens)
	Landmark	recognizable natural or artificial feature
	Architecture	one or two building(s), but not landmarks
	Public Space	public realm (street, square, park, etc.)
	Object	detailed elements of physical features
	Public Arts	arts objects in public space (graffiti, cultural items, etc.)
Activity	Transport	transportation and route finding
	Water Transport	water transport, boat riding
	Shopping	shopping and commercial activities
	People	local culture, social activities, street life
	Food	food and drinks (food and café culture)
	Event	specific events organised
	Paid Activity	paid tourist/leisure activities
	Attractor	items attracting attentions (animals, unusual items, etc.)
Meaning	Memory	memory of place, evidence of visit, selfie, self-portrait photo
	Emotion	feelings and psychological meaning
	Knowledge	knowledgeable explanations, craftsmanship
	Sensorial	sight, hearing, taste, smell, touch
	Seasonal	seasonal changes, city lightings (night view)

Table 1 – Evaluation Framework of Place Identity

The framework has three main categories: physical setting, activity and meaning. In order to collect and analyse social media data in the three main categories, 21 sub-categories have also been constructed. Sub-categories are to not only reflect the concept of place identity discussed in existing literatures, but also apply the framework to a concrete example of the historic city, Suzhou. For example, considering the Suzhou's tourism characteristics as a historic water town coming from the city's extensive canal network, the sub-categories of the activity criteria have the two separate categories of 'transport' and 'water transport'.

4 SOCIAL MEDIA DATA COLLECTION

4.1 SELECTING THE CASE STUDIES

As there are a vast number of social media sites available online, it is necessary to select a manageable number of social media sites for a sampling purpose. Drawn from a number of interviews with social media users in China, the research has initially identified 24 candidates of social media platforms including Weibo, Dianping, Ctrip, Qunar, Tongcheng, Tuniu, Lvmama, 58 City, and Mafengwo. Among 24 candidates, the research has chosen three social media platforms for the case studies: Weibo (similar to Facebook, most popular social media in China); Ctrip (similar to TripAdvisor, well-established enterprise-led online tourism platform); and, Dianping (restaurant/place review site, one of largest user-generated

review sites in China). The selection was based on the number of users, reputation, popularity, the quantity of user-generated contents, and at least 5 years of the operation period. It is also expected that the three different types of social media platforms may enable to collect diverse opinions and experiences of tourists in various data formats (photo-oriented and text-oriented postings).

In terms of defining the geographical scope of the research, 20 tourism designations in Suzhou are selected by paying systematic attention to the rankings of tourism designations presented in Weibo, Ctrip and Dianping. Moreover, as the Baidu online map service (similar to Google Map) provides the real-time density data of their service users (density heat map), this spatially presented density data has been taken into account in the selection process (Baidu density heat map from 6th June to 12th June 2016). The selected 20 tourism designations of Suzhou in this research can be categorised as follows:

- Classical Gardens (5): Humble Administrator's Garden, Master of the Nets Garden, Lingering Garden, Lion Grove Garden, Pavilion of Surging Waves
- Old Towns (4): Feng Bridge, Mudu Ancient Town, Tongli Ancient Town, Zhouzhuang Ancient Town
- Streets (3): Guanqian Street, Pingjiang Road, Shantang Street
- Historic Heritages (3): Hanshan Temple, Panmen Gate, Tiger Hill
- Natural Landscapes (2): Qionglong Mountain, Tianping Mountain
- Artificial Landscapes (3): Suzhou Amusement Land, Jinji Lake, Suzhou Museum

4.2 COLLECTING SOCIAL MEDIA DATA

The analysis results in this research are based on 640 social media postings from the three online platforms, Ctrip, Dianping and Weibo. As a single social media posting contains multiple images and/or text comments, this dataset contains 3,960 valid samples in text and/or image formats. Due to constraints of resources, the research is focused on the social media data posted from 1st of January to 30th of June 2016 (for six calendar months). Considering there are many casual postings in social media that are not closely related to the topic of this research, the data was collected through a selection process, rather than randomly, in order to obtain meaningful data effectively and efficiently. As the research deals with different types of social media platforms, the data collection methods have been adjusted for the particular social media platform. As the research evaluates the temporal change of social media data, the social media data is collected evenly throughout the six months of the data collection period. The collected social media posting data was classified using 21 sub-categories of place identity (Table 1). In this process, maximum 5 sub-categories could be tagged for a single social media posting, because there could be multiple interpretations from a single posted image or comment. In order to conduct a quality measurement for the text-format comments, trained surveyors had evaluated each comment using 10 likelihood classifications from -5 to +5 (-5 means strongly negative comments, 0 means neutral, +5 means strongly positive comments). For corpus linguistic analysis, 45 words were selected as most frequently used words in the collected text-format data, and used for further analysis.

4.3 DATA VERIFICATION

While the research uses 640 postings, the sample size for each tourism designation per a calendar month is relatively small. As there might be a concern on the sample size, the research conducted a pilot test to compare the data analysis results with one from a larger sample group. For this purpose, Humble Administrator's Garden, the most well-known tourism designation in Suzhou, was selected for the comparison. The data collected for 21 sub-categories of tourism identity was compared in two different sample groups, one with 142 samples and one with 603 samples (Figure 4). The results showed that there was no significant difference (less than 3%) between the two sample groups. Considering the survey resource efficiency, the analysis results show that the research outcomes from a smaller sample size may also be able to illustrate a snapshot of the city’s tourism identity.

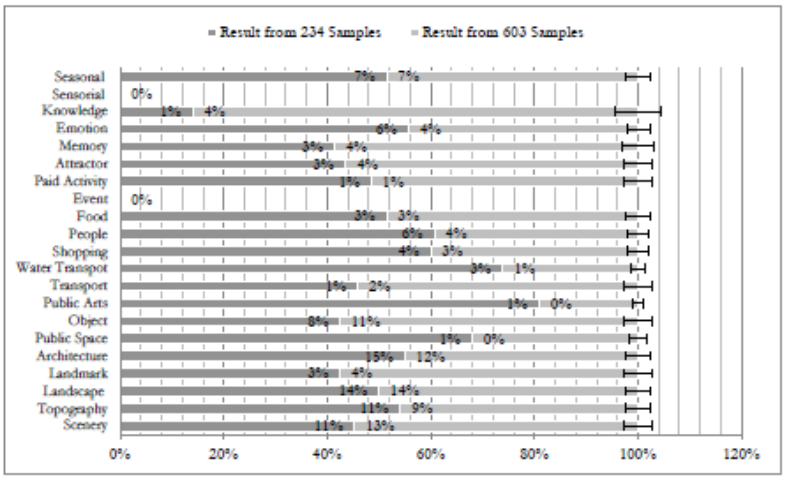

Figure 4 – Comparison of Survey Data from Different Sample Sizes

5 ANALYSING PLACE IDENTITY FOR TOURISM PLANNING

In the process of place identity classification, 640 social media postings had been tagged with 1,775 place identity categories. Among three main categories of place identity, the social media data shows that the postings related to physical setting is noticeable mostly (Figure 5), especially, the architecture element. One possible explanation on this is that the unique architectural style of Suzhou (black roofs and white walls) attracts visitors' attentions and is considered as 'something different' from other cities in China. Another interesting result from the physical setting category is that people publish many postings on scenery landscape and detail objects, however, are less interested in posting contents on the city's landmarks. In the activity category, food and people watching is most common posting, and attractors such as animals and unusual items are also one of popular postings. In the meaning category, not surprisingly, the memory category that includes selfie and evidence of visits is recognised as a popular posting. Additionally, seasonal change is another item posted commonly.

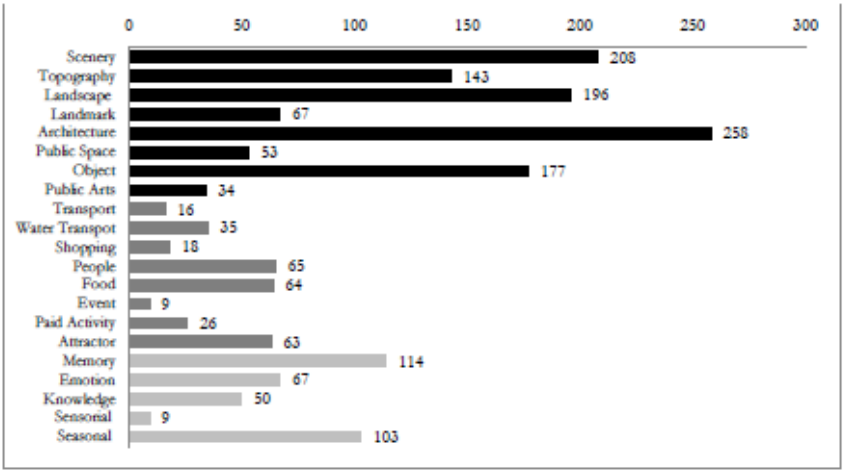

Figure 5 – Social Media Postings and Place Identity

5.1 SPATIAL ANALYSIS

In order to explore the spatial pattern of Suzhou's tourism activities, the research has identified the top 100 tourism designations, which were ranked in the three social media platforms used in this research. The heat map analysis is conducted with the weight of the ranked popularities in social media, and the result is shown in Figure 6.

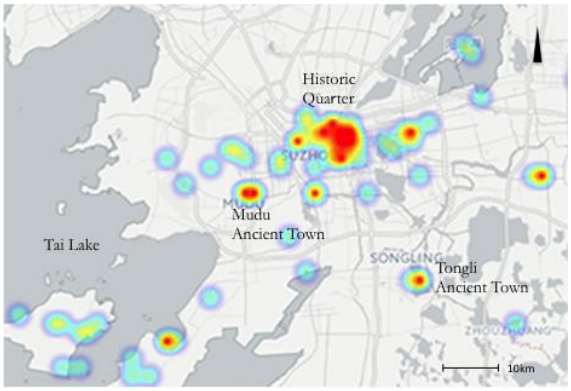

Figure 6 – Spatial Distribution of Suzhou's Top 100 Tourism Designations

There is little doubt that Suzhou has a tremendous potential for tourism throughout the whole area of the city. However, the spatial analysis result recognises the importance of the existing attractions and tourist hotspots. Most popular tourism attractions of Suzhou are located at the historic quarter, and others are clustered in the different parts of the city. Suzhou Tourism Master Plan (2009-2020) has also addressed this issue, and summarised as the tourism strategy of 'One Core, One Belt, Three Districts'. It is notably desirable that links between all the tourist venues are established with "cross marketing" ventures so that tourists can see the wide spectrum of activities available within the area. To make the city's tourism strategy mirroring what visitors perceive in the tourism designations, it is necessary to investigate popularities and marketing potentials in each tourism designations that will be explored further in the following sections.

5.2 TEMPORAL ANALYSIS

From 1,775 place identity tagged in 640 social media postings, the results of temporal analysis are shown in Figure 7. Although a number of postings are different in each calendar month, there is no significant difference in terms of the proportion of the three categories: physical setting, activity and meaning. There was an hypothetical expectation that visitors may post more seasonally related contents in the change of seasons, for example postings on flower blossom in spring, it seems that the seasonal significance is not visible in the analysis result. While visitors post many seasonal contents in their social media accounts (Figure 5), there is no particular proportional change of seasonally related contents throughout the survey period.

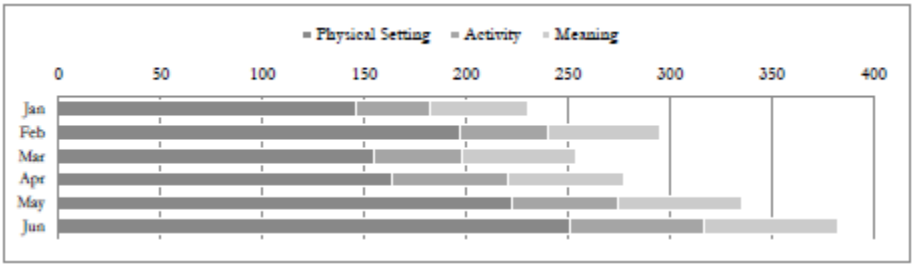

Figure 7 – Temporal Analysis Results (January to June 2016)

5.3 POPULARITY ANALYSIS

Popularity analysis is in twofold. Firstly, all 1,775 tagged categories were analysed based on 20 tourism designations (Table 2). An interesting result is shown in the 'shopping' category. Humble Administrator's Garden, which is the most well-know classical garden in Suzhou, is recognised as the most popular place for shopping activities presented in social media. However, Guanqian Street scored lower in 'shopping' activity, although it has been the city's town centre shopping district. This result can be explained by the decline of Guanqian Street in recent years, due to newly developed large-scale shopping malls in Suzhou. In the case of Pingjiang Road, the 'food' and 'sensorial' categories are highly ranked, although this is one

of main tourism development areas with rich architectural heritages and a concentration of art craftsmanship shops. Suzhou Museum is also worthy of paying attention, as the 'knowledge' category is scored lower considering it is a museum, and the 'architecture' category is also not recognised while this museum building is designed by one of representative Chinese architects. Those analysis results have great potentials in rethinking the tourism marketing and promotion strategies of individual tourism designations.

Popularity Analysis		Physical Setting								Activity								Meaning					Review Score (Avg. 3.9)
		Scenery	Topography	Landscape	Landmark	Architecture	Public Space	Object	Public Arts	Transport	Water Transport	Shopping	People	Food	Event	Paid Activity	Amusement	Memory	Emotion	Knowledge	Sensorial	Seasonal	
Classical Garden	Humble Administrator's Garden	7	10	10	6	8	2	7	3	13	11	33	12	6	0	8	6	4	12	2	0	10	6.8
	Master of the Nets Garden	0	0	5	0	4	6	2	3	0	6	0	5	2	0	0	6	3	4	2	0	3	1.2
	Lingering Garden	1	0	12	6	6	2	11	12	0	6	0	5	6	0	0	5	4	3	6	0	3	4.5
	Lion Grove Garden	3	1	7	3	5	2	7	12	0	0	0	6	0	22	15	8	4	0	2	0	1	5.9
	Pavilion of Surging Waves	6	4	9	6	5	4	9	0	0	0	0	2	0	0	0	3	4	3	12	0	9	3.1
Old Towns	Feng Bridge	4	3	3	1	3	8	3	6	19	9	11	2	3	0	4	6	4	9	6	0	1	1.9
	Mudu Ancient Town	5	7	7	4	6	11	4	3	0	0	0	5	9	22	8	8	4	3	4	0	3	2.2
	Tongli Ancient Town	7	17	3	4	6	11	3	3	19	11	22	3	16	11	4	0	8	12	8	0	4	5.9
	Zhouzhuang Ancient Town	5	6	4	0	3	0	3	0	0	6	11	6	3	22	8	0	3	4	4	0	3	1.6
Streets	Guanqian Street	2	1	0	4	2	13	1	3	6	6	6	3	0	0	0	6	8	1	10	0	6	2.4
	Pingjiang Road	1	6	1	3	4	4	3	9	6	6	0	6	20	0	4	3	10	13	4	22	6	7.2
	Shantang Street	7	17	4	4	5	6	5	0	0	0	0	11	3	0	8	10	4	6	12	22	9	4.2
Historic Heritages	Hanshan Temple	3	5	5	12	8	6	7	18	13	0	0	8	0	0	4	3	3	7	4	0	8	3.3
	Panmen Gate	7	2	5	1	6	4	3	3	0	6	6	5	6	11	0	3	3	9	6	33	2	1.9
	Tiger Hill	4	8	6	7	7	0	6	3	0	0	0	3	2	0	0	3	3	3	2	0	7	5.3
Natural Landscapes	Qiongjong Mountain	10	1	6	13	6	4	11	3	0	20	6	5	5	11	0	8	10	0	4	22	9	4.2
	Tianping Mountain	9	0	7	4	3	2	3	3	13	0	0	6	3	0	8	8	4	3	6	0	6	5.6
Artificial Landscapes	Suzhou Amusement Land	7	3	2	3	3	6	6	6	6	3	0	6	6	0	12	5	9	1	0	0	5	1.1
	Jinji Lake	12	8	0	12	3	9	2	9	0	9	6	2	8	0	0	6	6	3	4	0	4	5.0
	Suzhou Museum	0	0	7	3	5	2	5	3	6	3	0	2	2	0	19	2	5	1	2	0	4	4.1

Table 2 – Popularity Analysis Results (unit: %, except Review Score)

Secondly, 10 likelihood classifications on positive and negative comments posted on social media are also calculated in popularity analysis (Table 2, Review Score). The weights from +5 to -5 are added in the review score calculation and standardised by the numbers of comments posted in each tourism designation. The average review score is 3.9, and Pingjiang Road and Humble Administrator's Garden show higher visitor satisfaction, while Suzhou Amusement Land (theme park) is awarded the lowest score for the visitor satisfaction.

5.4 CORPUS ANALYSIS

The research analysed the frequency of word appearance in the text-format comments in all 640 postings using a word counting software. Considering the similarity of the meanings, 45 words are selected for further corpus analysis in 20 tourism designations. In general, the abstract words like 'wonderful', 'beautiful' and 'eating' are mostly used in collected social media postings (Figure 8). However, there are also differences in corpus analysis results based on the tourism designations (Table 3). For example, Humble Administrator's Garden, the largest and most popular classical garden, is tagged with the words describing feelings, such as 'wonderful', 'beautiful' and 'knowledgeable', while other smaller gardens are described with the words related to the particular activity and physical appetences, such as 'evening activity', 'Suzhou Pingtan (a local musical performance)', 'stroll', 'flower' and 'rockery'.

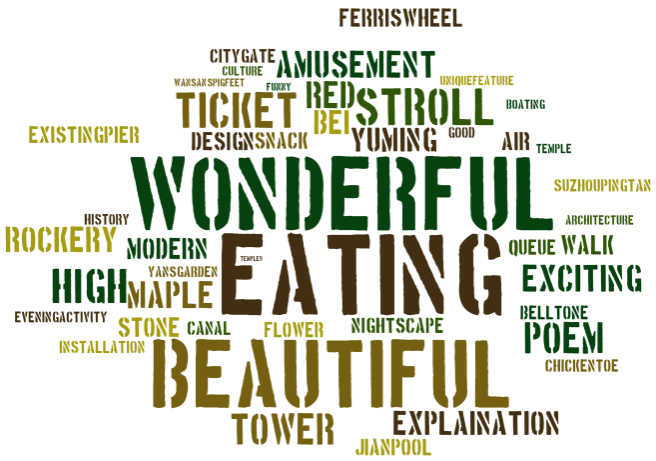

Figure 8 – Word Cloud Results from Corpus Analysis

Frequently Used Words		1st	2nd	3rd
Classical Gardens	Humble Administrator's Garden	wonderful	beautiful	knowledgeable
	Master of the Nets Garden	wonderful	Suzhou Pingtan	evening activity
	Lingering Garden	stroll	knowledgeable	rockery
	Lion Grove Garden	rockery	amusement	enjoyable
	Pavilion of Surging Waves	flower	beautiful	culture
Old Towns	Feng Bridge	poem	canal	bell tone
	Mudu Ancient Town	Yans Garden	beautiful	architecture
	Tongli Ancient Town	ticket	eating	walk
	Zhouzhuang Ancient Town	beautiful	eating	Wansan's pig feet
Streets	Guanqian Street	snack	stroll	unique feature
	Pingjiang Road	eating	stroll	chicken feet
	Shantang Street	eating	wonderful	unique feature
Historic Heritages	Hanshan Temple	poem	ticket	temple
	Panmen Gate	city gate	good	boating
	Tiger Hill	tower	Jian pool	history
Natural Landscapes	Qionglong Mountain	high	amusement	air
	Tianping Mountain	red maple	stone	high
Artificial Landscapes	Suzhou Amusement Land	exciting	queue	installation
	Jinji Lake	ferry wheel	existing pier	nightscape
	Suzhou Museum	Bei Yuming	design	modern

Table 3 – Corpus Analysis Results

6 CONCLUSION

The research found that this new method has a major advantage of mapping existing place-based tourist activities, and plotting visitors' personal interests and perceived resources that can be closely associated with future strategic tourism development of the city. The analysis results show that the social media study is potentially useful to identify the key characteristics of particular tourist designations of the city from the visitor's perspective. The social media research can also be applied to the quality evaluation of tourism experiences and the practice of tourism planning and management. In terms of survey methods, the traditional tourism planning practice usually employs the data collection methods using questionnaires and interviews that are resource-incentive survey methods. As discussed, considering place identity is subjective feelings of individuals, the main weakness with questionnaire and interview survey methods is that the poorly designed questionnaires and the untrained interviewers can mislead the survey results. However, the social media data collection method may be beneficial for place identity survey as it may be influenced less by the survey environments, because social media is user-generated contents.

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ID 1614 | THE SPECTACULARIZATION OF THE URBAN SPACE FOR TOURISM IN BRAZIL AND ITS CONTRADICTIONS

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1 INTRODUCTION

The third industrial revolution based on the interaction of microelectronics with computers and the consequent collapse of the Fordism model of mass production led the major western economies to rethink their models of accumulation.

As a consequence, the capitalist system, unable to continue the process of accumulation in the actual productive base, has been seeking other mechanisms of recovery. Among these is the tertiary sector, where tourism is an important activity for growth resumption. This has implied an increasing capital investment in physical infrastructure to support the production, circulation and consumption of goods and services.

In this sense, starting in the 1970s, many cities in the world started to invest in reinventing their urban spaces. Under the logic of commodities (MARX, 1983), spaces are reinvented and facilities are built to give life and to promote the development of tourism.

In Brazil, the State and its partners have been investing in the revitalization of architectural structures and in the reinvention of the urban landscape in favor of tourism, in the last three decades. In Fortaleza, state of Ceará, shortly after the announcement that Brazil would host the 2014 World Cup, the authorities announced a package of initiatives: the reform of the Maritime Terminal of passengers in the Port of Fortaleza and Castelão Stadium, the revamping and expansion of Pinto Martins International Airport and the works of urban mobility, mainly the Light Vehicle on Rails (VLT), which is the focus of this paper.

This article aims to investigate the contradictions of the recent projects of embellishment (DEBORD, 1997) of urban spaces in the city of Fortaleza, specifically those called "World Cup Works" and their purported promise to revitalize the tourism infrastructure in the city through the Growth Acceleration Program (PAC).

Throughout the research we sought to give some visibility to the relationships maintained by the process of reorganization of the urban space and the logic of capital and the current crisis in their mode of production, as well as identify the negative impacts that such works have incurred on the lives of residents, particularly those families living in the areas surrounding the construction of VLT, and the damage incurred on the city's coffers and on the urban environment.

As for the methodology, we opted in favor of the dialectic method, due to an understanding that only a critical approach may reveal the multiple relationships that the process of reinvention of the urban space maintains with the prevalent social, economic and cultural system. As for the approach, the research

has a qualitative and exploratory nature. We used the techniques of survey of the literature, documentary research, empirical observation and interviews with persons and institutions who had (or have) experiences with the object searched. Finally, the data collected were analyzed with the use of content analysis technique (Bardin, 2004) and with the support of Atlas \ ti software version 7.5.

2 THE CRISIS OF THE FORDIST MODEL OF MASS PRODUCTION AND THE APPEAL TO THE TERTIARY SECTOR

The last three decades of the 20th century, especially in the period from 1980 to 1990 were marked by a crisis in the Fordist model of mass production. Human labor, until then adapted "to the rhythm of the machine, can now be fully replaced by technical commands and by robotics" (Kurz, 1997, p. 370). Thus, unemployment, high rates of inflation in the context of the economy and the consequent sharp decline in purchasing power in the western countries showed signs at that time that the Fordism cycle of accumulation was exhausted. It is a crisis that has been deteriorating considerably, until today (2016), "by means of the revolution in information technology" (JAPPE, 2006, p. 147).

According to Jappe (2006, p. 147) "the computer definitively cuts the link between productivity and the performance of abstract work embodied in value". This is shaking the structure of society, leading to the belief that an entire production mode, based on the unbridled industrial exploitation of human labor force is in a "terminal stage" (Kurz, 1997, p. 372).

In another of his writings, Kurz (2005) points out the self-contradiction of the capitalist mode of production based on the exploitation of the labor force and the mass production of goods. He says:

> *In the three industrial revolutions, the standard of productivity was raised higher and higher through competition. However, the higher productivity implies a lower amount of work, represented by each of the goods and, therefore, the lower the value of the*

> *commodity. That is when we see the self-contradicting logic of capitalism: on the one hand, it seeks the endless accumulation of value and, on the other hand, it is capitalism itself that progressively removes the substance of the value of the goods. Historically, this contradiction was compensated by the capitalist expansion: the lower the value of a commodity, the larger quantity of that commodity had to be produced and sold. [...]. In the third industrial revolution the equation no longer works: the overall mass unemployment matches the internal devaluation of goods. (Kurz, 2005, p.01).*

With the drop in profitability in the productive sectors and an industry based increasingly on microelectronics, capitalism needs, more than ever, the wide support of the tertiary sector - services, trade, the financial sector.

In this sense it is the tertiary sector of the economy that allows for the movement and distribution of numerous goods, such as: transport services, telephony, telecommunications, health, education, trade, energy, water supply, tourism and leisure activities and their facilities (hotels, lodges, restaurants, snack bars, dance clubs, parks, zoos, libraries, bookstores, among many others).

Thus, services emerge as mechanisms of indirect capital appreciation (JAPPE, 1999), covering the territories of the market in search of formulas for overcoming the crisis endured by Capital. Given those conditions, starting in the 1980s, the tourism activity was recognized and valued as an important factor for the sustained growth of the world economy.

3 TOURISM AS A SURVIVAL STRATEGY OF CAPITAL

Tourism, as an output of the productive machinery of the capitalist system, and a social and spatial phenomenon which is translated into a strategy of capital accumulation (BEDIN, 2008), departing from the metropolises of the rich industrialized countries, rapidly sets foot in the countries that are already adapted to urban living. This is the case of Brazil, a country that has been putting large efforts to implement this activity since the 1970s, in order to become a coveted destination within the wide network of global tourism.

It is worth pointing out the role of urban planning as a tool for preparing the places to meet the interests of capital in the form of tourism. In this case, the State acts as an organizing and unifying agent that manifests its power by commanding the spectacle in a defined area. In his book "The Society of the Spectacle", Guy Debord makes it clear about the link between politics and spectacle. For him "the oldest social specialization, the exercise of power, lies at the root of the spectacle" (Debord, 1997, p. 20).

> *According to David Harvey, in his book "Spaces of Capital: Towards a critical geography" (2005), the capitalist state not only regulates competition, for the accumulation of capital, but offers infrastructure for capitalist production and exchange. According to him, there are currently very few aspects of production and consumption that are not deeply affected, directly or indirectly, by the policies of the state" (HARVEY, 2005, p. 79).*

Under such conditions, tourism as a particular form of spectacle, must necessarily, with the protection of the state, seize the spaces, since in modern societies these spaces have to be continuously refurbished to meet the needs of the new economic practices. Says Debord:

By shaping everything around it, society has devised a special technique to act on what gives support to those tasks: the very territory. Urbanism means that capitalism takes possession of the natural and human environment and, to develop the logic of absolute domination, can and will now remodel the entire space as if it was its own spectacular set (Debord, 1997, p. 112).

Thus, seeking to boost an economy in crisis, the enormous transformations of urban areas aim to support tourism and attract a clientele with purchasing power for the consumption of shows (commodities).

4 SPECTACULARIZATION OF THE URBAN SPACE FOR TOURISM IN BRAZIL: THE WORKS OF THE 2014 WORLD CUP

In 2007, when Brazil was officially selected as the host of the 2014 World Cup and the 2016 Olympic Games, twelve cities in Brazil - Rio de Janeiro, São Paulo, Porto Alegre, Salvador, Belo Horizonte, Brasília, Curitiba, Manaus, Cuiabá, Natal, Recife and Fortaleza - became co-hosts of those mega events.

To carry out the World Cup and the Olympic Games, the selected cities were "contemplated" with investment packages for the revitalization of their urban spaces. The initiative comprised several interventions, such as urban mobility (avenues, tunnels, overpasses, among others), tourism infrastructure (revamping and expansion of passenger terminals and airports) and especially renewal and construction of new stadiums, in order to attract and encourage private capital with interests in the big business involved in the games.

> *The organizers of the World Cup and the Olympic Games boasted that these mega events would create opportunities to attract the investment necessary to improve infrastructure in the selected cities, and the impacts would certainly bring economic benefits to the country and improve the living conditions of the population (CUP PORTAL, 2016). According to Curi (2013):*

The organizers, comprising representatives of sports federations and members of federal and state governments, were quite euphoric with the whole situation. They considered the mega events as being automatically beneficial to the country and its people. The sporting mega-events were depicted as a means to enhance and accelerate development in the host country.

However, despite the optimism of their promoters, the infrastructure built in the host cities, in order to support the mega-events, not only had negative economic impacts, but were also responsible for social and environmental problems. Moreover, many works never even started and others were not completed and today (2017), there is no way to predict when they will be handed out to society.

In December 2010, when the evictions, on account of these Mega Events, were already in place, the United Nations (UN) special rapporteur on the Right to Adequate Housing, Raquel Rolnik, sent a letter of allegation (formal instrument used by UN rapporteurs when they receive complaints) to the Brazilian government, denouncing forced evictions generated by works of the World Cup and the Olympics. Among the allegations listed in the document one points out the works approved without a bidding process, forced evictions without prior consultation with the residents, urban interventions that breach the environmental legislation, lack of dialogue and transparency, lack of participation in discussions by the populations living in the communities involved. At the time she received no reply from the government (Raquel Rolnik, 2011).

Nevertheless, Brazil is a signatory of the International Covenant on Economic, Social and Cultural Rights – ICESCR (UNITED NATIONS, 1992), which presents, in its Article 11, adequate housing as a right of every person. It is also worth pointing out the General Comment No. 4 of the Committee on Economic, Social and Cultural Rights that interprets Article 11.1 of the ICESCR and lists the components of the right to adequate housing and identifies what must be done in the case of evictions (Brazil, Secretary of Human Rights of the Presidency of the Republic - Right to adequate housing, 2013, p. 34)

National Coordination of World Cup Committees (ANCOP) confirms that among the various violations of human rights, during the preparations for the World Cup and the Olympics in Brazil, they can list: the exclusion of communities in the discussion and definition on evictions or the existing alternatives; the lack of information from the authorities to the residents of the affected communities; the payment of compensation was considered insufficient and transfers of residents to distant areas within 50 miles (ANCOP, 2014).

As if such violence against the residents, reported by the popular committees of the World Cup and by the media was not enough, many of the construction companies in charge of carrying out the reforms of the urban space as required by FIFA, started working without delivering the Environmental Impact Study/Environmental Impact Report (EIA/RIMA) and a good part of the legislation for the protection of the natural and architectural environment was modified or ignored.

The Environmental Impact Study/Environmental Impact Report (EIA/RIMA), is a primary condition, according to the National Environmental Council of (CONAMA) - Resolution No. 1, dated 23 January 1986 , in order to obtain environmental licensing, which allows the start of works and their preparations, the legislation provides, among other measures, the assessment of impacts, the demarcation of the area of influence and definition of compensation mechanisms and the mitigation of damages incurred by large-scale works.

In Fortaleza, even before completing the procedures of environmental licensing for the construction of the VLT, the government had already initiated the process of expropriation of housing property (ANCOP, 2014), which is a violation of environmental legislation, which requires EIA/RIMA, for these types of initiatives.

The need for EIA for licensing is enforced by the Federal Constitution of 1988 which, in its article 225, paragraph 1, section VI, instructed the Public Authority to "require, in the form of law, a prior environmental impact study for the construction of works or activities that may potentially cause significant degradation of the environment, and the study will be published" (Brazil, 1988).

5 THE RESEARCH AND ITS RESULTS: THE WORKS OF THE WORLD CUP IN THE CITY OF FORTALEZA (CEARÁ) AND ITS CONTRADICTIONS

In the wake of the preparations for the 2014 World Cup, the city of Fortaleza, as well as some other Brazilian cities selected to host this mega-event, announced the construction of some facilities: the reform of the Maritime Terminal of passengers of the Port of Fortaleza and Arena Castelão Stadium, the restoration and expansion of Pinto Martins International Airport and the works of urban mobility, such as the Light Vehicle on rails (VLT). The research focuses the works of the LRV (Light Vehicle On Rails).

The Light Vehicle On Rails (VLT) Extension Parangaba/Mucuripe/Castelão, is an initiative of the State Government of Ceará, through the Department of Infrastructure (SEINFRA) and the de Metropolitan Transport Company (METROFOR). When completed, the project will run an extension of 12.7 km, being 11.3 km on surface rail and 1.4 km of elevated rail. The the line will cross 22 districts, an area that concentrates more than 500 thousand inhabitants in Fortaleza. The potential demand for the new mode of transport is estimated at 100 thousand passengers per day. The project envisions the construction of eight stations. Parangaba and Papicu have distinctive design, due to their integration with the bus terminals.

In 2003, METROFOR presented a feasibility study for the VLT line described above, but a very important component was missing: funds for the works. The opportunity arose when Fortaleza became one of the host cities of the 2014 World Cup. Under this condition the works of the VLT (Fortaleza) became one of the projects of urban mobility for the World Cup (GEOPLAN, 2011).

With an estimated cost of R$ 179.54 million, the works were initiated in April 2012, but in 2014, the State Governor broke the contract with the CPE-VLT Fortaleza consortium, motivated by numerous notifications of delay made by the Secretary of Infrastructure. The decision was published on May 27, 2014. As a consequence, although the World Cup was a huge success, the VLT works remained incomplete.

In 2015 new tenders were called and among the problems still faced by the State Government to carry out the completion of the works, are the forced expropriations of families in the communities who resisted the eviction.

The ownership of the area in which the VLT was supposed to operate was an essential condition to start project construction. On 14 July 2010, State Governor Cid Gomes, signed Decree No. 30,263 declaring as “public interest, for the purposes of expropriation" an area totaling 381,592.87 square meters along the stretch of the former branch of the Federal Railway Network Corporation (RFFSA) and its surrounding areas. Then, the families living in the communities that soon would be facing eviction started to receive visitors, state officials, to estimate the value of the property and calculate compensations.

Two years after the World Cup, some of the works envisioned for the event are still incomplete. The high levels of public spending make up the history of the event in Brazil.

In Fortaleza the economic losses derived from the interruption of VLT works, for more than two years, have not yet been figured out, but the waste of public funds and the negative environmental impacts are visible throughout the entire line.

According to the piece (Fantástico, 2016), R$ 103 million had already been spent on the construction works and on the purchase of train wagons that were never used," notes reporter Alessandro Torres. The reporter is horrified to find wagons, purchased for the VLT, abandoned in a secluded area" of Companhia Cearense de Transportes Metropolitanos (METROFOR), "alongside subway compositions in maintenance". Equipment that have cost dear to the public treasury and which should be transporting people are in decay. The report also showed that the envisioned stations became garbage dumps. He showed the sad conditions of the area still holding the houses that have not yet been demolished by the progress of the VLT works. According to him, the families who did not accept the severance payments, or the rent proposed by the government, live "in the midst of rubble" from the demolitions.

The report showed the position of the then executive secretary of the Federal Comptroller Office (CGU), Carlos Higino Alencar, on the VLT unfinished works. According to the secretary, referring to the audit report, "the big problem was the lack of planning". For Alencar, "lack of planning causes not only paralyzed works, but sometimes waste of et renders equipment that may be damaged by non-use" (Fantastico, 2016).

The evictions, presented as a mandatory measure, without any other available alternatives, and the low value of the indemnities and social rents offered to those who had their homes demolished, have been and are being some of the other problems faced by the residents of the communities affected by the VLT. In an interview, the former federal prosecutor Alessander Sales, said that it would only be correct if the State gave 'adequate shelter to the families that will be evicted, but for this, he says, there has to be a for resettlement plan. Sales says (2016)

> *Adequate Housing means, first, a decent housing unit. But it is not only a decent dwelling: you have to reestablish all the labor, affective, and other bonds, that that person had in the original community. So what is the best way to do this, i.e., how can such disruption, such loss of housing be less traumatic? The answer is to provide another house, with an adequate size, with adequate sanitary conditions and as close as possible to the previous dwelling unit. Why is that? Because the previous dwelling had already established all these ties, labor ties, community bonds. To transfer people to faraway places means disrupting a community. [...]. Thus we have been struggling for the state to prepare a resettlement plan. And according to the norm, such a resettlement plan must provide for the transfer of people to a site as close as possible.*

Regarding the value of the social rent, many displaced families are content with a State aid - which, according to the residents, after much struggle, went up from R$ 200.00 to R$ 400.00. Some families complain that they have to take money out of your pocket to pay the difference in rents. For Sales (2016), "the social rent price is absolutely outdated, people are unable to rent a property nearby. So it has to be readjusted." The representative of the Public Prosecutor argues: "one thing that cannot happen is an urban intervention to make the lives of people worse" (SALES, 2016).

In March of 2016, specifically on the 5th, as described in the table below, two people considered leaders in two communities, among those mentioned above, were: Trilha do Senhor and Aldacy Barbosa. The choice was due to the location of the communities along the stretch where the works of the VLT are located, the greater availability of the community leaders in the dates defined in the work schedule and, above all, the history of struggle that these two communities carry.

Interviewed	Community	Role that represents in the community	Date / time
A	Trilha do Senhor	Community Leader	5/3/2016 at 9h
B	Aldaci Barbosa	Community Leader	5/3/2016 at 14h

Table 1 – Information about interviews
Font: by the author, 2016.

From the incursions to the selected communities, it was revealed more than the one reported in the Fantástico report, namely: the neglect of public power by these populations, devoid of basic services structure, permeated by the daily violence of drug trafficking, fighting of gangs between traffickers, among other problems.

The residents live in modest, low-quality homes built without planning. The houses are piled up in narrow alleys, alleys and alleys without paving and basic sanitation. The scenario is embarrassing and expresses the state of inequality in which low-income residents live in the city of Fortaleza. Some middle-class buildings contrast with the lack of power in the areas studied.

The problems already existing in the communities are accentuated when the implantation of the VLT implies several annoyances and harms the dynamics of the daily life and of the daily activities of the residents. In the following pages of this work, we intend to show how the communities consulted, in the person of their leaders, are experiencing the process of resistance / negotiation on expropriations, removals and resettlements due to the installation of the VLT in the city of Fortaleza.

Figure 1: Community Trilha do Senhor

The Trilha do Senhor community, one of the 22 communities affected by the VLT project and is located in an area of great concentration of people. The landscape of the community in every direction that gazes at the eye shows wreckage and residues resulting from the demolition of real estate formerly occupied by families who had to leave their old place of residence because of the works of the VLT.

On March 5, 2016, an interview was conducted with the community leader of the referred community (here called A) containing questions associated with the Light Rail Vehicle (VLT). The first inquiry was to know how the resident evaluates the fact that the community will have to be removed to make way for the VLT facilities. The respondent replied that it was "very bad, bewildering".

> *Too bad, right? It is a very worrying thing to know that we will be forced to leave here. We're kind of bewildered. You do not know where you're going; What are you going to do with us? Where are we going, will people be helpful? Will they want to help you when you need them? And for us to leave here to live in another place, it's like ... our head ... look ... it's never going to be like here. Here everyone is known; When we need it, everybody comes together (A, Trilha do Senhor).*

It was evident in the answer to the question raised the rejection of the obligation to remove residents from their current housing, without alternative, since this may end up destroying the social bonds of friendship and loss of the current space of coexistence of the residents. According to the resident, those who suffer the most from the removal process are the elderly.

> *Look, the elderly have suffered the most and have been suffering from this news that we have to get out of here. That moved and moved their heads a lot, there are elderly people here who are depressed. Here is a lady who is very skinny, worried, because she's going to leave here, and she does not even know where she's going (A, Trilha do Senhor).*

Regarding the level of satisfaction of the families that already received the indemnities, the interviewee reported that many residents were dissatisfied with the indemnities and much more with the value of the rents. According to A, even among those who have received a new property, some are repentant.

> *Look, here is very good, everything is close. The hospital, the health center, everything is very close. Many people who have been removed work here. Now you imagine, most were moved to the Garden City at Zé Valter. Look, we count on the fingers the people who left here who are 100% satisfied with the new address. Others say they are fine, but at the same time they are not. That's a long way off. Place that neither here does not exist (A, Trilha do Senhor).*

Concerning the disturbances that the work was causing to the community, the interviewee pointed out as main annoyances: excess of dust in the residences, noise pollution, rubble resulting from the demolitions of the residences of the families that have already gone through expropriation, but above all the forced removal of its current places of housing. Community leader A says: "No one was happy with this idea, not even those who got on well with the damages."

When asked about which government decision would make the residents more satisfied, the community representative replied that the best alternative would be to revitalize the community by building new homes, recreational spaces, basic sanitation, schools, kindergartens and other equipment.

Figure 2: Community Aldaci Barbosa

The Aldaci Barbosa community is located in the neighborhood of Fátima near the Central Bus Station. Its occupation dates back to 1950 and was consolidated in the 1970s, with the struggle of the residents involved with the resettlement resulting from the removal of families in favor of the works of the new central bus station, which later resulted in the promoted housing partnership by the state government in 1985/1986. With a history of struggle, the community was one of the first to resist forced removals by the VLT.

On March 5, 2016, with an appointed date and time, an interview was held with the community leader of the community (here called B). The interview contained open questions associated with the VLT project. The result showed the residents' involvement in combating the removals and impacts of this project on the lives of residents. Despite the resistance movement and negotiations with the government and the gains from the struggle of the organized movement, with the help of other actors, the community scene is still chaotic. The few living and leisure spaces, facilities of the place (court and community center) are poorly maintained and almost the entire extension of the community is surrounded by rubble from the demolition of residences of families that have already been indemnified.

The community leader informed, shortly before the interview, about the situation that the community is facing with the negative legacy of the work.

> *We live with a mouse, a cockroach, a scorpion, a termite, ants, an insect, all that's bad we have inside our houses, so nothing has been done here, dirt continues. Those responsible for all this are called SEINFRA, the Secretariat of Cities and Metrofor. It was they who were responsible to have all this cleaning done and so far not had the humility to have it cleaned. Those who live in the dirt are us, they are not they, they do not feel in*

> *the skin what we feel. Are you understanding? It's like health, they have private plan, even taking longer they are taken care of, and the poor if you want to look for SUS. Girl, it's a neglect. This makes me very angry (B, community leader Aldaci Barbosa).*

The first issue raised in the interview was about the process of negotiating removals. The interviewee revealed that everything started very violently.

> *The government here, when it comes to tinkering within our communities, it does not arrive with two years, three years before to prepare the heart of the families, not he arrives already attacking at the hour, making psychological pressure, if not leave has to leave with Police, cavalry, that's how it started, you understand? It started here when Cid Gomes came here at about seven o'clock in the evening, then joined the staff of the association and put Cid Gomes to run, the governor. From then on, those same people who did this ended up coming to the government and negotiating on the doors of our house. I put them to run because I know how to fight for my things, I've been a community leader for more than thirty-two years (B, community leader, Aldaci Barbosa).*

The second question was about the annoyances caused by the impacts of the work. Similar to what was revealed on the Trilha do Senhor, the community leader pointed to the following problems: excessive dust in homes, noise pollution, increased respiratory diseases and loss of living space due to demolition.

Asked for a break in the interview, the community leader draws attention to the environment: "open sewers within the community, much debris. This neglect is the inheritance of past management, along with that now "(B, community leader Aldaci Barbosa).

When asked if he would be given the right to choose on the removal question what would be the position of the community? She replied: "I would not say all, but probably the majority would not leave the community" (B, community leader Aldaci Barbosa).

Regarding the level of satisfaction of the families, the community representative said that many of the residents are dissatisfied with the compensation. "This is a position of almost all the residents. Girl, everybody likes it here, love this place. Some people have lived here for over fifty years. There are people who were born here, were raised here "(B, community leader Aldaci Barbosa).

Finally, when asked about which government decision would make the residents more satisfied, the interviewee replied that "the best alternative would be a housing project in the community itself or in the immediate vicinity, with basic sanitation, recreational spaces, schools and day care centers for children." According to the interview, this proposal has already been negotiated with the government and the local association, but does not know when it will leave.

It is interesting to note that the community leaders interviewed came to converge in some points of the answers to the questions formulated to them. This is proof that the judgment of the two leaders is deeply involved with the interests they represent. It is a sign that the communities of Trilha do Senhor and Aldaci Barbosa live similar situations and share the same struggle.

6 CONCLUSION

The arguments presented above, as well as the empirical observation, the research applied in some segments connected to the problem studied and the field research conducted directly in the communities affected by VLT works, gave evidence that the right to the city is still being governed under the logic of the commodity (the Spectacle), in the conceptual meaning of Marx and Debord. Since the results of the research showed that the actions involved in the creation and revitalization of urban space in order to generate tourism flows through the exploitation of capital surpluses are not concerned with the losses in the city's coffers, or with the environmental issues and the needs of those who suffer the loss of their places of residence.

In fact, while for the companies involved directly and indirectly with the mega events, as well as for the businesses connected to them these works are economically favorable, the opposite is true for those residents who are being evicted on account of the works linked to FIFA and the 2016 Olympic Games. The

embellishment of urban spaces, for tourism, means not only the loss of shelter, caused by the evictions, but the extinction of entire communities. With another aggravating factor: those responsible for projects of urban reinvention , besides not complying with national and international standards of the right to shelter, in what concerns the issue as of involuntary evictions, have breached the environmental legislation. These results only demonstrate that the projects of city revitalization are governed by spectacularization for spectacularization, in the same sense as Debord (1997) affirms, in saying that the spectacle does not want to reach anything other than itself. What it means to say, under the light of his theory, that in capitalism the sole purpose of production is the production of money.

For the apologists of spectacular urbanism the spectacularization of the urban space is capable of bringing economic and social growth, in this work it has been critically shown that these perspectives are mutually exclusive, when it is found that the places inhabited by poor populations are destroyed by same contradictory logic that makes these activities (tourist) a call for financial investments.

This work was based on radical criticism of the way of thinking and reinventing the city and the elaboration of projects of urban restructuring, that come to the encounter of a new way of life based on sustainable principles. What is essential is necessarily the discussion of the need for urban planning beyond the exclusive interests of capital, therefore, another development paradigm, whose primary goals are the sustainability of local and global space and the improvement of people's quality of life.

To conclude, it suggest some possible questions to be addressed in later works that seek to investigate the urban transformations undergone by the great Brazilian metropolises (the increase of socio-environmental inequalities, the spread of poverty throughout the urban fabric, the emergence of new forms of segregation of the middle strata of the population in others). The contrasts between situations of extreme poverty and extreme wealth in the Brazilian metropolises: what has led to such conditions to perpetuate themselves in the city of Fortaleza? Who is interested in the processes of structuring and restructuring the urban space in the city of Fortaleza? What is the importance of a Resettlement Plan for urban revitalization projects involving removals? Finally, it is expected that this work can contribute to the search of innovative strategies in the management of cities, inserting social and environmental components in the reinvention projects of urban space.

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ID 1627 | ANALYZE OF SOUTH GEORGIAN HEALTHCARE TOURISM CLUSTER COMPARING WITH GERMAN AND HUNGARIAN EXAMPLES OF THE REGIONAL PLANNING OF RESORT CITIES

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ABSTRACT: The article discusses importance issues of medical tourism and resort medicine for the case of Southern Georgian resorts, especially resorts in Samtskhe-Javakheti Region Akhaltsikhe, Borjomi and Abastumani. Cluster analysis principle is applied and the central role of health-care tourism and resort medicine in Tourism and Recreation Cluster of Samtskhe-Javakheti is defined. Historical experience of Georgia in health-care tourism and resort medicine is highlighted. Renewed development of health-care tourism and resort medicine should be related to the Sustainable Urban Development of these settlements, therefore, future policy should be determined. In this regard, complex activities in following issues were offered: education improvement in the field of resort medicine, considering appropriate resort treatment in insurance packages, urban planning solutions and Smart city management, environmental and protective planting issues, rehabilitation of resort infrastructure. We offer to create health-care tourism cluster for Georgia considering contemporary trends, and for this were defined successful examples of developed countries, in particular, German and Hungarian cases. The direct contribution of Travel and Tourism to GDP was 6.5% in 2015 in Hungary. The raising part of tourism is medical tourism in Hungary and the most popular area situated near to the Austrian border. All over the country there are many type of baths and the therapeutic use of them is common. The good examples of them could be helpful to create a brand new touristic destination in Georgia. Also a good example for Georgian healthcare Tourism Cluster development is a managed system of German resots named Deutscher Heilbäderverband. Resorts of Germany have united functional system, with interactive map and comprehensive information, resorts profile and category classification, affordable health-care activities, etc. In tourism and recreation cluster of Samtskhe-Javakheti are considered Akhaltsikhe, Borjomi and Abastumani, like resorts, determining main profile of the region. Also potential thermal resorts of South Georgia should be considered for future development. In this regard climatic and geographic characteristics, also balneology resources potential of above mentioned resort cities were shown. Sustainable urban development recommendations for the rehabilitation and further development of the health-care tourism and resort medicine field were worked out.

KEYWORDS: Medical tourism, Resort medicine, Sustainable urban development, Regional Development

1 INTRUDUCTION

Georgia in 20th century was well known as health-care center of former Soviet Union. Huge resort industry have been the major sector of the country economy. According to the data of 1981, 2 million guests, between them for the health-care purposes, came to Georgia annually (Encyclopedic Dictionary, 1983). Many mountain and sea resorts are presented on the whole territory of Georgia. In this paper we focus our attention on the South Georgian tourism and recreation geographic cluster of Samtskhe-Javakheti region, where are concentrated the most outstanding climatic and balneology resorts.

Objectives: main objective of this research is to prove that the development of the heath-care direction of the tourism is most important for the sustainable development of South Georgian resorts Borjomi, Akhaltsikhe and Abastumani, which are most remarkable cities in Samtskhe-Javakheti Region; major tasks are: to define ways, to develop concepts for the activation and revitalization of these resorts. Based on great experience in near past, to find and suggest appropriate foreign examples for significant results whenever possible.

METHODS

Comparative research of foreign examples, cluster analysis, SWOT-Analysis, review of regional development strategies and contemporary sources were used in this paper.

2 RESULTS AND DISCUSSION

2.1 GEORGIA

Historical preconditions: history of medical tourism in Georgia begins in ancient times. “At the beginning of 20th century on the territory of Borjomi mineral springs, during captive works, at the depth of seven meters the remains of stone built baths were discovered, which were considered by archeologists as buildings of 1st century. (Amiredjibi et al., General Plan of Land Use of Borjomi, Development Vision, 2007 p 6.)

Figure 1. Georgia. Map of Resorts in 18th century (Koniashvili, Ushveridze e.al. Atlas of Resorts and Resort Ressources, 1989).

In 18th Century Prince Vakhushti Bagrationi declares about the usage of thermal water springs in medieval Georgia: “On the mountain slope there is a spring, huge, hot and boiling, named Otskhe. Above is the bath, and many are bathing there, because it has a healing power of diseases”. (Bagrationi, Geography of Georgia, Samtskhe, 1892, redaction of 1999). During medieval wars the territory of Samstkhe-Javakheti, named to that times Samtskhe, Tori and Javakheti have been abandoned and population migrated to safe places. New development begun in 30th of 19th century, with attempts of Russian Kingdom. There was almost good health-care infrastructure for that time. Several resort places and towns performed to popular resorts.

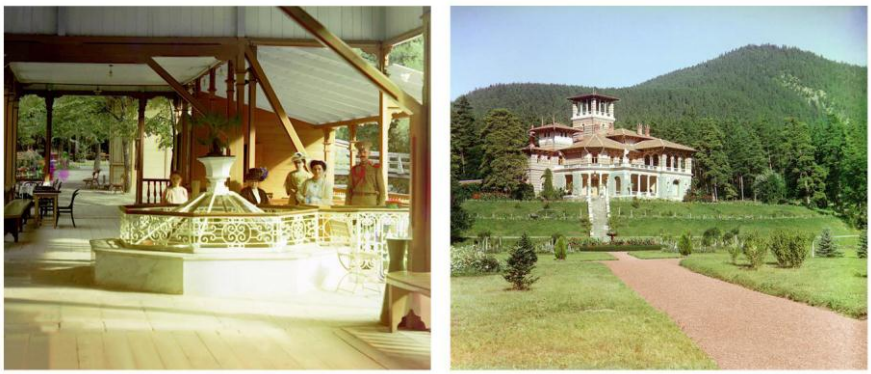

Figure 2. Composition of Historic Photos. 1. Borjomi water source. 2. Romanov’s Palace. Photos of Sergei Prokudin-Gorskii, appr. 1912. (Prokudin Gorskii Collection)

Balneology potential of Borjomi, Akhaltsikhe and Abastumani were investigated at the same time. Romanov's time was the time of rapid development, and resort development was one of the successful commercial projects of Russian Empire. (Borjomi, 2015). Although, many important steps and activities were performed to develop this area: Mineral water bottling and glass production factories were founded; 300 MW power plant was built; several hotels and summer houses of beautiful architecture mostly for nobles were arranged.

Figure 3. Composition of Historic Photos. 1. Borjomi water processing. 2. Borjomi water source. Photos of Sergei Prokudin-Gorskii, appr. 1912. (Prokudin Gorskii Collection)

Borjomi and Abastumani became most beloved places for Georgian and Russian intelligence and also for guests from other countries. For example, Persian prince built adorable small palace at the entrance of Mineral water Park, named "Firuse" because of its turquoise blue color. Akhaltsikhe played another role – communication hub and bordering city was not significantly comfortable for the rest, although in its surroundings a lot of thermal springs were located.

After Revolution of 1917 conditions changed, but resort development continued soon. In soviet times, until 90's of 20th century, in Borjomi 12 sanatoriums, and in Abastumani 10 sanatoriums with strong health-care facilities functioned. They were almost fully loaded. Up to 4000 guests at the same time could have rest in that facilities in small resort city Borjomi, with appr. 15000 inhabitants. For example, Likani sanatorium have hosted 1070 guests, Hotel "Borjomi" – 750, Sanatorium "Kechkhobi" – 700, "Mtis kheoba" – 500, "Plato" – 300, "Poly-clinical union" – 200, "Firuse" – 180, "Bakhtrioni" – 120, etc. (According to the interview with former employee of Resort management department of Borjomi).

In 90's of 20th century due to social and political crisis, resort facilities have stopped functioning. Most of them were ruined and degraded. As a result, unemployment led to environmental problems like illegal logging of forests. Different negative influences could cause unchangeable processes and dangerous threats to the main climatic conditions of resorts.

Figure 3. Samtskhe-Javakheti, Map of Resorts in 20th century. (Koniashvili, Ushveridze e.al. Atlas of Resorts and Resort Ressources, 1989) Importance of resorts according to red circle size.

Nowadays the condition of resort development becomes better. Tourism, especially health-care tourism, wellness and spa are the most prospective branches. It is not possible to develop any other industry for recreation regions. Medical tourism becomes one of the major directions in tourism diversification. Although, tourism development strategy 2025 doesn't consider the great importance of medical tourism development for the degraded regions of Georgia (World Bank 2015, Tourism Strategy 2025).

Climatic conditions of above mentioned resort cities are the following:

Borjomi is a famous resort, located between the slopes of Meskheti and Trialeti ranges, in the valley of river Mtkvari and its tributaries, Borjomula and Gujareti water. Inhabitants: 10,5 thousand (Census 2014). Height above sea level- 800-1000 m. Peculiarities of Borjomi climate are conditioned by the locaton of the resort in moderate climate, low mountain forested zone. The average January temperature is -2,8 ° C. The average temperature in July, is the same as in August, 19°C. The average annual temperature is 8,3°C. Relative humidity is 77%. The average annual rainfall 658,6 mm. The amount of precipitation is more in the warm period (April-September (356,6 mm)), and less - in cold period of the year (October-March (302 mm)). The sunshine duration is 1350-1400 hours per year. (N. Saakashvili, I. Tarkhan-Mouravi e. al., Resort Borjomi). In the city there are several mineral water springs, between them thermal, which are located mainly in the historical Mineral water park of Borjomi.

Akhaltsikhe is an administrative center of the Samtskhe-Javakheti region. Inhabitants – 17,9 thousand (census 2014), The city has status of resort, but resort infrastructure is less developed, probably due to its border position and less forest coverage. "Geographic location – southern slope of Meskheti (Adjara-imereti) mountains, gorge of river Potskhovi Tskali. Height above sea level - 980 m. The terrain - hilly, climate - moderately dry, low mountain. Winter cold, with little snow. Average temperature in January - 3,8°C. Summer is warm, moderately dry. August's average temperature is 20,4°C. The yearly rainfall - 400-600 mm. The average annual relative humidity - 69%. Duration of sunshine a year - 2000-2100 hours. Natural healing factors: the low mountain climate and thermal (38 ° C), carbonate, hydrocarbonate, magnesium-sodium waters with the total mineralization of 9 g/dm3. Types of treatment: mineral water intake (to drink), mineral water baths, passive climate therapy" (N. Saakashvili, I. Tarkhan-Mouravi e. al., Curortography and Resort Therapy of Georgia). City is a communication and tourism hub; recently old fortress named "Rabati" became popular touristic attraction. Akhaltsikhe and its surroundings are rich on thermal springs, but totally without any infrastructure or facilities.

Abastumani is a small resort town in Adigeni municipality with excellent climatic and balneology healing features. Inhabitants – 750, during touristic season – 2000 (Census 2014). Abastumani characteristics: "The climate - the middle mountains lower zone, winter - cold, snowy. Average temperature of January: -6°C. Summer - moderately warm, 16°C average temperature in August. Relative annual humidity is 77%,

average annual rainfall number - 688 mm. Duration of sunshine per year - 1967 hours." (N. Saakashvili, I. Tarkhan-Mouravi e. al., Curortography and Resort Therapy of Georgia). Abastumani shows unique results in the threatment of lung deseases. Also here are thermal hot water springs with different healing features. Abastumani is outstanding also with its cultural heritage buildings – up to 122 houses of 19th and 20th centuries were recognized as cultural heritage buildings. Also astrophysical observatory (built in 1936) gives interesting prospects to the resort development.

Borjomi, Akhaltsikhe and Abastumani could be considered as key points for the regional planning and development of the tourism and recreation cluster of Samtskhe-Javakheti region. Therefore we developed SWOT-Analysis for these three resorts.

2.2 TABLES

SWOT ANALYSE - STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

BORJOMI, AKHALTSIKHE, ABASTUMANI

Strengths	Weaknesses	Opportunities	Threats
established and well known brand	Weakness of the logistical connections and of the long-distance as well city transport network, lack of decision-making skills locally	Increase of the role of Borjomi as international recreational resort, improvement of resort infrastructure, arrangement of exhibition- and concert halls	Loss of connection between governance and society, creating of false wellbeing picture
Traditionally developed resort, emergence of governmental interest in the resort medicine revival issue; increase of the role of education and science	Balneology system disfunction, lack of qualified personal, expensiveness of the branch, lack of conference infrastructure	Strengthening of resort medicine, education and healthcare sector, development of affordable resort medicine, organization of large-scale medical science events	Difficulties of medical equipment and infrastructure, need for big investments; probably the quality of local service may not be worth the price; and it can happen that attracting tourists for this sector fails
Positive examples of green areas arrangement in Borjomi, high interest of the society to the ecological condition of the region	Heavy ecological problems, strong damage of forests, partly wrong planning solutions by the rehabilitation of the existing green areas	Improvement of ecological condition, extension of green areas in suburbs, arrangement of green areas and public spaces in abandoned industry objects	Irreversible processes, related to climate change, delay of green cover restoration measures, Forest regeneration difficulties, late effect

Table 1. Borjomi, SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
Regional development strategy [*]. Well developed trade and handicraft sector	Influence of Akhaltsikhe does not cover the entire region and it can not fullfill the role of real center of the region; its disposition and services are not equally interesting for all subordinated municipalities	Growth of the regional importance, Offering alternative services opposite to the Tbilisi direction, increase of the intellectual potential	Akhaltsikhe might not be able to fulfill all the functions of the real regional center
Key location for the tourist routes, connecting position between Borjomi and Abastumani	Insufficient intellectual and material-technical base, Fewer use of potential in the region	Strengthening of educational and healthcare sectors, restoring of spa-functions of Akhaltsikhe, strengthening of the University	The passive approach of the state and private structures towards the implementation of large investments in the field of healthcare

Positive examples of green areas arrangement in the country	Lack of general master plan of the city, lack of strategic documents and decisions	Ecology improvement, extansion of green areas, arrangement of green public spaces, renewing of old protective planting along the roads	Only local measures of some green areas rehabilitation were implemented, protective planting is not used widely

Table 2. Akhaltsikhe, SWOT Analysis

Strengths	Weaknesses	Opportunities	Threats
Formed and well-known brand, existence of development strategy document [*]	Peripheral location, weakness of the transport network, Lack of decision-making skills locally	Increase of the role of Abastumani as unique climate and balneology resort, improvement of the communications and spa infrastructure	There is a view, that the resort treatment can be replaced by the chemical drugs therapy. Therefore the quantity of guests can decrease
Planned large-scale rehabilitation of cultural heritage	Damage of architectural heritage for long years, big part is wooden, damaged by moisture and fungus	Preliminary study of cultural heritage, 3D scanning, searching for the best ways to rehabilitate	It may not be possible to restore in the primary form, or just the facade reconstruction without reinforcement will be
	and other irreversible negative processes		implemented and hidden destruction of buildings continued
Tradition of resort medicine, interest of the governmental structures to the revival of spa medicine, increase of the importance of educational and science system	Balneology system disfunction, lack of qualified personal, expensiveness of the branch, lack of conference infrastructure	Strengthening of resort medicine, education and healthcare sector, development of affordable resort medicine, organization of large-scale medical science events	Maybe, the organizational side could not be carried out well and the investment costs could not be covered
Excellent natural conditions, high solar insolation	High probability of wastewater pollution with bacilles	The strategy envisages improving ecological conditions	Expensiveness and difficulties by the implementation

Table 3. Abastumani, SWOT Analysis

Climatic conditions and resort features, number and chemical ingredients of springs should be investigated again to update existing researches that were performed in 60th-s and 80th-s of 20th century.

Medical tourism could build a chain of interconnected health-care and spa facilities in the surrounding, involving also places with underused or unused potential (thermal sources of Akhaltsikhe and Aspindza Municipality; Aspindza, Nakalakevi, Uraveli, Tskaltbila etc., eco-tourism in Gujareti valley etc.).

Fig. 4. Regional map of Samtskhe-Javakheti Tourism and Recreation Cluster, with water sources

As successful example of medical tourism development we consider the case of “Borjomi Palace” hotel. According to the data of medical center attendees, the number of guests increased from 12 at the very beginning than center was opened in 2013 up to 470 in high season per month last year. But for the moment this is the only one hotel in the region which offers such services like medical treatment and spa-wellness at the same time. Guests of the hotel, like in another luxury hotels of the same area are mainly foreigners from former soviet countries, in which professional unions and insurance companies cover the part of the expenses.

Another issue is to develop system which works like affordable health-care tourism possibilities for Georgian inhabitants. Programs, Plans and Projects should been developed for this purpose. Here the cooperation of the State, Government and self-government, and private sector as banks and insurance companies is important.

Many projects of balneology and spa infrastructure for the future development of medical tourism were elaborated by Georgian Architects in 20th century, but most of them were not realized. We found these works interesting to show as prospective examples that could be used for learning and planning purposes, if health-care tourism industry will develop in Georgia. The Balneology sanatorium for 250 beds was designed for thermal resort Nokalakevi, by the Students Planning Bureau of Faculty of Architecture, Georgian Polytechnic Institute, 1979. Architects: V. Davitaia, G. Kvitsinashvili, T. Kldiashvili.

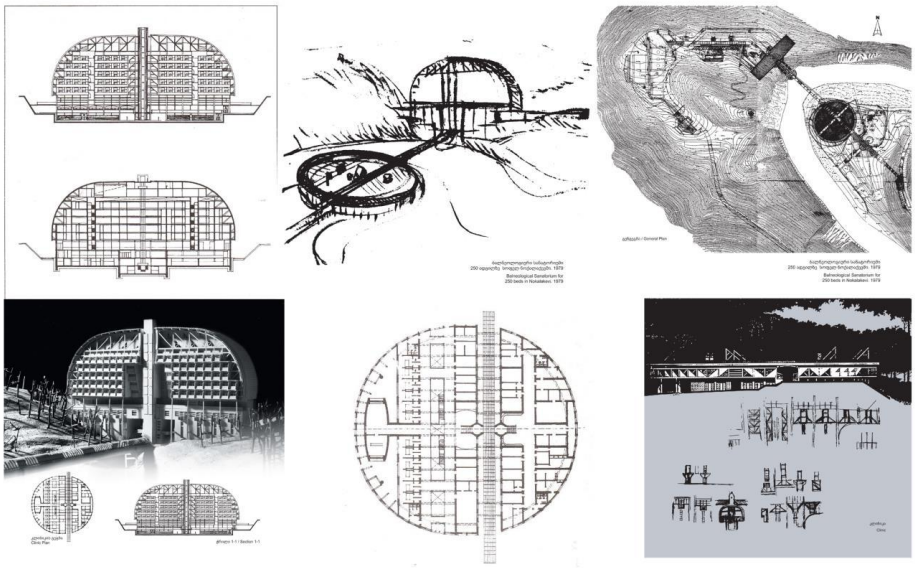

Figure 5. Project of Balneology Sanatorium in Nokalakevi. 1979. (Georgian Technical University archive)

Due to huge resort industry of Soviet Union, many standards and schemes of regional planning as well planning of different big and small touristic hotels and sanatoriums of resort areas were developed. (Urban Planning bases for development of resorts and recreation regions, Sroyizdat, 1990)

But for contemporary conditions old soviet standards, rules and schemes are not significant. According to Georgian building law, we are allowed to use standards of 37 countries by the planning.

Development of new schemes for resort regional planning and also schemes of hotels supported with medical tourism facilities is one of important tasks for the future.

From many world examples we have chosen Germany and Hungary, because of many similiaryties and good experience in the past. German examples of Baden-Baden were used by Romanov’s for the arrangement of Georgian resorts, and in particular, for Borjomi and Abastumani facilities.

2.3 GERMANY

German examples: One of the best experiences is to manage resorts through resort unions. Deutsche Heilbäderverband is the agency which manages, gives information, cooperates with scientific institutions,

organizes trainings and workshops and cares for the resort development in Germany. There are the main and also several other similar unions in different parts of the country.

German experience shows the problems, new challenges and how they were solved. Modification of insurance system to private financing and crisis of spa industry because of this was one of the reasons. German state policies, some data, trends, and positive examples could be well used in Georgia.

2.4 GERMAN EXAMPLES, CURE IN GERMANY

In Germany people are getting a cure e.g. after a serious sickness, when over worked (burnout) or when getting sick for the same reason over and over again. Another reason why people visit a therapeutic bath nowadays is the movement of wellness and lifestyle, to take a so called “Kururlaub”.

There are different ways of paying for it: health insurance, social pension fund or with privat money. The duration of cures lasts between 2-6 weeks, depends on the grade of sickness.

During the treatment there are staff members who look for special needs of the patients. If necessary they get helped to go back to the regular workplace after the cure, there are specialized people who help (e.g. what kind of work are you doing, perhaps different chair needed; shorter working hours to begin with).

Over the years the system of cures has changed. In 1996 the German health insurances stopped paying for the cure as it was before (10). Guest did not come as regular as it was, houses stood empty, people lost their workplaces. Because of that cure houses and cities had to reorganize to survive. Nowadays most of the "Kurkliniken" are specialized to persist, have modern rooms, old houses are remodeled or torn down and rebuild. Features like TV and Wifi, workout places and management of quality are important.

Two examples for different approaches are described in the following.

The clinic St.Peter (11) in northern Germany is well known for treatment of cancer patients. They put their focus on rehabilitation back to the regular workplace of the client. Specialist help to identify the critical points.

The network of Helios- Kliniken (12) sets the focus on enhancement of the quality of treatment. While surveying every treatment they do and publishing the operating figures everyone, from staff to patient or admitting doctor, can inform him/her self about the results

Figure 6. Resorts and baths in Bavaria. (http://www.kurorte-und-heilbaeder.de/karten/karte-bayern.html).

On other way of focusing in cures are spas, a speciality not only of Germany. They are called „Heilbäder“ (spa) or „Moorheilbäder“ (peat spa) (13). Around 6% of the spas with higher rating are peat spas. This type of spa uses peat/moor as treatment. The effect of the peat/moor is to appease pain and tension. Through the heat reservoir of the moor it operates depressant and stimulating. In Bavaria such spas are found often.

It is obvious on the map, that the communication system is well developed, what supports development of local tourism. To give the customers facts for choosing the place they need/want to go, in German some institutions are evaluating cure clinic’s and publish the results in different media.

There is a research institution, supported by the TU Berlin, called Minc (MINQ) (14) founded in 2010. It is independent and does surveys about the German cure clinics every year. The results are published not only in internet but also in a well-known magazine.

The German “Bäder- und Heilkundeverband” (15) (bath and medical science association), issues a quality label with four different focus. Gütesiegel des DHV.

DHV-Gütesiegel Die Kur®

- This label gives information about cure in general, what to expect, where to look for support, hwo to apply and so on. Three elements, earth, water and air, are the naturell remedies of cures. Depending on the medical condition one of this or a combination of them can be chosen.

DHV-Gütesiegel Park im Kurort®

An important issue is the “Park im Kurort” lable. As Catharine Ward Thompson said at the 5the Fabos conference in Budapest 2017 “the renewed interest in physical environment is now focused on identifying and understanding salutogenic environments (Antonovsky, 1979), that is, environments that support healthy behaviours and responses”. Presented survyes showed direct impact of green to the circumstances of live, people which are oposed to green environments are healthier than others, stress reduction included (ISBN 978-963-269-549-5, Landscapes and Greenways of Resilience, Catharine Ward Thompson: Greenways to health: the links between access to green space and healthy communities). Perhaps green surroundings enhance and speeds up the rehabilitation of the cure taking people.

- DHV-Gütesiegel Prävention im Kurort®
- This lable shall give orientation mostly to privat clients of cure houses. Their focus is the prevetion of sickness, to enable people to live a healthier live. It combines three factors of exercise, nutrition and relaxion suplemented by communication and empowerment

- DHV-Gütesiegel Wellness im Kurort®
- Relx and enjoy is the motto for this label. In combination with the surrounding landscape and a cultural program it fosters a well-beeing of the client.

All of them stand for quality enhancement in a different field. Futur clients , patienten and doctors alike, can use this labels to find the place which fits their needs the most.

CONCLUSION

Cures are paying of after all because people are healthier, resilient and appreciated after a cure.

(For example, Siemens is financing to their employees health cures of 22 days at regular time intervals so that desease rate remains low. (http://www.tagesspiegel.de/wirtschaft/karriere/kuren-wer-sie-bekommt-was-sie-bringen-urlaub-vom-job/1225054.html). In return, they must spend 9 days of their annual leave. This is a Win-Win situation.

2.5 HUNGARY EXAMPLES

Hungarian Examples of thermal baths cluster, their management system and state policy, the huge and rapid development of Hungarian thermal spa facilities are positive example for Georgia, how the Health-care tourism industry became the major branch in the country. Examples of Hungary can be applied for Georgian health-care tourism cluster planning as well.

In Hungary green routes are strongly developed. This strengthens medical tourism branch. The baths are located in urban and rural spaces as well. Famous baths are also located in capital city Budapest. The Hungarian Health-care cluster is strong, because thermal potential is investigated and appropriated infrastructure is developed and arranged. In Georgia we have unique mineral and thermal water potential which is underused.

Nature has generously endowed Hungary thermal water. Due to the geographical location of the country's thermal springs are covering 80% of its territory. Altogether there are fifteen hundred sources and 450 thermal baths.

„Hungary has enormous natural potentials that could be beneficially exploited by health tourism. We have extraordinary and unique thermal water reserves, the amount of which places us among the first 5 countries with the greatest thermal water supplies“ (dr. Judit Visi, Geography of Health, (2013).

Figure 7. Composition of Georgian, German and Hungary resort landscapes.

3 CONCLUSION AND RECOMMENDATIONS

Strengthening Medical tourism seems to be one of the best ways for the sustainable development of South Georgian resorts. Due to the main objective of this article, improvement of health-care cluster in Georgia is possible using mentioned examples.

The main principle of resort planning is to insert healthcare facilities into the green spaces, with careful integration of green areas and buildings, with attention to cultural heritage buildings. Due to the above mentioned examples, spatial planning, appropriated communication system development is a future of regional planning of Healthcare clusters.

- Medical tourism should become the key issue for the regional development strategy.
- South Georgian health-care tourism cluster should be determined and strengthened.
- Existing resorts like Borjomi, Akhaltsikhe, Abastumani should be developed to green, smart, well managed cities; and resort places with unused potential should be involved.
- Good foreign examples of famous spas like German, Hungarian and similar should be used, which includes not only healthcare facilities and resort planning principles, but spatial planning issues with its communication systems, the full complexity of urban planning factors.
- Programs, Plans and Projects should be developed.

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ID 1690 | EXAMINING THE POTENTIAL IMPACTS OF 2017 EUROPEAN YOUTH OLYMPIC WINTER FESTIVAL (EYOWF) IN ERZURUM, TURKEY

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ABSTRACT: This paper examines the perception of international visitors and athletes of 2017 European Youth Olympic Winter Festival (EYOWF), which will be held in Erzurum-Turkey. EYOF is one of the top multisport events for young European athletes where they have their first Olympic experience. As a relatively new concept, the EYOFs are organized in two-year cycles as summer and winter editions. Even though EYOF bears in general ambience of Olympic, it is far smaller in size than Olympic Games from many perspectives and its effects are more limited for the host city. However, for the host cities, EYOF can still serve as a serious organizational experience and as a reference point for hosting similar events. EYOWF is a new concept for Olympic tradition and this paper discusses the potential impacts of EYOWF 2017 in Erzurum, Turkey case. Turkey is awarded both the winter and summer EYOFs. First, Trabzon hosted the 2011 Summer EYOF and then with the positive legacy of the 2011 Winter Universiade, Erzurum is selected as the host city for the 2017 EYOWF. The 13th edition of Winter EYOF will be held in Erzurum from 11 February to 18 February 2017. Approximately 1,500 young athletes from 45 European countries will compete in different sporting events. EYOWF 2017 will also attract thousands of spectators, journalists, and volunteers along with the athletes, couches and staff members. EYOWF is not just a sporting event, but also an important event with a potential to leave significant legacies to the host city. EYOWF is a unique opportunity for Erzurum to increase the recognition of the city as a winter sport center and to leave significant legacies to the city. A successful staging of EYOWF will serve as a catalyst to activate the potential of Erzurum, especially reinforcing city image, promoting and branding Erzurum as a winter sport destination, attracting more tourists and encouraging them to stay for a longer time, and increasing local economic activities. EYOWF will also bring out the winter potential of the city with a positive impact on other alternative types of tourism, and will open other doors for Erzurum. In this sense, this paper seeks to discover; the perceptions of international visitors and athletes towards EYOWF 2017 Organization and towards the city of Erzurum; to discuss the impacts of EYOWF on Erzurum; to examine the success of EYOWF planning process; and to identify potential issue areas from the visitors' and athletes' point of view. In this paper, the data will be gathered from personal observations, primary and secondary resources, and surveys, which will be conducted on EYOWF sites in order to identify the perceptions of international visitors and athletes as well as to examine the tangible and intangible benefits of EYOWF for Erzurum. The survey form includes several items including the questions dealing with EYOWF planning, transport to the EYOWF site, accommodations, security, variety of activities, Erzurum city image and infrastructure. Although EYOWF is a new concept for Olympic tradition, it is still one of the sporting events with a potential to impact the host city in several aspects in both short and long term. The impacts of EYOWF on host cities have largely remained understudied. This study represents an initial attempt to explore the potential benefits and possible impacts of relatively less studied EYOWF on Erzurum city case and this study hopefully will lead to new studies and projects in this area.

KEYWORDS: European Youth Olympic Winter Festival, Erzurum, sporting event organization, event planning, winter sports, event legacy

1 INTRODUCTION

This paper examines the potential impacts of EYOWF -which is one of the prestigious sporting events-for Erzurum, Turkey. EYOWF is a far smaller event in size than other international sporting events such as Winter Olympic Games from many perspectives and the potential impacts of EYOWF are relatively more limited for the host city. However, EYOWF still can serve as a serious organizational experience for the host city and as a reference point for hosting similar events in the future. Within this respect, in this study: first, a brief history of both winter and summer editions of EYOF is provided; second, Erzurum's experience on organizing sporting events is examined; and finally, the potential impacts of EYOWF 2017 for Erzurum is discussed along with suggestions to increase the positive effects of the event for the city.

2 EYOF AT A GLANCE

EYOF is one of the top multisport events for young European athletes between the ages of 14 and 18 across Europe and more than 3,000 participants take part in the summer edition and more than 1,000 participants take part in the winter edition of the festival (EOC website). EYOF is an important stage where young European athletes have their first Olympic experience. EYOF is relatively a new concept for Olympic tradition. The EYOFs are organized in two-year cycles as summer and winter editions on behalf of the European Olympic Committees (EOC) under the patronage of the IOC (EOC website). The idea of organizing EYOF was first proposed by Jacques Rogge, the President of the European Olympic Committees (EOC) at that time and the first edition of EYOF was held in Brussels, Belgium in Summer 1991 (Lucidarme ve Maes, 2009). The first winter edition of EYOF was held in Aosta, Italy in 1993 and it has been growing since then. Several European cities hosted EYOF and Table 1 shows the list of the host cities of both summer and winter EYOFs up to this point.

Turkey is also awarded both the winter and summer EYOFs. First, Trabzon -a city on the Black Sea coast of northeastern Turkey- hosted the 2011 Summer EYOF and then Erzurum - a winter city in eastern Turkey- is awarded to host the 2017 Winter EYOF. 2017 Winter EYOF had initially been planned for Sarajevo and East Sarajevo, Bosnia and Herzegovina and EYOWF 2019 was awarded to Erzurum at the 43rd General Assembly of the European Olympic Committees (EOC) on the 21st of November 2014 in Baku. However, Sarajevo had some difficulties to get ready in time for the EYOWF 2017, while Erzurum already had the facilities in place after hosting the 2011 Winter Universiade and was ready to host the events two years earlier than originally planned (Mackay, 2015). Erzurum agreed to swap with Sarajevo to host the EYOWF 2017 and the agreement between the two city officials was officially signed at the at the 2015 General Assembly in Prague (Mackay, 2015).

YEAR	Summer EYOF	Winter EYOF
1991	Brussels (Belgium)	-
1993	Valkenswaard (Netherlands	Aosta (Italy)
1995	Bath (Great Britain)	Andorra la Vella (Andorra)
1997	Lisbon (Portugal)	Sundsvall (Sweden)
1999	Esbjerg (Denmark)	Poprad (Slovakia)
2001	Murcia (Spain)	Vuokatti (Finland)
2003	Paris (France)	Bled (Slovenia)
2005	Lignano Sabbiadoro (Italy)	Monthey (Switzerland)
2007	Belgrade (Serbia) J	Jaca (Spain)
2009	Tampere (Finland)	Szczyrk (Poland)
2011	Trabzon (Turkey)	Liberec (Czech Republic)
2013	Utrecht (Nederlands)	Brasov (Romania)
2015	Tbilisi (Georgia)	Vorarlberg/Liechtenstein (Austria/Liechtenstein)
2017	Győr (Hungary)	Erzurum (Turkey)
2019	Minsk, Belarus	Sarajevo & East Sarajevo, Bosnia and Herzegovina

Table 1 - Host Cities of Summer and Winter EYOFs
Source: eurolympic.org

3 ERZURUM AND SPORTING EVENTS

Erzurum is located in the eastern part of Turkey with a population of 367,250 in the 2010 census. The city is situated 1757 meters above sea level with the Palandoken Mountain in its background. Erzurum has huge potential for tourism development with its climate, cultural and historical amenities. However, Erzurum is not able to attract significant amount of local and foreign tourists mainly because the city is not well known as a winter sports center. Erzurum has substantial experience on organizing sporting events. For those events hosted in the past, the central government played an active role and heavily involved with

the event planning process along with the support from different local governments, business sector, and the public. The investments on winter sports facilities have increased along with the interest on winter sports. International Palandoken Cup as the first international winter sports organization has been organized since then. Additionally, Alpine Skiing Turkey Championship was organized in Erzurum four times. Finally, Erzurum organized the biggest sporting event in its history: 2011 Winter Universiade. For such a huge organization, when considered the size of the city, public investment reached maximum in the history of the city in order to complete proposed facilities to be used during the Games. As the result of such a big organization, the city was provided chances to renovate city stadium and other sportive facilities, own modern winter sports venues from ski jumping towers to biathlon fields.

At present, Erzurum has the highest preparedness level for large extended or international organizations due to completed infrastructure among other Turkish cities. With the positive legacy of the 2011 Winter Universiade, Erzurum selected as the host city for the 2017 EYOWF. The EYOWF requires serious planning and organization skills and the event has potential impacts and provides several opportunities for the host cities, even though the event is far smaller than the Winter Olympic Games in terms of their size and scope. In this respect, the potential benefits and opportunities provided by the EYOWF along with suggestions to increase the positive effects of the event for Erzurum will be discussed in the next section.

4 POTENTIAL IMPACTS OF EYOWF FOR ERZURUM

The 13th edition of Winter EYOF will be held in Erzurum from 11 February to 18 February 2017. Approximately 1,500 young athletes from 45 European countries will compete in nine different sporting events. The programme of the EYOWF 2017 consists of nine sports including Alpine skiing, biathlon, cross-country skiing, curling, figure skating, ice hockey, short-track, ski jumping, and snowboarding (EOC Website). EYOWF 2017 will also attract thousands of spectators, journalists, and volunteers along with the athletes, couches and staff members. EYOWF is not just a sporting event, but also an important event with the potential to leave significant legacies to the host city and the success of the event will be an important reference point for the host city to be able to plan and organize similar sporting-events that are likely to be staged in the future.

Major sporting events have both tangible and intangible legacies on host cities. Tangible legacies are the improvements on infrastructure, new sporting venues and other investments, while intangible legacies include the changes on organizational and administrative skills, community spirit, socio-cultural impacts, increased recognition, promotion of the host city, and sports participation. EYOWF is one of major prestigious sporting-events with a potential to benefit the host city in both short-and long-terms. For Erzurum, EYOWF is an important prestige element and also an important international practice for the city to test its sporting-event organizational skills. Staging the event without any major problems is crucial for Erzurum to increase the positive impacts of the event for the city. Through the potential of EYOWF, recognition of Erzurum will dramatically increase, and with the EYOWF experience Erzurum is likely to come into prominence and become an important winter sport center. EYOWF is also expected to bring some benefits to Erzurum, especially reinforcing city image, promoting and branding Erzurum as a winter sport destination, attracting more tourists and encouraging them to stay for a longer time, and increasing local economic activities. However, the host cities should start promoting the event and the city years before the event with a carefully and thoroughly planned vision in order to increase the impact of these intangible legacies.

Long-term tangible benefits of EYOWF will be limited since Erzurum is not investing on infrastructural improvements for EYOWF. Erzurum already has the facilities in place to successfully host EYOWF in 2017 and the city is not likely to make more investments to increase tangible legacies of the events. Sporting benefits of EYOWF to Erzurum will be very limited as well, since winter sports culture is weak in the city and it does not reach to locals for some reason. As a result of this fact, EYOWF will not result in increased participation to winter sport organizations or strengthened winter sport organizations in Erzurum. In this respect, it is more critical for Erzurum to invest on intangible legacies of EYOWF for the city. Erzurum has the dream of hosting the Winter Olympics some day in the future and EYOWF 2017 is a great opportunity for Erzurum to show the world that the city has the capacity and skills to host those types of major sporting events. EYOWF is also a good chance for Erzurum to increase the recognition and reputation of the city as a winter sport center.

EYOWF is not a big organization to leave dramatic tangible or intangible legacies on host city, but it can still serve as a reference point for potential future organizations. A successful staging of EYOWF will bring out the winter potential of Erzurum and this will have positive impact on other alternative types of tourism such as ecotourism, cultural tourism, health/medical tourism etc. Spreading the touristic activities year-round will increase the economic and social-cultural activities, thus EYOWF will serve as a catalyst to activate the potential of Erzurum. EYOWF will add value to the city's identity and brand building. However, lack of information and advertisement concerning the EYOWF 2017 and Erzurum itself on Internet and on other sources makes it even harder to approach the targeted tourists. As of now, no website is dedicated to the EYOWF 2017 to provide information about the event itself and details about Erzurum. Someone interested in coming to Erzurum for EYOWF will not be able access any information regarding the details of EYOWF 2017 program (competition sports and how to access to each competition) or information about Erzurum as a touristic destination (transportation, accommodation, activities to do etc.). For the summer edition of EYOF 2017, Györ (Hungary) created a website with detailed information about the event and the city both in English and Hungarian (EYOF 2017, Györ Website) and Erzurum needs to create a similar website for EYOWF 2017 as soon as possible.

EYOWF might also lead to a change on planning perspectives in terms of the projects proposed and built, which has the potential to change the perception for the future of the city. Future policies might prioritize improving the infrastructural capacity in order to promote tourism and finally create a strong economic base for Erzurum. With the catalyst impact of EYOWF, Erzurum might promote the local winter sports industry and achieve the goal of establishing an international winter sports center. Accordingly, the increased tourism potential will affect the way of thinking about the importance of tourism and will shape the future of Erzurum city as an attractive international touristic destination.

EYOWF will have more intangible legacies than tangible legacies on Erzurum and the strategies should focus on increasing the intangible legacies such as organizational and administrative skills, socio¬cultural impacts, increased recognition, and promotion of Erzurum. A successful staging of EYOWF in Erzurum will open other doors for the city and the dream of hosting other important sporting events like Winter Olympics will come true in the near future. The future of the city and the dream of hosting other sporting events should be melted in the same pot with a holistic planning strategy. EYOWF is also another important turning point for Erzurum to integrate and spread other touristic activities year-round in the same holistic planning approach. Staging the EYOWF 2017 successfully will also increase the recognition of Erzurum and help promoting the city as an alternative, attractive winter sport center.

Erzurum has considerable winter-sport-event organizational experience and hosting EYOWF 2017 in Erzurum provides substantial hopes and opportunities for the city. EYOWF 2017 organizing committee should think seriously, carefully and holistically in order to get the most out of the event. The committee's way of analyzing the EYOWF preparation and planning processes should be a comprehensive approach, which entails a goal-oriented view and long-term vision of using the resources to show how a successful event can be blended with the long-term needs of Erzurum. In addition to the organizing committee's effort, other stakeholders' involvement and participation in the planning and organizing phases of EYOFW will increase the success level of the event. Additionally, transfer of knowledge is also a critical mechanism to benefit from earlier host cities' experiences to increase the success of staging the EYOWF.

5 CONCLUSION

EYOF is one of the top multisport events for young European athletes where they have their first Olympic experience. As a relatively a new concept, the EYOFs are organized in two-year cycles as summer and winter editions. Even though EYOWF bears in general ambience of Olympic, it is far smaller in size than Winter Olympic Games from many perspectives and its effects are more limited for the host city. However, for the host cities, EYOWF can serve as a serious organizational experience and as a reference point for hosting similar events in the future. Turkey is also awarded both the winter and summer EYOFs. First, Trabzon hosted the 2011 Summer EYOF and then with the positive legacy of the 2011 Winter Universiade, Erzurum is selected as the host city for the 2017 EYOWF. For Erzurum, EYOWF is an important prestige element and also an important international practice for the city to test its sporting-event organizational skills. The success of the event will be an important reference point for Erzurum to be able to plan and organize similar sporting-events that are likely to be staged in the future.

EYOWF is not just a sporting event, but also a good opportunity for Erzurum to increase the recognition of the city as a winter sport center as well as to leave significant legacies to the city. EYOWF is also expected to bring some benefits to Erzurum, especially reinforcing city image, promoting and branding Erzurum as a winter sport destination, attracting more tourists and encouraging them to stay for a longer time, and increasing local economic activities. Erzurum already has the facilities in place to successfully host EYOWF in 2017 and the city is not likely to make more investments to increase tangible legacies of the events. Sporting benefits of EYOWF to Erzurum will be very limited as well, since winter sports culture is weak in the city and it does not reach to locals for some reason. In this respect, it is more critical for Erzurum to invest on intangible legacies of EYOWF for the city and the strategies should focus on increasing the intangible legacies. A successful staging of EYOWF will serve as a catalyst to activate the potential of Erzurum, will bring out the winter potential of the city with a positive impact on other alternative types of tourism, and hopefully will open other doors for Erzurum.

EYOWF is a new concept for Olympic tradition and the impact of EYOWF on host cities has largely remained understudied. This study represents an initial attempt to explore the potential benefits and possible impacts of relatively less studied EYOWF on Erzurum case. Further studies in this subject area should focus on comparative cases to see the positive and negative legacies of EYOFs on different host cities for short-and long-terms.

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ID 1708 | THE AIRIFICATION OF CITIES. MAKING SENSE OF THE IMPACT OF PEER TO PEER SHORT TERM LETTING ON URBAN FUNCTIONS AND ECONOMY

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1 INTRODUCTION

The emerging sharing economy is an extremely interesting phenomenon in the context of major cities, impacting them on several dimensions, ranging from social to economic, from cultural to environmental. “The sharing economy is an emerging economic-technological phenomenon that is fueled by developments in information and communications technology (ICT), growing consumer awareness, proliferation of collaborative web communities as well as social commerce/sharing” (Botsman & Rogers, 2010), (Kaplan & Haenlein, 2010), (Wang & Zhang, 2012), (Hamari et al., 2015). The concept of sharing economy is very simple: it allows to rent out anything that is under-utilized or not used at all. The contact between supplier and customer is established through an online platform. Sharing economy platforms, in the last few years, have become very popular and changed our consumption patterns (Quattrone et al., 2016). On the one side, suppliers can short-term rent their goods (or services); on the other side, consumers can rent goods or services at a lower cost than a traditional provider (Zervas and Proserpio,

2014). Airbnb, a peer-to-peer accommodation website, is one of the most successful sharing economy platforms. Airbnb is a platform where people can offer for short term, discover and book houses all over the world, from a pc or smartphones and tablets. The company was founded in 2008 and by now (May 2017) it lists over 3 million properties in over 191 countries, over 65.000 cities, accommodating 150 millions of guests. Spaces rented on Airbnb vary from a couch in someone's living room to an entire island (Wortham, 2011), but generally there are few typologies of accommodation: private or shared room and entire houses. The host may live in the property at the time of the rental or not. Airbnb claims that 57% of listings are entire apartments or homes, 41% are private rooms and 2% are shared rooms (Guttentag, 2015). Airbnb has been adopted on a massive scale worldwide and also in Italy: in 2015 the country had the third largest number of Airbnb listings in the world, with 83.000 hosts and 3.6 millions of visits per year, according to data published by Airbnb Italia. A press event in Rome (2016) saw the participation of the Italian minister of Culture who spoke with great enthusiasm of the affordances of the platform and the great benefits that it supposedly brings to urban economy. Nevertheless, in typical Italian fashion, there has been very little debate over the long term consequences of a relatively new phenomenon, especially one associated with novelty, enterpreneurialism and "new" technologies, and the only intervention that the government has deemed necessary has been that of imposing a tax on homes rented through the platform. However questions about the impact of an upsurge of short term rentals ('STR' onwards) over the delicate environment of Italian historical urban centres, as an example, have hardly been asked. Italians also seem to be ignoring the controversy that Airbnb's fast rise has generated around the world, with accusations of driving up rents, depleting the residential housing market and, as is the case in Barcelona, turning entire neighbourhoods into 24h party zones, to the bewilderment of residents. Currently, in Florence and Venice just like in Barcelona, the risk to turn the historic centres into "cathedrals of consumption" where what had been grown naturally is replaced with a superficial and tourist-oriented veneer (Thani and Heenan, 2016) – is a very present one. The consequence of this process might be, at best, the loss of authenticity of such places (Zukin, 2009). In this context, the present contribution provides a more in-depth insight on the mechanics of Airbnb in Italy, focusing on two dimensions of the phenomenon, related to (1) the spatial distribution of STRs; (2) the economic impact of Airbnb on city centres and residential rents. After a brief recollection of the academic production on Airbnb (section 2), we describe our data and method of analysis (section 3); in Section 4 we present the spatial patterns of Airbnb supply and demand across 13 towns and cities in Italy, focusing on three archetypical patterns; we then hypothesize on the possible drivers of the Airbnb offer and suggest a possible way to assess whether Airbnb supply could be driven by an economic advantage of STR over long term letting (Section 5). In Section 6 we discuss the way the benefits of the sharing economy are… shared. Finally, we conclude by presenting a possible alternative way of regulating Airbnb.

2 RELATED WORK

While the topic of the sharing economy in general is widely analysed, the phenomenon of Airbnb in particular, despite having arisen interest in recent times, hasn't been investigating so much. It has been noted that legal issues are the most examined, for example Quattrone et al. (2016) focus on the regulation of Airbnb. They claim that the platform is either completely allowed or totally banned by municipalities, underlining the lack of regulations in any case. The authors suggest possible innovative policies that the city of London could implement, based on a stringent analysis of spatial and economic patterns of accommodation supply and demand. Similar focus is provided by Lee (2016) who employs legal and statistical analysis to explore how short term rental affects the price and the supply of housing rental in Los Angeles, and how municipalities and policy makers could regulate the phenomenon. Furthermore Guttentag (2016) examines the rise of Airbnb through the lens of disruptive innovation theory and investigates, again, certain regulatory issues related to Airbnb, considering the current tax flow and possible interventions. He also analyses the potential of Airbnb to disrupt the residential accommodation sector, and the impacts -both positive and negative -that Airbnb may have on cities. McNamara (2015) examined the same topic: she first analyses the development of the community marketplace and the perception of Airbnb within society, afterwards she concentrates on regulatory issues that Airbnb arises, how proponents and critics react to them, and advances some proposals to regulate the platform. A different outlook is provided by Edelman et al. (2014). They examine a diverse aspect of Airbnb, racial discrimination among landlords. The authors confronted a large dataset of pictures of all New York City hosts on Airbnb with the corresponding prices and user feedback. They found out that non-black hosts are

able to charge about 12% more than black ones for comparable properties, highlighting the existence of a form of racial discrimination in online marketplaces.

In the context of hospitality Zervas et al. (2015) focused on Airbnb as a touristic phenomenon. They analysed the ratings of over 600.000 properties listed on Airbnb worldwide and compared them with the ratings of about half a million hotels listed on Tripadvisor. Ikkala et al. (2015) explore Airbnb presenting a qualitative study of hospitality. They consider the motivation of hosts to monetize network hospitality. They found out that hosts are motivated to monetize network hospitality both for economic advantage and social interaction. The authors discuss the implications of their findings on the fields of social network analysis and sharing economy. Another study on hospitality (Zervas et al., 2014) focuses on the hospitality industry in the state of Texas, and tries to identify the impact of Airbnb on such industry. The authors collected all Airbnb listings in Texas and information on all Texas hotels to estimate the impact of Airbnb on hotel revenues. They found out that such impact is distributed unevenly across the industry, but generally lower-end hotels are those most affected. Finally, they simulated certain regulatory interventions, such as limiting Airbnb hosts to one single listing, and argued that this intervention alone would greatly reduce Airbnb's impact on hotel revenues. Yannopoulus et al. (2013) use a different approach, examining brand identity construction of user-generated brands (UGBs) through a visual analysis. They explore Airbnb and Couchsurfing to underline the peculiarities of identity construction and visual representation of UGBs. They found authenticity, access to the private sphere, a more human dimension, and meaningful inter-personal discourses, to be the distinctive features of UGBs. Dudas G., et al. (2017) use additional indicators (distance, attractiveness) and a 3-band raster layer visualisation method to map the spatiality of Airbnb in Budapest. Celata e. al. (2016) offer a comparative analysis of the main sharing platforms in the accommodation domain, looking at the relationship between trust, reciprocity and belonging across different sharing economy platforms. The rise of Airbnb has recently started generating some interest in the field of urban planning. Gurran and Phibbs (2017) looked at the impact of Airbnb in Australian cities and the implications for the local housing markets.

These works do an excellent job in defining diverse critical aspects of the phenomenon of Airbnb, some of them do also concentrate on the spatial distribution of the phenomenon and the economic impact of Airbnb. There have been no systematic investigations of the impact of Airbnb in Italy, we believe data from this platform can be extremely useful to explore dynamics related to the changes of Italian city centres.

3 METHODOLOGY AND DATA SOURCES

The data employed in this investigation were obtained scraping the Airbnb website at two different points in time in 2016 and 2017. We implemented a crawler[1] and collected all the listings existing on the website in the second weeks of February 2016 and February 2017 relative to 13 Italian cities (Bari, Bologna, Catania, Firenze, Genova, Matera, Milano, Napoli, Roma, Siena, Torino, Venezia, Verona). Specifically, for each property listed in the considered cities, we collected the data resumed in the table below.

Code	Description
uid	host id
ppn	price per night
bd	number of bedrooms
r2015	number of reviews posted in the year 2015
r2016	number of reviews posted in the year 2016
lat	latitude
lon	longitude

Table 1 - Data collected for each Airbnb listing

We estimated the gross revenues (R) generated in 2015 and 2016 by each listing according to the formula

[1] The crawler was based on code released online in 2014 by Tom Slee (http://tomslee.com) and Murray Cox (http://insideairbnb.com)

Ry=(ry∗1.30)∗ppn∗3 (with y=2015 or 2016). We adjust the estimation assuming a 30% of stays without a corresponding review (as Airbnb itself maintains) and an average stay of three nights (following the approach of insideAirbnb.com). For entries listing an entire apartment/house we also estimated the size in square meters of the property offered according to the mapping in Table 2.

bd	0	1	2	3	4	5	>5
size in m2	35	50	65	80	95	120	180

Table 2 – Estimation of property size based on listed number of bedrooms

To the purpose of comparing the STR market with the regular long term rental market we obtained official data on average rental prices from the Italian Revenues Agency (Agenzia delle Entrate). The dataset made available to us includes the average monthly price paid per square metre in each “OMI Area” of the Country. OMI Areas are defined as areas with homogeneous market conditions, with larger cities generally being subdivided in at least 50 OMIs. OMI Data allow us to compare revenues generated via STR with the revenues that the same property would generate if offered on the long-term market. We discuss our results in Section 5. Finally, data from the 2011 Census (ISTAT) were employed to account for resident population changes and number of individual dwellings existing in each census area of the cities considered (housing stock). In the following we try to analyse the dynamics of supply and demand of Airbnb accommodation. We consider the number of reviews that a property has received as the most immediate indicator of the demand for that property. Similarly, we group listings and the corresponding reviews geographically, to assess the areas in cities that are high and low in demand.

City	Population	Listings 2015	Entire Place 2015	%	Listings 2016	Entire Place 2016	%
Bari	320741	397	195	49	490	320	65
Bologna	382728	1095	587	54	2577	1630	63
Catania	313944	1055	570	54	1305	977	75
Firenze	372551	5406	3791	70	8193	5921	72
Genova	596206	852	442	52	1039	704	68
Matera	62334	373	198	53	415	331	80
Milano	1262447	9491	6178	65	13159	9074	69
Napoli	1011955	1271	681	54	4058	2300	57
Roma	2668729	15044	9270	62	21687	13422	62
Siena	59593	482	255	53	600	447	75
Torino	894365	1160	653	56	3202	2276	71
Venezia	272443	3186	2466	77	5637	4168	74
Verona	267216	1018	612	60	1531	1209	79

Table 3: Airbnb listings by city 2015 – 2016.

City	All listings 2015	Entire Place 2015	%	All listings 2016	Entire place 2016	%	% of entire places in centre 2015	% of entire places in centre 2016
Bari	102	64	63	114	87	76	33	27
Bologna	631	380	60	1292	905	70	65	56
Catania	663	374	56	812	608	75	66	62
Firenze	3337	2594	78	5205	4192	81	68	71
Genova	523	298	57	620	453	73	67	64
Matera	181	100	55	189	146	77	51	44
Milano	1290	909	70	2425	1953	81	15	22
Napoli	677	357	53	2013	1104	55	52	48
Roma	6650	4709	71	7607	5341	70	51	40
Siena	287	159	55	331	252	76	62	56
Torino	335	234	70	833	666	80	36	29
Venezia	2981	2320	78	4287	3389	79	N/A	81
Verona	605	412	68	907	777	86	0.67	64

Table 4: All listings and entire places in historic centres. The last two columns show the proportion of all “entire places” listed in historic centres.

City	% Housing stock 2015	% Housing stock 2016	Variation 2015-2016
Bari	0.80%	1.00%	25.0%
Bologna	1.00%	2.40%	140.0%
Catania	1.40%	2.20%	57.1%
Firenze	11.10%	17.90%	61.3%
Genova	0.60%	1.00%	66.7%
Matera	17.30%	25.30%	46.2%
Milano	1.70%	3.60%	111.8%
Napoli	1.00%	3.10%	210.0%
Roma	7.10%	8.00%	12.7%
Siena	2.50%	4.00%	60.0%
Torino	1.00%	2.80%	180.0%
Venezia	6.10%	8.90%	45.9%
Verona	2.20%	4.10%	86.4%

Table 5: Proportion of the housing stock in historic centres listed on Airbnb as “entire place” in 2015 and 2016

4 SPATIAL DYNAMICS OF SUPPLY AND DEMAND: THE AIRIFICATION OF HISTORICAL CENTRES

The three tables above (Tables 3,4,5) summarise the data that we gathered. Confronting year 2015 and 2016 some considerations can be drawn:

- The absolute majority of Airbnb listings consists of entire homes/apartments, over private and shared rooms. This is true for all the cities considered, regardless of size and number of listings (Table 1). • This trend seems to be reinforcing over the years, as more entire properties have been listed in 2016 than 2015: the proportion of entire homes over the total number of listings increases in all cities (Table 2).
- Within historical cores (Table 2) the trend is even more pronounced: the proportion of entire homes over the total number of listings is higher in the centres than elsewhere in all the cities considered. This proportion increased further between 2015 and 2016.
- The proportion of entire places listed in historical cores vs. the total number of entire places is decreasing in many cities. This signals that the Airbnb habit is spreading to areas of towns and cities other than historic centres (last two columns of Table 2).
- The proportion of the housing stock devoted to STR in historic centres is increasing and, in some places, has reached levels unseen in the world: 18% in Florence, 25% in Matera, 8% in the vast historical core of Rome (Table 3).

In most cities considered, the supply of Airbnb accommodation is concentrated in or around the historical cores. This is understandable, as most attractions in Italian cities are of historical and artistic nature, and tend to be concentrated in the centre. However, the scale of STR concentration in historic centres is, to the best of our knowledge, unmatched in the world. A 7% of all housing units in districts such as Venice Beach and Abbott-Kinney Boulevard in Los Angeles listed on Airbnb rose alarms among the local authorities[1]. This number is almost doubled in places like Florence (18%), while in cities such as Rome and Venice Airbnb accounts for more than 8% of all housing units of their historic centres. A staggering one in four homes in the Sassi area, the historic core of Matera, Italian city of culture 2017, are offered on Airbnb. This particularly high number is very significant, especially in relation to a multi-decade old phenomenon that researchers have pointed out – the touristization and social desertification of Italian historical centres. Population has been lost, and city residents increasingly tend to perceive these areas with a certain detachment, as no longer belonging to their daily experience of the city (Rossi, 2003). This is a phenomenon that pre-dates Airbnb by far, but the availability of Airbnb data allows us to effectively visualize part of the dynamics at play. The three larger cities frequently recurring in the touristization discourse -Florence, Venice, Rome – all have a proportion of their centres’ housing stock on Airbnb above 8%. This figure could be considered a sort of canary value for the disneyfication of the centre. Cities

[1] http://www.latimes.com/business/realestate/la-fi-airbnb-housing-market-20150311-story.html

approaching it should seriously reflect on whether touristization and disneyfication are desirable conditions for their historical centre. However, the data show that not everywhere Airbnb accommodation is predominant towards the historical cores. On the contrary, the distribution of the Airbnb offer and demand is fairly variable among cities. Figures below show the distribution of offer and demand in Florence, Rome and Milan, exemplifying three recurring patterns.

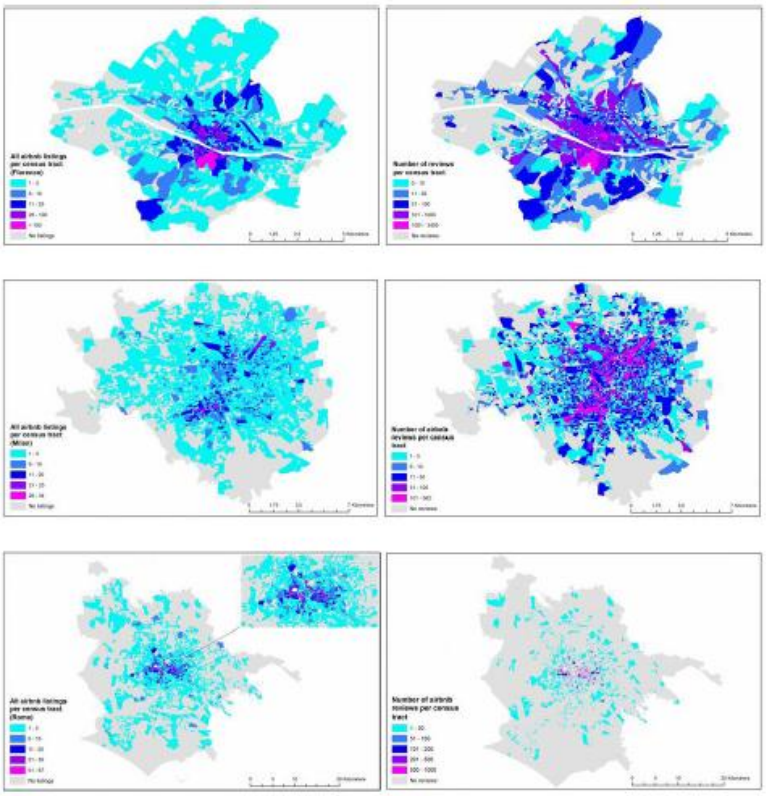

Fig. 1 – Distribution of offer (left) and demand (right) in Florence (top), Milan (middle), and Rome (2016).

Florence epitomizes the typical art city with an enormous concentration of the offer of STRs within the medieval walls of the historic centre, where 63.5% of the total listings are located (2016). As mentioned, 18% of entire housing stock of the city centre of Florence is listed on Airbnb (as entire homes) and the proportion has been increasing steadily over the last years. On the demand side, however, the figure shows that the listings outside of the historical centre are also capable of attracting a certain demand, likely thanks to the reduced prices, which we discuss further. In Florence (Fig.2) both offer and demand decay in parallel as a function of the distance from the town centre (identified with the location of the Town Hall); Milan displays an entirely different pattern, with a much more sprawling distribution of Airbnb properties. Here the STR phenomenon started outside of the historical centre: the fashionable districts of Isola and Navigli have been the areas with the highest concentration of Airbnb listings. In this regard Milan is more remindful of European capitals like London and Berlin, with recognizable and attractive districts outside of the centre. Despite an 88% increase in the offering of entire homes in 2016 vs. 2015, the old centre is still relatively blank compared to the neighbouring districts. Note how the historic centre of Milan is represented as a sort of depression in the Airbnbscapes diagram (Figure 3). Rome shows a pattern with elements of both Florence and Milan. In the Capital most of the offering is concentrated in the central Municipio I -which includes most of the great archaeological sites and the historic districts of Monti, Trastevere, Testaccio. Here the Airbnb offering of entire homes accounts for 8% of the entire housing stock, but Rome also shows hot spots outside of the centre: in proximity to the Vatican, in the student district of San Lorenzo, east of the central railway station, and in the residential district of San Giovanni, immediately to the south of the centre. An interesting trend that our data show is that, in the last couple of years, the phenomenon of renting out entire homes on Airbnb is extending far beyond historical centres. Between 2015 and 2016 the number of homes on offer outside of historical cores has increased faster than that within historical cores. In most cities this increase in offer seems to have met some demand: we plotted the variations in offer and demand between 2015 and 2016 within and without historical centres (Figure 4). While in cities like Rome and Naples the centre keeps being more attractive, producing a higher

number of new reviews for every home added, there are places, like Siena, where an increase in the offer of accommodation outside of the central core generates an increase in demand disproportionally higher.

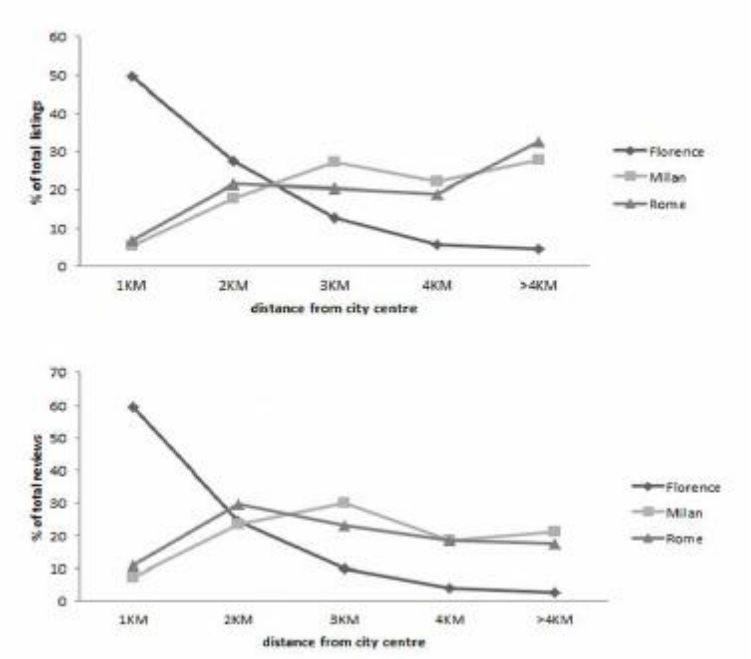

Fig. 2 - Offer and demand decay. Florence, Milan, Rome (2016).

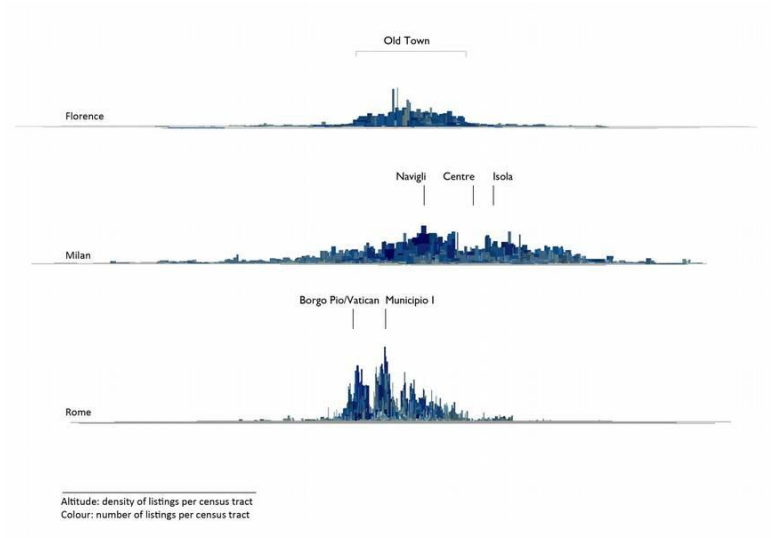

Fig 3. – Density of Airbnb listings (2016)

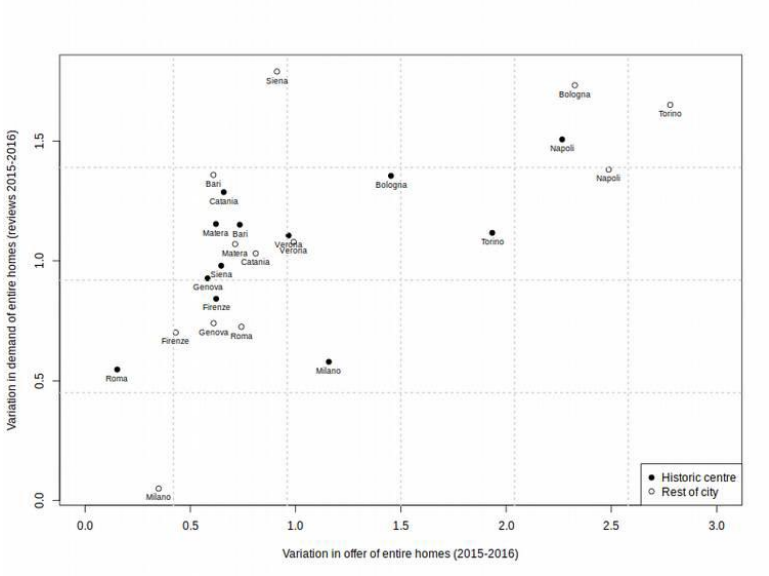

Fig. 4 - 2015-2016 variation in offer vs variation in demand of entire homes in centres and outside

5 DRIVERS OF AIRBNB SUPPLY

Critics of Airbnb often point out that the readily available opportunity of offering a property on the the STR market, often tax-free, has the extremely unpleasant side effect of depriving the long term rental market. A hotelization effect seems to be at play in several cities across the world (Lee, 2016). We asked ourselves whether our data would support such claim for the cities in our study. What are, in other words, the drivers of Airbnb provision? We obviously looked into tourism, but we also asked ourselves whether landlords offering their property on Airbnb and not on the long term rental market may be driven by economic considerations.

5.1 TOURISM

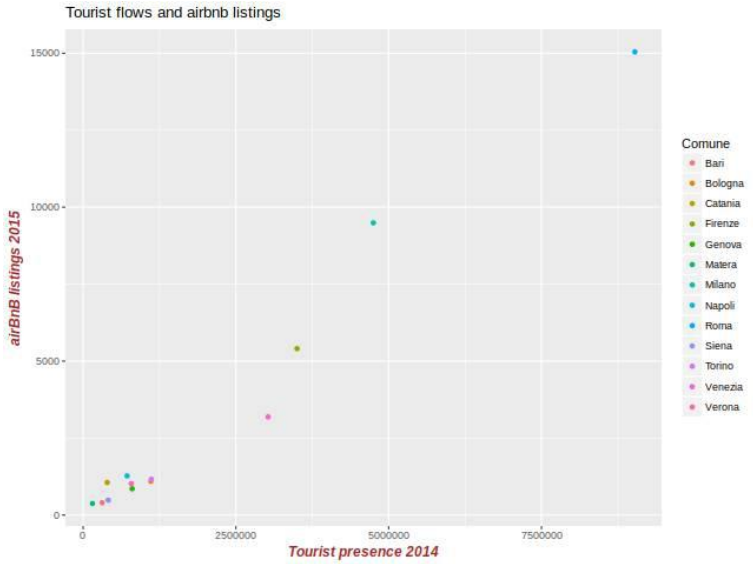

Fig. 5 – Tourist flows and Airbnb listings

The offer of Airbnb accommodation across the studied cities correlates almost perfectly (adjusted r 2=0.95) with tourist presence in the same cities. Tourist flows seems to be the best single predictor of the volume of Airbnb offering across cities.

5.2 ECONOMIC ADVANTAGE OVER LONG-TERM RENTAL

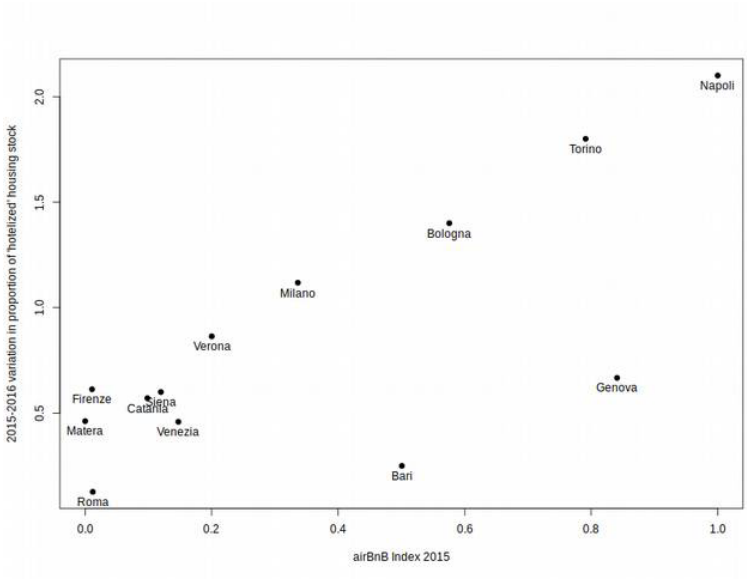

Fig. 6 – Airbnb index 2015 plotted against the 2015-2016 variation in the proportion of the housing stock listed on Airbnb (historic centres only). There is an almost perfect correlation, bar two outliers, Bari and Genoa.

Apart from the somewhat obvious relationship with tourist flows, we were interested in exploring whether the dynamics of the Airbnb offering could be explained in terms of the economic advantage that STR may enjoy over regular long term rental contracts. This is a crucial point, since the risk of tourist rentals depleting the housing market is a very realistic one, often very high in the agenda of local administrations across the world. To assess whether the provision of entire homes on Airbnb could be, at least partially, driven by the economic advantage over normal rent we estimated the revenue that each home listed on Airbnb would generate if offered on the regular long-term rental market. Such estimation was performed on the basis of rental market data described in Section 3. The ratio between Airbnb revenues (the estimated revenues of every entire home offered in a given area, pN) and the estimated long term rental revenues (RH -derived estimating the size of a property according to the mapping in Section 3) forms the basis of an “Airbnb index” that we produced. The index also incudes a value proxying for the saturation of the offer and one for that of the demand: we considered the number of listings not receiving any review in the year (E) as a good indicator of the lack of demand in a certain area, whereas the density (r 2=0.95) of listings per square km counts as an indicator pN of saturation in the offer. The resulting index $i = \frac{pN}{RH} \div E \div d$ is normalized in the 0-1 interval. Its correlation with the RH increase in the proportion of the housing stock of historical centres listed on Airbnb is shown in Figure 6. The correlation is quite high (although not as high as that with tourism), r=0.73 , meaning that where the index relative to the previous year is higher, the increase in homes devoted to STR in the next period is also higher. Two strong outliers are there, Genoa and Bari. Without them the adjusted r jumps to 0.97, matching almost perfectly. This result leads us to believe that the factors considered -an economic advantage versus long term letting, the density of existing listings, and the existence of some demand in the previous period -are good predictors of the number of new listings that we can expect in a given area. Ideally, the index could also serve as a predictor of the possible evolution of the system. For next year we would expect a great increase in the proportion of the housing stock ending up on Airbnb in the centres of Genoa and Bari, since the conditions seem to be there for further expansion.

6 THE INEQUALITY OF AIRBNB

Somewhat contrarily to the rhetoric generally attached to the notion of "sharing", we found the Airbnb ecosystem to be a profoundly unequal one. In terms of income generated on the platform, the inequalities are twofold: an "inequality proper" between hosts, and a spatial inequality between centre and periphery of cities.

6.1 INCOME INEQUALITY BETWEEN HOSTS

Since its inception Airbnb has seen a profound change in the nature and demographic of participants. The original intended audience of young people renting out a spare room in their flats is long gone as the main income generator for the platform. As we have shown, as of today, entire flats make up, by a good margin, the majority of listings in all the cities considered. At the same time, among those who list entire homes for STR, hosts listing multiple properties seem to have increased substantially. We looked at how incomes from Airbnb are spread across the thousands of hosts that list entire homes on the website, suspecting that revenues wouldn't be shared in a particularly inclusive way between participants.

Table 6 shows the inequality of the distribution of Airbnb revenues for the 13 cities considered, in the form of the Gini index, a commonly used measure of inequality. Figure 7 plots the distribution of Airbnb revenues among hosts in four of the considered cities. Inequality is extremely high in all the cities, and has increased between 2015 and 2016 in ten of the thirteen cities examined. In most cities a handful of operators listing several properties are capable of amassing more than two thirds of the total revenues generated on the website. To what extent this phenomenon is due to businesses operating as agencies listing third-party properties for STR should probably be the subject of further investigation. However, for comparison, we note that the inequality (Gini) index of Airbnb revenues in all the cities considered – ranging from 51 in Genoa and Bari and 70 in Milan -exceeds of at least two times the nationwide Gini income inequality index (36). This suggests that the supposed benefits of the platforms are appropriated very disproportionately by a small number of users.

6.2 SPATIAL INCOME INEQUALITY

If revenues differ substantially among hosts, they also differ widely among different areas of the same city. The figure below shows how the average earnings from a property listed on Airbnb decays as the distance from the centre of town increases. This dynamic is consistent with that highlighted in other countries: Gibbs et al. (2017) note that each additional five kilometers away from City Hall were associated with price decreases ranging from 4.0% (Ottawa) to 20.7% (Montreal). Our analysis confirms the function of distance to centrality (we also measured distances from the City Hall) in the tree cities observed. This confirms that a disproportionally high share of Airbnb earnings flows towards the central areas of cities.

City	Gini Idx 2015	Gini Idx 2016
Bari	52	51
Bologna	54	63
Catania	58	67
Firenze	65	66
Genova	57	51
Matera	52	61
Milano	62	70
Napoli	54	59
Roma	65	62
Siena	58	59
Torino	54	61
Venezia	57	60
Verona	54	57

Table 6. – Inequality index of Airbnb revenues between hosts.

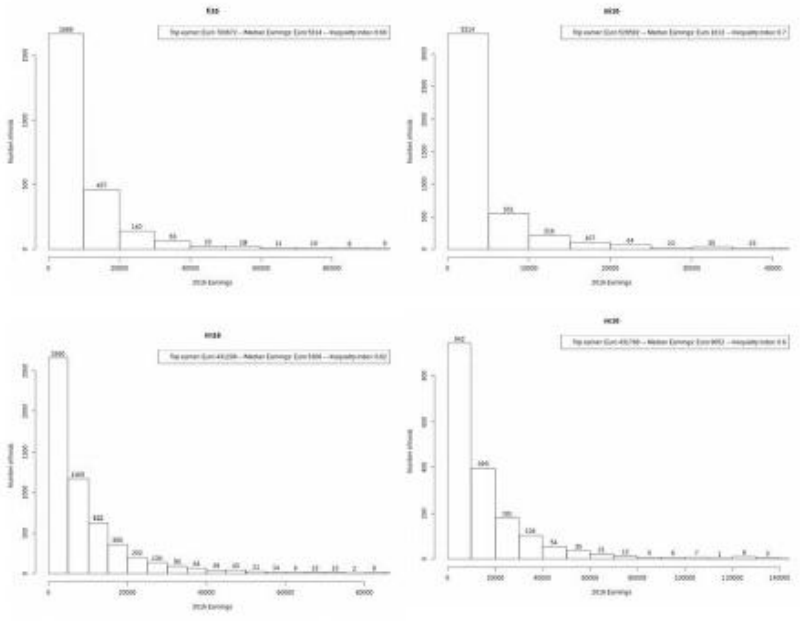

Fig. 7 - Distribution of Airbnb revenues between hosts, 2016. Florence (top left); Milan (top right); Rome (bottom left); Venice.

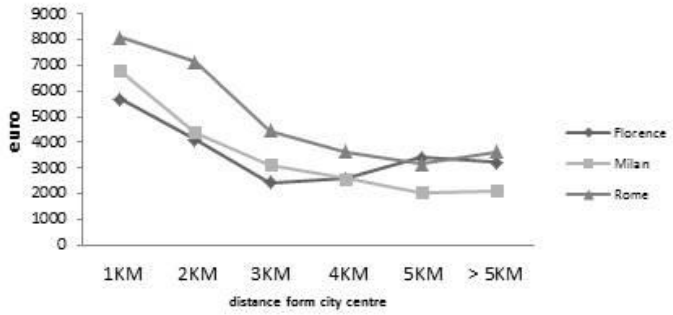

Fig. 8 – Average Airbnb revenues by distance from the centre of town in Florence, Milan and Rome. Note how earnings in the centre are substantially higher than elsewhere.

7 CONCLUSIONS: REGULATING SHORT TERM RENTALS

As other “sharing economy” platforms such as Uber, Airbnb has spread unchecked and unregulated for almost ten years. Protests and criticism arose around the world, especially on the part of residents and businesses in the hospitality industry, the latter accusing Airbnb of unfair competition. The Italian Government has ignored the matter for most of the decade, deciding to intervene and “regulate” online accommodation platforms only in 2017, when Italy had already become the country with the second highest number of Airbnb listing in the world. A flat rate tax of 21%, operational from 1 June 2017, was introduced on all rentals of less than 30 days. It is interesting that, in the view of Italian policymakers, the need to regulate a phenomenon often instinctively translates into the mere taxing of that phenomenon; more often than not, with a flat-rate tax. What outcomes is a 21% flat-rate tax going to have on a phenomenon that we have shown to be extremely complex and unequal? In our view, it is safe to assume that hosts in the long tail – the many collecting a very small share of Airbnb revenues – will be disproportionally affected. The same is true of hosts listing properties outside of the very profitable historic centres. The risk of such taxation, then, is, on the one hand, of favouring the growing hotelization of historic centres, where the profitability of staying on Airbnb would persist, even after the tax. On the other hand, it could further increase inequality, because many small hosts with only one listing could withdraw from the platform, not finding it advantageous enough to stay. The net result would be an even more unequal system, with an even higher concentration of the offer towards the delicate and already

compromised environment of the historic centres. We believe that a less short sighted intervention could have exploited the opportunities offered by Airbnb to the benefit of local economies, instead of simply penalising those that participate. Quattrone et al. (2016), for instance, suggest a dynamic, data-driven attribution of “sharing rights” to hosts, based on the saturation of different areas of a city. In section 5 we showed that the offer of Airbnb accommodation, to a certain extent, generates its own demand. A city administration, therefore, could decide to encourage the provision of Airbnb accommodation in areas less popular and saturated – with a different tax regime, or with variable restrictions in licensing -driving tourists to those areas, thus benefiting local neighbourhood economies, instead of overcrowding the “usual suspect” areas: historic centres.

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T13 | MOBILITY POLICIES, TRANSPORT REGULATION AND URBAN PLANNING

CO-CHAIRS: ENRICA PAPA; XAVIER DESJARDINS; FERNANDO NUNES DA SILVA

Human rights movement theorised that the concept of dignity could be used as a lens through which to explore the relationship the well-being status of individuals and communities and the human rights achievements or failures of the societies in which they live.

This session track aims at applying this rights-based approach, directed to protecting human rights, to the transport field. Its elements include participation, accountability, non-discrimination, empowerment and linkage to the European and international standards. Nowadays, transport systems and urban structures play an even greater role in providing accessibility to opportunities like public services, social facilities and jobs. So, this session track focuses on the role of accessibility planning, transport equity and justice to contribute to the creation of 'spaces for dialogue for places of dignity'.

The track will also accept paper of the following topics: governance and decision-making processes in transport planning and policy, cultural and social issues in transport, national, regional and local transport planning and policy, the role of new technology in transport, sustainable accessibility planning, land use and transport planning and policy, active transport, transport justice, complexity and mega-projects, transition studies for mobility.

ID 1307 | EVALUATING JOB ACCESSIBILITY FOR DIFFERENT TYPES OF TRANSIT ORIENTED DEVELOPMENT AREAS IN BEIJING

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1 INTRODUCTION

Growing levels of urban mobility provide many noticeable benefits, but they also produce negative effects on the environment and society, such as higher energy consumption, CO2 emissions, air pollution, traffic noise, and reduced traffic safety (Bertolini and Le Clercq, 2003; Banister, 2005; Ferreira et al., 2012). In order to find a better balance between the benefits and costs of urban mobility, a shift from mobility-based to accessibility-based transport and land use planning has been advocated (e.g., Cervero, 1996; Levine and Garb, 2002; Bertolini and Le Clercq, 2003; Bertolini et al., 2005; Curtis and Scheurer, 2010; Bos and Lee, 2012; Levine et al., 2012; Papa et al., 2014; Martens, 2016; Levine et al., 2017). Accessibility-based strategies focus more on people's direct demand for participation in activities (e.g., housing, working/schooling, shopping, visiting people/places, entertainment etc.), in contrast to the focus on derived travel demand that mobility-based strategies mostly focus on. Among several accessibility-based strategies, Transit Oriented Development (TOD) aims to fulfil people's need to participate in activities by concentrating relatively high-density, mixed-use, cycling- and pedestrian-friendly development in transit station areas (Bertolini and Spit, 1998; Cervero, 1998, 2004; Curtis et al., 2009). Under favourable conditions, TOD can deliver multiple benefits, such as providing access to diverse activities, creating liveable or attractive places, helping renovate the built environment, and mitigating urban sprawl. In order to measure the actual effects, it is particularly crucial to assess accessibility for TOD. This is because many expected impacts of TOD, for example, reduced passenger transport costs (Litman, 2007), reduced CO2, air pollution emissions, and energy consumption (Kimball et al. 2013; Nahlik and Chester, 2014), and increased land/property values (Cervero and Murakami, 2009; Duncan, 2011) – are closely associated with the enhancement of accessibility, as accessibility significantly shapes these impacts by influencing individual travel behaviour (Kockelman, 1997) and business' decisions (De Bok and Sanders, 2005; De Bok and Van Oort, 2011). Recently, the assessment of accessibility with respect to TOD strategies has generated considerable interest in academic and professional circles (e.g., Papa et al., 2013; Papa and Bertolini, 2015; Qviström, 2015; Palmateer et al., 2016). Studies have also shown large differences in the application of TOD strategies, resulting in different TOD types, even within the same city (Atkinson-Palombo and Kuby, 2011; Kamruzzaman et al., 2014; Vale, 2015; Lyu et al., 2016). This means that deeper insights into the association between different types of TOD areas and accessibility are necessary. To our knowledge, this association has not been empirically measured yet.

The paper aims to address this gap by studying how various TOD types within the same city are related to accessibility. The main focus is accessibility to jobs, because this is closely related to key policy debates about the functioning of the

labour and housing markets, social equity, and personal emancipation (Kawabata and Shen, 2006; Matas et al., 2010; Zhao and Howden-Chapman, 2010; Reggiani et al., 2011). Moreover, access to jobs is one of the main inhabitant demands in cities, requiring adequate responses in transport and land use systems. The study presented in this paper addresses the following research questions: Does TOD deliver higher job accessibility? How does job accessibility differ across different TOD types? By answering these questions, we aim to provide insights that can help develop targeted strategies to improve job accessibility for the entire built-up area or for specific types of urban areas.

Beijing, China was selected as the case study for the following reasons. On the one hand, mobility-based strategies – e.g., road building (increasing road density in Beijing's urban districts, see Beijing transportation research centre, 2015), vehicle ownership number control (Zhao et al., 2014), and driving restriction (Viard and Fu, 2015) – have shown unable to fundamentally or effectively address Beijing's major urban problems, such as road congestion, long commuting times, high rates of traffic accidents, air pollution and traffic noise (Li and Tao, 2004; Anas et al., 2009; Beijing transportation research centre, 2015). On the other hand, accessibility-based strategies, in particular TOD strategies, have been proposed (or applied) to address Beijing's urban problems for many years. In Beijing's Urban Master Plan 2004–

2020, TOD strategies proposed commute corridors connecting Beijing's central area to the former satellite towns, now part of Beijing's continuous built-up area, and improving accessibility to meet inhabitants' housing and job needs (Beijing Municipal Government, 2003). Since then, TOD has been officially considered as one of the key policy tools to address Beijing's transport problems (Beijing municipal commission of transport, 2012; Beijing municipal commission of transport, 2016). Despite these policy initiatives, an assessment of job accessibility for different types of urban areas is yet to be conducted.

The paper is organised into five sections. Following the introduction, in Section 2, we develop a methodology to evaluate job accessibility for any given place in Beijing. Section 3 presents the result of the job accessibility assessment for different types of urban areas. Section 4 discusses some potential policy implications, while Section 5 draws conclusions, reflects on the limits of the study, and provides future research directions.

2 METHODOLOGY

2.1 INTRODUCTION OF THE CONTEXT

2.1.1 DIFFERENT TYPES OF URBAN AREAS IN BEIJING

Beijing Municipality is home to 21.5 million residents, with 86.4% urban population and 1,385.6 km2 urban built-up surface (the main continuous urban areas) in 2014 (Beijing Municipal Statistics Bureau, 2015; Ministry of housing and urban-rural development, 2014). In 2014, the metro (18 lines, 268 stations and 527 km of tracks) served 10 million passengers each workday in 11 of Beijing's 16 districts (Beijing Mass Transit Railway Operation Corporation Limited, 2015; Beijing Infrastructure Investment Corporation Limited, 2015). Our research examines TOD areas around metro stops. Previous studies delineated TOD precincts according to geographical distances from the transit stop. Specifically, most European researchers (e.g., Bertolini, 1999; Reusser et al., 2008; Zemp et al., 2011; Vale, 2015) propose a 700 m Euclidian distance from the transit stop as the TOD precinct boundary, while most American studies use a range of ¼ mile (400 m) to ½ mile (800 m) (e.g., Atkinson-Palombo and Kuby, 2011; Austin et al., 2010; Schlossberg and Brown, 2004). Most TOD radii in European and American case studies are based on a 10-minute walking distance from the station (assuming walking as the main access and egress mode and 10 minutes as an acceptable walking time). In addition, some studies proposed that segments up to 1,500 m (Schütz, 1998) or half a mile (American Public Transportation Association, 2009) can include a secondary catchment area that might profit from the transit connection, substantiated by evidence that some walking trips to a transit node are generated in this secondary catchment area (see García-Palomares et al., 2013; El-Geneidy et al., 2014).

The study area in this paper was set as the entire built-up area of Beijing (the boundary uses Yang et al., 2013), and divided into 1,651 regular grid cells (1 km by 1 km). Given the modifiable areal unit problem (Openshaw, 1984), the choice of grid cells at this spatial scale may influence the results of the analysis. Our choice was made according to two main criteria: the size of the grid cell (1) can sufficiently distinguish between different types of urban areas to be investigated in this paper (compare definitions of area-types below) and (2) is around the average size of the original dataset (the economic census data at community level, also see Section 2.2.2). Moreover, grid cells are comparable spatial units. Next, based on the above-mentioned TOD studies, we identified cells whose centroids are less than 700 m Euclidian distance away from the centroids of metro stations as the TOD cells. Furthermore, we identified cells whose centroids are between 700 m and 1,500 m Euclidian distance from the centroids of metro stations as TOD secondary catchment (SC) cells. Beyond[1],500 m, most studies record only a few walking trips to a transit node, thus we identified cells whose centroids are beyond 1,500 m distance from the centroids of metro stations as non-TOD cells. Based on this methodology, we identified 375 TOD, 548 secondary catchment, and 728 non-TOD grid cells. Furthermore, we also defined six types of TOD cells (TOD_C1 to TOD_C6) and their corresponding secondary catchment cells (SC_C1 to SC_C6) (Figure 1), based on the work of Lyu et al. (2016), who classified 268 metro station areas of Beijing into six types (C1 to C6) by means of a principal-component cluster analysis. Prior the further analysis, a validation of their TOD classification (Lyu et al.,

[1] Here a TOD area refers to a 700-meter buffer from the centroid of a metro station.

2016) was conducted using variance analysis (ANOVA) and Tukey's Honest Significant Differences (HSD) Test (Tukey, 1949). The result shows that their TOD clusters are highly distinguishable from each other.

2.1.2 SELECTION OF GRID CELLS FOR ANALYSIS

We selected 261 TOD cells (classified into six types) and 182 secondary catchment cells (classified into six types) for the analysis. The TOD cells were selected if the centroids of TOD areas1 are located in such cells. Since some distances between the metro stations in Beijing's inner city are less than 700m, a few of the centroids of TOD areas are located in the same grid cells, resulting in a slightly smaller number (261) than number of metro stations (268). The secondary catchment cells were selected when the centroids of secondary catchment areas[1] were located in these cells. However, we only selected 182 secondary catchment (SC) cells for two reasons: (1) a few of the centroids of secondary catchment areas are located in the same grid cells; (2) a few of the centroids of secondary catchment areas are not located in secondary catchment cells[2]. A selected TOD/SC cell was attributed the features (i.e. category C1 to C6 and TOD indicators scores[3]) of its closest[4] metro station area. The locations of the selected cells and the numbers for their categories are presented in Figure 1. We also randomly selected 252 non-TOD cells (see Figure 1) to represent the entire population of non-TOD areas (728), calculated according to Formula 1 (Israel, 1992):

$$S = \frac{\frac{Z^2 pq}{e^2}}{1+\frac{\frac{Z^2 pq}{e^2}-1}{N}} \quad (1)$$

S is the sample size; Z2 is the abscissa of the normal curve that cuts off an area α at the tails (1 - α equals the desired confidence level, in this case 1.962 for 95% confidence level); e is the desired level of precision (in this case ±5% precision); p is the estimated proportion of an attribute that is present in the population (we assume p=0.5, i.e. maximum variability); q is 1-p; and N is the entire population (728).

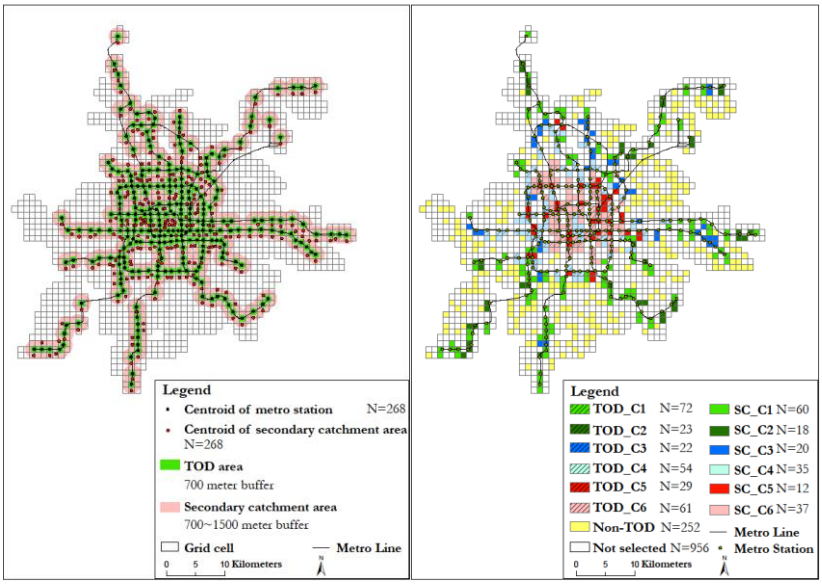

Figure 1 - TOD area and Secondary catchment area buffers (left) and selected cells of different types of urban areas for analysis (right) Based on: Lyu et al., 2016 and selection rules of this paper

[1] Here a secondary catchment area refers to a segment of 700- up to 1,500-meter buffer from the centroid of a metro station. The area has been cut out of the area that proximate TOD areas occupy. Its centroid is generated by the Feature to Point - a tool with an inside generation option in the ArcGIS 10.3.1 desktop platform. The output point was located inside of the polygon as its centre of gravity (centroid).
[2] See Figure 1 for the location of centroids of secondary catchment areas; some of them are located in the cells that have been identified as TOD cell in Section 2.1.1.
[3] See the description in section 2.1.3
[4] The distance is measured from the centroid of cell to the centroid of a metro station area.

2.1.3 TOD CHARACTERISTICS OF DIFFERENT TYPES OF TOD CELLS

Based on the work of Lyu et al. (2016) and the choices made in section 2.1.2, we summarised the TOD characteristics of different types of TOD cells, with 18 TOD indicators (see Table 1) used to cover 'Transit', 'Oriented' and 'Development' characteristics of urban areas. 'Transit' (T) indicators measured transportation features; 'Development' (D) indicators measured urban development features (e.g. land use density or diversity); and 'Oriented' (O) indicators drew attention to the functional and morphological interrelations between 'Transit' and 'Development' characteristics, focusing on relative proximity of residences and economic entities to the transit node and walkable urban design. All original TOD indicators were rescaled into the range of 0 to 1, with higher value means indicating a higher level of 'Transit', 'Oriented', and 'Development' features.

Of the six types of TOD cells, TOD_C2 cells, located in the periphery of the urban area (see Figure 1), show lowest values for the 'T', 'O', and 'D' aspects. TOD_C1 cells also have a peripheral location, but score higher on proximity to jobs and residences, functional density and diversity compared to TOD_C2. TOD_C4 cells are located at the periphery of the core urban districts; their TOD indicator scores are slightly lower than average, but the functional mix is at the highest level. TOD_C3 cells have similar 'T' characteristic to TOD_C4 cells, but higher 'O' dimension values (jobs and housing are located closer to the stations) and higher walking scores. The station areas in TOD_C5 cells and TOD_C6 cells are located at core urban districts and on the inner palm of the metro system. Although both score high on all TOD indicators, there are some notable differences. The 'O' values in TOD_C6 cells are highest among all clusters, suggesting that these areas are the most walkable and have the highest clustering of jobs and housing around stations.

TOD Characteristics	Indicators
Transit	T1 Number of directions served by Metro; T2 Number of directions served by bus; T5 Daily frequency of Metro services; T12 Number of stations within 20 minutes of travel by metro; T15 Travel times to major employment and activity centres by Metro; T19 Car parking capacity
Development	D1 Number of residents; D7 Number of establishments; D9 Number of establishments in retail, accommodation, and catering; D10 Number of establishments in education, health, and culture; D11 Number of establishments in public administration and services; D29 Degree of functional mix
Oriented	O1 Average distance from station to jobs; O2 Average distance from station to residents; O9 Length of paved footpaths per acre; O12 Intersection density; O14 Length of street network; O17 Walking scores

Table 1 - TOD indicators adapted from Lyu et al., 2016

2.2 METHOD OF MEASURING JOB ACCESSIBILITY

2.2.1 DEFINITION OF JOB ACCESSIBILITY

Job accessibility can be captured as the 'potential of job opportunities for interaction' (Hansen, 1959) or the 'ease of reaching workplaces' (Cervero, 1996). Based on these definitions, we define job accessibility as the potential job opportunities that can be reached from a given place, by travelling a certain time by means of a certain transport mode during a certain time period. With respect to travel mode, our focus is on public transport modes (bus, tram, metro, and walking or their combinations) for two reasons. One is that public transport is the main transport mode that TOD strategies build upon to affect job accessibility. The other reason is that public transport is an affordable and frequently used transport mode in Beijing. According to Beijing's annual transport report of 2014, 48% of all trips were made by public transport (Beijing transportation research centre, 2015). We set a travel time of one hour, because the average public transport travel time during peak hours (7:00–8:00 in the morning and 17:00–18:00 in the afternoon) is about one hour (Beijing transportation research centre, 2015). With respect to our specific study context, we thus capture job accessibility as the potential job opportunities that can be reached from a given cell by travelling one hour with public transport.

2.2.2 DATASETS AND MEASUREMENT

In order to calculate job accessibility in a given cell, two main datasets are needed. The first concerns travel times between the centroids of the cells. We retrieved the data by using Google Maps Distance Matrix API (Google Inc., 2016), which returns travel times of the shortest travel route from multiple given places to other multiple places by a given transport mode for a given departure time. We selected 695 cell centroids as trip origins (all the coloured cells in Figure 1), while the trip destinations were all grid cell centroids of the built-up area, namely 1,651 points (thus including all TOD, secondary catchment and non-TOD cells in Beijing). The departure time was set at 7:00 in the morning Beijing local time on Wednesday, 9 November 2016, by using a timestamp code (departure_time='1478646000'). The transport mode was set as 'transit' (Google Inc., 2016), i.e. public transport (bus, tram, metro, and walking or their combinations). The travel time dataset is a table, 695 rows (origins) × 1,651 columns (destinations) and 1,147,445 cells (=695*1651), with total travel times between pairs of origin and destination points. This travel time includes walking time from point of origin to public transit stop, waiting time for transport mode, riding time in public transport, and walking time from transit stop to destination point. If one or several transfers are required, the transfer times are also accounted for by the travel time returned by this API.

The other dataset measures job opportunities in a given grid cell. We used a dataset that contains numbers of employed workers in each community in Beijing (the number of jobs in each work place, Beijing Municipal Statistics Bureau, 2016). The boundary of communities and numbers of employed workers in each community were retrieved from Beijing's web application depicting the third economic census of 2014 (Beijing Municipal Statistics Bureau, 2016; also see Figure 2). In the built-up areas of Beijing, there are 3,045 communities, which have an average surface area of 0.71 km2 and are thus smaller than the area of a grid cell.

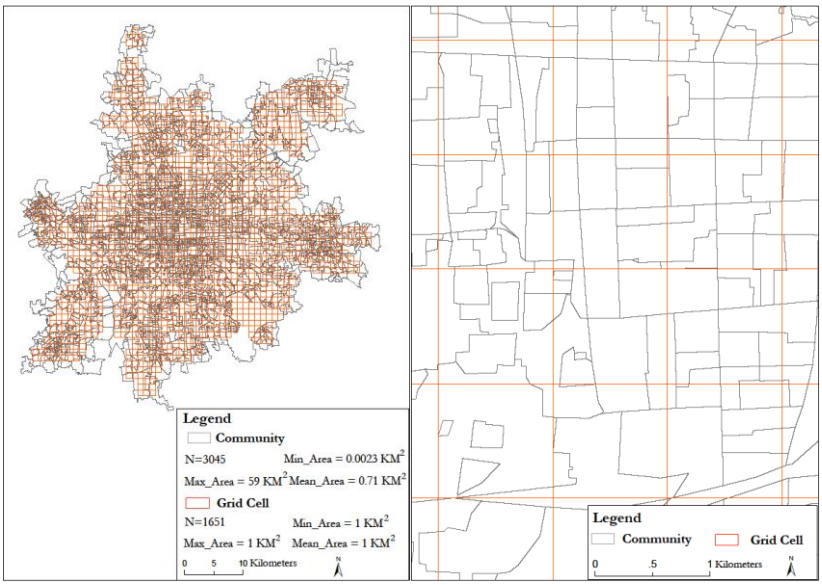

Figure 2 - Communities and grid cells in the built-up areas of Beijing.
Source: Beijing's web application depicting the third economic census of 2014

We selected three categories of jobs to be analysed, based on their relevance to policy intervention. The first is the type of all jobs[1] (no classification) because of its synthetic value. The second is type of jobs categorised by different economic sectors[2], using the Sectorial Classification System GB/T4754-2011 (National Bureau of Statistics of China, 2011), to provide insights into the differentiation of job accessibility across varying economic sectors. Third, we zoomed in on the jobs provided by central government–owned companies, because we assume that intervention in these jobs (e.g. establishing new or relocating existing

[1] It is not a sum based on the different types of jobs but an indicator for its synthetic value, which can be retrieved from the economic census database.

[2] We cannot analyse number of jobs by all different economic sectors because of data feasibility (e.g., the numbers of jobs on the sectors of agriculture, scientific research and polytechnic services, and international organizations are not available).

positions) can be accomplished more easily through direct policy choices (e.g. those suggested in our analysis).

The selected types of jobs for analysis	
All jobs	All-jobs (AJ)
By different economic sectors	Mining quarrying (MQ); Manufacturing (MF); Utilities(supply of water, gas, electric, heat, etc; UT); Construction (CT); Wholesale and retail trades (WR); Transport, storage, and postal services (TP); Accommodation and catering (AC); Information transfer, software and information technology services (IT); Finance (FN); Real estate (RE); Resident, repair and other services (RR); Education (EC); Health care and social work (HS); Culture, sports, and entertainment (CE); Public administration, social insurance, and social organizations (PS)
By capital source	Capital owned by the central government (CG)

Table 2 - Types of jobs selected for analysis

Based on the economic census data and the locations of grid cells, we computed the number of jobs within each grid cell. The processes were conducted in the ArcGIS 10.3.1 desktop platform. First, we calculated job density of each community by means of Equation 2:

$$Job_Density_{i_j} = \frac{Numbers-of-employed-workers_{i_j}}{Areas-of-community_j} \quad (2)$$

$Job_Density_{i_j}$ is the job density of the community j on the category i; $Numbers\ of-employed-workers_{i_j}$ is the number of employed-category-i workers in the community j; $Areas-of-community_j$ is the surface area of community j. Second, we calculated the spatial overlap of 'communities' and 'grid cells' within ArcGIS. This resulted into 9,767 new polygons across the 1,651 grid cells. Third, we re-aggregated the number of jobs within each cell using Equation 3:

$$Job_Number_{i_k} = \sum_k Job_Density_{i_j_k} \times Area_Polygon_{j_k} \quad (3)$$

3 JOB ACCESSIBILITY IN DIFFERENT URBAN AREAS

3.1 SPATIAL DISTRIBUTION OF JOB ACCESSIBILITY

In order to illustrate the spatial distribution of accessibility of different kinds of job categories of the selected cells, we mapped all job accessibility, manufacturing job accessibility, wholesale/retail/trade job accessibility, and central government–owned-company job accessibility across these cells. The aim is to give the reader an idea about the spatial distribution of job accessibility according to all jobs, to different economic sectors, and to jobs of which the government may more easily determine the location. For the visualisation of the spatial pattern, we used the standard deviation method to classify accessibility values (ArcGIS for Desktop, 2016).

Regardless of the preferred job locations for different economic sectors, Figure 3 shows that the distribution patterns of job accessibility across different job categories are similar. First, it clearly shows a distinction between core and periphery (as defined by Friedmann, 1966). Job accessibility shows a marked decrease when moving from the inner city to the periphery. Second, Figure 3 also shows the influence of the historical distributions of job systems. For instance, job accessibilities in the northern part are generally higher than in the southern part, as the northern part is historically more developed than the southern part (Deng and Srinivasan, 2016). A third pattern is related to differences in TOD features, with job accessibilities in transit nodes and corridors being higher than in areas without transit connection. For example, even in the peripheral areas, job accessibilities are higher along the transit corridors (see light green or yellow coloured cells in the periphery in Figure 3). Potential implications for policy- and strategy-making

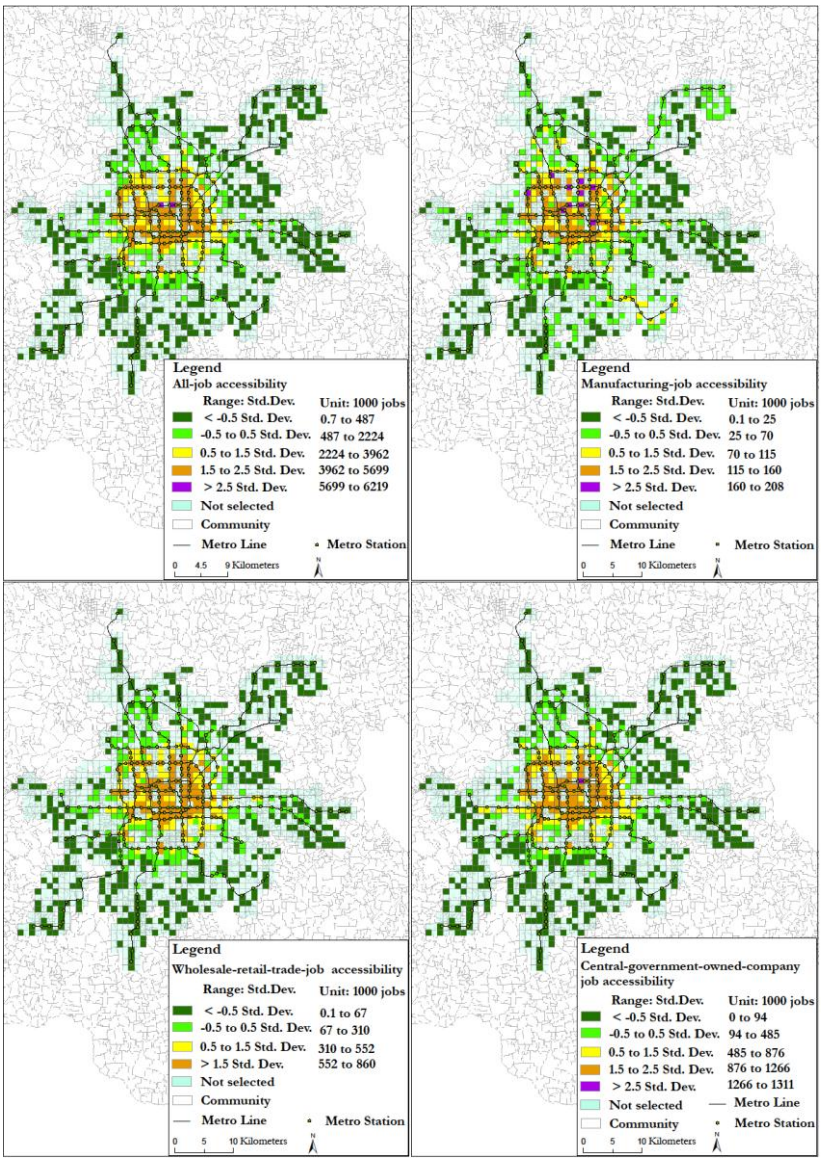

Figure 3 - Job accessibilities of the selected cells for the selected job categories. Source: Job accessibilities calculated, based on Economic Census 2014 and travel times obtained from Google Maps Distance Matrix API

3.2 TESTING SIGINIFICANT DIFFERENCES OF JOB ACCESSIBILITY IN DIFFERENT TYPES OF URBAN AREAS

In order to test whether job accessibility in each type of urban area is significantly different from other areas, we performed Tukey's Honest Significant Differences (HSD) Test (Tukey, 1949) after variance analysis (ANOVA), using the R Stats Package (R Core Team, 2017). Here we take a significance test for the difference in all-job accessibility across types of urban areas as an example. The 161.4 F-value (the ratio of the variance between groups to the variance within groups) in the ANOVA Test indicates that the means of all-job accessibility across different types of urban areas are different; however, it does not show exactly where those differences lie. Tukey's HSD Test provides detailed information about the significance of the difference between different types of urban areas on all-job accessibility. Table 3 shows the difference in all-job accessibility means between two types of urban areas. It also gives the adjusted P-value, indicating the significance of the difference. An adjusted P-value close to 0 means that the means of the two compared groups are significantly different, while an adjusted P-value close to 1 indicates that the means of the two compared groups are almost the same. Comparing, for example, the means of all-job accessibility between TOD cells and secondary catchment cells (TOD_Cell~SC_Cell) shows that the all-job accessibility in the TOD cells is on average higher than in the secondary catchment cells by 917,000 jobs. Their means are significantly different (adjusted P-value 0.00). The compared types in bold in Table 3

indicate that their means are significantly different, suggesting that in some types of urban areas, all-job accessibility is very much different than in the other types of urban areas. However, the result of this test is conservative by nature when applied to unequal sample sizes of compared groups. It means that all-job accessibility across various types of urban areas in Beijing may be much more different than what Table 3 shows.

Comparison between urban areas	Difference in means	Adjusted P-value	Comparison between urban areas	Difference in means	Adjusted P-value
TOD_Cell~SC_Cell	917	0.000	TOD_C2~TOD_C1	-433	0.719
SC_Cell~Non_TOD	1337	0.000	**TOD_C3~TOD_C1**	713	0.059
TOD_Cell~Non_TOD	2253	0.000	**TOD_C4~TOD_C1**	2145	0.000
TOD_C1~SC_C1	225	0.968	**TOD_C5~TOD_C1**	3562	0.000
TOD_C2~SC_C2	199	1.000	**TOD_C6~TOD_C1**	3514	0.000
TOD_C3~SC_C3	685	0.391	**TOD_C3~TOD_C2**	1147	0.001
TOD_C4~SC_C4	860	0.001	**TOD_C4~TOD_C2**	2579	0.000
TOD_C5~SC_C5	1358	0.001	**TOD_C5~TOD_C2**	3996	0.000
TOD_C6~SC_C6	1020	0.000	**TOD_C6~TOD_C2**	3947	0.000
			TOD_C4~TOD_C3	1432	0.000
			TOD_C5~TOD_C3	2849	0.000
			TOD_C6~TOD_C3	2801	0.000
			TOD_C5~TOD_C4	1417	0.000
			TOD_C6~TOD_C4	1369	0.000
			TOD_C6~TOD_C5	-48	1.000

Table 3 - Tukey's HSD Test for all-job accessibilities across six types of TOD cells, six types of secondary catchment (SC) cells, and non-TOD cells. Unit for difference: 1,000 jobs; adjusted p-values range from 0 to 1
Source: All-job accessibility of the selected cells, based on the Economic census 2014

4 POTENTIAL IMPLICATIONS FOR POLICY- AND STRATEGY-MAKING

The evaluation of job accessibility across different types of TOD areas, their corresponding types of secondary catchment areas, and non-TOD areas provides insights for policy- and strategy-making. First, the result that the means of all-job accessibilities in TOD areas are higher than those in secondary catchment and non-TOD areas can motivate urban planners, designers, and policymakers to develop more TOD areas in order to improve all-job accessibility. Second, the result that varying TOD characteristics substantially influences job accessibility suggests that from the perspective of job accessibility some type of urban areas with stronger TOD characteristics should be encouraged over other types, as elaborated below.

The internally similar but externally distinct characteristics of TOD types may allow planning professionals to develop a set of targeted strategies to facilitate a transformation of an area from one TOD type into another, which would serve to improve job accessibility for the targeted job category. For example, TOD_C1 areas that have broadly similar locations with TOD_C4 areas (Figure 1) can possibly be planned and designed to facilitate their transformation into TOD_C4 areas (shifts of means of 18 TOD indicators).

With respect to the associations between TOD types and the other types of job accessibility (e.g., manufacturing job accessibility or wholesale/retail/trade job accessibility), we can perform the corresponding Tukey's Honest Significant Differences (HSD) Tests (similarly to the process in section 3.2, the object of test becomes the targeted type of job accessibility). Such HSD Tests also provide insights for policy- and strategy-making in order to improve the targeted type of job accessibility of specific locations.

Furthermore, our work provides insights for actions on the metropolitan level. For instance, the spatial distribution of job accessibilities suggests that Beijing is still a single-centre city with a strong 'core–periphery' opportunity distribution pattern. Based on our work, policymakers can identify potential secondary cores (hubs) of job accessibilities to be strengthened. It seems useful to cultivate these future core urban areas to transform Beijing into a polycentric city, one of main stated planning goals of Beijing's Urban Master Plan 2004–2020.

5 CONCLUSION AND DISCUSSION

This research evaluated job accessibilities across different types of TOD areas, their corresponding types of secondary catchment areas, and non-TOD areas in Beijing. By comparing their job accessibilities, it confirmed that inhabitants of TOD areas enjoy higher all-job accessibilities than those living in secondary catchment or non-TOD areas. We also found that stronger TOD characteristics correlate with higher all-job accessibilities in these locations. This outcome provides insights for developing area-specific and targeted strategies to improve the all-job accessibilities of specific locations. It demonstrates the development of a methodology with future potential application in other geographic contexts, with both analytical and planning support value.

The study's methodology and findings are qualified by several limitations. First, the analysis is limited by the modifiable areal unit problem. It influenced the results on (1) the identification of different types of urban areas, and (2) the job attribution to cells. We took strong efforts to minimise its impact on the final result by using the most disaggregated census data and selecting a meaningful grid cell size for the analysis. Second, with respect to the association between TOD characteristics and job accessibility, we anticipated and confirmed its existence across different types of TOD areas. However, the hypothesised relationship may go in both directions, and it could be a dynamic and long-term relationship, across time or space, as captured by the notion of a transport–land use feedback cycle (Wegener and Fürst, 1999; Bertolini, 2012; and Kasraian et al., 2016). Third, since the results were based on publicly available datasets, namely Google Maps Distance Matrix API and Beijing's economic census of 2014, the level of detail or bias of these datasets also influences the result.

Based on these findings, we postulate the following potential research directions for future efforts. Considering the result that TOD characteristics have a strong effect on job accessibility of urban areas, we think it is worthy to evaluate TOD characteristics for the entire urban area of a city. This approach would entail extending TOD studies to urban areas without transits stops, but with 'T', 'O' and 'D' characteristics (here the 'T' refers to public transport). The next direction is to explore the relationships between specific TOD characteristics and the particular types of job accessibility (e.g., by sector or required skills). It would provide many valuable insights to policymakers for improving the targeted job accessibility in the specific urban areas. Considering the importance of job accessibility for access to the labour market, the third research direction could be to explore the spatial justice of job accessibility across different social groups of inhabitants.

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ID 1322 | COMMUTING PATTERNS AND CAR DEPENDENCY IN URBAN REGIONS

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ABSTRACT: We have analyzed car dependency in urban regions in the Netherlands, focusing on the lack of alternatives for the car in daily commuting. As geographical factors like distance from home to work and accessibility of job locations shape important conditions for potential behavioral change in car use and ownership, we map out the alternatives to the car for commuting in urban environments in the Netherlands, with emphasis on the bicycle and e-bicycle for shorter distances and combined bike-train for longer distances. In 2014, in the three big cities and some medium-sized cities (30% of the Dutch

population), 60-80% of the commuters have jobs within an acceptable cycling distance (within 7.5 km on average). Moreover, in all big and medium-sized cities and most of the suburban areas in the Netherlands (61% of the population) 60-80% of commuters have a job within e-biking distance (within 15 km on average). These geographical conditions could allow a doubling of the share of the bicycle and the e-bicycle in commuting, becoming the dominant forms of commuting in urban areas in the Netherlands. Looking at trends over time, it appears that in the large cities there is a stabilization of the share of jobs within e-cycling distance, but the medium-sized cities show a decrease. The South Limburg case study examined the potentials of the bike-train combination and found that it provides a reasonable alternative to the car for approximately 5% of employees with jobs located beyond e-biking distances.

1 INTRODUCTION

In the area of transport policy and research there seems to be a wide consensus on the need for alternatives for the car as a daily means of transport in urban areas. The dependency on cars and the consequential massive car use and ownership seem to contradict the spatial and social characteristics of urban areas with respect to accessibility, health, safety, equity and quality of public space (Rogers 1997, Girardet 2004). In urban areas, the space required for driving and parking competes with space for leisure, walking and cycling, green areas, as well as residential and work space (e.g., on-street parking for residents, including room for maneuvering occupies more floor space than the average apartment). A shift to the use of environmentally friendly vehicles such as electric cars will not solve these spatial and social problems. The contributions of self-driving cars are at best uncertain in this respect (perhaps there is locally less parking space needed if self-driving cars are shared, but it may also lead to more car traffic).

In the light of the above, how feasible are changes in car use and ownership, especially in the more developed cities in Europe and North America where they are so ingrained? Although the spatial conditions for walking, the cycling, public transport and car-sharing seem favorable in urban areas – as shown by studies of travel behavior, modal split and car ownership (e.g., Geurs and Wee 2006, Hilbers and Snellen 2006, Kenworthy and Laube 1999, Van de Coevering 2013) – urban areas are increasingly becoming part of regional networks, with jobs and facilities located beyond cycling reach and often at transit poor, car-dependent locations (PBL 2014). The Netherlands, a country known for its relatively compact cities, has been scaling up urban networks, for several decades (Tordoir, 2015). The average commuting distance in the Netherlands has increased from 17.6 in 2003 to 18.6 in 2014 (CBS Statline). In areas with shrinking populations, the average commuting distance increases because there are fewer residents and jobs within the same space (Wiersma et al. 2017, Goudappel Coffeng 2015). Moreover, the biggest growth in jobs in the past 15 years has taken place on motorway sites (PBL 2014). The car seems indispensable for most weekly shopping and social recreational trips (Jeekel 2013).

The trends outlined above indicate increasing car dependency (CD), also including the urban population (Jeekel 2013, Harms 2008). CD does not only relate to car use, but also to car possession. Because both use (space for moving) and possession of cars (space for parking) claim urban space, not only the dependence on everyday use is important, but also the need of owning the car. In figure 1 the various levels of CD are shown. In yellow the car trips having alternative transportation modes that are competitive in terms of travel time and costs. This is the domain of what Jeekel (2013) refers to as 'subjective CD': a habit or lack of information about alternative transport modes. In the Netherlands, in urban, suburban and most rural areas, daily amenities, like schools and shops are within walking and cycling distance (Wiersma et al. 2015, CBS). They form part of the yellow sphere. In this sphere policy aimed at awareness of alternative transport modes, or offering more comfortable and safe bicycle paths, could be effective for behavioral change. Orange are the occasional car trips, for which the car is indispensable, such as a trip to the hardware store, or a holiday home. For this, the use of the private vehicle is necessary, but not the possession, renting or sharing a car being an option. In this sphere, policy aimed at offering attractive arrangements for rent-a car could be effective. Purple is the "hard core" of CD. These are everyday trips without an alternative transport mode, such as daily commuting trips to car dependent locations beyond cycling distance. Research shows that people rarely rent a car for their daily commute (Cervero 2006). The daily dependency on the use of cars for commuting creates thus a 'hard core' of the use and possession of cars, because 1) the trip is in most cases done with the private car, and 2) in addition to driving to work or school, the car is often part of a chain of other movements, for which alternative transport modes are often available (Harms 2003, Urry 2004, Baptista et al. 2014).

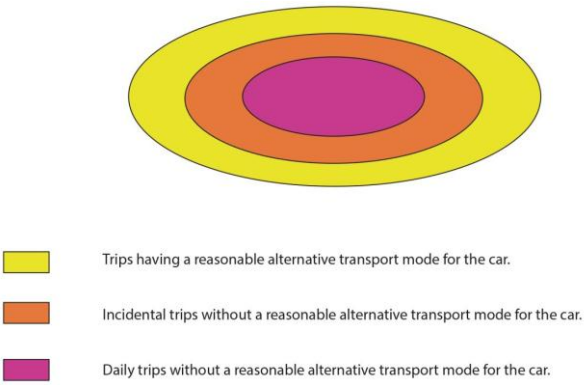

Figure 1. Levels of Car Dependency

Although in urban areas people aren't dependent on cars for trips to amenities, such as shops, health care or schools (Wiersma et al. 2015, CBS 2015), the dependence of using their own car for commute trips beyond cycling distance or to car-dependent locations seems to be an important determinant for a car-dependent lifestyle Determining the extent of this 'hard core' of CD could show the extent of possible behavioral change (using alternative modes and sharing or renting instead of owning a car) in the existing spatial context, thereby giving insight into the possibilities of policies aimed at this behavioral change, not requiring a different location of homes and jobs.

Our study seeks to answer the following research question: How CD are employees in the Netherlands in their daily trips from home to work, and how does this evolve over time? While in the Netherlands' data are largely available on the development of average commuting distances (CBS 2016, PBL 2014, KiM 2013) and the accessibility of jobs (Goudappel Coffeng accessibility map http://www.bereikbaarheidskaart.nl/, PBL 2014, Tordoir 2015), there is no specific overview of the CD of existing and potential future commuting patterns of the urban population. Our study aims to fill this knowledge gap.

We have focused primarily on the potential of the bike or e-bike as an alternative to the car, because in the Netherlands 1) for most people this is the most attractive alternative to the car for short distances (Harms 2006), 2) more jobs are accessible within 30 minutes by e-bicycle than by public transportation (Wiersma et al. 2017, Goudappel 2015), and 3) the potentials of the e-bike for medium distances (5-15 km) seems promising (KPVV 2012, KIM 2016). For longer distances the alternative to the car must include some form of public transport. In this study, we focused on the bike-train combination, because in the Netherlands the bicycle as a transport mode has an ever-growing share of the ride to the station (Kager et al. 2016), and this combination seems to be most competitive alternative to the car in travel time, as it avoids time-consuming and inconvenient public transport transfers (Kager et al. 2016, Schakenbos et al. 2015, Staps 2014). This specification leads to the following sub-questions: 1) To what extent are commuting distances in urban areas within cycling or e-cycling distance, and how do they evolve over time? 2) To what extent is the combination (e-) bicycle-public transport an additional competitive alternative to the car in commuting? 3) Which are the potentials for behavioral change, in relation to the current modal split of commuting? In the next sections we define our case, the research methodology, findings and conclusions.

2 THE NETHERLANDS AND SOUTH LIMBURG CASE STUDY

The broader case is the current and future situation in urban areas in the Netherlands, especially municipalities of 100,000 inhabitants or more and their interwoven suburban areas (see Figure 2). Within the European context, the urban areas in the Netherlands are relevant because size and density are typical of many urbanized parts of Europe. At present, almost half of the people in the Netherlands live in medium-sized cities, ranging from 50,000 to about 1,000,000. This reflects the situation in most of Europe, where only a minority live in larger metropolitan areas such as Paris, London or Berlin (Giffinger 2007). This share is increasing at the expense of peripheral and rural areas. Second, most cities in the Netherlands are part of polycentric regions where daily urban systems are becoming intertwined, as is the case in many urban areas in Europe, such as Northern England, parts of Germany and northern Italy. In one respect the Dutch situation is atypical: the widespread use of bicycles in everyday life, in comparison with in size and density comparable urban areas in other countries. Nevertheless, although behaviors may

be different, the spatial conditions for bicycle use, as determined by urbanization patterns, are similar to many urban areas in Europe. We investigated commuting distances across the entire territory of the Netherlands, and looked at the bicycle-train combination specifically in the South Limburg region.

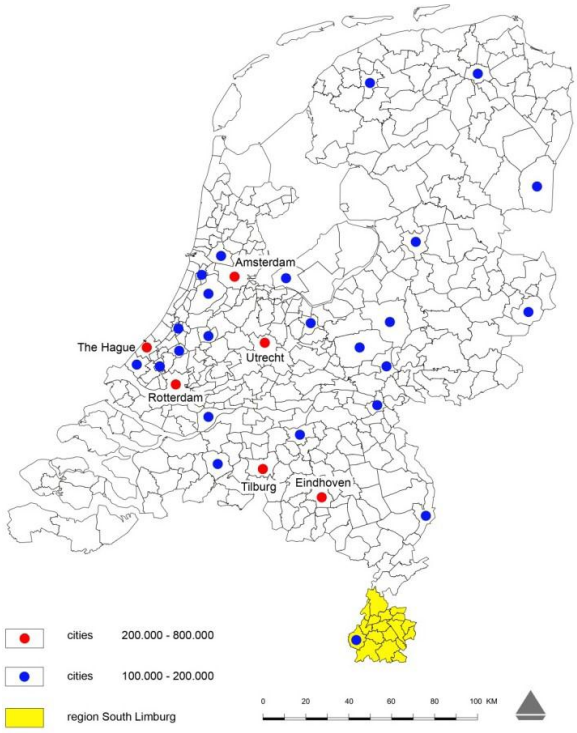

Figure 2. Cities of more than 100,000 inhabitants in the Netherlands

3 RESEARCH METHODOLOGY

3.1 COMMUTING DISTANCES WITHIN (E-)BICYCLE DISTANCE

The basis for this study consists of data on commuting distances, measured between the geographic centers of the commuters' home and work municipalities (CBS 2014). We have defined 5 km Euclidian distance one-way (or about 7,5 km real, on-the-network distance) as the maximum acceptable distance to cover daily by bicycle, 10 km Euclidian distance each way (or about 15 km real distance) for the e-bike (based on KiM 2016). For each municipality we have mapped out the percentage of employees who have jobs within cycling distance and e-cycling distance in 2014. We assumed that employees who have jobs in their own municipality live within bicycle distance from their jobs, given the geographical size of most urban and suburban municipalities in the Netherlands. Of course, there is a minority of people who work in the opposite side of the city. This would still be within a maximum of 15 km (10 km Euclidian distance), and therefore still be within e-bicycle distance. Furthermore, we assumed that employees with jobs in a nearby municipality, with a geographical center within 10 km of the geographical center of their home town, are within e-bicycle distance. Figure 3 shows a schematic view of the geographical size of municipalities in the Netherlands and corresponding commuting distances. We have distinguished two possible situations: people who hold jobs within their own municipality and those who have jobs in another municipality. The left side shows that commuting trips for people living in municipality A and working in A are on average within bicycle distance. The right side shows that commuting trips for people who live in municipality A or B and hold a job in B or A, respectively, are on average within e-cycling distance. In all other the job is located beyond bicycle or e-bicycle range.

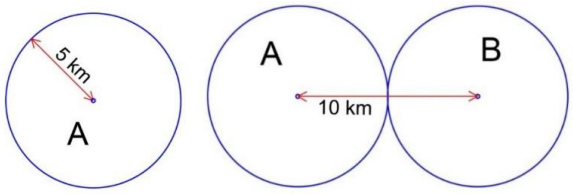

Figure 3. Schematic view of the geographical size of municipalities in the Netherlands and corresponding commuting distances

3.2 POTENTIALS OF THE BICYCLE-TRAIN COMBINATION

Given the fact that the average distance from home to a train station in urban areas in the Netherlands varies between 2 and 4 km (KPVV 2017), we can deduct that the travel times from home to and from the station by bicycle would take on average about 15 minutes. Against this background, we assume that one can store the bike without significant delay; there is a 15 minutes train frequency; no train–train transfers are needed; and the job location is within 500 m from the destination rail station. Under these conditions the bike-train combination could be competitive – though not in all cases – in terms of door-to-door travel time, and a reasonable alternative to the car (especially taking considering parking costs and occasional effects of congestion in rush hour into account) (See figure 4). We explored how many employees would benefit from this combination, using data from the E'til (http://www.etil.nl/contact/) for South Limburg, available from the Province of Limburg (Vaessen and Knoors 2015). These data show the number of employees per municipality working in economic centers, on the level of zip code 4. This indicates how many people per municipality in 2014 had jobs at transit locations, defined as within 500 m from a train station.

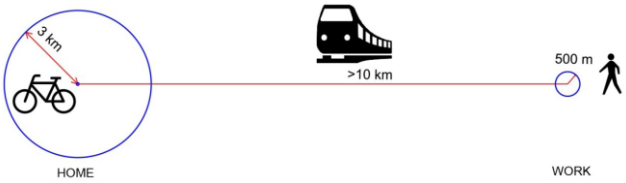

Figure 4. Schematic view of the components of the bike-train combination in urban areas

4 FINDINGS

4.1 THE RELATION BETWEEN URBAN DENSITY AND POTENTIALS FOR THE (E-)BIKE

Figure 4 compares the densities of the municipalities in the Netherlands, defined by the number of addresses per square kilometer (left-hand side), with the percentage of commuting trips within bicycle distance for those municipalities (right-hand side). The cities with more than 100,000 inhabitants and some satellite towns ('groeikernen') mostly have densities above 1,500 addresses per square kilometer, while smaller towns and suburban areas mostly have densities between 1,000 and 1,500 addresses. There is an urban concentration in western, central and the southeastern Netherlands, sometimes described as an 'urban field', as opposed to some smaller and less dense conurbations towards the north and southwest. The right side shows municipalities where more than 50% of their residents live within an acceptable cycling distance (7.5 km) from their jobs, on average, per municipality in 2014. As expected, it shows high scores (above 60%) for the big cities and some medium-sized cities with high densities. However, most cities with high densities in the heart of the above described 'urban field' seemingly have moderate (50-60%) scores. The satellite towns (groeikernen) mostly have scores below 50%. Of the entire population of the Netherlands 8% lives in municipalities with between 70% and 80% reach, 22% in municipalities with scores between 60% and 70%, another 20% in municipalities with scores between 50 and 60%, and the rest (50%) in municipalities with scores below 50%.

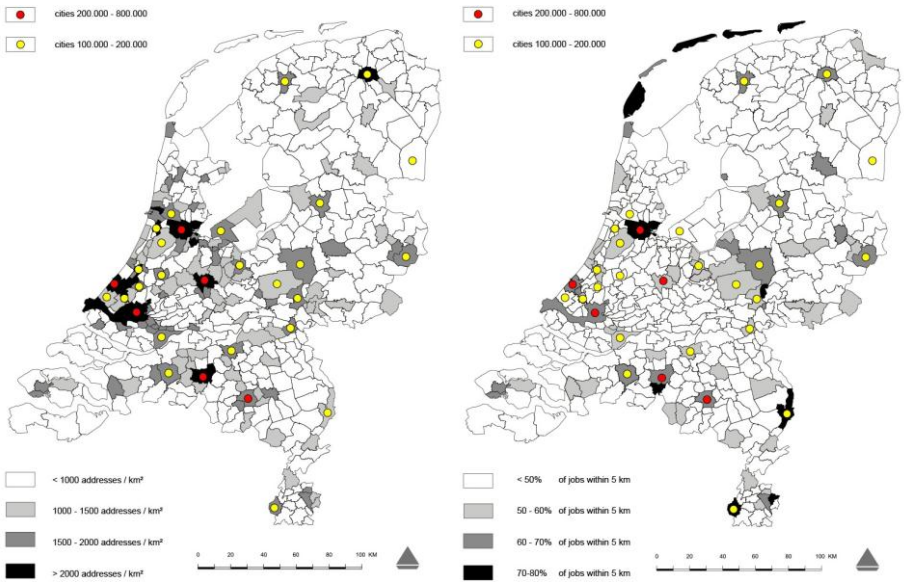

Fig. 5. Urban densities and potentials for the bicycle in commuting, Source: CBS 2014

Figure 6, right side, shows the percentage of workers living within an acceptable e-bicycle range (15 km) from their work, on average per municipality in 2014. As expected, there are more municipalities with high scores than in Figure 5. However, apparently there is no direct relation with density. Apart from the big cities in the west, high scores (above 60%) are found in suburban areas with lower densities, sometimes even below 1,000 addresses/km2. In some cases, the scores of suburbs are higher than the adjacent medium-sized central cities (see the black areas next to cities, marked with yellow or red dots). Also remarkable are the extensive areas with high (more than 60%) e-bicycle potentials in the less populated periphery of the country. Finally, it appears that almost the entire southern wing of the Randstad and almost the whole of South Limburg, in urban as well as in suburban areas, where three-quarters of people live on average within 15 km of their workplace, thus within e-bicycle distance. Of the entire population of the Netherlands, 31% live in municipalities with between 70% and 80% of the workforce having a job on average within 15 km, 30% in municipalities with scores between 60% and 70%, a quarter (26%) in municipalities with scores between 50% and 60%, and the rest (13%) in municipalities with scores below 50%.

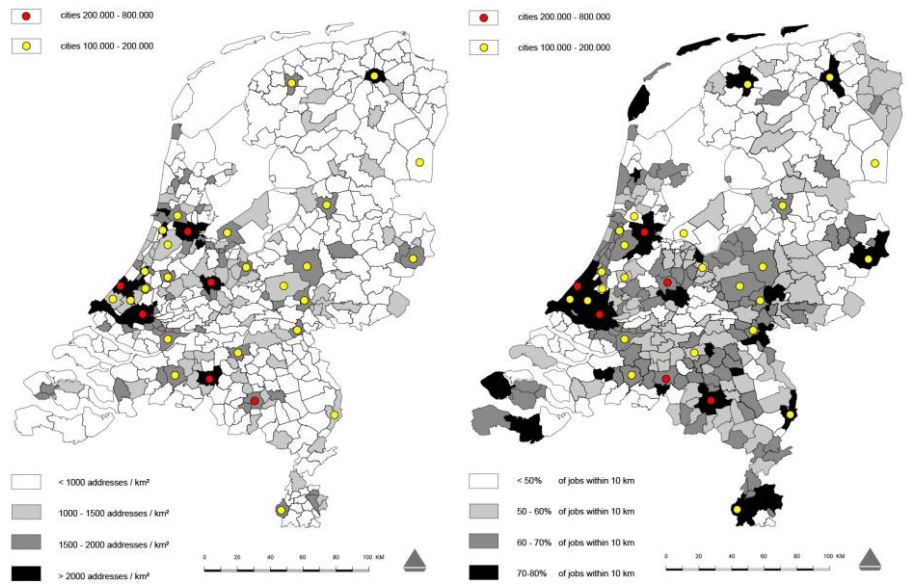

Fig. 6. Urban densities and potentials for the e-bicycle in commuting, Source: CBS 2014

4.2. DEVELOPMENTS IN COMMUTING DISTANCES

To explore how commuting distances evolve over time, we considered the changes in home–work distances in cities with populations over 100,000, between 2005 and 2014 (Figure 7). Except in the big cities, in most cities the percentage of people holding a job within an average distance of 15 km is decreasing, resulting in an average decrease of 4% between 2005 and 2014. This seems consistent with the observations of Tordoir (2015) regarding the upscaling of urban networks in the Netherlands. It is slightly less, however, than the increase in average commuting distance across the Netherlands from 17.6 km in 2003 to 18.6 km in 2014, which amounts to 6% (CBS 2016).

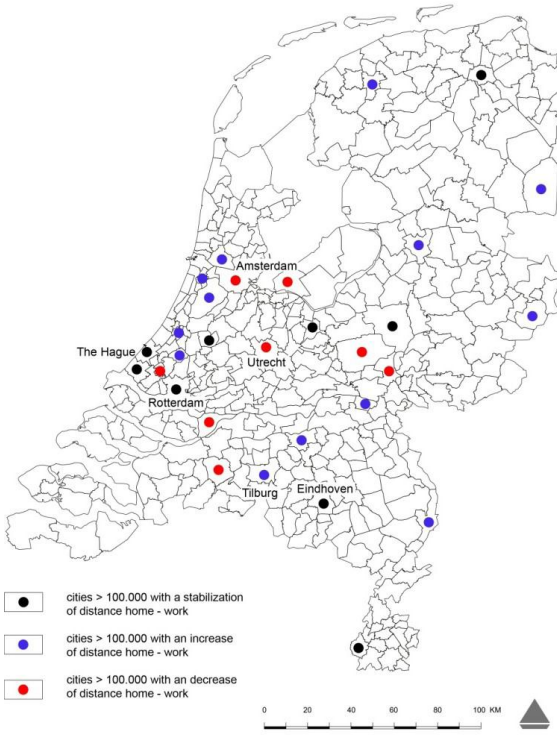

Fig. 7. Developments in home–work distances 2005-2014, in cities with over 100,000 inhabitants, Source: CBS 2014,2016

4.3 POTENTIALS OF THE BIKE-TRAIN COMBINATION IN SOUTH LIMBURG

Figure 8 (left hand side) shows the percentage of people with jobs within acceptable e-bike distance in the South Limburg region . In Figure 8 (right hand side) this percentage is added up with the percentage of employees with jobs on rail-oriented locations beyond 15 km, having thanks to the bike-train combination a reasonable alternative to the car (following our assumptions, see above). This results in a gain of approximately 5% to 6% of commuting trips that have a reasonable alternative to the car. Compared with the scores of the (e-)bicycle, shown on the left side, this has almost no visible effects in the figure. Only two municipalities score above 70% thanks to this addition, but that is because the score of the e-bicycle for these municipalities was already close to 80%. It must be also kept in mind that these figures only reflect the potential use of public transport as an extension of the (e-)bicycle, and not as a transport mode in its own right, which might of course for some travelers and trips be an important option to have.

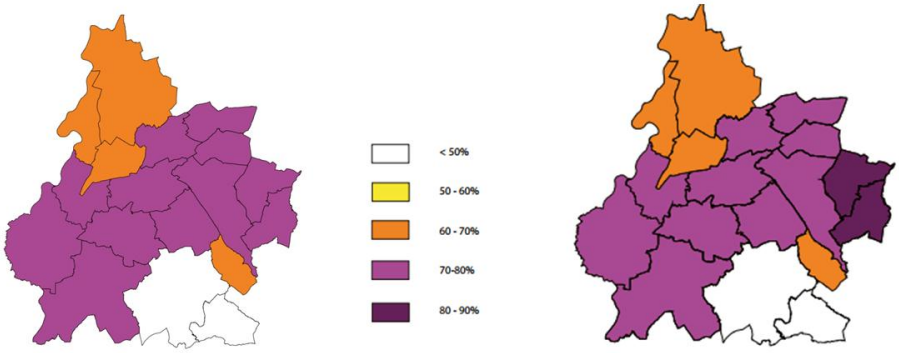

Fig.8. Left hand side: Percentages of employees living on average within e-bicycle distance from their work , per municipality. Right hand side:, Percentages of employees living on average within e-bicycle distance from their work , added up with the potential bike-train combination, per municipality (2014), Source: CBS and E'til

4.4. ACTUAL VS. POTENTIAL TRANSPORT MODE OPTIONS IN COMMUTING

4.4.1 ACTUAL VS. POTENTIAL USE OF THE (E)-BICYCLE FOR COMMUTING

So far, we explored the geographical conditions for the potential use of bicycle, e-bicycle, and bike-train mode for commuting. An interesting question is to what extent the potentials for bicycle, resp. e bicycle use are currently being used. Table 1 shows the percentages of employees having jobs within bicycle distance, compared with the actual bicycle use for commuting, on average in four groups of municipalities, also showing the parts of the Dutch population living in these four groups in 2014. (based on own calculations on Netherlands Travel Survey-data (OViN), CBS 2014).

Percentage of employees having jobs within 7.5 km	Actual bicycle use for commuting	Percentage of population
70-80%	39%	8%
60-70%	37%	22%
50-60%	35%	20%
0-50%	28%	50%

Table 1. Percentages of employees having jobs within bicycle distance, compared with the actual bicycle use for commuting, on average in four groups of municipalities, also showing the parts of the Dutch population living there, in 2014 (OViN, CBS 2014).

It seems that, viewing home–work distances as conditional for potential behavioral change, about 30% of the Dutch population lives in municipalities in which a doubling of bicycle use for commuting would be possible.

Percentage of employees having jobs within 15 km	Actual bicycle and e-bicycle use for commuting	Percentage of population
70-80%	36%	31%
60-70%	33%	30%
50-60%	30%	26%
0-50%	27%	13%

Table 2. Percentages of employees having jobs within e-bicycle distance, compared with the actual bicycle and e-bicycle use for commuting, on average in four groups of municipalities, also showing the parts of the Dutch population living there, in 2014 (OViN, CBS 2014).

4.4.2 ACTUAL VS. POTENTIAL MODAL SPLIT FOR COMMUTING IN THE SOUTH LIMBURG REGION

Following the results for South Limburg, we compared the current modal split in South Limburg (OViN, CBS 2014) with the potential modal split, adding up the potentials for e-bicycle and bicycle-train combination. This results in the following potential modal split for commuting in South Limburg (see Table 3), as shaped by home-work distances and accessibility of job locations through the bicycle-train combination.

Actual modal split South Limburg region		Potential Modal split South Limburg region	
Car:	60%	Car:	23%
Alternatives fort he car: 38%		Alternatives fort he car: 75%	
Other:	2%	Other:	2%
Total:	100%	Total:	100%

Table 3. Actual and potential modal split for commuting, as determined by geographical factors, and with the use of the e-bicycle and the bike-train combination, in the South Limburg region in 2014. (OViN, CBS 2014).

5 CONCLUSIONS

To determine the 'hard core' of CD in urban areas, we addressed the following questions: 1) to what extent are commuting distances in urban areas within cycling or e-cycling distance, and how do they evolve over time? 2) to what extent is the combination (e-)bicycle-public transport an additional competitive alternative to the car in commuting? 3) which are the potentials for behavioral change, in relation to the current modal split of commuting?

The findings indicate the following conclusions:

1. Although distances from home to work have been increasing, reaching an average of 18.6 km in the Netherlands in 2014, in the three big cities and some medium-sized cities, 60-80% of the commuters have jobs within an acceptable cycling distance (on average within 7.5 km). Almost one-third (30%) of the Netherlands lives in these cities. Next, in all big and medium-sized cities and most suburban areas in the Netherlands (61% of the population) 60-80% of the commuters has a job within e-bicycle distance (on average within 15 km). Looking at trends over time, between 2005 and 2014, it appears that in the large cities there is a stabilization or a decrease of the home–work distance within e-cycling distance, but in most medium-sized cities there is a modest increase. In all cities with over 100,000 inhabitants there is an average increase of about 4% in the home–work distance, compared to an average 6% increase across the Netherlands in the same period.
2. We selected the South Limburg region as a case to examine the potential of the bike-train combination for distances beyond 15 km. At present, in the South Limburg region, approximately 5% of employees with jobs outside e-bike distance have a reasonable alternative to the car in their daily commute with the bike-train combination.
3. In urban environments (61% of the total population) the current home-work distances shape conditions for a potential doubling of the use of the (e)-bicycle for commuting, from about one-third to about two-third of commute trips, thus potentially becoming the dominant transport mode for commuting in urban areas.

Our overall conclusion is as follows: In the Netherlands the urban fabric seems appropriate for the daily use of the e-bicycle for commuting. In urban areas and their interwoven suburban areas the (e-)bicycle currently has a remarkable potential for increasing its share in daily work commutes, even replacing the car as the dominant transport mode. Looking at the specific case study of South Limburg, the added potential of the bicycle-train combination currently seems modest.

6 REFLECTIONS AND FURTHER RESEARCH

Although current home–work distances shape conditions for a doubling of the use of the (e-) bicycle in commuting in urban areas, this is of course not a sufficient factor for behavioral change. Extensive research has been carried out, addressing the non-spatial factors of behavioral change (see e.g., Van Acker et al. 2010). The differences between potential and realization shown in Table 1 and 2 underscore this challenged.

Nevertheless, for the sake of discussion, it would be interesting to try to estimate some implications for car dependency in urban areas. Only looking at the (e-)bicycle as an alternative to the car (without the use of public transport) and considering that about 50% of the population of urban areas commutes daily, it follows that only 10-20% of the urban and suburban population currently are dependent of the daily use of a car, due home–work distance in excess of 15 km. The rest of the population should be considered to lie outside the 'hard core' of CD, and in the second or third level of CD (see Figure 1). Assuming that dependency on the car for commuting can be considered as the major determinant for car ownership and that everyone might need access to a car occasionally, this results in a theoretical market for car sharing or renting – or the 'car as a service' – for at least 80% of the urban and suburban population.

Although potentials for alternative transport modes as determined by geographical factors will not necessarily lead to behavioral change, it is informative for the resilience of urban structures in the Netherlands in relation to possible desired or necessary behavioral changes in relation to e.g. climate change (reduction of the use of cars) or the livability of cities (reduction of use and ownership of cars). It

appears that this resilience is not dependent on high densities; the e-bicycle seems well suited for medium-size and even suburban areas as an alternative for the car. A question for further research would be to examine to what extent the urban structures and resulting commuting patterns in the Netherlands are representative for Europe at large.

Although the added potential of the bicycle-train combination currently seems modest, this does not reduce the importance of public transport: due to the increasing home–work distances, especially in medium-sized cities, the importance of regional public transport as an alternative to the car will increase on distances beyond 15 km. Next, and beyond this study, the importance of the availability of public transport options that do not depend on a good inter-modality with (e-) bicycles for certain trips and travelers should be acknowledged.

7 LIMITATIONS

We have assumed that people who work within their municipality on average live within 7.5 km of their workplace, given the geographical size of most Dutch municipalities and due to the concentration of residents and jobs in the more central parts of those municipalities. An analysis on a finer scale would obviously lead to a more nuanced picture. For instance, in the northwestern peripheral and rural areas of the country there are municipalities with a large geographical size, but without an urban core. Although it appeared from the model that in some of these municipalities the score of employees having a job in their own municipality was between 50% and 60 %, we adapted the score in these cases as being below 50%, as it was obvious that the average commute distance in these cases was beyond 7,5 km. A special position is taken by the big cities of Amsterdam and Rotterdam, in particular because their urban area is significantly larger than the medium-sized cities. As a result, on the basis of this analysis it is uncertain whether residents who work in these cities live on average less than 7,5 km from their work. On the other hand, it seems that precisely in these cities, through a well-developed urban transport network, alternatives to car commuting are in abundance. As stated above, looking at the specific case study of South Limburg, the added potential of the bicycle-train combination currently seems modest. Partly this is due to our research method: 1) We have assumed that all commute trips within 15 km potentially could be undertaken by the (e-) bicycle – on average around 70% in the South Limburg region – leaving as potential for the bike-train option only the rail-oriented jobs beyond 15 km. 2) We didn't take into account the rail-oriented job locations outside the region of South Limburg. Finally, we did not study the potential impact of technological and socio-economic developments, such as an increase in telecommuting or flexible work contracts, on the future commuting patterns.

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ID 1342 | INFLUENCE OF URBAN MORPHOLOGY ON THE USE OF BRT TRANSPORT SYSTEM

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ABSTRACT: Urban planning has the responsibility for defining the territorial and urban models of cities, this determines the distribution of the demand for mobility in the cities. Hence, it is important to affirm the character of the two-way relationship between the spatial distribution and public transportation systems. Using the primary and secondary data with multiple regression model, the present study analyses the relationship of the built environment with the number of passengers registered in the year 2014 in the Bus Rapid Transit in the city of Quito, Ecuador. The delimitation of the service area in the built environment of stops is carried out with the support of the Geographic Information System (GIS). The results show the importance of no-resident population density and diversity of land uses and road density at the time of explaining the number of users of the system at each stop. Research allows to estimate both the future transportation system demand, as well as the impact that can have urban variables on the use of the Bus Rapid Transit in future growth of the urban area.

KEYWORDS: urban variables, Bus Rapid Transit multiple regression model, GIS

1 INTRODUCTION

Urban planning has a great responsibility in the management of urban mobility demands and conditions it (Pozueta, 2000), therefore this influences the mobility and transport system that serves, in the same way, the changes in the transport network and mobility generate territorial transformations (Miralles, 2002). In this sense, the spatial planning is a tool for generating an urban model that promotes public transportation.

In fact, this urban model has been promoted as a strategy within the sustainable planning of cities, as is the case of the European Union (EU, 2011). On the other hand, this urban model in the United States began to spread based on the Transit Oriented Development (Cervero, 1996, Boarnet and Copin N., 1999). In Latin America, the pioneer city was Curitiba, which BRT Oriented Development (BRT-OD), becoming a worldwide reference.

In the case of the city of Curitiba two elements facilitated the mobility, on the one hand the distribution of the activities of the city along the zones served by the transport, and on the other, the implementation of the Bus Rapid Transit. This system is efficient, flexible and low-cost system to meet the demand for mobility in cities (Rabinovitch and Leitman, 1996). For these qualities, this transport has expanded rapidly around the world. Currently there are 205 cities that have implemented this transportation system (GlobalBRTData, 2016).

However, not all cities that have this transport system have managed to integrate the built environment with transport. In this line of reflection some research has emerged of these urban models that were not planned as a support to the BRT, several of these analyses were carried out in cities of Latin America. The results show that the demand behaviour of the transport system depends on the supply of the service and the built environment (Estupiñan and Rodríguez, 2008, Rodríguez and Vergel, 2013, Vergel, 2014).

Notwithstanding these contributions support the relationship between the built environment and the number of users, it is difficult to determine the behaviour of some variables, especially the influence of design. These analyses determine the area of intervention within a range of 250 meters in all stops, 500 meters in the terminals and stations. This delimitation does not consider the actual distances travelled in the pedestrian networks of the built environments.

On this basis, this paper aims to analyse the built environment of the service area within distance of 300 meters at stops and 600 meters at stations and terminals. Starting from the question How does the urban form promote the use of Bus Rapid Transit in Quito? The main objective was to analyse the urban

variables no-resident population density, land use diversity and road density. The hypothesis is supported by the statistical empirical analysis of the urban variables and the number of users of the Bus Rapid Transit.

For this, the research is structured in four sections. First the introduction in which review of the literature, secondly the data and the methodology used based on GIS tools, third the model is explained and finally the conclusions and contributions of the work.

2 BUS RAPID TRANSIT AND BUILD ENVIRONMENT

The Bus Rapid Transit (BRT) are high-quality surface buses that provide comfortable mobility through the use of exclusive lanes and a favourable cost-benefit ratio. These systems have performance characteristics similar rail transit, but at a lower cost. A BRT could cost from 4 to 20 times less than a tram system (LRT) and 10 to 100 times less than a metro system (Wright and Hook, 2007). For these qualities, the BRT system has gained worldwide popularity. To date, more than 200 cities around the world have implemented some form of BRT-type system, comprising about 5568 kilometres in length and more than 30 million passengers per day (GlobalBRTData, 2016). Despite the popularity of this type of transport, the fact that these systems can promote a development in the next building environment, and that this environment becomes a support for this system remains a topic of discussion. The empirical evidence shows that the built environments can be a contribution at the Bus Rapid Transit, as well as the transport system can generate significant activities in the built environment.

These studies have analysed the urban variables proposed in the TOD, which is the urban form considered inherent, efficient and sustainable (Calthorpe, 1993; Curtis et al., 2009). In other words, they analysed residential and employment population density, the diversity of land uses and urban design (Cervero and Koclelman, 1997, Cervero, 2007, Badoe and Miller 2000, Cervero and Duncan 2003). Thus, the city of California identified correlations between population density and number of passengers, however, this also depended on the proximity factor (Cervero, 2007). Similar was the behaviour of the employment density variable located in the environment close to BRT transport (Frank and Pivo, 1994).

In relation to the diversity of land use, this variable and accessibility are considered relevant for the behaviour to ridership, even more than the characteristics of the residential density (Badoe and Miller, 2000). The Portland study found that the diversity of land use in residences decreased the likelihood of private vehicle travel, while in residential exclusive use areas the number of private vehicle journeys increased. Similar to the result was obtained in the bus stop of Florida (Chu, 2004). However, it depends on the willingness of the residents to walk. Thus, they found that local commerce located within a radius of a mile (1.6 km) may have a greater chance of displacements pedestrian (Cervero and Duncan, 2003)

On the other hand, urban design is one of the variables with broad meaning depending on the context, in general, understood as the form that acquires the connection space that allows the integration of different land uses in cities. Under this concept, the variable acquires its importance when considering that, the displacement does not end at the entrance or exit door of the transport system but includes the urban environment to capture the clients (Wright, 2007). Thus, the study of the city of San Francisco concludes that, the landscape and the urban form directly affects nonmotorized modes, especially by design factors such as the distance between blocks, the perception of safety or other factors as Topography (Cervero and Duncan, 2003; Kitamura et al., 1997).

In this sense, the demand of the Bus Rapid Transit has a similar behaviour to other types of transport analysed in other contexts, in which the demand of the transport system depends both on the supply of the system (speed, Service and frequency) and of the characteristics of the near urban environment (Cervero and Koclelman, 1997; Cervero, 2007).

3 BUS RAPID TRANSIT IN QUITO-ECUADOR

Quito is the capital both Republic of Ecuador and province of Pichincha. Due to its characteristic of centrality it welcomes the majority of the population of the Metropolitan District. The city is located on a plateau at 2850 m a.s.l., in an area of 18,860 hectares (DMQ, 2009). The urban area is articulated by public transportation that facilitates the movement of the population through the integrated Bus Rapid Transit known MetrobúsQ, conventional buses, vans and informal buses (EMQ, 2011). The system

integrated BRT(Metrobús-Q) was built and implemented gradually in some phases since 1995. At present, the trunk corridors Trolebús, Ecovía, Suroriental, Central Norte, Suroccidental have a total of 135.70 kilometres of length between exclusive lanes and mixed traffic. In the exclusive corridors articulated buses circulate while in the mixed traffic corridors the conventional buses circulate (EPMTP, 2016; Barrera A. and EMBARQ, 2013).

The Trolebús system is the central corridor. It is also known as the "green line", which covers an approximate distance of 18 km from the south of the city with the El Recreo terminal to the north of the city in the terminal La Y (Guía, 2012). These articulated buses run through exclusive corridors, has 31 stops, two stations and four transfer terminals (EPMTP, 2016). The Ecovía corridor is known as "red line", the fleet is composed of articulated buses. It travels a distance of 9,5 km in exclusive lane, that goes from the transfer station the Marín (sector center) to the terminal Rio Coca located in the north zone of the city (Guide, 2012). This articulated bus system has 16 stops, one station and two terminals (EPMTP, 2016). Regarding demand, the results of the mobility survey (2011) highlighted that 67.3% of the population depends on the supply of the public transport system. Of this percentage of trips, 22.7% correspond to the integrated transport of Metrobús-Q, of which 45.6% are Trolebuses, 19.7% to Ecovía and Eastern Southeast with 8,0% (EMQ, 2011).

In relation to the urban form, the city of Quito presents diverse characteristics. The city maintains a structure that concentrates equipment and services in the centre, whereas a tendency of distribution of the population is registered in the periphery of the city. This heterogeneous distribution has an impact on the mobility of the city.

Fig.1 Quito's Trole and Ecovia BRT stations audited

4 DATA AND ANALYSIS TOOLS

The study analyses the variables of the stopping environment in terms of no-resident population density, land use and network density in the surroundings near the shutdowns, stations and terminals of the transport system. Primary and secondary data are used for the 2008-2016. This period time is justified in the first instance by the sources provided. To obtain no-resident density, it uses the number of employees in public entities, the number of students and the number of employees in shopping centres. For the index land use, it uses the database (2008) available at the Secretariat of Territory of Habitat and Housing. This information is superimposed with available on the internet using the Google maps tool and also with the data obtained in situ. The road and corridors of the BRT system, stops, stations and terminals (2008) available in the Metropolitan Public Enterprise of Mobility and Public Works. The number of passengers per stop (2014) Metropolitan Public Transport Company of Passengers. In the case of the dependent variable (number of passengers), we use the data corresponds to he averages recorded in one day in the stops, stations and terminals of the Bus Rapid Transit obtained from the database of the year 2014, the base is used of data this year because in recent years the stops are in a process of remodelling, for such reason its operation has been unusual.

Table 1 shows the description of the data, the level of data collection, the source of information. In addition to the statistical descriptive analysis of the 53 stops, stations and terminals studied. In the case of the density variable, it analysed the number of people who are not residents of only those who work in public entities, shopping malls and educational institutions, the latter includes students. In relation at index land use are considered according to the current legislation (education, health, recreation, religious, administration, hotels, specialized commerce, malls, small scale commerce, and industry). Finally, the density of the network which is the result of the total length of the pedestrian network in kilometres divided for the service area.

Variable	Definition	Mean	Std. Desv.	Min	Max	Spatial Level	Source
Dependent Bordings 2014	Number of daily boarding per station for 2014	4897,04	3501,06	617,3	19940,83	Station	EFMTP
Centrality	Distance of Centrality activities form stop	5,73	4,5	0,58	15,41	Station	GIS
Density	Density (Persons do not live per hectare)	123,98	124,74	0	585,56	Station	MEC, MTRH
Land use	Land use index (0-100)	656,6	194,75	18	100	Station	EFMMOP
Road Density	Road density (linear kilometres in service area)	0,24	0,055	0,15	0,41	Station	EFMMOP

Table 1 Description of the variables used in the model and descriptive statistical analysis (N = 53)

For the calculation of the independent variables, it analysed the data within the service area of each stop, station or terminal. In the case of no-resident population density it superimposes the information of the number of public employees, students, teachers and number of employees of shopping centres with the service areas of each stop, thereby calculating the population number within the float population inside of the service area which is calculated in hectares. Using the land use layer (2008), the layer with the data obtained in the field is superimposed on google maps. These data are filtered into the tables and the number of uses in each service area is quantified. These activities were classified according to the current regulations, establishing a range of 0-100 for this indicator. In order to integrate the design variable into the model, it is considered the road density. For this, it calculated road density by means of overlap the layer road (length kilometres) and the service area. Once the independent variables are obtained, a multiple linear regression model is obtained from the statistical analysis system, this tool is available in the Geographic Information System (GIS).

5 METHODOLOGY

Using primary and secondary data, the present work combines the quantitative and qualitative analysis to explain the relationship between the built environment and the Bus Rapid Transit. For this, it selects the corridors Trolebús and Ecovía which the bus systems were the first to be implemented in the city. The Trolebús corridor began its operation in 1995, has 31 stops, 2 transfer stations and 2 terminals. The Ecovía corridor began operating in 2002, has 15 stops, one station and two terminals. These two BRT transport systems circulate through exclusive corridors. On the other hand, the built environments of these corridors have been analysed in previous studies (Rodríguez and Vergel, 2013, Vergel, 2014).

Another relevant issue for this study is the delimitation of the service area of the Trolebús and Ecovía corridor stops. For this delimitation, this paper considers the choice of critical service distance in relation to the demand capture in the built environment and the pedestrian route through the network. In this particular case, the critical service distance of 300 meters is established for the stops and 600 meters for the terminals. These thresholds correspond to the maximum distances of the sample of pedestrian routes registered in the environments near the stops in October 2016. These distances are similar distant identified in studies of the Metro Madrid, Spain (Gutiérrez et al. , 2010). The network analyst (tools GIS) is used for pedestrian distance. In this way, we intend to work with the actual distances travelled through the road (Gutiérrez et al., 2012).

Using overlays of layers within the delimited served areas, we calculated the urban variables. In the first part of the study, we analysed the variable density the variable density of non-resident population in 44 stops, 3 transfer stations and 6 terminals of the corridors of the Trolebús and the Ecovía in relation with ridership. This study also includes two variables, on the one hand the dummy because the stops and the terminals have different behaviour and on the other the distance of the stops in relation to the centre of activities of the city (Rodríguez and Estupiñan, 2008; Vergel, 2014; Gutierrez Et al., 2010). The second part analyses the relationship between the ridership and the attributes of the built environment, in this case the diversity indicator is calculated dividing the number identified in the service area for the total number of uses established and multiplied by 100. Finally, for the design variable, it calculated the road density within the service area (Rodríguez and Estupiñan, 2008; Vergel, 2014; Gutiérrez et al., 2010).

6 DESCRIPTION AND ANALYSIS OF RESULTS

In the first part of the model we consider the ridership relation to the density of the nonresident population in the service areas, with this variable it obtains R2 0.149. Table 2 describes the results of the model fitted with the first factor analysed, which includes the distance to the stops, service stations and terminals and the dummy, with these variables it obtains R2 0,43

Variables	Coefficient	Std error	P-value
Dummy	0,43	0,131	0,000021
Centrality	-0,02	0,091	0,004405
Density	0,189	0,008	0,001774
N	53		
R2	0,44		

Table 2 Multiple regression model (N = 53)

Yi= PoFlot Density + Centrality +Dummy
Y = ridership at each station i
PoFlot Density = not-resident population in the service area
Centrality = Distance between stops to the centre of activities of the city
Dummy = terminal BRT = 1; 0 = other type.

The second part of the model analyses the relationship between ridership, land use and design.

Yi = Dummy + Diversity + DenRed
Diversity = variable number of uses divided by the total number of uses multiplied by 100.
Dummy = terminal BRT = 1; 0 = other type.
DenRed = Road density

Variables	Coefficient	Std error	P-value
Dummy	0,14	0,095	0,09
Centrality	-0,019	0,007	0,008
Density	0,08	0,048	0,07
Land use	0,05	0,001	0,0019
Road Density	0,07	0,022	0,0010
N	53		
R2	0,66		

Table 3 Regression model of station boarding

Table 3 shows the bivariate correlation coefficients obtained between each of the independent variables studied and the number of passengers recorded in the stops. The results show a significant statistical correlation between the variables, except for the variable density of the network. The coefficients have low values, with significance values below 0.01.

7 CONCLUSIONS

This proposed model shows the information of the users volume that could have the station of simple way. Relating the variables in the Geographic Information System, we analyse a direct estimate of the demand for BRT transport at the station level. This model involves the variables of the built environment known as the 3D (Density, diversity and design). Variables become important when explaining the use or not of the BRT transport system because the built environment is the pedestrian connector to the transport system.

To estimate the demand, the multiple regression model has been adjusted, where the dependent variable is ridership at stops, stations and terminals, and the independent variables reflect the characteristics of the built environment in the service areas delimited with the networks analyst tool of the GIS, reaching R20.66. The procedure allows to make estimates of demand quickly facilitating to the transport planners. In addition, it is a tool of interest to planners when establishing urban plans. Despite the goodness of the model, there are weaknesses and one of the main is that, it considers the pedestrian movements in the stations and it is not applicable in the stations and terminals where the access can be through feeders.

The adjustment of Bus Rapid Transit model in the city of Quito (R20.66) confirms that urban variables are explanatory in relation to the number of passengers at stops, stations and terminals. Although this study has not been considered the resident density, because it has little explanatory value. However, the incidence of no-resident density can be identified as a variable with greater explanatory value and not applied in other works. This variable acquires greater value when integrating the variables distance to the centre of economic activities and Dummy.

The distance from the stations to the city centre is also a variable that has an explanatory value in relation to ridership. The stations near the activities of the city tend to catch more passengers than in the peripheries. This information is a tool at the time of planning both to predict future demand for new peripheral stations and to restructure the distribution of existing activities in the city. Including the variables land use road diversity, the results confirm the importance of the 3D the time to explain the demand of the Bus Rapid Transit. The design in this model is identified only through the road density. Under the criterion that the increase of the density of the network directly affects an increase of the area of coverage to the stops. A dense road facilitates the pedestrian mobility of the population. In spite of this assertion, to define that they comply with characteristics to be spaces known as pedestrian-friendly spaces, other variables are required that will be considered in the next stage of the investigation.

Finally, it is concluded that this model that relates the variables through the multiple regression analysed in the GIS contributes to strengthen the existing knowledge regarding the urban form and the demand of the

Bus Rapid Transit. From the point of planning it allows establishing future demands and also becomes a tool that can contribute information for the design of new development and the rehabilitation of existing ones.

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ID 1753 | REUSING HERITAGE: ACTIVIST PLANNING FOR PLACE-BASED REGENERATION PROCESSES

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ABSTRACT: The research aims at discussing the potential role of reusing abandoned built heritage as driver for place-based regeneration processes in inner areas. The study focuses on disused railway heritage in Italy because of its relevant size, the low percentage of effective initiatives, and its strategic position into the territory. In European context, successful initiatives show the considerable role of political agenda and economic programmes as well as shared interests among institutional subjects, associations, entrepreneurs and local communities to achieve common goals. In Italy, these necessary components are often lacking, especially in terms of strategic initiatives and dialogue between policy makers, activists and socio-economic stakeholders, although the National Railway Company (RFI) has promoted institutional initiatives in the last decades. In this field, could activist planning have a key role for regeneration processes by recycling unused heritage? Could activist planning contribute to new territorial metabolisms, especially in deprived and marginal areas? The Southern case of Campania Region has been selected taking into account that it is included among the regions that need support to promote development and reduce regional disparities in European countries, according to European Structural Funds and Cohesion Fund. In this region, on one hand, the potentiality of railway heritage has been recognised for its being an existent infrastructure network on the territory that could link cultural, historical and environmental resources; on the other hand, the crisis of 2008 has cut down investments addressing main of them to sustain market-led processes. This conflicting scenario has induced social reactions such as civic movements, new local associations and community-based initiatives that have a proactive role in carrying out bottom up planning initiatives. To discuss that, the researchers have selected a case study in the Campania Region – the historical *Avellino-Rocchetta Sant'Antonio* railway – to reflect on the process induced by activist planning in reusing railway heritage. Through the consultation of indirect sources, fieldwork sessions, interaction with local key actors of the selected case study, the research group aims at verifying if bottom-up reuse initiatives are able to trigger place-based regeneration processes, producing positive impacts in terms of social, economic and cultural dimension.

1 INTRODUCTION

In many Italian Regions, inner areas represent about 60% of the national territory, where 25% of people lives, plagued by growing depopulation and marginalisation conditions, as described in the National Strategy for Inner Areas. The National Strategy defines these areas « […] as territories substantially far from centres offering essential services and thus characterized by depopulation and degrade» but also « […] with a wealth of key environmental and cultural resources of many different kinds, which have been subject to anthropisation for centuries». The Strategy is funded by Community funding programme for the period 2014-2020, and by national funds (Stability Law) and actually implemented at regional scale. As result of abandonment and emptiness processes, nowadays the inner areas often present a capital of unused built and infrastructural heritage. According with the National Strategy, the starting point for a local regeneration process is enhancing the "territorial capital" (Camagni, Borri, & Ferlaino, 2009): the natural and cultural capital and the social capital and social cohesion. In this perspective, unused capital should be considered as a measure of development potential. The ongoing research is developing within the research project "Place-based Regeneration Strategies and Participatory Processes", coordinated by Gabriella Esposito De Vita, and funded by the Italian Research Council (CNR) and aimed at combining community engagement and participatory approaches within a cooperative and place-based regeneration process. A thematic focus regards abandoned heritage and reuse strategy as driver for local regeneration processes, analysing the role of bottom up initiatives ad social activation in implementing these processes. At present, the study deals with reusing abandoned railway asset in Italian inner areas as catalysts for valorising and networking environmental, historical, cultural and socio-economic resources, and guaranteeing a sustainable accessibility to the inner areas. What can be the opportunities arising from the railway network asset in the field of place-based regeneration processes? In this framework, what can be the proactive role played by local communities? The research deals with this heritage considering building stations and tracks as integrated parts of an infrastructural system for verifying if reuse strategies of this network can contribute to cope with the challenges of marginalization in inner areas through place-based regeneration processes. In particular, while in urban areas reusing railways can produce new opportunities in terms of urban mobility (Xu, 2011), in inner areas it can support local development strategy, improving accessibility of environmental, cultural and historical resources (Oppido & Ragozino, 2014). This research deals with the enhancement and valorisation of disused railway heritage taking into account a systemic logic, coherent with this heritage features and territorial characteristics. The main goal of this approach is to highlight relationships that this network has with the territory and the opportunity in linking environmental, cultural, historical as well economic and social existent resources (Oppido, 2014). The selected method to facing adequately this issue is the case study approach (Andrade, 2009; Yin, 2009), by selecting a case study located in an inner area of Southern Italy, the historical *Avellino-Rocchetta Sant'Antonio* railway in Campania Region. The case has been selected taking into account different criteria, among which: with regard to national average, the Region of Campania has an high level of soil consumption and this highlights a need of strategies for the reuse of dismissed or underutilised heritage (ISPRA, 2016); the extent in this Region of internal areas (63% counter to 60% of national average) and high rates of depopulation of the *Alta Irpinia* area; the extent of the track (119 km) with its historical and engineering value; and the high value of the landscape that the track crosses as well as environmental and cultural heritage that it captures. In this phase of the research, the case analysis has double objectives:

- To give a systemic lecture of the context aiming at linking the railway path with the entire infrastructural system and territorial heritage;
- To reconstruct main steps, main actors and stakeholders, which have marked the process of social activation for the enhancement and valorisation of historical track of *Avellino-Rocchetta Sant'Antonio*.

For these reasons, empirical analysis has been led starting from a consultation of direct and indirect sources and a set of site visits aimed at producing a visual analysis and a constant active observation (Gaber & Gaber, 2007). Then the work has carried on with the interviews to main local stakeholders, with a particular focus dedicated to actors involved in the social activation process, thanks to which several initiatives has been planned and put to the test for the enhancement of the track and for contrasting its closure. Geographic Information System (GIS) has supported this phase of the research for the construction of a geographic database. Other strengthens points have been added to these formers ones in order to consider possible future strategies of enhancement and valorisation of the track as well regeneration of its context:

- The project "*Binari senza tempo* [Timeless Tracks] and the Memorandum of Understanding between the Minister of cultural goods and activities and tourism, the Region of Campania, the *Rete Ferroviaria Italiana S.p.A.* [Italian trail network] and the Foundation *Ferrovie dello Stato Italiane* [Italian State railways] for a new opening of the track with tourist destinations (14 July 2016).
- The inclusion of the *Avellino-Rocchetta Sant'Antonio* case among the Italian historical tracks objects of the law proposal for the declaration of "Tourist railways" now collected from the Senate.
- The starting of the declaration procedure as good of architectural and landscape interest.
- Campania Region Strategy for inner context has selected this area as pivotal for regional inner contexts.
- The recent declaration of the *Distretto Turistico Alta Irpinia* [tourist cluster] with the Ministerial Decree 321/2016.

The last but not the least element of strong interest is the relevant civic activation emerged. In this context, associations and citizens have struggled to contrast the closure of the railway and to implement the process of enhancement and valorisation for the entire area. This engagement has anticipated and stimulated the following public action. Both strengths and weaknesses points of the *Avellino-Rocchetta Sant'Antonio* case arouse an interesting fieldwork for investigating potential effects of its reuse – with the final goal of supporting regeneration processes in vulnerable and marginal territories – and for checking the power of social activation. The paper includes four sections. Following this introduction, the background to frame the issue of place-based regeneration and enhancement of unused railway lines with a specific focus on social activation; case study analysis and first findings to the discussion about proactive role of social capital in regeneration; conclusions and perspectives for implementing research activities.

2 ENHANCING RAILWAY ASSETS FOR PLACE-BASED REGENERATION PROCESSES

Place-based regeneration processes «may be more accurately understood (and more efficiently practised) as an innumerable range of place-based economic strategies – each one connected by some common attributes, which could form an ideal-typical place-based policy model, although each approach to place-based development is likely to be contextually distinct. Actualising a place-based mode of thinking shapes how places are understood, conceptualised and codified, which can have significant implications for the formulation of policy and the implementation of development initiatives» (Pugalis & Bentley, 2014:561). These context-rooted approaches aim at improving partnership, involving and empowering local community in decision processes to achieve common goals. The main challenge is to build widespread collaborative arena among institutions, experts, stakeholders, local communities and all key actors for inclusive policies and practices in urban planning. They can support regeneration processes in historical centres, neighbourhoods, brownfields or abandoned areas that needed new development strategies based on inclusive and participatory processes. Indeed, place-based regeneration processes aim at building long-term development strategies that overcome inefficiency and inequality in the territory by solving the underutilization of resources and by reducing social exclusion (Barca, 2009). In this framework, cultural heritage represents a strategic resource and potential driver for triggering local development processes, improving quality of life and socio-economic and cultural environment, supporting heritage led regeneration processes (Ferilli et al., 2016; Fusco Girard, De Rosa, & Nocca, 2014; Horizon 2020 Expert Group on Cultural Heritage, 2015). This goal is even more relevant in inner areas, defined as territories at considerable distance from hubs providing essential services (education, health and mobility), and characterized by depopulation and degrade. In Italy, these areas cover approximately 60% of the national territory and hosting nearly 13,540 million people (Barca, 2016). This condition caused marginalisation processes, aging population, and, consequently, land maintenance reduction, hydrogeological instability and environmental risks, and decay and abandonment of the historical heritage. Nevertheless, on the other hand, the inner areas – excluded by globalization processes – contain major environmental resources (water, agricultural systems, natural and human landscapes), and relevant material, and immaterial cultural heritage. Because of this heritage, together with strong sense of community and sense of places, these areas represent a resource for recovering and enhancing local identity and promoting sustainable development. This perspective is consistent with the National Strategy for Inner Areas in Italy, which identifies natural, cultural and landscape diversity enhancement as the main goal for development processes, competitiveness and attractiveness, by increasing the use of territorial capital and by strengthening territorial cohesion (Atkinson, 2013; Camagni et al., 2009; Camagni & Capello, 2013). For this purpose, local communities and place-based leaderships can play a pivotal role in recognizing and enhancing local resources and in bringing up initiatives for bottom up local development and regeneration processes (Hambleton, 2015). With regard to this topic a new figure has been coined by Sager, the "active planner" (Sager, 2016). She is engaged in developing an alternative planning proposal not being a professional planner but a person informed about facts and involved proactively in the process by going beyond possible institutional participatory process and starting grassroots-initiatives, mainly when the institutional decision-making process is not sufficiently inclusive and transparent. She is aware of the potentiality of territorial resources and is engaged in bottom up struggles to enhance underused or unused goods for collective use. Place-based approaches and active planners could be a key to face issues of inner areas. Starting from valorising underused heritage it is possible to build new scenarios for their future. In particular, enhancing disused railway infrastructure can represent an opportunity for a new sustainable accessibility and for tourism promotion (Taylor, 2015), generating positive impacts on economic, social and cultural terms, as evidenced by a number of national and international experiences. For this goal, the railway heritage must be evaluated through a systemic approach, considering disused railways and stations as integrated parts of a system, a network able to improve accessibility and connections among environmental, cultural and historical resources (Oppido & Ragozino, 2014). In international context, many experiences demonstrate opportunities arising from enhancing disused railways for tourism, pointing out the role of a cooperative governance and dialogue between policy makers, stakeholders and local communities. The main initiatives concern, on one hand, national greenway design for implementing a slow mobility, such as *Sustrans Program* in England, *Vías*

Verdes in Spain, *Ecopistas* in Portugal; on the other hand, tourist trains for recreational activities. This second case is the topic of the research, aimed at designing a new life cycle for historical railway lines linking landscapes, and cultural and historical heritage. In many countries, local government bodies and community groups are developing these outdoor recreational trails and this tourism experience represents a growing trend (Taylor, 2015). In some cases, the tourist railway also represents historical and civil engineering values, such as Semmering Railway in Austria, added to the list of the UNESCO World Heritage sites. In Italy, these tourism initiatives started in the 90s thanks to voluntary associations, such as *Ferrovie Turistiche Italiane* [Italian Tourist Railways] in the cases of *Treno Blu* [Blu train] in the area of the Iseo Lake and the Norcia Valley railway. Then, starting from the 2013, the tourism train has been implemented also by institutional initiatives of *Ferrovie dello Stato FS* Group, in particular by *FS* Foundation that provides to enhance historical and technical heritage of Italian railways. For this purpose, in the 2014 it has launched an initiative named *Binari senza tempo* [Timeless railways], aimed at valorising historical rail tracks by converting them in touristic routes across Italian landscapes. Data by *FS* Foundation highlight over 60 thousand of visitors in touristic railways in 2016, with an increase of 45% over the previous year.

THE CASE STUDY OF AVELLINO-ROCCHETTA SANT'ANTONIO

The research deals with the case of Campania Region, where appropriate strategies for reuse of disused railway heritage can contribute to reverse the trend of high soil consumption, to activate valorisation processes of cultural, historical, environmental resources and to reduce gaps between the inner and the coastal areas. With regard to internal areas, the Campania Region has identified the delimitation of four internal areas among which has selected the *Alta Irpinia* as Pilot Area (resolution 600/2014). In March 2016, the Preliminary of Strategy of the Pilot Area *Alta Irpinia* was published on the site of the Territorial Cohesion Agency. The historic *Avellino-Rocchetta Sant'Antonio* railway, before its suspension, represented a strategic infrastructure between Campania, Basilicata and Puglia Regions crosses this area. Data highlight the ongoing marginalization process in the area; between 2000 and 2011, the population decreasing was 5,8%, higher than the regional average of internal areas (1,4%) and the national average for the same type of area, equal to 2,3%. In 2011, population over 65 was 23,7%, higher than the regional and national average for internal areas (21,2%). All these data are included in the Preliminary of Strategy - Pilot Area *Alta Irpinia* (Agency for Territorial Cohesion, 2016), which, among the whole actions for the development of the area, indicates the reuse for tourism of the suspended *Avellino-Rocchetta Sant'Antonio* railway. The railway was built starting from 1889, and it was inaugurated in 1895, with the engagement of Francesco De Sanctis – Minister of Public Education of the Kingdom of Italy – that described in his book *Viaggio elettorale* [Election trip] the landscapes crossed by the railway. The line is 119 km long with 31 stations and 2 terminals (Figure 1).

Figure 1 – The closed terminal of Avellino: new infrastructure and historical warehouse - (Source: Authors)

The tricky orography of the territory, and the need to overpass three rivers - *Sabato*, *Calore* and *Ofanto* – required the built of 58 bridges and viaducts, some of them are above 50 meters long and entirely of masonry (Pane, 2008). Among these relevant infrastructures, the *Principe Bridge* is renowned for its technologic and dimensional features. Considering this heritage, in 2014 an agreement has been signed between Department of Architecture (DIARC) of University of Naples Federico II and Regional Direction for cultural and landscape heritages of Campania; it aims at protecting and valorising the historic railway *Avellino-Rocchetta Sant'Antonio* with the proposal of declaration of architectural and landscape interest. This nineteenth-century-line crosses the main landscape resources such as *Conza della Campania* (Figure 2) natural reserve, *Monti Picentini Regional Park* - in which there are a SIC (Site of Community Importance) and a ZPS (Special Protection Area) zones - and Mephite area with a sulphurous lake and an archaeological site. The landscape excellence is testified by the high quality of local food-and-wine production such as registered designation of origin white wines - *Fiano* and *Greco di Tufo* - and Taurasi DOCG red wine. Nevertheless, in last decades national and regional policies did not recognise and valorise resources of this territory, local communities have believed in local identity value and understood potential future scenario based on their territorial capital.

Figure 2 – Landscapes of Conza della Campania, an abandoned post-earthquake village (Source: Architect Emanuela Di Guglielmo (2013), Degree Thesis "La Ricostruzione di Conza della Campania, Alta Irpinia. 1980/2013. Attraverso la Fotografia di Paesaggio")

3.1 ACTIVIST PLANNING FOR AVELLINO-ROCCHETTA SANT'ANTONIO RAILWAY

The sense of belonging that characterises *Alta Irpinia*'s communities is widely evident in the case of *Avellino-Rocchetta Sant'Antonio* railway. During the middle 2000, has been in sight the closure of the railway because it was underused. Because of this real possibility, a group of people organised an event-trip using the railway. Several people participated at the event so that an idea born: to build a permanent network having the main goal of demonstrating potentialities of the railway, mainly in tourist terms. In 2009, one year before

suspension of the line, the association *In_Loco_Motivi* was established by a network of associations, organisations and citizens, together with trade-union observatory (CGIL), to renew and give the right value to the *Avellino-Rocchetta Sant'Antonio* railway. The project was the *Treno Irpino del Paesaggio* [Irpinia's Landscape Train], Sunday's train trips to discover territory and its cultural, landscape, historic and food-and-wine resources. *In_Loco_Motivi* book from *Ferrovie dello Stato* tickets and organised a tourist package in which were included an excursion with lunch, cultural entertainment and guided tours, with the aim of telling the story and identifying local resources through a slow mood. This initiative was recognised really well done and interesting and the Campania's Agency for Sustainable Transport funded two trains per month. The high number of participants certified the success of this initiative in terms of tourism, socio-economic issues and territorial valorisation: during one year of activity, 27 excursions organised with 2,051 visitors, which have paid a ticket from 15 to 30 Euros. Among these trips, three were organised with educational goals (63 students per trip) and the others with tourism purposes (76 visitors per trip) by crossing 17 small villages and visiting more than 30 monuments (*In_Loco_Motivi* archive). On December 2010, the railway was suspended but not dismissed thanks to the engagement of *In_Loco_Motivi*'s activism started in 2009 to keep high attention to the *Avellino-Rocchetta Sant'Antonio* railway and on usage opportunities for the valorisation of the area. The association organised national level events (National Day of Forgotten Railways, www.ferroviedimenticate.it), meetings and debates to facilitate communication among local administrators, stakeholders and citizens, and awareness activities in schools involving pupils and students in knowing territorial history and resources. A rail trip from Rocchetta to Conza was organised for the last edition of the Sponz Fest of Calitri (22-27 August 2016, www.sponzfest.it); it is an artistic kermesse directed by Vinicio Capossela that is programmed also for this current year during August. They are active also in contrasting not shared ideas and projects, such as the 2014-adopted Territorial Plan of Provincial Coordination that have proposed the conversion of the *Avellino-Rocchetta Sant'Antonio* railway to a greenway. This would have meant to delete the historical railway heritage substituting it with a new green infrastructure; this idea did not encounter favours of the *In_Loco_Motivi* Association, who, recognising its historical, cultural and engineering value, submitted comments to the plan in order to oppose to this conversion.

3.2 GIS inventory AS SUPPORT FOR territorial analysis

In order to analyse the territorial complexity and overlapping nature characterising *Alta Irpinia* area, a Geographical Informatic System (GIS) supports the research. Being the object of research a network linked (or potentially linked) to other territorial systems (environmental, historic, cultural and socio-economic), the GIS permits to analyse this complexity by identifying clusters and homogeneous areas – both critical and potential – to trigger a place-based regeneration process in the *Alta Irpinia* pilot area. Starting from these reasons, a GIS inventory has been elaborated to systematise information about railway and territorial structure. This tool can provide a support both in the case study analysis – reading the space-time context in a systemic logic and railway relations with environmental, cultural, socio-economic heritage (Eizaguirre-Iribar, Etxepare Igiñiz, & Hernández-Minguillón, 2017) – and in decisions making process to develop a place-based regeneration approach for the area. The use of GIS tool permits, indeed, to manage process, analyse, and then update and implement, a significant amount of georeferenced data and alphanumeric dataset. The analysis have focused on the railway line and crossed territories, particularly in the *Campania* Region, with attention to Avellino Province; considered that railroad crossed also *Puglia* and *Basilicata* Regions, the study model has also been extended to neighbouring territories of *Foggia* and *Potenza* Provinces. Spatial reference system is WGS84-UTM-zone 33N. About the project of the study model, systems have been identified taking into account context features in order to think about a place-based regeneration process: accessibility system, environmental system, historical-cultural system, socio-economic system, production system and tourism hospitality system. The model, then, takes back both information and maps about single systems, and integrated readings. This study model has been divided in systems to identify features and resources of territorial context, and to highlight relations of this one with railway:

- Environmental and historical-cultural systems include data about the existence and typology of natural and cultural resources;
- Accessibility system aims at highlighting some integrations between transport systems and different types of roads, the distance of the railway line and stations from urban centres and sites of interest and accessibility conditions;
- Socio-economic system aspires to analyse the marginalization of these areas, especially that crossed by the railway line in the previous and subsequent period by suspension (population density, age range, occupancy, commuting, etc.);
- Production system includes the identification of the main productive sectors and their location; finally, the tourist reception system identifies the current type of tourism that affects the area, and the hospitality capacity of the area.

Data to build GIS inventory have been found from different territorial information systems – particularly from, among other sources, Geoportal of public administrations, primarily from the Campania Region and the Avellino Province – and from official statistical sources, particularly *ISTAT* (Italian National Institute of Statistics). These databases have been integrated with information about environmental and cultural heritage, found by national and local authorities, and supplied by the *In_Loco_Motivi* association; also, fieldwork campaigns have been aimed at verifying and integrating information. By the use of GIS tool, graphics and thematic maps regarding territorial information have been worked out. In the subsequent steps of the research, moreover, this tool will be used for spatial and topological analysis to determine information about spatial relations. Therefore, it is clear that the use of GIS tool has a double function: the use as an analysis tool during the study step and as a decision support system for future valorisation strategies of the territory through the reuse of the *Avellino – Rocchetta Sant'Antonio* railway.

4 A DIFFUSED ENHANCEMENT THROUGH SHARED STRATEGIES

In the current initial phase of research, case study analysis has been structured in two areas of complementary investigation aimed at understanding the potential of the territory, the role of social actors and the expectations of local communities. For this purposes, an analysis of the track and its stations in relation to the context and territorial heritage has been carried out, through a systemic approach and building data collections. In parallel with this research activity, a listening campaign has been carried on for integrating the reading of the territory and identifying the expectations of local communities and key stakeholders. In the first five months of activity, initial case study evidences have been collected to define a first framework analysis:

- The importance of the territorial heritage of the context crossed by the track, with its historical, cultural, landscape and precious resources, and excellence productions;
- The strategic position of the railway to access landscape and main resources of the territory;
- Railway role as hinges between three Italian regions that amplify its range of action and consequent effects of a valorization strategy;

- The number and position of stations along the track reinforces this role as a linkage among the main territorial resources and as points for a diffused accessibility;
- Not critical conditions of the infrastructure that need not too expensive investments for the railway rehabilitation.

The listening campaign conducted so far has highlighted:

- The sense of belonging, social and territorial cohesion, which represented humus for the effectiveness of a broad social activation process;
- The presence of a group of key actors able to exercise leadership in civic activism;
- The community's awareness of the historical memory value of this railway line and the prefiguration of its potential for regenerating the territorial context, which has anticipated and urged the subsequent choices of public action;
- Proactive role of involved actors that have highlighted potentialities of the railway for a regeneration process, have anticipated and stimulated current public intentions.

In the face of public action absence, bottom-up initiatives undertaken by activists have highlighted the potential of the railway in tourism terms through the re-use of a benefit perceived as a collective and considered part of the historical memory of local communities. The data provided by the *In_Loco_Motivi* association regarding the attendance of users during Sunday walks with "*Il Treno Irpino del Paesaggio*" before the suspension of the line highlights the appropriateness of the initiative and the willingness to pay for this kind of tourist service. After seven years of exclusive civic activation, starting from 2016 institutional actors had showed their practical intentions for tourist reuse. In particular in 2016 the Avellino-Rocchetta Sant'Antonio railway has been inserted in the Foundation Timeless Tracks of *FS* Foundation, and in the same year the Campania Region has signed a Memorandum of Understanding with *FS* Foundation, Minister of cultural goods and activities and tourism, *Rete Ferroviaria Italiana S.p.A.*. For this current year, Campania Region has committed to fund the reopening of the railway for the Sponz Fest – scheduled for August – and to support accessibility to the WWF's Oasis *Conza della Campania*. The last but not the least result is the reuse of this railway with tourist and cultural destination among main interventions declared with the Preliminary of Strategy of the Pilot Area *Alta Irpinia.* Starting from these initial results, from completion of the analysis phase and the listening campaign, next steps of the research could be developed in order to verify opportunities offered by the railway as a field in which it could be tested approaches for place-based regeneration. In particular, it will be possible to highlight the impacts on the territory resulting from the reuse of the railway, in terms of environment (soil consumption reduction, sustainable accessibility), socio-economic dimension (new services for local communities, new profitability), cultural dimension (valorisation and promotion of environmental, cultural and historical heritage). In this integrated perspective, by overlapping environmental, socio-economic and cultural dimensions, it becomes necessary to consider a reuse approach based on mixed usages in order to guarantee not only a tourist destination but also new proactive synergies for internal areas. New activities in railway stations and sustainable mobility system are strategic points for this goal, with a particular regard to the role of the railway in accessing vulnerable areas, supporting Management Plan for Site of Community Importance, WWF areas and archaeological sites. The main goal of this proposed approach is to explore the reuse of railway as a device for diffused enhancement and valorization in terms of tourist development, building and sustaining excellence productions and activation of new economic and social synergies.

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ID 1754 | RESILIENCE ASSESSMENT TOOL FOR PUBLIC SPACE REGENERATION

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ABSTRACT: The reacting capacity of a territorial system to multiple stresses can be described as its "resilience". It expresses the ability of a system to absorb, recover from and successfully adapt to stressing circumstances. To make cities more resilient to natural disaster risks, international initiatives, such as the UN Agenda 2030 for Sustainable Development and the Sendai Framework for Disaster Risk Reduction (2015-2030), recommend the application of risk management measures and procedures, and stress the importance of preserving and safeguarding cultural heritage as a key element of safe, inclusive, sustainable and resilient cities. Urban planning and regeneration can be opportunity to design safe and resilient public spaces according to risk management, enhancing the overall city resilience to natural disaster risks. In this work, we develop a methodology to assess resilience to natural disaster risk in cities and public spaces, allowing the integration of risk management into ordinary planning tools. We identify which are the drivers that make cities and public spaces resilient to natural disaster risks, adopting a systemic approach that interprets cities as complex, dynamic, self-organizing systems, continuously changing under the pressure of perturbing factors caused by internal processes or external factors. A set of *drivers* (4), *driver descriptors* (15) and *sub-drivers* (36) were identified. A single sub-driver was associated to one or more phases of disaster risk management and to one or more goals of resilience. The method allows to overcome the sectorial approaches of territorial management through an integrated decision support tool for resilience-oriented planning. Particular attention was posed to the role of cultural heritage because it enhances the sense of belonging to the place and thus can enhance the response of citizens to adverse natural events. The territory of the Ischia Island, in Southern Italy, was identified as a suitable case study for future testing of the methodology. In Ischia, the presence of natural and cultural heritage coupled with the exposure to many natural hazards (seismic, volcanic, landslide, coastal erosion and marine inundation), and the intensive urbanization, could favor the validation of the methodology here proposed.

KEYWORDS: urban resilience, public space, urban design, risk management, cultural heritage.

1 INTRODUCTION

Public spaces should be designed to provide cities with beautiful, human-scaled and walkable open areas, creating a unique atmosphere, sense of place and identity. Furthermore, public spaces should be "safe", both in the daily use and in the face of hazardous events and emergencies that threaten people's life. The Agenda 2030 for Sustainable Development (United Nations, 2015) advocates the development of safe, inclusive, resilient and sustainable cities (Goal 11), by protecting and safeguarding the world's natural and cultural heritage (Target 11.4), reducing the number of deaths and damages caused by disasters (Target 11.5), and increasing the number of cities and human settlements adopting and implementing integrated policies and plans towards resilience to disaster and holistic disaster risk management, according to the Sendai Framework for Disaster Risk Reduction 2015-2030 (Target 11.b). In order to achieve these fundamental aims at global scale, cities should implement feasible, economically viable, easy-to-use and effective tools to enhance their ability to cope with natural disaster risks. A set of integrated actions to increase city resilience to natural disaster risks should include information and preparation of citizens, cultural and natural heritage protection, and the design and equipment of public spaces. It requires a large effort in terms of human and economic resources. However, public resources are more and more scarce, particularly at the local and municipal level. Moreover, the integration of risk management into ordinary urban planning presents many difficulties due to the sectorial education and skills of urban planners and risk management officers. Thus, the enhancement of cities resilience can become extremely challenging, preventing the achievement of global goals. Existing funding provided for urban regeneration processes can be an opportunity, if sectorial approaches are overcome in favor of more integrated, multidisciplinary and systemic approaches. The concept of urban regeneration includes actions improving the economic, physical, social and environmental condition of an area that could be subject to changes (Roberts & Sykes, 2008). Thus, the synergy between risk management and urban

regeneration strategies can be the key to achieve safe and resilient cities. In recent years, the concept of resilience emerged as an important quality of natural and man-made systems (Folke, 2006) to cope with the effects of stressor events. The term resilience expresses the capacity of a system to withstand, respond to, adapt and prepare more readily to shocks and stresses to emerge stronger after tough times, and live better in good times (The Rockefeller Foundation & ARUP, 2015). This perspective highlights that resilience should not be interpreted as a static equilibrium, because urban systems can change and become different from their original conditions, in response to strains (Ahern, 2011; Carpenter et al., 2001). The needs pointed out in the Agenda 2030 were highlighted by the international scientific community since the end of eighties. The International Decade for Natural Disaster Reduction (IDNDR, 1989) recommended to integrate disaster-mitigation programs, land use and insurance policies for disaster prevention and to establish education and training programs to enhance community preparedness. The Yokohama Strategy and Plan of Action for a Safer World (United Nations, 1994) and the International Strategy for Disaster Reduction (1999) highlighted that managing disaster in the response phase alone is not sufficient, because it yields temporary results at a very high cost, thus underlining that all the phases of risk management should be considered integral parts of policies and urban planning at regional, national and international scales. The recommendations were received by Hyogo Framework for Action (2005-2015) which stressed the importance of innovative and pro-active approaches to involve people in all stages of disaster risk reduction (UNISDR, 2005). It also pointed out the need of building a culture of safety and resilience at all levels, improving international collaboration on resilience issues and allocating proper resources to reduce the impacts of natural hazards. Recently, the Sendai Framework for Disaster Risk Reduction (2015-2030) has emphasized the different concepts of disaster risk management and disaster management (UNISDR, 2015). Disaster risk management assumes the implementation of actions that allow the city to cope with dangerous events and reduce their effects, while disaster management applies when events have already occurred. Aiming at enhancing the resilience of cities to disasters, this document suggests to develop a new concept of disaster risk, which can be seen as part of a multidimensional and systemic framework including also the preservation of natural and cultural heritage in the face of natural hazards. The Sendai Framework recognizes thus the positive role of cultural heritage to improve urban resilience, since it is has historic, aesthetic, social, scientific and spiritual values for past, present, and future generations. The international frameworks recognized the importance to consider the resilience goals (prevent, prepare for, cope with, respond to, and recover from) in ordinary planning to manage the impacts of natural shocks and stresses (UNISDR, 2015). All the measures adopted before, during and after the occurrence of a dangerous event, to ensure human security, well-being, quality of life, resilience and sustainable development are part of risk management phases (*mitigation, preparedness, response, recovery*) (IPCC, 2012). *Mitigation* phase focuses on increasing the capacity to withstand natural hazards; *preparedness* phase addresses the process to get ready the population to the event occurrence; *response* phase aims to ensure a scalable, adaptable, and flexible reactions; and *recovery* phase aims to apply measures to rebuild and revitalize the affected communities. In this work, starting from previous literature review regarding categories and indicators of systemic urban resilience (Iavarone, Gravagnuolo, Esposito De vita, & Alberico, 2017), we identify which are the drivers that make cities and public spaces resilient to natural disaster risks and propose an evaluation framework to assess resilience of cities and public spaces exposed to natural hazard. In addition, we point out the key role of natural and cultural heritage as element enhancing urban resilience. This frame includes 4 *drivers* and 36 *sub-drivers* of urban resilience and recognizes for each *sub-driver* the resilience goals (prepare for, respond to, withstand, adapt to) and risk management phases (mitigation, preparedness, response, recovery). The proposed resilience assessment tool allows overcoming the sectorial approaches of territorial management thanks to the integration of disaster risk management measures into territorial plans in force (e.g. Regional Territorial Planning, Provincial Territorial Planning, Municipal territorial planning) and to the identification of priorities for intervention for resilient cities and public spaces.

2 METHODOLOGY

Disasters caused by dangerous events and environmental stresses such as climate change have a critical impact on the public space of the city, affecting the natural and built environment, but also the economy and society. The ability to absorb, adapt, transform and prepare for shocks and stresses is influenced by the institutional capacity and availability of critical resources at local scale, thus the management of risks requires a highly multidisciplinary and systemic approach.Evaluation tools can be useful to ensure the identification of features of a resilient urban system exposed to natural hazard, to assess the present territorial status, provide guidelines for its enhancement and monitor its evolution in the future. The evaluation framework proposed in this work integrates sectorial approaches of territorial planning and disaster risk management, identifying *drivers* and *sub-drivers* of urban resilience and recognizing their locations in all phases of risk management (Figure 1).

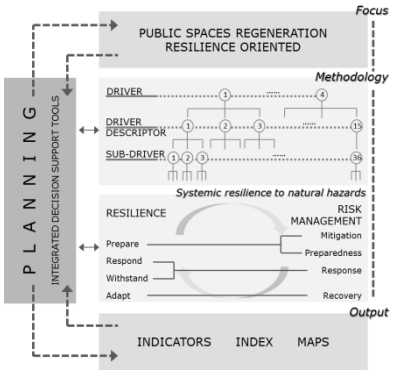

Figure 1 –Evaluation framework scheme. A brief description of logical model (focus, methodology, output and planning), the risk management tools (indicators, indeexes and maps) and the key role of data integration (dark gray box) are shown.

The *drivers* can be defined as elements of the complex territorial system (economic, social, environmental, institutional) that drive urban resilience. The *sub-drivers* represent specific aims of resilience-oriented urban regeneration, which can be used not only to "measure" and map resilience through the selection of suitable indicators, but also to produce evidence of the weaknesses of public realm that need to be enhanced through urban regeneration tools. The framework is structured into three main parts:

1) Identification of focus (public space regeneration resilience oriented);
2) Development of the methodology (identification of *drivers* and *sub-drivers* that make cities and public spaces resilient to natural hazard);
3) Identification of links between risk management phases (mitigation, preparedness, response, recovery) and resilience goals (prepare, respond, withstand, adapt).

2.1 IDENTIFICATION OF DRIVERS AND SUB-DRIVERS OF URBAN RESILIENCE

According to OECD (2016), four *drivers* help to enhance urban resilience: economic, social, environmental and institutional. *Economic driver* requires innovation and diversification of economic activities; *social driver* ensures inclusive society, active citizens networks and access to opportunities, infrastructures and services; *environmental driver* requires that urban development is sustainable, natural resources and adequate infrastructures are available; finally, *institutional driver* requires clear leadership and long-term vision, proper

resources at local scale, governments cooperation and openness to participation. For the single *driver,* the conditions that lead to a resilient city (field *description* in Table 1) and related *driver descriptors* (e.g. E1 - Employment and workforce, E2 – Entrepreneurship, E3 - Local productivity) were defined and listed in Table 1. Specific *sub-drivers* representing the optimal characteristics that a resilient urban system may have, at the scale of the public space, were identified. They were deduced from a broad literature review (Iavarone et al., 2017) and the "Resilient Cities" framework (OECD, 2016), which has been already tested in ten cities worldwide and can be considered a robust evaluation structure. A total of 36 *sub-drivers* have been proposed (table 2), which express the qualities that cities and public spaces should achieve to be considered resilient to natural shocks and stresses. Specifically, 7 *sub-drivers* are related to the economic *driver* (more broadly intended to express resilience at the city scale); 8 *sub-drivers* pertain to the social *driver* (expressed at the city and public space scale); 12 *sub-drivers* express the environmental aspects of resilience (specifically expressed at the public space scale); and 9 *sub-drivers* are related to the institutional *driver* (at the city scale).

Driver	Description	Driver Descriptor
Economic	All productive activities, trade and services in a specific territory; it includes economic sectors (primary, secondary and tertiary) and their diversification, the level of innovation and creativity, vitality of entrepreneurial environment, skills and education of workforce, which influence the overall capacity of response of a community to adverse events.	E1 - Employment and workforce
		E2 - Entrepreneurship
		E3 - Local productivity
Social	Includes socio-economic characteristics of population such as age, gender, employment, education, income, health and wellbeing; it also includes the access to communication means, transport means and health services; also, social cohesion and cultural aspects such as the relationship of community with its environment, which influences the inclination of a community to recover from adverse events.	S1 - Socio-economic
		S2 - Services (communication, transport, health)
		S3 - Socio-cultural
Environmental	Includes the characteristics of the natural and built environment, land uses and infrastructures; it also includes natural and cultural heritage as element of particular value of the environment, but also as factor of increased vulnerability if adequate mitigation measures are not implemented.	En1 - Natural environment
		En2 - Built environment
		En3 - Infrastructures (streets, energy, ICT)
		En4 - Land use
Institutional	The capacity of institutions at all levels to manage the territory, also in case of natural dangerous events, through urban / territorial planning tools, risk management tools and emergency management tools; it includes financial resources available at local level for risk management, and the capacity of institutions to be open and inclusive, promoting active participation of the community to emergency planning and risk management decision processes.	I1 - Leadership and long-term vision
		I2 - Territorial management
		I3 - Institutional collaboration
		I4 - Financial resources
		I5 - Citizens' engagement

Table 1 – Drivers of urban resilience to natural disaster risk

2.2 RESILIENCE AND RISK MANAGEMENT

The evaluation framework proposed in this work poses particular attention to the key role of relation between the urban resilience goals and the four phases of disaster risk management. Mitigation focuses on the impact of a hazard and encompasses the structural and non-structural approaches taken to reduce the interaction of human, property and environment with dangerous events and to limit their vulnerability. Mitigation actions differs from these applied to survive during an emergency because they are programmed for a long-term and can take place before and after emergencies. Mitigation measures can involve changes in local building codes to fortify buildings, revised zoning and land use management, strengthening of public infrastructure, retrofitting structures to withstand natural hazards, construction of defences and other efforts to make the community more resilient to a dangerous event (FEMA, 2010). Preparedness addresses the process for developing and maintaining capabilities for the whole community both pre and post event through the education, outreach and training of the population. It includes engaging the business community, evacuation planning and other logistical readiness activities such as stocking food and water (FEMA, 2010). Response addresses the actions taken in the immediate aftermath of a dangerous event to save and sustain lives, meet basic human needs (food, shelter, clothing, public health and safety), reduce the loss of property and limit the effect on critical infrastructure and on environment. Right after the solution of the immediate emergency issues, the focus shifts to planning action aiming at reparation of property, restoration of utilities, stabilization of public services and conclusion of clean-up process. Response planning provides rapid and disciplined incident assessment to ensure a quickly scalable, adaptable, and flexible response (FEMA, 2010). Recovery encompasses both short-term and long-term efforts for the rebuilding and revitalization of affected communities, aiming at the return to a degree of physical, environmental, economic and social stability and to future sustainability and resiliency. The short-term phase involves delivering immediate services, including the restoration of interrupted utility services, the reestablishment of transportation routes and the provision of food and shelter to displaced persons, while the long-term phase requires thoughtful strategic planning and action to address more serious or permanent impacts of a disaster. Particularly a recovery plan should address prewritten emergency ordinances that facilitate recovery operations, such as those dealing with road closures, debris removal and expedited permitting; it also should incentive community efforts aiming at the improvement of mitigation processes and should develop strategies for including civic leaders and the public in the recovery decision-making process (FEMA, 2010). Taking into account all aspects considered in these definitions, each *sub-driver* of urban resilience was correlated to one or more phases of risk management (Table 2).

Driver	Driver Descriptor	Sub-Driver	Goals Of Resilience	Risk Management Phase
Economic	E1 Employment and workforce	The population in working age is actively employed	Ability to adapt	Recovery
		Workforce has diverse skills	Ability to adapt	Recovery
		Workforce is employed in sectors useful to cope with natural hazards	Ability to respond, withstand and adapt	Response Recovery
		Industries are diverse	Ability to adapt	Recovery
	E2 Entrepreneurship	Innovation takes place	Ability to prepare for and adapt	Mitigation Preparedness Recovery
		The entrepreneurial ecosystem is vital	Ability to adapt	Recovery
	E3 Local productivity	Adequate stock of primary resources is ensured	Ability to respond, withstand and adapt	Response Recovery

Social	S1 Socio-economic	Society is inclusive	Ability to adapt	Recovery
		Resources are equally distributed	Ability to respond, withstand and adapt	Response Recovery
	S2 Services (communication, transport, health)	People have access to communication devices	Ability to prepare for and adapt	Preparedness Response
		People have access to transport means	Ability to respond and withstand	Response
		People have access to health services	Ability to respond and withstand	Response
	S3 Socio-cultural	People recognize and feel proud of their city's identity	Ability to prepare for and adapt	Mitigation Recovery
		The Heritage Community takes care and valorises cultural heritage / landscape	Ability to prepare for and adapt	Mitigation Recovery
		Citizen's organizations are active in the community	Ability to prepare for, respond, withstand and adapt	Mitigation Preparedness Response
Environmental	En1 Natural environment	Adequate Green Infrastructures are realized to cope with natural hazard	Ability to respond and withstand	Response
		Natural heritage is preserved	Ability to adapt	Recovery
	En2 Built environment	Buildings are robust and safe to cope with natural hazards	Ability to prepare for, respond and withstand	Mitigation Response
		Inhabited areas are not overpopulated	Ability to prepare for, respond, withstand and adapt	Mitigation Response Recovery
		Buildings are covered by insurance	Ability to adapt	Recovery
		Adequate equipped and safe spaces are available for emergency	Ability to prepare for	Preparedness
		Cultural heritage / landscape is well-conserved	Ability to prepare for and adapt	Mitigation Recovery
		Cultural heritage / landscape is safeguarded from natural hazards	Ability to prepare for and adapt	Mitigation Recovery
	En3 Infrastructures (streets, energy, ICT)	The infrastructures are well distributed over the territory	Ability to prepare for, respond, withstand and adapt	Mitigation Response Recovery
		The infrastructures are well maintained	Ability to prepare for, respond, withstand and adapt	Mitigation Response Recovery
	En4 Land use	Degraded areas are absent or in phase of regeneration	Ability to prepare for and adapt	Mitigation Recovery
		The city/territory carries out urbanization rates	Ability to prepare for and adapt	Mitigation Recovery
Institutional	I1 Leadership and long-term vision	Leadership and long-term vision are clear / include learning from past natural events	Ability to prepare for and adapt	Mitigation Preparedness Recovery
	I2 Territorial management	Urban planning is regulated	Ability to prepare for and adapt	Mitigation Recovery
		Risk management plans are available and periodically updated	Ability to prepare for and adapt	Mitigation Preparedness Recovery
	I3 Institutional collaboration	Local governments cooperate with regional and national governments	Ability to prepare for, respond, withstand and adapt	Mitigation Response Recovery
		Local governments, institutions and civil society organizations cooperate	Ability to prepare for, respond, withstand and adapt	Mitigation Preparedness Recovery
	I4 Financial resources	Adequate financial resources are available at municipality level	Ability to prepare for and adapt	Mitigation Recovery
	I5 Citizens' engagement	People are informed about the natural hazards that may affect the city	Ability to prepare for	Preparedness
		People are able to apply emergency plans directives	Ability to prepare for, respond and withstand	Preparedness Response
		Government is open and citizens' participation takes place	Ability to prepare for and adapt	Mitigation Preparedness Recovery

Table 2 - Structure of drivers and sub-drivers of urban resilience related to risk management

3 DISCUSSION AND CONCLUSIONS

The methodology proposed in this work identifies 4 *drivers* and 36 *sub-drivers* to assess the resilience of cities and public spaces for urbanized areas exposed to natural hazard. Each *sub-driver* represents the optimal conditions that cities and public spaces should have to cope with natural disaster risk. They were associated to one or more phases of disaster risk management and one or more goals of resilience. The assessment framework proposed overcomes the sectorial approaches of territorial management providing a decision support tool useful to enhance daily territorial management though resilience-oriented guidelines for planning and design. Particular attention was posed to the role of cultural heritage, which highly contributes to social resilience, providing in communities a sense of belonging to the place that can enhance the response of citizens to adverse natural events, particularly in the phase of reconstruction, recovery and adaptation to a new equilibrium, without losing the cultural inheritance of the past. Moreover, it can positively influence city creativity, innovation and the vitality of the entrepreneurial environment, indirectly enhancing economic resilience. The assessment framework takes into account the key role of natural and cultural heritage. In fact, it comprehends the following 5 *sub-drivers*:

- Social (Socio-cultural): People recognize and feel proud of their city's identity
- Social (Socio-cultural): The Heritage Community takes care and valorises cultural heritage / landscape
- Environmental (Natural environment): Natural heritage is preserved
- Environmental (Built environment): Cultural heritage / landscape is well-conserved
- Environmental (Built environment): Cultural heritage / landscape is safeguarded from natural hazards

Moreover, some specific *sub-drivers* were added to the list proposed by OECD (2016), which ensure the achievement of resilience goals (ability to prepare for, respond, withstand and adapt):

- Environmental (Built environment): Buildings are covered by insurance (*ability to adapt*).
- Environmental (Built environment): Adequate equipped and safe spaces are available for emergency (*ability to prepare for*).

- Environmental (Infrastructures): The infrastructures are well-distributed over the territory (*ability to prepare for, respond, withstand and adapt*).
- Environmental (Land use): Degraded areas are absent or in phase of regeneration (*ability to prepare for and adapt*)
- Environmental (Land use): The city / territory carries out urbanization rates (*ability to prepare for and adapt*).

Sub-driver labelled "*Adequate green infrastructures are realized to cope with natural hazard*" (e.g. green space created around the southern edge of Manhattan after hurricane Sandy in 2012) has been also considered to improve the resilience of large parts of the city (Iavarone et al., 2017). The assessment framework proposed in the present work can be a valid decision support tool in planning processes, enhancing resilience in a territory through the integration of urban regeneration and risk management tools. It can be further developed through the identification of multidimensional evaluation tools (quantitative and qualitative indicators, indexes and draw maps) useful to enhance the urban liveability through resilience-oriented plans. The methodology will be tested in a real case study to identify possible weaknesses and refine the assessment framework. Possible limitations due to data availability, particularly for qualitative data, need further investigation through case study application. Specific selection criteria led to the identification of the Ischia Island, located in the north-western zone of Napoli Bay (Southern Italy), as a suitable area for the pilot test. They were the presence of both natural and cultural heritage, exposure of the territory to multi-hazard, and the availability of institutional quantitative and spatial data for a first assessment of the territorial structure. Ischia Island territory includes six municipalities: Ischia, Barano d'Ischia, Casamicciola Terme, Lacco Ameno, Forio d'Ischia and Serrara Fontana. Its local economy is based mainly on tourism in urban coastal areas, while the cultural landscape in mountain areas still preserves wide forests and agricultural terraces characterized mainly by vineyards and fruit trees (Gravagnuolo, De Rosa, Ronza, Di Martino, & Fusco Girard, 2017). Natural and cultural heritage such as lava domes, headlands, cliffs, pocket beaches, castles, towers, chapels and villas, are hotspots in the waterfront landscape (Figure 2). The presence of such elements in coastal areas, exposed to many natural hazards (seismic, volcanic, landslide, coastal erosion and marine inundation) and intense urbanization (Alberico & Petrosino, 2014, 2015), make the Ischia Island a relevant case study to test the proposed resilience assessment tool.

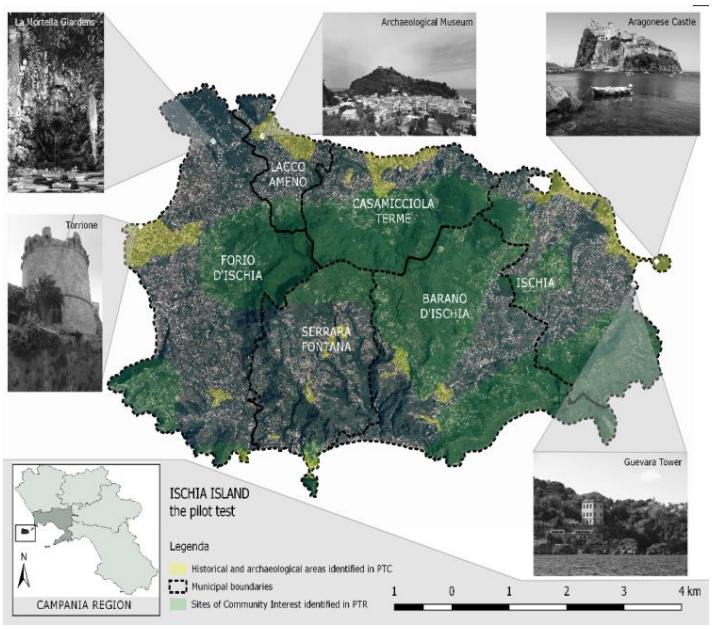

Figure 2 – Ischia Island. Map of key elements of the current territorial structure: cultural heritage, areas of high nature value, institutional municipal boundaries

Future research will focus on the development of a matrix of suitable quantitative and qualitative indicators, applied in the spatial dimension in the Ischia Island case study, which will be used to rank the territory in different resilience classes, identify weak areas that need resilience-oriented regeneration and produce specific guidelines for the enhancement of public spaces. For the four phases of risk management urban resilience maps can be drawn, which could support the identification of priorities for interventions at the municipal and inter-municipal scale and at the scale of public space.

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ID 1363 | "MIND THE MINDEMYREN" A NEW SPATIAL ANALYSIS TOOL FOR LINKING BUILDING DENSIFICATION STRATEGIES TO PUBLIC TRANSPORT AND STREET NETWORK ACCESSIBILITY IN BERGEN CITY

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1 INTRODUCTION

The population in Bergen city is growing fast. There is a need for areas for facilitating such a population growth. However, the availability of land is scarce, as the city is squeezed between seven mountains on the hilly west coast of Norway. Today, about 279 000 inhabitants live in Bergen. The population is growing with 4000 inhabitants per year. This is 2,5 times higher than the Norwegian bureau of statistics predicted in 2007 (www.bergen.kommune.no).

Old industrial areas and existing low density areas located adjacent to the city centre are becoming attractive for urban transformation. The industrial area Mindemyren is one of the urban areas with the largest transformation and densification potentials. Today this area functions as a barrier between surrounding dwelling areas by roads, old railways, fences, large long buildings and a lack of cross connections for pedestrians. The size of the area is comparable to the city centre. Bergen municipality has a policy to transform this area into a new urban centre in the next 25 years. At this moment, the area is the largest urban transformation area in Norway. This gives the opportunity on the one hand to create a new centre for the surrounding dwelling areas and to facilitate population growth on the other hand.

Population growth implies pressure on the existing infrastructure network. After a half a century of road building and facilitating the private car in city centres, the emphasis is currently shifting towards improving the public transport network and to implement a second light rail line in Bergen. A light rail line opened in 2009. The last part of the line has recently been finished. During the last 5 years, this light rail contributed to densification around the stations and to an increase of the property prices in the stations' vicinity.

At present, a proposal for the location of a second light rail line is now on the drawing table. The track of light rail line 2 goes through the Mindemyren area, and connects the Fyllingsdalen area on the other side of a large mountain with the city centre with a tunnel. The location of this light rail shapes a unique possibility to establish integrated urban design solutions in the Mindemyren area.

A land use plan has already been made. The plan has a flexible solution. Due to strong property rights in Norway, development depends on the will of the various property owners. Therefore, the challenge here is to facilitate with a proper infrastructure to trigger densification.

In addition, a change in Norwegian planning practice is currently taking place. Until recently, rigid street and road dimensions, minimum parking standards, the making of rigid land use plans with a land use

fulfilling one single function and high private car accessibility everywhere was the standard. Now, the aim is to create car-free city centres, promote a high degree of walkability, implement bicycle lanes, strengthen public transport and promote a diverse land use in new land use plans. However, large highway infrastructures for private cars outside the city centre are still implemented with the aim to remove the through-transport from city centres.

This development is in line with trends that are already taking place in other European cities. Current planning policies in Europe are putting smart growth, high building density and high diversity of urban functions within short walking distances on the agenda to create compact cities. However, the social and environmental sustainability of building a compact urban form is disputed (Rådberg 1996:385). The compact city has the advantage of short walking distances between buildings containing its various activities. The ecological footprint is relatively small due to a reduction of urban sprawl. There are advantages to social and economic intensity because a high number of people live close to each other. From an environmental perspective, energy usage of transport between functions in compact cities is low. However, there is a lack of green spaces for recreation or for agricultural activities. Green and sustainable cities on the other hand have positive connotations in terms of well-being, attractiveness and sociability. The green city has the advantage of being able to provide its inhabitants with recreation and possibilities to produce food. In contrast, green cities contribute to urban sprawl into the countryside when the city expands.

This contradiction between green cities and compact cities continues to prevail in urban design and practice (Rådberg 1996).

High building density is considered to contribute to sustainable development because it implies sharing of buildable space, facilities and infrastructure, as well as the reduction of travelling distances. This sharing implies a reduction of land use and energy resources required to perform all kinds of urban activities.

The degree of success of this sharing can thus be seen as an indicator for an area's degree of urban quality.

If density is desirable as one of the requirements for urban quality, then urban development projects should always facilitate for maintaining, and where possible, further increasing density. Jane Jacobs (2000) and Jan Gehl (2011) argue that sufficient density is a requirement for life between buildings. More importantly, life between buildings is "potentially a self-reinforcing process", in which, "once this process has begun, the total activity is nearly always greater and more complex than the sum of the originally involved component activities" (Gehl, 2011:73). In other words, a successful urban area is self-propelling by merit of the amount and duration of outdoor activities, which requires both sufficient density and high-quality public spaces to ensure that a high number of people enjoy using these spaces.

Therefore, if density is a prerequisite for sustainable use and the amount of outdoor activities an indicator for the degree of success of performing these activities, then a spatially integrated urban street network is the primary generator of sustainability in the context set out here (Hillier et al., 1993). The next step is now to reveal how public transport accessibility plays a role in the natural urban transformation process. Therefore public transport accessibility is included in the calculations of street network accessibility by mapping the angular step depth from public transport stops.

One obstacle for large scale urban planning and transformation of urban areas in Norway is the strong legal issues related to private property rights. It is even stated in paragraph 105 of the Norwegian constitution law from 1814 that no one should be dispossessed of their private property, and if so, they should be given full compensation (Backer and Bull 2016, p. 12). Therefore, urban expansions in Norway tend to take place on large plots where one has to deal with a low number of property owners. Large-scale urban renewal projects or big inner city transformations thus involve time-consuming negotiations with property owners and adjustment of property borders, as well as high costs of changing property borders when a large number of owners are involved.

2 WHERE AND HOW TO DENSIFY?

The background for the research is a project set up by Bergen municipality that intends to explore where and how to densify in existing urban areas. The aim is to use the outcomes in future land use and policy planning as a strategy for densification in the central areas of Bergen. Inspired by the 'Denser Stockholm' project (Spacescape 2013), a Spacescape analysis is made using a densification rose to identify both the need for densification and there where there is freedom to do so. How to densify in those areas depends on the degree of accessibility of the street network and public transport, as this inquiry shows. To that end, the Space Syntax method is included in the research project.

The project started with an identification of the types of densification actions proposed by the municipality. Three types of densification actions were identified: intensification, transformation and expansion.

The intensification strategy entails identifying densification potentials in existing urban areas without changing the whole built environment. The transformation strategy concerns identifying and assessing densification potentials of larger urban areas requiring a functional transformation, such as harbour fronts, goods terminals and industrial estates. The expansion strategy implies finding densification opportunities in previously un-built areas within the city borders. In the Bergen case, these are often found on the mountain slopes, where development had not previously been considered due to costly technical challenges. According to the theory of the natural movement economic process, the spatial structure of the street and road network influences the flow of movement from everywhere to everywhere else as well as the location of economic activities (Hillier et.al, 1993 and 1998). A change in this kind of mobility network, such as a new road or street link, influences the location of various urban centres (van Nes 2003).

During the last years, the use of GIS has contributed to combine the results from spatial analyses with place-bound socio-economic data. GIS has made it possible to operate with big data and to combine them with one another. The combination of building density (the correlation between FSI with GSI), degree of function mix (MXI) and Space Syntax in old and new towns has contributed to knowledge on how these aspects are interrelated (Ye and van Nes 2013 and 2014; van Nes et al., 2012). Already now, an outline is formulated for a theory of the natural urban transformation process. According to this theory, the spatial configuration of the street and road network influences the degree of building density and the degree of multi-functionality in the natural transformation processes in neighbourhoods over time (Ye and van Nes 2014). Lively and vital urban environments are thus dependent on a combination of a highly spatially integrated and well-connected street pattern, high building densities and a high degree of function mix. Following the theory of the natural movement economic process, it is to be expected that the highest potentials for densification outside the city centre are found around the main routes, the local centres and the public transport stops. Local discrepancies may be found which can likely be attributed to the unique landscape elements such as the mountain slopes and fjords surrounding the city. They are also responsible for the characteristic capricious road pattern, which follows height lines to keep gradients acceptable from a road-engineering point of view.

2.1 DATA SETS AND METHODS

The Space Syntax method, developed by Bill Hillier and his colleagues at University College London, is able to calculate how a street relates to all others in a town or city. The recent versions of the Depthmap software are able to calculate topological distance (how integrated a street is in relation to others in terms of the number of direction changes), geometrical distance (how integrated a street is in relation to others in terms of the angular relationship between them), and metrical distance. Moreover, the software is able to both describe and visualise spatial inequalities within a built environment.

Johan Rådberg developed the Spacematrix method, whereas its name is introduced by Meta Berghauser Pont and Per Haupt. The Spacematrix method contributes to quantify density and various building types. This classification makes it possible to quantitatively describe the combination of intensity, compactness, pressure, non-built space and height, which can be used to differentiate urban form in a more efficient way than before. Spacematrix correlates the following measures with one another: floor space index (FSI), ground space index (GSI) and the average number of floors or layers (L). Here, FSI on the y-axis gives an indication of the building intensity in an area and GSI on the x-axis reflects the coverage, or compactness of the development. The L represents the average number of storeys. The building types are classified into

low-rise, mid-rise and high-rise based on floor numbers. The building types are also separated into point type, stripe type and block type based on building forms.

The Mixed-Use Index (MIX) method, developed by Joost van den Hoek, deals with the degree of functional mix in a quantitative manner in terms of the percentage of dwellings, working places and amenities, measured in building spaces. The function Housing includes various buildings for residential living, such as apartments, condominiums and town houses. The function Working implies places of work such as offices, factories and laboratories. The function Amenities implies all kinds of commercial facilities such as shopping and retail, societal facilities such as schools and universities and leisure facilities such as sports, cinemas, concerts and museums. A triangle matrix is made on how these three functions can be correlated and divided into high, middle and low ratios of multi-functionality. The three corners of the triangle represent one single function, which are either 100% amenities, 100% dwellings or 100% working places.

With the aim of producing maps in which Space Syntax, Spacematrix, Mixed-Use Index and property ownership data are combined, two new ways of visualising integration levels have been tested. This method goes further than the raster method introduced by van Nes, Ye and Mashhoodi (van Nes et al., 2012; Ye and van Nes, 2013, 2014) (see figure 1).

With the first method, the integration levels contained within the line segments are projected onto the building plots adjacent to these segments. This is achieved using an Overlay operation in ArcMap. The method is chosen because the building plots themselves contain the data that the integration levels are aimed to be combined with, i.e. the data on density and functional use as well as information on ownership of the plots.

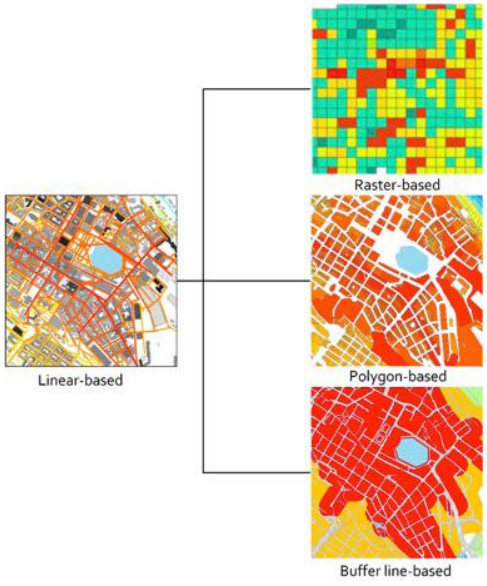


Figure 1 - Examples of raster-based, polygon-based and buffer line-based Space Syntax maps in GIS

The second method combines Space Syntax data with Spacematrix and the Mixed-Use Index with a buffer area around the line segments, since there are a number of inaccuracies in the initial results from the grid-based method. The overlay method works well for smaller plots, especially if they are connected to only one or two line segments. However, in particular on larger plots, values are found that often do not represent the actual degree of integration based on their position in relation to the street network.

The best example of this inaccuracy is the plot belonging to the goods terminal east of Bergen's railway station (figure 2). Directly connected to the globally and locally highly integrated street Strømgaten, this large plot thus receives a "highly integrated" classification. In reality, however, the plot is for the larger part flanked by line segments with much lower integration values than the map suggests. Moreover, the plot today is isolated and difficult to approach, and elongated to such an extent that only a limited percentage of people would approach it from Strømgaten, but most others from other streets located closer by.

To avoid this deviation from actual integration values on larger plots, a buffer operation is tested out as a second method. With a buffer of 75 meter around each line segment, a surface area is created that contains the corresponding integration value of that segment.

To identify the segments with high potential for both to- and through-movement, the global and local integration values have been multiplied with each other and combined with the multiplied metric step depth values with both high and low radii. The result is an aggregated map that reveals the overall integration

values based on the location in relation to the street network. In addition, the building function is visualised by colour according to the Mixed-use Index and simultaneously, the building height is indicated by the gradient of the colour in question.

2.2 RESULTS

In figure 2 and 3, the global and local integration values have been projected onto the building plots. The highest global values are found in the city centre area where there is an orthogonal street structure, introduced in the first decade of the twentieth century. The high values extend out of the centre along the main axis that leads past the Danmarksplass area. This axis has evolved over time by different road upgrades to facilitate the rapid growth of vehicle transport. Since 2009, Bergen's first light rail line runs parallel with the highway. The highest density and degree of function mix is found along this highway axis.

The orthogonal street network structure yields the highest local integration values in the city centre around the Smålungeren area (figure 3). However, there are no other local areas outside the city centre where equally high values are found. This lack is not only limited to the built-up slopes, where both the road structure becomes more parallel to limit the gradient and there is an edge effect, but is also found throughout the urbanised valley.

It becomes clear that the street pattern throughout the city (outside of the city centre) has been constructed for facilitating car traffic through the large topographic variations in the landscape. This has produced a curvier road pattern with fewer cross connections than in cities situated in a more level landscape. Moreover, road engineers have the largest influence in Norwegian urban planning. In detailed land use plans, all new streets and roads are planned in detail, whereas the land usage along these streets and roads is merely indicated with a function and with a degree of building density.

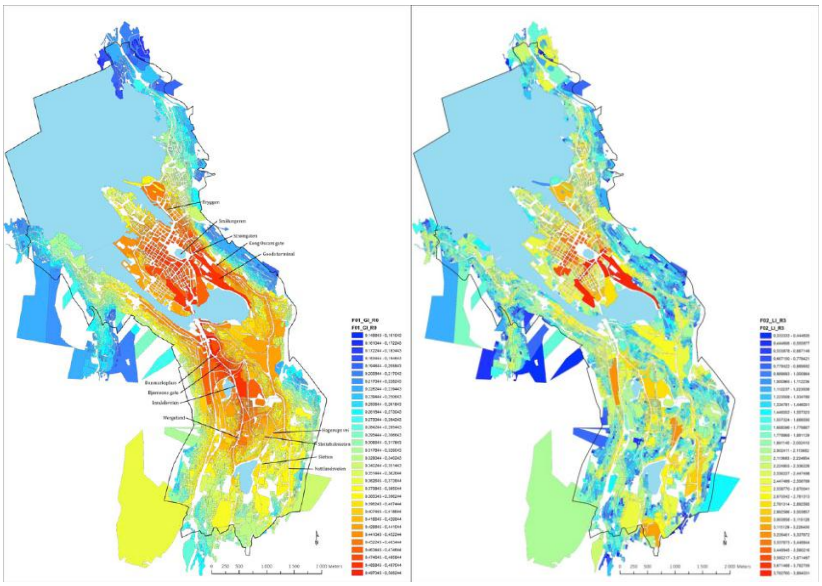
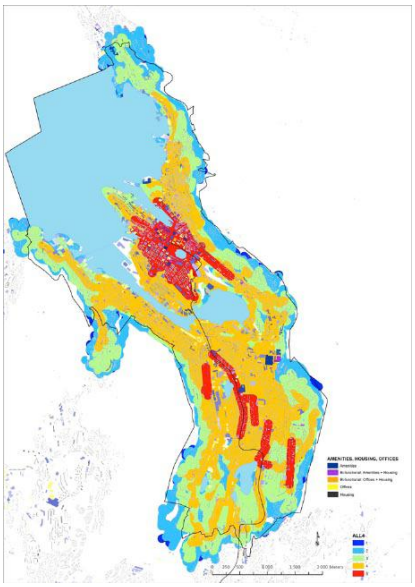


Figure 2 - Global integration map projected onto building plots
Figure 3 - Local integration map projected onto building plots

Taking into account that Bergen's street pattern is imposed on an extreme sloping landscape, the aggregated map in figure 4 was produced to reveal the areas with the best accessibility on both city level and local level, whilst including choice of route based on angular deviation. Again, the highest values are found in the city centre. Moreover, several main streets are well-integrated on a local level, such as Bryggen and Kong Oscars gate in the centre, Bjørnsons gate and Inndalsveien leading up to Wergeland, Slettebaksveien and Hagerups vei north of Sletten, and Nattlandsveien as the main road on the east side of the valley.



These red areas are undergoing a considerable degree of urban transformation in terms of increased density of the built mass. Ground prices in these areas are rising. New building projects have larger floor space and more storeys than the old buildings. The amount of commercial establishments is also increasing.

The trajectory of the light rail line has subsequently connected these centres with each other. Most areas around these centres, marked in orange, are relatively well-integrated, although further away, the values drop sharply.

Figure 4 - Aggregated integration map using 75m buffer lines

A close-up study was done of Danmarksplass and Bergen centre. The goal was to reveal how building density and degree of multi-functionality are strongly influenced by the degree of spatial accessibility of the street and road network. These two areas have developed incrementally over many years without any overall urban planning. In line with earlier studies from other cities in Europe and Asia (van Nes et al 2012, Ye and van Nes 2013 and 2014), the higher spatial integration on all scale levels on Bergen's mobility network, the higher degree of multi-functionality and the higher the density of the built mass.

2.3 THE NORWEGIAN PLANNING REALITY

It turns out that developments in Bergen city take place in line with the natural urban transformation process. Well-integrated streets have more to- and through-movement than poorly integrated streets. Shops and businesses cluster around these streets and densities increase considerably in comparison to the situation prior to the new situation.

Seemingly, cities in Norway are currently transforming on an "anti-urban" track. Even though the intentions are to make compact cities, there are three drivers for urban sprawl in Norway. For the first part, urban developments are still steered by a strong emphasis on private car accessibility. New buildings are equipped with parking garages in the basement and often at ground floor level. As a result, building projects create poor urban qualities for pedestrians and cyclists. This stands in strong contrast with the municipality's formal ambitions to reduce the growth of car traffic with 50% by improving the walking and cycling conditions in urban areas.

The second cause for the continuation of the anti-urban tradition is Norwegian property legislation. Although private property developments do result in space-efficient exploitation of building plots with high short-term profits, the flexibility and adaptability to adjust to changes in the long-term is lacking. Moreover, these private owners have the last word concerning the degree of multi-functionality on their properties. In addition, property owners tend to plan and build their properties to the current context rather than being future-oriented. Access from the public domain is hardly taken into account and private car accessibility is prioritised. Attitudes like these strongly affect the organisation of public spaces that link the properties to the public street network. Disappointingly, this often results in an incoherent, anti-urban structure with inward oriented buildings that lack active frontages towards the public streets.

The third aspect is the hilly Western-Norwegian landscape. Technical innovations now give way to previously impracticable or unrealisable plans, although they are expensive. Carrying out functional changes in a later stadium would thus be much more demanding. Therefore, any possible short-sightedness from private developers could produce a building stock that is hard or expensive to adapt to new uses.

The method of projecting integration values onto building plots can be a useful tool in Norwegian planning. By linking integration values directly to building plots, the authorities can take measures that oblige privately owned properties to be developed with the urban qualities related to accessibility for pedestrians, cyclists and public transport, flexibility, multi-functionality and, in the near future, energy production, smart communication and sustainable mobility means.

The second method, using buffer lines, is more usable to locate densification potentials based on the position in the urban fabric. In addition, this method allows for quick identification of areas that are segregated as a consequence of the street pattern layout. The municipality and road authorities can use this method as input for overall development plans as well as infrastructural improvements, and subsequently predict the effects on building density and degree of diversity of such plans and measures.

2.4 WHERE AND HOW TO DENSIFY FROM TODAY'S SITUATION

How can this research be used to make recommendations for Bergen municipality on where and how to densify? Evidently, the street network configuration influences the degree of building density and degree of function mix. Four types of urban areas were identified based on street network integration on local and global scales:

- Type A: High local and high global integration of the street and road network - Where extra space becomes available, these areas can be transformed with a high density of built mass. This can include high-rise buildings. The aim is to provide land use plans that allow a wide range of different usages, in particular on ground floor level. Areas suitable for this kind of development in Bergen are the city centre, the harbour areas around the city centre, Danmarksplass and the old industrial area Mindemyren.

- Type B: High local, but low global integration of the street and road network - Where there is space, these areas can facilitate high density of dwellings with ground floor spaces for shops, small businesses and services. Depending on the local circumstances, high-rise buildings can be considered as an option. As an example, the Sandviken area has many 2-3 floors high old wooden houses.The type and style of buildings give this area a particular place character. New buildings will have to adjust to the existing building stock in scale and style to avoid damaging the place-identity of that area. Areas suitable for this kind of densification are the various local centres outside Bergen centre. Most of these small local centres are situated along the main routes leading through various urban areas. Areas located along the light rail line also fit in this category.

- Type C: Low local, but high global integration of the street and road network. These locations are suitable for high densities of housing. Where possibilities exist to create a locally integrated street network, local shops on the ground floor can be facilitated. An example of such an area is the southern part of industrial area Mindemyren.

- Type D: Low local and low global integration of the street and road network. Where there is space to develop, high densities of only dwellings are desirable. These areas have a low degree of accessibility, and are therefore little attractive for shop owners. Examples of these kinds of areas are found around the lake Store Lundgårdsvannet such as Møllendalsveien, and harbour areas located along the fjord Puddefjorden.

Figure 5 shows the principles on how and where to densify in one map. The colours in the diagram in the upper right corner are applied in the combined integration map. Four groups were used in this inquiry.

It is also possible to use nine different groups where high, medium and low values of global and local integration are combined. This would enable the application of more detailed strategies. In this case, however, being in the beginning stage of collaboration with the municipality and in a planning process where multiple NGO's, property owners and stakeholders are involved, operating with four different categories rather than nine is more practical. In addition, the various densification strategies for each of the nine categories would need to be defined.

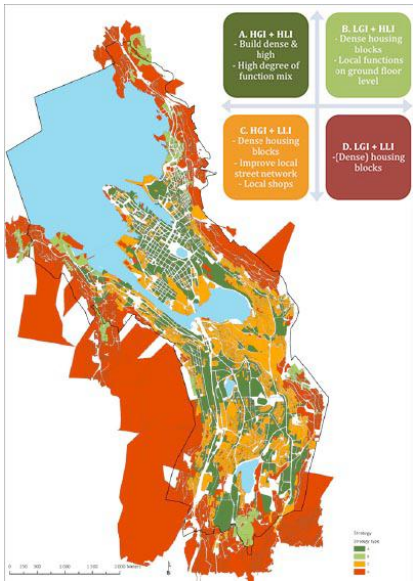
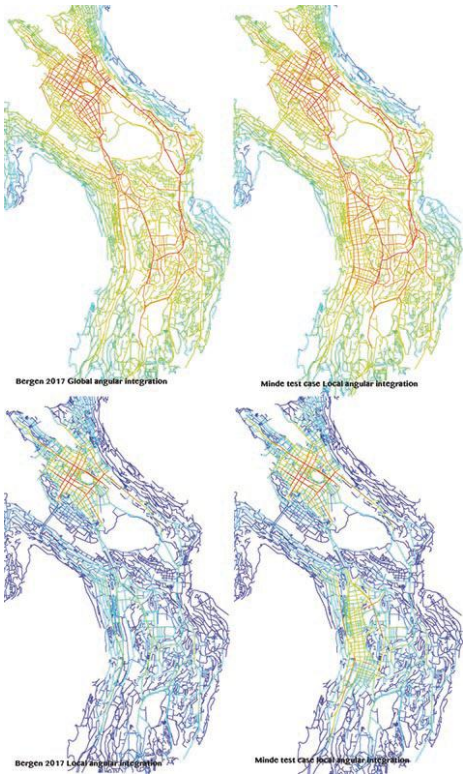


Figure 5 – Strategies for where and how to densify

The experiments with the buffer line method are still in a test stage. The next step is to find ways to combine density, MXI and Space Syntax data into one buffer line model. The raster model is useful for overall strategic land use planning in whole urban regions or in regional planning. Professionals such as spatial planners and urban geographers may find this model useful. The polygon model is useful as a guide for urban designers and architects who work on plot level. Finally, the buffer line model can be useful for road engineers to make them aware of the spatial potentials of their planned road and street links. After all, the degrees of building density and function mix depend on the spatial integration of the mobility network.



3 CONCLUSIONS: THE MINDEMYREN EXPERIMENT

According to the theory of the natural urban transformation process, a change in the road and street network system implies a change of the densification potentials and degree of multi-functionality. An experiment is carried out on Mindemyren's street and road network. A few new cross-connections were added between east and west and made an orthogonal street grid inside the whole area. This proposal is analysed with the Space Syntax method. Figure 6 shows global and local angular integration analyses of Mindemyren today and with our proposal. These street and road network changes can extend Bergen's main centre to Mindemyren. The degree of street life depends on a well-connected fine-grained local street network, whereas the new cross-connections contribute to give this new centre a strategic location for the whole city.

Figure 6 – Spatial analyses of the street and road network showing changes with Mindemyren as a test case

The test analysis of public transport stops as a backbone for densification reveals that the influence of bus routes is insignificant in comparison to that of the light rail. This might be due to the comparatively long-term character of light rail lines, creating a certainty of passenger flows along these routes. The municipality is currently developing plans for three new light rail routes aimed at improving the accessibility to and from the city centre to the districts further away. It can therefore be expected that redevelopments will intensify more along these lines than the integration values based on the street pattern would otherwise suggest.

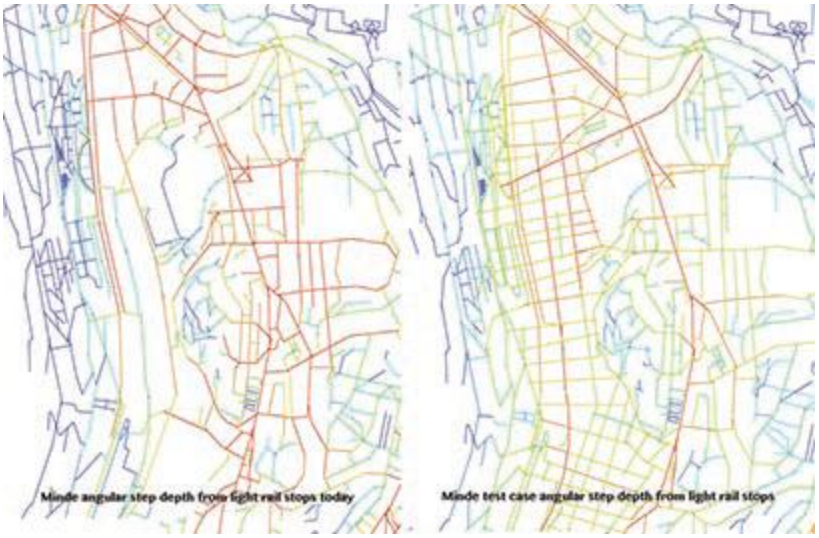


Figure 7 – Angular step depth from light rail stops showing changes in public transport accessibility with Mindemyren as a test case

Figure 7 shows an angular step depth analysis from all light rail stops. The light rail is running frequently. In the Mindemyren test case, the stops of light rail number 2 (which is now on the drawing table) are added into the model. As can be seen in our proposal, two light rail lines surround the new Mindemyren area. The area has in the proposal a higher public transport accessibility than in the historic city centre. Seemingly, a natural densification process depends on the degree of accessibility of the street and road network on various scale levels. If this degree of accessibility changes as an effect of new street and road links, the potentials for a natural densification process will change too. Therefore, these aspects have to be taken into account when making densification strategies for Bergen municipality. In particular, planners have to mind Mindemyren's hidden spatial potentials in the making of densification strategies.

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ID 1397 | INTEGRATED SPATIAL AND TRANSPORT DEVELOPMENT IN EUROPE: THE EXAMPLES OF TWO EUROPEAN CORRIDORS

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1 INTRODUCTION

In order to better understand the impact of infrastructural improvements on spatial development, we can make the illustration of our planet as our own body: the skeleton is made of roads, railways, air and sea ports; the vascular network consists of gas and oil pipelines and electric grids, while the nervous system is based on internet cables, satellites, data scanners, etc. In sum, infrastructure, being it an instrument of physical connection, energy supply or information share, is an underlying factor generating the connectivity – the key asset class of the 21st century. Thus, the infrastructural upgrading, as it enables all other sectors to function properly, is recognised as one of the 19 UN Sustainable Development Goals.

Looking back through the history of European 'rise and fall', after each critical period Europe started to renew itself by improving the transport corridors. In other words, Europe has a long tradition in understanding the infrastructure, in particular the railway transport infrastructure, as a tool for achieving prosperity and stability – first transnational initiatives date back to the end of the 19th century. However, the coordinated action regarding the development of transport infrastructure in Europe started in the 1980s with the European Union (EU) TEN-T (Trans-European Transport Network) policy clearly addressing the main objectives of European development – economic, social, and territorial cohesion. The first initiative was the PEC (Pan-European Corridors and Areas), developed during two Ministerial Conferences – in Crete (1994) and in Helsinki (1997), with the aim of connecting the EU-15 with the then neighbouring countries. At the same time, the TINA (Transport Infrastructure Needs Assessment) process started in 1995 focused on strengthening the linkages within the eastern part of Europe (EC, 2011a; Commission of the European 1 INTRODUCTION

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understanding the infrastructure, in particular the railway transport infrastructure, as a tool for achieving prosperity and stability – first transnational initiatives date back to the end of the 19th century. However, the coordinated action regarding the development of transport infrastructure in Europe started in the 1980s with the European Union (EU) TEN-T (Trans-European Transport Network) policy clearly addressing the main objectives of European development – economic, social, and territorial cohesion. The first initiative was the PEC (Pan-European Corridors and Areas), developed during two Ministerial Conferences – in Crete (1994) and in Helsinki (1997), with the aim of connecting the EU-15 with the then neighbouring countries. At the same time, the TINA (Transport Infrastructure Needs Assessment) process started in 1995 focused on strengthening the linkages within the eastern part of Europe (EC, 2011a; Commission of the European issue of integrated railway and spatial development along European corridors, illustrated through two examples: 1) the Rhine-Alpine corridor (the Rotterdam-Genoa corridor) as the crucial north-south axis of developed Europe, and 2) the Orient/east-Med corridor (the Hamburg-Athens corridor) as the most challenging corridor of entire Europe, connecting both developed and developing countries. Therefore, the concluding remarks provide the lessons learnt from the Rotterdam-Genoa corridor development, and their possible adaptation and implementation in the case of the Hamburg-Athens axis.

2 THE COOPERATIVE APPROACH FOR INTEGRATED SPATIAL AND TRANSPORT DEVELOPMENT

Integrated spatial and transport development is considered a challenging task. This is particularly true if we take into account the territorial scope associated with such a development, different contexts (political, social, economic), and finally different ways of 'how thing are done' (Faludi, 2005), i.e. the planning cultures. Therefore, one of the most demanding issues, besides the compliance of infrastructural equipment and technical specificities, is the question of the governance of such a development (Peric, 2016b). How to achieve effective cooperation among a number of nation states? How to integrate the visions of various sectorial departments at the state level? And, how to make the consensus-based decisions among the various parties involved in certain urban development? The following lines describes the most important levels and types of cooperation needed to be taken in due account when in comes to the integrated spatial and transport development, as provided in Figure 1.

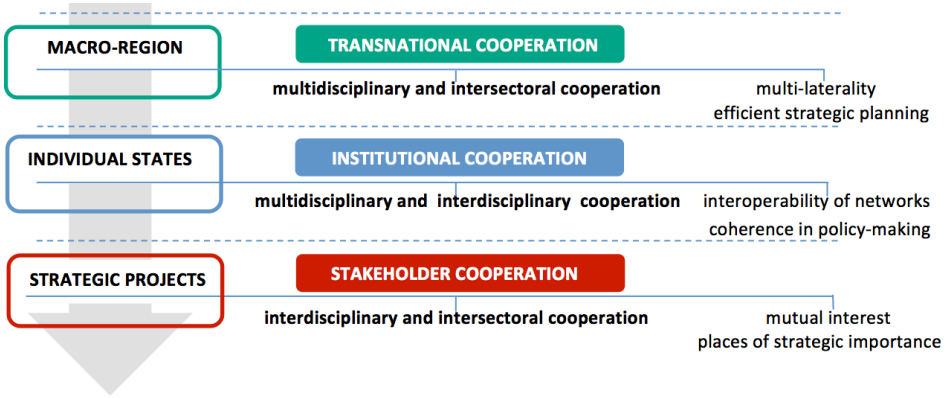

Figure 1 – A cooperative approach to integrated spatial and transport development
(Source: Peric, 2016b)

2.1 TRANSNATIONAL SCALE: MACRO-REGION

According to the research in the field of transnational (macro-regional) projects, the main problem is that there is no sufficient cooperation among numerous countries, which participate in these (Colomb 2007; Perkmann, 2003; Scholl, 2012). In a narrow sense, all the achievements and project results usually stay within one country, without their effective dissemination among other project participants. Briefly put: transnational projects are not truly transnational, since they usually remain at the level of 'exchange of experiences' on domestic issues (beginning phase) and seldom reach the final phase of the process − making a transnational strategy (Colomb, 2007). Therefore, it is necessary to implement multi-lateral and strategic approach, which, on the one hand, includes relevant representatives stemming from various expertise domains (transport, spatial planning, economy, sociology), and various sectors (public, private,

and civil). Usually, at the transnational scale, only the voice of official government representatives and public enterprises are heard, neglecting the fact that large-scale development usually depends not only on public money, but more likely on private funding.

2.2 NATIONAL SCALE: INDIVIDUAL STATES

Transnational cooperation and its outcomes affect the institutional and policy change, observed at the national level and lower levels of governance (regional, local). Actually, transnational cooperation has an impact on the extent of synergy between different governance levels within the nation states. The changes can be seen in formulating the new integrated policies (e.g. integrated spatial and transport policies) or stronger cooperation among existing institutions (e.g. spatial and transport agencies). Nevertheless, the implementation of decisions made at the transnational level often depends on the planning culture − the way of understanding the problem and the usage of specific planning methods and instruments of the individual state (Scholl, 2012; Getimis, 2012; Friedmann, 2005). The compatibility of national policies with the transnational strategic planning goals is very 'state-sensitive' and demands knowing the broader context of socio-political circumstances in which spatial planning policies are made (Savini and Ovink, 2012). Therefore, in order to achieve the coherence in policy-making, a multi- and interdisciplinary cooperation (at the entire national scale, or among the regions within the state) is a must.

2.3 LOCAL SCALE: STRATEGIC PROJECTS

The easiest way to understand the close relationship between the improvements in transport infrastructure and its effect on spatial development is to observe their interconnection at the level of strategic nodes, i.e. specific, flagship projects in particular places (Scholl, 2012). An example of such a project can be the redevelopment of the railway station and, consequently, urban growth of its catchment area. More precisely, such infrastructural developments contribute not only to creating the transportation hubs, but also to generating the new city landscape. The synergy between the mentioned two fields usually transcends local, often national, and, in some cases, integrated project can be of international concern. One of the criteria for identifying such projects is certainly the firm commitment by the country concerned to implement the project (EC, 2005). Nevertheless, it is not only about the readiness of the authorities to tackle such issue – the identification of strategic projects depends on the extent of stakeholders' involvement and their cooperation. This is particularly relevant for the states without the tradition of cooperation among relevant stakeholders and with the non-transparent decision-making procedures (Peric, 2016a).

3 INTEGRATED SPATIAL AND TRANSPORT DEVELOPMENT ALONG EUROPEAN CORRIDORS

Before we proceed with an analysis of integrated spatial and transport development on the cased of two European corridors, it is important to clarify what is actually understood as a corridor. A corridor is a bundle of infrastructure and adjacent settlements and landscapes linking regions spread over a certain physical space (cf. Witte, 2014). From such a definition, it is clear that infrastructure development cannot be considered without taking into account the spatial dimension. Moreover, due to its axial nature, the issue of corridor development usually goes beyond the national borders (Scholl, 2016a). The main indicators assigned to the topic of corridor development are: 1) mode (road, rail and inland waterway), and 2) scope (freight and passenger) (Priemus and Zonnenveld, 2003).

Two main factors that determine the approach to be used when dealing with corridor development are its multidimensional and multi-scalar nature (Chapman et al., 2003). Multidimensional nature refers to various dimensions appropriate for further analysis, such as: 1) infrastructure (physical and organisational infrastructure), 2) space (functions and morphology), 3) governance (politics and institutions), and 4) economy (finance and market conditions). Although there can be difficulties in combining various aspects to gain the synergetic developmental effects, the improvement of its spatial and infrastructural dimension certainly have no negative impact on other two factors. When it comes to the multi-scalar nature of

corridors, it is logical to mention three main levels of observation: 1) transnational, 2) national/regional, and 3) local.

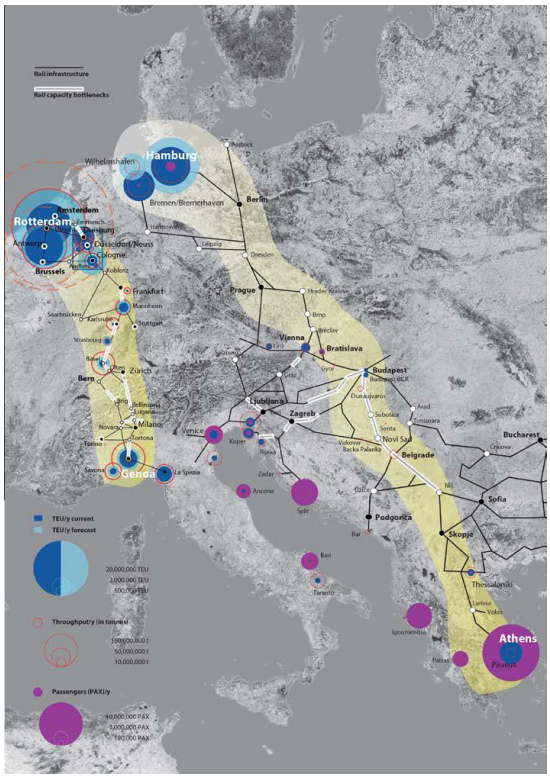

Figure 2 – Rail and port infrastructure along two European corridors (Source: Scholl, 2016b)

In the following lines, the main features of the Rhine-Alpine (Rotterdam-Genoa) and the Orient/east-Med (Hamburg-Athens) corridors (Figure 2) are to be elucidated, being observed from various levels according to the cooperative approach described in the previous section.

3.1 THE RHINE-ALPINE CORRIDOR

The corridor from Rotterdam/Antwerp to Genoa, which was designated as Corridor 24 by the EU TEN-T policy, now operates under the name Rhine-Alpine corridor as one of nine core European corridors. In its length of more than 1200 km, it travels through European regions that have the highest economic value – from the large North Sea harbours in Belgium and the Netherlands, across Germany and Switzerland, to the prospering economic centres of northern Italy, as well as the Italian Mediterranean area. In terms of transport, 700 million tonnes of freight are transported along this north-south link, while 70 million people, roughly nearly a fifth of the entire population of the EU, live in the catchment area of this important European north-south connection (Drewello and Scholl, 2016).

The corridor demonstrates which connections and conflicts between spatial and transport development at the macro-regional scale are to be observed and how the tasks to be solved can be identified and solved in steps. More precisely, the analysis provided below stems from the project entitled CODE 24, conducted in the period 2010-2013 within the framework of the European Commission supported INTERREG programme. Results and interim project results are reported in detail in other publications (see Scholl, 2011, 2012, 2014).

3.1.1 GLOBAL TRENDS

A strong increase in transport in the north-south direction of Europe can be expected for 2030 as globalisation continues to grow. The world is changing slowly but steadily into one single large market. In particular, the economic growth in Asia and the increase of goods exchange within the EU plays a vital

role. The Mediterranean Sea has taken over from the Atlantic as the main shipping route for maritime exchange. In the long term, it will be important to take the opportunity to use the port potential situated on the Mediterranean and the Adriatic coasts in order to achieve a balanced European goods exchange. Highly productive hinterland connections, in particular, those on railway systems, as are the northwest European ports, will as before play a decisive role (Scholl, 2016a). At present, the main parties dealing with sea transport in Europe are the ZARA ports (Zeebrugge, Antwerp, Rotterdam, Amsterdam) and the German harbours of Willemshafen, Hamburg, and Bremen/Bremerhaven.

3.1.2 TRANSNATIONAL OVERVIEW

Antwerp and Rotterdam alone had a turnover in 2010 of over 16 million TEU (Twenty-foot Equivalent Unit). By 2020, a redoubling of capacities to over 36 million TEU is expected. Such a preference for northern harbours over the Mediterranean ports is indicated by the financial capacities of these regions and the much larger and more effective cargo handling facilities as well as better hinterland connections, e.g. waterways, railways, and high capacity roads. The container capacities of Rotterdam are five times larger than those of the Ligurian harbours (Savona, Genoa, and La Spezia) together. The harbours in Northern Europe, particularly in Rotterdam, have invested massively in the extension of their harbour infrastructures. Rotterdam will increase its cargo handling capacity with a harbour extension 'Maasvlakte' from about 450 million tonnes at present to about 700 million tonnes in 2035. However, the harbour extension will make it increasingly difficult to guarantee a smooth hinterland transport (Günther, 2015). In the Netherlands, the launch of the Betuwe line was achieved in 2007 under considerable pressure. Starting in 2015, a full use of this line between Oberhausen and Emmerich will mean the need for a third track and block concentration which will not be available because the German railway network has other priorities. From now on, commissioning and costs of around 2 billion euro will be expected for the year 2023 (Scholl, 2016a).

3.1.3 NATIONAL CHALLENGES

With such a foreseen port development and their extra capacity, more bottlenecks are to be expected. Today, there is a great request from the Rotterdam port to transfer the share of the container hinterland traffic (4 million TEU in 2009, and 18 million TEU expected in 2035) to the waterways and railways.

Another bottleneck is the strategic railway section Frankfurt-Mannheim in Germany. It is highly significant for the approach to the Brenner Tunnel and the Main East-West Railway, as well as the missing continuation of the four-track extension of the Rhine line from Offenburg to the area south of Freiburg. It should be mentioned that despite all financial difficulties, the 17.6 km long Katzenberg Tunnel was launched in time for the time table change in December 2012. The building work for the Raststatter Tunnel could also begin in 2013 after a nearly ten-year postponement due to missing financial support. The launch is now expected to be in 2022, with construction costs of around 700 million euro. According to prognoses, the finalisation of the extension of the Rhine Valley route will not take place until after 2030, although according to the contract, a timely launch with the Gotthard Base Tunnel had been secured (Scholl, 2016b).

In addition, the opportunity arises, supported by new planning approaches, to achieve the separation between goods transport and passenger transport in some densely populated areas, for instance, by using goods transport bypasses. Route sections where this should definitely be tested are: Germany – the section between Frankfurt and Mannheim, from Offenburg to just south of Freiburg, and Switerland – Basel to Central Switzerland, a bypass for Bellinzona, and south of Ceneri to the Italian border. Transferring dangerous goods transport not only decreases railway noise and eliminates unsatisfactory noise reduction installations, it also plays a significant role in creating relevant planning considerations (Tosoni, 2015). This transfer would also create additional experimentation space for local and regional development where smaller distances to the railways are possible (Scholl, 2016a). It will be necessary therefore to create sensible priorities, together with the national and regional authorities, and find integrated solutions through innovative forms of cooperation. This can only happen on the basis of an assessment of the entire situation. CODE 24 has created an important foundation for these (Scholl, 2012, 2014, 2016a).

3.1.4 LOCAL ISSUES

Eliminating bottlenecks is of major significance for the redevelopment of cities and regions, whereas the catchment areas of the railway stations are considered the crucial redevelopment nodes (Peric, 2016b; Scholl, 2016a). This encourages the need to keep, or actually improve the availability of public transport. With redevelopment, the share of public transport's part of overall traffic can be increased when relevant attractive offers for public transport are available. Its decrease or reduction through increasing goods traffic, which would compete with the passenger transport on rails, is counterproductive. Of all these reasons, the integrated development in the triangle of passenger transport, goods transport and redevelopment is of central importance (Scholl, 2014).

The catchment areas of nearly all mayor railway stations offer special opportunities for redevelopment. The city of Frankfurt is a good example: near the central railway station and several metro stations, a new city area, the Europaviertel, is being created on a 100 ha-site where about thirty thousands of people will have the unique opportunity to modernise and expand the Messe Frankfurt in its inner city location.

Estimates of the available settlement potential along the north-south axis show a grand total of around 150,ooo ha. Some of these potential areas, e.g. in the German state of Rheinlandpfalz, in the regions of Rhein-Neckar and Upper Rhine-Bodensee, and in the Swiss cantons of Basel-Landschaft, Schwyz, Uri and Tessin. A conservative estimate would mean that around 50% of the sites would be available immediately. Applying an average gross floor ratio of about 0.5 would, and filling the area with apartments at a rate of 50 m2 of floor space/inhabitant, around 7 million additional inhabitants could be housed along the corridor (Scholl, 2016a,b). These are significant figures for a potential settlement area, which can be actively implemented in the coming decades.

3.2 THE ORIENT/EAST-MED CORRIDOR

The Hamburg-Athens corridor, defined as the Corridor 22 in the TEN-T policy and as the Orient/east-Med(iterranean) corridor within the more recent EU Core Network programme is one of the key north-south transport corridors in Europe. In its length of more than 2,500 km, it connects the ports of northern Germany with the Adriatic and the Danube ports, as well as the seaports in Thessaloniki and Athens. Hence, by strengthening its transportation features, the Hamburg-Athens corridor is considered an axis with a huge potential for triggering off spatial development, which would finally lead to territorial cohesion in Europe (Scholl et al., 2016).

However, the Hamburg-Athens corridor is currently an example of genuine shortcomings in various domains: it runs through the states with traditionally low economic performances in comparison with the developed Western European countries; there is also a significant lack of efficient infrastructural network – seen in numerous missing links and bottlenecks; the corridor nowadays coincides with the so-called migrants' route; finally, administrative obstacles caused by mistrust among stakeholders are common practice in cross-border issues, as well as among various authorities of the nation states (Peric and Scholl, 2017).

The findings presented below stem from the ongoing three-year project titled "Spatial and Transport Development in European Corridors: Example Corridor 22, Hamburg-Athens", being conducted currently by the German Academy for Spatial Research and Planning (ARL). Since the ARL members recognised the necessity to take also the needs and challenges of the non-EU states affected by the official corridor into consideration, and since the route from Budapest to Thessaloniki via Belgrade is the shortest (400 km) and the most logical way of connecting the north and south of Europe, the axis covered by the ARL project slightly differ from the official EU route – it runs through Serbia as a primary line, while the way through Romania and Bulgaria is of secondary importance.

3.2.1 GLOBAL TRENDS

Since the development of the large-scale projects is affected by global factors (trade, economy, demography), it is important to stress the relevance of the Hamburg-Athens corridor in trans-continental circumstances. Firstly, 80% of global TEU traffic appears between Europe and Asia, reaching the most important European ports of Rotterdam, in the north, and Piraeus, in the south. Secondly, the New Silk

Route is constantly upgrading through the Chinese investments, mainly through constructing the new high-speed railway network not only in Asia, but also in Europe. Its most important section in Europe is a route from Athens to Budapest via Belgrade. Finally, until 2050, the population rate in Europe will shrink to only 5.7% of global population (in comparison to 10.1% today), with a constant loss of people in Eastern Europe, mainly due to socio-economic reasons and, hence, the huge brain drain (Scholl et al., 2016). Hence, demographic decline in Europe together with boosting factors in terms of trade and economy actually trigger us to think about sustainable ways of overcoming such challenges.

3.2.2 TRANSNATIONAL OVERVIEW

Improving the conditions along the Hamburg-Athens corridor can be seen as contributing to a better territorial cohesion along this axis and reducing the gaps between Western and Eastern Europe. Nevertheless, the challenges are numerous. In terms of economy, the countries along the corridor have 21% lower performance comparing to Western Europe. Although EU provided a great support (also in financial terms) to the less developed European regions, the problems and limitations that the socialist countries had to face during the period of the Cold War are still felt nowadays. Through the lens of the traffic analysis (goods export/import, passengers/goods on rail/road, network density), the performance is even 50% lower looking at the section from Vienna towards the south. This makes a great inconsistence in the railway schedules, thus practically disabling any efficient passenger and/or freight transfer along the corridor; e.g. the passenger travel time from Hamburg to Athens is 52 hours (Scholl et al., 2016). Finally, in terms of population along the corridor, there is 128.4 million inhabitants counting only NUTS-1 regions along the corridor route and excluding these in Germany and Tirol in Austria (Scholl, 2016b). Such a limited population potential creates ond of the biggest challenges for the creation of an effective rail conncetion. However, recent incentives in various projects (transport infrastructure, pipelines, etc.) provide an important stimulus for the research on possibilities for raising the competitiveness level of the Hamburg-Athens corridor.

3.2.3 NATIONAL CHALLENGES

In addition to the historical differences between the countries on the corridor route (i.e. only Germany, Austria and Greece were not part of the Soviet bloc), there is also a high discrepancy between the corridor member states today. Except Germany, which is still one of the leading European countries in economical terms, Greece is faced with recent economic downturn, Romania and Bulgaria are dealing with numerous problems despite their joining to the EU, while Serbia still tries to fulfill all the necessary pre-accession conditions.

In terms of transportation quality indicators, the current assessment is as follows. There is an asymmetry in the freight distribution through the maritime transportation mode. Sea freight is mainly concentrated in the northern ports of Hamburg and Bremerhaven, while maritime passenger figures are low in Germany. In contrast to this, both in the Greek and the Adriatic ports, the main flows using ports are the passengers, denoting a much more tourist-oriented economy than in the north. Secondly, the rate of freight transport is the highest in Austria, while particularly low rate (in both freight and passenger transport) is observed in the case of Greece. Finally, the quality and density of the rail network is better in the regions northern from Vienna – escpecially in Germany. In contrast to this, there are no railway lines with a speed more than 160 km/h along the southern part of the corridor. In some of the regions (parts of Serbia and Bulgaria), the train speed is only 40 km/h (Scholl et al., 2016).

3.2.4 LOCAL ISSUES

The local scale of the Hamburg-Athens corridor project relates to identifying the hot spots – places with major spatial implications of transport infrastructure development. Moreover, it is interesting to observe some ‘good-practice’ examples of integrated spatial and infrastructure development as well as more challenging case studies. The result is directed towards mutual learning finally aimed at improving the collaboration among various stakeholders with different interests.

The main differences are again observed between the cities along the northern part of the corridor and the hot spots in the south. The 'best practice' examples of integrated spatial and transport development are found in the cities of Hamburg, Berlin and Vienna. Each city succeeded to make certain transportation Mutual engagement of all interested parties in the problem screening and identifying the complex points for future actions.

- Preparation of regional conferences and the annual project conferences, whereby the results and findings are introduced to the public, representatives of all governmental levels and political committees, as well.
- The findings, together with the outcome from the debates with the public and political representatives, should consolidate a common strategy for the corridor development.
- The European Grouping for Territorial Cooperation (EGTC) is considered one of the follow-up aims, as it will continue to be the organisational body for future project related activities.

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ID 1467 | MOBICAMPUS-UDL: COMBING WEB-BASED TRAVEL SURVEY AND SMARTPHONE APP DATA COLLECTION TO UNDERSTAND AND MANAGE URBAN MOBILITY BEHAVIOUR

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ABSTRACT: Reducing car dependence in general and driving alone in particular has become an important public policy issue. Universities are recognised as special generators in transportation planning processes. Large university campuses contribute in a variety of ways to the travel demand. However, university populations are underrepresented in travel behaviour studies in particular regular household travel surveys. The aim of MobiCampus-UdL research is to understand Lyon's university communities daily travel behaviour characteristics not just from a travel demand modelling perspective but as well to help campuses managers in planning coherent measures prioritising various range of mobility management strategies/urban design solutions appropriate to the diverse mobility needs and fulfil sustainability goals. The data used specifically was generated by an online travel survey conducted among several higher-

education institutions. Another issue of the project is exploring the potential of smartphone travel data collection. As we know university populations are tech-savvy, that was a good opportunity to plan a panel recruitment of voluntary participants who will respond to the first wave of the web survey. The objective of this experimental approach is to verify if this new method of data collection can improve quality/accuracy in temporal and spatial data. This paper aims to report on first findings from and experiences gained in the conduct of a comprehensive travel survey at University of Lyon (UdL). The paper offers a very preliminary results of an ongoing research project MobiCampus-UdL. A detailed description is dedicated to research method and data collection. Preliminary analysis on surveyed campuses shows when compared to the employees from the same university, university students are more likely to share favourable modal split towards active transport modes that include public transport and sustainable travel modes.

KEYWORDS: Lyon, student travel behaviour, mobility management, travel survey, planning, policy, transport regulation and urban planning, sustainable accessibility planning, active transport

1 INTRODUCTION

As education and employment destinations, universities are important generators of travel demand on local transport networks. Understanding travel behaviour is essential to informing transport management and planning (Akar, et al., 2012). Travel survey is often adopted as a method to understand individual travel behaviour. However, university students' mobility patterns are weakly investigated in conventional household travel surveys (HTS) surveys (Khattak, et al., 2011).

This paper investigates travel behaviour of the students, faculty and staff of the UdL campuses. A first experiment was undertaken by research team in spring 2015 among ENTPE-ENSAL Vaulx-En-Velin campus' population. The aim of the survey was to contribute to the reflection in the campus redevelopment framework in particular accessibility and parking issues. Insights gained from this pilot study served as a springboard for the next step with the ambition to set up a permanent "mobility observatory" on overall UdL's community by collecting longitudinal data including socio-economic, demographic, spatial and travel activity data.

The remainder of the paper is organized as follows. Section 2 describes the background of the project by a presentation of the research context. A detailed description is dedicated in Section 3 to research method and data collection. Section 4 presents some very preliminary results while Section 5 concludes and gives perspectives for the next research objectives.

2 BACKGROUND

Considered as the main French higher-education and scientific centre outside the Paris metropolitan area, The Université de Lyon (UdL) is a so-called ComUE (community of universities and higher-education institutions), federating 26 institutions of higher education and research (12 members and 14 associate members), located in the cities of Lyon (about 1.3 million) and Saint-Étienne (400,000 inhabitants) and spread over 7 campuses with different urban settings (Figure 1). Over the past several years, UdL has experienced considerable growth in enrolment and this growth has contributed to substantial increases in travel demand. An estimated population of 150,000 students & staff attend different UdL' campuses.

In an attempt to increase their environmental sustainability, part of UdL's campuses are beneficing since 2008 of an important program of energy-efficient renovation known as Lyon Cité Campus. Strategies aimed at reducing the dependence on private cars and at increasing the use of alternative transport modes are also part of UdL's sustainability goals as car-traffic is considered a major source of CO2 emissions in particular campuses presenting a high car-oriented environment. As legislation has changed, the Energy Transition for Green Growth Act (2015) made it compulsory for businesses and public institutions (with at least one hundred employees working at a single site) to set up a mobility scheme to support behaviour changes and encourage use of alternative modes.

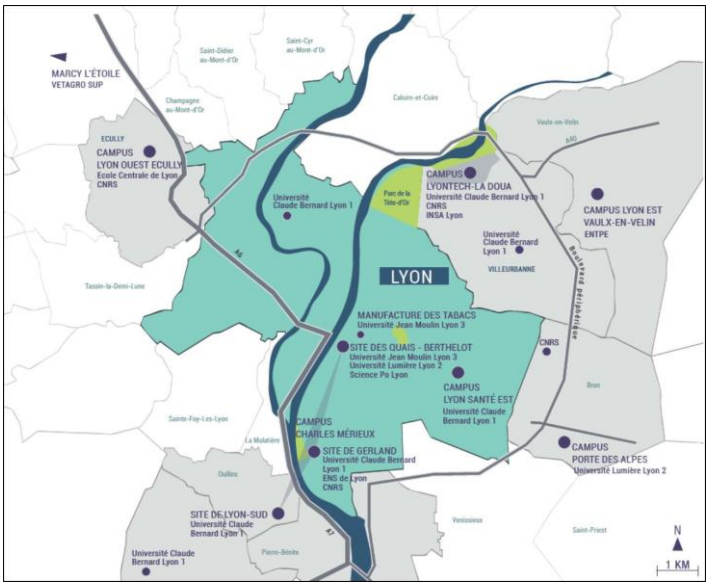


Figure 1 - Location of the different campuses part of Université de Lyon

In this paper we will focus on Lyon's university campuses, actually Jean Monnet University located in Saint-Étienne has already drawn up a mobility plan to increase the level of sustainable accessibility of its campuses. At present two campuses were object of the first wave of MobiCampus travel survey:

LYONTECH-LA DOUA CAMPUS

As one of the largest campus in the city of Lyon (about 25 000 students), LyonTech-la Doua campus has an objective to reduce the campus's energy consumption by 40% by 2021. The campus is located in dense urban settings and well serviced by a various public transport options: two tram lines are connecting the campus with the city centre with 5 stations on campus. There are also 3 bus routes connecting the campus with the rest of the city.

Actually the campus in engaged in an ambitious rehabilitation project jointly sponsored by the Metropole de Lyon and the UdL. The project involves the rehabilitation of some 20 buildings on 140,000 m² and 100 hectares. Due to the rehabilitation project the campus will face a severe parking shortage during and after works. About 25% of the actual parking capacity (4650 places) will have to be removed.

VETAGRO SUP CAMPUS:

The veterinary campus of Lyon is located in Marcy-l'Étoile a western suburban area in metropolitan Lyon approximately 16 km from the city centre. The campus is hosting about 1200 students & staff and accommodates academic, hospital and residential functions for students.

3 RESEARCH METHOD

DEVELOPMENT OF THE SURVEY INSTRUMENT

The questionnaire was developed by MobiCampus research group. Questions were then adapted to better fit the populations of interest and to be more relevant to different UdL's urban campus setting. We perform a web-based survey to collect the dataset to understand travel patterns to, from and on campus. This survey mode (web) was chosen because it is attractive to the target population (students) and the costs are lower than other survey modes (face-to-face or phone survey). There have been a few studies in the recent past focusing on measuring and analysing university students' mobility behaviour. Greene, et al., (2013) provide a meta-analysis of three separated university population travel surveys, include a survey of eight universities and colleges in Arizona, Utah and a survey of Texas A&M University and Blinn Junior College in Texas. Insight from this analysis conclude that the web-based instrument was the most successful technique to collect travel data

One of the challenges associated with a web-based online survey is that the survey administration team has no direct contact with the survey respondents. Thus the survey should meet appropriate standards and be compliant to specificities of a university environment to improve the quality of data collected, encourage participation and reduce participant burden. To ensure that erroneous and miscoded data are minimised, review, refinement, error checks and logical consistency checks were built into the survey instrument during the test of the beta version. Also, to minimise the non-response rate, our questionnaire was configured to allow respondents to skip questions they don't wont to answer, expect those that are crucial for mobility analysis such as travel patterns and socio-demographic characteristics.

The first set of questions involved collecting information about the academic institution affiliation of the respondents. Participants were asked to identify the campus where they went to study or work (primarily). They were also asked to identify their mean residential and work locations (both on-campus and off-campus for students) and mean frequented places linked to their activity. A user-friendly map-based interface (Google Maps API) was integrated to the online questionnaire to identify locations using point-and-click features. Locations could also be identified by typing an address, cross streets, or landmark if participant do not want to use the map-based interface. The deployment of the survey through a web-based interface made it possible to implement complex skip patterns and logic flows without unduly burdening the respondent. A second set of questions concerns basic information about usual travel to and from campus. Participants were asked to provide the usual mode of travel, travel time, departure and arrival times and parking location for their regular daily travel. A third set of questions concerns detailed socio-economic and demographic information about themselves and their households. Data was collected on such items as personal income (household income if living with family, parents, or guardians), race, gender, age, living arrangements, driver license holding, and public pass pass holding. Some additional questions were asked to determine whether the respondent could also be part of a qualitative interview or/and participate to a GPS mobility tracking experiment.

SAMPLING PROCEDURE

The student travel survey's reference population comprises all active students, faculty and staff attending targeted campuses. These lists of active students and staff was provided by the participating academic institutions through the support of UdL staff. A list of students, faculty and staff email addresses was drawn by Information system staff by processing complete and recent data from HARPEGE and APOGEE tools (respectively human resources and student management softwares). A confidentiality agreement was signed with each academic institution to insure rules of use and guarantee protection of personal data transmitted for the sampling purpose. The administration of a survey to the entire university community can be accomplished only with the cooperation and consent of the considered academic institution and its various administrative units. A confidentiality agreement was signed with each university to insure rules of use and guarantee protection of personal data transmitted for the sampling purpose.

SURVEY ADMINISTRATION AND RECRUITMENT OF PARTICIPANTS

To ensure that the university community was informed about the purpose of the survey and encouraged to participate, the initiative was advertised through multiple forms of university media and announcements were placed on the university weekly newsletters and student's web portal. The administration of a travel survey to the entire university population requires close coordination with university administrative authorities. A deliberate and collaborative process-oriented approach is actually followed by the project team to ensure that all constituents are engaged and supportive of the effort specially to enhance response rates. To give the survey good exposure advertising was designed in partnership with communications department, with a strategy developed that included a visual branding design which was publicised across campus using digital teasers and paper flyers (Figure 2). The IT department was also informed to authorized to send out mass e-mail messages requesting participation in the survey.

Figure 2 - example of publicity materials used during the survey advertising

The survey was hosted on our own reliable and high power server to facilitate ease of access and retain greater control of the online survey system by the project team. The email message provided a brief description of the survey and the ways in which the data would be used by our project team and the university administration for mobility planning and analysis. The message included a link to the survey instrument (LimeSurvey software), requested participation from community, assured respondents of the safety and privacy of all information provided, and furnished contact information if anyone have comments or concerns about the survey.

A first wave of the web-survey was carried out from January to May 2017. Successive waves will be achieved in the next 3 years with the aim to establish reliable travel behaviour data for the university community across all UdL's academic institution members. The 1st wave of the survey was deployed by a mass-email to a stratified sample belonging to the following institutions:

- VetAgro Sup: during 6 weeks from January to February 2017;
- UCBL University[1]: during 8 weeks from March to May 2017;
- UdL (staff): during 5 weeks from May to June 2017; (ongoing survey)

As our survey questionnaire collect data about travel means used the day before or the last time for joining the campus/workplace, the survey mailing process was spread over weekdays (from Tuesday to Friday) applying a proportionate stratified sampling method thanks to the R statistical software and its package 'SamplingStrata'. As in the survey questionnaire we are asking respondents about their usual mean of transport to access their mean studyplace/workplace, we wanted also to verify trough the survey if there is any variation in preferred modal choice linked to period of the survey administration.

SAMPLING RATES

As expected we found that response was higher among some role groups (faculty & staff) and lower among others (students). Table 1 shows that sampling rates for the students vary from 7 to 25 % between the two surveyed campuses. It is important to note that for our survey, no incentives were offered. In general, university student populations are younger aged and may not be fully engaged with survey processes compared to staff & academic members. As such, they are more likely to ignore surveys for which they do not personally identify and see an immediate or direct benefit to themselves. Furthermore, and according to UCBL's Communication Department, students used to be checking less their academic email compared to their personal email account. This was not the case of VetAgro Sup students who

[1] UCBL University welcomes more than 40,000 students and represent the largest university in number of students enrolled in the Lyon's metropolitan area and the region.

joined the survey with a relatively high response rate (25%). It appears that reminder messages did have an appreciable impact on the response rate for staff & faculty community group.

UdL's academic insitution	Category of population	Baseline population[3]	(%)	Sample size	(%)	Sampling rate (%)
VetAgro Sup campus	Students	707	66%	179	57%	25%
	Faculty & staff	370	34%	134	43%	36%
	Overall	**1077**	**100%**	**313**	**100%**	**29%**
UCBL University	Students	36640	90%	1917	60%	5%
	Faculty & staff	3987	10%	1279	40%	32%
	Overall	**40,627**	**100%**	**3196**	**100%**	**8%**
UCBL University LyonTech-la Doua campus[4]	Students	16,414	88%	1214	60%	7%
	Faculty & staff	2274	12%	824	40%	36%
	Overall	**18,688**	**100%**	**2038**	**100%**	**11%**

Table 1 - Population and samples for surveyed campus

Despite the best efforts and intentions of the project team, response rates for student community group has been identified to be a serious concern in student segments surveys. However, based on our own experience, email survey remains nevertheless the most effective channel of communication for our survey. We found that our survey rates of return are generally consistent with response rates from similar travel surveys:

- Université de Lille (2014): 6% (120,000 students)
- Université fédérale de Toulouse Midi-Pyrénées (2015): 8% (27,000 students)
- Université de Poitier (2010): 15% (18,600 students)

SAMPLE ADJUSTMENT

Due to the differential response rates across market segments, staff members were over-represented in the dataset while students were slightly under-represented in the dataset relative to the true university population (Table1). Therefore, we weight the responses by role (undergraduate students, graduate students, faculty, and staff), age range, gender and distribution of university population across campuses and sites for multi-sites institutions so that the proportion of respondents in each group reflects their proportion in the university population (raking ratio method, using XLSTAT 2014.5.03). Access to higher resolution data during to sampling frame step participate to improve the adjustment process.

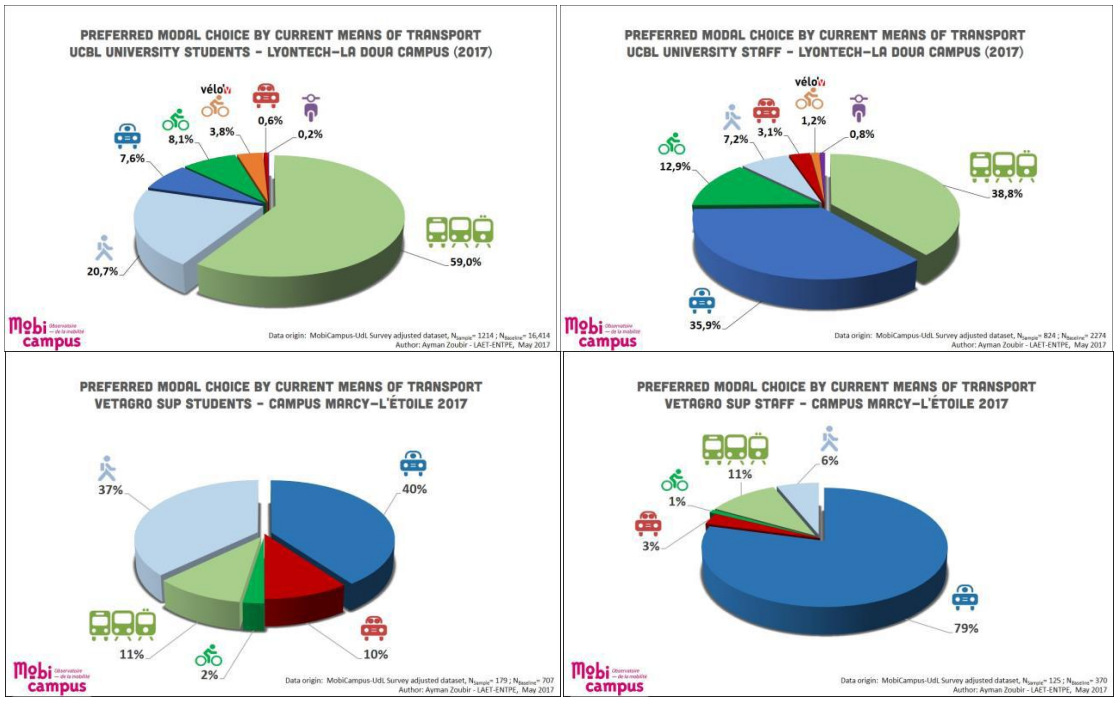
We voluntary do not include residential location as a weighting factor in the sample adjustment process. University students tend to be a mobile group with a-typical mandatory activity schedules, frequently changing their residential locations and residential living arrangements. Available data issued from university information system (APOGEE) includes generally zip codes given by students when enrolled. Important part of those zip codes are corresponding to parent's house and thus do not fit with common student's residential location during term time (Monday until Friday).

DATA PREPARATION AND QUALITY ANALYSIS

A very extensive filtering, cleaning and coding process of the raw data has been performed. A quality control and assurance process was implemented wherein all records were subjected to a number of consistency checks to see if the records would pass through the quality filters especially for travel patterns data. In a number of instances and with extreme care, it was able to apply logical imputation techniques and fix obvious errors, thus minimising the loss of data due to incorrect entries. As data preparation is still an ongoing step we invite to take with extreme care preliminary results presented in this paper.

4 PRELIMINARY RESULTS

Preliminary analysis on surveyed campuses shows when compared to the staff & faculty group from the same university, university students are more likely to share favourable modal split towards active transport modes that include public transport and sustainable travel modes. Figure 3 shows that students do indeed differ from other adults. This is especially noticeable in the analysis of travel patterns.



5 CONCLUSION AND PERSPECTIVES

This paper has attempted to present part of UdL's campuses travel survey design and administration, analysis of observed university community travel behaviour. However, there are some limitations to the research as the data collection and analysis still an ongoing process. At present this paper will be updated as additional data processing will be done.

ACKNOWLEDGMENTS

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ID 1499 | COLLECTIVE TRANSPORT. A SPATIAL ANALYSIS IN THE CITY OF RECIFE, BRAZIL

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ABSTRACT: Developed countries have related the lack of access to public transport to disadvantage and social exclusion, and many methods have been developed for the spatial measurement of the public transport supply aimed at equity in relation to socially disadvantaged groups, and for improvements in transport systems. These methods are still incipient in Latin America, although interventions to improve transport quality are an essential political requirement in urban governance. This paper is part of a PhD thesis, aiming the methodological development for the identification and evaluation of spatial gaps in the supply and demand of public transport causing social disadvantage in the Brazilian city of Recife. It is based on methodologies such as Needs-gap (Currie, 2010), PTAL (Transport for London, 2010), PTAI (Saghapour et al, 2016), and other methods analyzed. The objective of the paper is the critical analysis of the approaches that deal with these aspects, both in terms of social disadvantages due to the difficulty in accessing or even having public transport, as well as in the part related to the detection and analysis of spatial gaps in the supply and demand for public transport in urban areas of large cities. Based on the review carried out, it is possible to base the methodological development intended for the thesis study area, which can also be used for other cities in the world.

KEYWORDS: Public transport. Needs-gap. Social exclusion.

1 INTRODUCTION

Social inequality has been interpreted in several ways. It is most commonly explained as being the effect of income concentration and disparities in quality of life. In a study published in 2015, the OECD shows that the gap between rich and poor has widened in developed countries over the past 30 years, consolidating disparities between classes and affecting gross domestic product. What, then, can be said of the countries of Latin America that have reduced poverty, but in absolute numbers have millions of people in this situation in urban areas and high levels of unemployment strengthening informality? Considered the most urbanized region in the world, its cities are spatially and socially segregated (UN-Habitat, 2012). In Brazil, the appropriation of the urban space by private interests with the support of the State has been well-known and thus the challenge of overcoming the unequal conditions of citizenship is constant. The socially disadvantaged population moves away from the main centers of cities and the difficulty of access to public transport in carrying out basic activities such as work, school and health, compromises freedom and social progression. In view of the importance of the theme, several methods have been developed for the spatial measurement of the public transport supplied, aimed at identifying lack of equity in relation to socially disadvantaged groups.

This article focuses on the bibliographical review aimed at framing and sustaining the methodological development to be proposed for the current PhD thesis. The critical analysis of the approaches prepares the mainstay of the methodology for the study area of the thesis, the Brazilian city of Recife, and that can be used mainly for other cities of Latin America and also of the world, with adaptations to each reality.

Thus, the paper is formed by this section, containing the objetives and showing an overview of the framing for this work; section 2, which deals with the social needs and social exclusion that is due to the disadvantages in public transport; section 3, which presents the main and most recent methods for investigating spatial failures in the provision of public transport, and section 4, which presents the analysis and discussion of results concerning the content reviewed in the paper. Finally, in section 5, are the conclusions and the methodological proposal to be used in the thesis.

2 DISADVANTAGES IN TRANSPORT AND SOCIAL EXCLUSION

Social exclusion has a broad and multi-pronged concept, sometimes being addressed in a general context as a synonym for poverty, which is not real. For Kenyon at al. (2002), poverty mainly incorporates recognition of material and social deprivation, while social exclusion perceives unequal access and need for inclusion and participation of the individual in society (Levitas, 2007).

In the face of the concepts that translate social exclusion, when referring to transport in the face of a perspective on how its scarcity in diverse bias can bring losses to the lives of individuals in various social strata, one begins to perceive what the disadvantage in transport is. If social exclusion is encompassing in its structure, with factors such as poverty, ethnicity, gender, disability, age, employment status, among others, it is natural to understand that people who do not have or have difficulty accessing to achieve the normal activities of life such as education and employment, health, food and leisure shopping, do not have the same opportunities as others who have access to public transport and are thus disadvantaged. The disadvantage in transport is one of the causes of social exclusion.

Latin America and the Caribbean are mainly characterized by urban public transport, walking and cycling, while private motorized transport is composed by cars or motorcycles. It is important to note that for those who live in peripheral areas, transportation costs are higher, which is natural because of the greater mileage traveled and this corresponds to a considerable portion of their salaries. This picture portrays the great Brazilian cities, including the city of Recife, which also suffer from the inadequate supply of public transport, which made the use of private motorized transport attractive (IPEA, 2011). There is still a lack of adequate infrastructure for the so-called active means of transport, besides being sustainable, such as cycling and walking (Malatesta, 2007, UFRJ, 2016). Thus, having a motorized vehicle has become an important element for the level of accessibility and not owning it has become a factor of social exclusion (Rodrigue et al., 2006).

Investments in urban roads in order to improve their capacity have been only temporary in Brazil (Ministério das Cidades, 2007), increasing the additional capacity of the roads without privileging urban public transport and the active means of transportation. Transport, while not taking into account criteria for urban development in harmony with demand to improve urban mobility, is totally counterproductive, aggravates congestion and privileges individuals that can own a car (Vasconcellos, 2010).

According to Jaramillo et al. (2012), in the most traditional line of planning methods for urban transport systems, the demand has been the main object of study, not taking into account the spatial or socioeconomic equity (Banister, 2005). It should be noted here that spatial equity in focus is embedded in vertical equity because, according to Litman (2016), "transportation policies are equitable if they favor economically and socially disadvantaged groups, thus compensating for inequalities."

It is in this context that some of the methodologies developed for the identification and evaluation of the spatial gaps in the provision of public transport are presented and that they bring in their structure the problem of the disadvantages in transport relative to the disadvantaged social groups, trying to find the proper methodological support for the case study of the current thesis, as already mentioned.

3 METHODS FOR THE GAP ASSESSMENT IN PUBLIC TRANSPORT

Methods that associate the measure of supply to disadvantage in transport using geographic information systems (GIS) have been developed for a long time in Australia (Currie and Wallis, 1992; Currie et al., 2003; Currie, 2004; Currie, 2010; Delbosc and Currie, 2011). In the studies for Hobart (Currie, 2004), which is in the Australian state of Tasmania, the already refined approach has been called 'needs-gap'. The designation of this approach is due to the fact that needs-gaps are the spatial failures between transport and social deprivation, after comparing measures of supply and demand. Currie (2010) used the methodological development needs-gap in Melbourne, which is in the State of Victoria, Australia, for all 5,839 census collection districts (CCDs) -which will be called 'bairros' (neighborhoods) in our study - in order to test how this approach would respond to the case of larger localities within the Australian context. Greater Melbourne already had a population of 4,530,000 inhabitants in 2015, to the detriment of the population of Greater Hobart, which in the same year (2015) had 221,000 inhabitants (Australian Bureau of Statisticians, 2016).

Delbosc and Currie (2011) also presented a new approach to the metropolitan Melbourne region, with a visual representation of the shortcomings in the provision of public transport in relation to population and employment.

Also aimed at Greater Melbourne, in a differentiated bias, the methodological development of Saghapour et al. (2016) considered the frequency of public transport services, with the incorporation of population density, an innovation considering previous studies.

Also in the context of the quality of public transport provision, the work of Wu and Hine (2003) studies the supply and the disadvantage in transport, in the city of Belfast, Northern Ireland. It uses the geographic information system and the Public Transport Access Level (PTAL) method (Transport for London, 2015).

The revisions of the aforementioned methodologies regarding supply and demand measures are shown below, observing the social needs due to the transportation disadvantage.

3.1 MEASURE OF SUPPLY

In the treatment of supply, Currie's study (2010) considered a combination of the level of service provided by public transport in metropolitan Melbourne and the conditions to access it through the existence of buffers in the neighborhoods of the study area. The frequency was evaluated by the number of arrivals per week in each neighborhood and the measurements of typical walk catchments (Currie, 2010) were used for public transport modes. For the calculation of the supply index, a combined measure of the above parameters was used, as shown in the equation below. GIS software was also used.

$$SIbairro = \sum N \left(\frac{Area_{Bn}}{Area_{bairro}} * SL_{Bn} \right) \quad (1)$$

Where: bairro is the neighborhood under analysis; SIbairro is the index of the supply corresponding to each neighborhood; N is the number of walk access buffers for the stops/stations in each neighborhood; Bn is the buffer n for each stop/station in each neighborhood; Areabairro is neighborhood area in square kilometers (km²); SLBn is the measure of the level of service (number of arrivals per week of buses, trams and metro in buffer n). The approach then considered the territory of the neighborhood taking into account its coverage by walk catchments to access public transport beyond its relative service levels.

Delbosc and Currie (2011) used the same index for the supply developed by Currie (2010), corresponding to equation (1), in each census tract (CCD) or 'bairro' for metropolitan Melbourne. The main focus was on the distribution of supply in relation to population and employment. The approach consisted in the use of Lorenz curves as a measure of the relative supply of transport to the population, as well as the Gini coefficients for the representation of the equity measure, allowing a visual representation of the gaps in the public transportation supply relative to the population and employment. They reported in their research that service levels were calculated based on the walk catchment overlap of the stop and not based specifically on the catchment centroid, where the stop is located, noting that the public transport stop does not have to actually be within the neighborhood so your service contributes to the supply of this neighborhood.

In the studies of Wu and Hine (2003) the PTAL-Public Transport Access Level method (Transport for London, 2015) was used to determine the quality of the Citybus network's supply in Belfast, Northern Ireland. The purpose was to assess the spatial impacts that would be caused on the population under the influence of that network in the case of hypothetical networks, by comparing relatively the access to the localities in Belfast, as well as verifying the relative effects on access with the introduction of new schedules or levels of service. Among the main parameters of the research were the age structure of the population, the possession of the car and the fact of belonging to the Roman Catholic religion or the Protestant religion. The PTAL translates into a scale of levels that show the amount of service provided, including measures such as frequency, reliability and walking time to access public transport.

In the methodological development of Saghapour et al. (2016) an index for classifying public transport access levels (PTAI) for metropolitan Melbourne's Statistical Areas Level 1 (SA1s) was formulated. In the elaboration of this index, two factors were calculated for each SA1 district and for each buffer, that is, the weighted equivalent frequency (doorstep frequency) and the proportion of population density. In the approach, Mesh Blocks were used to calculate the population density of SA1s and buffers. According to ABS, the Melbourne region contains 53,074 Mesh Blocks and 9,510 SA1s. The PTAI index for each SA1 in the service level part follows a similar approach to the London PTAL method (Transport for London, 2015). In this way, the buffer areas were overlapped on the SA1s, using ArcGIS, in order to calculate their population density. Figure 1 illustrates the overlapping areas of a SA1 selected with walking catchments of tram stops and mesh blocks. In this figure the authors assumed a homogeneous distribution of the population within the mesh blocks. The SA1 population is then obtained through the population in the mesh blocks that compose it. The population within buffer areas was calculated based on the proportion of these areas in relation to their overlap in the mesh blocks. Thus, the area or population of each SA1 corresponds to the sum of the areas and population of the respective mesh blocks.

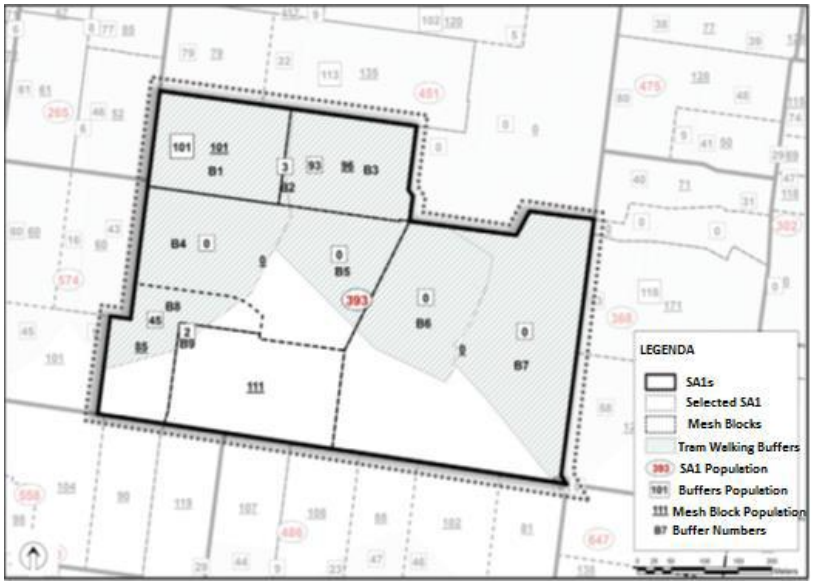

Fig. 1. Illustration of calculation of population density for buffer areas and SA1s.
(Adapted from Saghapour at al, 2016)

It is possible, therefore, to calculate the population density, for both study areas, that is, those of buffers and SA1s. Since the PTAI index is the composition of the combined measure of the weighted equivalent frequency of the SA1s and the incorporation of the population density ratio of the buffers' areas in relation to their respective SA1s, then,

$$\text{if } DBij = 0; \text{PTAI } SA1i = \sum_{j=1}^{3} \sum_{i=1}^{l} \left(1 + \frac{DBij}{DSA1i}\right) * \text{WEF}SA1i$$

$$\text{if } DBij \neq 0; \text{PTAI } SA1i = \sum_{j=1}^{3} \sum_{i=1}^{l} \left(\frac{DBij}{DSA1i}\right) * \text{WEF}SA1i$$

Where: PTAI SA1i is the index of access to public transport for each SA1; DBij is the population density of buffer i for transport mode j; DSA1i is the population density of SA1i and WEFSA1i is the weighted equivalent frequency of the corresponding SA1.

Finally, a measure of the provision of public transport is obtained through the same evaluation technique of the London PTAL, that is, the PTAI is grouped into 6 bands with levels of quality of the offer ranging from very poor to excellent. The result equal to zero indicates that there is no accessibility or there is no population in an SA1.

3.2 THE MEASURE OF TRANSPORT NEEDS (DEMAND)

In the methodological development of Currie (2010) for Melbourne, two groups of indicators were presented for calculating the needs index in the socioeconomic context, and the analysis could be based on one group or another. The first group was composed of variables primarily of socioeconomic characteristics and weighting values according to the level of importance of each one in the social analysis of the study area. The second group concerns the more specific indicators of transport demand, and was based on an earlier 'need-gaps' approach developed by Currie & Wallis (1992); Travers Morgan (1992) and Currie (2004). These indicators are shown in table 1.

Need indicator	Source	Weight
Adults without cars	Census 2001[a]	0.19
Accessibility	Distance from Melbourne - CBD[b]	0.15
Persons aged over 60 years	Census 2001	0.14
Persons on a disability pension	Centrelink[c]	0.12
Low income households	Census 2001[d]	0.10
Adults not in the labour force	Census 1996 [e]	0.09
Students	Census 2001[f]	0.09
Persons 5–9 years	Census 2001	0.12

Table 1 Transport need indicators and weights applied. (Adapted from Currie, 2010)

a. Based on the number of cars per household and the number of persons aged 18 and over (Census 2001).
b. Based on the straight line distance to Melbourne central business district (GPO) from the CCD centroid.
c. Based on the number of persons on a disability pension in a postcode grouping (Centrelink 2006). This was then spread across CCDs based on number of persons in each CCD within that postcode (Census 2001).
d. Based on the number of households with a weekly household income of $499 or less (Census 2001).
e. Based on persons over 15 not in labour force in 2001 (Census 2001).
f. Based on persons enrolled in an educational institution – including primary and secondary school, university and technical and advanced further education.

Currie used the group listed in table 1 to elaborate the measure of social needs due to transportation disadvantages. For the measure of accessibility, the direct distance from the center of each neighborhood to the central business district (CBD) in Melbourne was considered. Thus, for calculating the transport needs index, the following equation was used, highlighting the fact that the values of the indicators should be standardized beforehand, since a single need score will be produced for each neighborhood.

$$\boldsymbol{NIbairro}=\Sigma(\boldsymbol{SI1bairro}*\boldsymbol{W1})+(\boldsymbol{SI2bairro}*\boldsymbol{W2})+\cdots+(\boldsymbol{SInbairro}*\boldsymbol{Wn}) \quad (2)$$

Where: $\boldsymbol{NIbairro}$ is the index of need for the neighborhood; $\boldsymbol{bairro}$ is the neighborhood under analysis; $\boldsymbol{SIi}bairro$ is the standardized indicator of each indicator of need, where $\boldsymbol{i}=\boldsymbol{1}\ldots\ldots\boldsymbol{n}$ and $\boldsymbol{Wi}$ is the assigned weight for each indicator of need.

In order to calculate the measure of transportation disadvantages, Currie and Delbosc (2011) developed their research in the perspective of an equity analysis in relation to public transport, both horizontal and vertical, using, for this, the Gini coefficients, calculated using the following equation:

$$G1 = 1 - \Sigma(Xk - Xk-1nk=1)(Yk + Yk-1) \quad (3)$$

Where: Xk is the cumulative proportion of the population variable, for k = 0, . . . , n, with $X0$ = 0, Xn = 1; Yk is the cumulative proportion of the public transport service variable, for k = 0, . . . , n, com $Y0$ = 0,

Yn = 1.

In order to evaluate the horizontal equity, the index of the public transport supply was compared to the population and also later compared to the employment. Data from Australian census of Melbourne 2006, at the district level, were used. Demographic data from that census were obtained for the evaluation of vertical equity.

Wu and Hine (2003), on the other hand, used the multiple deprivation index of Northern Ireland, the so-called Noble Index, to measure transport disadvantages in the approach developed for Belfast in that country. This index was based on the demographic census of 1991, allowing an understanding in the spatial analysis of the most distinct aspects, whether of deprivation or disadvantage. Among the deprivation indicators considered by the Noble Index were income, employment, health and physical or mental incapacity, education, social environment, housing and geographical access to health services, postal services, among others.

3.3 THE NEED-GAPS

As explained above, the methodological development of the thesis is based on the identification of spatial gaps in the provision of public transport for people who are socially disadvantaged.

Before the measurement of the supply and of the one referring to the disadvantage in transport, the two are compared using the geographic information system and in this way the need-gaps are obtained, according to the method of Currie (2010). Following this approach to Greater Melbourne, he calculated the supply index by arranging it into seven groups, one in the zero supply category and the other categorized as three above average (above average, high, very high) and three below average (below average, low, very low). The groups that are below the average, are those that suffer of greater social necessity. In this context, we found the results shown in figure 2, which presents the spatial distribution of supply in the categories mentioned.

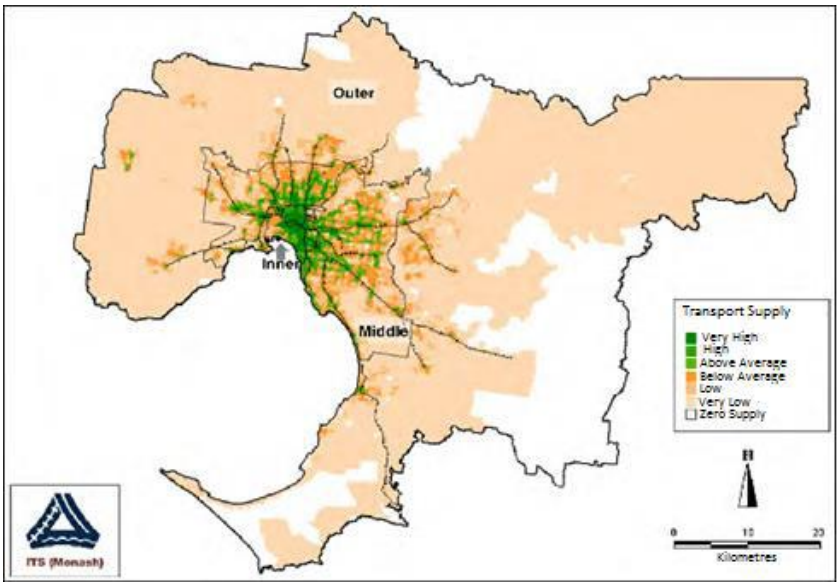

Fig. 2. Distribution of supply measure scores – Metropolitan Melbourne. (adapted from Currie, 2010)

With regard to the index of disadvantages in transport, it is seen in figure 3 below, the spatial distribution of social needs due to disadvantage in public transport. Groups were separated into a needs scale with scores ranging from low need to high need, in the context of three levels below average (below average, low and very low) and three levels above average (above average, high and very high).

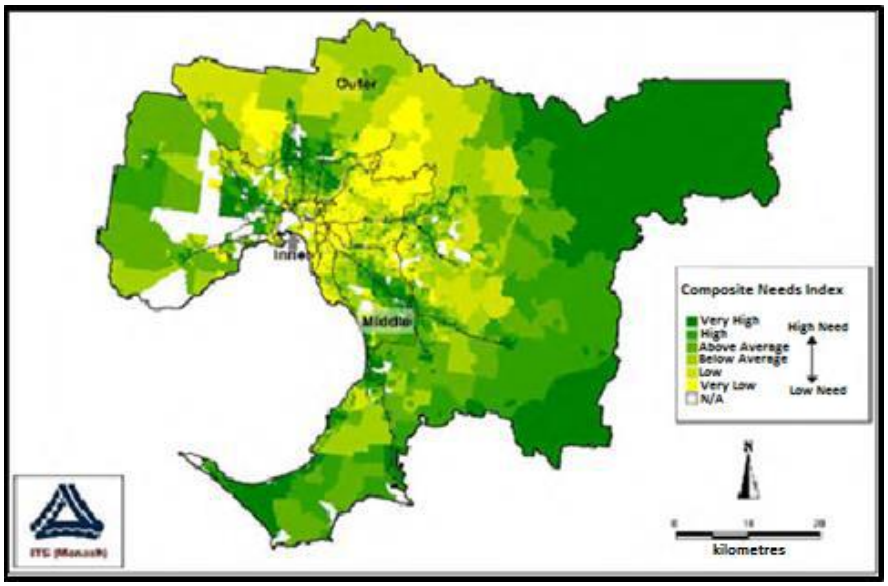

Fig. 3. Distribution of categories of composite social need index scores.
(Adapted from Currie, 2010)

In Currie's methodology, as mentioned previously, need-gaps are obtained through the comparison between the measure of supply and the measure of social needs (or demand). As an example, figure 4 below presents spatial gaps due to the disadvantage in transport (need-gaps) in the category of very low supply or zero supply and in the category of social disadvantage by transport, very high.

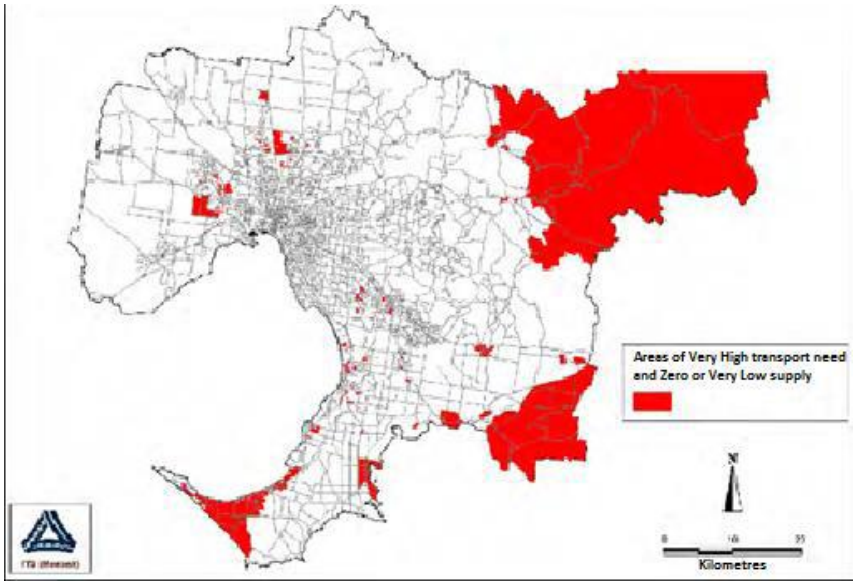

Fig. 4. Melbourne needs-gap – very high transport need areas with
zero or very low public transport supply. (Adapted from Currie, 2010)

In the study of Delbosc and Currie (2011), as already discussed in section 3.1, the approach was developed in a perspective of horizontal and vertical equity. Using the Lorenz curves for the measure of supply and the Gini coefficient for the measure of equity, it is possible to graphically represent the results of the relationship between transport supply and population and employment, since, according to the authors, “while the Lorenz curve is a visual interpretation of equality, the Gini coefficient is a singular measure of the representation of the degree of inequality”. Figure 5 below shows that 70% of the population of Melbourne shares only 19% of public transport, while 30% of this population shares the remaining 81% of the public transport service. In this case, the Gini coefficient obtained was 0.68, which suggested relatively low horizontal equity, since services are only available for a small proportion of the population. In order to map the gaps for horizontal equity, the differences between the supply and the population are detected, and the inequalities of the service are identified.

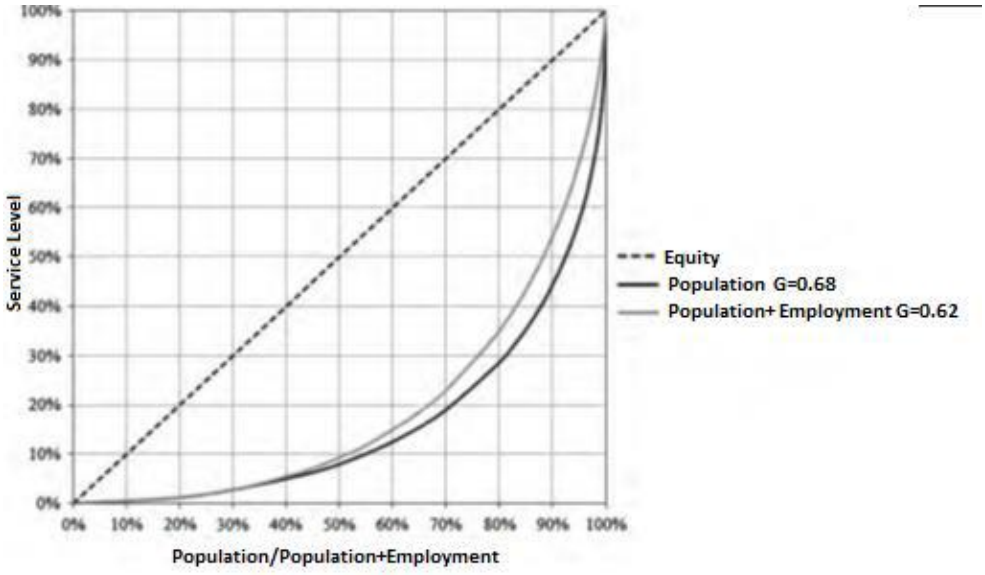

Fig. 5. Lorenz curves of population and employment (Adapted from Delbosc and Currie, 2011)

The approach of Wu and Hine (2003) using the PTAL method (Transport for London, 2015) focused on the analysis of the existing Citybus Network and the assessment of the spatial impacts that would be caused in the population under the influence of the network, in the case of Implementation of hypothetical networks by comparing the access to localities in Belfast, as well as by checking the relative effects on this access with the introduction of new schedules or levels of service. The PTAL levels were calculated for different periods of time, so that it was possible to examine the relative access in different locations, as well as the relative effects on access to public transport in view of the proposed changes. In this way, the gaps were identified when comparing the variations of the local PTAL index and the spatial distribution of the deprivation indexes.

4 ANALYSIS AND DISCUSSION OF RESULTS

The methodological development of this work follows a research line similar to Currie's Need-Gaps method (2010); however, in the perspective of an innovative bias, adaptations will be carried out in search of consolidated results, in addition to being a study focused on Recife, in northeastern Brazil, while Currie's studies were primarily in developed countries.

Considering the documents analyzed, it is observed that in Currie's approach (2010) the analysis was able to detect significant gaps for the metropolitan area of Melbourne. Considerable differences have been found between the service levels of the public transport supply in Inner and Middle Melbourne with space areas covered by walk catchments at a much greater advantage than Outer Melbourne. It was observed that in addition to having much lower levels of service, the suburbs of this part of the outskirts of Melbourne have characteristics of sparse population of low density, and thus, the overlap of walk catchments is also limited when compared to the more central region and surrounding (Inner and Middle). In the analysis of the social needs index for transport disadvantages, it has been found that there are large spatial concentrations in Outer Melbourne with high levels of transport necessity and even in Inner and Middle Melbourne, despite the better conditions in relation to the urban periphery, yet they have sectors with high and very high social needs. When comparing needs/spatial gaps, the analysis identified that 1.1% of residents were in locations with no public transport provision, and were included in the group with needs scores rated very high. Overall, 8.2% of the population of Melbourne, according to the Need-Gaps methodology, were included in the group with very high needs score and with public transportation in the zero, low and very low supply categories.

In a different context, Saghapour et al. (2016) in the development of the PTAI included the population density as an indicator of the spatial distribution of the population in the neighborhoods and in the walk catchments areas and for this it was introduced the ‘mesh blocks’. The mesh blocks represent a closer estimate of the reality, because being smaller measures, make possible a calculation of the population in

SA1s (neighborhoods) or buffers, more accurate. A homogeneous distribution of the population within the mesh blocks was assumed, which allowed a better analysis of the spatial distribution, which was not done in Currie (2010), since it was considered a uniform population distribution throughout the study area.

Wu and Hine (2003), using the PTAL (Transport for London, 2015) method, with the benefits of GIS and transport networks, strategically analyzed the spatial impacts caused in the population with the hypothetical networks in Belfast, in view of changes in the original Citybus network. PTAL levels were produced at different time periods, so relative access could be examined at different sites. In all the hypothetical options a strong impact was observed on the age groups, mainly harmful to the elderly. Families without cars would be more disadvantaged, as they would have more difficulty accessing the network especially at the peak of the morning. The users of each religious group, Catholics and Protestants, would have many problems in the periods between peaks and off-peak. A contextualized research on vertical equity was observed in Wu and Hine. The PTAL methodology is pertinent in the approach of the authors, as it develops a measure that reflects the connectivity between the different modes of public transportation and thus, the availability of access to them.

Delbosc and Currie, verified the practicality of their method, with the use of the Gini coefficient to obtain a simplified value of the equity of the system as a whole. When the (population + employment) curve was also taken into account in relation to supply, the situation was not very different from the (supply x population) curve, mentioned in section 3 (because 70% of jobs and population share only 23% of the service (Gini = 0.62). For the authors, “perfect horizontal equity is not attainable or even desired, but the fact that 77% of public transport is concentrated for only 30% of the population and employment in the city, seems quite unfair”. With respect to vertical equity, there are features of it in Inner Melbourne, where young people and low-income groups have much higher transport supply than other groups and in Outer Melbourne, where older people have a slightly larger offer. However, in Middle Melbourne there is little difference in supply between groups. In the three areas of Melbourne, households that do not own cars are located in places with much higher rates than those with one or more cars.

5 CONCLUSIONS AND METHODOLOGICAL PROPOSAL TO BE USED IN THESIS

Some failures were detected during the review of the analyzed methods, as well as positive and value aspects.

In the case of the Need-Gaps methodology, Currie (2010) pointed out as fragility of this approach, the fact that supply allocation has been assumed to be uniformly distributed spatially within the neighborhoods. This issue could present more consistent results with the incorporation of population density to the method, as Saghapour et al. (2016) in the methodological development PTAI. In this case, the population density served as an indicator of the spatial distribution of the population in the neighborhoods and in the walking catchment areas, and for this purpose ‘mesh blocks’ were used. The population of the neighborhood was obtained through the existing population in the mesh blocks that composed them and the population in the buffer areas was calculated based on the proportion of their areas in relation to the overlap in the mesh blocks. Thus, the area or population of each neighborhood corresponded to the sum of the areas and the population of the respective mesh blocks and the homogeneous distribution of the population was assumed to be within these neighborhoods instead of being throughout the study area as was done in Currie (2010). In this way a closer analysis of reality in terms of spatial distribution is possible.

The method of calculating the Currie supply index (2010), pointed out by Delbosc and Currie (2011), presents deficiencies, one of which is that the frequency of the service does not have a measure of access to specific destinations. This same failure in relation to the PTAL methodology itself is identified by Transport for London (2015) because the PTAL does not take into account the destinations to which the individual can travel. PTAI, on the other hand, is limited in terms of connectivity between modes, which certainly has a great influence on access, the object of its approach, especially in areas where it is inappropriate.

The other methodological deficiency in the measure of Currie's supply (2010) perceived by Delbosc and Currie (2011) is in relation to walk catchments. They pointed out that most of the important points that are in larger neighborhoods than those around them are sometimes identified as being of low supply. What

happens is that sometimes the point shares its catchment with the neighborhoods bordering it, thus reducing its level of service.

In view of the above, given the positive aspects and the detected failures, it is expected that the methodology of this thesis will cover the following directions: the use of a methodology similar to Currie, considering the index of the public transport supply and the index of the social needs (demand) due to the disadvantage in transportation, for the identification and analysis of spatial/need gaps, according to the standard of the Need-Gaps method, but considering, however, the system of Saghapour et al. (2016) when the population density was included in his PTAI, in order to distribute more properly the population in the walk catchments and in the neighborhoods, making the results closer to reality. In this case, due to the fact that Brazil does not have the 'mesh block' measure unit, the Brazilian Institute of Geography and Statistics (IBGE), the so-called 'census sector', would be used as the smallest measure. Another adaptation in Currie's methodology (2010) that this thesis can add is the incorporation in the index of the supply of a measure of access to specific destinations, that in the case of Recife study would be the hospital of the 'Restauração' and the hospital 'Santa Joana', and that in the framework of this study was already foreseen the redistribution of the frequencies for these equipments.

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ID 1508 | A HEURISTIC FRAMEWORK FOR EXPLORING UNCERTAINTIES IN TRANSPORT PLANNING

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1 INTRODUCTION

In recent decades, the effectiveness of positivistic approaches in transport planning has been growly contested by academics and practitioners (Innes and Booher, 2010). The idea of planning for a single model of reality is becoming obsolete when considering the fast and radical changes that society is experiencing at present and in the near future (e.g. ICT advances, environmental concerns, social inequalities, changes in mobility behaviour, etc.) (Batty et al., 2012; Lyons and Davidson, 2016; Marsden et al., 2014). The

discussed crisis of the rational-planning model has generated a great deal of interest in those rationalities pursuing “alternative realities” of planning, rooted in critical realism, constructivism and pragmatism (Khisty and Arslan, 2005). However, practitioners and policy-makers are still comfortable with the idea of planning as “enlightening the future”, also reinforced by traditional planning cultures, legal frameworks, and political institutions (Lyons and Davidson, 2016). Placed in a crossroad of approaches, motivations and

perspectives, the issue of unveiling uncertainty has been gaining relevance among transport-planning researchers (Martens and van Weelden, 2014).

Attempts at understanding uncertainty have mostly been made from a decision-making perspective, especially from the transport-modelling field (van der Pas et al., 2010; Walker et al., 2003). However, those approaches face what is known as the “uncertainty paradox”: the recognition of higher levels of uncertainty goes hand in hand with the expectations of positivistic science and knowledge to tackle them (van Asselt and Vos, 2006). Moreover, despite multiple dimensions of uncertainty having been explored in literature (Brown, 2004), they seldom encompass the plurality of perspectives (and also languages) involved in transport planning. At this point, previous systematization and conceptualization efforts need to converge into common overarching frames, which are flexible enough to embrace this plurality of uncertainty dimensions.

Such attempts may help in improving the perception and communication of uncertainties in planning. This paper addresses the following research question: how can uncertainties faced by transport planners and policy makers be framed and compared? To explore potential answers: (i) a heuristic framework has been developed to summarize a set of existing sources and levels of uncertainty in transport planning; (ii) this heuristic framework has been used to carry out a literature review of situations of uncertainty, that is, specific perceptions and consequences of uncertainty in planning; illustrative examples of those situations were provided, with the implementation of a new public-transport infrastructure (i.e. a Light Rail Transit systems) as a background.

Section 2 outlines the research design. Section 3 shows the bases of the proposed heuristic framework to identify situations of uncertainty in transport planning. Section 4 further develops the description of the framework according to different dimensions of planning, using references from transport literature and some examples. Section 5 closes the paper with reflections and some concluding remarks.

2 RESEARCH DESIGN

The research design consisted in a literature review comprising two main phases: in the first phase, a review was conducted on academic publications under an open search basis, aimed at identifying uncertainty, complexity and risk concepts (i.e. how uncertainties are represented, located, and assessed); two perspectives were explored: i) the planners’ perspective on uncertainty, involving how and where uncertainties are perceived and communicated; and ii) the policy-makers’ perspective on uncertainty, involving how uncertainties are analysed, assessed and managed. In the second phase, the previous concepts were used as keywords for a systematic search of references in the Scopus database. The resulting selection of 364 references was manually refined to 44 papers according to their relevance (i.e. mostly, discarding offtopic references, insights on mathematical modelling and research on operational processes and transport engineering) and their availability in consulted sources. After a first scan of the content of the final selection of papers, a heuristic framework was proposed (Section 3) for connecting different levels of uncertainty with features and dimension of planning represented by authors (Section 4).

To facilitate the understanding of the theoretical insights during the literature review, some situations of uncertainty have been pictured with examples involving the implementation of a Light Rail Transit system (LRT) (Section 4). LRT projects have cast claims and doubts over the potentials of such systems for transforming existing urban spaces and upgrading the transport system of medium and small urban regions (Babalik-Sutcliffe, 2002; Priemus and Konings, 2001). The examples provided here are mostly inspired in the recent implementation of an LRT project in Granada (Spain), close to the authors’ experience.

3 A HEURISTIC FRAMEWORK FOR UNCERTAINTY IN PLANNING

The heuristic framework was built as a thinking device for identifying different situations of uncertainty in planning. Those situations are described linking two questions: (i) where uncertainties are located (i.e. object and subject); and (ii) how important they are (i.e. their impact).

Concerning the object of uncertainties, information, knowledge and decisions have been central to their study. Uncertainty manifests when something is unknown, or cannot be known, due to certain limitations related to the very nature of knowledge (i.e. “what we know”), how it is processed (i.e. “how we know”) and how knowledge is used (i.e. “what we do”). In literature, these aspects have been related to different locations or sources of uncertainty (Enserink et al., 2013; Hansson, 1996). Nonetheless, a more complete understanding of uncertainty sources in planning also requires attention to their subjects, highlighting how perceptions and actions of planners and policy-makers are inherent to their confidence, expectations and state of surprise (Hutter, 2016).

The heuristic framework conceptualises the possible sources of uncertainty in transport planning according to three overlapping layers. Uncertainties are generated as interactions or tensions between pairs of features in each layer (Figure 1):

Layer 1 or “planning reality” (context – environment): this layer corresponds to the notion of the world outside the planning process, as perceived by both planners and policy-makers. It involves the planning context, as the less or more complex “physical reality”, which planners cannot directly control or influence (e.g. infrastructures, transport systems, flows, demography, economic cycles, technological changes, behaviour of travellers, etc.); and the planning environment , or the “social or organisational reality”, as the network of actors which links material reality and the planning process by gathering information and practical experience and sharing information and knowledge with other actors.

Layer 2 or “planning process” (concepts – artefacts): this layer would be embedded in the transportplanners’ side, regarding how disperse information and knowledge from the planning reality is actively screened, processed and interpreted by them to define and solve planning problems. Concepts stand for those planning problems and premises steering the transport-planning process to its resolution (e.g. restraining cartraffic volumes, reducing traffic emissions, promoting TOD, etc.). Artefacts are the devices or knowledgebases which help planners to describe, explain and validate concepts (e.g. judgements or argumentations, simulations, planning-support systems, decision-support systems, etc.). At the same time, the definition of concepts motivates the choice of those artefacts that can interpret them.

Layer 3 or “planning products” (outputs – outcomes): this layer would be embedded in the policymakers side, considering how planning knowledge is effectively used. Outcomes characterize the available options of the plan and their expected impacts (e.g. decisions it expects to influence, objectives to achieve, policies it delivers, alternatives it proposes, etc.). Outputs are the real planning impacts, as decisions are made according to outcomes. At the same time, outputs are used for validating and questioning planning outputs.

The implications or impacts of uncertainty are addressed in our framework through the addition of levels of uncertainty. Levels have been used in other works to measure or express the severity of uncertainty, or its consequences, within a spectrum from completely deterministic knowledge to ‘total ignorance’ (Bertolini, 2007; Enserink et al., 2013; Lyons and Davidson, 2016; Walker et al., 2010). Here, we also consider levels as related to the main nature of uncertainty (Enserink et al., 2013; Hansson, 1996): epistemic, originating from lack of knowledge about phenomena; ambiguity, a type of epistemic uncertainty coming from the plurality of frames under which reality is understood; and ontic, originating from the limits of cognition and representational systems. We distinguish four levels (Figure 2): Reducible uncertainty (level I): information may be eventually incomplete, but known causal relationships (deterministic knowledge) can help to retrieve the “missing parts”. Shallow uncertainty (level II): knowledge is incomplete but still reliable, linked to a single frame, in a way it can effectively bridge the information gaps.

Deep uncertainty (level III): it corresponds to conditions of incomplete and unreliable knowledge, in which information gaps cannot be properly bridged, due to the existence of conflictive frames (i.e. different perceptions of the same issue).

Radical uncertainty (level IV): this level exacerbates the limits of knowledge and the lack of reliability on past experience. Therefore, information gaps cannot be even defined, as previous knowledge frames turn useless.

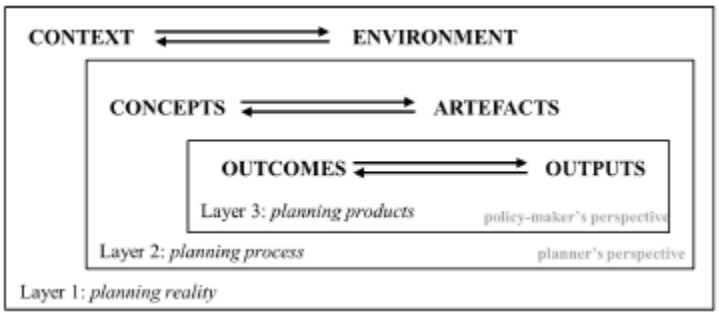

Figure 1 - Conceptualization of the three layers of the heuristic framework.

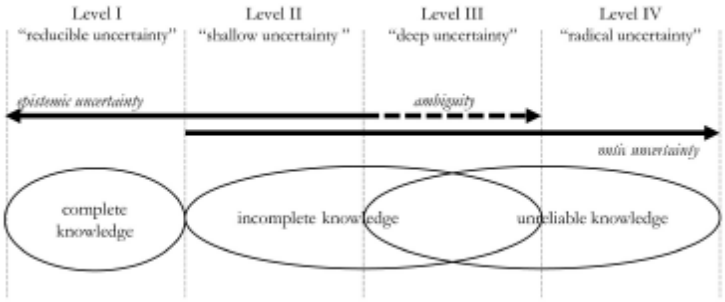

Figure 2 - Levels of uncertainty.

4 SITUATIONS OF UNCERTAINTY IN TRANSPORT PLANNING

In this section, situations of uncertainty are described according to intersections between layers and levels of the heuristic framework (in each sub-section). The features of planning at different layers (i.e. context, environment, concepts, artefacts, outcomes and outputs) are further developed in 14 dimensions, concerning different aspects relevant in transport-planning literature. Tables 1 to 6 summarize key situations of uncertainty, and offer some examples picturing the planning and implementation of an LRT system.

4.1 UNCERTAINTIES FROM THE PLANNING REALITY

The situations of uncertainty authors acknowledge within the notion of reality of planning (layer 1) are mostly associated to the planning context (physical reality) and the planning environment (social reality) (see Section 3).

Uncertainties in the context have been linked to planners and policymaker's perceptions of past change (see Table 1). Objects of change in transport planning seldom work in isolation (level I), but they involve different components and their mutual relationships, usually arranged in systems: transport systems, land-use systems, social systems, etc. Uncertainties are related with different types of complexity in systems, which range from the complexity due to increasing number of components and properties (e.g. a transport network growing in nodes and links) (levels I and II) to the complexity of dynamic systems, shifting behavior and functions (level III), or interacting with outside drivers (level IV) (Bertolini, 2007; Dimitriou et al., 2013; Koppenjan et al., 2011; Martens and van Weelden, 2014; Ramjerdi and Fearnley, 2014; Salet et al., 2013). On parallel, nature of change refers to the pace, continuity, reversibility and dynamicity observed in transformations of the context (Bertolini, 2007; Lyons and Davidson, 2016; McDowall, 2014). Accumulation of change dominates transport planning, for instance, in the inherited urban forms and infrastructures. From a level-II perspective, fixed elements, such as infrastructures, may help to retain structures and deliver stability (Gifford, 1994); nonetheless, under a level III perspective, such elements are perceived as irreversible and path-dependent (i.e. the sequence of historical events influences future possibilities) (Bertolini, 2007; Herder et al., 2011; Ramjerdi and Fearnley, 2014). Combination of reversible

and irreversible elements is usually associated with transitional and discontinuous changes (levels III and IV).

Dimension of planning	*Level 1*	*Level 2*	*Level 3*	*Level 4*
Object of change (*what changes?*)	components of systems	structure of systems	regime of systems	external conditions of systems
Nature of change (*how does it change?*)	incremental	stable	transitional	discontinuous
e.g. What changes will LRT bring to Granada's context?				
Lvl. 1	Plans claim that the LRT will extend the public transport coverage (a simple physical dimension of transport systems). As a consequence of this increase in coverage, public transport demand is also expected to rise.			
Lvl. 2	LRT implementation generates new components into the previous transport systems (e.g. new stations, transfer nodes, etc.); these new components and structures are also intended to "create order out of chaos", concerning the multiple transport services operating in Granada (i.e. urban and inter-urban public buses), as well as reinforcing the functionalities and complementarities of those services (e.g. the metropolitan dimension of metropolitan transport systems).			
Lvl. 3	LRT will induce new mobility behaviours in public transport users. At the same time, the new travel dynamics induced by LRT will transform the corridor functionality, which will create pressures and interests in developing spaces with new roles, which, again, will generate additional travel needs and, therefore, new infrastructure demands.			
Lvl. 4	LRT has been an opportunity for channelling external investments in Granada (i.e. regional and European funds), which have been dependent on the economic context over the last two decades (the property boom and the economic downturn), and external political decisions.			

Table 1 - Uncertainties from layer 1: context.

Uncertainties within the planning environment are linked to barriers on knowledge exchange, regarding planning actors and their modes of interaction (see Table 2). Firstly, uncertainties perceived in planning actors, as knowledge-sharers and knowledge-holders, have been connected to their organisational structure (Boelens, 2011; Gifford, 1994; Koppenjan et al., 2011; Marsden et al., 2012). Increasing levels of uncertainty are depicted as problems of fragmentation and coordination, moving from “top-down” (i.e. vertical, centralized, organization-based, institutionalized) (level I and level II) to “bottom-up” structures (i.e. horizontal, spontaneous, agent-based, networked, actor-relational) (level III); at the level IV extreme, the strong influence of independent actors, such as coalitions, lobbies or political champions, is also acknowledged (Dimitriou et al., 2013; Salet et al., 2013). Modes of interaction involve how exchange of knowledge occurs between actors in the planning environment. Uncertainties have been related to the quality of information formats, and transparency of knowledge exchange (Boelens, 2011; Grant-Muller et al., 2001; Isaksson et al., 2009; Khan, 1989; Koppenjan et al., 2011; Marsden et al., 2012; Tapio, 1996). In theory, while lack of information on level I and II comes from the assumption that well-defined information requirements have been previously set (format, procedures, standards…), higher levels of uncertainty are generated in the overwhelming amount and diversity of information managed within collaborative environments, often full of contradictions, misinterpretations, gaps and redundancies (level III), or in the lack of transparency or traceability of knowledge, mostly produced in informal interactions between actors (level IV).

Dimension of planning	Level 1	Level 2	Level 3	Level 4
Planning actors (who interacts?)	institutions	organisations	agents (sectors)	individuals
Modes of interaction (how do actors interact?)	procedural	normative	collaborative	informal
e.g. in which arenas have been the LRT discussed?				
Lvl. 1	LRT-system solutions (routes, designs, vehicles, etc.) were developed and promoted by regional government for different Andalusian cities. Communications involved specific features of the systems and in-detail issues, which should be integrated in local planning. They were implemented through formal technical documents (as part of the LRT-survey and project documents).			
Lvl. 2	While local governments are expected to commit to the project previsions ("top-down" decisions), problems of coordination arise concerning land-use, other services, and infrastructures. In response, the regional government formally requested information from local departments and organizations concerning a close set of issues (e.g. about new developments, transport demand).			
Lvl. 3	Local actors promoted modifications to the LRT route ("bottom-up" decisions), according to different conflicts of interest, preferences, etc. Those modifications are sustained in different types of communications, meetings, round tables, claims, etc.			
Lvl. 4	The option of building the central part of the LRT route underground was finally taken as a consequence of pressure from local officials and political parties, disregarding other options recommended by local experts and supported by retailer associations and transport operators.			

Table 2 - Uncertainties from layer 1: Environment.

4.2 UNCERTAINTIES IN THE PLANNING PROCESS

Uncertainties within the planning process encompass two features: concepts (planning motivations, premises, and problems) and artefacts (knowledge constructs as mechanisms validating or supporting concepts) (see Section 3).

In reference to planning concepts (see Table 3), a first dimension of interest is their value as future hypothesis. A future hypothesis may be past-dependant, relying in few variations over known trends, theories, probabilities or policy pathways (levels I and II) (e.g. the "predict-and-provide" approach); or it may divorce from past and show higher tolerance towards alternative hypothesis (level III), even raising speculations (e.g. technological "hype") (level IV) (Lyons and Davidson, 2016). A second dimension of concepts is their contextualisation, which concerns the "policy transfer" of planning solutions (Marsden et al., 2012) and their "permeability" regarding context influences (Dimitriou et al., 2013; Gifford, 1994; Marchau et al., 2010; Tapio, 1996). In this sense, uncertainties can be related to the definition of universal planning concepts (in isolation from the context) (level I); to local exogenous factors that influence the use of certain concepts (e.g. problems of applicability in concepts underlying some transport analysis) (Ma and Lo, 2015; Malone et al., 2001); or to concepts surrendering to local forces and singularities (e.g. critical components, opportunities, barriers, vulnerabilities, events, community images…) (levels III and IV). In third place, the definition of concepts may rely on accurate expressions (e.g. quantitative previsions of demand/capacity, accurate prescriptions, etc.) (level I) or accommodate the higher variability and fuzziness of natural language and statistical science (e.g. time-travel intervals, "higher/lower" accessibility, spatial arrangements, road levels of service, scores…) (Kikuchi and Pursula, 1998; Lambert et al., 2013) (level II). In addition, concepts can take the form of parameters (level I) and closed categorical properties (level II), or be based on loose structures concepts lacking a single underlying categorisation, but retaining some meaning or purpose related to the issue (levels III and IV).

Dimension of planning	Level 1	Level 2	Level 3	Level 4
Future hypothesis (how are concepts preconceived?)	as predictions	as assumptions	as possibilities	as speculations
Concept contextualisation (where do concepts come from?)	global	local-influenced	local-oriented	singular
Concept definition (how are concepts expressed?)	as parameters	as categories	as meanings	as thoughts
e.g. how is the LRT concept introduced in Andalusia and Granada transport planning?				
Lvl. 1	LRT solution relies on the hypothesis of increasing travel demands, supported by forecasts in the metropolitan area of Granada. These needs are based, at the same time, on universal (i.e. formal/mathematical) definitions of service demand and capacity. Along the same line, parametric premises are proposed in the LRT project, such as reducing car travel by over 10%.			
Lvl. 2	LRT is a solution for satisfying a range of projected mobility demands and preferences, associated with promoting public transport use. Concepts of capacity must be reconfigured to address more complex spatial and social factors in the context, such as car dependency and modal preferences. Categorical qualities of multi-modality (modal share) and PT competitiveness (concerning travel times, priorities, use of street section etc.) are associated with LRT.			
Lvl. 3	LRT is a critical factor for future transformations towards more sustainable mobility patterns. Such transformations involve multiple local issues and options, such as reducing traffic impact in the city, encouraging city center regeneration, etc. Moreover, the model of "sustainable urban mobility" is ill-defined in plans, and there is a convergence of many conflictive meanings (local visions).			
Lvl. 4	LRT is associated with the idea of a modern transport system, both as a solution to mobility demands and as a symbol of city prosperity in the future. At the same time, despite the external origin of the LRT, it has been deliberately given the nostalgic appeal of the old electric tramway system, which worked in Granada until 1975.			

Table 3 - Uncertainties from layer 2: Concepts.

Concerning planning artefacts (see Table 4), their knowledge requirements are directly connected to the levels of uncertainty. Thus, artefacts operating under lower levels would require conditions close to perfect information to perform (level I), or, at least, in which information can be externally validated (by technical expertise, institutional support, etc.) (level II). On the other hand, artefacts under level III assume some degree of fundamental ignorance, caused by the impossibility of gathering sufficient evidence to support planning concepts by “natural” laws or probabilities (Kikuchi and Pursula, 1998; Kronprasert and Talvitie, 2015). Other important dimension is the artefacts structure. Structures at level I are analogical, that is, they resemble physical and economic laws (level I) (e.g. gravity models and impedances, cost-demand laws, laws of human behaviour, etc.) (Batty et al., 2012; Khan, 1989); higher uncertainties admit more flexible and diverse structures, either systematic/structurally closed (lelvel II) or holistic (level III), allowing a greater variety of qualitative techniques (e.g. stakeholder panels and workshops, narratives and intuitive scenario-planning techniques, open indicators, direct transfer of planning ideas…) (Schippl and Fleisher, 2012). Level IV artefacts, despite their lack of proper deliberative structures, can still be powerful instruments to change public opinion (Richardson, 2001). Finally, uncertainty has been connected with debates about prevalent rationalities in planning approaches and methodologies (Martens and van Weelden, 2014; Richardson, 2001; Tapio, 1996). Situations of uncertainty are inherent to the particular knowledge mechanisms or grounds which allow artefacts to validate concepts: strong cause-effect explanatory logics (level I); judgements resting on a coherent structure of thinking (e.g. experts and expert systems, etc.) (level II) (Berrittella et al., 2008; Khan, 1989; Rayner, 2004); heuristics and bias mechanisms for supporting arguments (e.g. case similarity, lessons of success and failure, common sense, rules of thumb, etc.) (level III); or even non-rational use of artefacts built in rhetoric, legitimacy, fairness, public trust or fear, etc. (level IV) (Isaksson et al., 2009; Martens and van Weelden, 2014). Higher uncertainty levels relax the conditions of expertise required (Kronprasert and Talvitie, 2015), and also lead to more sophisticated uses of artefacts (e.g. instruments for contestation, narratives, etc.).

Dimension of planning	Level 1	Level 2	Level 3	Level 4
Knowledge requirements (what do artefacts need?)	complete series of information	comprehensive information	incomplete/contested information	no information
Artefacts structure (how are artefacts built?)	analogical	systematic	systemic	unstructured
Rationalities (how are artefacts used?)	to validate cause-effect logic	to generate judgements	to support arguments	to support discourses
e.g. how has the LRT concept been supported?				
Lvl. 1	LRT implementation has been supported by transport demand models, whose generations/attractors logic relies on gravity models (analogy with physical model). These transport-demand models link causal factors with the positive effects of LRT (increasing PT use, reducing traffic, etc.). They also rely on a predefined set of variables and data.			
Lvl. 2	Alternative LRT routes have been compared in various project stages using MCA, concerning not only functional features (demand), but also encompassing economic, urban integration and environmental objectives. These methods admitted the use of multiple indicators, and qualitative and quantitative attributes (especially from the report on the environmental impacts of the LRT project) for assisting final decisions. In parallel, multidisciplinary technical boards were asked to draw up expert judgements on some key decisions, such as building part of the LRT route underground, considering similar criteria.			
Lvl. 3	Arguments on the systemic evolution of Granada towards a metropolitan area have supported the idea of a metropolitan rail system, addressing the future growth of suburbs and the loss of population and activities in the city center. However, the strength of these assumptions (only relying on observed demographic trends) has been weakened by the prevailing importance of the city center.			
Lvl. 4	The LRT solution has been justified with discourses on improving citizens' quality of life, with no information support or structured argument.			

Table 4 - Uncertainties from layer 2: artefacts.

4.3 UNCERTAINTIES IN THE PLANNING PRODUCTS

Planning products ("plans", to abbreviate) (layer 3) include two planning features: outcomes (planning options) and outputs (planning effects) (see Section 3).

Uncertainties from planning outcomes are observed in the content of plans, as well as in how plans are expected to accommodate future change (adaptations) (see Table 5). Firstly, uncertainties in contents obey to how planners foreclose the list of problems and alternatives before moving to decision-making. On level I, all decision-related aspects are expected to be foreclosed, leaving policy-makers with a complete set of descriptions, statements and designs of future systems (planning as blueprints). On level II, only the list of planning problems is foreclosed, and contents consist on all-encompassing guidelines and statements still anchored in a complete end-state image of the future (i.e. statutory planning, comprehensive planning or master planning) (Bunker and Searle, 2007; Gifford, 1994; Khan, 1989). In levels III and IV, policy-makers confront ill-defined problems, either with an underlying idea or motivation toward their resolution (e.g. an urban or transport program) (level III) or without it (i.e. "wicked problems") (Dimitriou et al., 2013; Batty et al., 2012; Martens and van Weelden, 2014). Secondly, planning adaptations involve how uncertainties are handled by policy-makers through a balance of adaptability, flexibility and robustness in planned systems (Bertolini, 2007; Dimitriou et al., 2013; Ramjerdi and Fearnley, 2014; Salet et al., 2013). In the lower levels (I and II), this balance lean towards protecting outcomes from external changes (i.e. "closing systemperspective"), trading off robustness against overall flexibility. On the contrary, flexibilities are prioritized against robustness in most aspects of decision-making (e.g. systems scale, definition of components, reversibility, etc.) on the higher levels (III and IV), to mitigate their negative consequences and amplify the positive consequences (Herder et al., 2011; Van De Riet et al., 2008). Level IV would only leave room for improving resources and learning capacities of actors following their actions (e.g. "policy experiments").

Dimension of planning	Level 1	Level 2	Level 3	Level 4
Contents (what kind of options exist?)	blueprints	guidelines	programs	actions
Adaptations (how options accommodate changes?)	isolating from context	increasing robustness/resilience	increasing flexibility	increasing adaptability
e.g. which options were considered for implementing the LRT in Granada?				
Lvl. 1	Some features of line 1 of the LRT, such as itinerary and stations near city center, were fixed at great detail from the early planning phases (as evidenced in regional infrastructure plans and spatial plans). Such planning decisions were also isolated from later events (e.g. the substitution of the line 2 project with a high-capacity bus line), building trust amongst land developers, property owners, retailers, etc.			
Lvl. 2	Regional infrastructure and spatial plans created a set of guidelines for fostering the multi-modality of LRT with other transport modes in Andalusian cities. Own right-of-way systems (including LRT and tramway) were part of a strategy of protecting adaptations of future public-transport systems against traffic problems.			
Lvl. 3	Among the final LRT project definitions, a set of general measures and orientations for re-structuring traffic flows and urban-bus network was proposed. These measures took advantage of the potential flexibility of the urban bus system, operated by a city company (if compared with the rigid concessional system of metropolitan buses).			
Lvl. 4	While the LRT project has not yet produced great changes, local master and transport plans have learnt from previous actions implemented in Granada at the beginning of the 1990s, on the whole pedestrianisation projects and car-access restrictions. These individual actions have led to a complete overhaul of mobility patterns in the historic city-centre, including the reduction of car traffic and the improvement of urban bus system reliability.			

Table 5 - Uncertainties from layer 3: outcomes.

In relation to planning outputs (see Table 6), uncertainties are associated to planning expectations (success conditions) and where are they materialized (implementations). Uncertainties on implementations are intrinsic to the aspects of decision focused by plans (Koppenjan et al., 2011; Marsden et al., 2014): control over material outputs (e.g. planning of daily transport operations) (level I); directions on decisions to be made by organizations and actors (level II); indirect influence over the way actors make decisions (level III); or, in broad terms, recommendations on general issues that should be engaged (level IV). Uncertainties over success conditions of plans are linked to the nature and range of those expectations, or, in other words, how unexpected effects are managed (Schippl and Fleischer, 2012). At level I uncertainty, success conditions assume that changes observed in reality must fit all previsions of the plan as close as possible (e.g. definition of targets). At level II, success conditions are set in terms of progress and achievement towards more general planning goals; decisions are governed by preferences towards intended effects, while unintended effects are managed as risks. At level III, success conditions relate to the capacity of plans for creating agreement frameworks, in such a way that potential surprises related to policy-maker actions can be overcome (Boelens, 2011; Koppenjan et al., 2011). At level IV, the success of plans is limited to basic acknowledgement of issues, which can set the difference between being prepared or not to address the most unexpected consequences of decisions.

Dimension of planning	Level 1	Level 2	Level 3	Level 4
Success conditions (what expectations exist?)	targets	achievements	agreements	acknowledgements
Implementations (where are expectations placed?)	applications	directions	influences	discussions/ references
e.g. what transformations are plans expected to make in Granada following the LRT implementation?				
Lvl. 1	Infrastructure plans incorporate monitoring indicators related to number of public-transport stops per inhabitant; in addition, they fix quantitative targets related to LRT average frequency (8 minutes).			
Lvl. 2	Multi-modality guidelines are promoted in regional infrastructure-plans, which create a directive framework for city interventions in transport systems, such as park-and-rides, multi-modal facilities, inter-service coordination, etc.			
Lvl. 3	The LRT project is expected to influence the definition of corridors and services-sharing conditions for the next concession of metropolitan bus services. In this sense, the LRT has created a background for setting agreement between urban and metropolitan transport operators.			
Lvl. 4	Regional-infrastructure plans include broad references to a "sustainable urban mobility model", which, without more in-detail specifications, aims to raise concern and stir up debate before future environmental challenges (e.g. peak-oil, climate change, etc.).			

Table 6 - Uncertainties from layer 3: outputs.

5 CONCLUSIONS

The recognition of uncertainties in transport planning has been traditionally used as a provisional closure for technical questions, for avoiding conflicting topics or, on the other hand, as a call for straight action (Marsden et al., 2012; Rayner, 2004; Salet et al., 2013). Conversely, this research argues that many useful interrogatives can be opened after uncertainty has been acknowledged. But, how can uncertainties faced by transport planners and policy-makers be framed and compared? To address this, a heuristic framework was developed to explore situations of uncertainty at four distinct levels (reducible, shallow, deep and radical), concerning three layers of planning: planning reality, planning process and planning products. Some concluding remarks are made:

Framing uncertainties. Compared with theoretical insights to uncertainty, both conceptual (Brown, 2004; Hansson, 1996) and mathematical (Kikuchi and Pursula, 1998; Kronprasert and Talvitie, 2015), a rather practical and intuitive approach was used. This heuristic character has been proven useful for processing and comparing references from a wide and disperse range of research fields within transport planning (i.e. decision-making, modelling, scenario planning, transport policies and governance, etc.). Furthermore, the understanding of uncertainty across methodological boundaries and planning paradigms is considered central here (Khisty and Arslan, 2005; Martens and van Weelden, 2014; Tapio, 1996). This framework offers an excellent platform for (re)formulating further research questions on how specific situations of uncertainty are perceived and handled by actors involved in transport planning.

The communicative approach. Positivistic approaches seldom explain uncertainties beyond levels I or II (reducible or shallow), ignoring the more extreme and complex situations described by transport-planning literature (i.e. “black swans”, “wicked problems”, adaptive or flexible planning approaches…) (Lyons, 2016). While the “uncertainty paradox” (see Section 1) prevents any effort from actually “knowing uncertainty”, it leaves space for creating a common language for understanding its implications in planning. This research contributes to making explicit differences between grounds and values in planning actors, and to creating flexible frameworks for communicating uncertainties within a transactional planning environment, that is, where conditions of “truth”, expertise and knowledge validity are constantly bargained (Abbott, 2005).

Lastly, this study was motivated by the challenge that emerged during the search for new scopes on scenario building in transport policy. Such insights demand new theoretical and practical foundations for understanding the role of scenario exercises in building meaningful futures (i.e. plausible, consistent, desired, challenging, etc.), while managing the uncertainty deriving from its conceptualization, expectations and use in practice. In addition, a framework for exploring uncertainties may enable new branches of research, focused on empirical and experiential exercises (in real planning conditions or controlled experiments) about how actors relate specific layers, features and dimensions of transport planning with uncertainty and how comfortable they feel under different levels of uncertainty. In this way, more suitable context-sensitive planning tools can be offered in the future.

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ID 1534 | SUSTAINABLE MOBILITY AT FEUP

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1 INTRODUCTION

Sustainability is a concept that has become entwined with planning of the future, since it means the capacity to endure. It is a balance between the use of resources and productivity, allowing the process to continue uninterrupted. The organizing principle of this concept is called Sustainable Development and its definition was firstly conceived by the World Commission on Environment and Development (WCED), on March 20th, 1987. WCED defined Sustainable Development as the "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Sustainable Development stands on three principal pillars: environment, society and economy, where the latest two are restricted by environmental limits (UCLG, 2008).

The transport sector is responsible for 23% of the total GHG emissions, with about three quarters coming from road traffic (Ribeiro, et al., 2007). In addition to this problem, transportation has also other negative impacts on sustainability such as noise pollution, devaluation of public spaces, public health and safety, development and urban sprawl, etc., all of which involve a high cost for societies (Fenton, 2017). Given this situation, the concept of sustainable mobility arises, which can be defined as the one that, responding to people's travel needs, is carried out through sustainable modes of transportation (Portuguese Environmental Agency, 2010).

In order to properly formulate a plan for sustainable mobility, studies are required to assess the situation and the suitable course of action. Unfortunately, traditional data collection implies long periods of time and associated heavy costs. In Portugal, many mobility decisions are only supported by the Census, which only provides information on work/school related trips. New solutions must arise to meet the needs for supporting data and the requirements of feasible practical applications.

Technology is advancing at an alarming speed, providing an enormous quantity of data in a rate that cannot be processed. It's the age of Big Data. From small quantities of information taken directly from willing participants to huge amounts of complex and unorganized data retrieved automatically in digital processes, the collection of information is rapidly migrating from straightforward and direct methods to an undetected part of everyone's life and becoming an increasingly prosperous market.

Striving for a sustainable urban management requires solid foundation on reliable data collection to construct achievable plans for the future. Mobility, being a core subject in urban systems, entails extensive data to properly characterize its patterns and to evaluate its impact in a city's sustainability.

Therefore, Big Data shows potential in becoming an important tool in the decision making process of improving mobility systems. It is in this sense that falls the present study, in which the main objective was to evaluate the sustainability of mobility in the Faculty of Engineering of the University of Porto (FEUP) using carbon footprint as the main tool and operationalizing this concept for awareness campaigns on the sustainability of individual mobility intended for the general public and to compare traditional and modern data collection to validate its transition. The secondary objectives consisted on:

- Studying the different methods of mobility data collection;
- Reviewing the phenomenon of Big Data and its applications in mobility;
- Analysing relations between sustainability and mobility;
- Assessing the potential for a more sustainable mobility of FEUP's community.

2 STATE OF THE ART

2.1 CARBON FOOTPRINT

A carbon footprint, is a Life Cycle Assessment (LCA) limited to the analysis of emissions that have an effect on climate change, including carbon dioxide, methane, etc. This limitation makes this method easier to apply on integrated systems, such as an entire house or automobile, facilitating its application on mobility sustainability studies (Wachter, 2008). It allows the calculation of global warming gases emissions from transports and, consequently, their energetic efficiency (Davies, Jefferson, Longhurst, & Marquez, 2000).

The carbon footprint measures CO2 emissions mainly associated with fossil fuel use. In order to calculate this footprint, it is necessary to be aware of the Global Warming Potential (GWP) of each gas to be able to add the emissions of different gases and reach a single result on the overall impact on global warming of an activity, often called “CO2 equivalent emissions” (Myhre, et al., 2013). The usual GWP is estimated for a time period of 100 years. Carbon Dioxide is the reference gas, hence the name of the method, and it has a GWP of 1. The latest IPCC Assessment GWP values for the three most important gases (Carbon Dioxide, Methane and Nitrous Oxide) are shown in Table 1. Even though the emitted Methane lasts about a decade on average, which is much less that the Carbon Dioxide that lasts for thousands of years, it can absorb a lot more energy. This effect plus the indirect influence on being a precursor to ozone (also a greenhouse gas) is quantified in the GWP.

The complete list can be reviewed in the original report, however only these three gases were considered in the carbon footprint calculation of this study. The inclusion of climate-carbon feedbacks means it is considered the response of the gas to emissions of the indicated non-CO2 gases (Myhre, et al., 2013).

	Lifetime (years)	Climate-Carbon feedbacks	GWP_{20}	GWP_{100}
Carbon dioxide (CO_2)	-	-	1	1
Methane (CH_4)	12.4	Yes	86	34
		No	84	28
Nitrous oxide (N_2O)	121.0	Yes	268	298
		No	264	265

Table 1 – Main GWP with and without inclusion of climate–carbon feedbacks
(Adapted from Table 8.7, IPCC Fifth Assessment Report, 2013).

By quantifying all emissions from each gas, it is possible to apply the GWP and translate to CO2 equivalent, all the process being in units of mass, not volume, as shown in the formula below (Gillenwater, 2015).

$$Mass\ of\ CO2e = \Sigma(mass\ of\ gas) \times (GWP) \quad (1)$$

The emissions of each gas depend on the activity, being its specific values called emission factors. The default emission factors are averages based on the most extensive data sets available.

2.2 MOBILITY DATA COLLECTION AND PROCESSING

To implement measures to improve mobility it is necessary to collect information about mobility patterns and population’s behaviour, usually following established indicators. The most traditional method is directly through surveys and interviews, more recently including travel diaries. While surveys usually gather general information about a person’s mobility, a travel diary is a collection of real travel information throughout a period of time, usually a week. These methods can consider individual data or household data and generally evaluate the main indicators of mobility: mode of transportation, frequency, time and distance (by considering the destination and purpose of the trip).

With the evolution of new technology, like the smartphones and other location detection devices, the last decade has been the stage of the development of two different fields determined to understand how individuals move in space and time: the traditional field of mobility researchers, who have been working in this field for decades, and the new comers from a variety of disciplines, especially computer scientists in

particular due to the crescent source of digital information. They both use different approaches, different methodologies and different datasets. This presents an opportunity for the evolution of mobility data collection and processing by working together for a common goal (Chen, Ma, Susilo, Liu, & Wang, 2016).

From paper, travel diaries are reaching the digital world, which are less prone for errors. Many people around the world share their travel experiences every day, but this informal information goes unprocessed. The digital information differs and separates from the analogical one for its quality and fidelity, its independence of nature of the data, the flexibility for the transport, compression, cipher, communication and manipulation of the basic sources and, especially in the data space and economic demands for the massive store of information (Hoyuela, 2002).

Nowadays, the Internet of Things connects us more than ever, yet the Big Data that constantly produces presents many challenges that need to be tamed so we can reap the benefits of connectivity (Li-MinnAng & PhooiSeng, 2016). The biggest problem with Big Data (massive, less structured, heterogeneous, unwieldy data up to, including and beyond the petabyte range) is that it is incomprehensible to humans at scale. Machines in the cloud are simply tools and they cannot understand the information they process as humans do. They can amplify noise or errors in the data just as easily as amplify signal or provide insight, consequently a human input is always necessary. And yet Big Data keeps getting bigger and unprocessed in a useful manner (Morrison, 2015).

The Big Challenge of Big Data is turning it from technology oriented to user oriented, because in the end what truly proves its value is its usefulness. The success of an information system is to transform a data set into comprehensible information (Hoyuela, 2002).

Most online social networks nowadays allow the identification of the location of the user. Facebook and Twitter, for example, exploit the GPS readings of user's phones to tag posts, photos and videos with geographical coordinates. This generates enormous amounts of data, which can be useful for the study of mobility behaviours. Comito, Falcone and Talia (2016) attempted to analyse the time and geo-referenced information associated with online posts to detect typical trajectories and discover common patterns, using the tweets in the urban area of London as a case study. By assuming people tend to follow the same routes daily, like going to work using the same roads, they had enough information to model behaviours and identify top interesting locations and travel sequences (Comito, Falcone, & Talia, 2016).

Another more direct way of collecting mobility data is through smartphone specialized applications. Mobility apps have been increasing as alternatives to traditional travel diaries. Nonetheless, most still present both characteristics. An application called "MoveSmarter" used automatic trip detection with a web-based prompted recall survey. This app is particularly unique due to its sample size (about 600 respondents) and representativeness of the sample for the Dutch population. After an in-depth comparison between automatic detections and reported trips, most trips were detected correctly without strong biases in trip length or travel time distributions. However, 20-25% of the trips could not be detected due to a problem with inaccuracy when activity times at the trip destination are small, creating lack of distinction between successive trips. Also, most missing trips were caused by inappropriate use of the app or empty batteries, a common problem in mobility applications (Geurs, Thomas, Bijlsma, & Douhou, 2015), unlike "SmartMo". The app "SmartMo" was designed in a multi-stage iterative development process and included a traditional travel survey modified to match mobile devices that could be completed any time the user wished. Trip distance and duration was automatically measured and calculated to prevent inaccuracies due to individual and subjective assessments. Additional map matching algorithms and filter criteria for identifying and eliminating outliers are implemented externally on a server, which in return made the app less demanding from the energetic point of view, since all the calculations were not run by the smartphone (Berger & Platzer, 2015).

Other study by Montini et al. (2015) used a dedicated GPS device to validate the results of the mobility app and to compare the best form of data collection. They concluded that even though meaningful diaries can be extracted from both data sources, if the high resolution data is needed, a dedicated GPS device is more efficient, since they do not have battery issues, which means more consistent data with a constant quality (Montini, Prost, Schrammel, & Rieser-Schüssler, 2015).

As proven, GPS-based data collection has gained popularity in the recent years, due to its ability to record accurate time and geographic information and easiness to add extra request for information through integrated surveys. While such methods have many advantages over traditional surveys, they suffer from

other limitations such as the dependency of the constant use of the smartphone and the unavailability of GPS signals in certain areas (Zhao, Ghorpade, & Pereira, 2015). They face the challenges of mode identification and stop detection with overlapping bus routes, distinguishing waits and transfers from non-travel related activities, and tracking underground travel in a Metro network, so in many situations they use small questionnaires as a support (Carrel, Lau, Mishalani, Sengupta, & Walker, 2015).

A recent study by Susilo et al. (2017) used different methods to measure travel satisfaction, which included two types of smartphone applications (a satellite navigation app and a game app), an on-line survey, a paper-based semi-structured questionnaire and a focus group. This resulted in 5275 valid responses from eight European cities and five FIA (Federation Internationale de l'Automobile) national networks. Although this study wasn't focused on mobility data collection, it allowed to conclude that every method has complex advantages and disadvantages when it comes to provide data on travel satisfaction to policy makers (Susilo, et al., 2017).

In this study, both a traditional survey with incorporated travel diary and a mobility app called "SenseMyFEUP" will be analysed, comparing the two methods and evaluating the sustainability of the joined results.

3 METHODOLOGY

The process applied to this study required three parts with subdivisions to reach the desired results and conclusions: the supporting study of the state of art and preparation of the next phase; the dissemination and data collection from the mobility survey and the app "SenseMyFEUP"; as well as the final data processing and inherent analysis.

The case of this study for both survey and mobile application is the Faculty of Engineering of the University of Porto. The University of Porto is the second largest Portuguese university by number of enrolled students, after the University of Lisbon, and has increased its renown and reputation over the years, while at the same time striving to increase its sustainability. In 2015, it harboured 30 066 students, 1 542 staff members and 2 286 teachers and researchers spread among the 3 main campuses and 14 faculties (Universidade do Porto, 2015). From these numbers, the Faculty of Engineering of the University of Porto includes 6 839 students, 340 staff members, 536 teachers and 315 researchers (FEUP, 2015).

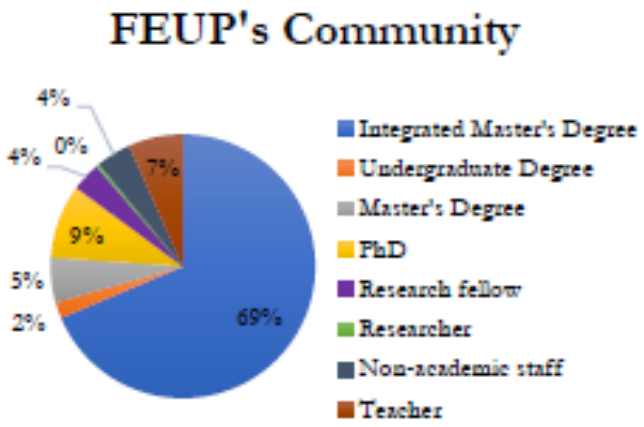

Figure 1 – Distribution of FEUP's community.

Throughout the years, several studies have been carried out to evaluate sustainability and mobility patterns, especially since the creation of FEUP's Commissariat for Sustainability in 2015.

3.1 PREPARATION PHASE

The study of the art phase was a common base to both the survey and application. For the survey, the collection of both typical and traditional questions was needed in order to compare with the results from the app and expand further to evaluate the ability of this method to gather reliable information. For the smartphone application, the preparation phase required more effort due to the partnership with a team from the telecommunications lab, which was developing the Future Cities Project where the SenseMyFEUP app was included. This cooperation allowed the improvement and the moulding of an existing technology (SenseMyFEUP used the same code of an existing app from the same lab,

SenseMyCity) based on mobility and environment indicator's needs. It was necessary to operationalize the carbon footprint so it could become an integrated tool of both sustainability and dissemination.

To assess FEUP's sustainability regarding mobility, it was required data related to the society involved, economy and environment. The society parameter was satisfied by the interaction with the community through the survey and the SenseMyFEUP app, the resulting feedback and conclusions. Regarding economy, the balance of household income/mobility costs was made through the survey, but not with the app, even though in early discussions it was considered the inclusion of that measurement, however that would require a better mode of transportation detection system and some level of intrusion for the user to obtain sufficiently accurate results.

On the subject of environment, which we are focusing on, the elected tool to measure was the carbon footprint. The formula for its calculation changed according to the mode of transportation selected for each trip. To calculate the emissions of CO2 equivalent of the car, motorcycle and bus we used the values regarding Portugal provided by the EMEP/EEA air pollutant emission inventory guidebook from 2013 (Ntziachristos & Samaras, 2013). The substances considered for the calculation were CH4, CO2 and N2O. CO, NOx, PM and CO2 from lubricants were rejected for having little or too indirect influence in the overall carbon footprint (Intergovernmental Panel on Climate Change , 2013).

According to the IPCC Fifth Assessment Report of 2013, releasing 1 kg of methane (CH4) into the atmosphere is equivalent to releasing 34 kg of CO2 and if instead of methane it was nitrous oxide (N2O) the equivalent would be 298 kg of CO2 in the course of 100 years. The resulting CO2e value was calculated with the following formula:

$$CO2e=[CO2+(CH4\times34)+(N2O\times298)]\times Fuel\ Density \quad (2)$$

Considering the bulk emissions for Portugal provided by the EMEP/EEA air pollutant emission inventory guidebook from 2013, updated July 2014, in the 1.A.3.b Road Transport Section, the resulting CO2e (g/l fuel) values were calculated for cars, motorcycles and buses.

In order to use the required emission factors, it was necessary to know the fuel consumption of each transport to transform from CO2e in g/l of fuel to g/passenger.km. While it is easier to acquire that information about personal means of transportation, like cars and motorcycles, public transportation proves itself more difficult to provide it. Considering that in Porto most of the transportation via bus is controlled by "Sociedade de Transportes Colectivos do Porto" (STCP) whose fleet is mainly fuelled by compressed natural gas, we used their Sustainable Development Report to obtain the data on their CO2 emissions. In 2015, each vehicle emitted 1.385 kg of CO2 for every kilometre covered. The same procedure was applied with the Porto's Metro and train (Comboios de Portugal – CP) information, which revealed that, in 2014, they released 41.674 and 27.03 gCO2e/passenger.km respectively (CP Comboios de Portugal, 2014).

The results of the emissions from each vehicle need to be divided by the number of passengers to provide a more accurate value of the individual carbon footprint. The occupancy rate of passenger cars in Western European countries, like Portugal, is around 1.54 passengers per vehicle (European Environmental Agency, 2015), however in Greater Porto that rate is lower, consisting in 1.4 passengers per vehicle (Instituto Nacional de Estatística, 2002).

In regard to buses, STCP states that in 2015 the occupancy rate was 13.4% (STCP Sociedade de Transportes Colectivos do Porto, 2015), which, considering that the average capacity for a bus is 90.9 people (STCP Sociedade de Transportes Colectivos do Porto, 2016), means that it usually carries 12.18 passengers per vehicle.

For the metro and the train, the information on the occupancy rates were not required, because the provided data from the reports already took that detail into consideration and further calculations weren't needed. The final emission factors can be consulted on Table 2.

	Final emission factors (gCO_2e/passenger.km)
Car	**Gasoline:** $2420.20 \times \frac{\text{fuel consumption (l/100km)}/_{100}}{1.4}$ **Diesel:** $2661.27 \times \frac{\text{fuel consumption (l/100km)}/_{100}}{1.4}$ **LNG:** $1237.50 \times \frac{\text{fuel consumption (l/100km)}/_{100}}{1.4}$
Motorcycle	**Gasoline:** $2528.14 \times \text{fuel consumption (l/100km)}/_{100}$
Bus	**CNG:** 88.939 gCO_2e/passenger.km
Metro	**Electricity:** 41.674 gCO_2e/passenger.km
Train	**Electricity and Diesel:** 27.03 gCO_2e/passenger.km
On foot or bicycle	0 gCO_2e/km (increase of CO_2 production not considered)
Other means	Not calculated

Table 2 – Carbon footprint estimation

To calculate the individual carbon footprint through the survey and the app it is required information about the distance travelled with each trip and, in case of the car and motorcycle, the specific fuel consumption, so it is possible to apply the emission factor.

It is important to point out that even though vehicles that run on diesel create more CO2 per litre, they usually can achieve higher fuel economy than similar vehicles that use gasoline, which generally offsets the higher carbon content of diesel fuel

3.2 DATA COLLECTION PHASE

3.2.1 MOBILITY SURVEY

This online survey was a combination of traditional questions to characterize the sample (occupation, age, gender, household information, income) and evaluate their general mobility habits concerning their trips to and from FEUP (distance, frequency, duration, mode of transportation) and a travel diary to give a consistent one-week detailed information that can be compared with the general answers that were given. The evaluation of sustainability will be based on the sample characteristics, their average travelling costs and their carbon footprint, which will be calculated using the data about mode of transportation, distance and fuel consumption in case of using a personal vehicle. With these results, the objective will be to assess the sustainability of FEUP's mobility and the potential of improvement.

Due to an initiative in progress by FEUP's Commissariat for Sustainability and the University of Porto called U-Bike, the mobility survey was sent to all University community with the addition of a question specifically about the susceptibility to the initiative, which promotes electric and conventional bicycles in Academic Communities.

In total, 340 people answered the survey, consisting of 4.1% of the total community, with several replies with suggestions and ideas about sustainability and mobility. Even though it is a low response rate to a normal Mobility Survey (the ideal being above 10%), it is high if we consider the usual rate for travel diaries, where it is not unusual having only 10 families in a city contributing to the travel diary.

3.2.2 SENSEMYFEUP APP

The mobile application called SenseMyFEUP was developed for Android Smartphones by a research team from FEUP's Institute of Telecommunications. For this purpose, they adapted another app of their creation, called SenseMyCity, which is part of the project Future Cities from the University of Porto. They both use crowdsensing to obtain data from the users, and, in SenseMyFEUP's case, it is more directed to retrieve

information about mobility's indicators (mean of transportation, duration and distance of a trip), using distance and chosen mode of transport to obtain the user's carbon footprint.

The data collection and the associated database was registered in the National Data Protection Commission. Each user is identified in the database by the hash used by Google Open ID and not even the database administrator could revert it, therefore being impossible to identify the emails of the participants. The users had access to their data through the app's website, but they were anonymous to everyone else. The raw anonymous data use individual id to be later processed in mass. All the data will be erased after 3 years.

To validate the mode detection algorithm that was still in progress, the users had to respond to a questionnaire each time the app sensed that they finished a trip, using GPS or other location sensor and detecting the variation of velocity between points. The interface of the app showed information about the user's mode of travel, carbon footprint and the comparison to FEUP's average, so the user could be aware of his or her own sustainability.

The SenseMyFEUP app was officially released to the public on March 29th and the dissemination consisted on the distribution of flyers and the exposition of posters throughout the faculty, considering that the target audience was all FEUP's community.

A Facebook page was created to help disseminate the project especially among the students. To raise interest, during the period of data collection (April 4th to April 29th), a FEUP's sweatshirt was sorted among the app's users each week and a smartphone in the end with the chances of winning accumulating with time since the installation and with each data contribution. Due to the impossibility of identifying the exact winner through his or her google email, the winner would be warned through an app notification.

In total, 239 people used the app, but only an average of 150 sent data consistently.

4 RESULTS AND DISCUSSION

4.1 SUSTAINABILITY

Sustainability stands on the pillars of society, economy and environment, but this study will focus on the environmental side, considering that the main tool was the carbon footprint. The key variables for its calculation were mean of transport and distance.

For the first variable, shown in Figure 2, the difference from the app and the survey results is based on the different sample of users, although they tend to become more alike during the same time the data was recorded. The car modal share, particularly the one assessed by the app, is similar to the value defined by the Census 2011 for work/school trips (62%) not only in Portugal but also in Porto, with the rest of the modal choices having a similar distribution, except the metro and bicycle, which are more frequently selected in this case study due to the proximity of metro stations and the larger number of short trips.

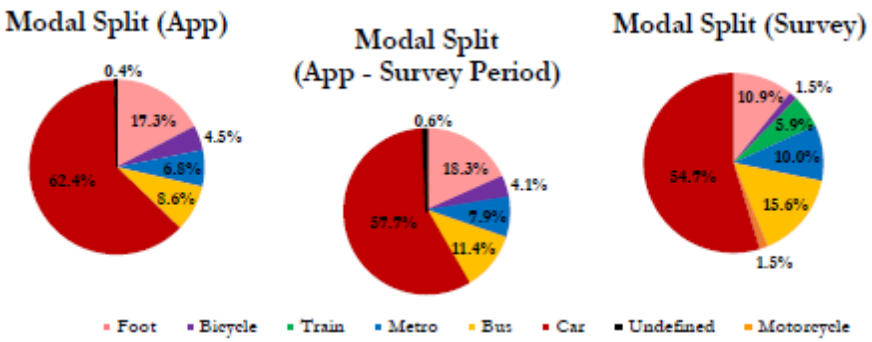

Figure 2 – Modal split according to the survey and the app.

For the second variable, distance, the app and the survey stray from each other in terms of results. While the average trip distance assessed from the survey was 13.6 km, the average shown in the app was 6.0 km, probably due to the difficulty of intermodal trip chaining, which included train travelling, to be discussed further ahead.

With the information of both methods, it was possible to calculate the final carbon footprint. Using the survey, it was concluded that the carbon footprint, on average, is 1.28 kgCO2e per capita in each trip made from and to FEUP, which is consistent to a prevalent car user community. With the app the value is relatively similar, reaching 1.42 kgCO2e/trip due to a higher share of car users.

Using the survey information on frequency of trips throughout an average week, the emissions were estimated around 13.80 kgCO2e individually, which translates into 551.99 kgCO2e during the 40 weeks of an academic year. In 2014, the average carbon footprint per capita in Portugal was 4.60 tCO2e, with 1.51 tCO2 being the share related to transportation emissions (World Energy Council, 2016). Even though our results constitute just a third of that value, we have to bear in mind that it was only considered trips from and to FEUP for 10 months. The contributions from other types of mobility will definitely increase, since that school/work travelling only represents 30% of a person's mobility in the area of Porto according to the Mobility Survey of Resident Population in 2000 (Instituto Nacional de Estatística, 2002). By considering the totality of mobility emissions of 1.84 tCO2e per person in a year (considering that 0.55 tCO2e is 30%), FEUP's community not only surpasses the national average, but also the world annual carbon emissions of 0.86 tCO2e per capita (World Energy Council, 2016).

There are a few options within FEUP's reach to help decrease their carbon footprint. Studying the survey's results with more care, we concluded that from the 186 people (55%) who chose car as a preferred mode of transportation, 25 reported that they used any kind of public transport or other alternative for their travelling to or from FEUP in at least one day in their travel diary, meaning there is a feasible substitute to the car. On another note, 24 people use the car or public transportation for travel distances shorter than 3km, which can be considered a valid walking distance and an extra of 27 people, if we consider 5km, which could be travelled by bicycle.

In total, 65 people (19.1% of the sample) were identified to possess mobility habits that could be easily changed and become more sustainable. If those people decided to use a bus from now on and those within 5 km started walking or cycling, for example, the average carbon footprint would become 1.21 kgCO2e/trip, a 6% decrease. Applying on the whole population, around 1535 people in FEUP (19.1%) are easily susceptible to improve the sustainability of their mobility which could be obtained and increased in number with more awareness campaigns, projects like car sharing, and even striving to improve public transportation around campus and in areas poorly serviced. On the other hand, if we consider SenseMyFEUP's results, 42% of car trips to FEUP and 34% of car trips from FEUP were less than 3km. If those trips were on foot, the total carbon footprint would decrease 22% from 1.42 kgCO2e/trip to 1.10 kgCO2e/trip.

Regarding the feedback of the U-Bike initiative, as cited previously, 8% claimed they would change their mobility habits to become more sustainable and 33% would consider it. This would mean that if all those who affirmed that they would start cycling keep their word, the average carbon footprint would decrease to 1.20 kgCO2e/trip. If we add those who would think about it, the difference would be even more considerable, dropping to 0.69 kgCO2e/trip, with a 46% decrease from the actual value.

The overall reduction of the carbon footprint can reach 48%, if we combine the population susceptible to change their mobility patterns and the answers for the U-Bike initiative.

4.2 COMPARISON BETWEEN METHODS

After analysing the sustainability results provided by both sources, the survey and the mobile application, it is time to review these methods and reach a conclusion on their effectiveness in obtaining useful results and their reach to the community.

The traditional method of studying mobility is simple and to the point, although it has its limitations. It matured through time into a standardized procedure based on surveys, which can take various forms, but

always presenting the same base questions to answer key points in mobility: mode of transportation, time, distance, frequency and purpose of the trip. Other information can easily be requested and inserted in the survey, as well as interviews for a more qualitative input.

The downside of this process is related to the length of the survey and the specific, extensive questions that are necessary to cover the information required to be able to gather useful statistics on the matter. The less specific a survey is, the less exact and informative the results will be, but on the other hand it will be faster and not as exhausting to people, which can lead to a higher number of responses. If, on the contrary, a survey is more complex and inquisitive, the opposite would happen. In the end, it reduces itself to a simple balance of extent of information gathered and the willing participation of the people.

Comparing both methods, there is a clear confrontation about declared mobility and revealed mobility. By relying on a survey to provide data means accepting the inherent errors related to generalization, perception of the respondent and willingness to provide thoughtful answers. An app based on a location sensor system gives more accurate answers, since it does not depend on the user per se to provide the data. This information is not a described behaviour but a perceived behaviour instead.

Regarding SenseMyFEUP, a source of app results errors can be during the answering of questionnaires. Some respondents stated they walked during the last trip, although the velocity sensed by the app was around the 45 km/h. Another common problem was with the detection of the exact user's location. The source of this error, however, can usually be traced to the phone itself. These represent the various different uncontrolled variables that can potentially cause problems.

Inconsistencies with the location system from the user's phone or online connection can incapacitate the app's ability to work correctly. Each trip must be correctly identified from its beginning to its end and that means movement recognition with variation of velocity. This process can be complicated because many trips are not simple: they can be intermodal, with stops along the way and other irregularities. If the automatic detection mode is not fully operational, questionnaires can be both a source of confirmation to compensate that weakness as well as a source of confusion, errors and frustration from the user's part. Having to answer a question about used mode of transportation every time a trip ends can be tedious if they pop up regularly.

Trip recognition is crucial, but most of it relies too much on the user's phone or if the user remembers to answer with each trip without letting them accumulate and probably give wrong feedback for mistaking trips. Another problem associated with trip recognition is the correct trip chaining, which can be a problem difficult to control, especially when public transportation and waiting periods are involved. SenseMyFEUP considered a trip complete when the user seized to move for a longer period than a normal metro or bus stop or the waiting time at a traffic light, therefore if it took longer than usual, like being stuck at a traffic jam or waiting for a bus or a train, the app would not chain the trips correctly. Also, if the location system stopped providing data for longer than 20 min or in a 200 m radius, the trip would end, which becomes a problem with metro underground tracks. To aid in correcting this problem, the help of the user would be necessary to select the registered trips and connect them, requiring a change of the app's interface choices.

Although SenseMyFEUP faced these challenges, in comparison with the survey, the app data is more detailed and each trip is unique, which is better for differentiation and accuracy. While in the survey, the distance analysis was based on the answers of the respondents and their opinion, the app automatically retrieved that same information with precise values and added details about origin and destination, not only gathering data on school/work mobility, but its total as well. For more accurate results for the survey distances, it would be necessary to calculate it through the given addresses, which would take a long time to process, and, even so, it would not reach the accuracy of the app because not all school/work trips start or end at home. The closest in detail that a survey can get to a dedicated app is through a travel diary, but that lowers the response rate, therefore the choice between both methods must be balanced by considering the requirements and the resulting consequences.

Regarding sustainability, the survey provided more specific data related to details about personal vehicles, including type of fuel and fuel consumption, both being important for the calculation of the carbon footprint, and also information about social situation and mobility costs. SenseMyFEUP, on the other hand, did not retrieve that information since that would demand more questions for the users and, for now, the intention was to remain simple, using average data to compensate the lack of information.

While the app had more immediate sustainability results which could create awareness about individual habits, the survey didn't offer direct results for the community, although many gave personal feedback revealing their concern about their sustainability, and explaining the limiting conditions that influence their choice of using the car.

In the following table, a final collection of advantages and disadvantages from both traditional and modern method according with different main topics is revised.

	SURVEY	APP SENSEMYFEUP
Costs	• Even though the survey did not present associated costs due to the fact that was email based, city or country level surveys require considerable investments.	• The main costs of SenseMyFEUP were the prizes, the payment for the registry in the National Commission of Data Protection and, especially, the costs regarding data storage.
Time	• Although it requires a smaller amount of time to write a survey, in bigger scale the survey period is a lot more extensive, especially with a larger target community. Door-to-door surveys demand long periods of time and, as opposed to the app, the richness of the data is not increased with a longer data collection period, only the amount of answers; • It usually only requires a single fill of the survey, unless it is a travel diary.	• The programming phase requires a lot of work and a lot of time, however, from the moment the algorithm is finished, the data collection is automatic and does not require further effort, unless problems are found; • The period for data collection is continuous until the app ceases to work, contributing with more information each day.
Human resources	• In this case, the method only needed the contribution of one person, since it was an online survey. However, if it is face-to-face, many teams are required on the field to conduct interviews and surveys.	• Making and maintaining an app requires a specialized team with an increasing number of involved people according to the complexity of the app and the collected data.
Users	• It allows a better access to a larger portion of the population, since it does not exclusively depend on technologies to collect data, which could be a deterrent regarding old-aged people, for example; • The response rate depends of how the survey is conducted (online, face-to-face, by telephone) and the receptivity of those inquired. Face-to-face interviews have better rates, as well as having a target community that is more informed and interested in the matter.	• It is limited by the required technology, which in SenseMyFEUP's case meant that only those who possessed an Android smartphone could install and use the app, narrowing the sample; • It is a more attractive and effective method for the younger population, who rely on a daily basis upon technology and are less likely to regard this method with distrust.
Results	• The collected data is a declared mobility, which is more prone to assumptions; • The provided information is generalized and limited to the questions; • The detail demanded in the survey influences negatively the response rate, which means that travel diaries, even though they collect more information, present lower response rates; • The errors of this method are mainly human, especially during the filling of the survey, due to distraction, imprecision, assumption, lack of memory (in particular regarding travel diaries, which require more details), etc.; • Most difficulties lie on dealing with response inconsistencies and unforeseen situations that are not considered in the questions of the survey.	• The collected data is a revealed mobility, which is closer to reality; • The results are more exact and detailed throughout time, with a passive and continuous collection, even though privacy issues can limit some access; • SenseMyFEUP used a questionnaire to identify the transport mode, therefore, in similarity to the traditional method, it had to face human errors in its results; • Technical problems are intrinsic to technology and, especially if the users are not accustomed to this type of apps, situations like having the location sensor inactive, not turning the smartphone on while travelling or Wi-Fi problems are common; • The main difficulties of mobility apps are modal identification and trip chaining.

Table 3 – Advantages and disadvantages from both studied methods.

Both methods have advantages and disadvantages, with the choice depending on the available resources, the required richness of the results and the target population. The ideal scenario would be to use the strengths of both methods to collect data, especially in larger scale cases, allowing a smoother transition to a new era of mobility information. However, that is not always a viable option and a choice must be made.

5 CONCLUSIONS

The case study, supported by two methods, proved that the community of the Faculty of Engineering of the University of Porto follows the trend of favouring the car over public transportation. Its comfort and practicality in varied situations is still deeply valued, and it affects FEUP's sustainability negatively for being a favoured choice for long distances. The individual carbon footprint for each trip calculated with the data from the survey and the app was between 1.28 and 1.42 kgCO2e, that translates to 0.55 tCO2e at the end of the academic year.

The feedback from the survey demonstrated a wish for change from the community that revealed interest for sustainability, but inability to overcome daily limitations with other mobility choices. More initiatives are required to support this transition, including promoting walking or the use of bicycle for short distance trips, which showed interest from the community according to the U-Bike question, and carpooling/carsharing for people who live further away and have few or none public transport options. Encouraging better supply and quality of public transportation with supporting data about deprived areas is also important to diminish the advantage of the car. It is imperative to diminish the preference for motorized vehicles for short distances and to increase the use of public transportation for longer ones.

Regarding SenseMyFEUP, even though being a relatively new method of approaching data collection in this faculty, it sparked interest in the community and raised awareness about mobility and sustainability in a new way by using carbon footprint as a tool. Being a recent project, it requires further development to correct problems and increase interactivity with the user to encourage installation and continued use.

Both methods provide valid information, but the app has a greater potential for the future as a developing technology. The traditional method has a more stablished procedure that can be easily followed, but, unfortunately, studying big populations can be costly and take long periods of time. In the end, the results are slightly different: the survey method relies on what respondents say it is true and the app method collects real life information directly from the source, as long as it is not completely based on questionnaires. Each approach has its strengths and weaknesses and the choice to obtain data through one or another belongs depends on the situation, the target population, the final objectives and the available resources. For now, using both methods to balance their strengths and weaknesses is a good choice for the evolution of data collection.

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ID 1542 | CAR SHARING AND SOCIO-SPATIAL INJUSTICE

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1 INTRODUCTION

Car sharing is nowadays commonly acknowledged as an innovative approach to the transportation problems of urban areas (Firnkorn and Müller, 2015). Scientific literature regularly discusses car sharing related to the context of sustainable mobility and environmental benefits, or in relation to consumer behaviours in the sharing economy rhetoric. The former approach is common in transport studies and concerns strategies to face mobility-related problems in urban context and potential solutions for the environmental impacts of car traffic due to CO2 emissions (Martin and Shaheen, 2011), number of vehicles per household (Martin et al., 2010) and vehicle-kilometres travelled (Firnkorn, 2012). On the other side, social studies are more interested in the changes of consumer behaviour and their implications on society and economy. These publications are mostly based on the shift from ownership to service use lifestyles (Kuhnimhof et al., 2011; Prettenthaler and Steininger, 1999; Schaefers, 2013): the concept of ownership is changing fast and determining lots of consequences on consumers' practices and business strategies (as, for example, the interest of auto companies in short-term rental like a way to balance the loss of purchases; Schwanen, 2016a).

Differently, poor attention has been so far focused in scientific literature to the social impacts of car sharing. This can sound quite surprising: the first car sharing organisation, the SEFAGE (Selbstfahrgemeinschaft, self-riding community), was founded in 1948 in Zürich by a housing co-operative, just to allow people, who could not afford to purchase an own car, to share one (Harms and Truffer, 1998). Shaheen and Cohen (2007) outlines that the main beneficial social impact of car sharing is the possibility for households (in particular, low-income ones) to gain or maintain vehicle access without bearing the full costs of car ownership. Litman (2000) reads it in terms of equity: car sharing can increase equity by improving the mobility options of people who are transportation disadvantaged.

But the spatial dimension can play a crucial role for these supposed social benefits, in particular in urban areas. On the one hand, the distribution of social deprivation problems in the city is not homogeneous, on the contrary it tends to increasingly polarize (especially in times of austerity and economic crisis; Cucca and Ranci, eds., 2016). On the other hand, car sharing services hardly cover all the territory of a city; private companies can choose the area where to operate, or can modulate costs and levels of service (e.g., the density of stations) in different neighbourhood of the same city. If these two spatial distribution patterns mismatch, car sharing can deepen rather than reduce socio-spatial injustice and inequity

As regards the spatial dimension of car sharing services, until now scientific literature has mainly focused its attention on models and tools to assess the market potential for new car-sharing operations in urban communities (Habib et al., 2012). For example, Celsor and Millard-Ball (2007) developed a methodology that supports car-sharing operators and transit agencies to assess the market potential for car sharing in different neighborhoods, according to their characteristics. Wagner et al. (2016) use a set of indicators for the attractiveness of certain areas (based on points of interest in their vicinity, such as shopping malls, movie theatres, train stations etc.) to identify promising regions for an expansion of car sharing business areas. However, the potential negative impacts of these approaches in terms of social inequity have not been considered.

Conversely, in this paper we will try to examine precisely if present car sharing services increase or reduce socio-spatial injustice. The paper focuses on three Italian cities (Turin, Milan and Rome), where private transport plays a key role in mobility choices of citizens (section 2). A deprivation index is calculated to identify in each city the neighbourhoods where potential car sharing benefits could be more significant, and levels of car sharing service are assessed in each of these neighbourhood (section 3). Positive or negative correlations between levels of deprivation and car sharing services are then calculated (section 4), and reasons for these results are hypothesised and discusses (section 5).

2 CASE STUDIES

In Italy, private motorized transport plays a key role in mobility choices of citizens: (its modal share is close to 70%; Isfort, 2016) and the Country has the highest motorization rate in EU, after Luxemburg and Malta, with 610 cars per 1,000 inhabitants. At the same time, road traffic is one of the main problems in urban areas in terms of air and noise pollution emissions, loss of public space, reduced efficiency of surface public transport. Despite these critical situation related to private transport, the diffusion of car sharing services inside most important Italian cities was considered, since the beginning, a potential advantage for solving mobility problems and an innovative “ethic” perspective of mobility (Fistola, 2007). Nowadays, car sharing is spreading quickly, especially in Northern Italy, whereas is less widespread in the South.

The first car sharing services started at the end of the 90’s thanks to the national Car Sharing Initiative (ICS) promoted by the Ministry of Environment, that financed station-based services in 12 cities and 4 provinces at the beginning of 2000s. Since 2013, several private free-floating services were set up in main urban areas, followed also by van and scooter sharing. The introduction of free-floating services is reducing the number of users of station-based services, which are more expensive and less flexible. At the same time, new types of station-based and free-floating services are emerging related to electric vehicles.

The case study analysis takes into account three of the four Italian cities with the highest number of inhabitants: Rome, Milan, and Turin. They have different types of car sharing services and more than one company interested to operate in this service (Table 1). Naples (the third city per population) was not considered because it has only one company that operates with a very limited car sharing services (only 4 stations in the whole city). Rome, Milan and Turin have both station-based and free-floating services. In general, each city has its public (station-based) car sharing initiative even if some of them have a limited number of cars or the service has stopped because of the high decreasing of customers. On the contrary, free floating mainly concerns private companies whose numbers of cars, costumers and services are increasing rapidly in the last 4 years.

Station-based services			
	number of car services	number of scooter services	number of electric vehicles
Rome	1	-	-
Milan	3	-	2
Turin	2	-	1
Free-floating services			
	number of car services	number of scooter services	number of electric vehicles
Rome	3	5	3
Milan	4	1	2
Turin	2	-	-

Table 2 – Details of the car sharing services analysed in the three cities

At the same time, it is important to consider the different dimensions, densities and spatial structures of Rome, Milan and Turin (Figure 1), which can influence the implementation strategies of car sharing companies.

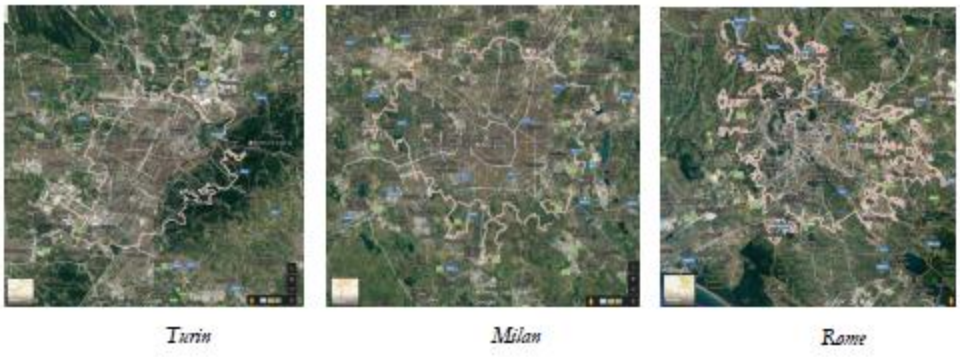


Figure 1 – Spatial structure of the three case studies

Rome is the largest and most populated Italian city (and the fourth-most populated one in the European Union) with 2.873.598 residents (2016) on 1.285 square kilometres. Its urban boundaries are wide due to historical reasons: its surface is six times the size of Milan. Its territory is divided between highly urbanised areas, parks, natural reserves, rural areas, wetlands. The transport infrastructure is bases on the radial network of roads that connected, already at the time of the Roman empire, the city with its surrounding region. Nowadays, Rome is cut in two parts by the Grande Raccordo Anulare (GRA), a ring-road that circles the city centre with a radius of about 10 km. Most inhabited areas lay inside the GRA, but there are also neighbourhoods outside of it and also up onto the Tyrrhenian coast (20 km far from the city centre). The city suffers from chronic road congestion, also because of the limited size of Rome's metro system (two underground lines) compared to other cities of similar size. Due to poor efficiency of public transport, citizens have become addicted to private vehicles and the ring-road has become the main transport infrastructure. Today the city has one of the highest motorized vehicle ownership rate in Europe: 613 cars every 1,000 inhabitants.

Milan is the second most populated city in Italy with 1,369,000 people in the proper city and 3,209,000 in the metropolitan area (2016). Its territory covers 181 square kilometres with a population density of 7.315 inhabitants per square kilometres. The urbanized area covers almost the entire city surface and has swallowed many municipalities of the metropolitan area, especially in the North. The city has a concentric layout and the public transport network consists of five underground lines and 154 surface bus and tram lines. Also in Milan, mobility problems are related to the private transport demand, due to the high number of people entering the city during the day and the absence of co-ordinated mobility management at the metropolitan level between the city and its hinterland. A congestion charging scheme has been introduced in 2011 in the central part of the city.

Turin counts 888,921 inhabitants (2016) and covers 130 square kilometres. The city has a natural limit on the Eastern front, where it is surrounded by high hills. On the Northern and Western fronts the urbanized area spreads far beyond the city limits and covers several municipalities up to the Alpine mountains, while the Southern front is wider due to the plain territory. The city has grown along the North- South railway axis that used to cut the territory in two parts; this trench was covered in the 90s and its transformation has allowed to build a 8-lines commuter rail system that connects the city to its metropolitan area. The public transport network consists of one underground line and several surface bus lines. Nevertheless, also in Turin private transport plays a leading role in citizens' choices of mobility.

These transport and morphological structures have influenced the car sharing models adopted in each city. For example, due to severe congestion problems, in Rome 5 companies were or are specialized in scooter sharing services. In the cases of Rome and Milan, the municipalities required to the companies to serve specific areas, while in Turin there is not specific demands (even if Eastern hills are not served because of their poor residential density and difficult accessibility). Rome limited the services to the region inside of the ring road (GRA) even if some of the companies have showed an interest in serving also parts of the surface outside the GRA, especially the coast during summer season. On the contrary, the municipality of Milan tried to impose spatial equity elements requiring to cover a certain percentage of the

municipal surface. As a consequence, one of the company operating in the city (Car2Go) has introduced an additional cost for outskirt zones because they registered a low utilization of the cars and the relocation of the vehicles by the company was considered non- economic.

In this paper, we will focus on the three car sharing services that are active in each of the three cities (Table 2): the already mentioned station-based ICS service, promoted by the State, and two private free-floating services, Enjoy (promoted by the Italian oil company ENI) and Car2go (promoted by the Dutch automotive Daimler group).

	Turin	Milan	Rome
ICS: number of station	67	84	131
Enjoy: operational area (square kilometres)	49	118	97
Car2go: operational area (square kilometres)	56	117	90

Table 2 – Details of the car sharing services analysed in the three cities

3 METHODOLOGY

3.1 DEPRIVATION INDEX

Data above driving licences of car ownership at sub-municipal neighbourhood level are not available for Italian cities. We have decided to use, as a proxy for these, a social deprivation index: the assumption is that people that cannot afford to own a car are more likely to live in neighbourhood where social conditions are worse, rather than in more richer ones. Therefore, a deprivation index (ID) was calculated for each census tract[1] of the three cities. The index is made up of four distinct indicators of social deprivation, for which disaggregated data at the census tract level were available from 2011 population census. These indicators are:

- Education (z1): percentage of people aged 15 years and over which has attained at maximum a primary or lower secondary level of education;
- Unemployment (z2): percentage of people aged 15 years and over which is unemployed;
- Living condition – overcrowding rate (z3): average number of people per dwelling;
- Living condition – housing condition (z4): percentage of people living in mediocre or poor condition houses.

For each indicator z, census tract variables x are standardized by subtracting the city mean μx and dividing the difference by the standard deviation σx:

$$z_j = \frac{x_j - \mu_{x_j}}{\sigma_{x_j}}$$

The deprivation index of each census tract is then calculated as the sum of the four indicators:

$$I_D = \sum_{i=1}^{4} z_i$$

On the basis of the deprivation index values, census tracts are finally clustered in five “deprivation classes” through the Jenks natural breaks method, where “class 1” comprises the least deprived tracts and “class 5” the most deprived ones.

[1] The census tracts referred in this paper are the so-called ACE (“aree di censimento”), which are defined by the Italian national statistics Institute as municipality partitions hosting between 13.000 and 18.000 inhabitants.

3.2 LEVELS OF CAR SHARING SERVICE

For station-based car sharing services, each station is geo-referred and "attributed" to the census tract it is located inside. Two indicators are then calculated for each census tract:

- the absolute number of car sharing stations;
- the density of car sharing stations (i.e., the number of stations divided by the number of residents).

For free-floating car sharing services, the border of the operational area covered by the service is geo-referred, and census tracts (with their number of inhabitants) inside and outside this border are identified; the same is done for borders which separate operational areas covered by different service tariffs. If a census tract is partly inside and partly outside this border, the tract is divided in two sub-tracts and its total population is attributed to these portions proportionally to their surface. An indicator is calculated to measure the percentage of population living in census tracts that are covered by the car sharing service, and the percentage that is not served; in the case of diversified tariffs, the percentage of population covered by each tariff is calculated.

4 EMPIRICAL RESULTS

4.1 DEPRIVATION INDEX

Table 3 shows the mean values and the standard deviation of the four deprivation indicators for each of the three cities, as well as the range of values for the five classes of the derived deprivation index.

	Turin	Milan	Rome
N° of census tracts	57	86	147
ID dimensions			
Education			
mean value	0,230	0,186	0,187
standard deviation	0,053	0,052	0,058
Unemployment			
mean value	0,071	0,054	0,064
standard deviation	0,016	0,013	0,014
Overcrowding rate			
mean value	2,140	2,065	2,302
standard deviation	0,159	0,143	0,217
Housing conditions			
mean value	0,122	0,096	0,123
standard deviation	0,074	0,069	0,099
ID classes			
1	-4,95 – -2,89	-4,27 – -3,04	-5,25 – -2,83
2	-2,89 – -1,22	-3,04 – -1,44	-2,83 – -0,67
3	-1,22 – 0,35	-1,44 – 0,30	-0,67 – 1,38
4	0,35 – 2,70	0,30 – 3,00	1,38 – 3,75
5	2,79 – 8, 02	3,00 – 9,95	3,75 – 8,31

Table 3 – Details of the deprivation index in the three cities

Population is quite homogeneously distributed (Figure 2) among the five deprivation classes in Milan and Rome, despite classes 4 and 5 cover over the half (76% in Rome) of the municipality surface. In Turin residents are more concentrated in the first and in the two last classes.

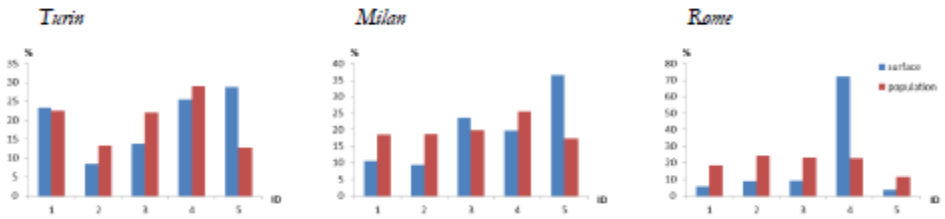


Figure 2 – Distribution of population and surface among the five classes of the deprivation index

Conversely, from a spatial point of view, the distribution of the census tracts among the five deprivation classes is quite far from being homogeneous. As shown in Figure 3, in all the three cities deprivation levels generally tend to increase from the central area to the outskirts. In the case of Turin, less deprived areas are concentrated in the Northern part of the city and in the Eastern hills; in Milan, they cover the Western and Southern outskirts; in Rome, a wide deprivation “class 4” area surround the central city, while “class 5” census tracts are quite restricted in surface.

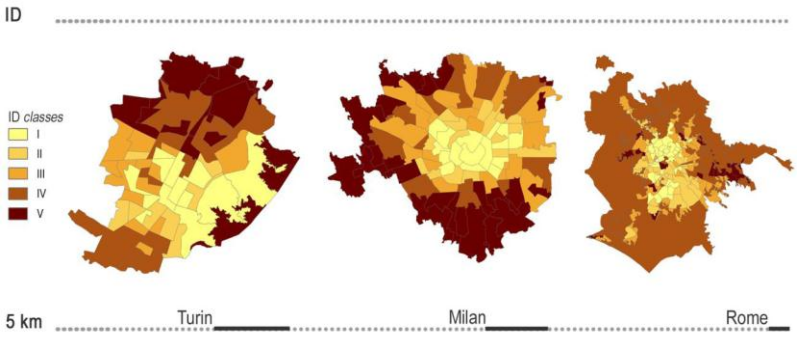
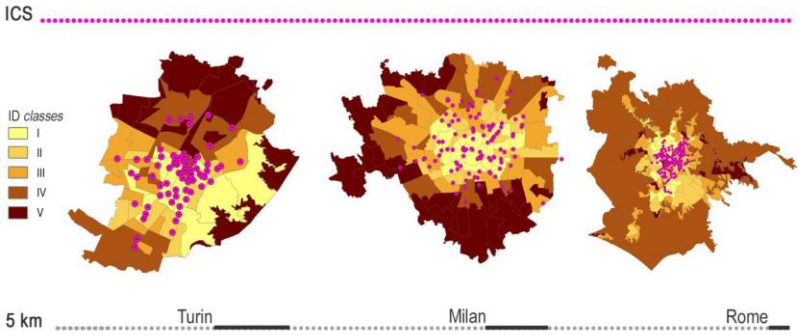


Figure 3 – Spatial distribution of the five classes of the deprivation index in Turin, Milan and Rome

4.2 STATION-BASED CAR SHARING SERVICES

In all the three cities, it is clearly evident (Figure 4) that the level of station-based car sharing service decreases significantly from less deprived areas to more deprived ones, either considering as service level the absolute number of stations in each class or their density (n° of station / inhabitants ratio). For example, in Turin 55% of stations are concentrated in census tracts of the first deprivation class. In all the three cities, two thirds of the stations or over are located in the census tracts of the two less deprived classes.



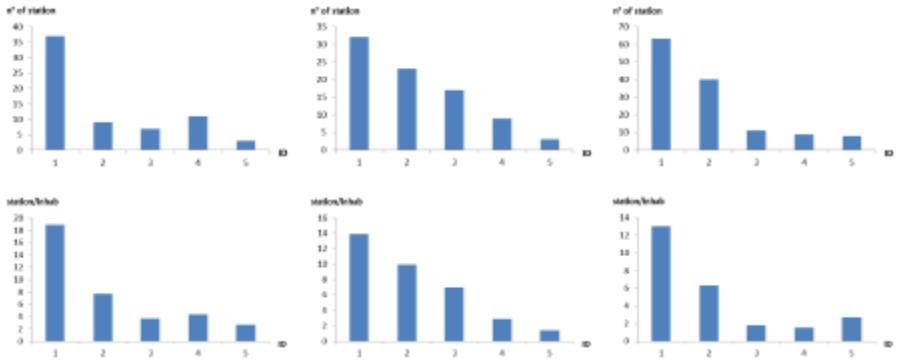


Figure 4 – Number and density of the fixed car sharing stations

4.3 FREE FLOATING CAR SHARING SERVICES

As regards Enjoy (Figure 5), the percentage of the population living in census tracts covered by the service decreases from less deprived tracts to more deprived ones (except in Rome, where population in the tracts of the fifth deprivation class is more served than in the fourth class). In Milan, the coverage range from 100% for the first class of deprivation to 74% for the fifth class; in Turin from 81% to 50%; in Rome, 83% of the population in the first deprivation class is served, but only 5% in the fourth class and 16% in the third and fifth classes.

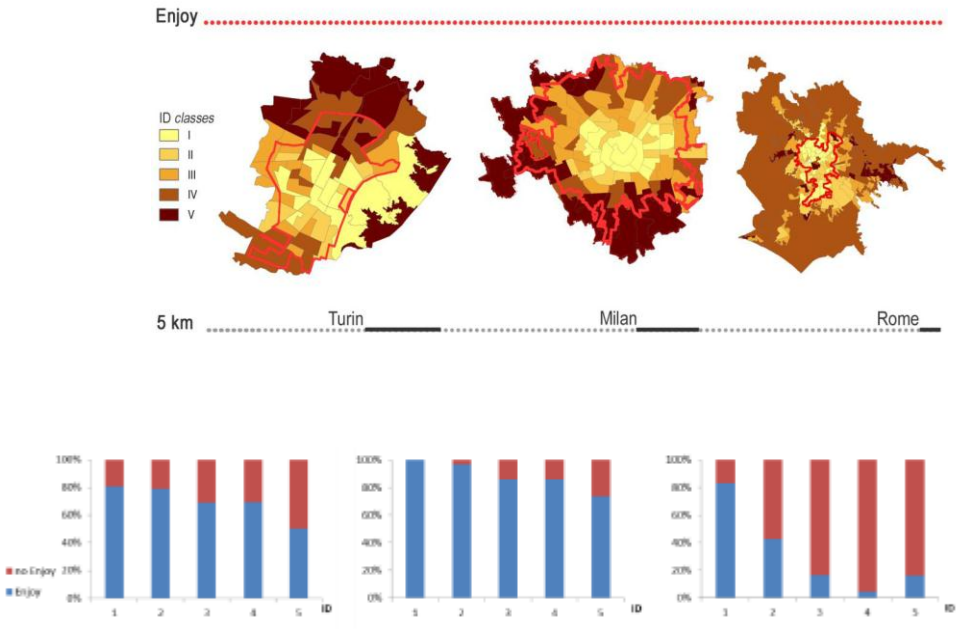


Figure 5 – Percentage of the population living in census tracts covered by the Enjoy car sharing service

As regards Car2go (Figure 6), a similar uneven spatial coverage of the service can be noted. In Rome, 76% of the population in the first deprivation class is served, compared to 6-7% in the fourth and fifth classes. In Milan, where the service has a dual tariff, in the first two classes over 95% of the residents are served by the less expensive tariff; in the fifth class, only 6% of the residents live in a census tract covered by this tariff, 61% are covered by the more expensive tariff and 33% are not served at all. In Turin the decreasing level of the service is less clean but anyway acknowledgeable: the coverage reaches 86% of the population for the second deprivation class, and only 65% in the fifth class.

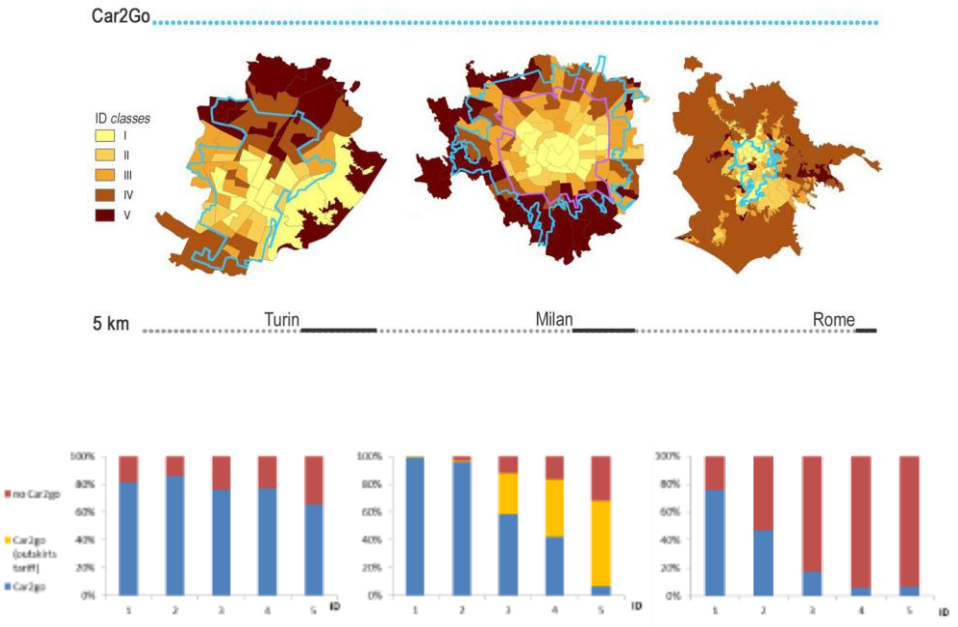


Figure 6 – Percentage of the population living in census tracts covered by the Car2go car sharing service

5 DISCUSSION AND FUTURE RESEARCH

The importance of transportation in spatial justice issue is still hardly considered (Martens, 2016) even if transportation systems, for their very nature, influence the urban structure and affect the accessibility from and to a specific place. For example, Schwanen (2016b) wonders whether the reconstitution of public transport as efficient and economical in neoliberal and post-neoliberal cities has reduced or intensified socio-spatial polarization.

Car sharing could be thought as a factor that improves socio-spatial justice and transport equity, since it offers people, who cannot afford to own a car, the opportunity to drive more or less occasionally. But the results of the analysis of car sharing services in three Italian cities clearly demonstrate that, because of their spatial distribution, these services (be they station-based or free floating) increase – at least in relative terms – social and spatial polarization in the city, rather than reduce it. As a matter of fact, in Turin, Milan and Rome car sharing is less developed in most deprived urban areas (where a greater share of residents is likely not to be able to own a car) than in less deprived tracts. In other words, car sharing services tend to give precedence to central urban areas, while most deprived tracts are mainly concentrated in the outskirts.

As Soja (2011) outlines, it is relatively easy to discover examples of spatial injustice descriptively, but it is much more difficult to identify and understand the underlying processes producing unjust geographies. In this paper, we do not examine the strategies that car sharing operators adopt in defining the spatial distribution and extent of their services. A few hypothesis can be done. As some studies have outlined, car sharing users are mainly urban, young and professional: they tend to be in their 30s or 40s, have middle- to higher-incomes, are primarily employed in professional occupation, live in one-person households (Bardhi and Eckhardt, 2012; Katzev, 2003; Millard-Ball, 2005; Schmöller et al., 2015). In order to maximize their profits, private companies can decide to intensify their car sharing services where this kind of potential users are more concentrated (tipically, central urban areas), to the detriment of other areas (as the most deprived ones). Other studies (Celsor and Millard-Ball, 2007) show that car sharing has success in places where transit and walking are realistic alternatives, where a car is not needed for everyday travel and little off-street parking is available: again, these are typically central older, historic neighbourhoods. Finally, private operators can avoid to serve (or reduce their levels of services in) most deprived areas for fear acts of vandalism: for example, in Italy Car2Go allows to rent its cars in a city and park them in another one, but prohibits to drive them in the South of Italy.

Further research on the spatial strategies that car sharing operators adopt in defining their services could help to better understand the reasons of the socio-spatial injustice that car sharing can determine. Moreover, they could offer relevant information to public administration that aims at encouraging car-sharing operators to place their cars in low-income neighbourhoods (through co-funding, subsidies for households etc.) (Millard-Ball, 2005).

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ID 1548 | UNSUSTAINABLE GROWTH OF URBAN TRANSPORT: QUESTIONING MAINSTREAM SUSTAINABILITY SOLUTIONS FOR TURKISH CITIES

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1 INTRODUCTION

The automobile, supported by bus, has become the transportation mode which formed the urban physical structure after the beginning of the years of Second World War. By this technology, it was possible for the city to develop in any direction. Initially, urban development occurred between train lines, and then the cities started to develop fifty kilometers away from the central core for the average half-hour journey (Newman & Kenworthy, 1999). When the effects of car dependence are considered in urban areas in terms of sustainability concerns for the future of environment, society and economy, it is obvious that an automobile based urban pattern cannot be sustained.

As opposed to car dependency, mainstream solutions are put forth as public transport, walking and cycling. In addition, decreasing policies for car use such as congestion charging, traffic calming, disincentive tax measures for car entrances to city centers and awareness raising campaigns and policies have been seen as supplementary solutions to sustain the future of urban transport. The positive feed backs of those mainstream sustainability solutions have been observed in positive manner over years in especially U.S and Europe –in cycling friendly cities such as Copenhagen, Amsterdam, Strasbourg, Antwerp-. However, cities in Turkey has still been experiencing the hazardous outcomes of car dependency and unsustainable urban transport. Whether the policies has been taken consciously or unconsciously concerning making urban transport more sustainable, there have also been several sustainable solutions in particularly public transport in Turkish cities. These are new urban rail investments, pedestrianization projects, cycling lanes and bike-sharing systems. Therefore, the main question is that "Have sustainability precautions worked so far in cities in Turkey or not?"

In this research, firstly, unsustainable transport concept will be mentioned together with its sustainable solutions as public transport walking and cycling. Then, unsustainable urban transport, namely car dependency, in Turkey will be revealed to constitute a base for research question. Finally, sustainable transport solutions in cities of Turkey will be critically discussed concerning the effects of new public

transport, walking and cycling investments. Finally, the expected outcome of research will be that it has been so difficult to overcome the dominance of neo-liberal urbanization and transport policies through only sustainability impacts on transport.

2 WHY CAR DEPENDENCY IS UNSUSTAINABLE?

In the late 1960s, both public and policy makers tended to reconstruct central urban areas in order to create more space for traffic such as roads and parking spaces. In the early 1970s, many Western countries realized the negative urban and health impacts associated with the excessive use of automobile, and prepared regulations to reduce emissions of pollutants per vehicle kilometer for cars and other kinds of road vehicles together with considering noise emissions of them (Wee, 2007).

The use of automobiles has significantly increased during the last few decades. Between the years of 1970 and 1990, the number of passenger kilometers by private car per capita experienced an abrupt rise by 90 percent in Western Europe and 13 percent in the United States (Jakobsson, 2004). Road traffic that depends on motorized vehicles is a fundamental contributor to particularly environmental problems at a global scale. Steady growth of motorized traffic threats the quality of life in urban areas, and private car use is an important source of these problems. In this instance, reducing negative effects per vehicle through new technologies cannot make a significant impact to completely control these problems; instead, changes in volumes of car traffic are necessary (OECD, 1996).

According to Newman and Kenworthy (1999) that problems of car dependence cover a wide range of issues, varying from economic efficiency, environmental responsibility, social equity, and human livability. The effects of automobile dependence on the efficiency of economy, firstly, start with infrastructure costs. A significant amount of costs for new urban infrastructure emerges, because older infrastructure in the city is underutilized. In fact it is obvious that, as long as the urban development is low density and sprawled rather than transit oriented, monetary sources will still be wasted. Then, transportation costs come for the issue of economic efficiency. It is important to mention that the total costs of an automobile-based urban transportation system exceed transit system costs by 30% to 40%. Moreover, this system could become completely automobile-based with a little focus on public transport; therefore, the land use structure has to be on the basis of more concentrated and non-motorized movements including public transport. In addition, time costs of an automobile based urban transport system also exist as a constraint. Urban traffic mostly creates congestion, and cities have been oriented their way out towards it. Therefore, people lose most of their time for travelling from one destination in a city to another, and it has to be reconsidered that the solution for the problem of time loss necessitates land use changes in order to reduce the need to travel. The last problem of economic efficiency on the basis of automobile dependence is land waste which refers to the use of urban land for car parking and new road construction. The loss of available productive land for excessive parking and road space is not only the concern of economic constraints, but social as well as environmental ones. Secondly, the constraint of social equity on automobile dependent cities stands initially together with inequalities in being car-less. In any city, a significant part of population cannot drive, because of being too young, too poor, too old, or just disabled and being thus disadvantaged. Then, the issue of inequalities in location comes. The people living in middle, outer and fringe suburbs created in the era of the car are access disadvantaged because of lack of transit, which is often the case in car-dependent cities. This kind of a disadvantage has two key characteristics: primarily, the policy makers focus on transportation rather than land use policy approach which reduce the need for car travel; and secondary, they give priority to private cars over public transport and non-motorized modes. Furthermore, there are constraints of automobile dependence on human livability. Initially, the issue of loss of community constitutes one of the significant automobile-related constraints. The interactions between neighborhoods and communities are decreased, because together with the domination of automobile on urban transport, pedestrian or transit system travels -which cause accidental or casual interaction between people-lessened. Therefore, it is evident that walking, cycling and public transport play crucial role in considering the quality, and more interaction of human oriented aspects of access and transportation. Moreover, loss of urban vitality stands as another part of constraints. The vitality and culture of the city is decreased when urban spaces are dominated by automobiles instead of people. The main problem here is structuring our cities according to car use and an emphasis on private rather than public space.

Urban transport is also highly related with injuries and deaths as a result of accidents and this probably have the most dramatic unfavorable influences on both objective and experienced quality of life of

survivors, their families and friends. Besides, it can be extensively considered that serious accidents have irreversible impacts on victims due to drunk or careless driver who fatally injures someone else (Gifford, 2007). Motor vehicle accidents constitute 44% of total accidental deaths in the United States; in addition, approximately about 45,000 people have been died every year in the last 30 years for that reason (Best, 2005). In Table 3, statistical data can be seen including population, number of people with driver license, total motor vehicle accidents, deaths and injuries between 2002-2011 for Turkey. When the number of people with driving license is considered almost in parallel with the number of motor vehicles in traffic, it can be obviously seen from the table that the number of total motor vehicle accidents -constituted much of them from car involvements- raised almost threefold in number between the years of 2002 and 2011. In those accidents, important numbers of them involved death or personal injury which increased also in parallel with the number of driver in traffic and total accidents. In addition, almost each year, an approximate average number of 4300 people were killed, and more people also injured. In this case, it is evident that motorized traffic has a direct effect on not only human health, but its existence, and if the increase in the use of motorized vehicles -especially private cars- continues, the condition will be very dramatic as expected.

YEARS	Population (Thousand)	Number of People with Driving License	Total Motor Vehicle Accidents	Accidents involving death and personal injury	Number of people killed	Number of people injured
2002	69 626	14,994,960	439 777	65 748	4 093	116 412
2003	70 231	15,488,493	455 637	67 031	3 946	118 214
2004	71 794	16,151,623	537 352	77 008	4 427	136 437
2005	72 065	16,958,895	620 789	87 273	4 505	154 086
2006	72 974	17,586,179	728 755	96 128	4 633	169 080
2007	70 586	18,422,958	825 561	106 994	5 007	189 057
2008	71 517	19,377,790	950 120	104 212	4 236	184 468
2009	72 561	20,460,739	1 053 346	111 121	4 324	201 380
2010	73 723	21,548,381	1 106 201	116 804	4 045	211 496
2011	74 724	22,798,282	1 228 928	131 845	3 835	238 074

Table 1 - Number of driver license, persons killed, persons injured, motor vehicles and population between 2002-2011 in Turkey - Source: (Turkish Statistical Institute, 2012)

Thus, the seriousness of the circumstance has to be stated that on the one hand, a car based urban transport system damages particularly the environment, climate, and nature; and on the other hand, it affects human health and quality of life in general. It is evident that car use has unfavorable results on three phases of sustainability: on economy, society, and especially environmental quality; therefore, the answer of the question about what we undoubtedly should not sustain anymore for urban transport appears more clearly. In short, a car-based urban travel pattern cannot be sustained, and some kinds of sustainable solutions have to be considered in policy making.

3 SUSTAINABLE SOLUTIONS TO CAR DEPENDENCY

According to the report prepared by International Economic Development Council in Washington (2006), the principles of Smart Growth can be listed as:

- Mix land uses
- Use land efficiently
- Create a range of safe, convenient, and affordable housing opportunities and choices
- Create walkable neighborhoods
- Foster distinctive, attractive communities with a strong sense of place
- Preserve natural lands, farmland, and critical environmental areas
- Strengthen and direct development toward existing communities
- Provide a variety of transportation choices

- Make development decisions predictable fair, and cost-effective
- Encourage community and stakeholder collaboration in development decisions (International Economic Development Council, 2006)

Calthorpe (1993) presented the urban design principles associated with Transit Oriented Development in his book as:

- A compact and transit supportive development urban growth on regional level,
- Location of housing, jobs, commercial activities, parks and civic uses within walking distance of transit stops,
- Formation of street networks that are pedestrian friendly and directly connected to local destinations,
- Provision of a mix of housing types, densities, and costs,
- Protection of environmental quality and high quality open spaces,
- Making public spaces the focus of building orientation and neighborhood activity
- Encouragement of infill and redevelopment along transit corridors in the existing neighborhoods (Calthrope, 1993).

As expected, a variety of solutions to the problem of automobile dependence can be mentioned as restrictions for using cars, and improving public transport services and biking and walking conditions. This requires a careful management of the urban transport system. In the 1980s, concepts of congestion management and travel demand management were tried to be discussed referring to problems in cities, inter-city corridors, and activity centers that produce urban traffic (O'Flaherty, 1997). These management measures can help to accomplish one or more of the following targets:

- Reduce the need to make a trip
- Reduce the length of a trip
- Promote non-motorized transport
- Promote public transport
- Promote car pooling
- Shift peak hour travel
- Shift travel from congested locations
- Reduce traffic delays (OECD, 1994)

According to May (1997), there are some ways to restrict automobile use as vehicle ownership taxes, fuel taxes, parking measures, congestion charging, traffic calming and charging for road use.

3.1 IMPROVING PUBLIC TRANSPORT, WALKING, AND CYCLING

The most efficient passenger transport mode for long distances and at the corridors that travel demand is high in urban transport is public transport. In cases of short travel distances pedestrian travel and transport through cycling can also be efficient alternatives (Sutcliffe-Babalık, 2012). It can be seen that public transport systems provide significant advantages for passenger travel when compared to car use. At most five people can be carried by car; on the other hand, the passenger capacity of a bus changes between the ranges of 40 or 120 which means that 8 or 24 times more people can be carried by public transport. Automobile and public transport is also differentiated in terms of the necessity of road use. For example, a 12 lane road is needed for 40,000 people to cross over a bridge; on the other hand, only 4 lanes for bus, and two lanes for a light rail system is needed (Illich, 1992). In addition, another advantage of public transport systems compared to the car is the efficiency for energy consumption, that is, per passenger transported per kilometer automobile consumes five times more energy compared to bus and metro, and automobile creates 125 times more air pollution compared to bus. For these reasons, improving public transport plays a key role within the framework of sustainable development strategies. Consequently, sustainable urban development objective necessitates a high quality and sufficient capacity public transport system (Sutcliffe-Babalık, 2012). Another sustainable mode for urban accessibility is walking. Pedestrian oriented regulations -especially in city centers- can make people use their car less for transportation and, also it contributes to decreasing unsustainable impacts of automobile on the streets or open public spaces. According to Tumlin (2012), pedestrian planning principles include several critical issues including that most of the needs of daily life should be available within walking distance; buildings

should be in relation with sidewalks rather than parking lots; road traffic has to be calmed; lighting should be arranged for the benefit of pedestrians; people should feel safe. Even if all these principles are applied in the design of a walkable environment; at first glance, walking may not seem as an alternative transport mode compared to car or public transport; however, if urban planning and design of an area includes efficient regulation principles that focuses on facilitating pedestrian movements particularly in short distances, it can seriously affect the appearance of car in the areas in which the car existence is not desired -particularly in city centers- due to wishes for the efficient pedestrian use of urban space and for a less polluted, more equal urban social environment. Cycling stands as a transport alternative which can contribute significantly to sustainability of our urban transport future. Using bicycle as a transport mode has been common travel choice for many years in the globe: there are a number of cities where people ride their bicycle from their home to school, or to work, or to a leisure activity, or to the opposite direction, and now this can be considered as a permanent culture, in other words, “cycling culture”. Learning from the experience of such cities with a cycling culture, many other cities in the world started to invest in cycling infrastructure by developing bikeways, bike lanes, and building bike parks. In order to further encourage the usage of this mode, which is one of the most sustainable modes of travel since it requires no energy and emits no pollution, many cities in the world also started to launch bike-share systems.

4 ANALYSIS OF TURKISH CITIES IN TERMS OF SUSTAINABLE TRANSPORT SOLUTIONS

In this preliminary research, it will be mentioned that there have been implemented sustainable solutions in cities, and t is not still obvious that whether these interventions contributed the sustainability level of those cities and car dependency has decreased or not. In further part of the research, cities of İstanbul, Ankara, Konya, Samsun, Kayseri, Gaziantep will be investigated through figure demonstrations in order to open and trigger new discussions on research issue. The critical hypothesis here is that although there have been urban rail, cycling and pedestrianization implementations in Turkish cities, the interventions inciting automobile use in the city have also been continuously increasing. Consequently, it has become questionable whether the sustainable transport interventions have worked effectively or not. The expected outcome of research will be that it has been so difficult to overcome the dominance of neo-liberal urbanization and transport policies through only sustainability impacts on transport.

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ID 1573 | MOVING TO ACCESS IN TRANSPORT PLANNING: IDENTIFYING BARRIERS, DESIGNING STRATEGIES

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1 INTRODUCTION: THE ACCESSIBILITY APPROACH

Accessibility is a well-established concept in planning research. It measures the ease of reaching destinations or activities, or the potential for interaction (Hansen, 1959). In very general terms, accessibility can be defined as the level of ability to successfully reach a certain object, place, event, or person. It is a key concept for understanding the social and economic life of cities in particular and societies in general.

The purpose of this paper is to inform the 'accessibility approach' to transport policy, planning, and investment by means of critically analysing its implementation barriers in professional circles and how to overcome them. We argue that it is necessary to focus less on technological issues such as what are the best instruments and decision-making tools to promote the accessibility approach. There is now sufficient knowledge about that (Papa et al. 2016). Now, the priority is to identify the institutional, organisational and cultural barriers to this approach.

Mobility and transport networks can facilitate accessibility, but only to a certain extent. Defining accessibility as what is granted by mobility is a reductionism. In our view, mobility is in many cases a necessary condition for accessibility, but rarely is a sufficient one. Traditional transport planning has in numerous instances failed to realise this important nuance. As a result, traditional transport planning has frequently equated implementing measures aimed at increasing mobility to improvements in accessibility levels. That is not necessarily a very accurate way of understanding what happens. This is fully acknowledged by the accessibility planning approach. In fact, accessibility planning recognises that the absolute opposite to that might be closer to the truth: increasing mobility might represent less accessibility (Ferreira and Batey, 2007).

Conflicts between accessibility planning and the dominant transport planning culture have been a barrier to effective implementation of accessibility planning (Bertolini et al. 2005; Bertolini, 2012). This approach of 'mobility-first' planning and investment has largely failed to deliver on the broader urban goals relating to economic growth, social integration, and sustainable development. Conversely, implementing accessibility-based performance measures can allow regions to pursue more coordinated objectives around economic opportunity, social equity, well-being, and health.

Several reasons should encourage the application of the accessibility planning approach., as the potential benefits of using the accessibility approach in applied planning practice are massive. Among other benefits, it facilitates understanding with much greater accuracy how different social groups are served in different ways by the transport system and by public and private services. It also facilitates identifying with higher precision what prevents people from reaching certain places and develop or maintain certain connections. This happens because it offers valuable insights on matters as diverse as mobility and

transport, time budgets and schedules, nature and quality of services, financial and economic constraints, just to mention some possibilities. For further insights see, for example, Ferreira and Batey (2007).

Another reason is that the accessibility approach has the potential of bringing diverse activity sectors (e.g. transport and land use, economics and health care, education and logistics) together to agree on shared actions. This happens because the accessibility approach makes evident the interconnections between individual preferences and characteristics, geodemographic properties, nature and quality of services available, and mobility issues such as travel time savings, travel costs, and levels of service experienced in the transport network. This is not the case with the traditional transport planning approach as its focus is narrower and essentially concerned with mobility issues.

A benefit is also that the accessibility approach has the potential to create a common language among different stakeholders for discussing community conditions and priorities. In this way this approach offers a particularly constructive framework for action on agendas shared by transport authorities, citizens, service providers, technical experts, and land owners. It is also very constructive for creating communication bridges among people with different academic and technical backgrounds. This happens because its epistemological underpinnings are strongly linked with social inclusion theory and its theoretical basis is not mathematics, economics or engineering (which tend to be quite exclusive disciplinary areas), but social science in general and planning in particular.

Finally, another advantage is that the accessibility approach is abundantly equipped with appealing visualisation tools and techniques capable of depicting information in very clear ways. It can therefore facilitate decision-making processes by means of providing powerful visual inputs that integrate and give answers to a wide range of questions and policy issues.

However, a number of barriers exist to making the use of the accessibility approach mainstream. As a result, mobility-oriented planning continues to dominate the professional world. In this paper we aim at uncovering the barriers that planners face when trying to apply the accessibility approach in planning practice and on the pathways to overcome these barriers. This research aim is relevant and timely. Indeed, in the existing literature the main focus has been on the technical properties of accessibility measures and tools, with some exceptions (Curtis & Low, 2012; Geurs & Halden, 2015; Halden, 2014). We believe that accessibility planning research needs now to move on to study in greater detail the institutional barriers that prevent the implementation of the accessibility approach. There are strong reasons to believe that stakeholders involved in planning processes are prone to perceive the accessibility planning approach as something with massive potential, but only when this is introduced in the right institution, adopting the best approach, with the appropriate strategic support, for the appropriate goals, with the correct indicators and datasets, and with the correct timing.

The paper is structured as follows. Following this introduction, section 2 provides a brief description of the methodology used. Section 3 reports the results of the expert's survey, discussing the barriers to the implementation of the accessibility approach in planning practice and discusses pathways to mainstream accessibility planning. Some concluding remarks are drawn in section 4.

2 METHODOLOGY

In this study we applied a qualitative method loosely based on the Policy Delphi protocol (Linstone & Turoff, 2011). The purpose was to obtain insights about (i) the most critical issues in implementing accessibility planning in practice, and (ii) possible pathways to mainstream the accessibility approach. The method is based on the collection of rigorous ideas interviewing highly qualified experts who have deep understanding about the subject area under study.

We conducted a round of in-depth interviews with eighteen leading figures and pioneers of the accessibility approach working in land use planning and transport planning. These experts were chosen from an original group of most cited academic authors as defined during an initial literature review, who helped to identify other non-academic experts. The final group included experts from different disciplines (urban planning, mobility planning, finance) and organisations (academia, consultancies, government and NGOs) and geographical contexts (six from North America, ten from Europe, one from Australia, and one from South America). All these experts work in the field of accessibility planning in either public or private

bodies and are very well-known figures, if not internationally, at least in their own countries and professional worlds.

It is important to highlight that we included in the group of respondents budget professionals and transport economists because those professionals are rarely involved in studies dealing with accessibility planning. This was a conclusion derived after the first round of interviews conducted. We will come back to this point.

3 RESULTS

3.1 INSTITUTIONAL BARRIERS TO THE ACCESSIBILITY APPROACH

The results from the interviews suggest that implementation barriers can be clustered into the following main categories: i) the high costs of the accessibility approach; ii) the fragmented administrative and governmental frameworks; iii) pro-mobility established powers and traditions; iv) the influence of mainstream economics on transport planning; and v) the feeble influence of higher education and research organisations. These factors are likely to mutually reinforce each other.

With regard to the first point, it emerged from the interviews that accessibility analyses need much more extensive datasets than those required in traditional mobility-based modelling processes (typically focused just on simple information about origins, destinations, travel demand, and impedances) and this has a cost. For this reason, accessibility planning is correctly perceived as a more expensive and time-consuming process than traditional transport planning. It was argued that adopting accessibility planning processes comes across as a quite unattractive choice to many public or private organisations. Availability of financial resources is therefore likely to determine which local and national authorities can adopt accessibility planning tools.

According to the interviewed experts, lack of funds for the implementation of accessibility planning is closely linked to the organisation of local and governmental authorities. These are unlikely to provide financial support for schemes that are not aligned with policy priorities shared by several stakeholders, departments and agencies (Banister, 2008). Strategic governance for achieving accessibility requires a combination of coordinated actions across urban land use planning (e.g. housing policy), transportation planning and regulation, financing of investment and operations, and pricing and cost recovery. This is difficult to achieve as it corresponds to a higher level of institutional interaction and cultural complexity.

A third point raised by our experts was the difficulty to overcome the well-established transport planning tradition, strongly based on civil and mechanical engineering and economics. Indeed metrics used by the transport approach are easy to communicate and reflect short-term impacts of political choices. The accessibility approach measures distribution of land use and transport benefits that are not always in the decision maker's agenda. Furthermore, accessibility planning measures long term effects, which are in contrast with the short terms effects needed by politics which the mobility planning approach can more easily offer.

A four aspect is the influence of mainstream economic science applied to transport planning. Traditional economic analyses of transport investments, such as the Cost-Benefit Analysis method (henceforth CBA), primarily use mobility indicators like travel time savings to estimate economic value. While there are still a number of significant complexities not completely solved associated with the objective measurement of accessibility in a way that fits the data needs of CBAs. In other words, as state by one of our expert: 'the economic language used by transport planners has a universal appeal. Accessibility planning does not speak in terms of economic values or prosperity, while everyone wants to be prosperous'.

A final aspect raised from the experts we interviewed is the feeble motivations of higher education and research organizations to promote the accessibility agenda. Academic researchers are not necessarily doing much to promote a transition from mobility to accessibility thinking. According to some answers collected, this mostly happens because academics conducting research with more impact-oriented goals are not necessarily finding it very attractive to do research on accessibility.

3.2 PATHWAYS TO MAINSTREAM THE ACCESSIBILITY APPROACH

This section reports the answers to the second issue discussed in the interviews, which was focused on the possible pathways to mainstream accessibility planning. Those can be summarised in the following five points.

The first action is to clarify much better how accessibility gains and losses can be equated to financial gains and losses so that cost-benefit analyses and other econometric assessment tools can be effectively informed by the accessibility approach. To make accessibility planning mainstream it is important to make evident the financial gains resulting from the accessibility approach and who benefits from it. It seems likely that many accessibility planning experts resent the dominant econometric thinking logic that has become so deeply rooted in transport planning. As a result, they overreact to it by means of dismissing almost completely all sorts of financial and budgetary considerations. It is not acceptable that accessibility planning becomes unable to determine with at least some precision the value for money of alternatives even if this is at some stage considered a secondary policy objective. Some form of assessment of value for money of alternative solutions is therefore most needed.

The second needed action according to the group of experts is aimed at reducing the high costs of accessibility planning by supporting the development and dissemination of open access software and data. As stated in the previous section, one of the main limitations of accessibility planning is that it requires a considerable amount of data, but this action could potentially have massive implications in terms of communication between people and planners. For example, online collaboration (i.e. collaborative mapping projects), GIS, and data visualisation tools are leading to the fusion of the data collection, analysis, and representation steps of accessibility planning.

The third action consists of making accessibility part of the common sense language. The group of experts we interviewed stressed the importance of the ‘public demand’ of accessibility. In other words, it is crucial the role of everyday apps and tools used by the people, to make them aware of the concept and the benefits of accessibility, rather than the benefits of mobility. If there is a public demand for accessibility, then planners and decision makers would be forced to provide what citizen ask for.

The fourth action is in the hand of academics. This consist of developing a holistic understanding of accessibility. The interviewed experts agreed that a common framework to account for the diverse institutional processes that promote the accessibility agenda is a crucial conceptual point to be taken into consideration. This requires in the first place a holistic understanding of what accessibility is and what promotes or reduces it.

The fifth action is to identify and mobilise institutional, geographical, and community implementation niches. One of the experts stated that accessibility planning has much to offer to a wide variety of businesses and corporate powers and it might represent for these actors something as desirable as acquiring more clients or locating better places to invest.

The sixth action consists of increasing the accessibility appeal. Accessibility experts should be able to ‘sell’ accessibility when dealing with influential decision makers in the same way mobility experts ‘sell’ the outputs of their transport models.

4 CONCLUDING REMARKS

In cities and countries across the world, accessibility-oriented planners and practitioners are struggling to implement accessibility policies and programs. This paper started with the notion that technological barriers are not the key ones preventing the accessibility approach from becoming mainstream. The key barriers have instead an institutional nature, and those have been discussed in this paper. Transport, land use and budgets professional using the accessibility approach can bring about a new dimension in planning. In order to achieve a transition from the mobility approach to the accessibility approach a number of actions were collected All the actions presented in the section above correspond to very particular needs in terms of enhanced knowledge about how to proceed. We would like, however, to stress a specific research need in greater detail. A deeper understanding is needed about the extent to which local and national issues influence the topics addressed in this study. We limited our research to the identification of

general international and cross-institutional issues. Future research should explore the institutional barriers of accessibility planning in specific national and institutional frameworks.

A final remark to make before concluding is that the knowledge developed by the mobility approach should be seen as a step towards the accessibility approach. This is an evolutionary process. To plan accessibility necessarily requires a good level of mobility planning and so the accessibility approach includes the mobility approach and all its knowledge forms, infrastructures and technologies. The accessibility approach adds more aspects and dimensions than those exclusively concerned with mobility; it does not and it cannot exclude mobility as a concept or as a social and economic value. This point means that there is no sense in seeing these two approaches as alternatives. They are instead stages of evolution in transport planning that build upon each other and need each other to evolve.

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ID 1618 | HOW CONGRUENCE BETWEEN FORMAL AND INFORMAL INSTITUTIONS EFFECTS INTEGRATED TRANSPORT AND LAND USE PLANNING: A STUDY ON DUTCH NATIONAL PLANNING PRACTICE

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ABSTRACT: The field of transport planning is in flux, influencing the way developed countries plan, program and budget their transport infrastructure. Planning scholars and policy makers increasingly acknowledge that integrating land use and transport planning generates opportunities for synergetic benefits and helps evade unwanted consequences such as project time and cost overruns. Despite this emerging concept of integrated infrastructure planning, examples of successful employment remain scarce. For this paper the institutional context associated with infrastructure planning has been studied to identify incongruences which hamper integrated infrastructure planning practices. The explicit focus is on how horizontal (cross-sectoral and cross-border) and vertical (between scales) integration in road infrastructure planning is adversely influenced by counteracting formal and informal institutions in different phases of the policy cycle. Evidence is derived from a six-month research project on the current Dutch national infrastructure Planning, Programming and Budgeting System. This research has studied how integrated infrastructure planning is influenced in the different phases of the policy formulation, policy adoption, policy execution and monitoring and evaluation. Findings are distilled by triangulation of literature research, policy analysis, interviews with 22 experts, 2 focus groups and a workshop. In addition, multidisciplinary sounding board meetings, including both scholars and practitioners, were organized to reflect on interim findings. Results illustrate that every phase of the decision making process presents distinct formal and informal institutional incongruence which hampers integrated infrastructure planning. Furthermore, insights were generated on the different roles formal and informal institutions play in affecting integrated infrastructure planning practices. Findings of this study may be used as input for institutional design strategies which aim at enhancing the integration between infrastructure and land use planning as well as for developing further research trajectories.

1 INTRODUCTION

As scholars and practitioners increasingly acknowledge the synergies that can be obtained through transport and land use integration a change it witnessed in the way public authorities plan, program and budget transport infrastructure (Gudmundsson et al., 2015). Despite land use and transport integration is a central goal of contemporary transport policies in developed countries, successful implementation of such integration remains insufficient (UN-Habitat, 2013). As a result potential value is missed, which could have been acquired from the synergies that arise when transport and land use planning are integrated in processes of policy formulation and project delivery.

Land use transport integration has been a topic of research for a long time (e.g. Wegener and Fürst, 1999). Multiple scholars have emphasized the need for an institutional perspective in addressing the adverse influence of institutional barriers on achieving integration (e.g. Marsden and May, 2006; Hull, 2010). Curtis and Low (2012) even state that “time and time again it appears that institutions block the way” (p.13). A growing body of literature on this subject provides insight in how general barriers block the formulation and implementation of integrated transport policies. Isaksson et al. (2017) suggest there appears to be a demand for more in-depth understanding of the multifaceted and chaotic institutional conditions in which these barriers operate as transport planning still tends to exist in siloes (UN-Habitat, 2013).

This study focusses on the Dutch planning context where land use transport integration has been a policy goal for decades. Since the 1990’s a converging trend between transport planning and spatial planning is witnessed (WRR, 1998). National government has undertaken multiple attempts to redesign the national transport infrastructure planning programming and budgeting (PPB) system to achieve further land use transport integration. PPBSs function as institutional vehicles structuring different phases of policy

formulation, adoption, execution and evaluation. Hatzopoulou and Miller (2008) point out that the influence of frameworks for appraisal and implementation on the delivery of integrated transport policies can also be negative.

This paper addresses the effects of institutions to integrated transport planning on national level. It aims to offer to a more detailed understanding on how congruence between institutions influence land use transport integration in different phases of infrastructure planning, programming and budgeting. Data is collected in an depth case study research taking Dutch national PPBS as unit of analysis. Through a sociologic historic institutional perspective differentiating between formal and informal institutions a more comprehensive perspective is offered on the effect of different institutions within different phases of the PPBS. The theoretical perspective adopted in this study is introduced in the next paragraph. The subsequent section elaborates on the data collection within the applied case study methodology. Thereafter research findings are presented and interpreted a discussion and conclusion section.

2 ANALYTICAL FRAMEWORK

2.1 CONCEPTUALISING LAND USE AND TRANPORT INTEGRATION

Transportation planning is traditionally characterized by a sector-oriented, technocratic, predict and provide approach resulting in narrowly defined infrastructure projects aimed at enhancing network capacities. Driven by societal developments such as increased environmental awareness, emergence of the network society, scarcity of space and changing financial-economic contexts this approach broadened through processes of internal and external integration (Heeres et al., 2012). Ambitions for multi-modal solutions through coordination between different modes and networks to influence mobility behaviour lead to a process of internal integration. Concurrent to this development a process of external integration, emphasizing the reciprocity between transport systems and land use systems, as stressed by Wegener and Fürst (2004), lead to a strong focus on the integration of transport planning with other spatial sectors. The concept land use and transport integration captures this contemporary approach to transportation planning in developed countries. Elaborating further on this notion, a more detailed conceptualization is provided by distinguishing in dimension and types of land use and transport integration. The interpretation of land-use transport integration used in thsi research is summarized in table1 .

2.1.1 HORIZONTAL AND VERTICAL INTEGRATION

The distinction between the horizontal and vertical dimensions of integration are widely recognized and discussed in spatial and transportation planning literature (e.g. CDS, 1999; Stead and Meijers, 2003; Harzopoulou and Miller, 2008). The horizontal dimension refers to inter-sectoral, intra-sectoral, and cross-territorial integration. Vertical integration occurs between different layers of government. Although transport planning is often a responsibility of national governments, Isaksson et al. (2016) see the local and regional planning scale as key arenas for implementing integrated mobility solutions. Transport systems in itself are multi-scale of nature (Arts et al., 2014); within any particular government layer there are specific conflicts and synergies between domains of transportation and between transportation and land use (Gudmundsson et al., 2015). Successful land use transport integration includes both dimensions.

2.1.2 POLICY AND PROJECT INTEGRATION

Scholars agree that land use transport integration differs at the strategic level and the operational level (e.g. Cowell and Martin,2003; Heeres et al., 2012; Gudmundsson et al. 2015). Integration at the strategic level is here referred to as policy integration, along with Stead's et al. (2004) definition. Stead et al. (2004) present a hierarchical distinction between cooperation, coordination and integration, which produce different output and levels of interaction. Policy integration "includes dialogue and information (as in policy cooperation), transparency and avoidance of policy conflicts (as in policy coordination, policy coherence and policy consistency) but also includes collaboration, attempts to create synergies and the use of the same goals to formulate policy (Stead, 2008, p.140). Policy integration is based on shared goals, as such requiring a higher level of interaction than coordination and cooperation, creating stronger

interdependencies between horizontal and vertically dispersed actors. Integration at the operational level, defined here as project integration, focuses on the integration of land use and physical infrastructure in integrated area development projects. Multiple researchers have shown how combining transport infrastructure with other local land use goals, such as housing, energy and recreation, enables different interests to merge, enhancing the societal, economic and environmental revenue of projects (Arts et al, 2014; Elverding, 2009). This type of integration is associated with the better, faster or cheaper achievement of interests against a decreased effort and enhanced overall outcomes for an area, in form of higher quality or more sustainable results (Heeres, 2017,p.14).

	Horizontal	Vertical
Land use transport policy integration	Inter-sectoral, intra-sectoral, and cross-territorial integration between land use and transport policies.	Multi-level (between government layers) integration between land use and transport policies.
Land use transport project integration	Integrating infrastructure development with other land use development within area development projects.	Integrating transport interests and land use interests dispersed across government layers in area development projects.

Table 1 – Conceptualization of land use transport integration as a comprehensive notion which can be subdivided into four components.

2.2 AN INSTITUTIONAL PERSPECTIVE ON LAND USE TRANSPORT INTEGRATION

For this study institutions are defined as any form of human devised constraint (both formal and informal) structuring social interaction (North, 1990). It is argued that all planning and decision-making takes place within a certain institutional context (Alexander, 2005). These 'rules of the game', a much used appellation for institutions, influence the behaviour of actors in the process of designing, negotiating and funding policies by prescribing what is considered appropriate, adequate, right and wrong in specific situations (March and Olsen, 1989). As such institutions help explain why specific patterns of collective behaviour occur as they do. Within any process of policy formulation and implementation a variety of different 'nested' institutional contexts meet and interact (Alexander, 2005). This study focusses on both formal and informal institutions as defined by Hemke and Levidsky (2004,p.727). The focus on both types of institutions is crucial to capture all incentives and restrictions underlying behaviour (Helmke and Levisky, 2004).

Due to their structuring influence on social interactions institutions are considered to influence processes of land use tranport integration. Marsden and May (2006) show how institutions play an important role in the development and delivery of integrated transportation policies. Institutional congruence is used here as a concept to gain a deeper understanding on the the way institutions inlfuence land use transport integration efforts. Institutional congruence fits with historic institutionalism from a new institutional sociologists perspective, as formulated by Hall (2010). He states that a society "replete with multiple layers of institutions…that provides footholds for many courses of action" (p.22). Institutionalization can be described as a "historic accretion of culturally specific forms and practices with their origins and diffusion related to their specific contexts: sectors, societies and subcultures" (Alexander 2005, p.212). The choices made when an institution is formed, will have continuing influence on policy in the future (Peters, 1999). As such i tis said that emerging institutions are inspired by existing ones (Thelen, 1999). The development of institutions is regarded as a path dependent process resulting in unintentional consequences (Taylor and Hall, 1996) Institutional congruence focusses on the mutual influence between different formal and informal institutions. Institutions can either reinforce, have no impact on, or weaken each other's effect (De Jong, 2008). Two types of congruence can be distinguished. First, a (mis)match between old and new institutions. Institutional structures which have been appraised in the past can effect institutional structures underlying contemporary policy objectives. The second type of congruence infers a (mis)match between existing institutions which have been developed from diverging strategies (De Jong, 2008).

2.3 SYNTHESIS

The structuring influence of institutions on social interaction patterns makes institutional theory appropriate in the context of land use transport integration. Achieving land use transport integration requires interaction between a variety of actors dispersed across horizontal and vertical dimensions. These interaction patterns change in the different phases of planning, programming and budgeting of transport infrastructure. Due to the structuring influence of institution on social interaction patterns, both formal and informal institutions are important in the formulation and implementation of integrated land use and transport policies. This research aims to provide an in depth perspective on how institutions influence land use transport integration by studying the congruence between the institutions within the phases of policy formation, adoption, execution and evaluation.

3 RESEARCH DESIGN

The findings discussed in this article are derived from a six months research project on Dutch national spatial and infrastructure planning. This project studied how land use transport integration is hampered in the different phases of the policy formulation, policy adoption, policy execution and monitoring and evaluation of the Dutch infrastructure Planning, Programming and Budgeting (PPB) System. As will be discussed in section 4, the Dutch PPB System, MIRT, is undergoing a major change in which both horizontal and vertical integration are pursued. Although the findings are to some extent specific for the Dutch situation, lessons can be drawn for other countries as well, since PPB Systems are a common instrument for connecting policy and practice in transport planning, which all struggle to successfully bring integration from the strategic policy level to the project practice (UN-Habitat, 2013). In order to assess the integration and the role of formal and informal institutions, we applied methodological triangulation that included besides the literature research, policy analysis, interviews, focus groups, a workshop and sounding board meetings.

First, policy analysis was performed, which included the Dutch Spatial Planning Act (In Dutch WRO), the Dutch Infrastructure Planning Act (in Dutch Tracéwet), the series of documents of the National Spatial Strategy, the National Mobility Strategy , and the Long-range Programme for Infrastructure, Spatial Development and Transport (in Dutch MIRT), and supporting policy documents. The policy analysis provided the input for 22 interviews that were conducted. These interviews were semi-structured, allowing for a structured discussion of relevant concepts emerging from the literature study, as well as flexibility for interviewees to bring up their own experiences and conversation topics (Liamputtong and Ezzy, 2005). The interviewees were all experts working at the Ministry of Infrastructure and the Environment (in Dutch Ministerie IandM) and the Directorate-General for Public Works and Water Management (in Dutch Rijkswaterstaat). All are closely involved with implementing the current spatial planning and infrastructure policies, or engaged in the revision of the PPB System.

Subsequently, 2 focus group discussions enabled the findings from the interviews and policy analysis to be discussed in a broader group of people. As such the focus groups combine interaction, obtained through participant observation, with in-depth knowledge of experiences, obtained through in-depth interviewing (Morgan and Spanish, 1984). The participants were chosen based on their organization, either from the Ministerie IandM or from Rijkswaterstaat, their orientation towards policy or practice and their “articulateness”: their ability to reflect on their field and form and express their opinion.. The focus group discussions were held around statements derived from the policy analysis and interviews. These statements provided the starting point for discussion, and proved to be successful in activating the participants.

Finally the workshop and multidisciplinary sounding board meetings, including both scholars and practitioners, were organized to reflect on interim findings. During these meetings the progress of the research was discussed, sources and contacts were disclosed and avenues for future research were identified.

4 RESULTS

4.1 CASE INTRODUCTION

The Dutch national government carries a legal responsibility for planning, building and maintaining national surface transport infrastructure networks. A national Infrastructure Fund secures annual budgets for executing this task. The allocation of this fund is done with national PPB system called MIRT - Long-range Infrastructure, Space and Transport Programme - which serves as an official annex to the national budget planning. The MIRT rules provide a formal administrative institutionalization structuring the procedure of policy integration, policy adoption, policy execution and monitoring and evaluation. In several distinct phases separated by formal administrative decisions, ministerial strategic transport policy goals are translated into clearly outlined projects (see figure 1). As such MIRT is an institutional instrument structuring policy implementation. Since its adoption in the early 90's the MIRT rules have been periodically revised to reflect the gradual policy shift from a sectoral transport planning to integrated land use and transport planning. A short historical perspective is offered on the context in which the PPB System was developed and evolved. For a detailed historical perspective this research refers to Arts et al. (2016).

In 1991 MIT, the precursor of MIRT (without R which stands for 'ruimte': space), was introduced, during a period of New Public Management, as a transport PPB System to operationalize controllability, transparency and output steering. MIT was designed to move away from a planning system which was at that time considered bureaucratic and received increasing social critique (Van den Brink, 2009). In line with private organizational management principles a division was made between policy making at ministerial level, and policy delivery by governmental agency Rijkswaterstaat. Alongside the incremental adoption of New Public Management principles, a shift occurred towards integrated planning (Heeres et al, 2012). Land use transport integration became a central policy goal. This goals was even captured in the Traffic and Transport Planning Act (1996) to "emphasize the need for integrated traffic and transport policy. This means intersectoral integration and integration with spatial planning, environment and economy"[1]. This converging trend between transport planning and land use planning continued, uniting two disciplines with divergent rationales (Filarski and Jeekel, 2016; WRR, 1998).

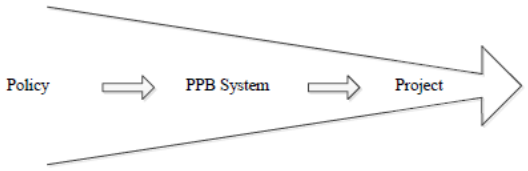

Figure 1 – The current MIRT procedure and its development throughout the years

In 2008 the 'R' was adopted in MIRT. The Ministry of Transport, Public Works and Water Management and The Ministry of Housing Spatial Planning and the Environment merged into one Ministry of Infrastructure and the Environment. Also Rijkswaterstaat as executive agency underwent a reorganization as a new management framework stressing public-orientation and interactive planning (van den Brink, 2009). Despite these, and several other institutional adaptations, the implementation of land use transport integration has shown to be limited successful (Lambrigts et al., 2016). A review of the MIRT procedure, initiated in 2014, resulted in revised MIRT rules in 2016 aimed at stimulation land use transport integration along the principles broad scope, custom-fit and collaboration (Ministerie IenM, 2016). The next paragraphs describe how this goal of land use transport integration is institutionalized into the MIRT rules and how other formal and informal institutions are influencing the extent to which that goals is achieved in practice.

[1] Parliamentary Papers II 1996-97, 25 337, nr. 3, p.13

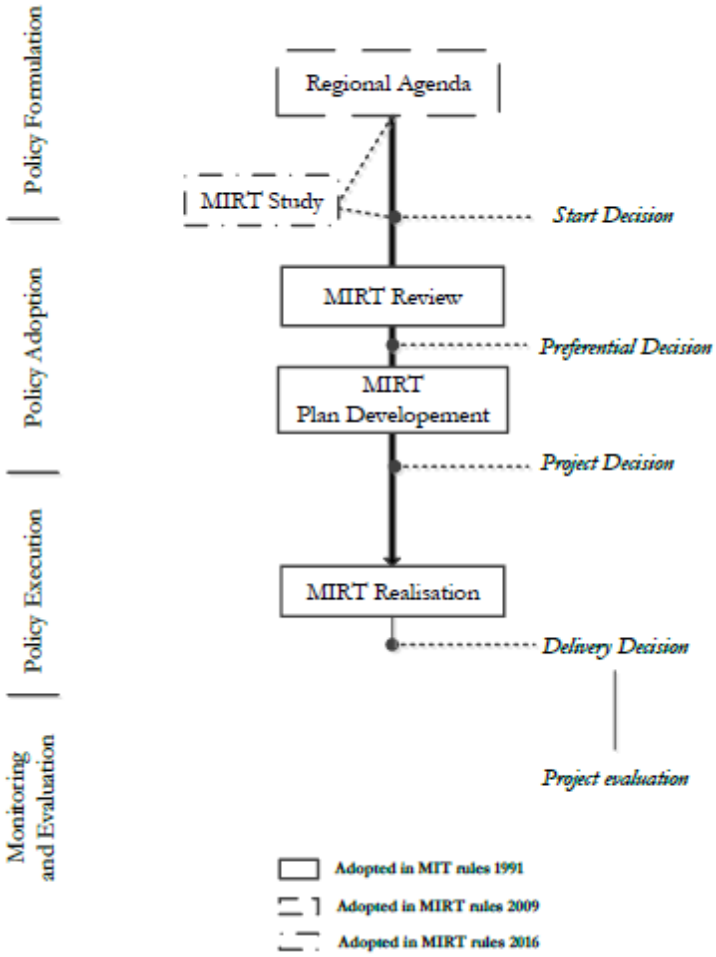

Figure 2 – The current MIRT procedure and its development throughout the years

4.2 POLICY FORMULATION IN MIRT

Traditionally MIRT aimed at efficient and transparent project delivery. Policy formulation was separately done at ministerial level. As the ambition for land use transport integration developed the front end stage of the MIRT was redesigned to facilitate policy development and policy integration. In 2009 the Regional Agenda was formally introduced in the MIRT Rules and periodical administrative consultations were adopted in the decision making process to encourage policy integration (Ministrerie VandW, 2009). The Regional Agenda functions as a platform for integrated agenda setting at regional scale. Its aim is to establish collaboration and integration between different governmental bodies (vertical and horizontal) and between sectors within one of the seven defined agenda regions (Ministerie IandM, 2016). These agendas provide input for formal decision making that done by national , regional directors and when relevant market an civil society actors during annual administrative consultations. The MIRT rules describe this as a strategic deliberation process in which formal decision making occurs and transport related policy issues are defined. A policy problem is formally adopted with a start decision, this marks the transition towards the next phase of the MIRT process. When more insight is required in the policy issue it is an option to start a MIRT Study. The phase of policy formulation ideally policy makers and decision makers from different governmental bodies, as well as market and civil society actors.

The traditional top down sectoral orientation of MIRT, limited employability of the Infrastructure fund and political culture are described by respondents as the institutions influencing land use transport integration in this MIRT phase.

“From a historical perspective policy making at national level has occurred in siloes, separated in different departments” (Respondent B2, 2017). “The infrastructure component is very dominant. A MIRT

administrative consultation, put very black and white, is all about public officials safeguarding projects (Respondent C8, 2017). Respondents describe a culture where collaboration between departments and ministries is obvious. This can be illustrated by the following three quotes. “The added value of taking an integrated approach in national level cannot be expressed in economic benefit, and current culture economic benefit or enhancing effectivity are the main incentives for collaboration”(Respondent B5, 2017). [On a ministerial visit of a government official responsible for the allocation of housing development sites] “he says: I want to build these houses as fast as possible so we should develop on pasture. Developing in urban areas is too much hassle” (Respondent B5, 2017). “I just notice that the collaboration and coordination between ministries is not very good. Multiple accidents are happening because we do coordinate well” (Respondent c8, 2017). Furthermore MIRT is said to be very much top down as national interests are dominant, and “the money contributed by regional partners is usually much lower” (Respondent C4, 2017).

The allocation of the Infrastructure Fund is legally confined to the construction, management, maintenance and operation of transport infrastructure for people and goods[1]. Potential land use planning solutions for transport issues can therefore not be financed with the Infrastructure Fund. In line with findings of IBO Werkgroep (2016), multiple respondents have defined this as a barrier for land use transport integration. The follow quote reflects this: “as soon the topic changes to finance problems emerge. Mobility mingles with other policy issues and things get difficult” (Respondent B1, 2017)

Decision making in MIRT is strongly influenced by politics. “Members of the parliament and aldermen, they demand projects. That is how they discern themselves” (Respondent B5, 2017). It influences how the MIRT Rules are interpreted “it is a very nice model. But every now and again projects just come falling from the sky” (Respondent B4, 2017); examples are given of projects that start at the MIRT review phase (Respondent B6, 2017). Research by Mouter (2016) confirms the strong influence of political games on decision making. This political culture is also mentioned as a barrier for collaboration: “Politics and trust do not mingle well. I mean look how things go in the Tweede Kamer [Dutch Lower House of Parliament], people are constantly trying to bring each other down” (Respondent C7, 2017).

4.3 POLICY ADOPTION IN MIRT

The phase of policy adoption is institutionalized with the instruments MIRT Study, MIRT Review and MIRT Plan Development. The MIRT Study aims at providing additional insights into a, in the administrative consultation, defined transport policy issue by e.g. delineating the scope, pinpointing its relation to other policy topics or distinguishing involved actors. This instrument aims at providing an integrated perspective. The outcome of a MIRT Study can be to that no further action is required, that measures should be taken outside MIRT or a start decision is made and the policy issue proceeds to MIRT Review. The MIRT Review consists of a problem analysis and the formulation and weighing of different solutions, aiming to formulate a preferred alternative. MIRT Review is a very structured procedure starting divergently, looking for diverse solutions, and then converging working towards specific project formulation (Rijkswaterstaat, 2010). MIRT Rules stimulate a broad an inclusive perspective by requiring the consideration of at least one alternative that does not comprise infrastructure development. A preferential decision, marking the transition between MIRT Review and MIRT Plan Development, is made during administrative consultation. MIRT Plan Development translates the chosen alternative solution into executable planning along. The MIRT rules prescribe a project approach for sectoral oriented solution and a programme approach for integrated solutions comprising multiple interrelated projects. A project decision binds the involved actors legally to execute their task.

A central topic in the interviews and focus groups on the policy adoption phase is the cultural clash that occurs between policy makers and project managers. Ambitions of integration from policy makers strokes with project-management culture. “Practice shows the more things you try to combine, the more complicated a project becomes. Project managers are accounted for keeping within time and money. So then you do not want to make things complicated” (Respondent B1. 2017). The strong focus on projects in MIRT is seen as negative influence on the adoption of integrated policies. Programme management is introduced in latest MIRT rules as intermediate structure between integrated land use transport policies

[1] Parliamentary Papers II 1990-91, 21 912, nr. 3

and project execution (Ministerie IenM, 2016). Programme management is widely acknowledged by respondents as a potential approach to stimulate the delivery of integrated policies. On the current employment of programme management a respondent states “you see that programmes are very much focused on a single modality [..]we have a wonderful railway programme [..] but this programme can be considered a collection of different projects to get. This works fine, but integrated? Not really” (Respondent B6, 2017).

4.4 POLICY EXECUTION IN MIRT

During the MIRT Realisation the focus is on project or programme delivery. The scope, time planning and budgets have been translated into contractual arrangements before the start of this phase. That makes MIRT Realization a clearly delineated and straightforward process. The delivery decision provides accountability on the realisation process and marks the end of this phase.

Respondents agree that there is minimal room for integration during MIRT Realisation . “Once you entre MIRT Realisation you are dealing with ridged scope leaving no room for negotiation” (respondent B6, 2017). For project managers it is attractive to keep the scope of the project narrow as it creates. The emphasize on clear project delineation is one of the reasons why project delivery is still very much a transport planning oriented endeavor. “Creating a robust network. That is why I realize infrastructure. Not because I want the road to be beautiful” (Respondent C4, 2017).

4.5 MONITORING AND EVALUATION IN MIRT

The MIRT rules do not contain policy evaluation instruments. Evaluation delivery decision does contain a project evaluation, which is performed a year after project delivery, that monitors if the legal norms (e.g. air pollution, noise level) are met.

Outside the MIRT rules the Environmental Management Act requires an Environmental Impact Assessment for infrastructure projects which possibly have a negative environmental impact. This can be considered another type of project evaluation. Evaluation loops from project delivery to the policy from which they originate are non-existent in MIRT at the moment (Respondent B1, 2017). But this is changing as “the minister specifically asked for MIRT monitoring [referring to Regional Agenda] in two administrative consulatations” (Respondent B5, 2017). Currently there are several initiatives to establish policy evaluation instruments, but these have not been formally institutionalized. “We want to specify the Regional Agendas to enable their evaluation. At the moment this is not possible […] it requires the regional agenda’s to be more specific” (Respondent B5, 2017). Also “there is a lot of resistance for policy evaluation from the regional partners involved in MIRT” (Respondent B5, 2017).

5 CONCLUSION

Transportation planning in developed countries has shifted from a technocratic approach towards a focus on land use transport integration. Despite this shift, successful implementation of land-use transport integrating remains scarce. Multiple scholars have referred to the influence of institutions land use transport integration. Through an in-depth case study on within the Dutch national transport PPB System we have tried to gain a deeper insight in how institutional congruence influences land use transport integration. This was done by analyzing the different phases of policy formulation, adoption, execution and monitoring and evaluation and disentangling land use transport integration into four components by distinguishing between dimensions (horizontal and vertical) and integration types (policy and project). Distinguishing between phase and components of land use transport integration was valuable. This enables to show, first of all, that each of the four phases has distinct role in achieving land use and transport approach. And second that distinct institutions, both formal and informal, influence specific dimensions or a specific type of land use transport integration.

As such the institutional congruence approach deployed here has led to a more detailed understanding on how land use transport integration is achieved. Due to focus on the whole planning programming and

budgeting system our findings remain somewhat. A more in-depth analysis of each of the different phases is expected to reveal a more detailed understanding on how a complex whole of different institutional structures, informal and formal, originating from different time frames, collectively shape the process of land use transport integration.

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ID 1651 | THE AMBIGUITY OF CYCLING AND URBAN DESIGN

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1 INTRODUCTION: ALIGNING CYCLING AND URBAN DESIGN

The term “urban design” has been a source of ambiguity among researchers focusing on cycling for a few decades now. Although commonly alluded to, urban design often lacks a precise definition in relation to cycling, and when used to describe cycling, is often referred to in conjunction with other ideas, such as planning, transport, and land-use. For example, a Google Scholar search for the term “urban design cycling” lists a mix of various sources, including literature like “Environmental Correlates of Walking and Cycling: Findings from the transportation, urban design, and planning literatures” (Saelens et al., 2003), which provides an overview of transportation literature and little to none on urban design. This is reflects the general state of cycling research, and Krizek et al. (2011) attests that that cycling has been viewed primarily in functional terms in relation to urban design, and that comparatively less research has been done on the aesthetic and experiential aspects of cycling. They also articulate the gap between the urban designer’s social and experiential focus on the pedestrian realm, such as sidewalks and plazas, and the traffic engineer’s operational focus of flow and speed in the motor vehicle realm of highways and intersections (Forsyth and Krizek, 2011; Hamilton-Baillie, 2004). However, this raises questions on the ambiguous role of urban design within the domain of cycling, and how urban design methods and processes can be used to address problems related to cycling and space. Furthermore, it must be understood why these problems fall specifically within the realm of the urban design discipline, as opposed to the expertise of urban planners, traffic engineers, or many of the other disciplines that also engage with cycling. In particular, this paper investigates the role and opportunity for urban design to expand the qualitative approach for framing the relationship between cycling, mobility, and space. Working on the assumption that the domain of cycling can benefit from a comprehensive overview of the various fields of literature it draws from, including urban planning, transport, mobilities, and public health, this paper is a critical evaluation of existing literatures and the role urban design can play here.

The first part of this paper introduces modern urban design as an interdisciplinary field, and articulates how urban design is distinct from the disciplines of urban planning and traffic engineering in how they study mobility and transport. Given the close ties of the urban design and urban planning disciplines, there is a tendency for researchers to refer to the two disciplines collectively, reflecting the ambiguous line between what is urban design and what is planning (Steino, 2004). Yet, there is value in defining each discipline separately, and Moudon (1992, p. 331) argues that the emergence of the urban discipline in the 1960s was “born out of a search for quality in urban form… focused on urban environments that have both functional and aesthetic appeal to those who inhabit them.” Hence, the urban design approach is one that prioritizes the aesthetic qualities of urban space while accommodating the functional requirements of cycling.

The second part of this paper surveys the academic literature on cycling and places the research into three frameworks: functional, social, and experiential. These frameworks have been developed from a literature review of the landscape of the literature on cycling, and these three frameworks will be used in this paper as approaches to understand cycling, mobility, and space. The importance of each approach has dominated and receded as the role of urban designers have evolved in relation to other disciplines that are also concerned with urban space and mobility, including public health (Freestone and Wheeler, 2015), traffic engineering (Dumbaugh and Rae, 2009), urban sociology (Jacobs, 1961), environmental psychology (Lynch, 1960) and mobilities studies (Sheller and Urry, 2006).

Finally, this paper concludes by outlining the relationship between urban design and the other disciplines that also study cycling. If urban planning is positioned as the more technical and quantitative of the two disciplines, then the role of urban designer may be to uncover the social, aesthetic and experiential aspects of cycling, in line with the urban designer’s particular interest of the experience of space in general. Insofar that urban design is recognized as an independent discipline and that researchers use the term “urban design” to refer to a body of ideas, it is useful to carve out space for the academic study of

cycling in relation to urban design, or, alternatively, to establish the urban designers' interdisciplinary role in facilitating the synthesis of knowledge from many disciplines.

Modern conceptions of the relationship between cycling, mobility, and space is often a combination of historical ideas, and some of these ideas have branched into their own disciplines. To understand how cycling is positioned in the context of urban design, this paper demonstrates a progression of mobility and spatial frameworks that has resulted in our current understanding of the relationship between cycling and urban design. The goal of this paper is to use these frameworks to form an interdisciplinary conceptualization of the current academic discourse on the relationship between cycling and the built environment through a literature review. By examining these ideas using the functional, social, and experiential frameworks, the contributions of various disciplines can be incorporated into urban design thinking.

2 METHODOLOGY

This paper is uses cycling and urban design literatures to identify overlaps and gaps in current research about cycling, mobility, and space. The goals of this literature review is twofold: (a) to establish the nature, methodology, and central problems of the contemporary urban design discipline and the opportunities for urban design to contribute to cycling research, and (b) to provide an overview of the research on cycling from various disciplines to arrive at an appropriate framework to perform a synthesis of cycling research into the urban design discipline.

To ascertain an overview of the state of the cycling literature, a broad search for topics relating to cycling and the built environment was conducted using Google Scholar to identify the disciplines currently studying cycling and the built environment. The most important attributes for locating sources were: year of publication, number of citations, and references to urban design literature. The literature search found that urban design often lacks a precise definition in relation to cycling. When used to describe cycling, urban design is often referred to in conjunction with other disciplines, such as planning, transport, and land-use. The focus on the functional aspects of cycling in the context of urban design has also been noticed by Forsyth and Krizek (2011) in their literature reviews.

The literature review then focused on articles that explicitly focused on non-functional aspects of cycling and models about how these non-functional aspects relate to the built environment. Through this process, fifty-one articles were reviewed and the disciplinary affiliations of its authors were identified. These articles were then tagged with keywords of their main content. The frameworks and models contained within these papers were compiled and summarized, and grouped into the disciplines of urban design, urban planning, engineering, transportation, public health, and mobility studies. There frameworks provided the basis for organizing this article. The key consideration for selecting a final framework for this article was its ability to accommodate interdisciplinary processes that are used to study cycling in urban design. To arrive at the three frameworks used for this paper, the functional aspects of cycling as most commonly studied by researchers was found to be juxtaposed against the aesthetic and experiential aspects of the environment (Forsyth and Krizek, 2011; Latham and Wood, 2015). In addition, this review also adds the social framework that seeks to capture a major area of research that is missing from the functional-experiential juxtaposition. These include the how people view cycling in the context of their social environment (Daley and Rissel, 2011) and how cycling fits in with the public health goals of society (Saelens et al., 2003). Together, the review of the cycling literature across many disciplines created the functional, social, and experiential frameworks that will be used to examine cycling in relationship to urban design.

3 INTERDISCIPLINARITY AND NORMATIVITY IN URBAN DESIGN

Since the establishment of urban design in the 1960s, urban design has drawn methods and ideas from other disciplines, and is characterized by Steino (2004) as "motley body of ideas", or what Carmona (Carmona, 2014) regards as a "mongrel discipline". Within its recent past urban design has inherently been an integrative discipline that draws from other fields of study. To support the core theories of urban design, Steino argues that, "the viability of any normative theory of urban design in practice depends on its ability to relate to other rationales" (Steino, 2004). Hence, approaching cycling from the urban design

perspective requires a framework for either integrating knowledge from other disciplines into the field of urban design or for creating knowledge that is specific to the field of urban design. Carmona (2014) outlines a few options for moving the urban design discipline forward. In the paper, "The Place-shaping Continuum: A Theory of Urban Design Process", Carmona observes that the urban design discipline can be conceived in two ways:

First, as a focused amalgam of core knowledge and practice pragmatically drawn from other fields, both professional and intellectual.

> *Second, as a distinct and evolving field that has added to, worked over and given new meaning to this borrowed knowledge and practice through […] fashioning it together into a singular and tolerably coherent field of knowledge [or…] the generation of new knowledge around what is unique about the subject and practices of urban design. (Carmona, 2014)*

Implicit in drawing knowledge from other fields is to also integrate and make the various pockets of knowledge coherent and connected to create a whole body of knowledge that is greater than the sum of its parts. Khan et al. (2014) contrasts the relatively fragmented multi-disciplinary approach of "contracting out of services", to the interdisciplinary and transdisciplinary integration of knowledge as envisioned by urban design:

> *It is in interdisciplinary work that the participants cross their 'own' epistemic boundaries, to co-produce new concepts and methods. [… Alternatively,] transdisciplinarity involves the members of different scientific and practice fields working together over a long period of time, which creates the possibility of producing an overarching synthesis that goes beyond any single framework. (Khan et al., 2014, p. 399)*

Currently, the urban design discipline is criticized for its absence of a positive methodology to support the normative values of the discipline. Normative theories of urban design project visions of the good city, and most urban design theories rank the importance of various aspects of the city. In contrast to the focus on aesthetics in relation to mobility, the mid-nineteenth century gave rise to a functionalist view of cities and public space. This view can be seen in the field of urban planning and transportation forecasting, starting with the four-step traffic model has been used since the 1950s and remains in use in some places today (McNally, 2008). The functionalist view of the relationship between mobility and space reduces travel as a necessary cost of moving two points in space (Sheller and Urry, 2006). However, reducing mobility to this functional problem also implicitly removes the aesthetic and social considerations that is urban designers. The effect of this functional view of mobility is to remove considerations of travel experience, and to reduce the journey to two dominant measurements: time and cost.

To counter this functional view of transport literature in general, and cycling in particular, the most important value of urban design as a discipline is its normative arguments in defining what a good city is. One insight from urban designers is to balance the needs mobility to serve the good city, rather than designing cities around the needs of transport modes (Bertolini, 2012). Urban design in particular has a rich history of normative theories that have influenced cities of the past century. Steino remarks,

> *Normative theories of urban design generally take a critical stance towards the status quo. Thus, the societal theories of urban design are critical towards the existing society, envisaging new concepts for society and its organization in space. (Steino, 2004)*

One role of urban designers could be to prescribe the normative values and visions of cycling and mobility in cities but to leave the technical expertise of construction with the engineers. This division of labour is a viable arrangement, as long as the normative-positive division holds true. However, as the technical disciplines have dominated the academic study of cycling, the functional approach have also encroached into the normative aspects of cycling, and dominated the study of transport and mobility in general (Spinney, 2009). The distinction between the positive and normative aspects of cycling is important in itself because the idealistic visions for cycling's role in the good city not cannot be established merely through positive methodology alone, but rather, it must be developed from a normative stance. If, for example, cycling is portrayed as a value-free domain of transport engineers, then the connection between cycling and the good city can be lost, giving way to a mechanistic focus on speed, movement, and transport efficiency.

After locating the core knowledge relating to cycling in urban design, the goal of urban design could be the creation of interdisciplinary and transdisciplinary integration of the diverse range of knowledge on cycling that exists today. This process provides new scaffolding for normative theories of urban design to be supported by positive methods from other disciplines. Hence, the lack of core knowledge and the ambiguity of the word “urban design” is an opportunity for integrative research. In relation to cycling, the task is two-fold. First, to catalogue areas of cycling knowledge that can be properly classified as within the urban design domain. The overview of various disciplines later in this paper is an attempt at constructing the “amalgam of core knowledge” (Carmona, 2014). Second, to coherently tie together bodies of multi-disciplinary cycling knowledge and to facilitate the collaboration of various disciplines.

4 THREE FRAMEWORKS FOR UNDERSTANDING CYCLING, MOBILITY, AND SPACE

Moving towards defining urban design as an interdisciplinary and normative field of cycling research requires a framework that brings together knowledge from other disciplines. So far, researchers have developed models for integrating various factors contributing to people’s decision to cycle (Saelens et al., 2003; Wang et al., 2016). However, existing models do not bring diverse disciplines and their respective methodologies together to support normative arguments about how cycling can be a field of integrative and interdisciplinary work. For example, while technical studies may be innovative in inventing safer intersections layouts and smoother bicycle paths, these individual improvements should be positioned in relation to research on social issues of culture, health, and social norms. Yet, it may be in an entirely different framework under which these two seemingly disparate fields of study may be connected. One example is to use the experiential framework to demonstrate that factors such as physical fitness and the skill level of the cyclist may affect both individual social perception of cycling (social) as well as their ability to comfortably use certain types of physical infrastructure (functional). This section identifies the functional, social, and experiential approaches of analysing cycling to provide frameworks under which various disciplines may interact.

These conceptualizations range from: 1) the engineering and planning perspectives associated with the functional framework, in measuring the speed, direction, and flow of traffic and understanding the relationship between land use, mobility, and accessibility (Botma and Papendrecht, 1991; Heinen et al., 2010); 2) the public health and urban sociology perspective associated with the social framework, in considering mobility and urban form in relation to social connection, physical exercise and active healthy lifestyles (Wang et al., 2016); and 3) the mobilities and environmental psychology perspective associated with the experiential framework, in studying the sensation and legibility of the environment from the perspective of the cyclist (Jones, 2012). Using the perspectives provided by various disciplines, this section will review the main ideas associated with the functional, social, and experiential frameworks as they relate to cycling.

4.1 THE FUNCTIONAL FRAMEWORK

From the modern urban planning perspective, a functional line of thought can be drawn between cycling and the built environment through quantitative land use and activity variables (Bertolini, 2012). The functional framework pursues the positive aspects of logistics in terms of movement, speed, and flow while seeking to minimize the negative impacts of congestion, collisions, and delays. To identify functional relationships, studies have been conducted to assess the correlation between built environment variables, such as trip distance, bike lanes, crash risk and bike parking, and people’s willingness to cycle (Heinen et al., 2010; Wang et al., 2016; Winters et al., 2011). The genesis of the functional framework can be traced back to the works of Le Corbusier, Robert Moses and the post-war idea of master planning. In this era, the goal of town planning went beyond establishing the physical location, form, and layout of land uses and buildings, and extended to the ideals of detailed master design of entire communities (N. Taylor, 1998). Although this functional conception of the city over the last decades has been ceded to engineers and urban planners through the division of public space into the traffic and design realms, the hybrid nature of cycling has challenged urban designers to integrate the needs of mobility with those of place-making (Hamilton-Baillie, 2004).

The traffic engineering discipline is most usually associated with the functional study of the bicycle in relationship to the built environment, viewing the bicycle as a physical element of traffic. Taylor and Davis (1999) summarizes the functional aspects of infrastructure design undertaken by their paper “Review of Basic Research Bicycle Traffic Science, Traffic Operations, and Facility Design”. As reviewed by this article, basic research in engineering relates to factors such as intersection control, pavement surfacing, acceleration characteristics, and cyclist reaction time, to name a few. The dominant methods for this line of research are naturalistic observational methods using traffic counts, computer simulation, and mechanical measurements such as size, speed and energy. In relation to urban design, these studies make explicit the physical parameters of the bicycle, and that the human-bicycle system has have limited capabilities. For urban designers, these limits serve to define the minimum necessary, but not sufficient, conditions for designing cycling-oriented spaces.

Travel demand is a topic that concerns both engineers and urban planners. In a mechanistic paradigm, people are assumed to travel in order to go to a destination. The total distance that people travel depend on the frequency of the trips and the destination of those trips. Relative cost and travel time are the usual measurements of behaviour in this model, but incorporating the idea of generalized travel cost without identifying its components results in a highly simplified idea of why people travel (Wee et al., 2013). The financial costs are conceived as the costs of gasoline, bus fares, road tolls and parking meters. Time costs are conceived as the missed opportunity of doing the next best thing as each minute of travel is reduced. This way of thinking implicitly values shorter time and greater speed. However, conventional models of travel demand do not explicitly consider the quality of the journey itself, even though an attractive urban environment is especially important to enticing active modes such as walking and cycling (Spinney, 2009).

A related component to travel demand is the mode choice of how people choose to travel. In order for people to choose to travel by bicycle, the bicycle must, on the whole, be advantageous compared to other methods of travel. Mode choice is related to travel demand as a percentage of total travel by bicycle. Mode choice can be influenced by trip characteristics such as trip distance (a function of land use), travel costs, cycling facilities, and other variables that are listed in detail by Hunt and Abraham (2007). However, choosing the bicycle for travel is also largely dependent of many factors are unrelated to trip characteristics, such as attitudes towards cycling and socio-demographic characteristics (Fernández-Heredia et al., 2014).

Land use factors such as density and use is recognized to have as having a large influence on cycling. However, land use is different from travel demand (when and if to travel) and mode choice (how to travel) in that the resulting land use patterns in cities is not the result of individual choice. On a trip by trip basis, a person may choose to travel down the street or to another city, or a person may choose to travel by car or by bicycle. However, living location and land use is constant over a longer period of time compared to choosing the method of travel (Wee et al., 2013). Therefore, land use is seen in combination with social measurements such as income and age as an overall factor in affecting people’s travel demand and mode choice decisions.

The functional framework ties together engineering research on the physical characteristics of cycling and the infrastructural needs of the cyclist with urban planning research on the relationship between travel choice, and land-use variables. For urban designers, the functional framework provides a wealth of quantitative studies that demonstrate a variety of ways in which cycling is related to the built environment, both as a physical object in the environment and as a transport alternative to other modes of travel such as automobiles, transit, and walking.

4.2 THE SOCIAL FRAMEWORK

The social framework is one of the earliest frameworks employed by urban designers with strong historical roots. Shaped by thinkers and designers, such as Jane Jacobs and Jan Gehl for example, the recognition of social dimensions of cycling has pushed urban planners and designers to extend their studies to the social factors that affect cycling. Gender, age, and cultural background have all been shown to affect people’s willingness to cycle (Harms et al., 2014; Pucher and Buehler, 2008). The idea that mobility is shaped by society is revealed in the history of cycling itself, having initially been viewed as a leisure activity of the wealthy and upper class with the introduction of the penny farthing. Only at the turn of the twentieth century, with the invention of the safety bicycle that was affordable to the masses, did cycling

become a common transport tool (Shove, 2012). This social concern with cycling extends to the present line of research, where cycling can be viewed as a highly politicised practice, with its own culture and subcultures (Spinney, 2009). Recently, there has been a notable increase in studies of the relationship between active mobility, physical exercise, and healthy neighbourhoods from the public health perspective (Dill, 2017).

Active modes of travel, such as walking and cycling has been the attention of public health professionals as a routine way to integrate more physical activity into everyday life. In recent decades, the academic study of public health and active transport has borrowed heavily from the methods used by traffic engineers and urban planners in creating quantitative analysis of the relationship between bicycle use and the built environment. (Saelens et al., 2003). The implications is that if land use can be demonstrated to affect cycling, then land-use policies should be able to affect public health through more travel-related physical activity. Public health studies have explicitly emphasized this relationship between policy and rates of bicycle use, both in terms of reducing death and injury from collisions and the positive health effects of increased physical activity due to cycling (Pucher and Dijkstra, 2003).

Social perceptions about the image of cyclists and peer groups associated with cycling also affect people's willingness to cycle. Is cycling a sport or a transport activity? Are cyclists viewed as law breaking? Daley and Rissel (2011) examine these questions and conclude that improving the social perception of cycling and cyclists has a large role to play in promoting cycling as a mainstream activity. Hence, the decision to cycle is not only influenced by the built environment, but also by the images of what cycling represents (Daley and Rissel, 2011). For example, in a survey of adults in a Flanders, a Dutch speaking part of Belgium, researchers found that social support played a more important role than environmental variables to encourage cycling. The results seem to suggest that given adequate cycling infrastructure, it is important for people to have friends and family who also support cycling (de Geus et al., 2008). Similar findings supporting the importance of social support in cycling was also found in study of a Portuguese population (De Bourdeaudhuij et al., 2005).

Measuring the social costs and benefits, as opposed to the individual costs and benefits of cycling, includes how users benefit from cycling as well as how cycling affects others in society. Two main approaches have been taken by researchers to understand the decision to cycle. One method analyzes the social, economic, and spatial data and relate those data points to the method of travel (Saelens et al., 2003). Another method is the use of surveys that ask people about their personal motivator and barriers to cycling (Winters et al., 2011). Some social benefits include the reduction of pollution, the creation of a more lively urban environment, an increase in general healthiness through exercise, and more equitable transportation access (McClintock, 2002). On the individual level, people choose to ride their bicycle because it is pleasurable, fun, fast, healthy, or to obtain a greener identity. However, the person choosing to travel by bicycle may not necessarily consider that their neighbours may breathe easier because of reduced air pollution, nor do people travel by bicycle consider that others may spend less time on a highway traffic jam.

The social framework ties together research on the physical activity benefits of cycling, social perceptions of cycling, and the various aspects of calculating the costs and benefits of cycling. For urban designers, the social framework brings awareness that the factors such as the image of cycling is also an aspect that can be influenced by the design language of the built environment. In addition, public health research shows that the benefits of physical activity from cycling for transportation yields health benefits in addition to improving accessibility through better transport options.

4.3 THE EXPERIENTIAL FRAMEWORK

The experiential framework focuses on the aesthetic experience in urban design. The experiences of movement has been studied by urban designers from the perspective of the person walking and through the windshield of a car, yet there the experience of movement from the perspective of the cyclist has not been extensively studied (Forsyth and Krizek, 2011). From the walking perspective, Bosselmann (2007) writes about perceptions of time through different urban environments by representing journeys through cities around the world using pictorial sequences. From a faster perspective, "A View from the Road" analyses the highway landscapes through the perspective of the driver (Appleyard et al., 1964). Only much more recently has extensive research been conducted from the cycling perspective. Stefansdottir (2014)

positions the experience of cycling in relation to a recreational and commuting purposes, drawing from theories of phenomenology of sensory perception and experience, urban design theory, and theory of environmental aesthetics. The field of mobilities studies have used mobile methods to analyse the experience of cycling, with Jones (2012) making explicit the sensory demands placed on the cyclist, and Latham and Wood (2015) viewing cycling in relation to the infrastructure that surrounds cycling.

In contrast to the land-use and transportation interaction that is studied closely by public health and urban planners, the field of urban design has its focus on the aesthetic qualities of urban space. However, much of this aesthetic study is done using stationary methodology, where the researcher observes space and other people's activities from a fixed point. Using stationary methodologies, urban designers are well versed in concepts such as mental maps, activities programming, wayfinding, and contact between people. Lynch (1960) also highlights the individual's subjective relationship to the built environment using the urban design the concept of "legibility", and Koseoglu and Onder (2011) applies Lynch's ideas to spatial forms and physical landmarks. Although Lynch's ideas of scales in terms of size, time, and complexity can be studied through the perspective of the cyclist, movement through space is more commonly analysed through the perspective of the pedestrian (Ewing and Handy, 2009; White, 2007) or from that of an automobile (Appleyard et al., 1964). These urban design ideas highlight that human experience of cycling cannot be fully described by physical measurements alone.

Surveys have been used to establish the human preferences of cycling infrastructure and environments. The survey approach is important because it attempts to capture the cyclist's perspective of their interaction with the environment. Questionnaire studies asking about the preferences of current cyclists (Hunt and Abraham, 2007; Li et al., 2012), current and potential cyclists (Winters et al., 2011), and a sample of the population (Tilahun et al., 2007). However, the survey method usually asks cyclists to recall their experience, resulting in a reflective account of people's experiences

What is notably missing in the field of urban design are techniques to observing cyclists, who experience the environment from a moving perspective, in order to understand how the particular movement of cycling can create its own meaning in relationship to space (Spinney, 2009). The most comfortable environment as perceived through a bicycle must be designed at a scale that is in between the scale of pedestrians and the scale of automobiles (Forsyth and Krizek, 2011). This pattern of scenery may be boring for the pedestrian or distracting for the driver, but is perfectly enjoyable at cycling pace. Thus, Forsyth and Krizek (2011) writes, "cyclists' speed, height and skill diversity present challenges and opportunities for urban design in terms of scale, texture and change over time."

To capture cycling experiences on a moment by moment basis, the perspective of the cyclist has recently been studied through the application of mobile methods by mobilities researchers. The use of video and ride-along interviews has been especially informative in capturing the experience of cyclists in motion (Latham and Wood, 2015). Others have focused on how cyclists mediate their exposure to the environment through devices such as headphones (Jungnickel and Aldred, 2014). By using mobile methods, the field of mobilities advances tools for exploring the user perspective of cyclists in real-time, and reveals cyclists' strategies for interacting with unpleasant aspects of infrastructure. Law and Urry (2004) argues that "existing stationary methods have difficulty dealing with the sensory – that which is subject to vision, sound, taste, smell; with the emotional – time-space compressed outbursts of anger, pain, rage, pleasure, desire, or the spiritual." The mobilities scholarship offers urban designers the tools for understanding cycling through movement, as opposed to the static interpretation of the experiential and aesthetic aspects of a city. It is through mobile methods that the tangential user motives of cyclists can be understood (Spinney, 2011).

The experiential framework ties together research in the field of mobilities and environmental psychology about perceptions of movement through the city, the legibility of space, and the sensory experience of cycling. The experiential framework focuses on the aesthetic dimension of urban space that is at the core of the urban design discipline, and recent research applies uses innovative mobile methods to understand how various elements of urban design are perceived through the perspective of the cyclist.

5 CONCLUSION: INTEGRATION OF CYCLING INTO URBAN DESIGN

Thus far, this paper has explored the boundaries of the urban design discipline, presented the potential role of urban design in articulating a platform for interdisciplinary and transdisciplinary research on cycling, and provided a review of cycling research through various frameworks. The final part of this paper concludes with a few examples of how the integration of cycling into urban design could happen.

Since Moudon (1992) and later Carmona (2014) articulated the core literature of urban design as the body of theoretical literature related to Lynch, Whyte, and Appleyard, the strength of urban design can be argued to lie within the experiential domain, with an awareness of the social issues associated with space. However, the contribution of urban designers have been largely limited to what Forsyth and Krizek (2011) expressed as the functional understanding of the requirements of cycling. Perhaps part of this problem is that other disciplines fail to see how the more qualitative aspects of urban design knowledge can be integrated into the largely quantitative methodology of urban planning and traffic engineering, exacerbated by the siloed nature of cycling research. In addition, there is a failure to recognize how the normative theories of urban design can play a role in the design of future cities to complement the positive methods used by other disciplines to understand cities (Moudon, 1992).

From the traffic counts of transport engineers, to video ride-alongs of mobilities researchers, to the surveys about social attitudes, the largest contribution of other disciplines to urban design is in the realm of methodologies. It seems that on balance, the use of qualitative methods applied to the study of cycling is more a more recent venture, and remains less explored than the use of quantitative methods. This focus on quantitative data is evident within the functional framework derived from traffic engineering, and planning, as well as in the social framework that uses demographic and physical activity data to study cycling. On the street level, a striking contrast between the qualitative realm of urban designers and the quantitative realm of traffic engineers is given by the following example:

> *The immediate, close-up environment of almost all our cities is determined by curbs, asphalt, road markings, bollards, traffic signals, barriers, and signs. We will negotiate our journey into and through the city amidst a landscape fashioned by traffic engineering. The rules that govern this landscape have little in common with the special cultural history and values that will have shaped the architecture and the unique signature of place. (Hamilton-Baillie, 2004)*

Here, a distinction is made between the foreground and the background of the city. In one domain, the functional control of the traffic engineers dominate. In the other domain, the aesthetic, social, and experiential priority of urban designers can be seen. The social perspective on cycling also contains both quantitative and qualitative approaches. On the one hand, there is the traditional quantitative methods of using demographic and physical activity data in correlation to quantitative measures of the urban environment such as street layout, residential density (Saelens et al., 2003). On the other hand, social researchers have also studied the qualitative image of cycling, as well as the role of social support and peer groups in people's decision to cycle (Daley and Rissel, 2011; de Geus et al., 2008) While research within the context of the functional and social frameworks employ positive methodologies, the normative values of what is measured, and implicitly promoted, is often unarticulated and uncriticised.

These new methods give urban designers the necessary tools for going beyond the utilities model of transportation planning used dominantly by transportation engineers and economists referred to as the "black box" conception of mobility referred to by Sheller and Urry (2006). In a study on cyclists' perceptions, Fernández-Heredia et al (2014) articulates:

> *The fact that the classic factors which determine transport user behaviour – such as cost and time – are not as influential regarding bicycles use as for other modes may indicate that these other kinds of factors of a psycho-social type gain importance in the correct characterization of cyclist behaviour.*

This reflects the mobilities critique of assigning value solely to stationary places and the utilitarian method of conceptualizing of travel as simply a matter of derived demand, used as a means to get to from origin to destination. Sheller and Urry (2006) argue that "[t]ransport researchers [...] take the 'demand' for transport as largely given, as a black box not needing much further investigation, or as derived from the level of a society's income. They tend to examine simple categories of travel, such as commuting, leisure, or

business as if these were separate and self-contained." By examining the experiential and qualitative aspects of cycling using mobile methods, urban designers can look inside this black box of travel to better understand the experience of travel, and to design the built environment to improve the cycling journey.

If urban designers know more about the social and experiential aspects of cycling, then is there framework to also integrate the technical expertise of engineers into the urban design process? This comes back to the question of the normative-positive divide and the position of urban design as an interdisciplinary or transdisciplinary field of study. For urban designers to set the normative agenda to move away from engineering concepts such as efficiency, speed, and traffic density, then these functional aspects of cycling must be adequately articulated in the context of greater social goals such as accessibility, aesthetics, and diversity. The functional aspects of cycling, from lane widths to intersection design to paving materials and traffic capacity serve as the building elements of enabling the physical operation of bicycles. These functional factors alone, however, only serve as necessary, but not sufficient factors of the good and pleasant cycling experience. Other elements, such as imageability, enclosure, human scale (Ewing and Handy, 2009), and perception, aesthetics, morphology (Forsyth and Krizek, 2011) are qualitative criteria, each consisting of numerous variables, yet it is precisely because these elements are not subject to direct numerical measurement that urban designers have the opportunity to apply qualitative methods of research and design. This provides the opportunity for urban design to integrate the functional, social, and experiential frameworks of cycling with research methodologies from multiple disciplines into a more complete understanding of cycling, mobility, and space.

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ID 1657 | ANALYSIS OF DYNAMIC PUBLIC TRANSIT ACCESSIBILITY IN WARSAW

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1 INTRODUCTION

Public transport plays an important role in functioning of every large city. It facilitates the flow of people and goods, and connects strategic areas of housing, labour, commerce or entertainment. Cities cannot develop properly when relation between those areas is not satisfactory. Public transport accessibility is a key factor to a stable operation of the whole system that city creates. It is generally understood as the ease of access to the means of transport and the ease of travelling to desired destinations. Concepts of the transport availability are used in the research on the settlement network, transportation systems and spatial development at every level (Olszewski, Dybicz, Śleszyński, 2013).

Public transport accessibility evaluation may significantly support management of city components of the city and whole transit network. The analysis should precede every major construction investment. It may also help local authorities intervene when current condition of public transport services is deficient in certain areas, especially housing developments poorly connected with public service areas and workplaces. Therefore, th following paper presents an attempt to asses a public transit time accessibility on the example of a medium-sized European city - Warsaw.

1.1 PUBLIC TRANSPORT SYSTEM IN WARSAW

Public transport system in Warsaw metropolitan area operates on the area of the city and 30 adjacent communes and covers about 2500 km2 (517 km2 in Warsaw and 1912 km2 outside the city borders). The annual number of passengers exceeds 1 billion (Urząd m.st Warszawy, 2015). The system consists of 267 bus lines, 26 tram lines, 4 city train lines (SKM) and 2 metro lines. Moreover, passengers who have appropriate tickets are able to use train lines operated by Masovian Railways (KM) and Warsaw Commuter Railway (WKD).

Important part in the public transport system is played by rail transport (railway, metro and tram), however bus is the most accessible mean of transport to the largest group of passengers. According to the data from 2013 it is estimated that during the year buses transported over 550 mln passengers, which is twice more compared to the number of passengers transported by trams or metro (Table 1). Tram is the second mean of public transport in terms of number of passengers. The third is metro (the youngest mean of transport in the city) which gains importance because of its capacity and travel time. Metro in Warsaw it is still under construction and the next 6 stations are going to be commissioned in 2019. In the peak time metro runs every 3 minutes. (Urząd m.st. Warszawy, 2015)

Mode of transport	Number of passengers [2013]
Buses	557 974 004
Trams	264 201 709
Metro	180 187 218
Railway – Fast City Rail (SKM)	22 578 235
Warsaw Commuter Railway	4 276 420
Railway – Mazovian Railroads (Koleje Mazowieckie)	30 043 675
Sum	**1 059 261 261**

Table 1 - Estimated number of passengers in 2013 divided into modes of transport.
Source: Urząd Miasta Warszawa, 2015

1.1.1 MODAL SHARE

According to data obtained during the travel survey of Warsaw inhabitants in 2015 nearly half of travels are made with public transport and one third of them with private vehicles. Almost 20% of trips are made on foot. After excluding the latter from the analysis the modal share occur as follows: 56.9% public transport, 38.6% private motor vehicle, 3.8% bicycle, 0.7% other means of transport. (Kostelecka, 2015b)

Every day inhabitants of Warsaw make 3.348.336 trips from which 44.1% comprise trips between home and workplace, 11.1% - trips between home and place of education, 35.1% - trips between home and other destinations and 9.7% - other trips with no connection to home. Majority of trips start and finish within the city boundaries and only 4.5% have their start or end outside it. Spatial layout of journeys shows that most of them take place on the west side of Warsaw (59.6%) and over one fifth (23.2%) requires crossing the Vistula river. (Kostelecka, 2015b)

The analysis of the data from years 1980, 1993, 1998, 2005, 2015 reveals the increasing value of inhabitants' mobility index in period 2005 - 2015, after a long period of decrease 1993-2005 (Kostelecka, 2015b). The cause of this increase is an ongoing process of development of rural areas in suburbs of Warsaw (urban sprawl) which is considered nowadays as one of the major problems in the city's spatial management.

Moreover, after the decrease of public transport share in 1980-1993 an inhibition of the decrease can be observed in years 1998-2005. It is the result of high expenditures to improve the public transport system and the competitiveness of it in terms of traffic congestion. On the other hand, in last 10 years public transport modal share dropped by almost 10%. Simultaneously the number of walking trips decreased from 30,1 % in 1980 to 17,9 % of all trips in 2015 (Figure 1). The cause of it is the increase of motorisation index and easier access to means of public transport (com. Figure 1).

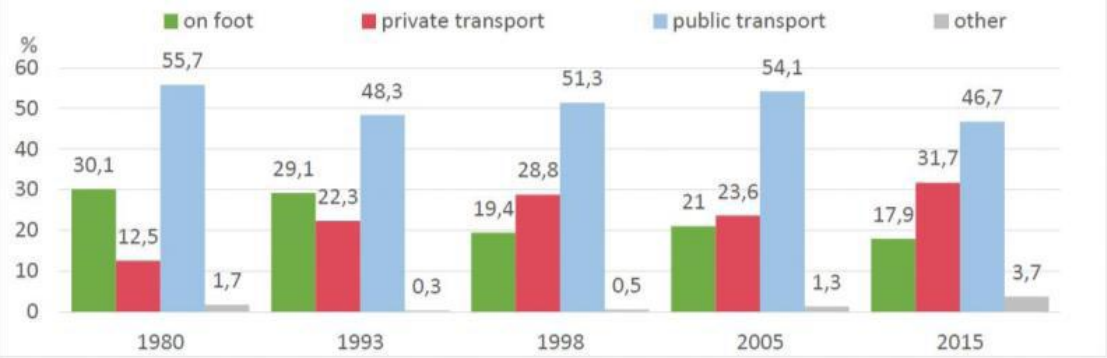

Figure 1 - Comparison of travel structure, by travel methods for travel in general. Source: Kostelecka, 2015b

The study of traffic volume conducted in 2015 (Kostelecka, 2015b) provided the numbers of cars within the metropolitan area. It is estimated that during a working day about 1 million of cars cross Warsaw borders as well as central area of the city (in both directions); 550 thousand of cars come from metropolitan area and 450 thousand from outer area. Furthermore, a significant rise of the motorisation index can be observed, which results in an increasing modal share of individual motor vehicles starting from the end of 1980s (Kostelecka, 2015b). According to the data published by Central Statistical Office in 2012 there were 580 vehicles per 1000 inhabitants in Warsaw, whereas in the 90's there were less than 400 cars. Similarly the index of motorisation raised in counties adjacent to Warsaw. For example, in Warsaw West County there were even 612 vehicles per 1000 inhabitants in 2012 (Urząd m.st. Warszawy, 2015). Increasing motorisation index and less access to public transport in communes outside Warsaw result in 59,9% share of cars (and only 29,6% of public transport) in all trips made by inhabitants from these areas (Kostelecka, 2015). These are the reasons for high traffic congestion during peak time in Warsaw. According to TOMTOM Traffic Index list Warsaw was ranked 42nd most congested city in the world (TomTom, 2017).

Cars are one of the main causes of air pollution in the city. According to Voivodeship Environmental Protection Inspectorate (WIOŚ) linear sources in the total pollutant emission share in Warsaw is the highest for nitrogen dioxide and particulate matter - PM10. The highest concentration of pollution occurs in vicinity of the roads of high traffic density and areas with dense development, especially in the city centre. A similar problem affects the whole metropolitan area where in 2011 according to Supreme Audit Office (Najwyższa Izba Kontroli, 2014) 63% of total PM10 emission from this zone was caused by linear sources (mostly transport). Moreover, a big number of motor vehicles in the city results in noise pollution. In fact, Warsaw is claimed to be one of the most polluted cities in Poland in terms of the number of people affected by overscaled noise and the area in which acceptable noise pollution index is exceeded (Warsaw City Council, 2015).

1.2 METHODS OF PUBLIC TRANSPORT ASSESSMENT AND ITS INSERTION INTO PUBLIC SPACES

Public spaces are one of the most significant components of urban environment. Not only are they important for social reasons but also influence the functionality of public transport system. Hence, authorities responsible for creating, managing and enhancing such system (including local government, urban planners, transport engineers, etc.) should introduce proper tools and methods of assessment of public transport accessibility. Since GIS become more and more common as an aid in different public governing areas, it seems obvious that methods of assessment of public transport accessibility will also be implied through such systems.

Cities around the world use different methods to study and analyse their public transport systems. They are usually based on evaluating time of accessing the public transport or distance between the stations and locations of residence (Fransen K. et al., 2015). Nevertheless, many other substantial factors may be taken into account to receive more precise view of a particular public transport system. For instance, PTAL (Public Transport Accessibility Level), a method introduced in London and then implemented in other British cities after modifications (GMAL, Greater Manchester Accessibility Level) consists of evaluating

time to get to public transport station from a defined Point of Interest and waiting time based on time tables (Measuring Public Transport Accessibility Levels, 2010). Welch and Mishra (2013) during their research on Washington-Baltimore region multimodal transport system and its impact on the environment added the factor of importance of the stations. They analysed the public transport frequency in peak and off-peak periods. The element that significantly improves the public transport accessibility assessment is evaluation of the time or cost of the journey to the defined destinations. Research on public transport vs. private car accessibility estimation in Tel-Aviv metropolitan area (Benenson et al., 2011) included walking time from the origin to a stop, waiting time, summarised journey time (travel times and waiting times between different buses) and walking time from the final stop to the destination (employment areas and other urban functional areas). Through GIS tool Urban.Access, developed by the researchers, the BTT (Bus Travel Time) was compared with CTT (Car Travel Time). Previously mentioned Lei and Church (2010) noticed that including estimated travel time into public transport accessibility assessment may occur insufficient. The value fluctuates depending on timetables. Including this factor into public transport accessibility assessment methods demands sophisticated GIS analyses implied into a specific public transport system.

Introduction of public transport accessibility assessment methods in other cities and enhancing them in existing ones pose a significant challenge for local authorities and specialists. It may help them recognise transportation service deficient areas and reshape the system accordingly.

2 METHODOLOGY

The main aim of the study was to analyse the quality of Warsaw public transport service. The model of public transport created on the basis of the total travel time to the city centre or to the key, centre-forming destinations enables identifying areas which are insufficiently serviced yet densely populated.

In order to measure the accessibility of public transport in Warsaw, it was crucial to identify key areas within the city spatial layout which are frequently attended by inhabitants. Those areas play important role in the city structure as they ensure workplaces, trade, education, recreation and community interactions. During the study points which represent district (major) centres and local (minor) centres were selected in every district of Warsaw.

The most significant part of the city is undeniably the city centre. In Warsaw it encompasses the area of the inner district Śródmieście and parts of adjacent districts: Wola, Ochota, Praga Południe and Praga Północ (the last two located on the right side of Vistula river) (Warsaw City Council, 2006). This area concentrates main government and local authorities' offices, embassies, international institutions and nationwide agencies as well as commerce, education and cultural objects (including historic Old Town and New Town). Multiplicity of key destinations within the inner city did not allow to select one central point of Warsaw, instead several points on two hierarchical levels were chosen (Table 2).

In the urban environment, apart from the inner city, it is possible to distinguish district and local centres. The first are usually anchored by local government seats, shopping malls or education institutions, especially universities. Such places attract not only residents of particular district but also from other parts of the city. According to the local planning act (Urząd Miasta Warszawy, 2006) district centres should be located suitably in the district layout, easily accessible and well connected with the city centre and housing developments. At this point, the fact that transport hubs influence strongly the city environment and often become district centres must be highlighted.

Local centres can be defined as multifunctional areas dedicated to residents of particular districts, which provide them with various services including retail, healthcare, education, culture as well as places of recreation and community integration (Oddział Warszawski Stowarzyszenia Architektów Polskich, 2015). Such areas, usually located between housing developments and public transport stops, aim their amenities mainly at local residents. Local centres were determined on the basis of "Warsaw Local Centres" project conducted by Association of Polish Architects in which areas of natural social interactions in the city's spatial layout were selected (Oddział Warszawski Stowarzyszenia Architektów Polskich, 2015).

Table 2 presents the list of important points distinguished from the urban space of Warsaw. They are divided into two groups based on their place in hierarchy of district and local centres and sorted by districts on each side of the city. Figure 2 shows the location of selected points.

West side of Warsaw	
1) Bemowo **District Centre:** 1) District Council of Bemowo **Local Centre:** 1) Department store *Hala Wola;* 2) Wrocławska bazaar; 3) Supermarket *Stokrotka* at Radiowa St.; 4) Bemowo shopping centre	**9) Włochy** **District Centre:** 1) Railway station Włochy; 2) Shopping centres at intersection of Popularna St. and Jerozolimskie Ave.; 3) Shopping centre Okęcie **Local Centre:** 1) Bakalarska marketplace; 2) Community centre *Artystyczny Dom Animacji*
2) Bielany **District Centre:** 1) District Council of Bielany, 2) Józef Piłsudski University of Physical Education, 3) Cardinal Stefan Wyszyński University **Local Centre:** 1) Sales and service centre at Conrada St., 2) Department store *Megasam Żoliborski, 3)* Metro station *Store Bielany,* *4) Wolumen* bazaar	**10) Wola** **District Centre:** 1) District Council of Wola; 2) Daszyński Roundabout; 3) Wola Park shopping centre **Local Centre:** 1) Sales and service centre at Górczewska St.; 2) Bazaar at the Koło neighbourhood; 3) Former cinema *Kino Femina*
3) Mokotów **District Centre:** 1) *Galeria Mokotów* shopping centre, 2) Warsaw School of Economics **Local Centre**: 1) Broniewski Orsza Square, 2) Jordan garden at Odyńca St., 3) KADR community centre, 4) Wałbrzyska bazaar, 5) *Land* shopping centre	**11) Żoliborz** **District Centre:** 1) Wilson Sq. **Local Centre:** 1) Department store *Hala Marymont;* 2) Grunwaldzki Sq.
4) Ochota **District Centre:** 1) Narutowicz Square, 2) Szczęśliwicki park (skiing slope), 3) *Reduta* shopping centre **Local Centre**: 1) Department store *Hala Banacha, 2)* Mołdawska marketplace	**East side of Warsaw**
5) Śródmieście **District Centre:** 1) surroundings of intersection of Jerozolimskie Ave. and Marszałkowska St.; 2) *Złote Tarasy* shopping centre; 3) Metro station *Ratusz Arsenał;* 4) Krakowskie Przedmieście St. nearby Warsaw University; 5) Plac Zamkowy in front of The Royal Castle in Warsaw; 6) National Museum in Warsaw **Local Centre:** 1) Department store *Mirowskie Halls;* 2) Savior Square; 3) Union of Lublin Square; 4) *Arkadia* shopping centre; 5) Warsaw University of Technology	**12) Białołęka** **District Centre:** 1) District Council of Białołęka **Local Centre:** 1) Sales and service centre at Światowida st.; 2) Shopping centre at Modlińska st.
	13) Praga Południe **District Centre:** 1) Wiatraczna Roundabout ; 2) PGE National Stadium ; 3) District Council of Praga Południe **Local Centre:** 1) Sales and service passage at Francuska St.; 2) Shopping centre nearby Szembeka Sq.; 3) *Promenada* shopping centre
	14) Praga Północ **District Centre:** 1) Metro station Dworzec Wileński; 2) Plac Weteranów 1863 r. (entrance to The Warsaw ZOO) **Local Centre:** 1) Haller Square; 2) Różycki bazaar
6) Ursus **District Centre:** 1) Railway station Ursus; 2) District Council of Ursus **Local Centre:** 1) Acher Park; 2) Plac Tysiąclecia; 3) Sales and service centre at Wojciechowski St. (nearby Park Hassów); 4) *Skorosze* shopping centre	**15) Rembertów** **District Centre:** 1) District Council of Rembertów; 2) Railway station Rembertów **Local Centre:** 1) War Studies University
	16) Targówek **District Centre:** 1) District Council of Targówek **Local Centre:** 1) *Renova* shopping centre ; 2) Trocka bazaar ; 3) Wiecha Square (in front of *Rompa* Theatre)
7) Ursynów **District Centre:** 1) District Council of Ursynów **Local Centre:** 1) Metro station Stokłosy - Ursynowski Shopping arcade; 2) Metro station Natolin - Galeria Ursynów shopping centre; 3) Metro station Kabaty - Tesco supermarket; 4) *Na Dołku* marketplace; 5) supermarket Auchan Puławska	**17) Wawer** **District Centre:** 1) District Council of Wawer (nearby railway station Międzylesie) ; 2) Children's Memorial Health Institute **Local Centre:** 1) Local community centre Marysin ; 2) *Falenica* marketplace
8) Wilanów **District Centre:** 1) District Council of Wilanów ; 2) The Wilanów Palace **Local Centre:** 1) Center of Divine Providence (Centrum Opatrzności Bożej)	**18) Wesoła** **District Centre:** 1) Railway station Warszawa-Wesoła ; 2) District Council of Wesoła **Local Centre:** 1) Sales and service centre at intersection of Brata Alberta St. and Wspólna St. ; 2) Sales and service centre at Trakt Brzeski

Table 2 - District and local centres in Warsaw Source: own study

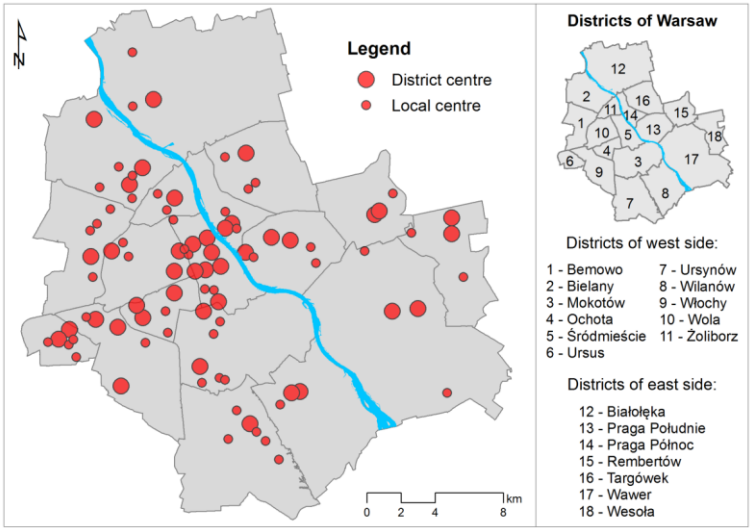

Figure 2 - District and local centres in Warsaw. Source: own study

2.1 MODEL OF WARSAW PUBLIC TRANSPORT

Model of public transit used in the study was based on data in the General Transit Feed Specification (GTFS) – a standardised data format for storing public transit routes, stops, and schedules (Morang, 2017). GTFS data is used e.g. in Google Maps transit trip planning or other planning applications. Since 2008 the number of transit agencies sharing open schedule data in common format increased from barely dozen to over a thousand agencies from almost every country around the world (Czebotar, 2017). Many major public transit systems, especially operators in US, have made up-to-date GTFS data for their systems readily available for download. Open-data movement also contributes to producing schedules in GTFS format, commonly available from a dedicated feed registry list (Transitland, 2017).

Public transit accessibility was evaluated using schedule-based transit analyses in ESRI environment. Tool “Add GTFS to a Network Dataset”, created by Melinda Morang, allows adding GTFS data to an ArcGIS network dataset and performing schedule-aware analyses using ArcGIS’s Network Analyst extension (Morang, 2017). GTFS schedule data for Warsaw was obtained from website Transitart (Inovatica, 2016). Network dataset was built using source point features (stop locations) and line features (roads obtained from Database of Topographic Objects - BDOT). Evaluation of public transit accessibility was performed using service area layer from Network Analyst extension. A network service area is a region that encompasses all accessible streets within given time breaks and is calculated on the basis of given cost - in the following study travel time with transit (ESRI, 2017). Accessibility was measured on the basis of travelled time, which is crucial for assessing public transit quality. The average travel time by public transport in Warsaw differs in years 1980 – 2015 and estimates 33 minutes in 2015, which is close to 30 min benchmark proposed in several studies (Cox, 2012; Goliszek & Połom, 2016). On the other hand, travel time between house and work destinations, the most often motivation of trip by public transport, was the highest of all motivations and estimated for 40 minutes in 2015. Moreover, the number of trips longer than 45 min, which is a limit time value of travel between city areas, was the biggest in this group (Kostelecka, 2015; Warsaw City Council, 2015). The methodology of the study was based on detailed positioning of isochrones of access in 5 minute intervals. Isochrones covered 15 min, 30 min, 45 min, 60 min and 90 min travel time to the destination. Calculation model is presented in the Figure 3. The test performed within morning rush hours, 6:00 – 9:00, on a working day.

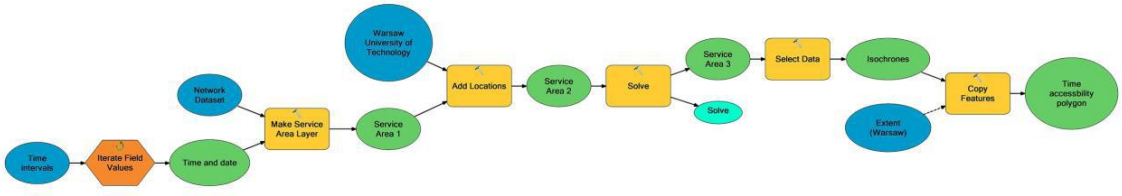

Figure 3 - Model for calculating isochrones in given intervals. Source: own study

Deviations in the operation of public transport were analysed using population data from 2011, derived from geostatical portal (http://www.geoportal.gov.pl/), divided into census blocks. The area of high population density was later used to select areas characterised with high population density and low public transport time accessibility. To obtain this, travel time and population data were standardised and summed, resulting in the indicator of the public transit time travel quality. Areas where average travel time was lower than 30 min were classified as satisfactory from the point of view of public transport handling. Public transit time accessibility indicator was classified using method of Natural Breaks into three classes (Figure 6).

The next question considered analysing accessibility of district and local city centres. Basing on the map of recognised areas (Figure 2), created isochrones covered travel time to the nearest destination in 10 min intervals (10 min, 20 min, 30 min, 40 min, 50 min, 60 min). The performed test included travel time towards facility, at 9:00 am, on a working day (Figure 7).

3 RESULTS

The results of service area analyses show differing public transit accessibility at following time intervals (Figure 4).

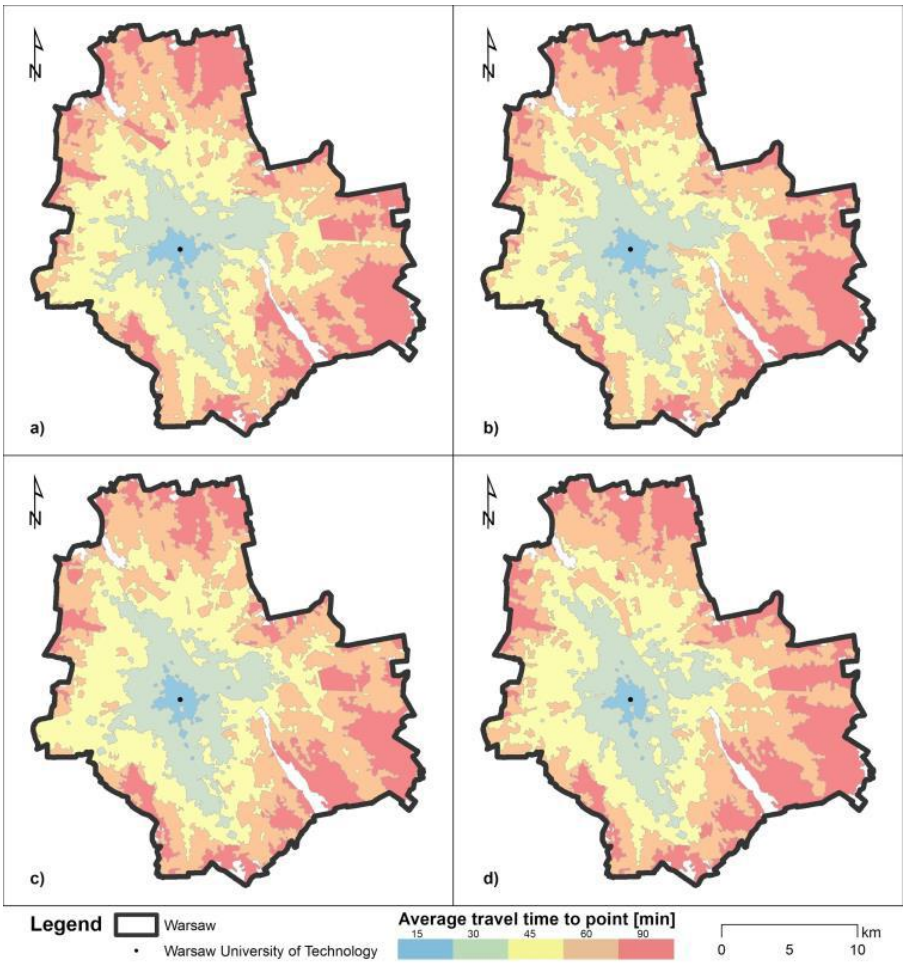

Figure 4 - Public transit time accessibility at 6:00 (a), 7:00 (b), 8:00 (c) and 9:00 (d) on working day. Source: own study.

Differences in time travel can be observed on the borders of the intervals. To obtain quantitative assessment of public transit accessibility in morning peak, the average travel time isochrones were calculated on the basis of raster isochrones in 5 min intervals in period 6:00 - 9:00 (Figure 5).

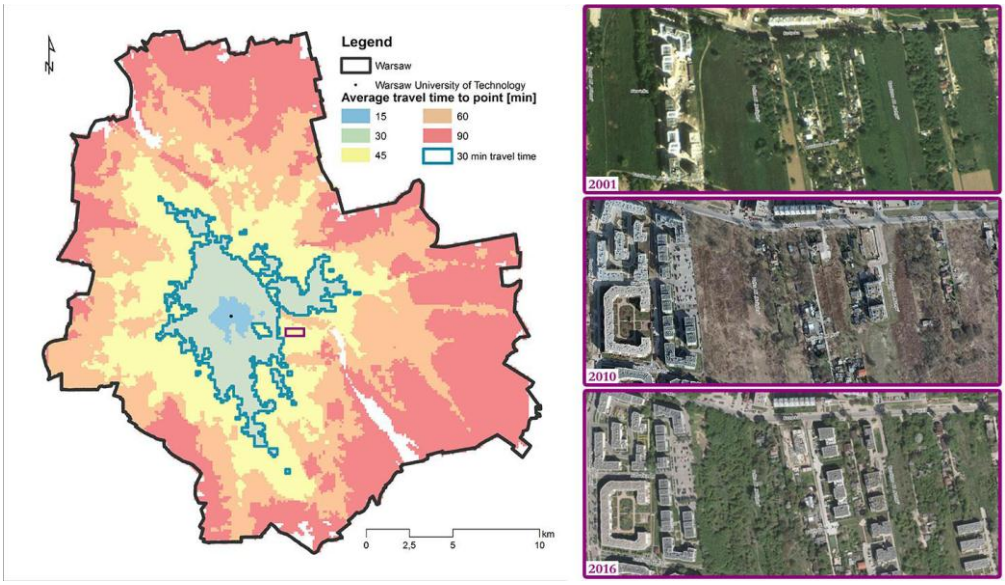

Figure 5 - Public transit average time accessibility in morning peak on working day. On the right: Czerniakow area in Mokotow district. Source: own study, http://www.mapa.um.warszawa.pl

Map of average travel time isochrones to city centre in the morning peak shows that the area of the lowest, 15 min travel time, is relatively small and covers area that can be also reached within 30 min walking distance. The satisfactory, 30 min travel time area covers both sides of the river. However, Vistula river is a visible barrier for public transit accessibility. In general, right side of the river has lower level of transit service to the city centre, located on the west side of the river. Strong influence of the metro lines and rail transport can be observed. Outside their service, the average travel time from the external parts of the city reach up to 90 min and higher.

Area with a lower time accessibility to the city centre, but still within a close distance, can be generally divided into two groups. First group includes areas closed for public transit, such as airports, railways, cemeteries, parks or industrial areas. The second group consists of new, rapid developments - attractive in the terms of location, nevertheless, not able to provide sufficient public transit service. Czerniaków, part of the Mokotow district (Figure 5), is exceptionally negative in the context of travel time. Located only 3 km from the city centre, but with 45 min average travel time, is intended for new, intensive housing investments.

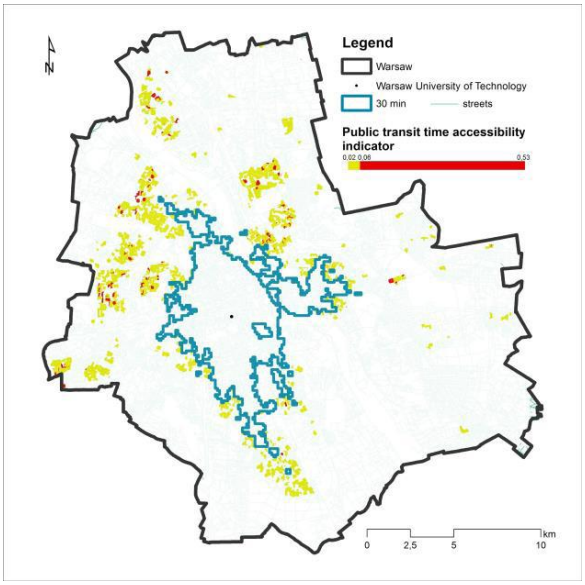

Figure 6 - Public transit time accessibility indicator. Source: own study.

Outside the area of 30 minute average time travel to the city centre live 1 283 875 residents of Warsaw, which gives 74% of total Warsaw population. Area of acceptable (30 min) time accessibility covers only 10% of city area. With the use of public transit time accessibility indicator highly populated areas, with significant travel time to city centre could be assigned. These are mostly observed in large-panel system building settlements on the north of Warsaw (Chomiczówka in Bielany district, Bemowo, Praga Północ, Białołęka). Low quality of transit service was also observed in western edge of Ursus district and in Ursynów district, despite their rail connection with the city centre (Figure 6).

Second part of the study consisted of identification and analysis of public transit accessibility of district and local centres (Figure 7).

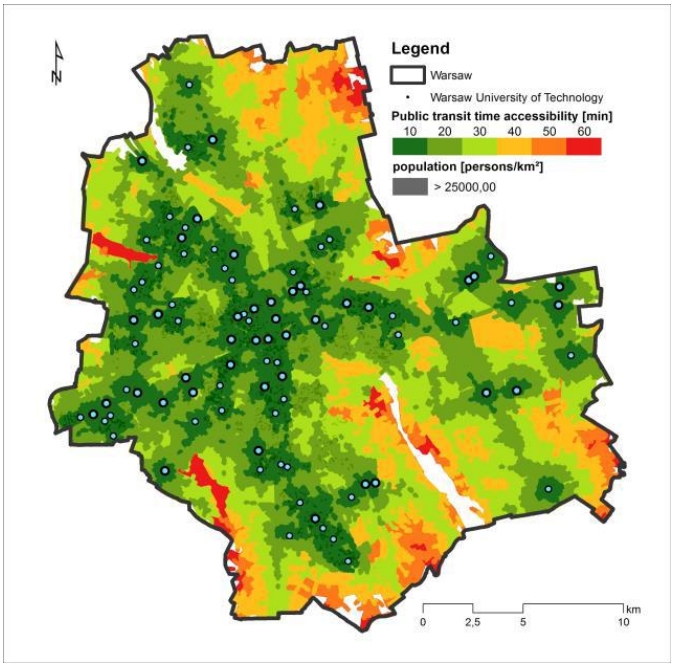

Figure 7 - Public transit time accessibility to district and local centres at 9 am on a working day. Source: own study.

The map shown in Figure 10 presents district and local centres localisation and the time of accessing them from every place in Warsaw at 9 am on a working day. It may be clearly noticed that the centres are distributed unevenly. An aggregation of them occurs in the centre of the city and along the major transit routes, where the access time approximates 10 minutes. Satisfactory results also cover more remote areas, such as Ursus and Włochy districts and areas with metro line stations. However, many service deficient areas may be also indicated. They usually cover developments placed away from major transit routes and close to Warsaw borders. Nevertheless, critical areas such as part of Mokotów district near Vistula river (e.g. Czerniaków, mentioned before) or Rembertów and Targówek localised relatively close to the city centre also have excessive access times to district and local centres. Such state is partially determined by the lack of the centres in those areas and improper public transport connection between them and the closest centres. Another peculiar phenomenon is the differentiation of the public transport time accessibility to district and local centres on both sides of Vistula river. The number of the centres on the west part of the city is far higher and the distribution of their localisations is more regular.

4 DISCUSSION

The source data processed in the study may be characterised as generalised and approximate. This is the reason for many limitations affecting the outcome. First of all, the analysis refers to a 3-hour period of time during a single day. Timetables are the input data for public transit course. Therefore, the study do not consider real time situation, traffic jams and unplanned schedule variances caused by unforeseen events. What is more, the population statistics from 2011 census do not show precisely the real distribution of inhabitancy and, even more importantly, do not fully correspond with the analysed schedule from 2016. Another important factor that has an effect on the results of the study is spatial data limitations.

Visualisation and storage of spatial data requires its proper classification, normalisation and generalisation. Localisation of local and district centres is represented by point symbols. Their spatial approximation affects the process of evaluation of their public transport accessibility. In addition, designated walking routes do not consider spatial barriers such as development fencing. Bus stop access times are affected because of this limitation. It is also important to take into notice the fact that population density distribution data processed in this study is classified into polygons that define statistical circuits. The results of the study are highly determined by the way the data are gathered and classified.

Visualising processed data on maps enables analysing many relations and phenomena. The distribution of the local and district centres in relation with the development areas or population statistics may be analysed. The spaces that are deficient in the centres may be designated. However, studying the centres localisations the observers are unable to conclude if they fulfill their role. Although the method of assessing public transport accessibility applied in the research served to evaluate the time to get to district and local centres, it does not give a full insight into real time journeys not connected with job or studying destinations and afternoon local centres traffic peak. The assessment results indicate variance in journey time in different hours, over 30-minute accessibility areas, public transport service deficient areas and potentially well communicated areas but lacking in compact development.

5 CONCLUSIONS

Historical conditions of shaping Warsaw (substantial settlements were located in the distance from the city centre) have a great impact on the present transportation problems. The connection between localisation of neighbouring developments and the course of the major transit routes is noticeable. The data concerning the size of traffic jams and the number of cars coming to Warsaw every day (Warszawskie Badanie Ruchu, 2015) shows the significance of carrying out such studies and manage metropoly transport policy properly. Traffic jams are one of the major issues in Warsaw and a significant challenge for its development. Investigating travel time with public transit might give an insight and a potential answer to understanding travel behaviour of the city inhabitants. What is more, expanded analysis of public transport accessibility in Warsaw may make for a strategic tool in creating spatial policy integrated with development of transport infrastructure. It is a significant element of sustainable development, introduction of which may determine stable growth of the city. That is why usefulness and applicability of the data on public transport level may be improved considerably by sharing the data for free. Local authorities, investors, scientific researchers and social activists may produce different types of information from the data and apply it in the realisation of their undertakings. Furthermore, such initiatives may lead to creating information bank accessible for everyone.

There is a noticeable deficiency of district and local centres in the new developments. It may be caused by poorly prepared services programme for the dwellings and the emphasis on the financial effectiveness of the investments. Secondly, the centres overlap transport nodes and well communicated areas. There is no certainty whether the centres emerged first and the transport accessibility was ensured then or inversely. Future public transport policy should be proactively managed in relation with localising new centres. Local authorities also have to take into consideration analyses of scientific researchers such as SARP (Polish Architects Association) and local community suggestions. These sources of information may enrich the knowledge of the authorities about the condition of public transport and possible solutions to its enhancement. Formation of spatial policy in such cities as Warsaw requires equipping every development unit with proper services including public transport system. When the system seems to be insufficient to connect the area with the central part of the city, local and district centres pose a crucial role there. Districts such as Włochy or Ursus confirm the thesis. Although their accessibility to city centre is poor, local and district centres are easily available for the dwellers.

The areas assessed as well serviced are those where the access time to the city centre does not exceed 30 minutes. In other ones the public transport system is characterised as insufficient. Constant occurrence of traffic congestion indicate that public transport in Warsaw may not be enough attractive to combat the problem. On the other hand, ongoing development of metro line is a hope for a change in the adverse state. The problem may lay in the fact that spatial planning in Warsaw is not properly integrated with PT development. The law favours quickly performed investments set to financial benefit of the developer. Therefore, many low serviced areas emerge on the city surface and the costs of equipping them properly become much higher.

Areas with high population density and simultaneously low public transport time accessibility were characterised as low service areas, insufficient in terms of public transit quality. These were parts of the city with great population density, therefore significant in terms of handling a municipality. It is possible to analyze new public transport investments' impact on accessibility of public transport in different city areas. Extension of the second metro line in Warsaw is considered to have a great effect on public transport accessibility in many areas, among which there are many low service areas at the moment. It is very important to extend further studies to suburban areas, since they are housing a large number of people employed in Warsaw.

In conclusion, the quality of public transport poses a significant element of the condition of the city in general. Therefore, the public transport system should be included in spatial policy and integrated with its other components. Then, new dwelling investments would be preceded by the development of transport network. Such order of completion of new dwelling projects may make the process much more effective. The areas of most critical level of public transport accessibility in Warsaw (localised close to the city centre, densely populated, with over 30 minute access time to the city centre) cover the area of the new-built metro line. It may be a partial solution to the problem in those places.

The research presented in this paper shows how crucial for proper functioning of the whole city is well organised public transport. Such studies should be implemented into spatial policy of Warsaw. The scope of the analysis, however, should be extended. Other factors, such as localisation of suburban areas, planned public transport and building investments or new traveling trends, as well as real time data should be taken into account. Enhanced research may help evaluate the condition of public transport in Warsaw more precisely and enable local authorities to implement suitable instruments to improve the whole system.

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ID 1683 | RECLAIMING STREETS AS PLACES OF DIALOG: CAR-FREE SUNDAYS IN ISTANBUL AS AN EXPERIENCE OF SOCIAL DIMENSION OF TRANSPORTATION

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1 INTRODUCTION

In parallel with the economic, environmental and social problems in the world, tendency for alternative and sustainable transportation approaches have increased. As a solution to these problems, people-centred and sustainable transportation policies are developed on the bases of their successful and permanent results in long term. This study, discusses streets as spaces of dialog by focusing on social dimension of transportation. Existing trend changes in transportation, which considers human movements and accessibilities as their focus rather than vehicles are questioned in local scale. In this context, the study introduces experience of Istanbul in Turkey concerning the social dimensions of transportation in order to reclaim the streets as public spaces for dialog. The study conveys the experiences of Carfree Sundays events in Istanbul in order to discuss the reflections of people-centred transportation approach and its socio-spatial effects on streets.

Based on these ideas, "Street Belongs to Us Organisation" was founded in 2010 as a non-profit organization, which focuses on people-centred cities and streets for a livable future in Turkey. This organization was involved in different projects, campaigns, interviews, events, workshops to make citizens aware of the transportation problems and alternatives, different usages of public spaces in terms of peoplecentred and livable cities. The main project of "Street Belongs to Us Organisation Once in a Month" - Carfree Sundays organized by 'Street Belongs to Us Organisation' in Istanbul aimed to produce long-term solutions for traffic culture. In addition to this, another main objective was providing information, governance and communication networks where all the actors of the process are included. Collaboration with other organizations such as municipalities, local residents, NGOs, sponsors, and local initiatives to achieve efficient participatory urban processes was the main structure of this project. This experience indicates that change in transportation can help reclaiming street as places for dialog, interaction and communication as well as a fundamental parameter of transportation network.

2 SOCIAL DIMENSION OF TRANSPORTATION

The city has a complex and comprehensive structure, composed of various parameters. Transportation network connects the relations of all those parameters in functional, economical, environment social ways. Transportation network as a basic connector plays an important role in shaping spatial and social structure of the city. Therefore transportation should be handled not with only physical but also with its social dimension. The fundamental focus in solutions of transportation should be on human individuals and their accessibilities. Within this context, social dimension of transportation and its significance will be discussed under this topic.

Transportation is the function transferring an object, goods or human beings from one point to another. Accessibility is to reach a place, which is the target. The difference between those two terms is important in terms of approach to the transportation. Nowadays, movement of vehicles from one point to another has become an objective; hence that has caused the development of cities being depended upon vehicles. This approach, which is defined as vehicle-centred, although providing solutions in short terms, has not been able to resolve the accessibility problem of the individuals for long term. On the contrary, ignoring the potentials of walking (pedestrians), which is the most original and economical perspective hence it is finishing up the resources of the city. In this model, vehicle is being considered as the central element of movements and it prolongs the durations of trips as well as this model where human scale is underestimated, causes health problems by increasing the noise and air pollutions as environmental factors and finally causing the irreversible destructions. This car-oriented approach has been clearly accepted as unsustainable in transportation literature. This brings us to develop sustainable approaches and solutions for transportation.

The term of sustainability, as a conception, which became increasingly important in world politics and prevalent for transportation policies, represents the effort to fulfil the transforming needs and to present solutions for their complications by moderate and foresighted use of existing natural resources. The concept of sustainability consists of three primary dimensions: economy, ecology and community. Therefore, it can be argued that a sustainable transportation system has to be environmentally - sensible, economical and socially aware. But in sustainable transportation discussions, mostly the social dimension is missing or weak. In addition to this sustainability dimension, in this understanding transportation is realized only by engineering and technical approaches and not being shared by inhabitants ignoring that it is a public service.

Transportation should be handled from social point of view rather than with its physical dimension. Therefore, transportation requires not only engineering field as profession, but also collaboration of different disciplines, administrators, citizens and civic associations. It has to be focused on human being rather than vehicle in searching the solutions for improving the quality of social life, while speculating on long-term study solutions instead of providing solutions for short-term conditions. Such a situation obliges us to produce transport solutions both human oriented as well as sustainable.

In order to fill this gap, new approaches such as 'Organic Transportation', which this paper is based on, have occurred. Developed as an alternative solution for existing problems of urban transportation, the approach towards organic transportation concentrates on human mobility with a special focus on bodyoriented transportation types such as walking or cycling and with regards to tools of mass

transportation and automobile use. Instrumental for creating a sustainable society, organic transportation seeks not only physical but also social transformation in order to attain sustainability. While relying on human-oriented and sustainable approaches towards transportation, organic transportation takes principles of environmental consciousness, social multi-dimensionality and affordability of sustainable transportation into account and is also based upon the principal need for human mobility. Beyond mentioned accounts, organic transportation is influenced by the organic structure of existing network of systems, which enables it to overreach theories and conceptions by being physically present in and alongside current urban structures.

Components of urban milieu to be exact, to provide urban solutions derived from the needs of a city and transform cities into healthy living environments. In accordance to this conception, organic transportation lays its most crucial emphasis on human mobility and passenger accessibility. It promotes public health through the instrumental prevalence of body-oriented accessibility opportunities, whilst encouraging public use of urban spaces through the integration of pedestrians and bicycles into the urban transportation system.

Last but not least, the goal of organic transportation is to preserve and carry the natural, historical and cultural milieu of cities into the future. Organic transportation claims that without social transformation adequate spatial transformation cannot be archived. (Galychyn O., Üstündağ K., 2017). Organic transportation does not only encompass physical regulations or technical and infrastructural analysis, but it also enhances aspects of management and governance, socio-cultural dimensions, institutional regulations and the enactment of tracking and educational organizations, indicating towards a multi-disciplinary process, as shown in Figure 1.

Figure 1: Multi-Disciplinary Structure of Organic Transportation

Organic Transportation approach considering human individual in central position offers equal accessibility solutions for all, which aims to sustain healthy communities and a balanced urban life. Therefore, such an approach considers the accessibility as base and supports public transport systems, as well as giving priority to pedestrians and cyclist in the city.

Considering the individuals who are inevitably join the transportation network in streets as soon as they leave from their domiciles, the importance of individual preferences becomes quite understandable. Each and every intervention in city's transport system has an impact on daily life of individuals. In order to achieve sustainability for the society in this intervention, the individual also resumes some responsibilities. Persistence of personal preference in driving a car has undesirable impact on transportation system of the city. In order to get rid of above described vicious circle, the necessity of creating a social awareness seems rather obvious.

One of the key characteristics of Organic Transportation is locating people in the centre of the solution process and strengthens governance. In this approach, the human being who is the basic subject of transportation – pedestrian in transportation system- has to be included in the process of solution. In addition to this, his/her responsibility in solving the problems becomes rather clear and visible. In order to involve individuals to solution process, street scale in a crucial starting point in this approach.

The street, which is the spatial part of a daily life, is the fundamental parameter of transportation network. Jane Jacobs claims that the streets are the living rooms of the city. In Organic Transportation approach, streets are not only the spaces where accessibility is obtained more so they are the public places were socialization initiates. In other words, streets are public spaces where people come together and create a

place for dialog. As a basic urban unit, streets are our first steps from our houses to the public life. They connect other public spaces to each other and provide a platform for social interaction. Streets are places in which we defend our rights and the key origin for bottom-up actions.

Nowadays streets are left to the vehicles eliminating the human beings hence losing their original public space qualities. In order to reclaim the streets for the use of citizens a process has commenced where by above mentioned, engineering and technical solution are considered together with social dimension. The problematic of regaining the streets by citizens is creating a model which the society is included in the process and is environmentally, economically and socially friendly, to reach the basic objectives of making the city more livable. This need triggered a movement in the world under different names such as Reclaim the Streets, Carfree Sundays, Ciclovia, Own Your Streets (Raahgiri) etc.

The picture above (Figure 2) illustrates an image from Bogota in 2013, and the picture below (Figure 3) shows Mumbai's 'Raahgiri'- Own Your Street events in 2014 organised by Equal Streets Movement. In these examples around the world, it is obvious to claim that there is a tendency for change towards livable and healthy transportation systems. For a permanent change, bottom-up based actions are needed crucially. These actions should involve different decision makers, actors, NGO's, stakeholders in the process of solution. In this context, a success story from Turkey will be given in terms of a bottom-up action for reclaiming streets as a part of an 'Organic Transportation' approach in the following topic.

Figure 2 : Carfree Sunday Events from Bogota | Figure 3: Carfree Sunday Events (Rahgiri) from Mumbai

3 RECLAIMING STREETS AS PLACES OF DIALOG

Cities in the World are shifting their agendas from vehicle-oriented transportation towards sustainable, people-centred approaches and implementations. This change focuses on human scale and starts from city streets and aims to increase the quality of life. This process of change is composed of different components such as economic, ecological, social, political and cultural dimensions. In this context, transportation is no longer just an engineering profession; it has become a socio-cultural discipline at the same time. This point of view leaded different disciplines to work in collaboration and create new solutions to transportation problems. Within this scope, municipalities, NGO's, invertors, universities and local residents are developing projects.

Based on these ideas, "Street Belongs to Us Organisation" was founded in 2010 as a non-profit organization, which focused on people-centred cities and streets for a livable future in Turkey. This organisation involves in different projects, campaigns, interviews, events and workshops to make citizens aware of the transportation problems and alternatives, different usages of public spaces in terms of peoplecentred and livable cities. The 'Street Belongs to Us' Organisation is working in collaboration with other organisations such as municipalities, local residents, NGOs, sponsors, and local initiatives to achieve efficient participatory urban processes.

The background of the NGO goes back to 2007. Myself, Kevser Üstündag, have initiated such a first example in Turkey based upon my personal studies at City and Regional Planning Department in Mimar Sinan Fine Arts University. In 2007, this idea has started as a pilot project of '7th Towards World Carfree Cities Conference', which was held in Istanbul. As the social dimension of transportation, "Street Belongs to Us Once in a Month" events were organised in order to reclaim streets for people. In 2010, my colleague Arzu Erturan and a core group enhanced this initiative in order to get a legal entity as an NGO.

The first project of the NGO was an event series named “Street Belongs to Us Once in a Month”. These events had started as the pilot projects of the 7th Carfree Conference in 2007. Events were organized to show people how to reclaim streets as public spaces for a livable neighbourhood and city. The main purpose was to reclaim streets as people-centred places and to show the alternative usages of the street in order to revitalize street culture by closing the street to vehicular traffic for one day. In this context, the main aims of the project were; achieving livable streets for livable cities, encouraging the participation of the local people in the solution process, creating a platform for dialog between different actors, emphasizing accessibility for all, discovering and experiencing alternative modes of public space, creating people-centred public spaces, and spaces specifically for people and not only for cars.

Within the scope of “Street Belongs to Us Once in a Month” events, various activities were organised in order to revitalize street life for different groups such as paintings for children, picnic with neighbours, yoga/pilates workshop for grown-ups, bicycle tours for bikers, music for everyone, street games etc. Figure 4 demonstrates the activities took place on the street. In these events, neighbours had chance to spend time together, communicate and develop or improve their dialog. And Figure 5 demonstrates the change in the street before and after the event. It can be clearly seen that carfree streets provide peoplecentred space to interact, socialize and create dialog between residents and different stakeholders.

Figure 4: Images from Street Belongs to Us Once in a Month Events

Figure 5: Before and After the Street Belongs to Us One in A Month Event in Istanbul.

“Street Belongs to Us Once in a Month” events were based on people-centred approach and aimed to build a governance and communication network that allows a co-solution process of different actors starting from local street residents. It’s a bottom-up movement involving different actors such as municipalities, local residents, NGOs, universities, public institutions, media, civil initiatives and creates a participatory process. By raising awareness of different actors about people-centred streets, these events

aimed to start the change in transportation by strengthening the social actions and active citizenship. These events were organised to inspire other transportation cases to create a bottom-up, participatory process. Main collaborators of the events are illustrated in Figure 6.

Figure 6: Collaboration with different stakeholders

During the organisation of these events, different actors contributed such as Sisli, Besiktas, Kadikoy, Beyoglu, Fatih, Sariyer, Beykoz, Uskudar Municipalities from Istanbul; the Greater Municipality of Istanbul and its Department Traffic, Department of Parks, Department of Gardens and Green Areas; Government of Istanbul. Suat Ayoz Traffic Victims Association, Turkish Traffic Safety Association, Turkey Pedestrian Association, Bicycle Association, Alternative Life Association, The Spinal Cord Paralytics Association of Turkey, Turkey Disability Association were some of the NGO's that have contributed to the events. A radio programme was run by members of the NGO at Acik Radyo (Open Radio) and various brochures were printed to support these organisations.

Figure 7: Images from activites organised at Street Belongs to Us Once in a Month Events

After Istanbul experience, in 2014, 'Street Belong to Us Once in a Month' events' effects spread to other cities and took place in Sinop, a middle-sized city in Black Sea Region of Turkey. In collaboration with Sinop Sustainable Development Association, Sinop Municipality, Sinop Association of Development of Woman's Labour and locals of Sinop, 5 different streets were reclaimed as people-centred public spaces. In 2015, during the organisation of the 6th event, training sessions were organised for the local collaborators in order to enable them and sustain the effect of the events. Local collaborators had successfully completed these trainings and had right to organise 'Street Belong to Us Once in a Month' events in Sinop. This occurred as an important step for the NGO in terms of making a lasting impact.

4 CONCLUSION

The ‘Street Belong to Us Once in a Month’ events set out principles of good practice for a social action based event in streets with the participation of citizens. These events raised the awareness of street culture, public space and livable streets. They were organised in 12 different streets in Istanbul in collaboration with different municipalities and NGOs. As a physical outcome, three of these streets were permanently changed into pedestrian-friendly streets by the municipalities. Local authorities permanently changed Abdi Ipekci Street, Atiye Street from Sisli Municipality and Iskele Street from Kadikoy Municipality. Abdi Ipekci Street and Iskele Street became more pedestrian friendly with a slowed traffic and widened sidewalk, while Atiye Street was closed to vehicle traffic and pedestrianized. As a result, ‘Street Belong to Us Once’ was declared as a successful case study by ELTIS[1].

‘Street Belong to Us Once in a Month’ events raised awareness of local governments and residents about people-centred streets. This can be both seen in the physical change of three streets made by local authorities in Istanbul and social change achieved in Sinop to sustain the events by local NGOs and residents. This indicates ‘Street Belong to Us Once in a Month’ events have not one day but long-term permanent effects. On the other hand, these events created a platform for dialog between different actors in a city in order to reclaim streets as people-centred places. In addition, it can be deduced from ‘Street Belong to Us Once in a Month’ that is much more likely to achieve both physical and social changes in transportation when people have opportunities to get involved into to solution processes and be part of a it. As long as city residents are a part of the solution, they will be the closest supporter and follower of urban issues.

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[1] ELTIS facilitates the exchange of information, knowledge and experiences in the field of sustainable urban mobility in Europe. For the case go to http://www.eltis.org/discover/case-studies/streets-belong-us-istanbul-turkey

ID 1742 | CHANGING MOBILITY BEHAVIOURS IN ACADEMIA UNDER AUSTERITY: THE CASE OF FEUP

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ABSTRACT: The purpose of this paper is to explore how commuting patterns of university students have changed, in face of the recent austerity that has been occurring in Portugal. Our findings based on two surveys carried out in 2006 and 2012 (before and during the austerity period) reveal that students have changed their travel patterns during economic crisis, becoming more multimodal, friendly of public transport and less dependent on private car. Interestingly, the results also indicate that this change on modal choice was particularly significant for distances longer than 8 km. Indeed, in 2012, students travelled longer distances taking advantage of the improvements in the public transport system, namely in the local Light Rail System that was not yet fully available in 2006. On the other hand, transport costs seemed to be able to explain, to a larger extent, the travel behaviour of those who did not use the individual car. In 2006, the main reason pointed out to move on foot was the time and comfort in short distances, whereas in 2012, the main reason was the overall cost of the journey. Although the overall evolution of the students' travel behaviour pointed towards greater sustainability patterns, the identified changes also reveal that the social contexts gained more importance. Keywords: University students, travel patterns, mode choice, private, public and non-motorized modes, austerity.

1 INTRODUCTION

The global financial crisis has had a strong impact, being in Europe particularly serious in peripheral countries such as Portugal, Ireland, Iceland, Greece and Spain (European Comission 2014; Frade & Coelho 2015). This crisis has exacerbated territorial differences between countries and social groups (Eurostat EU-SILC 2013, Martin 2011, Ulfarsson et al. 2015). According to Geels (2013), in political terms, it is understood as the right time to make profound changes in behaviours. It can be an opportunity to make transitions more sustainable, combined with green policies, and also, on a different perspective, the opportunity to introduce "structural" reforms with significant reductions in the welfare state and citizens' rights (Geels 2013). For this reason, one of the main issues associated with this theme is to understand why in some territories the effects of the crisis were felt more than in others (Hassink 2010).

Since mobility is part of the daily life of citizens, it is natural that it has undergone changes with the impact of the financial crisis. A financial reduction in family or personal life's budgets implies an adaptation to the new reality, which includes the need to reduce costs, including those associated to transport. It is recognized the difficulty of changing mobility habits, especially for individual transport users (Garcia-Sierra et al. 2015). One of the main differences in travel behaviour due to the financial crisis has been the reduction of travel frequency (Nielsen 2015), although the travel behaviour depends on the social groups under study (Marquet & Miralles¬Guasch 2017). However, adaptations are complex and may include changing modal choice, destinations and residence, among many others. Some of these adaptations may be circumstantial, but others may lead to a change in daily mobility habits (Garcia-Sierra et al. 2015). In this sense, according to Marquet at al (2017), it is necessary to analyse with some cautious their impacts not only in geographical terms but also in different social groups (Smith & Swain 2010).

Following the financial collapse in the US and shortly after the beginning of the Greek debt crisis in the first quarter of 2010, in April 2011, the government called in international institutions (the so-called troika, ECB, European Commission and IMF) to bailout Portugal[1]. The long-term effects of the economic crisis and the

1 While the European financial crisis is often presented as a contemporary product of the Eurozone and banking crises, Portugal's specific difficulties are also an outcome of recent and historical factors. According to Moury & Freire (2013) many political actors argue that both the government's right-wing coalition and the "troika" have gone beyond their mandate by imposing so-called "structural" reforms on the country, which severely reduced the welfare state and citizens' social rights.

austerity measures implemented in the recent years have had a strong impact on the economy (Cairns et al. 2014; Cairns 2011; Frade & Coelho 2015; Freire & Moury 2013), for example: growth stagnation, decrease of public and private consumption, the fall of 6.5% in Gross Domestic Product (GDP) between 2009 and 2012, a general reduction in State expenditure (in particular in health, education and social security), an increase of 8% of unemployment (17% in 2013), which most severely affected youth unemployment from 15 to 24 years of age, from 16.6% to 37.7% (Frade & Coelho 2015). As a result, families saw their incomes fall sharply (freezes and wage cuts, significant increases in taxes, rising unemployment), so they had to adjust their budgets and lifestyles and make significant cuts in spending, including the costs associated with transport and mobility habits. Besides the transport measures conducted by the Portuguese government, (e.g. introduction of tax fare on SCUT[1]-motorway, introduction of new tariffs on fuel prices rising from 2005 - 1,15€/l to 2012 - 1,64€/l [DGEG]) and the rising price of oil in the world market also led to an abnormal increase in the price of public transport. Frade & Coelho (2015) report that 37.4% of the families surveyed say they have made cuts with transport and fuel (37,4% houselds who cut spending 2010-2014%).

The economic crisis also seems to have been the cause of the decrease of about 1/3 of the number of students enrolled in private university education in the period 2006 and 2012 (source INE 2014; Cairns et al. 2014) and the increase in the number of students in public universities. It also seems to have been felt in the emotional state of university students, who see the crisis as a disruptive factor for their future, in relation to several aspects such as the possibility of finding employment, of financial independence, of constituting a family and their sense of well being (Cairns et al. 2014, David et al. 2015). Although university students in Portugal are, still, a privileged group, it is possible that these measures had an impact on travel behaviour. Exploring university students' travel behaviour in two different times can reveal fundamental and valuable information to provide better guidance on future practice[2]. Uncovering student's perception and travel mode choices behaviour changes may help us to make preliminary recommendations for university transport demand management in order to decrease car dependency among students.

1.1 UNIVERSITY STUDENTS COMMUTING PATTERNS AND FACTORS AFFETING THOSE PATTERNS

In recent years, the commuting patterns of university students have garnered increasing attention. The reason for this interest is not only because the study of university students' movements represents a high number of commuting hours in the city, but mainly because they are recognized to represent an important target group in the transformation of behaviours, because they are more prone to change (this is generally the time when they build their independence and begin to make their own decisions) and because they represent the future leaders (Zhou 2012; Zhou 2014; Zhou 2016). Several studies can be found which deal with different aspects of university students' travel behaviour. These include, among other issues, housing and commuting choices (Zhou 2014), use of GIS to visualize and assess travel behaviour (Rybarczyk & Gallagher 2014; Whalen et al. 2013), or promoting a proactive and sustainable university transportation (Zhou 2016; Kaplan 2015). Other studies focused on academic mobility and university policy (Hopkins et al. 2015), and others on the introduction of travel demand measures (TDM) in academia (Bleechmore et al. 2011; Bamberg et al. 2003; Fujii & Kitamura 2003), as well as promoting active mobility patterns (Bopp et al. 2016; Whalen et al. 2013; Shannon et al. 2006). More recently, some researchers focus on the individual, the habit and attitudinal travel behaviour - psychological characteristics (Klöckner & Friedrichsmeier 2011; Lavery et al. 2013; Bamberg et al. 2003). Despite the emerging literature, most studies have failed to adequately specify relations of relevant explanatory variables (Zhou 2016).

Moreover, mobility patterns can vary with culture, technologies, characteristics of places, people and other external factors (Crane & Crepeau 1998)[3].

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1 SCUT – abbreviation of - 'without costs for the users' in its origin

2 For the definition of strategies and political measures it is essential first of all to begin with the knowledge and understanding of the reality that one intends to change

3 For example, Danaf (2014) in their study in Beirut Area, Lebanon, found that safety concerns and context are very important factors, as women university students tend to use more car or jitney, in that sense, cost differences among or

The mobility patterns of a given population are the reflection of this population in the territory, its social and economic-political organization. In the last decades, there have been profound changes in mobility patterns due to the continuous growth of the motorization rate, number of trips, distances travelled, urban dispersion and increased dependence on private transport, which has compromised the levels of sustainability of most urban areas and to become a central theme of the political debate (Banister et al. 2015; Pinho et al. 2015). It is consensual that to influence modal choice, it is necessary to know the factors that justify it. However the literature is not consensual on their identification. Zhou (2016) argues that little has been done to quantify the marginal effects of the factors, which are central when policy-makers design and prioritize efforts to promote alternative modes. An in-depth understanding of the factors influencing travel patterns and the extent to which these measures can change these conditions is therefore a main problem to address. To categorize the main exploratory factors influencing modal choice we will adapt the Cervero's model (2002) with Zhou (2016) and Paez (2004). In this sense, we chose to organize our explanatory model around three broad groups of factors: (i) individual characteristics (ii) characteristics of the trip and (iii) characteristics of the built environment with time contextual variables. The main factors that we used in our study are summarized on Table 1.

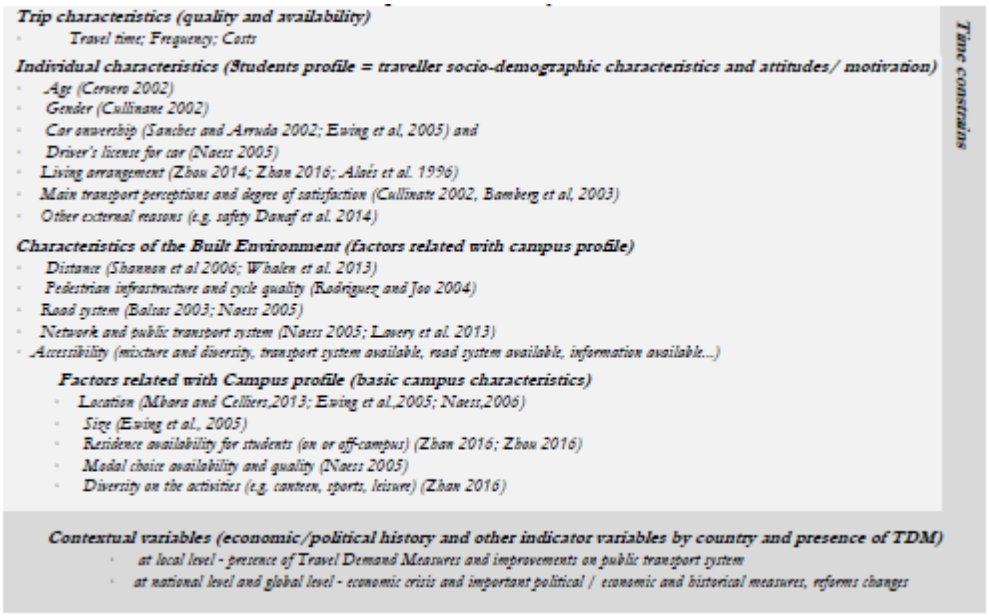

Table 1 - The main factors and variables explored in this study that influence mode choice Trip characteristics (quality and availability)

i. Trip characteristics. The main factors usually included are time, frequency and associated costs. We also included information about multimodality. Lavery et al (2013) found that active travellers are seldom captive users of a single mode.

ii. Individual characteristics. The individual characteristics of travellers that are used in the models are gender, age, income and car ownership (Zhou 2016; Zhan 2016; Cullinane 2002), the number of existing vehicles in the household (Danaf 2014) and socio-economic factors such as educational level and annual household income (Naess 2006), being the last two more common in European studies (Klöckner & Friedrichsmeier 2011). Other individual variables explain heterogeneities among university students' transportation behaviour, higher socioeconomic or academic status is linked to a preference towards private transportation, whereas the use of public transport is more common among undergraduates of lower disposable income (Tezcan & Tanış 2011), mostly because of direct cost Barata et al. 2011). Younger students are also more

network grow on public transport may not have impact on mode choice. Although very scarce, data on the evolution of mobility of university students in two or more moments, seem to show a tendency of reduction of the use of the automobile and of the increase of the use of the public transports and the modes (French and Giles-Corti, 2010; Miralles-Guasch, Melo and Sarda, 2009; Marquet and Miralles-Guasch, 2017).

predisposed to alternative modes of transportation (Zhou 2012). Gender divides preferences and concerns, women tend to walk or share transportation (Zhou 2012) while men prefer their own car or bicycle (Delmelle & Delmelle 2012).

iii. Characteristics of the built environment. The last three decades were rich in empirical studies focusing on the relationship between local physical environment and individual travel mode choice (Pinho et al. 2015). We chose to include in our study the DD of Ewing & Cervero (2010), which are the Population Density (number of inhabitants per km2); Diversity (mix of land uses); Design (connections and interconnectivity of the infrastructure and quality of the pedestrian environment - house vs. college). Distance and Accessibility (distance to destination, available transport system, diversity in route) (Ewing & Cervero 2010). The literature conclude that urban development can significantly influence the ways that people choose to travel (Cervero 2002; Zhou 2016) and the amount of travel by car is significantly higher in suburbs than in city centres (Naess 2005).

Within the characteristics of the built environment we can find in the literature some of the specific characteristics of university campuses. Most studies in the area concluded that the basic campus characteristics that influence students mobility patterns are, without a specific order, campus size, residence availability (on or off-campus), location (rural, suburban, urban), and diversity of activities. At local level we can also find other explanatory contextual factors such as presence of travel demand management (TDM) plans, strategies and programs, class schedules and telecommuting availability (Tomlinson 2014; Zhan et al. 2016; Zhou 2016).

The travel demand management (TDM) can include vehicular restrictions in some streets or parking cost (Shannon et al. 2006), introducing reserved bus lanes and signal priority at intersections, reducing public transport costs (subsidized fares, transit pass, others) operating an express bus service between campus and off-campus areas, and increasing student housing on or near the campus among others (Shannon et al. 2006).

Many of these exploratory factors influencing modal choice can be found in cross-sectional studies. However, in a study over time, there is still a need to include macro social contextual factors (economical/political and historical factors). For example, a war or a natural disaster will naturally generate different mobility patterns, in our study the crisis and the introduction of austerity measures had a great impact on the life of the Portuguese population and should be analyzed. These contextual factors - local, national and global factors, can be very important because cross-sectional data means that the analysis is essentially static, however, a study along time requires space-time changes should be considered (Paez 2004).

This article explores the main changes of commuting patterns of university students from before the financial crisis in 2006 to some years afterwards during the financial downturn and implementation of austerity policies in Portugal (2012). The purpose of this paper is to analyse the main factors that influence those patterns and ascertain their interrelations, as well as the main barriers and motivations affecting transport decision, focusing on the case of students from the Faculty of Engineering of the University of Porto (FEUP).

2 FEUP IN SPACE AND TIME

The Faculty of Engineering at University of Porto (FEUP) is part of the Asprela Campus (AC) and is located at the limits of Porto consolidated city, in the frontier line of three major municipalities of the Metropolitan Area of Porto, Porto, Maia and Gondomar and between three major motorways. This large university with 30,000 students is an important transport activity generator in Oporto Metropolitan Region[1]. This university campus is relatively recent, conceived as a 'university city', after the relocation of the old university buildings spread from the urban centre of Porto to this area. The AC enrols a large number of

[1] This Faculty have no transport policies or other travel management measures like parking costs, students until 23 years old have some subsidies to public transport costs from the Portuguese government.

public and private Institutions, lacking, however, diversity on commerce and housing. AC is one of the largest traffic generators in the Northern region, facing daily high levels of traffic congestion.

In Portugal, as in other southern European countries and some parts of the USA, most university students have no income and rely on their parents to pay for education fees, housing, travel and living costs (Cairns 2011; Cairns et al. 2014). Most students live off-campus[1]. In Portugal there is no university accommodation policy and is common for students to live with their parents[2], which makes the problem of their mobility even more complex. Understand the commuting behaviour of FEUP students means to consider a larger region. The metropolitan area of Porto, the second largest in Portugal, contains a population of approximately 1.6 million people, with 1574 km2 area, and a population density around 1016 (hab./km2), and has a polycentric urban structure (Pinho et al 2010:5). Like other metropolitan areas faces an increase in car use (INE, 2011). According to the 2011 Census, in a 10-year period, from 2001 to 2011, car journeys to work or school raised from 44,2% to 62,2% (INE 2011:35).

Big changes happened in the last years, in Porto. Several transport improvements and other planning measures were conducted: (a) at the local level, around FEUP's campus, new residential areas were built as well as new cycling paths, walking paths and a new road with sidewalks connecting with the eastern part of Porto; (b) at the metropolitan level, there were important changes on the public transport system (e.g. metro network improvements with more new lines, a unified ticket to public transport, Wi-Fi real time information at bus stops). We expected that both these measures and the Portuguese crisis would have an impact on student perception and mode travel choices.

3 METHODS

This article explores changes on modal choice, perceptions and barriers in a specific group. Our aim is to understand the explanatory factors that influence the modal choice along time. According to Anable (2005) if we want to built policy measures with effective results these should be designed in relation to specific target groups, which advises for the need of segmentation taking into account different attitudes and travel behaviours. In this way, policies should be oriented to those segments of the population that are more motivated to change and reduce the frequency of car use, thus justifying university students as an object of study.

The target population consisted of 5177 students in 2006 and of 4901 in 2012. Participants were 370 in 2006 and 352 in 2006 attending a University degree at Faculty of Engineering, University of Porto. Participants were randomly selected in order to set a representative sample. To determine sample size, we followed Krejici and Morgan proposal (1970, in Almeida & Freire 2007), that for an error probability less than 5% (with a confidence interval of 95%), for the population (N = 5000) the sample should include at least 360 subjects[3] (Almeida & Freire 2007).

A personal survey was designed to provide information about commuting patterns, motivation and barriers for the university students. We designed an anonymous multiple-choice survey focusing on students' mobility mode choices and the reasons behind them, in reference to the day's trip to campus (Cervero 2002; Ewing and Cervero 2010). The survey was formulated considering the three groups of factors addressed[4]. In our study, it was necessary to introduce different contextual scales. It was included

1 In this sense, it is expected to be verified that the economic crisis had an impact on the mobility patterns of Portuguese university students (Cairns et al. 2014).

[2] 7 For example, the University of Porto (UP) has 9 University Residences with availability for 1192 individuals, equivalent to approximately 3.8% of the total UP students

[3] Selected criteria were students attending the first to fourth years. After proper tuning with a pilot-survey, surveys were stratified among classes in various departments and colleges to get a heterogeneous distribution of degree and course in May of 2006 and after in May and June 2012. We used a sample size and the random process of selection of students for classes, year and course.

[4] The first section asked about the main transportation mode used on the journey residence-university, if they used more than one, with their used on first, second and third place, identifying how they combined this modes of transport; also were asked time and cost associated with these commuting (modal factors). In the second section, we analyzed accessibility in the residency area (e.g. modes of transportation available, quality of sidewalks, direct bus, main obstacles and other residential amenities), main barriers that students face up on their commuting to campus, and main reasons to choose that transport used. Students were also asked about their degree of satisfaction with the public

important contextual data about changes on the transport system and accessibility[1]. In addition to the local context we had to include macro-social data, a more myopic view of reality allows us to consider relevant issues, which in this study is related to the economic crisis and the impacts of measures of austerity in the modal choice of students.

Data was collected and analysed using the Statistical Package for Social Sciences (SPSS). Frequencies and other descriptive statistics were used to describe the sample and identify the main differences between the groups. Thus, this paper uses a Bi-variate and a Multi-variate Analyses in order to examine the relationship between variables. In order to determine differences between stages, numeric variables were analysed using a T-test or ANOVA and categorical variables using X2-test. Estimates could then be calculated separately for 2006 and 2012. A non-parametric test Mann-Whitney was used to verify the degree of satisfaction with public transport, answers were rated by respondents on a scale of 1-5. Only variables that were significantly correlated ($p < .05$) were included in the models.

4 RESULTS AND DISCUSSION

4.1 CHARACTERISTICS OF FEUP STUDENTS CHANGES

The samples from 2006 and 2012 included similar respondents' profiles as shown in Table 2. The respondents are on average 21 years old, ranging from 18 to over 40, and have a gender ratio of 2:1. The majority of the respondents have driving license, (given that 18 is the Portuguese legal age to obtain it), and 40% owns a car, although in 2012 there is a reduction in this percentage. The tendency for owners of personal vehicle to use it is statistically significant (2 (2) = 80.612, p =. 000). The type of residence is not only important as the social context of the students' mobility patterns, but also because of distance to campus and network availability (Table 3). Regarding students' residence, approximately 2/3 live with family and 1/5 rented a house11. The type of residence is associated with the travel distance – on average, students living with family travel 11 km to campus. The number of students living in a 4km radii is almost the same between 2006 and 2012 (137, 40% to 141, 41%),

However one of the main differences is the number of students living nearer, less than 1km, from university, which did double in 2012[2].

	2006	2012
age mean	21	21
range	18 - 46	18 - 51
male	67 %	69 %
female	33 %	31 %
with license to drive 79 %	78 %	
who own a car	42 %	40 %

Table 2 - respondents' profiles (valid responses)

transport, as prior research provides evidence that attitudinal variables may influence the perception of different modes and, therefore, affect the level of utility that individuals derive from certain aspects of travel (Whalen). Finally, in the third section, respondents were asked questions related to individual characteristics such as: age, gender, car access, driving license, type of residence, residence address and code (GIS)

[1] This is directly related to the characteristics of the local physical environment, and to the thesis that support the premise that a good public transport system brings users. 11 In 2012 there was a slight increase of students living with their families and who rent, partly because the number of students that bought a house dropped (from 13% to 7%). This in part was expected during austerity period, when there were law changes, including in credit approval (Law Nº58 and Law Nº59/2012) being very difficult to get access to credit housing benefits.

[2] This can be explained in part because this campus is relatively recent and there is an adaptation period for housing construction and getting into the market rent (private investment) in and around the campus.

		2006	2012
Location			
< 1km		8%	16%
1 – 4 km		32%	25%
4 – 8 km		32%	25%
> 8 km		28%	35%
Type of residence			
With family	64 %	66 %	
Rented to students	21 %	23 %	
University residence	4 %	3 %	
Own residence		13 %	7 %
Amenities in the area			
Wide and comfortable footpaths		41 %	54 %
Metro station		27 %	32 %
Bus station		79 %	76 %
Bus station (direct route)		35 %	24 %
Motorway	39 %	37 %	

a Bird distance, calculated from respondents' postal code of weekday residence.

Table 3 – Demographic profile of respondents

4.2 MODAL BREAKDOWN OF ACCESS TO FEUP

Multimodality doubled from 2006 to 2012, as we can see in Figure 3. When it comes to Public Transportation, metro has gained popularity in 2012 doubling the number of students (16% to 33%), deposing bus (26%)[1]. Train is also increasing popularity (10%), despite the fact that there is no train station in the vicinity.

Lavery and Paez (2013) found that people who use active commuting are seldom unimodal. In our study this is aided by the fact that the nearest metro station and the bus hub are at 7 to 10 minutes away from campus (900m from FEUP's main entrance). Thus, these results also confirm as it has been observed in other studies, that university students tend to have a unique travel behaviour, different from the general population and use more alternative modes (Whalen et al., 2013). In Portugal, from 2001 to 2011, car journeys raised from 44,2% to 62,2% (INE 2011:35).

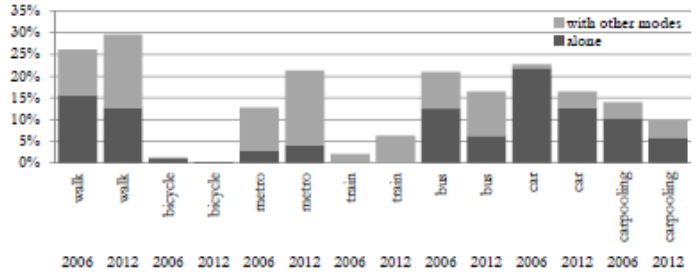

Figure 3 - Frequency of Mode choices when travelling to campus, in mono- and multi-modal trips (percentage of responses).

4.2.1 SHIFTING TIME AND MONTHLY COST

In 2006 home - college travel time was 30 minutes on average, but the high standard deviation (sd. 21,061) suggests a large dispersion around this reference value. In 2012 there was a slight increase in this value to 33 minutes (sd. 23.41). In 2006, students traveling by car were those who claimed to spend the most money on commuting, averaging 60€ per month (s. 50.62, 0-350€), the average travel time was around 23 minutes (sd. 14:27, 1-120 minutes), while in 2012 there is a decrease in the average value spent in the car 50€ (0-150€ N = 101) and travel time for students traveling by car 2012 varied from 2-60 minutes, with an average of 20 minutes (sd.10,43). Students traveling on public transport in 2006 spent an average of 40€ a month (29-150€), and took between 5-125 minutes (sd. 23.51), taking an average of 44 minutes. There was also an increase in the average amount spent on public transport 43€. Meanwhile, the average travel time for public transportation increased to 48 minutes (sd. 23.35, 10-120 minutes).

[1] For this, we present two possible factors – there was an adaptation period after the introduction of metro in the area, after which PT users shifted from bus to metro, and metro has a more regular and dependable service than bus.

4.2.2 GENDER, AGE, DRIVING LICENSE AND CAR OWNERSHIP

Our results revealed that female students tend to share a drive and use public transport more often than male students. This finding is consistent with Zhou (20012) and Delmelle and Delmelle (2012). However, data showing statistically significant differences found in 2006 are becoming only slight differences in 2012, mainly due to male student's behavioural changes. The overwhelming majority of the surveyed students (80% of 370 and 78% of 350) have a driving license. Younger students tend to use more public transportation and older students tend to use more the private car. The tendency is similar in both years, in 2012 out of the 50% students who use public transport, 73% students have a license, as well as 75% students of the 19% students who usually travel on foot or by bicycle have driving license, which means that the vast majority of students who do not regularly use private transport has a driving license. Finally, in relation to possession of the vehicle itself, 42% and 40% responded positively. Access to car leads to its use (Limanond et al. 2011; Klöckner & Friedrichsmeier 2011). The tendency for owners of a personal vehicle to use it is statistically significant (x 2 (2) = 80.612, p =. 000).

4.2.3 RESIDENTIAL AREA AMENITIES

To analyse factors of physical environment of place of residence that may influence the mobility patterns of FEUP's students, we asked students about some specific characteristics of their context, given that we had already some data on the destination. Indeed, the access to a metro station has increased, in 2006 23.9% of the students lived in a place with a Metro station less than 400 meters away and in 2012 29%[1]. In fact, the number of students using the metro is now much higher, from 16% of respondents in 2006 to 33% in 2012 and from the students using metro only 30% use it as a first mode of transport, 27% go by car (17.4% solo, 15.7% carpooling), 17% catch a bus. From these 17% shifts himself to walk to get to the station and 10% use the train later combined with metro. If we think that sidewalks are one of the ways to get to a bus stop or underground station, we understand that most students have poor conditions either to move on foot or drive to a bus stop, which, as we have seen, were fundamental to the incentive of these two modes of transportation (Zhou 2012). Only 36% of respondents stated that they could use wide and comfortable sidewalks, however, of the respondents in 2012, 49% claimed to have access to these. On the other hand, a similar percentage of the studied population claims to have fast roads nearby. As high levels of accessibility, derived from highways, promote the use of private transportation (Cervero 2002), there is a greater incentive to use motor vehicles.

4.3 STUDENTS COMMUTING CHANGES AND MAIN FACTORS

The dominant modal choice is different from 2006 to 2012. In 2012 the preferred main mode choice was public transport (50%) but in 2006 it was the private transport (44%). Non-motorized modes maintained approximately the same average. The results indicate a statistically significant increase of public transport users and statistically significant reduction in car drivers (Chi-squared tests or Z-test - Montgonery). These results show a tendency of FEUP's students modal choice to become more similar with other research results (Marquet & Miralles-Guasch 2017) and far away from others (e.g. Zhou 2016).

	2006 n=370		2012 n=352		
Dependet variablec	*n*	*sample %*	*n*	*sample %*	X_2
Walk or Bicycle	73	20%	67	19%	
Public Transport*	142	38%	177	50%	*
Private transport	162	44%	108	31%	*

Table 4. Students commuting patterns

[1] The extension of the metro network reflected in the general population has increased the use of this transport. As we referred there were improvements on metro with more lines covering a larger area of influence (from 45 to 69 metro stations). Literature defends that improvements on network public service will increase their use (Shanon 2006). Pinho and Vilares (2009) point out that the introduction of metro helped to reshape the regression process of public transport, although metro also got some bus users.

TRAVEL DISTANCE BETWEEN HOME-FACULTY

The distance is one of the determinants of the choice of transport mode. For students who live at ranges less than 4 km from faculty walking is the preferred mode choice (Table 5). This result is similar to the majority of studies, which indicate that for distances less than 1 mile (1.6km) the preferred way is to walk, however our data show that this distance may be higher depending on other conditions. Distance is an explanatory factor in active commuting (Delmelle & Delmelle 2012). Closer locations (less than 10/20 min.) lead to trips made by foot or bike (Bopp et al. 2011). However, Whalen et al. (2013) found that distance may vary importance depending on distance travelled (Whalen et al., 2013). For distances between 4km and 8 km modal choice possibility is variable, it is distributed between public and private transport. These results, in conjunction with the maps illustrating the spatial distribution of residence, indicate that more than 50% of car use can be shifted by non-motorized or public transport modes, as argued in literature until 5 mile or 8 km is a biking zone (Shannon et al. 2006). In that sense, they are a feasible option for students, however the availability in and near campus free parking gives students comfort and time. In our study, we also observed that for trips over 8km there was a significant change in behaviours, from car use to the use of combined collective transportation. Our data also indicate statistically significant differences for distances over 8km. In 2006 the preferred mode of transport was car but in 2012 the number of students who failed to take the car went down to half, from the public transport clearly being the preferred way.

		travel distance			
		< 1 km	1 - 4 km	4 - 8km	> 8 km
Walk or Bicycle	2006	76,4%	25,6%	0,0%	,0%
	2012	67,9%	37,6%	6,0%	1,0%
*Public Transport**	2006	7,3%	45,3%	59,1%	66,4%
	2012	14,3%	31,2%	45,7%	45,5%
Private transport	2006	16,4%	29,1%	40,9%	32,8%
	2012	17,9%	31,2%	48,3%	53,5%
	$\chi 2$			*	*

Table 5 – commute distance and modal choice

Our study also reveals that the average distances from students who walk are different between 2006 and 2012[1]. Type of residence is related to distance of travel. Students living in rented housing live near campus and prefer non-motorized. The preferred transport mode for those who rent housing system is still walk, probably because there is more freedom among location choice and modal choice. This finding is consistent with the findings of Shannon et al. (2006) and Lavery et al. (2013). However, Lanzendorf (2002) found that living arrangements and household type were not significant.

MAIN REASONS TO CHOOSE ONE MODE OF TRANSPORT AMONG OTHERS

Cost was statistically the most significant factor between 2006 and 2012 (statistically significant increase), which somehow seems to be associated with the economic crisis (Table 6). Like the research of Delmelle and Delmelle (2012) our results also reveal that male students are more cost sensitive than female students. Public transport is known as cheaper than car, although cost may not be a key factor for changing to public transport and other factors may have greater impact, such as time and comfort. In accordance with literature our results revealed that time is an important reason for mode choice. In both samples time is the most perceived reason to car users. In 2006 for non-motorized was the most important reason too. Journey time by car is perceived to be much less than it may actually be (Beirao & Cabral 2007). Driving is also associated with a sense of control, freedom and accomplishment, is a necessity to maintain the accessibility sprawling urban areas (Lavery et al. 2013; Whalen et al. 2013). Cost and health are usually associated with active modes (Bopp et al. 2011; Shannon et al. 2006), time and comfort with car use (Beirao & Cabral 2007). Conversely, concerns with safety, time and comfort act as barriers to

[1] Naturally, for walking, the percentage decreases sharply with the increase of travel distance, for distances greater than 4km the use of this transportation is virtually nil. The number of students living in a 4km radii is almost the same between 2006 and 2012 (137, 40% to 141, 41%), however one of the main differences is the number of students living near, less than 1km, from university, doubled in 2012. This can be explained in part because this campus is relatively recent and there is an adaptation period for housing construction and getting into the market rent (private investment) in and around the campus.

active modes (Shannon et al. 2006), time and comfort are usually incompatible with public transport and, finally, cost is the main complaint among car users (Tezcan & Taniş, 2011).

We found out in our study that people who do not use public transport seem to have a worse opinion of them than those who use them. In order to verify if the degree of satisfaction differed in both groups (users of public transport and non-users), we used the non-parametric Mann-Whitney test, at a level of statistical significance 5 given that the scale used was ordinal. We found that the differences between the two groups were statistically significant, with the group that did not often use public transportation having a worse opinion (z = ¬2,2006, p = 0.03).

	2006			2012			
	Walk or Bicycle	Public Transport*	Private transport	Walk or Bicycle	Public Transport*	Private transport	
	%	%	%	%	%	%	X²
there is no other option	13,7%	28,9%	7,1%	10,4%	28,8%	13,0%	
cost	28,8%	26,1%	7,1%	56,7%	36,4%	25,0%	*
comfort	12,3%	23,2%	39,0%	32,8%	24,9%	48,1%	
time	46,6%	20,4%	53,2%	46,3%	23,2%	63,9%	
schedules	2,7%	5,6%	18,8%	10,4%	13,0%	32,4%	

(Students could respond more than one reason)

Table 6. Main reasons to choose one mode among others

5 FINDINGS AND CONCLUSIONS

In this paper, we have explored how commuting patterns of university students have changed in face of the recent austerity period in Portugal. We aimed to gain some understanding about the explanatory factors that influence those patterns for that specific group. The crisis may explain changes on mobility needs and created a strong incentive to cut some spending costs on most expensive modes of transport, in particular for longer distances. However, socioeconomic changes alone are not sufficient to explain differences in travel behaviour. Despite the presence of other explanatory factors, the trends seem to indicate a better use of the transportation system available, students are more multimodal and the results give us significant differences among car users. The differences of modal choice have repercussions upon several aspects of mobility, such as cost, travel time and distance to/from residence. This study compares two points in time and cannot support an effective analysis of the financial crisis. However, our results seem to reflect that even if not all groups of students were affected by the financial crisis in Portugal, our research identifies a group of students that have changed their behaviours. This group is characterized by male students living with their families at distances greater than 8km. Cost is pointed out as the main reason for this option.

In summary, our results highlight some relevant findings: we verified that for trips over 8km there was a significant change in behaviour, from car use to the use of combined public transportation. In 2006 students who lived farther than 8km travelled mostly by car with monthly expenses that reached 350 euros. In 2012 these values decreased substantially. Taking into account the large number of Portuguese families who suffered from the impacts of the crisis, forced to make adaptations and changes in their daily behaviour, including mobility, it was expected that some of these impacts would be reflected in part by university students. In our study, a change in the attitudes of male students living with their families at distances greater than 8km is evident. Effectively, there is an increase in the number of students living with their family farther than 8km away from FEUP, which seems to explain a family management option. Other plausible interpretation is that, after the improvement of the metropolitan light rail, students tend to use it (> 8 km: 8% in 2006 had access to metro and in 2012 increase to 15%).

For trips that are not very long between 4km and 8km, car continues to be widely used, which suggests that at these distances the associated cost variation did not justify a change in behaviour. Thus the collective transportation system seems to benefit users on long journeys, but not for shorter journeys. This should allow us to question how we can increase the cost difference between car use and the use of public transport within urban centres, following the general trend in Europe. In our study, we can verify that within the urban zone, the car tends to be faster, and to have similar costs for those who use public transport,

since (at that time) there were no paid parking policies near the Faculty nor other type of 'penalties' for car users, nor, on the other hand, effective networks of BUS lanes[1].

We therefore reaffirm the urgency of implementing such measures. It should be noted that the economic crisis does not affect all users in the same way, the distance for those who live close remains as a consistent explanatory factor, those who live near the Faculty tend to move on foot. However, when questioned about why they are moving on foot, the response changes from reasons of 'speed' in 2006, to 'cost' in 2012, which demonstrates a change in attitude and priorities. Our study also shows that those who opt for a house renting scheme, seek to make it closer to the Faculty, substantially reducing transport costs, not only financial but also time related. However, there is no relevant difference in the size of the group between the two samples. In Portugal, there are no policies regarding the accommodation of university students, so we believe it would be imperative to introduce policies to encourage university students to a leasing system close to universities. Students who normally use public transport on their commuting most of the times combine it with other modes. Furthermore, our study also reveals that people who use active commuting (walking or biking) are more sensitive to the local physical environment. In this way, we should give special emphasis to the attributes of the local physical environment.

Synthesizing, the commuting patterns of FEUP's student are different. Our results revealed (i) Individual characteristics – gender differences have faded, mainly due to male student's behavioural changes, age is still an explanatory factor as well as car ownership[2]. (ii) Trip characteristics - in general students are spending less money on transport, mainly because for longer and more expensive trips students changed from car use to public transport use, although this change was territorial, differences between social contexts gained importance. (iii) Characteristics of the built environment - our results reveal that an improvement on transport system can lead to an increase in its use and distance is an important factor to non-motorized modes of transport. Explanatory factors may vary depending on the mode of transport. Car users seem to favour time and comfort to cost, but our results suggest this may be not true for longer distances when cost became significant. This finding may open a window to introduce some new measures at shorter distances.

We have verified that the factors that justify the use of a mode of transport in a certain period may be different in another period. This variation of explanatory factors over time is important as policy makers must take into account their dynamics in the construction of analysis and decision models. Our study also reveals the importance of taking into account fundamental contextual macro social factors - political-economic, historic and socio cultural. In practical terms this could mean raising awareness of time and different scales of context for policy design, taking into account not only local contextual data but also macro-social ones. Lastly, the crucial question is to know, whether these changes towards more sustainable modes of transport are intrinsic and natural, accompanied by a change of mentalities that incorporates associated advantages such as savings, health, time and quality of life, or whether it is only a direct reflection of the economic situation of the country. In this sense, we consider it particularly pertinent to carry out a new study to investigate, in the current context, if there is a deflection on the use of public transport and a gain in private transportation, or if a more sustainable trend is maintained, embracing the thesis that it is important to test the transport system and improve its image in the public opinion.

[1] In general, the students improved their accessibility conditions to the metro system. Although the proximity to a metro station has increased, this improvement alone is not enough to explain the great adherence to the metro in 2012, especially for distances of more than 8km. It should be noted that the financial crisis had several impacts on the transport system. If buses were penalized by price increases and the reduction of some access lines and schedules, which may partly explain the decline in their use, so did private transport with the introduction of tolls and fuel prices. As a result, they may have contributed to the change to public transport, justifying the change in behavior and benefiting the use of the metro in particular.

[2] Public Transportation is relatively more used by women, but the differences between sexes are fading. Between 2006 and 2012, female student's mode shares were virtually unchanged and the mode shift is explained entirely by male behaviour.

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ID 1743 | POLICIES AND MEASURES TO PROMOTE BICYCLE USAGE IN STARTER CYCLING CITIES: THE CASE OF LISBON

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ABSTRACT: The role of policies and strategies in the promotion of bicycle usage in urban transportation is a key subject regarding the future of sustainable mobility in developed cities. This paper's intent is to contribute with a critical review on the meanings and particularities of cycling policies and measures, focusing on their nature, implementation procedure and levels of operability, while exploring their role in the 'future' of urban mobility in cycling starter cities. Hence, a general review of published studies on existent procedures, which directly and indirectly influence bicycle usage, is presented recurring to contemporary peer-reviewed and 'grey' literature. To illustrate the paper's findings and argument, a case study is also presented, focusing on Lisbon's cycling network. Preliminary findings suggest that cycling policies can be described as a set of programs developed with the intent of establishing direct and indirect rules and actions, envisioning the increase of cycling. They vary in both nature (physical, soft, complementary and knowledge measures) and implementation (short-run and long-run procedures), and are particularly effective when developed and executed at a local level. Thus, it can be argued that cycling policies and strategies can play a key role in the promotion of cycling as urban transportation and that the importance of such measures and actions differ per city's cycling development stage. This paper also supports that the success of bicycle usage in cities is strongly dependent on both political will and resolve and on a comprehensive approach, one that provides a coordinated and integrated package of cross-cutting multi-level policies and measures.

KEYWORDS: Cycling, Policy, Measure, Mobility, Urban, Lisbon.

1 INTRODUCTION

The role of policies and strategies in the promotion of bicycle usage in urban transportation systems is a key subject regarding the future of sustainable mobility in developed cities. This paper's intent is to contribute with a critical review on the meanings and particularities of cycling policies and strategies, focusing on both their nature, implementation procedure and levels of operability, while exploring their role in the 'future' of urban transportation, particularly in starter cycling cities. A systematic review of contemporary peer-reviewed and 'grey' literature regarding bicycle usage is presented. To illustrate the paper's findings and argument a case study is also presented focusing on Lisbon's cycling network. Considering the PRESTO Project, which establishes different stages of cycling development per effort and achievement considering existent cycling conditions and rate, Lisbon is presently at its starting point. In result of its car-oriented design and insufficient and disconnected cycling infrastructure the city's daily trips are currently well under a 5% share. To reverse this scenario, the Municipality has been implementing several policies and measures, focusing mostly on 'physical' efforts, overlooking important soft and complementary programs and actions. Our findings suggest that 'cycling policies' can be defined as a package of programmes and measures, used both by public authorities and private stakeholder's, establishing direct and indirect strategies, actions and rules of procedure to increase and encourage cycling as a secure, comfortable and attractive mobility solution, regardless of its purpose. Results also suggest that cycling policies and strategies diversify in nature (physical, soft, complementary and knowledge measures) and implementation (short-run and long-run procedures) being particularly effective when executed at local levels, especially if spatial dimension and territorial dispersion of urban areas is not overlooked in the process. According to Rietveld & Daniel (2004), there is a positive correlation between the development and implementation of cycling measures by local authorities and the increase of bicycle usage. At higher levels, such measures focus mostly on establishing general goals, providing dedicated funding and continued cooperation with lower levels of government. Thus, it can be argued that cycling policies and strategies play a key role in the promotion of cycling as urban transportation and that although there are many ways to increase cycling each city's situation is unique and requires a tailored mix of

policies and measures. This paper also supports that the success of bicycle usage is dependent on both political will and resolve and on a comprehensive, integrated and long range approach where the involvement and commitment of people, public and private actors is of extreme importance.

2 LITERATURE REVIEW: CYCLING POLICIES AND MEASURES

According to Healy (2006), the term 'policies' can be understood as an explicit governmental statement, mostly used as guidelines, with the intent of describing the vision and goals that authorities intend to implement. For Portas, et al (2003) such planning instruments should be sufficiently revealing and adaptive in order to provide signs of fresh dynamics, investment opportunities and new dimension requirements, while also establishing coherence at different spatial dimensions and with different authorities and stakeholders.

These should also be consistent with the established rights and responsibilities of both citizens and administrative authorities. Such policies are often designed to respond to a particular purpose or need, during a particular period of time (CROW, 2016). The chapter intends to clarify the role and importance that policies and measures have in the development of bicycle networks, by providing a clear description or their significance by studying their adequate levels of governmental and spatial intervention, and by characterizing both their nature and implementation procedure. In addition, a description of key policies and actions influencing bicycle provision in starter cities is also presented. Discussion will make a critical review on the accuracies and meanings of such policies and actions, as well as a reflection regarding their importance in the development of bicycle infrastructure and promotional programmes. Therefore, a systematic review of contemporary[1] peer-reviewed literature was conducted, regarding policies, strategies and measures influencing bicycle provision in cities which are presently at a starting point of their cycling network development. An analysis of non-peer-reviewed 'grey' literature was also conducted, focusing on data published by independent agencies and multi-level government authorities in Europe. To access such information, in addition to public libraries, on-line scientific libraries, such as Science Direct, Web of Science, Google Scholar and Transport Research International Documentation (TRID), were consulted. Website analysis of organisations such as European Cyclist's Federation (ECF), European Commission (EC) and European Travel Safety council (ETSC) was also conducted. Searches included the following terms combined with bicycle, cycling, bicycling and/or bike: policies, strategies, planning, measures, actions, infrastructures, programmes, communication and training.

2.1 DEFINITION

Although several definitions are provided by experts and academics, they all possess as common feature the fact that 'cycling policies' represent a package of strategies and actions which are specifically devised to increase bicycle commuting (Buehler & Dill, 2016; Heinen et al, 2010; Noland & Kunreuther, 1995). For Pucher, et al (2011, 2010) such definition should also highlight the importance of safety conditions when commuting. Additional variations were also verified, focusing either on travel distances (shorter trips), cycling uses (utilitarian and / or recreational), provision of cycling facilities (bikeways and parking), and car restrictive measures (Tsenkova & Mahalek, 2014; Tin Tin et al, 2010; Santos et al, 2010). Furthermore, in order to provide a deeper analysis, both words naming the concept of 'cycling policies', were studied separately by accessing respected online dictionaries. The Merriam-Webster dictionary provides several descriptions for the word 'policy', namely: "prudence or wisdom in the management of affairs; and a high-level overall plan embracing the general goals and acceptable procedures, especially of a governmental body". Oxford dictionary defines the same word as "a course or principle of action adopted or proposed by an organization or individual". Cambridge dictionary refers that 'policy' means a set of ideas or a plan of what to do in particular situations officially agreed to by a group of people, a business organization, a government, or a political party. The Encyclopaedia Britannica defines 'policy' as "a set of measures or actions (plans, regulations and behaviours) used by a government, a corporation or other organizations, both public and private". Regarding 'cycling' (cycle/bicycling), the Merriam-Webster dictionary describes it as the act of 'riding a bicycle' and the Oxford dictionary as "the sport or activity of riding a bicycle".

[1] Published between 2000 and 2016.

Cambridge dictionary considers it to be the act of “riding a bicycle or related to riding bicycles”, while Encyclopaedia Britannica, defines ‘cycling’ as the “use of a bicycle for sport, recreation or transportation”. Cross referencing all prior descriptions one verifies that although different in content they are in fact relatively similar in concept.

2.2 LEVELS OF INTERVENTION

According to Graham & Marvin (2001), the majority of cities across the world display spaces that are interconnected to other areas within the urban landscape and across national and international distances, forcing us to consider that space and scale are being refashioned in ways that change the configuration of existent infrastructure networks, thus reshaping physical and social environments of cities. Different scales of intervention, jurisdiction and representation hold a key part in the debate concerning the role that public authorities have, or should have, in spatial planning, particularly regarding bicycle network development. For the European Commission (2011) there is considerable potential for increasing the number of travellers using bicycles instead of motorized vehicles in their daily commutes within urban areas. But to achieve such intent, planning practice will necessarily have to consider integrated multi-level policies, strategies, rules and measures, which should preferably be provided by different policy sectors and levels of government (Stead, 2010). There are several concepts regarding spatial or territorial ‘levels or scales’. For Johnston, et al (cited in Marston, 2000, p. 220) ‘scale’ can be defined simply as a ‘level of representation’. Castells (cited in Brenner, 2000, p. 363) believes that ‘scales’ are representative of the different spatial unit’s[1] that constitute the capitalist system, in an attempt to define territorial levels as spatial expressions of social functions. Howitt (cited in Marston, 2000, p. 220), considers that the concept of ‘scale’ holds other distinct aspects namely size, level and relation, claiming that scale should be assumed nor as dimension (urban, metropolitan, continental) or level (local, regional, national), but as a relational element, one that is part of a complex mix that also includes the notions of space and place. Such multiplicity of accumulated and enclosed spaces, actively and interactively produce the territories which we inhabit, which we observe and, one may add, which we (re)shape. Therefore, it is intended to comprehend which ‘dimensions’ and ‘levels’ are most suitable considering the development of cycling networks. The concept of ‘level or scale’ was addressed from a governmental and organizational perspective (public and private), considering the following levels of political power: Community[2]; Central; Regional; and Municipal. The concept of ‘dimension or size’ was analysed from a territorial perspective, considering the following dimensions: European, National, Metropolitan and Urban[3]. For the past years, several policies and guidelines have been developed at a Community level, with the intent of actively and positively contribute to territorial cohesion and sustainable mobility of member states. In the European Union, there are particular examples such as the Territorial Agenda 2020 (2011), which revises the Leipzig Charter (2007) on sustainable European Cities; the European Transport Safety Council Report (2012) regarding security policies and strategies for bicycle commuting within the European Union; the European Commission Report (2013) regarding the development of sustainable urban mobility plans; and the Declaration of Paris "City in motion: People first" (2015), which defines strategic priorities for future projects regarding transport, health and the environment, underlining the importance of promoting people-centred policies with the intent of facilitating access to inclusive, sustainable and healthy mobility systems. The European Commission is also supportive of the concept that cycling actively contributes to the improvement of urban quality of life and has been increasingly supporting the development of cycling projects (European Commission, 2013, 2011; Van den Noort, 2007). Overall, the European Union has been setting the general framework, providing funding and establishing standards regarding good cycling practices and continued cooperation with member state regions and municipalities (Mircea, 2012; Dufour & Ligtermoet, 2010; Banister et al, 2007). Central governments influence cycling through national policies intended to increase bicycle usage and safety, dedicated funding to regional and municipal governments, traffic regulations, roadway and bikeway design standards, in addition to mass dissemination of cycling knowledge and benefits. However, most policies that increase cycling and make it safer are developed at regional and, in particular, municipal levels, since in addition to having the ultimate responsibility for adopting and implementing specific bicycle infrastructures and programs, they frequently reveal courageous political will and leadership to support and finance cycling for transportation, by pursuing challenging and difficult measures, since, in most cases, people still favour commuting by car (Buehler &

[1] Neighbourhoods, urban cores, metropolitan regions, national urban systems.
[2] Community’ level refers to supranational organizations, in reflexion to the present European system.
[3] European’ dimension refers explicitly to the European Union, while ‘Urban’ represents the city dimension.

Pucher, 2012; Urbanczyk & Laubenheimer, 2011; Blackledge et al, 2007; Rietveld et al, 2004). Despite its relevance and importance, the association between the urban dimension and the municipal level may not produce effective legislation, since regulations that identify and specify the necessary standards may already exist at higher levels (regional or central). Therefore, when necessary, bicycle projects can be developed with the intent of enabling and implementing particular policies by recurring to urban projects which otherwise could not be considered since they had no apparent legal framework (Portas et al, 2003). Moreover, beside these spatial dimensions and governmental levels, the spatial size of cities should also be considered when developing cycling plans. According to Pucher and Buehler (2012), promoting bicycle commuting in large cities[1] is considerably more challenging than in small cities[2], since in addition to their greater land area, longer trip distances, more extensive transportation systems, heavier traffic, and more noise and pollution, larger cities often comprise more local governmental jurisdictions and thus, additional bureaucratic layers. On the other hand, cycling development in small cities is less challenging for all the opposite reasons. Spatial variation in bicycle use within cities is also an important subject. Cycling rates tend to be significantly higher near centre and historic urban areas, since they are in close distance of important amenities (transport interfaces, university centres and cultural facilities) and social, commercial and service areas, in opposing to outer neighbourhoods (Buehler & Pucher, 2012).

2.3 NATURE AND IMPLEMENTATION

Sadik-Khan & Solomonow (2016) consider that "(…) streets are the social, political and commercial arteries of cities (…)" (p. 3). However, current levels of motorized traffic commuting in such 'arteries' are as undesirable as they are unsustainable (Van den Noort, 2007). Public policies and measures on sustainable transport that until recently had been mostly directed at motorized vehicles are now being 'redirected' to other modes of transportation, namely bicycle commuting. The importance of policies and measures to promote cycling has been steadily rising and is now well recognised by the European Union in addition to local, regional and national authorities. Therefore, the following subchapter will address physical, soft, complementary and knowledge cycling policies and measures, focusing on their nature (push and pull) and implementation procedure (short and long-run). A general framework of programs and actions that positively influence bicycle usage, particularly in starter cycling cities[3] will also be presented. According to Santos, et al (2010) physical policies focus on measures of infrastructural nature, and are an indispensable first step in encouraging cycling in starter cities by providing cycle friendly facilities and developing cycle routes and networks (Riley, 2001). In addition to increasing travel safety and comfort, such physical measures signal commitment from local authorities and also send the message that cycling is a respectable and 'usual' way to commute within cities (Dufour & Ligtermoet, 2010). However, no single measure suffices and it is now clear that focusing on cycling infrastructure provision, although important, will not by itself lead to an increase in bicycle mode share (Pucher & Buehler, 2012; Urbanczyk & Laubenheimer, 2011; Van den Noort, 2007). Getting people to commute by bicycle requires a sustained campaign that makes people aware of new choices in result of new infrastructure developments. Coordinated with physical policies, soft policies (Santos et al, 2010; Riley, 2001) have proven effective in stimulating people to commute by bicycle (Pucher & Buehler, 2012; Urbanczyk & Laubenheimer, 2011; Pucher, Dill & Handy, 2010). These are intangible measures intended to bring about behavioural change by publicizing infrastructure improvements and availability, promoting travel awareness, information, special events, training and education programmes. Communication should start as soon as there is a clear commitment to cycling improvement programs, thus providing the opportunity to put cycling on the map, focusing on particular groups, such as students, millennials, recreational users and eco-friendly clusters, among others (Urbanczyk & Laubenheimer, 2011). Furthermore, complementary policies and measures should also be considered, namely those intended to restrict or hamper car use and circulation, discourage car purchase, adopt cycle friendly regulations, design mixed-use communities and transit oriented projects that facilitate the proximity of residential areas to transport hubs, local amenities, commercial and service centres (Pucher & Buehler, 2012; Pucher, Dill & Handy, 2010). Also, the adoption of bicycle use by certain visible professions, such as postal carriers and the police, may contribute to increase cycling visibility and credibility (Urbanczyk & Laubenheimer, 2011). Knowledge policies which emphasize the role of investment in research and development towards sustainable mobility should also

[1] According to Buehler & Pucher (2012), large cities have over 500.000 residents in their metropolitan area.
[2] According to Handy, et al (2012), small cities are defined as having fewer than 300.000 residents.
[3] Cities with insufficient users (mode share under 5%), scarce cycling infrastructure, car oriented road design and absent cycling culture (Urbanczyk & Laubenheimer, 2011; Dufour & Ligtermoet, 2010).

be considered (Santos et al, 2010). Considering the diversity of policies and actions designed to increase bicycle usage, a general framework is presented including some important measures, particularly used in starter cycling cities with the intent to make cycling possible, safe and respectable (see table 1). Regarding the nature of cycling policies and measures, one can consider two distinct yet complementary solutions to achieve a modal shift from commuting by car to bicycle usage (Riley, 2001). Push measures[1], or 'sticks', developed with the intent to persuade people away from car usage by making driving less attractive (allowing to improve cycling competitiveness regarding car travel), and pull measures[2], or 'carrots', aimed at improving and creating alternative mobility solutions, such as bicycle commuting, enhancing safety, convenience and comfort of bicycle users (Eriksson et al cited in Santos et al, 2010; Kalter, 2007; Riley, 2001). According to Rietveld & Daniel (2004), such policies, commonly used in transportation research, appear to adequately apply to bicycle usage as well. Push and pull measures need to be combined in a mutually supportive package of policies restricting car commuting while improving and promoting the availability and attractiveness of alternatives, focusing on public transport, car sharing, cycling and walking (Buehler & Pucher, 2012; Banister, 2008). Policy combination theory considers that the effects of policies increasingly reinforce each other, so that the total effect of a policy package is larger than the sum of their effects if applied separately (Lautso & Wegener, 2007). Nonetheless, push measures appear to also have stronger impacts than pull measures in bicycle development (Blackledge et al, 2007; Kalter, 2007). The implementation of policies and measures affecting the provision of bicycle commuting and its integration with public transit is a complex process that is being increasingly established (Tsenkova & Mahalek, 2014). For any starter city to adequately promote cycling policies, key factors have to be secured, namely: garner necessary public and political support, commitment and encouragement; determine an appropriate package of policies and actions; ensure a good policy development process[3]; and devise a tailored mix of short-run and long-run implementation procedures (Pucher & Buehler, 2012; CROW, 2009). For Noland and Kunreuther (1995), long-run procedures are frequently used when employing 'push' policies and measures. Given their sensitive and challenging nature they require careful planning and promotion resulting in a more time-consuming development. On the other hand, short-run procedures, which are usually associated to the implementation of pro-bicycle actions (pull measures), provide a swifter process due to their more direct and less challenging character (Noland & Kunreuther, 1995). The successful implementation of such policies and measures often depends on strong leadership and adequate capability of authorities to integrate the necessary elements for overcoming existent 'traditional barriers' and 'cultural attitudes' on cycling (Pucher, Buehler & Seinen, 2011; Blackledge et al, 2007; Van den Noort, 2007; Rietveld & Daniel, 2004). Implementation also requires complementary efforts from other individuals and interest groups, such as cycling advocacy organizations[4], in addition to local authorities (Pucher, Buehler & Seinen, 2011).

		Measure	Push	Pull	Long-run	Short-run
Physical policies (infrastructure)	Routes & links	Bicycle tracks		●		●
		Bicycle lanes		●		●
		Contra-flow bicycle lanes		●		●
		Bicycle streets		●		●
		Shared lanes (with traffic, buses and pedestrians)		●		●
		Bicycle trails		●		●
		Bicycle advanced stop lines and turn boxes		●		●
	Intersections	Right-of-way		●		●
		Roundabouts		●		●
		Traffic-light		●		●
		Crossings (street level and elevated)		●		●
	Parking	Sheltered/Unsheltered		●		●
		Guarded		●		●
		Lockers		●		●
		Private (workplaces, residences, malls ...)		●		●

[1] Expand paid parking areas, fewer parking places and higher rates in urban centre areas, congestion charging, car free streets, traffic calming measures, among others (Kalter, 2007).

[2] Construction of cycling routes and networks, improve cycling parking facilities, reduce waiting time at intersections and crossings, tax benefits for bicycle users, among others (Kalter, 2007).

[3] Hoogerwerf & Herweijer (cited in CROW, 2016, p. 21) identify six phases in policies development process: Agenda; Policies Preparation; Decision; Implementation; Compliance and enforcement; and Assessment.

[4] Such organizations have played a key role in cycling promotion by helping to organize and publicize cycling events, while providing useful information and conducting bicycle training programs.

	Public transport	Bicycle facilities at transport stops and interchanges		●		●
		Bicycle racks on buses		●		●
		Bicycle racks on trams and subway		●		●
		Bicycle racks on trains		●		●
		Bicycle racks on boats		●		●
Soft policies (promotion)	Promotion	Promotional campaigns		●		●
		Events and festivals		●		●
		Travel awareness programs		●		●
		Specific programs (bike to work and school days …)		●		●
	Information	Wayfinding signage		●		●
		Information centres		●		●
		Bicycle routes map distribution		●		●
		Trip reduction programs		●		●
		Safe routes to school		●		●
	Education	Child learning and safety programs		●		●
		Adult learning and safety programs		●		●
		Bicycle testing events		●		●
		Motorist training and education		●	●	●
Complementary policies	Diverse	Bicycle Sharing		●		●
		Restrict car use (congestion charging reduce parking availability)	●		●	
		Increase car parking cost	●		●	
		Cycle friendly traffic regulations	●		●	
		Traffic calming		●		●
		Car free zones		●		●
		Mixed streets		●		●
		Improve public transportation	●		●	
		Design mixed-use communities	●		●	
		Transit oriented development projects	●		●	
Knowledge policies	Diverse	Research and development		●		●
		Bicycle counters		●		●
		Bicycle traffic analysis (loop detectors or direct observation)		●		●
		Bikeability assessment		●		●

Table 1 – General framework of programs and measures[1]

The integrated and coordinated implementation of incentive and restrictive measures, in association with comprehensive bicycle plans, is crucial in increasing bicycle commuting, and has been associated to the on-going expansion of cycling share, especially in European Countries (Buehler & Pucher, 2012; Pucher & Buehler cited in Tin Tin et al, 2010, p. 61; Noland & Kunreuther, 1995).

2.4 DISCUSSION

The importance of a right set of policies and adequate development and implementation process in cycling promotion is now well recognised, particularly in cities that intend to increase their bicycle share (Pucher & Buehler, 2012; Van Den Noort, 2007). Our findings suggest that such 'cycling policies' can be defined as a package of programmes and measures, used both by public authorities and private stakeholder's, establishing direct and indirect strategies, actions and rules of procedure to increase and encourage cycling as a secure, comfortable and attractive mobility solution, regardless of its purpose (utilitarian or recreational). Such policies are most effective when developed and executed at a local level, particularly if spatial dimension and territorial dispersion of urban areas is not overlooked in the process. At higher levels, such measures focus mostly on establishing general goals, providing dedicated funding and continued cooperation with lower levels of government. The development of policies and measures should be cross-referenced with different government levels and spatial dimensions by ensuring that considered planning systems achieve both vertical and horizontal integration, namely, governmental cooperation and spatial consistency and coherence (Buehler & Pucher, 2012; Banister et al, 2007). In addition, results also suggest that cycling policies and measures may possess distinct, yet complementary, forms and natures, devised with the intent to implement 'encouraging and discouraging actions' to promote bicycle commuting, during a particular period of time, preferably including a tailored mix of short and long-run

[1] This table is based on the European Commission Presto Project - Promoting cycling for everyone as daily transport mode, and work developed by Pucher and Buehler (2012) and Pucher, Dill & Handy (2010).

procedures. Such an effective and integrated implementation requires interactive and participatory processes, where the involvement and commitment of people, public and private actors is of great importance in raising society's awareness regarding sustainable urban mobility, namely bicycle commuting.

3 CASE STUDY: THE CASE OF LISBON

Lisbon has a land area with nearly 100 km2 and is home to approximately 547.773 citizens. Such extensive territory is characterized by a large plateau and 15 km of riverfront as well as numerous routes along valleys and ridges (CML, 2013). The City is currently expanding and improving its bicycle network, with the intent of making cycling possible, safe and more respectable. The main goal of such investment is the improvement of both security and comfort conditions during circulation in addition to the reduction of energy consumption, pollutant emissions and noise level. Also, the promotion of cycling as a valid alternative in urban mobility will contribute to elevate the city's quality of life and improve its accessibility, making it more attractive and inclusive. This chapter describes and explains Lisbon's cycling network focusing on its evolution and considered policies and measures. The research method focused on qualitative data, namely literature review of policies, strategies and measures influencing bicycle provision in starter cities and content analysis of reports, public presentations, infrastructural solutions and promotional programs concerning bicycle commuting development in Lisbon, including the city's bicycle network layout. Also, exploratory interviews were conducted with Municipality's advisor and technical staff, responsible for the network development and overseeing. Most used information was provided directly by the Municipality of Lisbon, although additional data was also retrieved from specific websites (Municipality and bicycle friendly association's)[1].

The authenticity of such information as well as the credibility of its source was determinant criterion regarding its assortment and use. Regarding techniques and tools, in addition to observation of documental information, a spatial analysis of the city's cycling network allowed to understand its evolution, hierarchy and bicycle route types. Such analysis provided a better understanding of the intent and level of commitment the Municipality has regarding bicycle commuting. It also allowed to group and study the incidence of the network's bicycle routes typology, thus enabling to understand the level of effort regarding the construction of safe and comfortable routes. These analyses were developed recurring to CAD and GIS software, in addition to Google earth satellite images[2].

3.1 NETWORK DESCRIPTION AND EVOLUTION

The development of the city's cycling network was analysed considering two distinct moments. The first moment, which began during the year 2000, was a lengthy and complex process. In seven years merely 14 km of routes were built, namely in Monsanto Park, to the west of the city, in the Campo Grande urban park, located in Lisbon's central area, in Telheiras located to the north, and in the Parque das Nações area, located northeast of the city. In 2007, Lisbon was a city without cyclists despite all created paths, making it difficult to justify a continued commitment in this type of infrastructure (CML, 2013). Nonetheless, the municipality resiliently continued to focus on its network continuity and evolution, reinforcing its development dynamic. Between 2008 and 2009 Lisbon expanded the network in approximately 24 km, an increase of approximately 170% regarding the first seven years. Between 2010 and 2014, 26,2 km of new routes were added to the city, namely the river link between the area of Parque das Nações and the downtown historical area. Also, a cycling route was implemented in Avenida Duque de Ávila and Avenida da Liberdade, one of Lisbon's most emblematic and important boulevards. Overall, in the course of 14 years, little over 63 km of cycling network were developed. During this first phase, the focus was in establishing connections between existing green areas and important amenities and infrastructures such as public transport interfaces and university areas (CML, 2013). Of the developed network, implemented between 2000 and 2012, merely 28% were deployed in road areas (roads and parking spaces), with the remaining 72% constructed in green spaces and pedestrian areas (sidewalks). Although not being the

[1] MUBi – Bicycle friendly association for urban mobility; FPCUB – Portuguese federation of cycling tourism and bicycle users; FPC – Cycling Portuguese Federation.
[2] Images captured between July 2001 and February 2016.

most convenient solution such option was considered valid since during this first phase, which according to the Municipality can be considered as an experimenting phase, the network was developed using a more conservative approach focused on users unaccustomed to travel by bicycle, especially in a system dominated by motorized vehicles. However, in 2013 a different approach began to be introduced (second phase)[1]. In addition to the devise of the city's cycling network, the development of bicycle routes gained a fresh momentum and started displaying a different concept, with 63% of all new bicycle routes sharing the road with motorized vehicles, 24% in parks and green areas and merely 13% in sidewalks. Whenever possible, segregated routes were created, particularly in areas with higher traffic volume, intensity and speed (CML 2013). Despite the absence of quantitative data, by 2014, particularly during spring and summer, it was noticeable that more people where already commuting by bicycle (CML 2013). During this second phase, the Municipality intends to create approximately 90 km of new bicycle routes across 142 streets, and approximately 70% of such routes will be completed until 2019 (CML, 2017). Considering this new strategic framework, one that envisions the bicycle as a mobility solution supportive of the public transportation system and focused on utilitarian cycling, a new network layout was designed with the clear intent of increasing bicycle share in Lisbon. This moment, which one could say corresponds to an assertion and expansion phase, is also characterized by an enhanced focus in user's requirements, regardless of their age, gender or experience, and a new hierarchical organisation system. Three levels were considered: Fundamental; Complementary; and Local. The fundamental network intent is to enable daily commutes between the city's different 'core areas' and neighbouring municipalities such as Amadora, Odivelas, Oeiras, Loures and Almada. Considering such agenda, the bicycle routes need to ensure safe, comfortable and functional travels to its users so that they can commute quickly and efficiently. The complementary network has the key purpose of establishing connections between the fundamental and the local network and to important amenities (public transport interfaces, university centres and cultural facilities, among others.) in addition to social, commercial and service areas. The local network intent is to ensure home to work connections, while also enabling easier access to local commercial and service activities. This hierarchical system has a key role since it contributes to the creation of safe, fast and comfortable commutes throughout the city. In addition, the existent network will also be rehabilitated, 250 new bicycle parking areas will be constructed, and a shared bicycle system will be implemented with an estimated offer of 1.410 bicycles, most of them electric, distributed by 140 stations.

3.2 CONSIDERED POLICIES AND MEASURES

The information included in the following subchapter was provided by the Municipality, namely reports and public presentations, but most importantly, it was retrieved from interviews conducted with Municipality's advisor and technical staff responsible for the development, implementation and management of Lisbon's cycling network. Focusing on programs and actions associated with the network´s current development phase, these interviews were structured in order to understand the following: Intended agenda (political and technical), allowing to verify if it addresses societal needs and requirements; Policy preparation, focusing on steps taken during the plan's development; Policy decision, namely what type of support and agreements were necessary and secured; Policies implementation process, considering the network's current focus and its envisioned evolution; Compliance tools and procedures to enforce the selected policies and measures; and Evaluation of achieved results, allowing to understand if the considered goals were accomplished[2]. According to the Municipality, Lisbon's cycling network was developed considering a medium to long term political agenda, sustained by both its governmental and technical staff, with the intent of promoting bicycle commuting as a 'new' solution in urban mobility, one that needs to be carefully integrated with the city´s present and future transport system, as part of its sustainable mobility and environmental strategies. Its main goal is to increase cycling[3], and provide users, regardless of age, gender, travel purpose and experience, with a secure, direct and comprehensive bicycle system. In order to develop its network, in addition to information gathering, different spatial and social analysis were developed by the Municipality[4], in addition to the development and assessment of different solutions prior to the conclusion of the 'final' network layout. However, during the design phase of considered bicycle

[1] The local authority's government programme regarding sustainable mobility clearly stated the intent to include cycling in its agenda (2013-2017).
[2] Based on Hoogerwerf & Herweijer policies development and implementation stages (CROW, 2016).
[3] The current share is under 1% according to provided information. Regarding intended cycling share objectives, a specific value was not established by the Municipality.
[4] Traffic network; Land use and constraints; Amenities, commercial and service areas; Public transportation system; Urban morphology; Public space; Terrain model; Master plan and regulations, among others.

routes it became clear that necessary adjustments to the network layout were needed[1]. Also, a formal strategic report of the cycling network was not developed, although a draft version was completed by the Municipality's technical staff, a fact that some of the interviewed were unaware. This was a complex process, made of forward and backward movements, which involved substantial negotiation, mostly at a governmental and political level (between deputy mayors offices and local parishes), regarding the concept, route typology and implementation procedures. Regarding the network layout, quorum was definitely achieved, namely regarding the fundamental and complementary network levels. Nonetheless, not all urban projects currently being developed seem to be aligned with the envisioned strategy, presenting questionable solutions regarding cycling routes and intersection design, possibly affecting users safety, directness and comfort, and in the long run, the increase in bicycle usage. Presently the network's development focus is almost exclusively in physical measures overlooking soft measures in particular. Considering both political and technical conditions and momentum, it is conceivable that by 2018/2019 the additional 90 km's of cycling routes will be added to the current cycling network, focusing on its fundamental and complementary levels. In order to ensure the compliance and enforcement of the network's designated objectives, programs and actions, in addition to Lisbon's Master plan, the Municipality possesses as additional tools local regulations and design recommendations and guidelines included in the city´s public space design manual. However, additional tools such as communication and information events are not being considered, making it more challenging to campaign for cycling. It is expected that the launch of Lisbon's bike share system may reverse such scenario. Nevertheless, the key question centres on the extent to which the envisioned goals are being fulfilled, and in that regard the results do not disappoint. Although obtained by direct observation analysis, it remains clear even to cycling sceptics that more and more people are now commuting by bicycle. Such finding is also supported by results presented by Lisbon's existent bicycle counter located in one of the city's centres. Data analysis allows us to conclude that regarding a three-month period[2], this year's values reveal a 60% increase in cycling journeys when compared to those retrieved in 2016. Regarding developed policies and measures, they focus frequently on physical policies (infrastructure), namely: Routes and links design, including several elevated connections; Intersection design, focusing on safety and reducing stop periods for users; Parking solutions, although additional focus is needed regarding the creation of sheltered and guarded parking solutions; and Public transportation, such as allowing users to travel with their bicycles on trains, subways and buses in addition to creating parking facilities at stops and interchanges. Concerning complementary measures, present attention is clearly in the implementation of the city's bike share system. Additional actions such as traffic calming, mixed streets, improving public transportation frequency, and creating parking areas near city's entrances are also being considered. The creation of management policies and measures regarding urban logistics and tourism shuttle transportation is also being assessed. Knowledge policies, namely installation of additional bicycle counters throughout the city, focusing on its centre areas, and the creation of partnerships with local universities with the intent of analysing cycling's evolution and performance are also being deployed. However, as previously stated, soft measures development and implementation is considered to be overlooked, either regarding the number or frequency of promotion, information and education actions and events. Nevertheless, soft actions have already been executed, namely learning and safety programs, events and festivals, safe routes to school, bike to work days, mostly driven by private cycling advocacy organizations working in collaboration or with the endorsement of the Municipality, corroborating the important and active role that such groups have in campaigning for cycling.

4 CONCLUSION

The importance of Policies and measures in promoting bicycle usage in cities is widely recognised by providing positive impacts in cities environment, road safety, health issues, social equity, improved mobility and accessibility, among others. According to Van den Noort (2007), such programs and actions are targeted to correct misperceptions that people may have about cycling and to highlight its positive aspects and benefits in order to increase usage. Lessons learned also suggest that in addition to being most effective at a Municipal level, such policies and measures should be developed and implemented considering a comprehensive and integrated approach, cross-referenced to higher governmental levels and different spatial dimensions, ensuring the involvement and commitment of people, public and private stakeholders. However, no two cities are alike. Although distant from realities of other cycling cities such

[1] Such network layout inconsistencies are in fact a natural part of the spatial planning process (systemic theory).
[2] From February to April.

as Amsterdam or Copenhagen, Lisbon may shortly increase its current share to values close to cycling cities such as London, Seville and even Paris. Upon its completion, Lisbon's cycling network will have approximately 160 km of routes, representing an increase of nearly 140% in a short period of time. This is a clear demonstration of the Municipality's intent and determination in promoting bicycle usage as a valid and viable solution considering the city's intended mobility system and environmental sustainable agenda. According to the PRESTO Project[1], starter cities such as Lisbon, should have as main goal making cycling possible, safe and respectable, and focus on infrastructure efforts (physical policies) with the intent of developing safe, direct, and coherent routes. Promotional efforts, namely soft, policies, should also be considered, focusing on measures and programs that encourage, convince and reward cycling, in addition to publicizing infrastructure improvements thus providing the opportunity to put cycling on the map and hopefully stimulating people to start riding. Regarding implementation procedures, these should focus on a neighbourhood scale progressing to a city wide network as cycling increases. By cross referencing Lisbon's deployed policies and measures with the PRESTO project guidelines, it becomes clear that in overall the city's network is being developed and implemented in accordance with such recommendations. However, the network's infrastructural efforts started being developed at a city-wide dimension instead of focusing on local neighbourhoods. In addition, important features are being overlooked, namely soft policies and measures focused on promotion, education and information efforts. It is important to increase the understanding of both the public, politicians and the media regarding planning concepts and issues to provide a more clear and tangible knowledge regarding the Municipality's intentions and objectives for its cycle network (Banister et al, 2007). Also, additional and more specific objectives should have been presented instead of a single general goal such as 'increase cycling'. Establishing a bicycle share value to be achieved during a timeframe would allow to more accurately assessing if the intended objectives were being met and why. The inexistence of a strategic report that sets overall goals, details policies and actions to be achieved during a specific timeframe and provides for a comprehensive, coordinated and integrated approach, in addition to the identified inconsistencies in the network layout, makes it difficult to recognize Lisbon's cycling network as an effective planning and compliance tool. Preliminary results regarding the increase in cycling usage are encouraging and future expectations are high. To continue with its cycling progress, Lisbon will have to achieve an adequate balance between physical, soft, complementary and knowledge based policies and measures, set out a vision and a clear strategy and monitor results along the way. It can be argued that real change can only be attained by changing priorities and actions of individuals and by promoting debates regarding what type of cities people want to live in (Banister, 2008). Therefore, two fundamental questions must be placed by Lisbon's public authorities: Are we serious about promoting cycling as urban transportation and what are we willing to continue changing to get there?

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[1] The PRESTO Project provides a sequence of cycling development efforts, defining broad objectives and packages of policies and measures adjusted according to a city's cycling level, focusing on cycling conditions and rates. Three levels are considered: Starter, Climber and Champion. (Dufour & Ligtermoet, 2010).

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ID 1751 | SOCIO-SPATIAL DIMENSIONS OF HOW TO MAKE A CITY BICYCLE-FRIENDLY: THE CASE OF KAYSERI, TURKEY

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1 INTRODUCTION

Traditional transport policies based on automobile usage are regarded as no longer sustainable all over the world and governments are seeking new methods to encourage other modes of transportation such as walking, cycling and public transport. In Turkey, there is a big increase in the awareness of importance of the sustainable and integrated urban transport in the last ten years. Cycling in Turkish cities has also increasing importance both in national and local level. Parallel to this interest, the Ministry of Environment and Urbanism released a new regulation about the design and construction of bicycle paths, bike stations and tracks within the city in 2015. In addition to this, governmental bodies have been carried out a number of projects that aimed to encourage bicycle usage. This willpower has also influenced local authorities to make cities more bicycle-friendly.

Kayseri is a middle-sized Central Anatolian city with approximately one million population. The city has been doubled its population in the last 20 years and it is still growing rapidly. The local government has been built 34 km tramlines and 35 bike-sharing stations within the city and tried to integrate bike stations with tram stops. However, the overall development of the city is still automobile-oriented and the modal share of bicycles in daily commuting is almost zero. There are also safety problems for cyclists in the city.

Within this study, we aimed to examine the bicycle experience of the city from socio-spatial perspective and evaluate it according to the Copenhagenize Index criteria. Within this scope we will firstly reveal the existing condition in terms of bicycle infrastructure and bicycle usage in Kayseri. Secondly we will evaluate the experiences of cyclists in the city. For this, we conducted a survey with 125 active cyclists that cycle in daily base. We asked them both the physical conditions in the city and their experiences of cycling. Finally, we will propose a framework to be able to become bicycle friendly city.

2 BACKGROUND

Cycling transportation in cities is very common today. Bicycle sharing schemes offer a valid alternative cycling mobility in urban areas combined with public transport for longer distances. A lot of research (Pucher, et al., 1999; Pucher & Buehler, 2008; Forward, 2003; McClintock, 2003; Jacobsen, 2003; Pikora, et al., 2003) has extensively examined the role of cycling for transport. These researchers have listed the advantages and disadvantages of biking, and found how it influences the transportation pattern in cities.

There are also benefits for cycling such as ensuring public health in cities, reduced trafic congestion, improved accessibility, better air quality, less noise, lower carbon foot print, costs reduction, education-it helps children improve their physical health and fittness, land use-ten bicycles can be parked in the space taken up by one car. Additionally, Cycling is the most green house gas efficient transport mode.It has created new and huge transportation sector in economically. For example, 21 million bicycles were sold in the EU, in 2014 year.

The use of public bicycles has quickly expanded, although as a newly-developing mode of transportation its related theory and research is still in the early stages and largely focuses on site planning and scheduling, changes to and influence of transportation mode, analysis of the operation model, evaluating user satisfaction, and the characteristics of public bicycle users.(Yang R, Long R,2016:2)

Meanwhile, There are following policies and programmes concerning with the cycling in Europe. Especially, It is important that The European Union policies on transportation and bicycle programmes in cities. European Union has taken care of the priorities and action plan on bicycle within the public transportation. In 2011 dated White paper, It is called as In this report, It is declared that Individual transport is preferably used for the fiscal miles of the journey and performed with clean vehicles (White paper report:2011:5) Clean urban transport and commuting, public transport choices are more widely available as well as the option of walking and cycling.

On the other hand, EU action plan supported that road safety, air quality, use alternative fuels that best fit their local strategies, EU standarts for new infrastructure, continuing the ambition for a model shift towards more sustainable modes. Additionaly, EU supports to cycling in cities. (According to Eurobarometer, %7.4 of European citizen used the bicycle as their primary means of transportation in 2010, By 2020 We want to see the level of cycling at %5 of the modal split. (www.eurociites.eu.sustainable, 2015)

The EU has taken an active role in promoting cycling trying to maket he best use of this mode ofPap transport by involving it in it’s efforts to achieve the European 2020 strategy targets. When EU Ministers of transport declared their commitment to promoting cycling as a climate friendly and efficient transport mode. In recent years , two particular features of our society have come to be recognized as serious problems that require urgent action climate change and sedentary life style. (Pape M, 2016:5)

Eurocities network suggested that more funding for public transport, cycling and walking strategies should be available. European commission supports the transition towards clener and more performing cities through sustainable urban mobility plans. Mean while, European Cyclist Federation annouced ECF manifesto interesting with the title ECF manifesto for a call for ACTİON 10 key measurement to get more people cycling more of ten in Europe. There is a cobenefits of cycling as consist of environmental, economical and social . The other legal document as declaration on cycling as a climate friendly, transport mode (European Council, 2015) For cities the visible promotion of cucling through meavoures such as bicycle share scheme feeds into wider brsnding strategy. For cities, visible promotion.

There must be increased that streghten international, national, regional cycling networks. So, It should be integrated cycling to the multi modal transport policy for realising to smart mobility because of improving the urban mobility action plan. For example, EU action plan consists of many items: air quality, use alternative fuels, standarts for new infrastructure, streengthening city involvement. Cycle plans should be designed to create networks for destination oriented daily cycling and to encourage cycling demand. For instance, There are still using cycle superhighways, cycle rote network, cycle tourism routes in England. On the other hand, This process also should integrated sustainable urban transportation system as well comprehensively. It will lead that minimize energy cost in transportation in economically, ensure healthy living in daily life for every city dwellings, enforcement to social entity and ties in urban social structure. For this reason, Cycle-friendly cities have been planned mostly. Those cities attract investment, encourage neighbourhood revitilasition and can improve citizens quality of life.

It has been observed that bicycle and uses of it in sustainable and integrated transportation systems has increased all over the World. As We know that urban transportation and traffic safety and passes with different transportation modes by urban dwellings. It has existed Which has consist of walking and bicycle transportation integrated with public transporation in cities for urban mobility. Netherland and Denmark cities have top of the cities for cycling. Those cases are suitable cities for efficient use of bycling. For instance, in The capital city of Denmark as Copenhagen, According to the EPOMM Modal Split tool results in 2012, It has been identified that Daily total trips by users has made %28 by using bycle and has made

%20 walking. According to another research in 2014, (Special EuroBarometer, Quality of Transport 2014) The users mostly prefer the transporation modes that bycle use has an %8 in totally. And walking as %14. At the same time, different indicators as examined that bycle use, traffic safety, bycle tourism, market size, make an advocacy of bycle riding for European Cycling Federation Additionally, The results of a research in 2014 by ECF (European Cycling Federation) as following as emphasized.

Content	Ranking	Countries
Bicycle use	1.rank	Denmark
Traffic security	1.Rank	Luxembourg, Malta
Bicycle Tourism	1.Rank	Finland
Market Size	1.Rank	Slovenia
Advocacy	1.Rank	Denmark

Table 1: The ranking distribution of cycling parameter for countries
Source: European Cycling Federation publish, 2014

In our metropolitan cities, There are dependent upon car oriented transportation system versus on public transportation system included walking and bicycle transportation. This case has lead to many problems environmentally, economically and socially. In the Ninth Development Plan for the term 2007¬2013 the plan, “pedestrian and bicycle transportation would accompany public transport services in a way to allow the establishment of a sustainable intercity transportation system and these modes of transport would be prioritized and encouraged.” The Environment and Urbanism Ministry declared a legal document as law that bcycle routes in inner urban roads, bycle stations and design and construction of bycle park spaces in 2015. This act only consists of main issues about the bcycle routes stations and design and construction of it. Whereas, What It should be role of walking and bcycle transportation integrated with sustainable urban mobility plans. This kind of plans have realized on meusure mobility in cities that priority to pedestrian, not automobile and other mobile vehicles based on. Moreover, Bcycle roads infrustructure are unefficient that commonly no longer and safer for users in big metropolitan cities in Turkey. But, The municipalities have deal with the bcycle transportation integrate to the other modes of transportation.

3 CYCLING IN KAYSERİ: BICYCLE-FRIENDLY CITY?

3.1 EXISTING SITUATION

Kayseri is a rapidly growing industrial city in the middle of Anatolia, Turkey. While the population of the city center was 536.392 in 2000, it has surpassed 1.000.000 people by the end of 2016. The number of university students, academics and tourists has also increased at this period. Today the city is more dynamic and cosmopolitan city, and it necessitates meeting a wide spectrum of needs and expectations of new inhabitants.

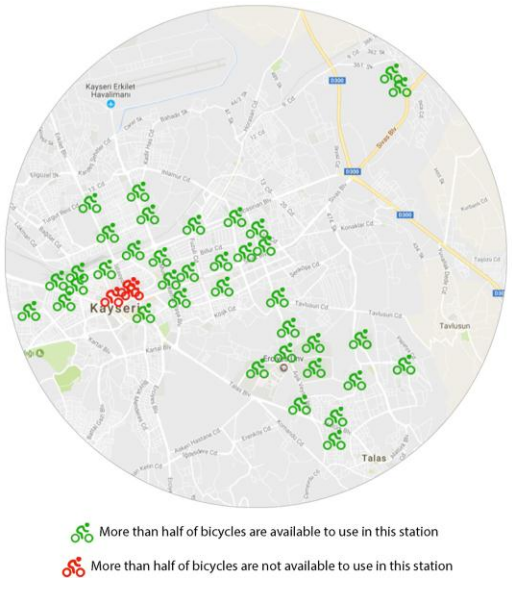

Figure 1: KAYBİS bike share stations (2017)

The local government has been built 34 km tramlines and 35 bike-sharing stations within the city and tried to integrate bike stations with tram stops.

KAYBIS bicycle sharing system, which started to operate with 25 stations and 300 bikes in 2010, serves with 35 stations and 600 bikes by 2017 and uses the system 453 people per day (URL-4). The locations of the bicycle sharing stations in the city are seen in the map. As it is seen in the map, if there is available bike in a station, it looks green in the interactive map.

However, the overall development of the city is still automobile-oriented and the modal share of bicycles in daily commuting is almost zero. There are also safety problems for cyclists in the city.

The bicycle infrastructure of the city is insufficient in terms of bicycle paths and bicycle facilities. There are totally 17,2 km bike lanes and 20,2 km shared paths (bike boulveards) in the city. The government planned to built just 2 more km bike lanes in the near future. The existing bikeways can be seen in the figure 2.

Figure 2: Existing and Planned Bikeways in Kayseri (2017)

3.2 BICYCLE EXPERIENCES: SURVEY RESULTS

We conducted an online survey with 125 active cyclists in the city between the dates of 22.04.2016 and 02.05.2016. With this survey, we aimed to understand their profiles and cycling experiences in the city.

PROFILE: AGE, GENDER, EDUCATION LEVEL, INCOME LEVEL, AND CAR OWNERSHIP

The demographic profiles of respondents also show what kind of people is cycling in a daily base. According to survey results, although there are active cyclists at all age groups, the people who are between 15 and 39 years old are mostly cycling in the city. The gender split reveals an unbalanced situation. Only 14,4% of total respondents are women. It can be easily seen in the city that most of cyclists are men because of socio-cultural background and safety issues.

Education level is another determinant to understand what degree the bicycle usage turned into a ‘bicycle culture’ in the city. While 36% of respondents are university students, 39,2% of respondents is graduated from a university (undergraduate or graduate level). So there is a tendency to cycle after graduation. Because a big percent of cyclists are students, the income level of 47,2% is seem a bit low. However there are a considerable number of cyclist in middle and high income levels. 39,5% of active cyclists has their own private cars. It also shows that cycling isn’t regarded in the city as only a job of poor people who can’t afford private or public transport.

BICYCLE USAGE: FREQUENCY, PERIOD, PURPOSE, DURATION, AND PREFERENCE

According to survey results, while half of respondents cycles every day, 32,8% of them cycles at least twice or three times in a week. 56% of them cycles throughout the year both in winter times and summer times. 72,8% of cyclists uses their bicycle as a means of transport in addition to sports and recreational

purposes, and half of respondents cycles each time more than one hour. Cyclists think that cycling is healthy, safe, environmentalist, practical and economic transport mode respectively.

These results demonstrates that despite the fact that the modal share of cycling in daily commuting is almost zero in the city, there is an increasing awareness that bicycle is not only a sports vehicle but also a mode of urban transportation, and it should be facilitated to use them in daily base and in winter times.

BICYCLE USAGE: SAFETY ISSUES

Safety is the most important factor that affects bicycle usage. There should be both individual safety requirements and administrative measurements to protects cyclists. 32,8% of active cyclists says that they had an accident while they are cycling, and 44,8% of them says that they are almost to have an accident while cycling. The first reason is other motor vehicles (57,4%) in the city traffic. The other reasons that the respondents remarked are related with another cyclists, pedestrians, physical problems (sidewalks, walls, city furnitures..etc) and so on.

Especially drivers in the city traffic are the nightmare for the ciyclists because there aren't enough bicycle facilities in the city and cyclists have to use motorways in their trip. So drivers and cyclists come across many times throughout the day.

BICYCLE USAGE: BIKE SHARING PROGRAM (KAYBİS)

Only 18.4% of active cyclists reported that they used the KAYBIS bicycle sharing system. Those who do not use the KAYBIS system firstly say that they don't really need it because they have their own bicycle, when asked why. In addition to this, the other reasons why they don't use the system are the charge system, the long duration of the acquisition of the KAYBIS use card, the location of the KAYBIS stations and the feeling of that the shared bicycles are bulkier and less comfortable than their bicycles.

Respondents basically suggest that the KAYBİS system would be more efficient if there are some arrangements as follows:

- Facilitating KAYBİS card purchases or allowing to rent bicycles with credit cards only
- Increasing the number of bike stations
- Building separated and continuous bicycle paths between stations
- Preferring faster and more comfortable bikes.

MAIN PROBLEMS AND SOLUTION RECOMMENDATIONS

According to the survey results, the most important problem that cyclists encounter in Kayseri is the insensitivity of drivers and the lack of respect for cyclists. The second major problem is the inadequacy of bicycle paths. Apart from these two basic problems, the other issues mentioned are as follows:

- Bicycle roads intersect with motorways/ no separated bicycle path
- Existing bicycle paths occupied by vehicles
- Intense vehicle traffic
- Bus drivers
- Road safety
- Pedestrians and drivers do not respect cyclists
- Car-oriented planning of the city / arrangement of traffic lights according to cars
- Inadequate warning signs
- Bicycle thieves
- No suitable environment for ladies with bicycles
- Bicycle parking problem
- Selection of materials used on bicycle paths.

However, in order to increase the use of bicycles in Kayseri, the following must be done according to respondents:

- Providing adequate physical infrastructure (separated bicycle paths; safe bike stops in city center, in front of health and education institutions, at tram stops, at stations and terminals, in parks; facilitating bicycle transport on trams and buses; signalization…etc)
- Legal and administrative arrangements (regulations to protect bicycle drivers, heavier penalties and sanctions for possible violations of drivers, strict controls)
- Training, promotion and awareness raising (training of bus drivers; hanging posters to raise awareness on billboards at certain intervals; sending SMS to all vehicle drivers, emphasizing that the bicycle is a vehicle and has the right to use the motorway, cycling and awareness trainings in primary, secondary and high schools; festivals and activities)
- Cooperation (Collaboration and cooperation with bicycle associations, NGOs, local and central government units, bicycle shopkeepers)
- Incentives (Providing bicycle users with discounts on municipal cafes and restaurants, allocation of certain streets for bicycle use only one day a week).

BICYCLE USAGE: MOSTLY USED ROUTES

Those who participated in the survey were asked about the routes they used most frequently in cycling in Kayseri and these routes were processed on the map (See Figure 3). As seen in the figure, while the city center and Talas stand out as the most frequent used destinations, Erciyes University and Anayurt are marked as other important destinations. However, it is seen that there are routes used by cyclists both east- west and north-south directions. When this map is evaluated together with existing bicycle routes, the inadequacy of existing roads is once again seen.

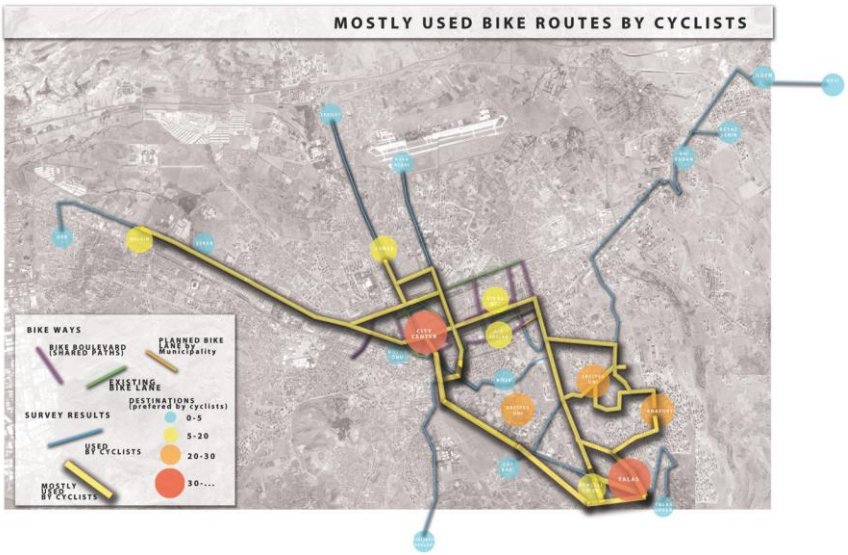

Figure 3: Mostly used bike routes by cyclists

3.3 HOW TO MAKE KAYSERI BICYLE-FRIENDLY: CHALLENGES AND OPPURTUNITIES

The Copenhagenize index is a system of scoring cities that have strived to adopt bicycles and make them a practical transportation form. The scoring system was developed in 2011 along with James Schwartz, inspired by Monocle's Liveable Cities Index and Economist's rankings.

In this system, cities are scored between 0 and 4 in 13 different categories. In some cases, in addition to these points, 12 additional points can be given to appreciate the extra efforts of the cities. After all, the city with the highest score is selected as the most bicycle-friendly city.

The 13 categories used in the Copenhagen index are as follows: Advocacy (NGO's), bicycle culture, bicycle facilities, bicycle infrastructure, bike share programme, gender split, modal share for bicycles, modal share increase since 2006, perception of safety, politics, social acceptance, urban planning, traffic calming (URL-1)

In this section, the potentials of Kayseri to become a bike-friendly city and the factors that make it difficult will be evaluated according to the above-mentioned 'Copenhagen Index' criteria.

Advocacy: It can be said that the decisive influence of civil society on public policies in Kayseri is weaker than in other cities in Turkey. Nevertheless, it is observed that there has been an increase in awareness on this subject in recent years. Currently there are 10 different associations or groups in Kayseri that are involved in cycling (URL-2). Among them, 'Thursday Evening Cyclists' (PABs) are actively engaged and are working to increase awareness of safe cycling and the spread of bicycle use in the city. However, the impact of these groups on local government is quite negligible.

Bicycle culture: Kayseri offers a very convenient environment for cyclists thanks to its flat topography and wide roads. Nevertheless, due to increased vehicle ownership and car-centric transportation planning, the city is becoming less and less bicycle friendly and the importance of bicycle as a mode of transportation is reducing day by day. As can be seen from the above survey results, the fact that drivers and pedestrians do not respect bicycles and that existing cycling roads are constantly occupied by car owners shows that cycling culture has not developed enough in the city.

Bicycle facilities: It can be easily stated that Kayseri has a long way to go in terms of bicycle facilities such as accessible bike racks, ramps on stairs, space allocated on trains and buses and well-designed wayfinding.

The number of bike racks in the city is very inadequate, there is no safe parking lot to be tried. Although the vast majority of bicycle tracks in the city are now invisible, they have not been renovated. In addition, it is not possible to ride a bicycle on the buses. However, they can carry their bike on the tram, except during peak hours (07: 00-10: 00 and 16: 00-20: 00) and with a one-pass payment for the bicycle (URL-3).

Bicycle infrastructure: As mentioned above, the total length of bicycle routes in Kayseri (including shared roads marked with signs) is 38 km. These roads, which are located only on certain streets in the city center and on a section of the Talas road, show that the infrastructure of the bicycle in the city is very inadequate. When we examine the most common routes used by cyclists according to the survey results, the inadequacy of bicycle routes is better understood.

Bike share program: KAYBİS bicycle sharing system, which started operation with 25 bicycle stations in 2010, is the first urban bicycle sharing system in Turkey. Within 7 years the number of stations has increased from 25 to 35 and the number of users has increased. However, the lack of bicycle routes between some bicycle stations and the problems listed above make it difficult to use bicycles safely. Bicycles can only be rented in April-November period, and they are not in use in winter period.

Gender Split: According to the survey results, only 14.4% of the active cyclists are women. This rate shows that the city needs to provide adequate infrastructure and safe environment for women to use bicycles.

Modal Share: Since there is no available data about modal split in the city, it seems difficult to determine the changes in modal share of cycling over time. However, it is observable that bicycle use has declined in recent years as a mode of transport in the city.

Perception of Safety: Although there is no binding regulation for bicycle safety and helmet use, it is observed that there has been an increase in the use of helmets recently as a result of the work of NGOs.

Social acceptance: Traveling on a bicycle in Kayseri is the most difficult and dangerous type of travel. The reason for this is that both car owners and pedestrians do not care about bicycles and do not give right-of-way. This is the main complaint of the survey respondents.

Urban policy and planning issues: In Kayseri, car-centered planning has been adopted since the 1950s. Especially in recent years, the number of bridges that are increasing rapidly, accelerates the car traffic in the city and makes crossing of cyclists difficult. Cycling-oriented applications such as the signaling system

for bicycles, bicycle bridges have not yet been passed on. Unfortunately, bicycle routes are not designed on newly opened roads, and new routes are planned only as roads and pedestrian walkways. As a result, the car-based planning approach makes the city more difficult and dangerous for bicycles every day. Although there is a willingness to build a bicycle route in the central government, it seems that local authorities' willpower is in the direction of car-centered planning.

4 CONCLUSION

Kayseri, with its flat topography and medium size, is a city with initial advantages for being bicycle friendly. Kayseri, an industrial city, has been designed as a car-centered spatial organization since the 1950s, with the influence of socio-spatial relations originating from the nature of the industry. This process has improved the sprawl patterns of the city against the bicycle, and the bridged junctions built in the city made it difficult to use the bicycle.

The fact that the industrial city's logistics-labor-market relations have put the wheeled vehicles in the forefront has caused that the city's economic power has put pressure on local governments to keep car-centered planning. Eventually, the city is very far from becoming a bicycle-friendly city today.

In this paper, both the existing bicycle infrastructure of the city as well as the results of the survey, which reflects the city experiences of the active cyclists, have been evaluated together with the above-mentioned Copenhagen index criteria. It is very clear that the city does not come to an adequate level in bicycle infrastructure, bicycle use, bicycle culture, planning approach, social acceptance, modal split, and gender split. On the other hand, trends in the world, as well as the interest of the central government, are compulsory for all cities to reconsider the bicycle issue. Kayseri's efforts to get away at least partly from industrial city identity and to become a tourism city require a new spatial organization. It is expected that this new trend will lighten the industrial pressure on the city and open up the investments that will make the city bicycle friendly.

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T14 | POLICIES FOR SMART AND CO-CREATIVE CITIES

CO-CHAIRS: FRANCESCO PILLA; PAULO MORGADO

As the world is becoming more urbanized, cities act as magnetic forces, attracting talent, knowledge, creativity and businesses. More than countries, cities will have a leadership role shaping the future and facing relevant challenges.

Besides being spaces of growth, innovation and knowledge, many cities presents a legacy of inadequate infrastructures (transport, sewers, electricity and water supply) and under-investments on social policies to face social exclusion, poverty, gender inequality, ageing, and a lack of public participation, public health and education). Besides traditional problems, new problems are emerging related to global greenhouse gas emissions, climate change, sea level rise and coastal pressure, recycling, domestic garbage, food supply, renewal energy, energy-inefficient buildings). Those are just some of the challenges that cities across the globe are facing today in a context of economical and financial crisis.

Technology plays an increasingly role in our lives. From the ubiquity of smartphones to the world of wearables, nowadays almost everything and everyone is connected. It's a wired world where every single actor, from global companies to a person, are a main data source, observatories in real time of our lives, our houses, our cities, our economy, our quality of live (Towsend, 2013).

Smart cities are data driven; the foundation of any Smart city project (1spatial, 2016, in http://1spatial.com/campaign/smartcities) depends on geospatial data, not only for knowing and monitor the needs of the citizens, but also to foresee alternative futures, prepared to face future challenges. Today, cities suddenly have access to big data, but the challenge is to transform this big data in useful data (eg. Intelligence), highlighting the role of advanced geographical models to understand cities in a context of system of networks and flows (Batty, 2013).

For many cities, smart cities model (Smart cities final report, 2007 In http://www.smart-cities.eu/download/smart_cities_final_report.pdf) has been the answer. This means to build a city through a combination of smart economy, smart mobility, smart environment, smart people, smart living and smart governance, being technology, cooperation and competition the driving forces of a better future. City administrations, utility companies along with ITC firms are partnering to explore ways for cities to grow smarter. Along with this technological revolution we are also witnessing a shift in how we should be planning and manage a city.

How to overcome the referred issues, be attractive and still manage inclusion and sustainable growth, but with less resources? In particular, this session seeks papers that engage with the planning and lived realities of Smart Cities, Big Data, IoT, M2M, VGI and PPGIS in Europe.

ID 1645 | A THEORY OF TECHNOLOGICAL CITIES

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1 INTRODUCTION

When two forces unite, their efficiency double.

Sir Isaac Newton, 1687- Approximately

Spatial planners must adapt to the modern way of planning cities. In today's modern world planners play a key role in the development of cities, but on the other hand have equal opponents in the form of policy, regulation, technology, where each individual has a certain role in development. The planner is the one who needs to adapt all the obstacles, to rise above all and successfully directed the planning of the city.

Cities in Europe are the main driving force of the economy and any change of the urban environment can leave severe consequences, both good and bad. It is very important that the planner should be careful and wise with the withdrawal of drastic moves to improve the city. Cities were created with a great goal to provide the best possible life for the population. The modern city for its population should provide good health care, good jobs, education, fast and reliable transportation, a healthy environment, a variety of cultural events, a place for rest and relaxation. Humanity over the next 100 years are expected the era of technology and energy, and we, as planners we have to be ready to prepare our cities through technological and energy development. Late implementation of modern technology can leave major implications on the functioning of cities, such as non-use of renewable energy, which directly leads to uncontrolled consume non-renewable natural resources. The current and future reality of space must be understood as a system in an uncertain environment, the development of which influence tendencies and "breaks" their subsystems and the interactions between them (Dabović, 2008).

Currently, in the world, about 50% of the population lives in cities, and the UN forecasts that by 2050 will reach 70%, and by 2100, 86% of world population will live in cities. Total population by 2100 will be between 11 and 12 billion, and just in cities is expected to live about 10 billion people, so it is important that cities adapt to the future. Our understanding of cities is being transformed by new approaches to the complexity of Sciences (Batty, 2005). One of the main goals of this paper is to activate the cities through technological development, especially cities that are in various indexes are not in the top 50 in the world, who do not have a very high income. Cities such as Belgrade, the capital of Serbia, with its 1.6 million inhabitants strategy must be oriented to the planning of the city with the great help of technological innovation. The energy that surrounds us and which is accessible must successfully collected. Precisely this kind of technological developments in cities such as Belgrade will quickly make progress in the future, and the current position as a medium-developed city can be ranked even better and more powerful in the world's top developed cities.

2 METHODOLOGY

In this paper, for the first time was presented a theory of technological cities. The paper introduces the concept, characteristics, and definitions of the technological city. Also explained the solution to the city to overcome the problem of lack of space for living, through a new vision of urban planning of cities, where a circular belt from the center to the periphery are alternately residential zones and green zones. While heavy and polluting industries ejected from the central and changed with the new modern high residential - business buildings. Regarding the latest technological achievements are represented by the superior technology in the field of transport - trains Hyperloop. The paper analyzed the long-term trend of global warming, for these purposes, data were collected from NASA and is based on an analysis of existing data collected in recent decades, and recent data from 2017. A comparative method was used in comparing Lisbon, Madrid, and Belgrade for daily solar radiation, data were collected from the archives of NASA. The method of analysis and evaluation was applied during the collection of relevant data from the scientific literature, statistical registers. In this paper, one of the prime objectives is to present the sustainable

development of cities in the near and distant future and to answer questions on how cities should be developed in the future with the help of technology.

3 TECHNOLOGICAL CITY: T-CITY

Definition of a technological city:

The technological city represents the sustainable functioning of the population and the nature, which are connected by modern technology into one entity.

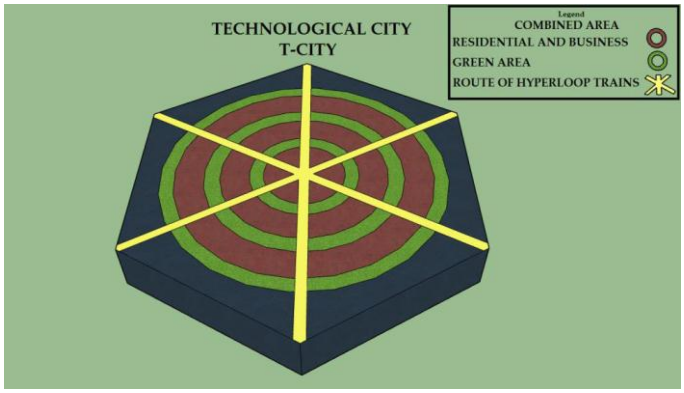
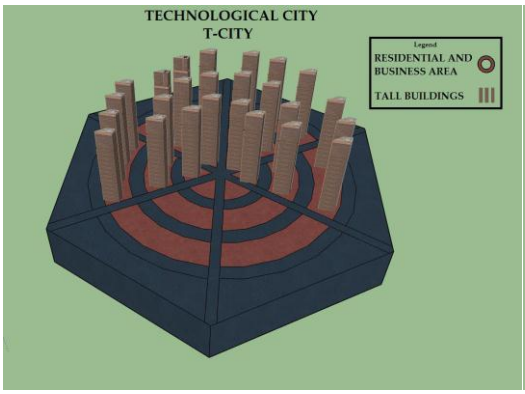


Figure 1 - T-city, Residential - business area, Green area, Hyperloop route.

As shown in (Figure 1) the combined system of residential and business areas, green areas and tracks of Hyperloop trains. The current way of building a residential zone that was based on the outskirts of the city buildings lower number of floors, and in the city center we have a very high building. Such an approach leads to the constant expansion of the city due to the increasing population in cities as a result of the lack of places in the city center for the population. An express development of cities and their remarkable functional significance requires a large number of the population lives and works in the city center, a technological cities must be planned to meet the needs of future life and work.

The three lines of Hyperloop trains that will connect the outskirts of the city with the city center. The trains that reach speeds of up to 1200 km/h, will be transporting passengers in the future in an incredibly short time. A combined system of residential and commercial areas, green areas and tracks Hyperloop trains.

T-city (short) as a modern technologically innovative system consists of three zones that circle from the center distributed in the form of residential - business complex with extremely high buildings in each of the three rings (Figure 2, red). This approach construction for the period from 2020 to 2100, provides enough capacity for all residents of the periphery to the center.



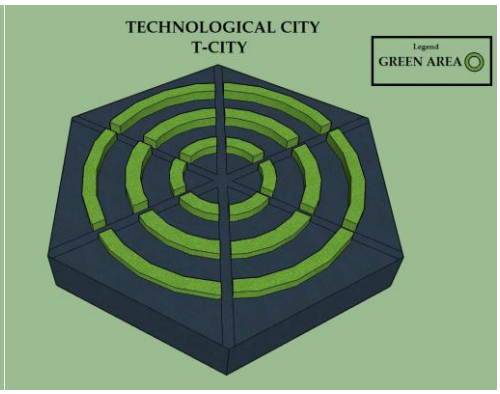


Figure 2 - T-city, Residental and business area. | Figure 3 - T-city, Green area.

Three rings of green belt that would be located near residential and commercial buildings, which would enable the population fast and easy access to nature. This kind of planning green spaces are innovative, and provides all residential - commercial buildings to be between green areas. In doing so, the planning of cities, attention should not be focused only on the construction but must devote a lot of attention to the protection of nature. The spatial planner in the city has two masters, one is population and the second is the nature. Nowadays nature is the one who calls out loudly for help, and we as planners we must not fail to respond to this call.

4 CHARACTERISTICS OF TECHNOLOGICAL CITY

To become a sustainable technological city, it is very important that each segment of the technological development of the city is at a high level.

The technological city is characterized by:

1. A large number of technological innovations.
2. Modern infrastructure.
3. Metro or a light rail system with high throughput capacity, with the remaining synchronized traffic, that is extremely fast and practicable (present). In the future, technology city will adorn Hyperloop trains that reach speeds up to 1200 km/h.
4. The high population density. The high modern building will allow the amortization of a large number of people.
5. Special places on the outskirts of the city that will serve to collect energy from renewable energy sources: solar farms, windmills, solar collectors: MEC (Milan Energy Collector) This ambitious project is expected in 2026-2030 etc.
6. Extremely high modern buildings that are energy efficient, which will in future be covered all over the windows, which will have solar panels installed, all windows will collect solar energy into a single solar system in one building.
7. Digital systems for monitoring all types of changes in the demographic changes, social changes, pollution of air, water and land, economic changes, etc..
8. A large percentage of investments from the budget of the City in the development of new technologies.
9. Transparency between the city, experts and the population, a high percentage of citizen involvement in solving problems. Group and individual involvement in the adoption and implementation of innovative technological solutions that can improve the functioning of the city, as well as public access to all types of information.
10. Flawless land use planning, land that will be a valuable resource in the future.

5 TRAFFIC - CURRENT STATUS AND FUTURE - HYPERLOOP TRAINS

5.1 CURRENT SITUATION

Cities that have not developed their own Metro systems and light rail systems remains largely limited to the requirements of the modern city. High density and a large number of employees in the central zone requires Metro, and the city that does not have built Metro is slowly but surely becoming not sustainable. In the absence of Metro, traffic jams occur, primarily because of a large number of cars, buses, and trams in the city center. On the other hand, cities that have recognized the demands of the modern city and started with the construction of the metro system, 70's, 80's, 90's, have the ability to implement new technology in existing infrastructure (underground roads beneath the city that are dug decades ago). The problem occurs in cities that do not have formed full Metro systems (such as Belgrade), which already has a traffic system unsustainable. Also, investors do not want to invest money in something that can be realized through several decades, and the idea of giving up is on both sides, by investors, and by the management board. Construction of Metro puts the city on the world map, strengthens the business area, contributing to the economic and social sphere, as well as environmental protection. Cities without subway can have a certain development, but lose every race with a serious city in which a metro system in the center of one of the basic components of good functioning.

5.2 THE FUTURE

Hyperloop concept including traffic vehicles like the current speed trains, but in this case transported the goods or population inside the tube, and moving at a speed up to 1200km/h. High speed is the result of the lack of air resistance in the tube and magnetic levitation which eliminates friction from the wheels.

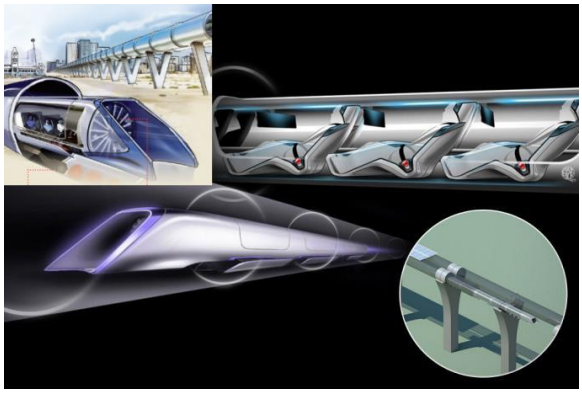


Figure 4 - Hyperloop trains, Source: https://hyperloop-one.com/

Hyperloop will probably initially be granted for freight traffic, which will allow the company to demonstrate the safety of such an advanced system. If the system proves reliable then it will go to the transport of passengers. This project represents an exceptional engineering challenge, and one of the biggest problems is the construction of huge vacuum tubes, which must be perfectly sealed, the length of several hundred kilometers. Instead of complete vacuum in the tube, it will only lower the air pressure that can be achieved with standard industrial pumps. The initial budget for Hyperloop is "only" $ 6 billion, and it is expected that this figure rapidly increased by ten times.

5.2.1 AUTOPILOT 2.0

Self-driving vehicles could reinvent how people live and travel around cities. They could also prompt cities to reconsider whether they even need parking spots. In the development of cars that have automatic control leading company is Tesla, which has the most innovative solutions when it comes to the development of this technology. Tesla vehicles have the hardware needed for full self-driving capability at a safety level substantially greater than that of a human driver. According to the Tesla Company „Eight surround cameras provide 360 degrees of visibility around the car at up to 250 meters of range. Twelve updated ultrasonic sensors complement this vision, allowing for detection of both hard and soft objects at nearly twice the distance of the prior system. A forward-facing radar with enhanced processing provides additional data about the world on a redundant wavelength that is able to see through heavy rain, fog, dust and even the car ahead“.

5.3 SOLAR ROADS

By 2050, energy demand in the world will increase twice. It is because of these problems that await us in the future, we as a society should discuss further how we can take advantage our cities, but not to jeopardize nature, in order to collect the greatest possible amount of energy. The exploitation of the roads as a collector of energy is one of the newer ideas. Roads is everywhere in the world, but they occupy only 10% of the time. According Wattway (2015) to a house fed electricity is enough Wattway 20 m² of solar panels, which are embedded directly in the road.

This pilot solar road is located in a small community in Normandie Turuvr, which has about 3,500 residents. France has started building the first 1km of solar road, with a donation of 5 million euros and thus encourage other countries to invest in modern technology that can lead to positive effects, and that in addition to the environment remains intact. The Wattway company plans by 2020 could lower the price at

the approximate price of ordinary solar panels, noting that the price of solar energy production in just 6 years from 2009 to 2015. reduced by 60%. It is obvious that this is a remarkable technological advance, but it is not currently viable. It is questionable how will road behave during the rain, and how to expect the tire contact under different weather conditions? The original plan of the project is to set up 1,000 kilometers of road, which would cost a lot, even $ 5 billion. A price per installed watt solar maximum capacities of the road is 17 euros, by comparison, the solar rooftops achieved 1.3 euros and 1 euro on the ground. Simply at this point, the solar road in this way is not sustainable, but it is a great incentive for the installation of new innovative technologies for the common good.

6 SUSTAINABLE DEVELOPMENT OF TECHNOLOGICAL CITIES

Cities in the coming decades have to implement innovative technology to achieve constant sustainable development. During the Climate Convention held in Paris in late 2015, representatives from 194 countries agreed to continue activities to reduce emissions of gasses that cause the effects of "greenhouse gasses". The meeting was held in order to avoid further and greater damage ecosystems around the world due to climate change. They discussed a number of strategy for overcoming this problem, one of them is the transition to renewable sources of energy (COP 21, 2015). The state of the environment in cities is not in a state where it should be. Change of purpose of land in cities is a major problem, the largely agricultural land is converted into construction, green area is almost gone, except for a few small parks in the city center. It is therefore of great importance that cities of the future plan good environmental protection, which would preserve the natural resources that adorn cities in the world. In recent decades, the combination of technology and the development of cities is inevitable, a technological innovation can greatly contribute to improving the current state of the environment. It is very important that good technological innovation systems implemented in cities and have a good think about what type of technology used to exploit the maximum potential of a particular city. The technology is developing rapidly, and if certain city invests a large amount of money, such as solar farms, it is important that the funds invested payments over a certain period, not only the pure economic profits but also "eco-profit" where minimizing adverse environmental impact. Solar energy is clean and renewable energy or green energy, also called clean energy, because its use does not pollute the environment (Stevović, 2016). In addition, if the city decides to solar energy, care must be taken to purchase solar systems tested according to the latest standards, which from day to day have a better result in the collection of solar energy. The progress of science in modern society has contributed to the man mastered various technologies but is pushing the same society as a "risk society" (Jovanović, 2015). In coming period, cities have to adapt to technological innovations to every segment of the city could be further improved, where each denial or deviation from the technology in the development of the city leaves a big lagging behind the other European cities.

6.1 CLIMATE OF CITIES

The combustion of large amounts of fossil fuels in cities leads to the formation of high concentrations of carbon dioxide and the formation of greenhouse gasses, wherein the sunlight is retained in the earth's atmosphere. Increasing the concentration of carbon dioxide in the atmosphere has reached the highest level in the past 800,000 years, which has led to a global average temperature increase of one degree Celsius from the period 1880 to the present. According to NASA, the surface temperature in 2016 was the warmest since modern record-keeping in 1880 (Figure 5).

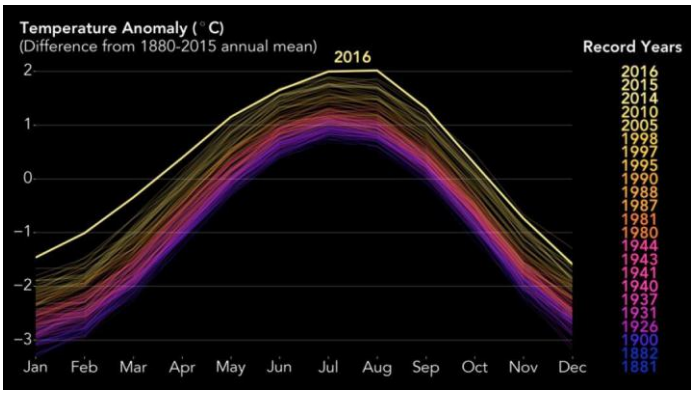


Figure 5 - Long-standing trend of global warming, Source: NASA

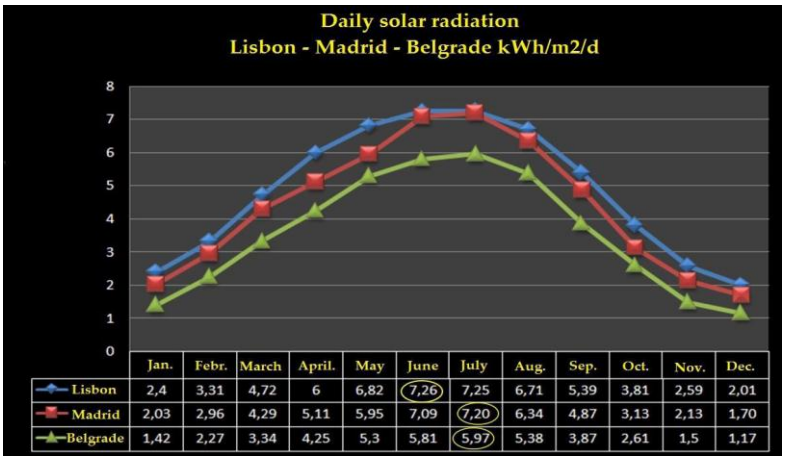
Cities must more decisively to apply all available technologies to adequately reduce unnecessary energy consumption. Some of the ways in which cities can provide sustainability are the following:

1. The use of renewable energy sources – use of solar panels is of great importance for the incredible energy savings, and also for the preservation of natural resources that cities have and more rational use. The solar farm needs to be built on the edges of cities, where land prices is lower.
2. It is important that each city starts with the reduction of electricity consumption, one of the solutions is the introduction of LED lighting as street lighting, which can greatly reduce power consumption.
3. Replacement of old cars that run on gasoline, with new electric cars. Replacement of old buses with new eco-buses, replacing the old dilapidated trains with new Hyperloop trains that reach speeds of up to 1200 km/h, which is expected for 5-10 years.
4. Green roofs on the tops of buildings in cities have a direct impact on cleaner air and a healthier environment.

It is expected that the supply of fossil fuels, as well as non-renewable sources of energy, are consumed in the next hundred years (Šešlak, 2015).

7 DAILY SOLAR RADIATION

For the purposes of this study, an analysis is made to the potentials of the following cities: Lisbon, Madrid, and Belgrade, with the aim to show that Belgrade does not lag behind too much for the cities that largely use solar panels and take advantage of solar energy. When mentioned solar energy in Serbia, it is immediately thought of South Serbia as a great potential, but from a given graph can be concluded that Belgrade has enough energy that could be collected, and that the lack of solar panels is just an excuse. In order to compare the potential (Figure 6) of cities to collect solar energy, studied the data received by NASA (the National Aeronautics and Space Administration). Calculating the amount of electromagnetic energy (solar radiation) on the surface of the Earth.



	Jan.	Febr.	March	April.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Lisbon	2,4	3,31	4,72	6	6,82	7,26	7,25	6,71	5,39	3,81	2,59	2,01
Madrid	2,03	2,96	4,29	5,11	5,95	7,09	7,20	6,34	4,87	3,13	2,13	1,70
Belgrade	1,42	2,27	3,34	4,25	5,3	5,81	5,97	5,38	3,87	2,61	1,5	1,17

Figure 6 - Daily solar radiation - Lisbon, Madrid, Belgrade, comparative overview Source: NASA, Chart – author.

From presented three cities, Lisbon has the highest potential daily solar radiation, which is the highest level in the period from May to August, with a maximum in June of 7.26 kWh/m2/d. Madrid in every month of the year has a slightly lower that are approximate to Lisbon. While Belgrade expected in the third place, the maximum in July of 5.97 kWh/m2/d, but still have sufficient amount of solar energy that can be collected.

8 GLOBAL ENERGY POTENTIAL OF RENEWABLE ENERGY SOURCES

It is very important to know the accurate and reliable data on how much each state has a capacity of renewable energy. In the following charts (Figure 7,8,9) is displayed the 15 leading countries that have the greatest potential of renewable energy in the world. The paper analyzes solar energy, wind energy, and bioenergy.

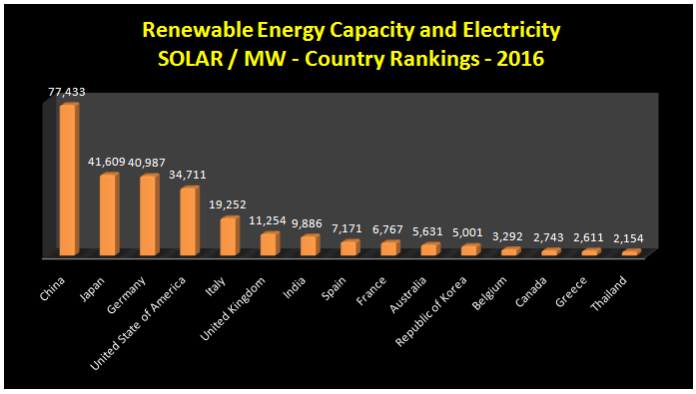


Figure 7 – Solar - Renewable Energy Capacity top 15 Country, Source: http:/resourceirena.irena.org, Chart – author.

China is the leading country when it comes to solar energy with exceptional 77.433 MW, Japan with 41,609 MW and Germany with 40,987 MW almost equal second and third position.

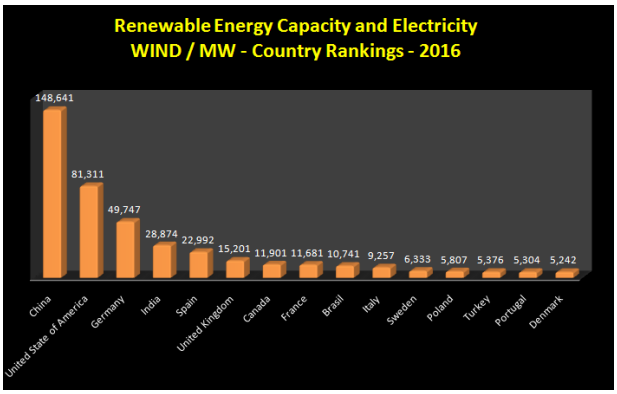


Figure 8 – Wind - Renewable Energy Capacity top 15 Country, Source: http:/resourceirena.irena.org, Chart – author.

As wind energy is concerned, China is also in the first position with 148.641 MW, United State of America is second with 81,311 MW, while the best ranked European Country is Germany, which has a capacity of 49,747 MW.

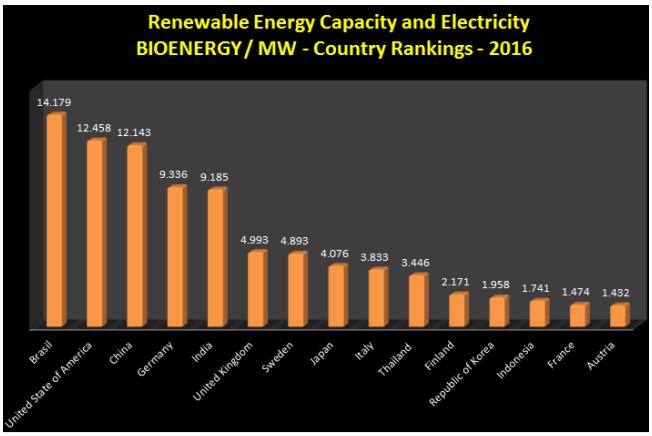


Figure 9 – Bioenergy - Renewable Energy Capacity top 15 Country,
Source: http:/resourceirena.irena.org, Chart – author.

The top five countries stand out when it comes to the capacity of bioenergy, the first is Brasil with 14,179 MW, followed by the USA 12,458 MW, China 12,143 MW, Germany 9,336 MW, and India with 9,185 MW.

These data clearly show an extremely large amount of energy available. Some countries that are ranked lower, can boost the particular country to advance in the segment in which lags behind competing countries in the region. The cities are epicenters of the economy and such resources must be used in the best possible way to get more energy from renewable energy sources, and thus save natural resources.

9 T-CITY

Each technological innovation can contribute to a better, healthier, and more beautiful life for the residents in the technological city. Further in the paper are described briefly my two original technological innovation, which can contribute to improving life in the city. First innovation is large and the second is small scale, precisely this difference in size tells how both small and large technological innovations can contribute to the development of the city in the future.

9.1 MILAN ENERGY COLLECTOR – MEC

The first one is a big and ambitious project called the Milan Energy Collector, a collector that collects solar energy through the multiplication of sunlight through the latest innovative lenses. The resulting overall energy is many times greater than a conventional energy collected by ordinary solar panels.

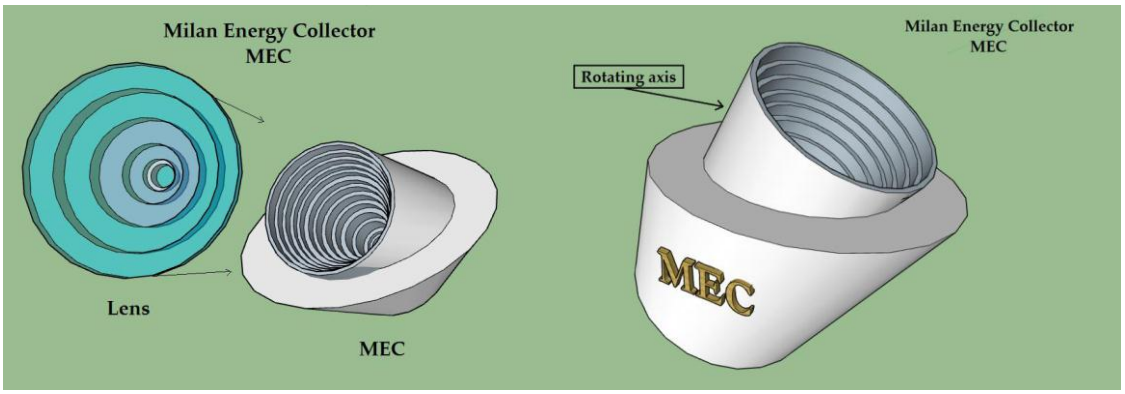


Figure 10 – Milan Energy Collector - MEC | Figure 11 – Milan Energy Collector - MEC

The collector consists of a large number of special lenses that are lined one above the other and in the end, solar energy is collected into a special generator.

The generator has a moveable front part, there is installed a sensor that monitors the intensity of the sun's rays and rotates to exploit the maximum potential of the sun's rays.

9.2 KEEP WALKING

Second technological innovation is very little, approximately is the size of a credit card. This is a sensor that detects movement of cars in the open building entrance, and an audible signal informs the population that passing along the street to avoid traffic accidents with cars coming out from a buildings output.

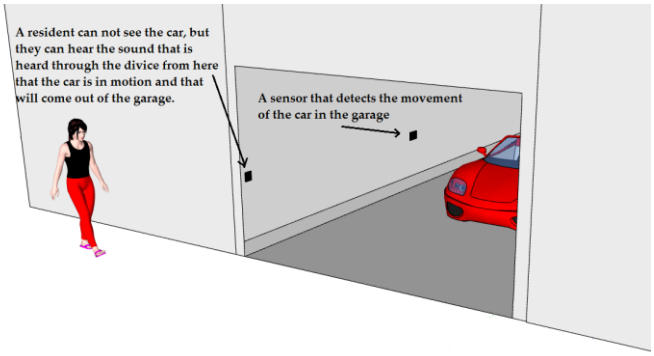


Figure 12 – Keep walking sensor

This is a technological innovation that can save people from injury. In my street, which is a few hundred meters long, there are more than 5 of these open passages through which the cars coming out from building. Both technological innovations are in the process of developed, which should be protected by a patent.

10 CONCLUSION

In recent decades, modern period brings with it a large number of technologically advanced systems that are being implemented in developing cities to become a more functional city. If in the city center, we have one good thing - a large number of technological buildings, and many negative things - a lot of traffic congestion and a lack of energy, whether we can then only after a one positive parameter classify a particular city as a technological city? Of course not, it is necessary that each segment of the technological city works seamlessly with to the modern technology used for energy, environmental monitoring, use of the latest technology in order to improve and modernize transport, all cars should switch to electric drive, to contribute to the reduction of air pollution in cities. Can Belgrade become a technological city?

Daydreaming or potential feasibility in the future? Belgrade has the potential to be in the next few decades (2030-40) closer to the technological cities. To achieve such an ambitious goal, it is a lot of investment in all aspects of development. Beginning in the infrastructure, transport, environment, quality of land planning, making better laws and regulations, construction technology modern buildings that are more energy efficient, the implementation of digital systems and monitoring of all segments of development, pollution, large investments in technology systems. The impact on the movement of climate change in cities to a large extent has a society, and that anything could change in the future, it is necessary to include more technological innovation that can have a positive impact on improving the current situation. The sudden use of energy in the world has raised concerns about supply and exhaustion of energy and resources, as well as a heavy impact on the environment: ozone depletion, global warming, climate change. Transport in urban areas is one of the leading polluters, a strategic city should direct a change in the automotive industry to eradicate polluting fuels and to move on cars driven by electric power. Eko buses that do not cost a lot more than just old buses can also contribute less to air pollution. Hyperloop trains that should work in the coming period, can greatly change the way population movement and transport of a large population in a short time and certainly brings benefits in the economic and the ecological sphere. Now is the time to plan the future.

This paper is dedicated to my professors.

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ID 1673 | A CLOSER LOOK INTO HOW LAND-USE, SOCIAL NETWORKS AND ICT INFLUENCE LOCATION CHOICE OF SOCIAL ACTIVITIES

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ABSTRACT : Technology now enables individuals to travel more flexibly, thanks to ICT and the numerous social networks. The choice of location for social activities has become very flexible, sometimes allowing changes to a previous decision on the move. In addition to this, the characteristics of the residential and

university location also play a vital role in the choice of location for social activities. It would be quite exciting to uncover the behavioral patterns associated with these decisions. Hence, this study pursues the following objectives: 1. to analyze the influence of ICT, social networks and land-use characteristics of the residence and university in choice of location for social travel. 2. To analyze the similarities and dissimilarities in the choice of activities pursued during weekdays and weekends. Students from the two different campuses of Instituto Superior Técnico were presented with an online questionnaire, intended to collect information about the use of ICT and social networks, in addition to the travel characteristics and socio-demographics. Emphasis was made in capturing the characteristics of social networks and ICT usage. Information on the land-use characteristics was later obtained from secondary sources. Factor analysis was initially carried out to extract factors related to use of ICT and social networks, which were to be later used in the model for choice of location. The alternatives considered for location choice include: location within 800 m from the residence, location within 800 m from the university, locations away from home and university and evenly spread locations. The analysis was performed separately for travel during weekdays and weekends, to understand the differences and similarities in behavior during these different time periods. A multinomial logit model was estimated to model this choice. This adds to the literature, the understanding of influence of use of ICT, social networks and land-use characteristics, in the context of social travel.

1 INTRODUCTION

Advancements in technology has made travel more flexibly. This can largely be attributed to the growing popularity of Information and Communication Technology (ICT), smartphone penetration and social networking sites. The use of these can have different effects in travel, such as substitution effects, complementary effects and peer pressure in travel decisions. For example, the use of smartphones might help do away with some of the shopping trips, but might as well induce socializing activities. Social trips are increasingly being scheduled using social network applications (WhatsApp, Viber) and websites such as Facebook. This makes it important to analyze the impact of these in travel decisions. Compared to the past, individuals are now presented with a wide variety of choices. This will have significant effects in the travel patterns of students, especially university students for whom, these provides a conducive environment for a more flexible travel. University students are also important considering the widespread penetration of these gadgets and the ease with which university students get acquainted with these emerging technologies and gadgets, compared to other age groups.

This has changed the way people travel. With the increasing use of smartphones and internet, individuals can now request taxi online through services such as Uber, Cabify, Lyft, etc. With most of the public transportation systems across the globe developing mobile applications and websites that provide information to make travel convenient, individuals can now use public transportation better. In yet another instance, the widespread popularity of social networking sites, now enable individuals to plan social trips easier and in groups. The location choice is now being increasingly made using these mobile applications. Individuals make decisions en-route making it difficult to understand location choice and specifically that of social activities. This is because, the location of workplace or university is usually predefined and thus, the importance of social travel. This paper, focusses on the influence of ICT, social networks and land-use on the location choice for social activities.

The objectives of the study are, 1. to analyze the influence of ICT, social networks and land-use characteristics of residence and university in choice of location for social travel, 2. to analyze the similarities and dissimilarities in the choice of activities pursued during weekdays and weekends. The analysis is carried out using data from around 500 students from two different campuses of Instituto Superior Técnico. Data was then processed and the location choice had the following four levels, viz., located within 800m from the residence, location within 800m from the university, locations away from the residence and university and evenly spread locations. Factor analysis was initially carried out to extract factors related to the use of ICT and social networks. These factors were later used in the specification for the location choice model. Considering the nominal nature of the variable, a multinomial logit model was estimated separately for choice during weekdays and weekends.

Exploratory analysis indicated difference in choice between weekdays and weekends. To understand this further, models were estimated and the factors influencing the choice were identified. It can be seen that socio-demographics (age, gender, etc.), land-use characteristics (road capitation), social networks

(physical and social media related) and ICT (use of instant messengers) were found to influence location choice. It is also worth mentioning that the factors influencing the choice decisions were themselves different between the two time periods considered and even when same parameters influenced, there was difference in magnitude.

The rest of the paper is organized into 5 sections. This section will be followed by a section on the review of literature. Third section presents the description of data, followed by a section on analysis and estimation results. The final section presents a summary of results and the salient findings from the study. This section also presents the areas for further research.

2 REVIEW OF LITERATURE

This section presents a review of literature related to location choice. The review is however not restricted to the study of location choice alone. To further understand the developments in areas related to land-use, ICT and social networks, a review of literature related to these areas is presented.

Destination choice of recreational trips from Dallas were analyzed using multinomial logit (MNL) model. Level of service variables, zonal characteristics, agglomeration effects and sociodemographic characteristics of the individual were found to influence the choice of destination (Pozsgay & Bhat, 2002). Multinomial logit model is by far the most commonly used model for destination choice. With a large number of destinations to choose between (in conventional studies), locations might have inherent similarities. Generalized extreme value (GEV) models were used to model the estimates for destination choice and was observed to predict the similarities between alternatives, which the MNL failed to capture (Bekhor & Prashker, 2008). In the agent based simulator, SimMobility, mode and destination choice models have been estimated using MNL. Destination choice for usual work-place is not modelled, but assigned, as the locations are known beforehand. But, for work trips that are not to usual work locations or for shopping, work-based sub-tours and other activities, a combination of mode and destination choice has been modelled (Lu, et al., 2015). Unlike the conventional approach to model multiple travel dimensions using nested logit models, travel decisions such as activity type choice, time of day choice, mode choice and activity time allocation or duration were modelled using multiple discrete continuous extreme value and destination choice modelled using MNL. These were then tied together using utility maximization consistent framework using logsum variables similar to SimMobility. This was observed to perform better than conventional approach and were also more behavioral compared to the conventional approach (Eluru et al. 2010).

The face-to-face contact between individuals were observed to be influenced by social network members. Relational closeness was observed to be a major factor, along with geographical distance, with the frequency of contact positively influenced by both relational and geographical closeness (Berg, Arentze, & Timmermans, 2012). Another study highlighted the importance of social media and ICT in social travel behavior (mainly limited to travel distance and frequency of trips by various modes). The study also highlighted the positive influence of the size of social network on social travel (Berg, Arentze, & Timmermans, 2013).

Shopping destination choice models estimated using single day activity diary were compared with that of two-week travel diary survey, by incorporating the timing dimension into the analysis. The analysis indicated the superior performance in terms of goodness-of-fit and predictive capabilities of the model estimated using two-week travel diary over the conventional single day travel diary model (Miller & O'Kelly, 1983).

The review of literature carried out for the study, though not exhaustive indicates that role of ICT, social network and land-use in location choice has not been studied extensively. Another major element of concern is the use of single day activity diary to understand the location choice decisions of individuals. In most cases, a separate analysis has not been performed to study these decisions during weekends and weekdays, especially of students.

3 DATA DESCRIPTION

For the study, data corresponding to use of ICT, social networks, travel data and socio-demographics of students from two campuses of Instituto Superior Técnico (Alameda and Tagus Park) was collected using an online survey. Though data was collected from around 700 students, after accounting for incomplete records, data from only around 500 students could be used for the analysis. Land-use data from secondary sources were later linked to this data.

The common practice is to evaluate the destination choice using a single day activity diary. This could sometimes lead to underestimating of recreational trips. Individuals seldom undertake recreational trips on a regular basis and hence by collecting a single day activity diary and estimating models using this data could lead to potential underestimation of recreational trips. To overcome this, in this study, individuals were asked about destinations to which social trips were made in the past week, separately during weekdays and weekends. We believe, this will help address this potential underestimation to a great extent.

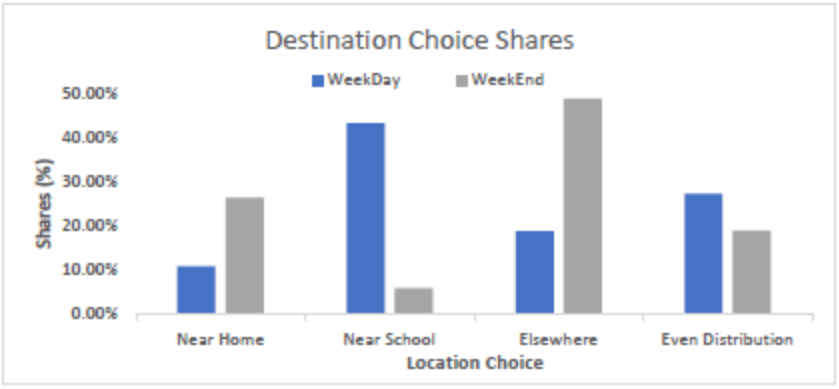

Figure 1 Shares of Destination Choice

The above figure illustrates the location choice shares in Lisbon, among students. Unlike the conventional approach, we have adopted a different definition for location choice. The main rationale for the following definition is that most of the activities by university students are anchored around the university and school, during weekdays. It can be observed that, most of the activities are pursued around the university (school) during the weekdays, whereas during weekends, most of the activities are undertaken at locations other than residence or university.

4 METHODOLOGY

The first objective of the study is to identify the influence of land-use, ICT and social networks on the location choice of university students from the two campuses of Lisbon. To achieve this, variables depicting land-use characteristics, use of ICT and social network were collected. Some of these variables were later reduced to factors using factor analysis to ensure parsimony and ease of use and in the estimation of models for location choice and to make behavioral insights. As has been mentioned previously, an alternative definition has been adopted for location choice variable. Considering the nominal nature of the variable, multinomial logit model has been used.

The second objective relates to the identification of similarities and dissimilarities in location choice, between weekday and weekend. As can be observed from the exploratory analysis in Figure 1, there is a significant difference in the choice of destination, between weekdays and weekends. This analysis will try to understand the factors contributing to this difference. This could be due to some socio-demographic factors, land-use, use of ICT, social networks or simply due to the difference in availability of time. This can be identified by estimating separate models for weekdays and weekends.

Multinomial logit model has been widely used in travel demand models, in modelling choice of mode, route, destination, to name a few. The models are based on the principles of utility maximization. The simplicity in use, estimation and interpretation have resulted in widespread use of MNL. Interested readers

are advised to refer to the following { (Ben-Akiva & Lerman, 1985) and (Koppelman & Bhat, 2006)} for more information related to MNL.

5 MODEL ESTIMATION AND DISCUSSION OF RESULTS

As has been mentioned in the third sections, four levels are considered in the analysis for location choice, which includes within 800 meters from residence, within 800 meters from university, elsewhere and even distribution of locations. Location within 800 m from the residence has been considered as the base alternative. Considering the need to analyze the factors contributing to the difference in choice preferences between weekends and weekdays, separate models for location choice has been estimated.

Table 1, given below presents the estimation results of the analysis. The coefficients and the statistical significance of the estimated variables have been presented. As a convention, symbolic representation of the statistical significance has been used. Further, some of the variables have been included, even when not statistically significant, to avoid instances of false negativity.

The goodness-of-fit measures have been summarized below the coefficients. In this particular analysis, it can be observed that the rho-squared values are 0.17 and 0.16 for Week Day and Week End respectively. Alternative specific coefficients have been estimated for the models.

5.1 WEEK DAY

Gender has a negative effect, indicating that men are less likely to prefer locations close to the university, in comparison to areas around the residence. This is the same for students of age between 30 and 40. Considering the need to pursue work after studies, students who are employed full time have lesser priority for choosing locations close to university. When close friends reside nearby, the location for social activities is more likely to be around the residence, as social activities are usually dependent on close friends.

In an effort to probably reduce the inconvenience associated with travel, students belonging to large families are more likely to pursue activities near the residence. This could possibly be because the activities are could also be family events. When close friends stay in the neighborhood, the preference is similar to that of pursuing activities near university. As expected, with increase in road capitation, the likelihood of pursuing activities in other localities decreases.

Again, gender has a negative effect on consider locations evenly distributed. This could be because women are less likely to travel during weekdays considering their responsibilities at home. The same is the case with students who are full time employees. And this could possibly be because of their inability to pursue social activities during week days at locations away from their residence. The residual time available after mandatory activities (university and work) will be limited.

5.2 WEEKEND

It is worth mentioning that, close friends living in the neighborhood has an effect in the choice of location of for social activities during weekends. The choice of a location near the university has a negative preference. This is probably because, with more close friends within the locality, it might be convenient to pursue social activities within the neighborhood. In this case, the role of use of instant messenger is interesting. The variable indicates decreasing levels of instant messenger use during weekdays and weekend. Decreasing use of instant messenger use during weekdays has a positive influence in social activities near university during the weekend thus indicating the role of instant messenger as a substitute for social activities during weekend or as scheduling mechanism for social activities (scheduling for activities during weekend, during weekdays). And, with decreasing use of messenger during weekend, there are fewer social activities during weekend near university, which probably indicates the use of instant messengers in scheduling. With more number of acquaintances, there will be fewer social trips during weekends. With increasing access to vehicles, there will be more social trips in areas near university.

With close friends staying in the locality, there is lesser probability of students pursuing social trips at any other place, other than near university and residence. This could probably be because, social activities undertaken by individuals are dependent on close friends. With them in your locality, the need for pursuing the same away from residence is not necessary. However, if the friends are within the same municipality, away from the locality, it can be seen that, individuals are more likely to pursue these activities elsewhere.

For students aged between 20 and 30, any location is equally preferable. This can be associated with the greater flexibility associated with this particular age group. They also may not have family to take care and hence can plan travel easily. With more close friends in the close vicinity, there could be fewer social trips in other locations. And with more close friends within municipality, social trips are more likely to be pursued in other locations. With decreasing use of social media during weekdays, lesser social trips are pursued in areas away from residence during weekends. This could be because individuals might resort to use of social media during weekends.

	Variable	Week Day	WeekEnd
Near University	Constant	4.48***	-.33
	Age is between 30 and 40	-1.31640***	
	Gender	-.69***	
	Full Time Employee	-3.07***	
	Close friends stay nearby	-.58***	-.31*
	Decreasing use of instant messenger during weekday		.44*
	Decreasing use of instant messenger during weekend		-.34
	Number of acquaintances		-.18
	Access to vehicle 3-6 times a week		.88
Elsewhere	Constant	3.35***	.39
	Household size	-.15*	
	Close friends stay nearby	-.59***	-.24**
	Close friends stay within the same municipality		.28***
	Road capitation	-1785.87***	
Even Distribution	Constant	2.90***	-.68
	Gender	-.37	
	Age is between 20 and 30		.54*
	Full Time Employee	-1.39***	
	Close friends stay nearby	-.39***	-.20*
	Close friends stay within the same municipality		.28**
	Decreasing use of social media during weekday		-.15*
	Number of observations	459	
	Initial log-likelihood	-636.31	
	Final log-likelihood	-526.95	-534.05
	Rho-squared value	0.17	0.16
Note: ***, **, * ==> Significance at 1%, 5%, 10% level			

Table 1 Estimated Coefficients of Models for WeekDay and WeekEnd

6 SALIENT FINDINGS AND CONCLUSION

This study analyzed the location choices of students from Lisbon. As has been mentioned previously, the destination choice of the individuals have been defined based on the distance from the residence and the university. This is considering the fact that the location of these mandatory activity locations play a crucial role in deciding the locations of social activities.

It can be inferred from the analysis that the factors influencing the location choice of students during weekdays and weekends are different. This is both, in terms of the variables that influence and also based on the coefficients of these variables, when present in both cases. In terms of socio-demographic variables influencing these decisions, it can be observed that age, gender, employment status and household size plays a critical role in location choice. Further, the access to vehicles are important in the case of social activities during weekends. For trips during weekdays, presence of close friends in close neighborhood is a contributing factor. Whereas for trips during weekends, presence of close friends within the municipality

and use of social media and instant messengers also influence the location choice. Only the land use characteristics such as road capitation, emerged to be significant in this study.

It would be important to understand this behavior further, with the use of variables that can capture the land-use characteristics in more detail. This could possibly be the reason for the comparatively poor performance of the proposed models and hence needs to be explored. It would also be important to use other discrete choice models.

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ID 1744 | CHALLENGES FOR THE FUTURE OF SMART CITIES FROM A GENDER PERSPECTIVE

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1 SPACE AND GENDER

The finding, on the one hand, that the future of cities will have important social and economic consequences due to an urban design implemented by information and communication technologies and, on the other hand, the gender perspective as the principle chosen to support social and economic progress based on equality in Europe (Horizon 2020, article 15), prompts us to propose a study that integrates a gender analysis and research around parameters and variables of the innovative design of the city's public space.

The question about the ways in which the genre of the subject modifies the conceptions and representations of (public) space is an indispensable question. In a previous publication me made reference to the more performative and interactive feminine behaviour in comparison with the typical ontological metaphysics of the masculine "fact" and the authorship (Trachana, 2012: 121-122) The current work of the woman is diluted in the family, in the group. Its essential condition is that of an off-centered

subject, of an extended body, of "being" in front of the central myths, of "the action that resists acts" (Agamben, 1998). The performative behavior is closer to manual craft than to scientific attitude, and is imbued in the action-reaction time, in everyday life within a given context where implication and commitment acquire an important dimension. The ways to interpret space and to create relationships in space are, consequently, a subjective and critical positioning. Their way to act, we maintain, is through an instinctive knowledge. This implies an awareness of the environment in which sensations and reflections, images and concepts can be correlated. It is a kind of biological and anthropological knowledge, which involves the senses, desires and physical limitations. This type of experience of the reality constitutes a cognitive state much more complex than rationalism, than the dominant capitalist and masculine thought.

Another classic theme -supported by feminisms- is that of the relations between the public and the private (space). The dual configuration of polis and oikós, from the Aristotelian politics constitutes the starting point of a genealogy of the feminine confinement in the domestic space. For this reason, the struggle for emancipation had to be, first and foremost, an appropriation of what was denied to women or a vindication of the deficiencies that women were supposed to have so that they could be considered as subjects worthy of a forbidden space.

Contemporary literature has dealt extensively with the relationship between space and gender and particularly with the theme of public space on the subject of biopolitics and the categorization of the public and the private[1]. Women crossing the threshold from private to public space, the "unique" route of women in contemporary public spaces, the oppression and representation of the feminine, the patterns that followed the associationism and political activism of women, the changes in the structures of domination and their particular conceptual verdicts have all been helpful themes not only to redefine the notion of gender but to regulate a social body and, at the same time, to eradicate a harmful construct of what gender is. That is a way of breaking with the illegitimate tie between biological sex and gender, which, in fact, does not guarantee the achievement of the desires for individual emancipation. The study of rich and powerful women, transgressors and rebels, slaves and prostitutes ... who differently crossed the threshold of the domestic sphere to circulate in public spaces with different vehicles, with different speeds, with different companions, leads us to consider "the idea that the private space had functions that went beyond what was simply domestic"(Huguet and González Ed., 2008).

The first International Congress on Gender and Space organized by the UNAM (April 14-17, 2015) revealed the different expressions of gender inequality that persist in the use and appropriation of spaces, especially in Latin America; also the persistent inequalities regarding the visibility of women in the public space and the gender violence; the conditions of working women, but also the transgressions and resistances, the expressions of appropiation of the public space; the trespassing as well of social spaces, the effective capacity that the female subjects have to transform the meaning, the conventional uses and the heteronormative and gender logics of certain social spaces. The investigation and presentation of all these categories have once again supposed a vindication of non-hegemonic subjectivities whose experience of different spaces is articulated in a different way. In so doing subjective positions different from the dominant one were made patent, as well as different possibilities of living and inhabiting the space-time continuum.

According to Foucault (2009), social space is not a "kind of emptiness", it is rather a framework of social relations that define orders, emplacements, attitudes and displacements. That space, in which "the erosion of our life, our time and our history" develops, only acquires sense and meaning from social assumptions and relationships. It is place for games of power and domination, for a symbolic and imaginary framework that incessantly turns it into a lived, imagined and regulated space. The complex relationship between gender and space can only be explained by the incessant intersection between both categories; by the constant intersection in which such variables get mutually constituted and form a social reality with palpable effects on social interactions, emotions, affections, displacements, daily activities, identities, resistances, transgressions, confinements and locations, stays, sojourns and rhythms.

To decipher tensions, gaps and beaches, to detect the emergency of changes and creativity and to give way to a conception of physical space with characteristics linked to the contemporary modes of production of space, it is necessary to endow the term with meanings that combine symbolism, intersubjectivity ,

[1] The Journal Astrágalo. Cultura de la Arquitectura y la Ciudad, v.5 published in 1996 the monograph , Space and Gender (“Espacio y Genero”).

variability and corporeality. Today we speak of an “augmented space” because of information, of a multisensorial confluence of the spatial and temporal dimension that produces favourable hubs for the study of different meanings, and that can reflect both, daily and ritual complexity. Undoubtedly, in the last decades urban social life has become incomparably more complex than anything known so far: social exchanges, use of time, forms of mobility and communication have been modified. Among these transformations, perhaps the most notable and emblematic, according to Remedi (2000), is the substantial modification of social space, the spatial organization of inequalities, social isolation, the context as a breeding ground of tensions between extreme forms of tradition that bind to the past, and a modernization that is expressed in a leap of scale in multiple aspects of urban life, leap that has to do many times with the use of communication and information technology.

2 CARTOGRAPHIES OF THE NEW URBAN COMPLEXITY

2.1 AS A RESULT OF WOMEN'S REVOLUTION

The need for the existence of a public space where to meet and be present to contribute to the development of healthy communities is a key dimension to promote an innovation of the traditional and institutionalized methods of how to make city and overcome the model of globalized urbanism. What does globalized urbanism consist of? The model of globalized urbanism holds the fear of the others and the refuge in private life (Borja, 2005). The concept and belief that it is possible to contain the world in the house and in the neighborhood, as well as in its complements - the motorway and the automobile - are simultaneously the result and cause of a new way of organizing the urban space and of relating in this space.

It is, therefore, a question of making new approaches to the built environment, augmented as a result of information and communications policy, without falling into the concept of 'smart cities' as mere business and political marketing in the hands of companies dedicated to technological products. In this technological realm, in fact, the differences are accentuated and the fear of the others is manifested by giving priority to surveillance and security. It is also manifested by means of technological endowments in areas of high economic and consumer level in contrast with what happens in popular neighborhoods, and also what happens in urban centres in contrast with the periphery. Technological devises are used by those who have the means to acquire them, what gives them access to specific formation. But the key question with regards to the implementation of smart cities is how to improve the standard of living and the coexistence by optimizing the collaboration of technological means and investigating inclusive and non-exclusive modes and applications. Before that it is necessary to study the attitude of men and women towards technological changes and the perception and use of ICTS by ones and the others.

In a former publication we studied the consequences of the revolution of women in the second half of the twentieth century (Amann, Trachana a.o.,2013). The traditionally accepted dichotomy between public space and private space has been demolished while the house has progressively got emptied of contents as the city has become more complex. Whoever kept the house and cared for the family has slowly entered the public sphere of the social so that the 'family', with its traditional meaning, is no longer the only reference for the organization of the space as, nowadays, issues of the private and the public get intertwined with identity issues till forming a new indivisible theoretical-empirical construct.

In the Arendtian social sphere activities related to pure survival appear in public (Arendt, 2005, p.65). There is a philosophical tension that is aimed at emptying the philosophical separation between public and private (...), which aims to displace the hierarchical construction of binary logics (Scott, 1990, 42). The maintenance of the public and private dualism not only hinders the historical understanding of sexual roles and their stereotypes, through categories attached to separate compartments in which the cultural abstractions mask both, their identities and their relationships. They also despise the possibility of instability and change throughout life. And if the boundaries between the public and the private are now dissolved, the city must be analyzed as a multidimensional system and face the urban space from the same conditions of complexity and diversity observed by Jane Jacobs in the 60´s. "The main responsibility of urban design and planning should be to develop cities that are ideal places for the flowering of wide ranges of plans, ideas and opportunities ... to generate diversity and to attain its maximum potentialities" (Jacobs, 1961).

It is, therefore, essential to update cartographies of urban life so that alternative proposals can be proposed for the design of the city. The urban demand is now as complex to determine and satisfy as the existence of a great diversity of users. It requires a comprehensive multidisciplinary analysis that addresses both the socioeconomic, sociocultural and geographical aspects as well as consumer behaviors and value systems and preferences associated to lifestyles and the capabilities of each one. It is no longer a matter of solving spatial functionalities that divide the city into zones, as we were taught by modern urbanism. It is a matter of superimposing layers of information and generating new atlases of urban habitability.

Women´s revolution and their incorporation into the labor market has not only had obvious sociodemographic consequences such as the delay of the maternity age and the decrease of the birth rate. There has been a fundamental change with regard to care: the abandonment by women of activities related to the care of the domestic space, the inhabitants of the house and especially the dependent groups formed by children, the sick and the elderly, which has seen its number increased in an aging population. At the same time there has been a growth of single households and other forms of coexistence and communities have emerged: from the emergence of Airbnb and elderly people communities, to the cohabitation of university students and the elderly, and other innumerable formulas. There have been profound changes in the labour structure due to unemployment, precarious work, reduced working hours or moonlighting. Immigration from countries in developing economies, the growth of female immigrant caretakers who have been introduced into homes or the migration of young south European people to the north are just a few brushstrokes to add to the new map of the city. All this represents new space-time relationships and trajectories of life and coexistence in cities.

From the sociocultural point of view, a renewed assessment of the leisure time, with a greater diversified consumption of entertainment joined, in many cases, to a body culture, have generated different space-time relationships that are incorporated into the daily schedule of the citizens. All those who can, within all segments of the population, dedicate some free time to go to the gym in the case of adults, attend extracurricular activities in the case of the youngest, and walk urban distances and do physical exercise in equipped parks, in the case of the elderly. This concern for healthy life and exercise also influences a change in eating habits which, in turn, have consequences both, on the preferences of consumption as well as on the supply of the different consumer centres.

These are just some obvious references that point to a paradigm shift and that need both quantification and also relative evaluation. From the paradigm of the functionalist city of the Athens charter - organized on the basis of standard functions, standard families and a society of certain homogeneity and certain gender roles - to a city with very diversified functions and uses and that is experienced from a subjective point of view . The incorporation of ICT in everyday life is, undoubtedly, a factor that contributes substantially to the space-time perception. This has implications in everyday life, family, relationship between genders…in learning, the self-assessment of personal and social life in relation to a specific habitat and the degree of spatial identification with the public space. The representation of a world that can be controlled by technology constitutes an imaginary and, in this sense, we need to explore how, in fact, artificial intelligence can affect urban life. With this technological revolution the fundamental question around new patterns of planning and city management is posed. How can we overcome globalized urbanism, create pleasant spaces for urban life, manage inclusion and citizen participation in a project in which quality public space for the citizens coexistence and principles of urban ecology, sustainability and resources saving are taken into account? Indeed we need to explore ways in which cities can develop more intelligently.

There is an obvious need to study the paradigm shift in the forms of artificial environment production based on a real and diversified demand versus the market offer; to study the demands in the urban space as a complex system of capacities, activities, means and requirements and to generate cartographies of the daily life that allow to elaborate a programmatic sheet for the urban project; to respond with the new enabling technologies to the challenge of building an augmented environment by defining the requirements for the design of systems that address the diversity and complexity of the new patterns of habitation; to research around the smart applications and the modalities of affection of the subjectivity; the experience of the smart city and its implications in everyday life.

The fundamental key of the pending research is to locate the constraints and perspectives of building places, territories and relationships for greater inclusiveness and equity, what means fostering a new

imaginery of everyday community life where confidence and identification with the place are promoted. And that compromises a gender perspective in the reflection. How can technological implementation contribute to reinforce integrating social dynamics, propose a multi-functional urbanism that favors diversity and social mix and an urban design that reinforces the collective life as already argued the legendary Jane Jacobs in 1961? To design from a gender perspective means to design for the diversity of people and collective situations, for solitude and for meeting for intimacy and for the community.

2.2 AS A RESULT OF THE TECHNOLOGICAL REVOLUTION

Nowadays the space where we develop our lives is, indeed, an augmented environment, a technologically implemented space that produces profound effects on multiple areas of communications, knowledge and life experience. The perception of the body-space-time-language, the understanding of what constitutes the conception of the ways of being in the world, the others, relationships, education, socialization, work, health ... are mediated by the digital technology (such as presence or absence). This is an important moment to re-examine the situation of women in a restructured environment through the relationship between science and technology "(Haraway, 1991, 165).

ICTs bring with them a change in the line of thought according to which relationships are conceived in the city. Its networking pattern logic implies a de-hierarchization and a potential horizontality of the processes and, at the same time, a much more nourished information exchange. This feature, coupled with other conditions of our time that include a series of questionings in the foundations of social disciplines, makes of ICTs an interesting element, object of monitoring within the framework of the current city. From the point of view of the information and communication technology it would fulfill the dream of democracy and freedom, access to information to which all citizens are entitled and the possibility to promote interactive receptors. And from the concerns of ecourbanism it would imply a total reformulation and the search for a new paradigm that could cross the discipline of urbanism to world-wide level. The design of the city would no longer be only a formal matter but a question of management and exchange between different layers of information, knowledge and disciplines involved.

The recognition of the influence that the so-called information society has had in the realm of urban life is decisive in order to move towards any new model. Its scope, still greater than the changes produced on the television and the telephone in the last century, implies changes even more profound than any advance in the field of building and infrastructures in the transformation of the urban space. The effects of ICTs on urban life, the daily activities of citizens and, as a consequence, the space that these activities engender is more than evident. The technological innovations in the areas of computers and telecommunications that we are witnessing today are generating profound transformations in social and individual behavior that are ultimately redefining the public space and its limits. This is an immense field of research aimed at developing the necessary cartographies to create reliable specifications for a renewed urban design, informed by the many existing channels.

The importance of ICTs when thinking and designing the cities of the future is related to an increase of intelligence that is translated into efficiency in existing environments. It is a trend that is presented as a necessity in the world today. Information and Communication Technologies undoubtedly play a fundamental role in the evolution of spaces towards more sustainable, comfortable, interactive and intercommunicated environments to improve the quality of life of the people who live there. Much of the ICT applicable to these environments can be included in what has been known in recent years as the Internet of Things, that implies that all elements in nature are able to communicate with everything that surrounds them, and to transmit information of their state, position, etc. so that decisions can be made based on it.

These environments can be either a room, a complete dwelling, a neighborhood, a vehicle, a subway car, an airplane, a boat, a park, a hospital, a hotel, or a complete city. A permeability is established between the boundaries of these environments and a continuous space-time whose experience is and will be very different in a future that is almost present. To reflect all the technologies that will be present in our day-to-day life in the city of the future and all the initiatives that currently exist in the development and implementation of these technologies, the ITI (Technologic Institute of Informatics) has produced a "Brief Report of Trends ‘Smart Environments: ICTs in Smart Cities’". This fundamentally focuses the concept of "Smart City! on three spheres: natural resources, health and urban mobility.

But usually they are business initiatives that investigate and promote the technologies applied in smart cities and the research developed by universities with external financing are aligned to business interest. Leading companies such as IBM work implementing equally with their projects and products urban environments in Spain, Portugal, Greece and Israel. Technological companies are advancing at a staggering speed in recent years to establish themselves and compete in this market by offering various installations, devices and applications that are overlapping with the settings inherited from the last century. In most cases, they can be considered implementations that affect specific aspects demanded within the broad spectrum of urban life´s needs. Smart cities do rely on data. But what kind of data? With what intention and by whom are these data collected? how data are associated and become useful is the important question.

It is true that a wide variety of institutions - both private and public - currently work, experiment and develop research projects in this sector of the intelligent city. Among them there are large multinationals such as INTRA and in terms of universities, in Spain, for example, UC3M publishes about 68 research groups working on projects related to smart city and UPC has around 120 projects that make reference to the field of administration and public safety, education, human capital and culture, energy efficiency and environment, traffic and urban mobility, health, transport and railways, elderly people. In this respect the Technical University of Madrid (UPM) coined the term 'city sciences' which encompasses interdisciplinary postgraduate training and research projects.

Once the cybernetic world is already incorporated into everyday life and the demand for fiber optic infrastructure has recently joined the usual facilities, the possibility to simulate a smart city through sensors and devices, increases. The goal of "intelligent environments" is to bring the user processed information that is integrated into their daily activities through mobile devices and interaction. The technology that is applied to the urban space addresses very different aspects: from security for any undesirable or risky situation and surveillance (concepts associated with the vulnerability of the feminine gender and its safety), to public lighting, surveillance cameras, etc. To the security and control that become priority themes in smart city designs, we must add themes that have to do with time and efficiency. Efficiency and speed are values of our time. Energy efficiency linked to sustainable consumption, fuels and mobility, public lighting, etc. are added. There are also criteria of comfort, attendance to people, accessibility and "design for all" that are part of a large repertoire of smart applications. On a design level, they could be categorized according to the functionality or comfort with many nuances related to consumption, transport, leisure, etc. focusing on time saving and other resources. Undoubtedly, this tendency has its pragmatic references in the architectural view of "the machine city", perfect in its parts and reasonably analyzed in each element separately.

Technology is able to control facilities, adjust costs, optimize consumption, offer comfort, safety and most importantly, help the user save time. Lighting systems, pollution, information about public services and means of transport are controlled through programming systems. Within a wide range of fields of action, applications specialize in determined functions and adapt to existing structures and systems. Everything seems possible. The interaction of these systems with the person or the environment is established through the smartphone and touch screen. Its use seems to be easy (user friendly) and there are even special devices for people suffering from functional, visual, auditory, mobility or even cognitive diversity. Most of the applications that exist in the market implement a space designed by architects and conform to some regulations.

The criticism of this technology that generally implements the urban project is that it is normally generated from the supply side and not from the reliable knowledge of the needs and the diverse desires of the great diversity of users that configure the real demand. The architects who design the living space with geometry as much as the engineers who design devices and applications ignore the experiences and real concerns of users and the needs of specific places. The approach proposed here for the contemporary city has to emerge from the radicalized coexistence of both situations: is it appropriate to propose an urban space as a space endowed with urbanity when an intelligent system allows citizens to develop urban activities in the best possible way?

The purpose is to address the new forms of social construction of space and relationships in a connected world. On the bases of the characteristics of the network culture that, in our opinion, define the forms of subjectivity and online collectivity, the erosion of the public and private spheres is favored. The materiality of a connected life transforms our relationships with the space, the body and others. In contrast with the

protection of privacy that our connected room offers- that space that anthropologically allows us to construct identity and intimacy, now permanently connected - to the interactive public space, the augmented environment by ICT becomes a place for the production of the public. Today all those that are connected to internet become visible, we want to be seen.

The spheres traditionally differentiated and linked to the production and reproduction of the world, with the masculinisation and feminisation of different spaces and practices of culture, have definitely been eroded. This erosion shows some scenarios and roles hidden as well as those who lived among its walls and that are now connected. Women these days emerge from the connected private spaces to get immersed in the public realm seduced by the inexhaustible entertainment of the screens, learning to manage time and to build their subjectivity (Zafra, 2010).

The confluence in the network of production, reception and distribution spaces and, as a consequence, the apparent horizontality of these practices backed by the celerity and the excess as signs of this confluence. generate an illusion of choice and emancipation. Taking into account that the logic that manages this excess in large, huge numbers cannot be but statistical, it is not strange to notice the rapid equivalence of connectivity with service. As a counterpart to this hyperconnectivity, the excess of time and dedication spent by women in particular, seems to us a new form of saturation and vulnerability.

The swift from “I” to “we” in the community space, the technologically implemented and connected city, becomes an illusion. Technological immersion mutates into individualities that, in a first impression, move from old strong bonds to light bonds marked more by affinity than by identity, more by presence than by belonging, and both by the biopolitics of spaces and the technological materiality as well as by the constraining virtual network. The community seems to be articulated today as a multitude of people alone and interfaced by the machine, a multitude of people that are always connected (Zafra, 2010).

However, from the abovementioned characteristics, the emergence of new scenarios of creative possibility and of entrepreneurship that counteract the adversities inherited from precariousness in so many areas of the working and social life of women, particularly, can be detected.

Political philosophy and feminist political analysis can be productively applied to the new conditions that ICTs have created for women, although much more research is needed on the specific impact of ICTs on different populations of women whose lives are being profoundly altered by the new technologies, often in ways that are leading to serious physical and mental health problems. This holds true for professional women with a high level of education in academia, sciences and industry, doctors and computer engineers, as it is for administrative and factory workers or rural and urban workers. Given that most women are already doing "double shift" (production and reproduction), the demands and pressures of the just-in-time economy (JIT, a method originated in Japan to organize production in factories) and the high speed are affecting women more than most men. The high levels of chronic fatigue syndrome, depression and stress, even among professional women - which is the best documented group - demonstrate the high human costs of our economic and cultural productivity systems. According to Fernández and Wilding (2006), to achieve strategies of action, we must analyze the impact of new technologies on sexuality and the subjectivities of women; the conditions of production and reproduction – already linked in the case of women; gender roles, social relations, and public and private space; and it is necessary to challenge the naturalised value attributed to speed and efficiency, when these do not take into account the limits and needs of the organic body.

3 FOR AN INFORMED DESIGN OF CITIES

From this shallow analysis it follows the necessity to combine the efforts of the academia and the responsible institutions to investigate the real and specific demands of the different settings; conduct studies that address the complexity of urban conditions in order to design policies and carry out specific urban projects and not simply indiscriminately implement technological products in all spaces. This would serve to bridge a large gap existing between today's operational strategies - built on the basis of homogeneous demands and bureaucratically and rigidly managed - and the current real demands, increasingly heterogeneous, fragmented, and variable over time.

To this effect, the visions of citizens, an incredible amount of subjective data that are generated in the networks, could complement and enrich objective geospatial information. The “collective intelligence”, the potential of the presence and participation of citizens in common things and the self-organization capacity of identities through the network that promote actions transforming the urban space has to be placed somehow at the service of the city.

It is true that in the field of disciplines that work on any aspect of the urban space, important methodological changes have been produced as we referred elsewhere (Trachana, 2012), so that Sociology approximates its methods to Ethnology and Anthropology abandoning theoretical models and trying to appropriate the urban through the direct sensory experience and the description of the particular (Delgado, 2007). Lévi-Strauss (1987) already warned us about the impossibility to access the real through the schematization of the action or the conceptualization of experience. The author also warned us about the abyss existing between what is thought and what is experienced. Everything that is present, and susceptible of being seen, observed and narrated matters much more than what is known. What is observable, intuited, the haptic, acoustic, luminous, thermal sensations which immediately affect the life of individuals, which constitute the sensitive space and not merely the formal-material city, is the most important (Trachana, 2013).

The question that arises is how to capture sensations, descriptions, formulations and proposals, which are difficult to classify, compare and analyze, in order to translate them. Blumer (1969) suggests "interractionism" as a set of honest descriptions of the area studied that would be an alternative to the protocolized information formats. This type of research is conceptually opposed to formalist research, so that problems, criteria procedures, techniques, concepts and theories fit the empirical world, a world that seems to have ceased to interest us.

In this context, recording techniques of what happens outside, of what depends on perceptual and sensitive value, such as drawing, photography, video, sound recording and voice, play a key role. Dialogue remains the most effective way to access the meanings that the actors attribute to the elements of the assessed environment. Therefore, the methodological questions concerning the way of detecting, recording, categorizing, and interpreting urban events call for a certain restoration of the much reviled confidence in the direct observation of the flow of urban life. The attention given to bodies and their languages, the role attributed to oral information, the capture of social activity in public spaces, could never be replaced by an established mechanic, by the established statistical values and meanings or simply by the application of regulations and legal prescriptions.

The assumption of this naturalistic perspective, at least regarding a readiness or openness towards the things and facts that are there and seem to be eager to be understood in their composition, requires the humble work of data compilation and inventory. The best we can do is the transcription and classification that properly corresponds to the observations. The detailed description to give an account in cartographic terms and record minutes of the observed, is considered as urgent and indispensable. The intensive and methodical use of the human capacity to receive sensory impressions whose variants are then destined to be organized in a significant way is the previous work to determine the real demands in order to give answers in terms of design and technological implementation of the urban space.

But the exhaustive immersion in the physical-tangible then raises the question of how to combine life with cartography, a map, a plane, a project, which is already the most philosophical theme of the same truth. The digital paradigm provides us with network construction and superposition of layers as a possible way of recording direct observation, the description of the given and its alterations. The digital tools allow to superpose and to read multiple registries, different types of observation, to capture movement, time and evolution, continuities and discontinuities, events, everything exposed to the senses apart from any preconceived idea and the abstract. All that can be converted into project data are no longer exclusively provided by public administrations - which, in fact, are currently undergoing a great effort to openly make them available to the public.

There are several individual and collective initiatives that investigate in this sense to create and transmit descriptions of the urban condition with new types of data that allow to complete the geospatial information and enrich the experience of the city. In this research it is possible to observe the ways in which smart applications affect subjectivities, their implications in daily and family life, the relationship between

genders, the emerging changes and the differences between men and women when dealing with technology.

Our purpose here is to account for the changes and resistances of today's urban life, the role of women contemplated with all the complexity and diversity that the contemporary social fabric presents, together with a technological background that demands a prevailing need to investigate in order to detect, determine and evaluate its effects. During the last decades, in the field of architecture where we are and also in related engineerings in an exacerbated way, action has prevailed over reflection (Lleó, 2006). The technology of products and tools has deeply affected the ways to design, the ways to act, collaborate, participate and produce the architectural space.

But what remains as the main issue is how optimized is the contribution of the media tools arsenal we have and the amount of data and information accessible to provide us with this global and totalizing vision that encompasses real, physical, corporal, intellectual and cultural demands to incorporate to the urban project and city planning. How can we derive from the analysis and interpretation of real and reliable data towards a project specification? Without any doubt, the field of research that opens in front of us is multidisciplinary. It is time to abandon the usual complacent solitude in which projects are developed both in architectural studios and research groups at the university.

To deal with the world of authentic specialization, we are asked to assume the need to interconnect specialized worlds, getting trained as authentic generalists in an institution such as the School of Architecture which, from a complex knowledge has to connect and relate the multiplicity of expertise. We have, in this sense, as teachers and mediators to promote substantial changes in the discipline by training agents as mediators, negotiators and communicators.

Advancing a little more in our thesis, we could say that the city and not the building, is the scale, the augmented framework of architectural intervention. The expanded architecture is the city, the city that becomes home. And our mission is to endow the city with this condition of use. What we need to change is its use value versus its value as a product that characterizes the current city. The new paradigm integrates elements of the virtual and the material world. Being already a "mixed environment" where the advancement of technology allows the juxtaposition of virtual information and the material environment where citizenship activities take place - giving rise to what is known as augmented reality (RA) – that is a new way of being in the world and related to it, between the body of the user and a generally mobile device.

The path taken towards a stage of complete digital and face-to-face integration effectively responds to the bipolar condition of the individual and by projecting it into the realm that inhabits get, on the one hand, an introverted position that explores the house and the city as a shelter of the self, and on the other, it considers them as the structure that enables and organizes all what is circumstantial.

The words that allow us to describe the city as a real and contemporary alternative, after having mapped the diversity and complexity of the variables analyzed above and many others, is hybrid (Trachana, 2014), liquid (Bauman, 2007), movable (Delgado, 2007), invisible (Innenarity, 2004). We are able to approach the project understanding it not as the quasi-mathematical consequence of a linear process with the hermetism of the finished product. Against the permanent materiality of the architectural orthodoxy and the project rigidity there is the heterodoxy that promotes change, the assimilation to a fluid environment, the aesthetic dematerialization of construction in favor of facilities, the consideration of flexible and adaptable strategies in any field, and the convergence of a digital immaterial environment that extends and increases the traditional architectural space.

4 SMART CITY AND WOMEN: THE CHALLENGE OF TIME MANAGEMENT

Today's society is changing its habits due, firstly, to the continuous variation of the vital situations that allow us to identify ourselves as nomads due to globalization, labour circumstances and the elimination of borders as well as the acceptance of the destabilization in everyday life, which is identified with the concept of "performativity" posed by Judith Butler (2007), and that makes reference to the existence of many forms of behavior as identities. What affects us fundamentally is time much more than space. The interaction with space and objects takes place in time, a time that is not neutral but specifically dedicated

to our body, our mind and our relationships. Relationships for a physically and emotionally developed life in an ecological and sustainable space designed with responsibility and, as it cannot be otherwise, pierced by large amounts of bytes. We continuously transform, either consciously or unconsciously, this space through its use, manipulating matter and transforming energy with our bodies. We alter the environments through the information we receive and transmit leaving traces that are changing the social environment. We generate affections and phobias, desires, ties and works, and generate waste, much more waste than an evacuation network can withstand with the hope that an intelligent system will transform it into new consumption possibilities and release the overload of a deteriorated world.

If the woman, with her imperceptible t daily task hrough daily domestic work guaranteed that in the face of the threats of an unstable, changeable and hostile world, the house would remain unchanged and became the home to which we all arrived sooner or later, who will be able to guarantee now this immutable condition of the home linked to the maintenance of space and its inhabitants?

Now the permeability between the body, the house and the world through ICT is a fact. It is not a question of avoiding a conflict or an alleged deficit of domesticity, but of taking care of all the unsustainable aspects derived from the management of the augmented habitable environment.

Undoubtedly, time is the variable that appears as a priority for the development of a truly intelligent city proposal. A time intelligently managed after an experience accumulated by women over the centuries and undervalued and ignored by the rest of humanity. An administration of time that guarantees the fulfillment of all needs so that each one of the activities of the human being can be developed in this scope. A time that systematically analyzed through cartographies of daily life allows to visualize each of its derivations and implications with the body, the city and the rest of the planet. A time to meet demands that, once detected, can be introduced into a complex system of interrelationships and implications and be assumed by a set of design specifications, management, maintenance and control of a responsible urbanity.

We are not very sure of what we have in our hands, perhaps because of sheer ignorance of the technological potential still in development, but we can bet that between a variable, diverse and indefinite body and a global city, complex and plural, we need to find the solution together with the fellow engineers, psychologists, anthropologists, sociologists, and housekeepers of any sex, race, and condition as we are irremediably connected.

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T15 | LAW AND PLANNING UNDER SOCIETAL CHALLENGES

CO-CHAIRS: RACHELLE ALTERMAN; LEONIE JANSSEN-JANSEN; BEATRIZ CONDESSA

Almost all countries have laws, regulations and government institutions related to planning and building controls. Planning laws often also enable intervention in property rights – such as expropriation and land sharing – and may entail fiscal aspects (levies, fees, negotiated value sharing).

These issues range from procedural matters - processes that affect quality of governance, to substantive policies and instruments that may enable the creation of spaces and shape land use (for better or worse). In times of increasing uncertainty, European (dis)integration, neo-liberal economic approaches, and social and demographic changes, a new focus on innovative processes and practices applied to planning of territories, regions and cities is needed. These are all very critical questions regarding the interplay between Law, spatial planning and property rights.

Can the law and planning institutions meet the challenges posed by inclusiveness and multiculturalism, promoting flexible planning approaches and collective engagement? How do they affect planning laws geared to handle distributive justice issues within cities, countries, and across borders? This track invites research proposal on any topic that relates to planning laws and land policy, whether directly or indirectly. An indication of the scope of the track can be seen from the following list of areas: Statutory (regulatory) planning systems and instruments: How well can they accommodate emerging economic, socio-demographic and environmental realities? Regulatory land use instruments: local statutory plans, zoning, building permits, agreements with developers, “exactions” or “planning gain”, regulation of open space and natural resources, regulations of already-built environments and other; Public property rights / private property rights / private property responsibilities: tensions between them, land for public services, customary collective / private rights, expropriation, compensation, land readjustment, taxation of land values, transfer or development rights;

Governance structures and procedures: How does planning law structure the relationships between central governmental control, local government, markets, and non-governmental organizations? How does the law frame public participation and involvement, conflict management and dispute resolution? Contribution of planning law to an efficient and equitable management of land and ecological resources; Non-compliance with planning laws: issues of illegal, “informal” “irregular” development – processes and enforcement. Innovations, methodologies and advances in planning legislation in its various territorial, regional, metropolitan and urban scales. Systematization of processes and practices applied to the planning of territories, regions and cities.

Questioning and analyzing experiences and processes and innovative management practices in territorial planning at different scales. Analysis and proposal of territorial, regional, urban, fiscal and tax, policy instruments applied to the planning, management and public administration at various federal levels. Contributions may focus on theory or investigate particular issues, focusing either on a particular country or cross-nationally. Since legal and planning systems vary greatly from country to country, authors should make the legal structures and procedures as transparent as possible. To be considered for this track, the author needs to point out some relationship with the underlying legal framework.

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ID 1404 | EVALUATION OF THE INSTITUTIONAL FRAMEWORK AND POLICIES OF SPATIAL PLANNING IN GREECE

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1 INTRODUCTION

The study, examination and classification issues relating to the planning process are imperative for today's society, which often faces significant territorial problems. As a field of expression of the various public policies, the actual space is regulated with certain tools that are activated and promoted by the planning legislation. In particular, regional planning as a strategic level may provide the necessary guidance, incentives and solutions to any kind of problem. Thus, the interdependence of the individual parameters constituting the planning process (policy - legislation – plans – spatial structure) and the circular route followed can be perceived.

2 THE ROLE OF LEGISLATION IN PLANNING

Urban planning is the subject matter of various sciences, namely, philosophy, sociology, political science, demography and law, resulting in issues of an interdisciplinary and complex nature. The implementation of urban planning comes as the result of two individual components, those of politics and legislation. Spatial planning, therefore, as a conscious attempt to modify the real world through implementing scientific methods or other means of making decisions, is a complex act including elements of scientific thought and political practice. (Kafkalas, 2015).

The latter involves, in the first place, policymaking and law regulations and secondly, the implementation of the urban planning policy. These two components are inextricable and interdependent. The legislation and in general the institutional framework aims at determining the operation of the authorities responsible for the urban planning policy, regulating the relations between the implementation tools – means (plans, projects) and providing guidelines and the basic orientation of any horizontal or sectoral policy to be followed. The term institutional framework entails all the legislative measures that define the rules followed by a human activity within the operational framework of a certain social group (Papapetropoulos, 2008). Urban planning is an activity regulated by the law as well (Papapetropoulos, 2004), and as the basic method of implementing state activity, it falls under a legal – institutional framework of state organisation none other than the Constitution itself (Melissas, 2002). Today, urban planning is not only a means but also the guiding tool of an active state policy. Urban planning is admittedly not a linear procedure, as it involves the setting of goals and the means to realise them.

In Greece, generally, the institutions, in the strict sense of the term, are the text of any kind of regulation (Laws, Decrees and other acts) also known as tools of the corresponding policy. Essentially though, the institutions reflect quite a few elements of a policy, on the one hand containing its goals and objectives and on the other hand specifying the majority of measures and the means of its implementation. The legislation provides the urban planning tools (plans) through which the goals and intended results are illustrated. When speaking of the Greek reality in particular, an abundance of plans yet a shortage of planning as a social and political procedure are mentioned (Beriatos, 2015). For this reason, the study, consideration and critique of the institutions is, at the same time, a study of the corresponding political and historical framework that they reflect (Beriatos and Papageorgiou, 2013).

3 BASIC ISSUES OF SPATIAL ORGANISATION IN GREECE

The uniqueness of the Greek space in terms of organisation and integrated approach is given, as, albeit being an inherently heterogeneous environment, its acquired characteristics and the anthropogenic intervention in it have intensified the problems and created several difficulties. It is, therefore, necessary that these spatial organisation issues which have arisen over time be analysed. The consideration of these

issues is essential as they are the ones taken into account and tried to be resolved by the latest spatial laws. The aforementioned issues are classified into six categories ranging from the most significant to the secondary ones according to the direct spatial imprint.

3.1 NETWORK OF SETTLEMENTS

The first and foremost category is that of the network of settlements. It is characterised per se by the spatial dimension and features the most crucial issues. This group differentiates itself from the next one as it mainly focuses on the role and functions of the settlements.

A recently observed phenomenon is that the competitiveness of the settlements has strengthened, instead of their complementarity, which partly depends upon urbanisation. This competitiveness, created at the expense of many settlements and cities, has not allowed satisfying exploitation of their potential. It is clarified that the competitiveness is not deemed unacceptable. It is, in fact, a beneficial course for every city or settlement, especially at a national level where all of them should be competitive towards foreign cities or settlements so as to be the first choice when it comes to investments, tourism, etc. In the case of the country itself it is important that there is complementarity so that the growth dynamics and comparative advantages of each settlement are exploited to the fullest. As a consequence, the country's growth will be balanced without considerable differences between metropolitan areas and rural settlements.

3.2 RESIDENTIAL RECEPTACLES AND AREAS OUTSIDE URBAN PLANNING ZONE

The second category focuses on issues of residential receptacles as well as issues of the areas that are outside the urban planning zone. Urbanisation, which has been observed worldwide but also nationwide over the last 50 years, has created several problems, as the tendency of the population to gather at urban centres is intensifying the pressure on the natural and built environment at a rapid pace. This has created great spatial needs not just for accommodation and infrastructure, but generally for establishing an integrated policy with specific measures and guidelines.

The first crucial issue worth mentioning is the phenomenon of building outside urban planning zones which has been taking place for years within the Greek space. Meanwhile, in the last few years the logic adopted is the one suggesting the expansion of cities, in other words converting rural areas to residential ones. This is also related to urban sprawl, which denotes the dispersion of urban functions in extra-urban space, making the purely extensive residential growth clear. The unequal relation between the city and the province stems from the above and also from their fragmentary and not integrated attitude.

Within the urban environment, different problems arise such as either individual abandoned shells, or whole regions particularly in cities and metropolitan areas. The reasons behind them are more complex and closely linked to economic as well as social constituents. Finally, high building densities in cities do not operate in the framework of the compact cities' philosophy, while, along with the shortage of open space within the urban fabric, a fragile environment and poor quality of life are created.

3.3 INFRASTRUCTURE & ARTIFICIAL NETWORKS

Infrastructure is divided into two subcategories; the first is concerned with its existence and connectivity whereas the second is concerned with the state or lack of the infrastructure itself within a specific space. The spatial planning issue of infrastructure in Greece is related to the strengthening of the role systems and networks play in the national integration and interregional cohesion (Skayannis, 1994). The association of Greece with the rest of the Balkan countries over the last few years is deteriorating, as phenomena of introversion are currently being observed. Even though insularity is among the main characteristics of the country, it has not been exploited to the fullest. The island space has been the recipient of significant ramifications due to a delay in uniting different kinds of planning, in adapting the growth procedure and the planning as regards to the characteristic of insularity (Gianniris, 2012).

Except for everything mentioned above, the immense requirements in various forms of energy aiming at covering needs have caused serious problems. In Greece, the exhaustible forms of energy, namely the oil

and natural gas, are facing problems regarding their transportation, distribution as well as safety. On the other hand, even though the renewable ones require a lengthy period of time to be taken advantage of, they compensate by producing secondary sources of energy.

3.4 NATURAL ENVIRONMENT

The fourth – and last – category directly related to space, concerns the natural environment. The environmental stress in Greece derives both from extrinsic factors, else known as global phenomena, such as the acid rain or the greenhouse effect, and from intrinsic factors which are the most important and are examined here. Quite frequent is the destruction of biotopes and ecologically sensitive areas and forests, important for the flora and fauna of these areas and for the conservation of the ecosystems just because they were outside the urban planning zones or even because of unauthorised roadside construction. The environment was almost always considered a receptacle for residential growth or a base for greenery growth and recreation identifying it, to a great extent, with nature issues in cities (Coccossis, 2012).

Lastly, a supranational phenomenon worth mentioning and which has a direct effect on spatial planning is climate change. It is an issue in need of total and integrated dealing as its outcomes are bound to affect the global community significantly. Among the effects to be produced, the rise of sea levels is noteworthy because it is altering and transforming the borders between countries, or even worse, may eradicate whole states.

3.5 GROWTH ISSUES

This category of growth issues includes highly diverse issues, though it also has both a direct and indirect impact as regards to spatial planning. The productive structure, either of a smaller area or a whole country, is one of the most important constituents affecting its growth prospects.

Undoubtedly, the sectoral and structural policies are the ones determining the framework of action and development of the productive sectors and more generally of the economic activity. The long-term dependence of the productive base on the two main constituents of the primary and tertiary sectors, agriculture and tourism respectively, has spurred an inward-looking tendency in production and economy. More specifically, tourism is an ever-developing industry and simultaneously has diffuse geographical impacts (Getimis and Economou, 1992). The basic problem which has emerged in the Greek space is the inability to develop a polycentric system with considerably high and sustainable population and production figures in rural areas (Petrakos and Psycharis, 2004). In this direction, each city and the respective region as a whole, has to balance the intra-regional differentiation and extend its comparative advantage against the others.

3.6 ADMINISTRATIVE ISSUES

The following constitute an overview of the general aspects of administration and, secondarily, of specific points regarding the process of urban planning. First of all, centralisation and the difficulties in decentralisation affect the urban planning issues because at lower scales, where local authorities should naturally make the decisions about most of these issues, the decisions are actually made by the central authority. Even though the majority of the local authorities are able to take responsibility and be active, the lack of personnel and the inadequacy in specialised political institutions and bodies does not allow that.

Moving on to particular details, overregulation concerning spatial planning is a prevalent characteristic of the Greek reality. It definitely is a serious problem as the large number of laws is the reason behind inconsistences, ambiguity and sometimes conflicting views. For this reason, a lack of legal certainty has emerged (Economou, 2015). In addition, the lack of monitoring in the process of urban planning is becoming noticeable because the regional as well as local bodies do not participate at all in monitoring and evaluation. They are the results of a deficit in integrated policy, which is evident in some cases, such as the late and gradual completion of the national land registry and the lack of coordination between sectoral policies and authority.

4 COMPARISON OF INSTITUTIONAL FRAMEWORK AND POLICIES

Although the general philosophy of urban planning is the same among the European countries, there are, indeed, some significant differences which, in the case of Greece, may serve as an example. After studying the current trends in urban planning in Greece, it is felt that over the last few years the concepts of spatial planning and space regulation have been redefined, while particularly focusing on spatial organisation and issue "resolution", both subjects of the two principal spatial planning laws, namely Law 2742/1999 'Regional planning and sustainable development and other provisions' and Law 4269/2014 'Regional and urban reform - Sustainable development', which shall directly respond to these. Through close examination and comparison of these Laws, it becomes apparent whether and how each of them addresses the above analysed spatial planning issues.

The difference between the two Laws is evident even by just examining their structure (Table 1). L. 2742/1999 is structured in six chapters, whereas L. 4269/2014 expands in only two chapters, of which the first has five subchapters. It is also noted that L. 2742/1999 applies exclusively to spatial planning, in contrast with L. 4269/2014, which refers as a whole to the reform of the urban planning system, while at the same time, the categories as well as the land use content are described in detail in its second part.

Law 2742/1999	Law 4269/2014
Chapter A	Chapter A
Objectives and Guiding Principles of Spatial Planning	Urban and Regional Planning
Chapter B	Part A1
Spatial planning tools	Basic concepts and structure of the spatial planning system
Chapter C	Part A2
Means of spatial planning	Strategic spatial planning
Chapter D	Part A3
Mechanisms for implementation, control and support of spatial planning	Regulatory spatial planning
Chapter E	Part A4
Administration and management of protected areas	Digitisation and electronic recording of institutional geospatial data - Codification of spatial and urban planning legislation
Chapter F	Part A5
Transitional Repealed and Final Provisions	Final Transitional and Repealed Provisions
	Chapter B
	Categories and Content of Land Uses

Table 1 - The structure of the two laws.
Source: Law 2742/1999, Law 4269/2014, Own elaboration.

The whole structure of L. 2742/1999 seems more mature when it comes to the urban planning process and reveals the integrated approach in that sector. The framework Law is the one that set the implementation mechanisms of spatial planning (Gourgiotis and Tsilimigkas, 2016). L. 4269/2014, though, is mostly aimed at reforming as a process, instead of preventing and then resolving accumulated problems. Chapter A is the core of the present law, as it points out the new integrated urban planning system of the country, which meets the modern needs, is responsible for remedying issues and conflicts between laws upon implementation of previous frameworks and aims at conserving the man-made, natural, residential and cultural environment, by avoiding further conflicts and overlapping of the different levels of planning. Chapter B attempts to update land uses mentioned in the P. D. of 23.02.1987, due to significant changes in modern lifestyles and new socioeconomic data.

It is useful that reference be made to the urban planning systems promoted by the two laws so that the reform and the changes made can be understood, emphasising though on a higher and strategic level. The lack of spatial planning over the years has led to a convoluted and unclear institutional framework. Whilst the smallest, in terms of land area, countries tend not to have many plans, Greece does, and in addition to that, the system reflexes are not of any help. L. 2742/1999 adopts a two-way harmonisation between spatial planning and developmental planning. It is characterised by a clearly more intense orientation in strategic planning, which is manifested in two ways; firstly, it covers issues such as the

international role that are of a horizontal nature, and secondly, it adopts a guiding attitude regarding sectoral issues (Economou, 2009).

In 2014 an attempt was made, through L. 4269/2014, to cover such weak spots by reducing the number of planning tools at every level. Strategic spatial planning features plans of an executive and guiding nature while master planning features plans of regulatory terms. At the same time, L. 4269/2014 relates spatial and urban planning both to the developmental planning of the country and to the guidelines and directives of the European Union, promoting three geographical levels and five planning categories. The comparison of the two Laws, regarding not only their structure but also their content, revealed some very important evidence referred to below.

4.1 STRENGTHS AND WEAKNESSES – SHORTCOMINGS

Assessing the basic spatial planning legislation (L. 2742/1999 and L. 4269/2014) and composing any policies that stem from it leads to useful observations concerning the shortcomings and weaknesses in spatial planning techniques and in the country's priorities.

Comparing, therefore, the two Laws, both positive and negative conclusions can be drawn. L. 2742/1999 has a time frame of fifteen years, while L. 4269/2014 includes both medium-term and long-term goals. Furthermore, an observation worth mentioning is that the former Law entails a spatial assessment of the present spatial planning state, which at least from a legal – technical viewpoint, has to be referred to only in its Explanatory Report. In contrast, L. 4269/2014 justifiably does not include this spatial assessment in its final version. The Law's strengths include the reduction of urban planning levels, their distinction into strategic and regulatory levels and the inclusion of specialised plans within the integrated spatial planning system as well as the quick amendments in certain plans. On the other hand, some significant deficiencies of the most recent Law are detected mostly in the area of the coordination and harmonisation between different leveled plans (vertical harmonisation) and same leveled ones (horizontal harmonisation) (Giannakourou, 2015). In general, the central mechanism used essentially to monitor the process of urban planning and the harmonisation of individual levels is absent here.

4.2 CRITICAL EVALUATION

4.2.1 GENERAL OBSERVATIONS

Overall, the question of whether and to what extent the new system has tackled the weaknesses of the previous one has not been adequately answered. The fact that it reduces the number of plans from seven to four in relation to the previous system is an advantage, time, however, is absolutely necessary for such reforms. Fortunately, quick amendments are provided for in certain plans. The flexibility in real estate development gives room for private investments that may act as a driving force of economic recovery. A proper attempt is being made to associate spatial planning with developmental planning, a fact that was missing from the already existing institutional texts on urban planning.

On the contrary, though, the essential and properly drawn up specifications were not issued in a timely manner. The ones issued until that time had several inconsistences and deficiences in terms of policy. Moreover, there is no content in the spatial planning levels and the relations between them are practically absent, as is the role played by the specific spatial and urban plans. In addition, there is a universal need to clarify the role and responsibilities of all those engaged in the spatial planning system, apart from the responsibilities to launch and approve plans. In any case, such deficiences in conjunction with the financial crisis imply the risk of non-implementation.

The new legislation introduces a concept in urban planning based on the top-down approach, something that could potentially cause serious problems to the spatial planning process and its effectiveness (Portokalidis & Zigouri, 2015). The Regional and Urban Reform is in need of a plan and system with specific objectives, axes and actions, mechanisms to monitor and evaluate findings, as well as the establishment of appropriate alliances at an institutional and socioeconomic level.

4.2.2 MORE SPECIFIC OBSERVATIONS

Regarding issues at a national level, the 'General Framework of Spatial Planning and Sustainable Development' is the one giving the priorities and strategies required for the integrated spatial development and sustainable planning of the national space, however, it is so general a plan that it lacks flexibility and speed. The new Law is estimated to set as a prerequisite the quantification of the National Spatial Policy's objectives and axes, while at the same time, the coordinating role that regional planning plays will have to be determined in relation to the national policies which have spatial impact. In other words, it will have to be predicted that this specific policy and the National Development Strategy should be mutually supportive and coordinated. At a regional level, a holistic approach to spatial planning is observed as the interactions from municipal developments are taken into account, thus simplifying the planning of said level.

5 URBAN PLANNING AMID CRISIS

Despite the lack of financial resources, the inaction, conservatism, the wait and see approach and the embarrassment in front of new challenges that the Greek reality faces, the recently adopted L. 4447/2016 'Spatial planning - Sustainable development' is expected to cope with them and make up for the weaknesses of the previous one. With a slightly different scope regarding the plans, it includes a forecast of the new sectoral policies concerning the conservation of the cultural landscape, the natural environment and the land policy. At the same time, the financial and national growth strategy and the community policies that influence the structure and growth of the national space are taken into account along with those about the environment and territorial cohesion. In addition, digital technologies for land use are exploited (Network Natura 2000, Forest maps, National Cadastre, Archaeological Cadastre) and a new geospatial database with an integrated reference to institutional texts and monitoring by the competent bodies, in order for projects and investments that are in progress or delayed due to possible conflicts and incompatibilities to disentagle. Generally, the new Law's urban planning system is characterised by an attempt to be more flexible in planning.

However, during the economic crisis, spatial planning is losing its executive nature in the name of growth. The question as for whom and depending on which goals the planning takes place remains, while another thing worth noticing is the large number of spatial regulations and provisions with a direct or indirect spatial impact in accordance with the managing of the financial crisis the Greek society is experiencing (Klabatsea, 2017). A shift, therefore, from the spatial expression of the crisis to its management through spatial planning has occurred. This is because overcoming the socioeconomic crisis was attempted with financial terms. Finally, there are fewer attempts towards safeguarding the public interest and an incompatibility between incentives in legislation and the results of regulations exists as well.

6 CONCLUSIONS

The challenges that the field is facing are immense. Owing to the various short-term as well as long-term prospects that are provided by spatial planning, the already existing natural and anthropogenic environment is very likely to become sustainable. It should be made clear that the challenges – changes mentioned above essentially relate to the structures and procedures of spatial planning.The short-term prospects involve the urban planning tools and more specifically the monitoring of Regional Plans, as this scale makes it easier for any changes and transformations to be perceived, so as to use feedback for this particular planning process through feedback itself. Collecting data from every Region may serve as input for determining criteria, based on which, the guidelines of the respective plans can be evaluated. The fact that urban planning is static could not be further from the truth. In fact, it has to have an immediate response to current needs. For instance, the fact that the new Partnership Agreement 2014 - 2020 contains several specific references that consider urban planning a prerequisite, means that every Ministry has to participate in a joint "spatial discussion" (Gourgiotis, 2015).

The long-term prospects, on the other hand, are mainly concerned with the more general structures of the urban planning system. The criteria to be established and the evaluation of the plans' guidelines may contribute to the production of certain monitoring indicators. These indicators will concern not only the quantitative characteristics of every spatial unit, such as employment figures or the per capita GDP, but also the qualitative ones, such as the state of the road network, always related to the spatial dimension.

Besides, there are also other policies, mainly European, such as the growth strategy called 'EUROPE 2020', which includes mandatory indicators. The construction of a database, which is essential to be renewed and updated on a regular basis, is a planning infrastructure that together with the completion of the national land registry will eliminate any rigidities of the system and accelerate the procedures. It is a sufficient and necessary condition, of course, in the long term that the institutional framework of spatial planning be, now, single and coded without any inconsistences and deficiencies. Only under this condition can the system be considered modernised and integrated.

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ID 1416 | MULTI-LEVEL CLIMATE GOVERNANCE IN GERMANY – THE OPPORTUNITIES AND CONSTRAINTS IN FORMAL AND INFORMAL INSTRUMENTS FROM A LEGAL PERSPECTIVE

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1 SETTING THE SCENE

Climate change is one of the most pressing societal challenges of our times. International climate governance is currently shifting from top-down and monocentric to bottom-up and polycentric governance structures with, inter alia, cities and local governments becoming increasingly visible and engaged actors. The research explores, from a legal perspective, multi-level and polycentric climate governance in Germany with a focus on formal and informal instruments of federal state ("Bundesland") and local level ("Städte und Gemeinden") climate action planning.

The paper, first, briefly depicts recent developments in the international climate change regime to show the current shift from mono- to polycentric climate governance structures (2). It then looks at the German system of climate governance and explores the key formal and informal instruments at national and federal state level for steering multi-level climate mitigation efforts (3). At the heart of the research, three local case studies highlight the manifold ways in which German cities are currently interlinked into polycentric climate governance, depending on how they mandatorily or voluntarily interact with vertical or horizontal climate governance axes (4). Building on these case studies, the formal and informal instruments developed at the different levels of the climate governance regime, their interrelationship, potential benefits and constraints are critically discussed with a view to effective climate mitigation action (5). Finally, conclusions are drawn and recommendations developed (6).

2 FROM MONO- TO POLYCENTRIC CLIMATE GOVERNANCE

The international climate change regime established with the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 1998 Kyoto Protocol with its first and second commitment period has the typical top-down and state-centric structure of a multilateral environmental agreement (MEA). The agreements are addressed only to states. The Kyoto Protocol defined clear emission reduction goals that were to be reached by states within a certain time period. State actors below the national level or non-state actors did not play any direct role in the legal and institutional framework set up by the original system. They only came into play indirectly via the state level and the use of certain instruments such as emissions trading or the Clean Development Mechanism fleshed out in national legislation.

This changed with the entry into force of the Paris Agreement (PA). In order to enable global commitments, the Paris Agreement turns the top-down approach of the Kyoto Protocol into a bottom-up approach. Under the Paris Agreement, parties agreed to the overall 2°C and 1.5°C goal (Art. 2 para. 1(a) PA)[1] and the general obligation to undertake and communicate "nationally determined contributions" (NDCs) (Art. 3 PA). They did not agree to state-specific emission reduction contributions in the form of quantified emission limitation or reduction commitments expressed in percentage terms in relation to the base year 1990 for the respective commitment periods. In general, the Paris Agreement leaves it up to the parties how they compose their NDCs without predefining a certain form, other than the requirement to provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 (Art. 4 para. 8 PA). Thus, NDCs submitted under the Paris Agreement differ quite significantly from one another. While some countries, for example Germany, "only" submitted a brief but clear emission

[1] According to Art. 2 para. 1(a) PA states agree to hold the "increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".

reduction target for a certain time period, others, for example China, explicitly referred to state actors below the national level and addressed their contributions[1].

Another indicator of the opening of the former monocentric international climate regime to sub-national levels of government and non-state actors is the wording of the preamble of the Paris Agreement. Here, states explicitly recognize "the importance of the engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change". While the legally binding text of the Paris Agreement does not assign rights and obligations to these actors, the Marrakech Partnership for Global Climate Action (MP) adopted by Parties to the Paris Agreement at COP 22 held in October 2016 further develops the institutional framework to include non-Party actors. With this step, the international climate regime arguably enters a new era in international law. The aim of this innovative step is twofold. On the one hand the Marrakech Partnership wants to catalyse and support climate action by Parties and non-Party stakeholders in the period from 2017-2020 (MP, p. 1). On the other hand, it aims to integrate the climate change mitigation and adaptation of a wide range of non-Party actors, including cities and other subnational authorities, and local communities (MP, p. 4), into a comprehensive and transparent management framework. For example, non-Party stakeholders participating in the Marrakech Partnership agree that their commitments are recorded on the UNFCCC Non-State Actor Zone for Climate Action (NAZCA) platform and that they regularly report on the implementation and progress towards those commitments (MP, p. 4).

Apart from the international climate regime, states also recognized the crucial role of cities in action on climate change mitigation in key documents of the global governance agenda such as the Sustainable Development Goals (SDGs) adopted in September 2015 and the New Urban Agenda adopted in October 2016 at the UN Habitat III Conference in Quito, Ecuador. For example, in SDG 11.b governments committed to "substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards (…) mitigation and adaptation to climate change, (…)". In the New Urban Agenda, governments committed "to promoting international, national, subnational, and local climate action including climate change adaptation and mitigation, and to supporting the efforts of cities and human settlements, their inhabitants and all local stakeholders as important implementers." (New Urban Agenda, para 79).

Furthermore, in addition to the opening of the international climate regime and the international political mandates adopted by states in the SDGs and the New Urban Agenda, cities themselves are increasingly engaging in international networks such as ICLEI – Local Governments for Sustainability, C40 Cities Climate Leadership Group or the Global Covenant of Mayors for Climate and Energy and voluntarily pledging to reduce their local greenhouse gas emissions.

These recent developments indicate an incremental shift from a top-down state-centric to a more bottom-up and polycentric international system of climate governance (Jordan et. al 2015). In line with Ostrom's assumption that complex societal problems with unknown solutions are best addressed by a variety of actors and overlapping policies at local, national and international levels (Ostrom 2012), this integration of non-Party stakeholders into a comprehensive management framework could turn out to be crucial for reaching the 2°C or even 1.5°C goal of the Paris Agreement. This paper focuses on German cities and municipalities as important actors in climate mitigation efforts and explores how they are embedded into the federal- and state-level legal and political framework of Germany.

3 CLIMATE GOVERNANCE IN GERMANY

Germany did not submit an individual NDC under the Paris Agreement but is bound via the NDC submitted by the European Union. This NDC states that the "EU and its Member States are committed to a binding target of at least a 40% domestic reduction in greenhouse gas emissions by 2030 compared to 1990, to be fulfilled jointly [...]." In Germany, the national government as well as sixteen federal states, including three city-states (Berlin, Bremen and Hamburg), are endowed with formal legislative power and develop laws and policies aiming at climate change mitigation.

[1] NDCs can be downloaded at http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx.

3.1 NATIONAL LEVEL

The key instrument currently steering national climate governance is the Climate Action Plan 2050, an informal policy instrument, adopted by the German cabinet on November 16, 2016 (CAP 2050). According to the CAP 2050, Germany aims to become basically greenhouse gas-neutral by 2050 (CAP 2050 at 2.4). In order to reach this goal, the federal government does not impose any specific emission reduction obligations on lower-level entities such as federal states ("Bundesländer") or municipalities. The CAP only refers to the importance of enhanced mitigation action at all levels, including the local level, in general (CAP at 4.3). It follows a sectoral and non-binding approach by setting out emission reduction targets for different sectors of industry to be reached by 2030 (CAP at 5). In line with this political guidance, regulation is also sectoral with, for example, laws on renewable energy production, emissions trading and energy efficiency. Although it has been the subject of some political and scientific debate about it (Rodi/Sina 2011), there is no climate protection law at the national level as an overall legally binding and thus formal instrument directing German climate mitigation efforts.

To date, national climate policies have only addressed German municipalities and cities via financial incentive programmes such as the National Climate Initiative (Nationale Klimaschutzinitiative). Municipalities can participate either in the funding programme of the "Municipality Guideline" (Kommunalrichtlinie) or the "Master Plan Guideline" (Masterplan-Richtlinie). The former – inter alia – provides funding for municipalities to establish integrated climate action plans; the latter supports more ambitious municipalities who commit themselves to two reduction goals: (1) reduction of their GHG emissions by 95% by 2050 and (2) reduction of their final energy by 50% compared to 1990 levels. The "Masterplan municipalities" (Masterplan-Kommunen) are financially supported in reaching these goals. So far, 41 German municipalities have voluntarily become "Masterplan municipalities", Frankfurt am Main and Stuttgart being those with the largest populations.

Thus, under the national legal and political framework, only those municipalities which have voluntarily chosen to become a member of one of the national government funding programmes have to fulfil the requirements of the respective programmes. All other German municipalities are free to plan or not plan, implement or not implement actions on climate change mitigation within the scope of local self-governance as provided for by article 28 (2) of the German constitution.

3.2 STATE LEVEL

In recent years, seven of Germany's federal states have enacted climate protection laws: Hamburg, North Rhine Westphalia, Baden-Württemberg, Rheinland-Pfalz, Bremen, Berlin and Schleswig-Holstein. These laws may be very broadly classified into three "generations", bearing in mind that also those that belong to one "generation" differ significantly in terms of specific regulations (Wickel 2015 and 2013). The climate protection law and the climate protection ordinance issued by Hamburg as early as 1997 and 2007 respectively may be referred to as "first generation" climate protection laws. They are not of a strategic nature but mainly concerned with specific energy saving and energy efficiency measures for buildings and installations (Schröer and Kullick 2012; Wickel 2015 and 2013). Neither the law nor the ordinance contains any state-wide emission reduction goals nor do they require the Hamburg government to enact a climate protection plan or regulate respective minimum content or procedural requirements. The "second generation" climate protection acts of North Rhine Westphalia (2013), Baden-Württemberg (2013) and Rheinland-Pfalz (2014) set an institutional and instrumental framework for strategic climate mitigation action at state-level. All three climate protection acts set emission reduction goals for the years 2020 and 2050, require the state government to enact a climate protection plan, provide guidance on its content, responsibilities and regular monitoring, establish an advisory committee to monitor and support the climate action plan and refer to the role model function of public authorities with, inter alia, specific goals and measures regarding state-owned buildings (Wickel 2013 and 2015).

The most recent climate protection acts have been issued in Bremen ("Bremisches Klimaschutz- und Energiegesetz" 2015), Berlin ("Berliner Energiewendegesetz" 2016) and Schleswig-Holstein ("Energiewende- und Klimaschutzgesetz Schleswig-Holstein" 2017). They contain all the elements of the strategic steering of climate mitigation and adaptation efforts of their "second generation" precedents (goal setting, climate protection plan, monitoring etc.), but go beyond this strategic level in providing for more specific instruments, for example, regarding local electricity and heat consumption and supply. Thus, they

might – broadly speaking – be referred to as “third generation” state-level climate protection acts. For the purpose of the analysis of multi-level relations in the German hierarchy of climate governance, the four state laws that explicitly address the level of municipalities or districts are examined below.

3.2.1 NORTH RHINE WESTPHALIA

The climate protection law of North Rhine Westphalia (CPL NRW) is the first and so far the only climate protection law not issued by a city-state that establishes a legally binding responsibility for climate mitigation action at municipal level. It requires all public authorities, including municipalities, to enact climate protection plans (§ 5 (1) CPL NRW). However, the actual obligation to do so, the time limit and more specific content requirements are dependent on a statutory instrument that the state government is empowered to issue. Municipalities have to provide for climate protection plans two years after the entry into force of such a statutory instrument (§ 5 (3) CPL NRW). Bearing in mind the outcome of the recent state elections in North Rhine Westphalia, it remains somewhat questionable whether this statutory instrument will be issued in the near future under the new conservative state government.

In addition to this specific procedural requirement, the climate protection law underlines the role model function of the public authorities in terms of climate protection and, more specifically, the lowering of local GHG emissions, expansion of renewable energy and adaptation efforts.

3.2.2 BREMEN

The city-state of Bremen consists of two municipalities (Bremen and Bremerhaven). Their climate mitigation activities are, in addition to a general reference to the role model function of municipalities (§ 7 CPL Bremen), addressed in four main ways via the Bremen climate protection law (CPL Bremen). Firstly, there is a general duty for the municipalities to take into account the goals and explicitly outlined strategies for action in their local decision-making (§ 2 (2) CPL Bremen). Secondly, the municipalities are required to issue and apply limitations on the energy consumption of newly built, renovated or newly rented public buildings within one year of the entry into force of the CPL Bremen. The law came into force 27 March 2015. Thirdly, both municipalities have to issue specific requirements for public procurement, e.g. cars, lighting, electrical equipment (§ 9 (1) CPL Bremen) and institute controls on the energy consumption of public buildings (§ 9 (3) CPL Bremen). Fourthly, the municipalities need to develop local urban planning concepts (“städtebauliche Konzepte”) with local goals and strategies for action on climate mitigation and adaptation. Such concepts are to be publicly available, reviewed every five years and contain information on specific measures in land use planning (“Bauleitplanung”) and urban development contracts (“städtebauliche Verträge”) (§ 13 (1) CPL Bremen). The local climate concepts shall specifically examine the scope for action with respect to the energy supply of new urban developments, the design and orientation of plots and rooftops for the production of renewable energies, construction of renewable energy plants, reduction in the energy consumption of buildings and adaptation measures (§ 13 (2) CPL Bremen).

3.2.3 BERLIN

The Berlin climate protection law (CPL Berlin) highlights the role model function of public authorities (§ 6 CPL Berlin) but contains several more specific requirements on the local level. It is important to note that the city-state of Berlin, unlike Bremen, is not divided further into municipalities. As in the city-state of Hamburg, the next level down is the administrative level of districts (“Bezirke”). The districts are explicitly addressed in § 9 of the Berlin climate protection law. It states that in general districts are free to fulfil their role model function under their own discretionary scope for action. However, they are required to produce their own energy balances and carbon emission inventories, enact goals for carbon emission reductions and provide for statements regarding energy savings in district-owned buildings (§ 9 (1) CPL Berlin). Upon request, districts need to report to the senate administration on the accomplishment of the reduction goals set (§ 9 (2) CPL Berlin). The only other specific obligation on the district level is regulated in § 16 CPL Berlin. According to this, district administrations need to examine their buildings with a view to the use of renewable energies, revamp roofs of suitable buildings in cases of renovation to enable the use of solar energy for electricity and heating, and actually use such rooftops of public buildings for the production of

solar power and heat (§ 16 (2), (3), (4) CPL Berlin). Furthermore, at state-level renovation strategies and energy management for buildings are to be established to include buildings belonging to the district administration (§ 8 CPL Berlin).

3.2.4 COMPARISON

The following table summarizes the responsibilities of municipalities and districts established via state-level regulation. The overview shows that state-level regulation has two main foci: one is to require and broadly guide the strategic planning of climate mitigation efforts at the local level and the other one is to oblige municipalities and districts to establish certain standards or management procedures in areas within their remit, such as public buildings and procurement. None of the state laws requires the local level to reach certain carbon emission reduction goals. Requirements in strategic planning are limited to procedural and thematic substantive guidance. In Nordrhein-Westfalen much will depend on the content of the statutory instrument that still needs to be enacted.

	NRW	Bremen	Berlin
Strategic Planning Instrument	CAP	Urban planning concepts	-
Content of strategic planning instrument	To be specified in statutory instrument	Local goals and strategies Specific measures in land use planning and urban development contracts Examine specific scopes for action (RE plants, energy supply of new developments, etc.)	-
Process	tbd	Reviewed every 5 years	-
Transparency	tbd	Publicly available	-
Target setting	in CAP	In urban planning concepts	Goals for carbon emission reduction
Monitoring	tbd	5-year review	Energy balances Carbon emission inventories
Reporting	tbd	Review publicly available	To senate administration upon request on progress towards goals
State – local relationship	tbd	Take higher level goals and strategies into account in local decision-making	-
Role model function	yes	yes	yes
Public buildings	tbd	Limit energy demand of public buildings Institute controls on energy consumption of public buildings	Statements regarding energy savings Examine and eventually use roofs of public buildings for solar energy production (Renovation strategies

			and energy management at state level)
Public procurement	tbd	Issue specific requirements, e.g. re cars, lighting, electrical equipment	-

Table 1 – Synopsis of the responsibilities of municipalities and districts established via state regulation

4 LOCAL CASE STUDIES

This section of the paper discusses case studies from the city-state of Hamburg, the city of Frankfurt – located in the federal state of Hessen without a climate protection law but voluntarily participating in the ambitious "Master Plan Guideline" programme – and the city of Cologne – situated within the jurisdiction of North Rhine Westphalia in order to provide examples of the different forms in which German cities can be interlinked into the multi-level web of climate governance. The case studies serve as a basis for the next chapter's more in-depth discussion of the strengths and weaknesses of different forms in terms of the design of multi-level climate governance.

Before outlining the specific instruments developed to steer climate mitigation action down to or up from the local level, it is important to note the immense relevance of local, especially city-level, action. In 2005, approximately 75% of global energy flows were consumed in cities (Swilling et al. 2013). About half of the world's population already lives in cities and this number is expected to rise to about two thirds by 2050 (UN DESA 2015). The share of energy consumption in cities and thus cities' relevance for climate change mitigation action will continue to rise. Consequently, it becomes more and more important to include cities in reliable, strategic climate mitigation action and equip them with instruments, institutions and ideally also financial support that enable them to effectively contribute to GHG emission reductions.

In general, cities and other municipalities in Germany have a constitutionally enshrined right to local self-government ("Recht der kommunalen Selbstverwaltung", article 28 (2) of the German constitution). Based on this right they can regulate and manage local affairs under their own responsibility within the limits of the law, for example via municipal ordinances and the spending of locally raised taxes. Within this scope for action many German municipalities have voluntarily enacted local climate action plans to strategically steer their climate mitigation efforts (Kahl/Schmidtchen 2013: 342). However, German and European-wide studies show a lack of mechanisms that ensure that targets are met (Sippel 2011, Bulkeley et al. 2011).

4.1 HAMBURG

With 1.7 million inhabitants Hamburg is the second largest city in Germany and the eighth largest city in the European Union. Per capita carbon emissions currently amount to 10.2 tonnes CO2/year (Hamburg Climate Plan 2015, p. 7). The city-state of Hamburg is free to voluntarily steer its climate mitigation efforts. It is not bound by any substantive or procedural international or national regulations, for example, to meet specific reduction targets, apply certain methodologies in its GHG inventory, report to anyone setbacks or progress in its mitigation efforts, or include citizens or public authorities in its climate action planning.

Voluntarily, Hamburg has been a member of two city networks, the European Climate Alliance since 1993 and the Covenant of Mayors for Climate and Energy since 2008. It reports its carbon emission data and reduction targets to the CDP (formerly Carbon Disclosure Project) and NAZCA (Non-State Actor Zone for Climate Action) established under the Paris Agreement.

The State Parliament of Hamburg adopted its most recent Hamburg Climate Plan (Hamburger Klimaplan, Drs. 21/2521) in December 2015. The key overall targets of the Hamburg Climate Plan are to halve CO2 emissions by 2030, reach a CO2 emission reduction of at least 80% by 2050 compared to 1990 levels, and – maintaining a quantitative target – reduce CO2 emissions by almost 2 million tonnes by 2020. Per capita carbon emission reduction targets are 9 t CO2 per capita by 2020, 6 t by 2030 and 2 t by 2050 (ibid. p. 7). The Hamburg Climate Plan puts in place a transformative process divided into so-called adaptive management cycles (ibid. p. 10) and thematically focused on the following four aggregated strategic

clusters with cluster-specific goals: the transformation of urban spaces, the green economy, the city as a role model and climate communication (ibid. p. 11). For example, a sub-goal of the cluster “the city as a role model” is that the Hamburg state administration becomes climate neutral by 2030 (ibid. p. 15).

To coordinate and steer action on climate change mitigation and adaptation, the city created the Hamburg Coordination Centre for Climate Issues (Leitstelle Klimaschutz) (ibid. p. 8). This body is also responsible for the control of measures and financial flows, as well as CO2 monitoring. Control and monitoring is a major element of the Hamburg Climate Action Plan and builds on a project-focused “bottom-up” method (ibid. p. 73 f.). Annexes 1 and 2 of the plan list 175 specific measures, the associated annual financial expenditure, measure-specific reduction targets for the year 2020 and the annual reductions achieved in 2013 and 2014.

The interim results of the monitoring process show for the year 2013 an overall CO2 emission reduction of 14.3% compared to the base year 1990, per capita CO2 emission reduction of 13.5% compared to the base year 2003, as well as a CO2-intensity reduction per unit of GDP of 28.4% compared to the 2003 level (ibid. p. 78).

4.2 FRANKFURT AM MAIN

With 730,000 inhabitants Frankfurt am Main is the fifth biggest city in Germany. Per capita carbon emissions in 2010 were 9.65 tonnes CO2 (Frankfurt Green City). Frankfurt voluntarily joined the national funding programme of the “Master Plan Guideline” (Masterplan-Richtlinie) and since 2013 has developed its “Masterplan 100% Climate Protection” issued in 2016. As a “Masterplan Municipality” the city committed to (1) reducing its GHG emissions by 95% by 2050 and (2) reducing its final energy consumption by 50% compared to 1990 levels. Participating in this funding scheme also involves putting in place a strategic planning instrument such as the “Masterplan 100% Climate Protection” to reliably steer the process required in order to reach the reduction targets and specific requirements regarding, inter alia, control and monitoring, participation and external review by an advisory board.

Frankfurt is member of the city networks German Climate Alliance and the Covenant of Mayors for Climate and Energy and it reports its carbon emission data and reduction targets to NAZCA established under the Paris Agreement.

The Frankfurt Masterplan 100% Climate Protection starts with a status quo description of final energy consumption in Frankfurt for the different sectors of electricity, heating and transport and respective subcategories (Chapter 2). In the following chapters it discusses the reduction potential in these different sectors and subcategories via energy saving measures and the use of renewable energies (Chapters 3-5). Chapter 6 highlights opportunities in the redirection of financial expenditure in the energy sector. Chapter 7 develops sector-specific scenarios (reference scenarios and measure scenarios) for electricity, heating and transport and concludes with scenarios and recommendations for covering 100% of the energy demand in 2050 by means of renewable energies. All in all, the feasibility study shows that it is possible to reach the ambitious goals for 2050.

The main coordinating body for action on climate change mitigation in the City of Frankfurt is the department of energy. A detailed table available on the department’s website lists all resolutions adopted by the city council since 2006 in the field of energy and climate policies.

4.3 COLOGNE

The city of Cologne is located in the federal state of North Rhine Westphalia and with about 1 million inhabitants is the fourth biggest city in Germany. Cologne has been a voluntary member of the European Climate Alliance since 1992 and a member of the Covenant of Mayors for Climate and Energy since 2008. The city derives its carbon emission reduction targets from the goals involved in membership of these city networks. Members of the Climate Alliance work, inter alia, towards reducing their CO2 emissions by 50% by 2030 compared to the base year 1990. Key commitments for members of the Covenant of Mayors at the time Cologne joined were an increase in energy efficiency by 20%, an increase in renewable energies in the energy mix by 20% and a 20% reduction in carbon emissions by 2020 compared to 1990 levels (City

of Cologne). Members of the Covenant of Mayors also committed to establishing a carbon or GHG emission inventory, instruments for strategic steering towards reaching the above targets and reporting (Covenant of Mayors for Climate and Energy). Cologne reports its carbon emission data and reduction targets to NAZCA established under the Paris Agreement.

As a municipality of North Rhine Westphalia, the city of Cologne is bound by the regulations issued under the Climate Protection Law of the state. Thus, according to article 5 CPL NRW the city will be obliged to enact a climate protection plan with the specific content requirements as soon as the state has issued the relevant statutory instrument. Currently, the key strategic planning instruments in the field of climate mitigation action are the 2012 Integrated Climate Protection Concept (Integriertes Klimaschutzkonzept) with its two main parts related to energy and transport and the 2014 Program of Climate Protection Measures (Klimaschutzmaßnahmenprogramm). The Integrated Climate Protection Concept focused on energy begins with a stocktake of the energy and carbon balance for the year 2008 (chapter 2), discusses the potential of energy saving measures (chapter 3), develops energy and carbon scenarios for 2020, addresses participation in the development of specific measures to reach the targets (chapter 5), develops a programme of measures (chapter 6), tracing of its effects (chapter 7) and its embedding in networking and public relations concepts (chapter 8). The Integrated Climate Protection Concept focused on transport builds on a stocktake for the year 2006 (chapter 5), develops a reference and a climate protection scenario (chapters 6 and 7), depicts specific climate protection measures in the transport sector including guidance for their implementation (chapters 8 – 15). Chapter 16 is dedicated to controlling and monitoring the effectiveness of the proposed measures in the transport sector. Building on the findings in both parts of the Integrated Climate Protection Concept (energy and transport), the city council adopted a resolution with 13 priority measures in 2014.

5 DISCUSSION OF INSTRUMENTS

The three local case studies highlight the manifold ways in which German cities are currently interlinked into polycentric climate governance depending on how they mandatorily or voluntarily interact with vertical or horizontal climate governance axes. All three cities voluntarily participate in the European city network Climate Alliance and in the international city network Covenant of Mayors for Climate and Energy. These voluntary memberships involve certain requirements for GHG or carbon emission reduction targets and strategic planning towards reaching such targets. Via the Covenant of Mayors for Climate and Energy, all three cities report to the Non-State Actor Zone for Climate Action (NAZCA) established under the Paris Agreement and strengthened through the 2016 Marrakech Partnership. Thus, with respect to the international level it is evident that voluntary mitigation efforts by cities organized in city networks are increasingly visible and start to be integrated into the formal international climate regime established under the Paris Agreement.

In the absence of any obligatory national regulation of municipal climate mitigation action, Hamburg and Cologne, just as the vast majority of German municipalities, freely decide upon their mitigation efforts and steering of these under their right to local self-government enshrined in the German constitution. Frankfurt am Main voluntarily participates in the funding program of the Masterplan-Guideline and is thus subject to the ambitious 2050 reduction targets and strategic planning requirements set by the funding programme. The German national legal framework thus refrains from setting any obligatory minimum requirements regarding municipal climate action planning and – more specifically, inter alia – targets, process, content, instruments, methodologies, participation and transparency. So far it focuses on financial and procedural support for the highly ambitious targets of the 41 German municipalities.

At state level only Nordrhein-Westfalen and the city-state of Bremen require their municipalities to enact climate action plans via their climate protection laws. However, with respect to Nordrhein-Westfalen deadlines and content depend on a statutory instrument that still needs to be issued. Bremen has the most detailed requirements for strategic climate mitigation action in its two municipalities including target setting, minimum content requirements and a publicly accessible five-year review. In the city-state of Berlin, districts have to set emission reduction targets, put in place energy balances and carbon emission inventories and upon request report to the senate administration on progress. Hamburg was the first German state with a climate protection law but it is focused on specific energy saving and efficiency measures for buildings and installations and does not require any strategic planning. It can be observed

that at state level there is a tendency in the newer climate protection laws to include regulation on strategic steering of climate mitigation action at the municipal level.

Thus, climate action planning at city level derives its framework from different axes. In Hamburg the process is internally steered, goals and content have been decided upon politically, administratively and with public participation bearing in mind the requirements of the city networks. Special efforts have been made with regard to monitoring and control. With the support of the Wuppertal Institute, the city developed a bottom-up process to trace in a measure-specific way which goals could be reached at what cost. The process of climate mitigation efforts in Frankfurt builds on an ambitious history and is in its recent form framed via the requirements of the national funding programme of the Masterplan-Guideline. With the scientific support of, among others, the Fraunhofer Institutes IBP and ISE, the city developed sector-specific strategies to reach the 2050 emission reduction goals set by the funding programme. The city of Cologne derives its carbon emission reduction targets via membership of the Climate Alliance and the Covenant of Mayors for Climate and Energy. The current 2012 Integrated Climate Protection Concept encompasses measures tailored to the energy and transport sectors. In the future, as soon as the relevant statutory instrument is in force, this strategic planning instrument will have to fulfil the requirements set by state regulation based on article 5 of the NRW CPL. Other formal requirements of strategic climate mitigation planning only exist for the municipalities of Bremen and for districts in Berlin. The city-level climate action plans as such are in all cases informal planning instruments with no legally binding effect and no formal requirements regarding procedure, participation and transparency.

		Hamburg	Frankfurt am Main	Cologne
International	Marrakech Partnership	via NAZCA	via NAZCA	via NAZCA
	City Network	Climate Alliance Covenant of Mayors for Climate & Energy	Climate Alliance Covenant of Mayors for Climate & Energy	Climate Alliance Covenant of Mayors for Climate & Energy
	Requirements	Targets and Process	Targets and Process	Targets and Process
	Reporting	CDP & NAZCA	NAZCA	NAZCA
National	National	-	Masterplan-Guideline 2012-2016	-
	Requirements	-	2050 Targets and Process	-
State	Regulation	HHKlSchG and VO	-	NRW CPL
	Requirements	No strategic planning requirements Specific energy saving and efficiency measures for buildings and installations	-	Climate Action Plan (Process and content to be specified)
Local	Climate Action Plan	2015 Hamburg Climate Plan	2016 Masterplan 100% Climate Protection	2012 Integrated Climate Protection Concept
	Targets	2050 and interim goals	2050 and interim goals	2020 and interim goals
	Content	Strategies and 175 specific measures to reach own 2050 and interim goals	Strategies to reach 2050 targets of Masterplan-Guideline	Strategies and specific measures to reach 2020 targets derived from city network membership Different parts for energy and transport
	Monitoring	Measure-specific bottom-up methodology	yes	yes
	Participation	yes	yes	yes
	Coordination	Coordination Centre for Climate Issues	Department of Energy	Coordination Centre for Climate Protection

Table 2 – Synopsis of case studies in polycentric climate governance axis

6 CONCLUSIONS AND OUTLOOK

The research has shown a growing web of polycentric climate governance structures, with cities becoming increasingly engaged and visible actors. Currently, cities and other German municipalities interact with the climate governance regime mainly via informal steering instruments. However, recent developments such as the Marrakech Partnership and the state-level climate protection laws of three German states show a tendency towards increasing formalization. It is too early to assess whether or in how far a formalization of local level climate mitigation efforts is beneficial to support cities in their climate action planning and turn them into reliable partners for international polycentric climate governance, with a view to reaching the overall 1.5 or 2.0 degree goal of the Paris Agreement. The state and city-level laboratories of strategic planning show a rich variety of target setting, development of sector specific strategies, assessment, monitoring, participation and transparency and much potential for the exchange of experiences, more in-depth scientific review and incremental strengthening of reliable bottom-up climate mitigation efforts.

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ID 1438 | INSTITUTIONAL INNOVATION OF URBAN REGENERATION IN CHINA: A COMPARATIVE STUDY OF GUANGZHOU, SHENZHEN AND SHANGHAI

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1 PLANNING TRANSFORMATION TOWARD REGENERATION PLANNING AND SUSTAINABLE DEVELOPMENT IN CHINA

China`s 30 years` urbanization progress and economic growth is complicatedly interweaved with land developing policy changes featured by distinctive state-led governance (Tian, Ma, 2009). Land is not only a simple container of production for growth, but also one of the most effective financing approaches for the governments with monopolistic power to get money and fund urban development (Fan et al., 2016; He et al., 2014; Figure 1). Accompanied by the worldwide greatest population mobility from rural to cities (247 million in 2015) and the rapidest urbanization growth from 26.9% to 52.7% (Figure 2), the years from 1991 to 2012 has witnessed increasingly land expansion from 2.08×104 km2 to 4.57×104 km2, which is criticized as “expanding land urbanization ignoring quality”. (Wang et al., 2014; Yang et al., 2016; Ong, 2014; China's floating population report 2016).

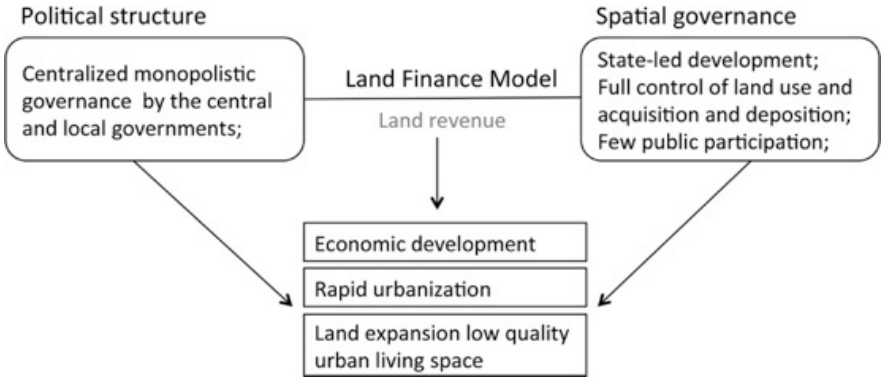


Figure 1 Logic of governance, land developing and economic development during China`s reform stage

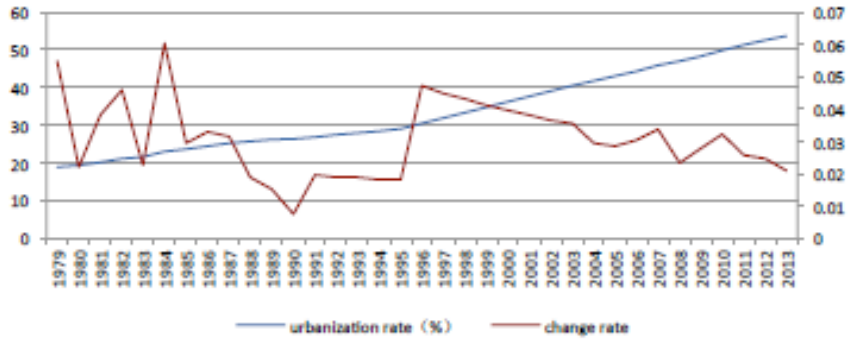


Figure 2 Urbanization and its changing rate Data source: Chinese Year Statistic Book calculated by author

This economic miracle based on land developing is exciting, quite similar to European reconstruction booming up after WWII and the urbanization marvels in other East Asian countries (World bank, 2014). However, many studies have criticized it for “draining the pond to catch the fish”, consuming too much land and creating widely distributed ghost cities. From a more profound perspective, it undermined problems such as vast public finance debt and barriers for economic shift from industry to services; the entire national economy seems “kidnapped” by the real estate market (Cai, 2017; Zhu, 2013). In response to this situation, China has been forced to revise its spatial strategies, veering towards a quality-oriented urban regeneration featured by lower growth rate, high emphasis on sustainability and formalization of institutional arrangements. In this new phase featured by the “new normal” economy, urban planning embodies a focus on structural change from expansion planning to regeneration planning by limiting horizontal urban sprawl and improving environment sustainability.

2 GENERAL DILEMMAS IN CHINESE URBAN REGENERATION

However, the space-time compression of rural-to-urban migration, industrial upgrading and urban sprawl makes Chinese urban regeneration suffer from variou dilemmas like complicated property rights, lack of legal approaches for regulatory plan adjustment, and long-term informal land transactions (Hao et al., 2011; Zou, 2014; Feng, Tang, 2013), in addition to the endogenous difficulties in finance balance and consensus reaching related to multiple stakeholders (Roberts et al., 2016; Gomez, 1998; Thomson et al., 2006).

1. omplicated Land ownerships. Normally, for a developed land that is waiting for regeneration, private, collective (legal and illegal) and state-owned property ownerships formed in different historical periods always overlaped together, especially in the fringe of sprawling metropolitan area, which makes any redevelopment action very hard to put into practice. Moreover, since there are plenty of illegal settlements in urban and rural areas resulting from the contradiction between social housing shortage and massive labor migration (Ding, 2003; Liu, Zhang, 2015), urban regenarion is even a harder issue to deal with.

2. Restrictions in Land subdivision and land-use change. In term of dividing or merging developed lands for better reuse, as legislation for regeneration didn`t receive serious consideration until the first decade in 21st century, the formal approach is explored for a long period, while some gratuitous lands have been transacted illegally under table. Due to the lease term constraint, no stakeholders could sell or divide the original property for better use, not to say upgrade and change the land use flexibly. The positive evolvement and upgrading of lands is obviously hampered.

Faced with these institutional deficiencies (Figure 3), a wave of institutional innovations ranging from governance, legislation, to planning has been set up in recent years, which implies great shifting of regenaration institutionalization. The paper tries to systemically underline these formalized institutional arrangements in three leading Chinese cities of Shanghai, Shenzhen and Guangzhou that have initiated a pioneering and influential institutional innovation of urban regeneration in recent years. It analyzes their institutional reform from the governance and planning-making aspects, so as to the performance

evaluations to explore whether the policies are of high problem-solving capacity in vivid public sphere rather than expressions on paper (Nicholls, 2005; Zimmermann, 2015; Buser, 2013; Smith, 2013). It can provides a broad view on Chinese urban generation to help us enhance the our understanding of decision mechanism and power balancing mechanism in current China.

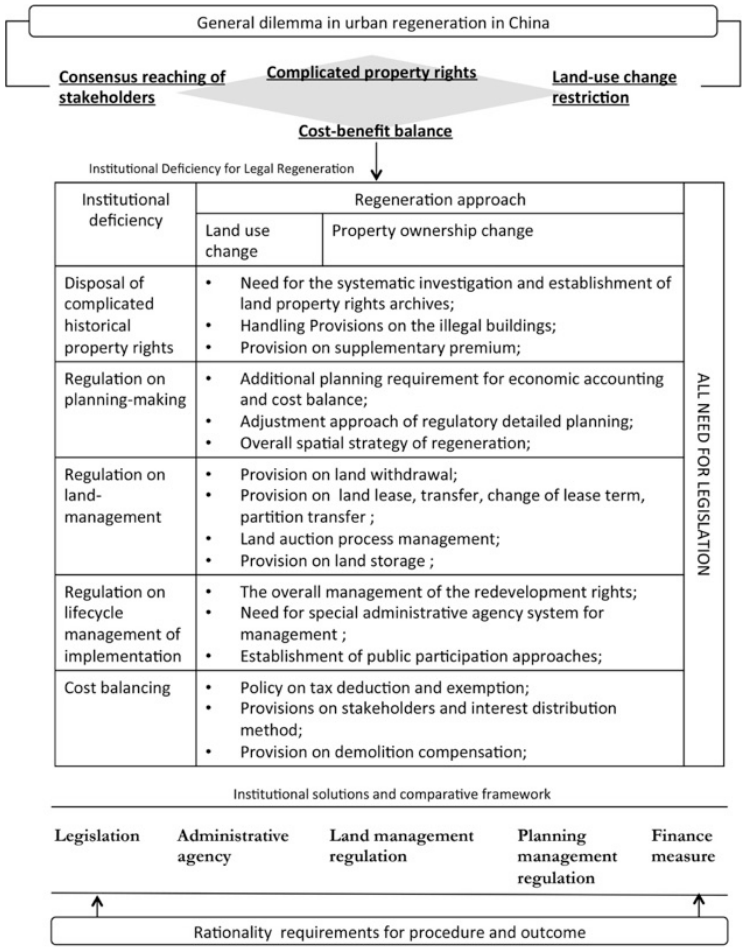


Figure 3 Dilemma, institutional deficiencies and solutions

The research is based on comprehensive understanding of the policy documents and field investigations. In the following chapters, it will firstly build a comparative analysis framework, and then goes into the deep analysis of the regenerations in Guangzhou, Shenzhen, and Shanghai. Different institutional arrangements are concluded afterward. The last section proposes some concluding remarks and suggestions for further regeneration in China.

3 INSTITUTIONAL INNOVATION OF URBAN REGENERATION IN THREE CHINESE METROPOLISES OF GUANGZHOU SHENZHEN AND SHANGHAI

3.1 COMPARATIVE FRAMEWORK

The characters of regeneration institutional arrangement is reflected from two folds, governance and planning management. In aspect of governance, administrative agency structure and legislation system sever as the foundation for performance, while other detailed management measures during the whole process also make difference to the outcome. And in the vein of planning management, new regulations involved in land use management and plan adjustment, are created by the government to deal with emerging problems in redevelopment, which is distinguished from previous new town plan. In consideration of its complexity, an analysis framework is built up as Figure 4. After direct analysis on

institutional innovation, the evaluation from aspects of legitimacy, outcome effectiveness and sustainability is also carried out.

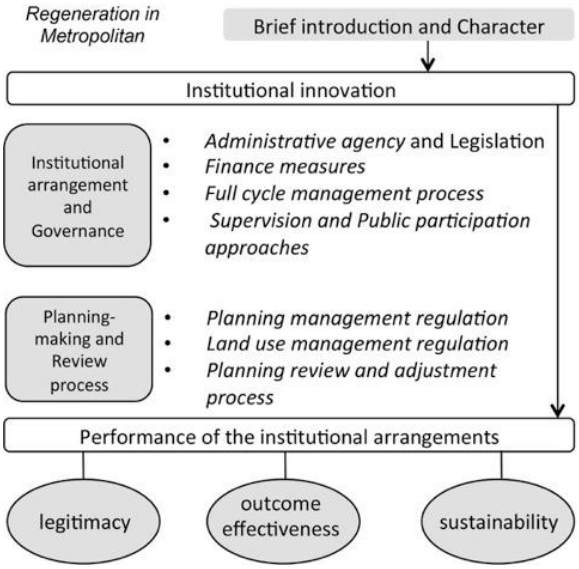
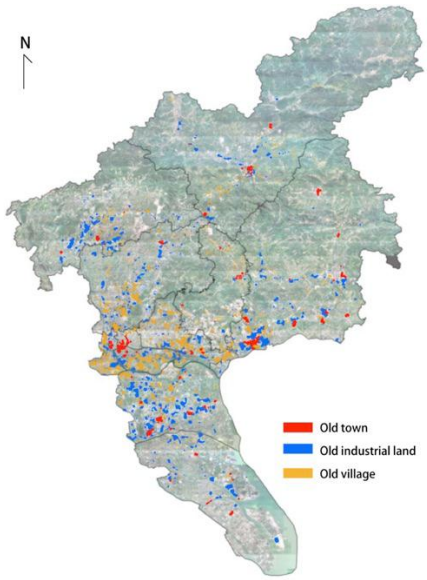


Figure 4 Analysis framework for regeneration in Metropolis

3.2 URBAN REGENERATION IN GUANGZHOU: GOVERNMENTORIENTED

In Guangzhou, regeneration is called as “Three Olds” redevelopment[1] formulated since 2008, comprising three categories of old town, old village, and old industry area (Altrock, Schoon, 2013; Figure 5).



There are generally two modes of regenerations, the comprehensive approach (demolition-reconstruction) applied for the areas in need of overall upgrading and improvement, and small-plot generation (wei gaizao) which improves the public infrastructure and spatial qulity in a small area. The total area for regeneration is up to 358.66 km2, 11,182 parcels (according to the statistics of Guangzhou renewal Bureau). By July 2016, the overall completion rate is up to 10.9% (old village 14.6%; old industry land 9.6%). Regeneration in Guangzhou startes from market-oriented but transfers to goverment-oriented gradually by policy revision.

Figure 5 Distribution of Three Olds lands for regeneration in Guangzhou
Source: Map database for Three Olds until December 2014, Guangzhou Urban Renewal Bureau

3.2.1 INSTITUTIONAL ARRANGEMENT AND GOVERNANCE

(1) ADMINISTRATIVE AGENCY STRUCTURE AND LEGISLATION SYSTEM

In order to effectively manage the urban regeneration projects, Guangzhou established the Guangzhou Urban Renewal Bureau in 2015, which is the first urban regenaration bureau across national wide.

[1] In Dec 2008, Chinese Ministry of Land and Resources together with Guangdong Provincial Government list Guangdong Province as the trial districts of intensive land development, and endowed cities in uangdong with legislative, policymaking power for “Three Olds”.

Urban Renewal Bureau serves as the core institution, led by the political leading group, in conjunction with other sub-district governments, systematically responsible for the regeneration management, including project declaration, regulation and policy making, and provision release, so as to coordination of involved departments. It's completely independent from Urban-rural Planning and Land Resource Bureau.

Until now, Guangzhou has released more than 20 regeneration-related policies and regulations, but no legislation yet. Among these documents, three core regulations are known simply as No.56, No.20, and "1+3" policy[1], which stipulates the specific requirements about stakeholders, planning, land auction and storage, cost-balancing measures. They settle the foundation for the institutional framework. No.56 documents was released in the first place, it gave great freedom to the developers to lead the regeneration projects, while the government served as a supervisor. During this period, the process of regeneration was very fast, because the construction need of public facilities had not been emphasized, reducing the cost of redevelopment. What`s more, when the land owners realized that regeneartion would create huge value-added benefits, they began to add rooftop extensions to obtain more compensations. Spatial mannagement of regeneration became even more difficult with no strict monitoring. Considering these phenomenon, government decided to take back the leading power of regeneration by No.20, emphasizing more on public interests, facilities construction and land storage. While the 1+3 policy is more refined, obtaining experiences and lessons from the previous regeneration management, but for developers, it also more rigorous. Detailed variations from No.56 to the current policy indicates governance trend to a more strengthen state-led control with fine measurements, strictly restricting the market behaviours (Figure 6).

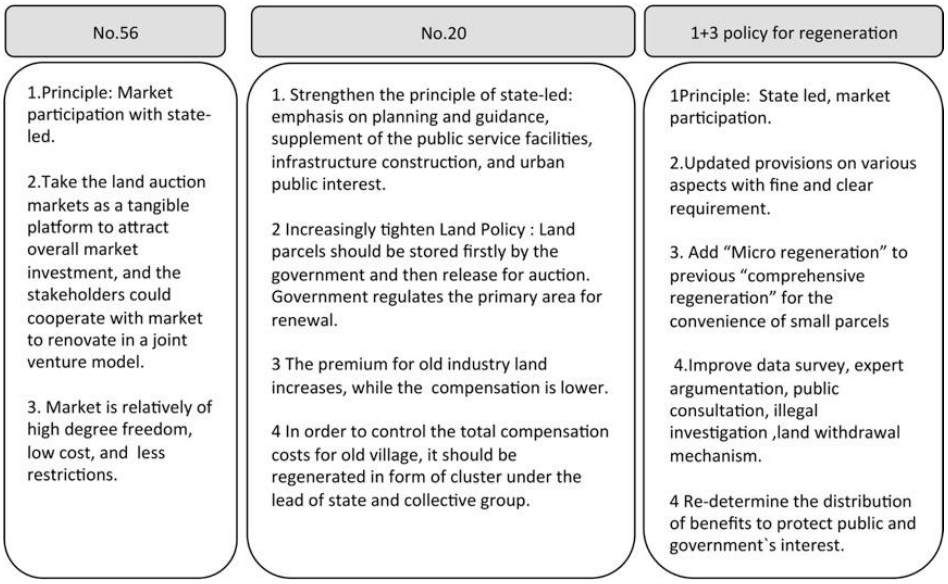


Figure 6 Outline and variation in between No.56, No.20, and 1+3 policy

(2) FINANCE MEASURES

Measurements on cost balancing reflect governance tendentious of government-market cooperation. In Guangzhou, public facility improvement, old town refurbishing, and historical area regeneration is financed by the local public finance. The land leasing incomes are used to cover the cost of land expropriation, acquisition and storage, as well as the subsidies for the encouraged industry and hard-tobalanced projects. By contrast, for old industry land and collective old villages, with value-added potential and strong regenaration initiative, are financed by the market investments and involved self-regenerated stakeholders. Following to the principle of "state-led, market operation, public participation and win-win", governments encourages innovative financing methods by market mechanism, they try to drive more enterprises and social force to participate in urban regeneration, solving financial bottleneck by a cooperative Public-Private Partnership, for exemple, creative mortgage loan, innovative credit financial products.

[1] No.56: Opinions on accelerating the transformation of the 'Three Olds' (Guangzhou government (2009) No. 56); No.20: Supplement for opinions on accelerating the transformation of the 'Three Olds' (Guangzhou government (2012) No. 20); 1+3 policy: Guangzhou urban regeneration policy: overall requirement, requirement for old village, requirement for old industrial land and requirement for old town (2015.11)

(3) FULL CYCLE MANAGEMENT PROCESS

Urban Renewal Bureau will lead the boundary delineation of regeneration priority areas, like historical area, land for public space and service facility, industrial upgrading area. The lower-level district governments could also investigate the need for improvement in its jurisdiction and submit proposal for priority areas in advance. After collecting suggestions from other departments and approved by the top leading group, Urban Renewal Bureau formulates an annual regeneration plan, as well as implementation and financing plan. This plan should go through expert evaluation, public consultation, and then be released to the sub-district governments for implementation. It should be underlined that the public consultation requires a stakeholder-agreement ratio higher than 80% (Old town 90%), otherwise, the parcel cannot be listed in priority regeneration area. Annual regeneration plan serves as an outline, while the local governments then make a detailed planning for the parcels. After a successful second round consultation process among the involved stakeholders (more than 80% or 2/3), the detailed planning will be again submitted and reviewed to check whether it comply with the overall urban development strategies by Urban Renewal Bureau and the leading group. The government also propose a prior data supervision process, if the submitted plan is deviated from the prior data more than 5%; the related subjects have to explain for the reasons. While public consultation committee, villagers' consultation committee and expert consultation is applied accordingly.

3.2.2 PLAN-MAKING AND REVIEW PROCESS

(1) PLANNING MANAGEMENT REGULATION

Guangzhou government creates a "1+3+N plan system" for overall planning management. The main purpose is to determine the principles and goals of "Three Olds" regeneration, besides, detailed spatial guideline, for example, regeneration types, methods, function upgrading direction, development intensity control, facility needs, key areas for historical and cultural protection, are all included. In general, it tries to lead a Transit Oriented Development, optimizing the land use structure through the redevelopment process.

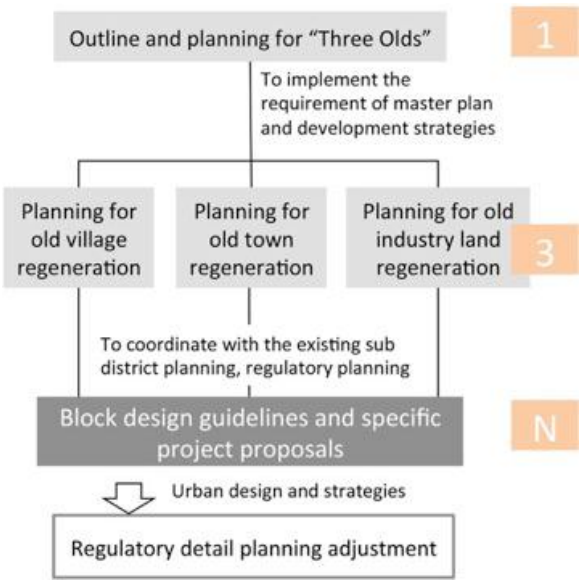


Figure 7 1+3+N planning framework

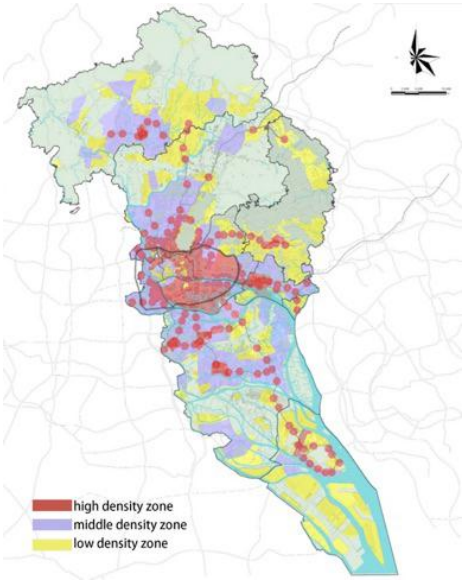


Figure 8 Density zoning according to the distance to subway and business zone
Source: planning for "Three Old" regeneration in Guangzhou (2010-2020)

(2) LAND USE MANAGEMENT REGULATION

Land use and property is the most troublesome issue. The set up of regulations on land use management is a slow but progressive process since 2008. The first issue is definning and confirming the fuzzy properties. Urban Renewal Bureau organized the sub district government to carry out detailed investigation of regeneration lands, such as household, population, historical architecture, property ownership, thus building a completed and clear status quo database of lands. For the old village, the collective economic organization or its successor should take the responsibility of clearing the land ownership and demolition of illegal buildings. If the old village is supposed to be transfered into industry or commercial land, it can hand over part of collective lands to the government, to be free from land property clean up. For the industry lands under illegal transaction, current owners could not propose regeneration until they achieve legal property right and pay for the fine.

While land supply has undergone a shift change after No.20 policy. Before No.20, the markets could transact lands directly with the stakeholders by negotiation, but afterward all the state-owned lands should be firstly stored by the government, and then bid in a unique land market. Collective-owned lands may choose to keep the ownership or transfer to state-owned lands, the latter one could sell tenure to markets, or be redeveloped cooperatively by village collective economic organization and developers. If one parcel land involves with multiple property ownership, it should be summarized as one subject representing for all, realized by signing a group legal contract or share value evaluation. In addition, lands inside and outside the regeneration boundary are equally displaced in the principle of voluntary.

3.2.3 PERFORMANCE OF THE INSTITUTIONAL ARRANGEMENTS

By the above flexible and comprehensive arrangements, formal and legal approach for regeneration is realized in Guangzhou. Its regulation system is based on the clarity of original fuzzy property rights, providing possibilities for different kinds of transaction approaches comply with the existing planning framework. However, in the exploration stage, the policy changes very quickly and it still cannot be confirmed as a rigid legislation. In response to the changing policy, outcome effectiveness shows different features taking No.20 document as a turning point. The first stage before No.20 is featured by rapid redevelopment with high market participation enthusiasm, and lots of invests entered into regeneration. Developers firstly choose the lands with clear property right which are easy access to redevelopment, moreover, the government still didn`t realize the importance of public facilities, which led to inadequate infrastructure and public good supply, fragmented regeneration without consideration of the overall spatial structure. After adjusting the requirements on facility construction, rigid storage policy of land and an overall regeneration planning, the prophase approval procedures become complex. In addtion, regulatory detail plan adjustment, consensus of multi-stakeholders is hard to achieve, which at last end by extension of the project period and and the interests is partially shared with the state, so markets get fewer added value and gradually loses initiatives. Regeneration in Guangzhou experiences a turning from market-oriented to state-led implementation. The outcome effectiveness is not so satisfied in the second stage due to a rigid control by government. Current land storage policy is like a deformed land finance mode with less sustainability. With difficulty in carrying out projects, Guangzhou is now trying to explore policy reforms to promote market participation.

3.3 URBAN REGENERATION IN SHENZHEN：MARKET-ORIENTED

Urban regeneration in Shenzhen is classified as three types of comprehensive renovation, functional change, demolition and reconstruction. The process is obviously market-oriented, encouraging the property owner or other subjects to conduct self-regeneration. Since 2009, more than 330 villages are regenerated. In 6 years, the number of regeneration units announced in draft plan has reached to 379 parcles.

Only in 2014, the total lands for redevelopment accumulated to 210.59 hm2, accounting for 36% of the annual land supply, with an investment of more than 40 billion (RMB). From 2011 to 2014, urban regeneration has provided 129,300 units affordable housing for the city (Table 1).

Year	Supply plan/10 thousand	Completion rate	Implementation of the previous year/10 thousand	Completion rate
2015	1.8（Plan）	--	2.7（Plan）	--
2014	3.11	110.7%	5.81	116.20%
2013	2.76	110.40%	4.27	141.40%
2012	2.39	120%	1.8	180%
2011	--	--	1.05	105%
Total	8.26		12.93	

Table 1 Shenzhen affordable housing supply (2011-2014)
Source: Shenzhen affordable housing supply plan and the implementation of the previous year

3.3.1 INSTITUTIONAL ARRANGEMENT AND GOVERNANCE

(1)Administrative agency structure and Legislation system Shenzhen urban regeneration department is under the lead of Shenzhen municipal planning and Land Resources Committee (Municipal Oceanic Administration), responsible for organization, coordination and supervision of regeneration projects (Figure 9). Such subordination relationship avoids the approval lag by division in-between departments, making it easy to carry out.

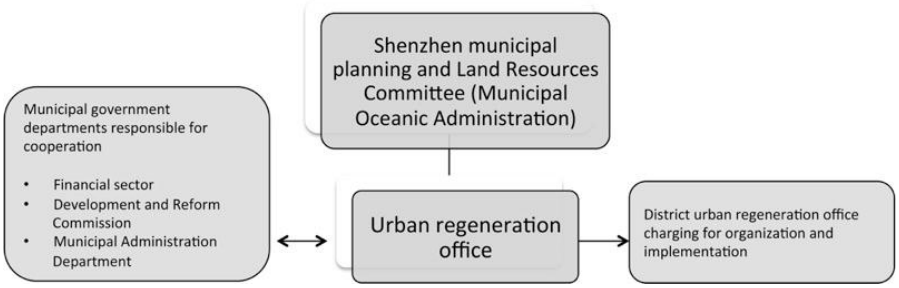


Figure 9 Urban regeneration agency structure in Shenzhen

Urban regeneration unit (chengshi gengxin danyuan) is regarded as an innovative and successful tool for project management. All regenerated parcels will be listed as a unit, and after the declaration and approval, it could replace the previous statutory plan under the protection of law. Similar to Guangzhou, Shenzhen also created a regulation system instead of legislation, ranging from detailed technical standards to regulations (Table 2), these documents regulate the rules for regeneration, methods for property clean up, premium sharing ration, so as to related affordable housing supply ratio, preferential policies on innovative industry, the latters are first creative attempts at a nationwide scale. Among these regulations, Shenzhen urban regeneration measurement regulation and detailed rules for implementation are two core documents integrating the others as a whole, illustrating for distribution of interests and operation process.

Regulations	Legislation of Shenzhen urban regeneration (in process)
	Shenzhen urban regeneration measurement regulation
Management Rules	Detailed rules for implementation of the Shenzhen urban regeneration
	Rules for urban regeneration unit planning approval
Operational guidelines	Guidelines for demolition property clean up
	Guidelines for the reconstruction of urban regeneration land ownership
	Guidelines for the planning of Shenzhen urban regeneration unit planning
Technical standards	Technical standards for premium sharing ratio in urban regeneration
	Technical standards for Shenzhen urban regeneration unit planning
	Technical standards for the implementation of low carbon ecological objectives in urban regeneration unit planning
Related policies	Policy on improving the innovative industry land supply
	Policy on management of housing for innovative industry

Policy on transformation of business buildings	

Table 2 Regulation system for urban regeneration in Shenzhen by author

(2)FINANCE MEASURES

Compared to other metropolises in China, the available land resource is relatively limited in Shenzhen (976km2, 1772 km2 in Guangzhou), so the revenue from innovative industries rather than the land premium income is the primary source for public finance. Now faced with the difficulties for regeneration financing, Shenzhen chooses to mainly dependent on the market and the property owners themselves. It`s actually the best solution for historical reason. Due to great shortage of affordable housing supply during the rapid development, a large number of informal residencies, also called urban villages, distributed widely in the city, 70% of which are illegal buildings. With the extremely heavy burden of these unclear-property clearances, the government has no choice but resort to market-oriented approach to fill the long existing loophole. From the other vein, market investments with initiative for potential regeneration interests, could also provide enough public service facilities, public space and social housing for this growing young city.

(3)FULL CYCLE MANAGEMENT PROCESS

Full cycle management process in Shenzhen urban regeneration is similar to Guangzhou. The procedures could be divided into five main processes, boundary delineation of urban regeneration unit, detail planning for regeneration unit and its approval, implementation plan-making, contract signing, plan permission approval and implementation (Figure 10). Among the three types regeneration, demolition and reconstruction takes the largest ratio, of which the coordination time is longer, but the land value-added profit is larger. There are still some defects in the current arrangement, like no mandatory demolition law, lack of detailed requirement for the coordination process, such as no standard transaction price, no forcedsale requirement for the original property owners. Accompanied by the soaring housing price, the formulation of one unique subject for one unique regeneration unit becomes quite difficult. The original property owners could ask for a super high compensation or unacceptable real estate replacement requirements, thus delaying the coordination time and forcing developers to trade higher than the market price. The other property right owners who have signed the transfer contract may at last break the contract. In practice, a lot of urban regeneration are delayed or even canceled because of the last few households that don`t agree with the relocation compensation and resettlement agreement.

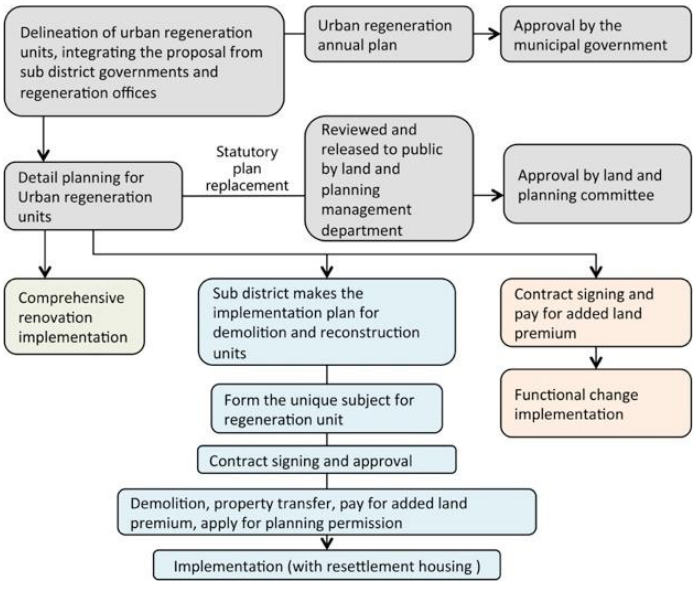


Figure 10 Planning and implementation process for urban regeneration units in Shenzhen

3.3.2 PLAN-MAKING AND REVIEW PROCESS

(1)PLANNING MANAGEMENT REGULATION

Planning management for urban regeneration is successfully connected with the existing planning system by urban regeneration unit (Figure 11), which could replace the statutory plan and break the constraint of illegalization. The special planning for urban regeneration is based on comprehensive research about the environmental condition development, the overall spatial structure and existing functional clusters` distribution. It could be divided into three kinds of regions, namely comprehensive service zone, environmental sensitive zone and industrial agglomeration zone (Figure 12). According to the distance to subway station and existing centers location, a density zoning and priority classification are created for development intensify management, in order to improve land use efficiency, public facilities and protect the environmental resource with clear sequence.

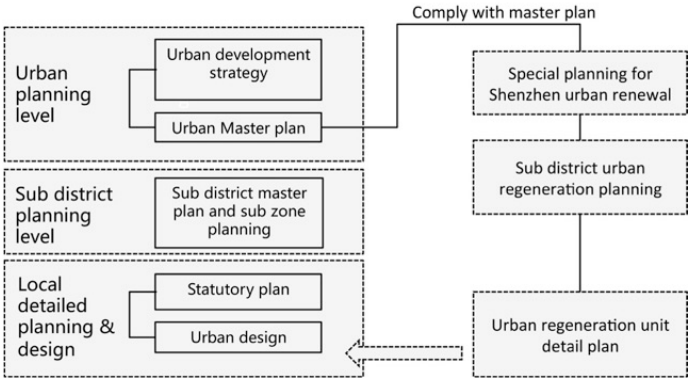


Figure 11 Urban regeneration framework in Shenzhen

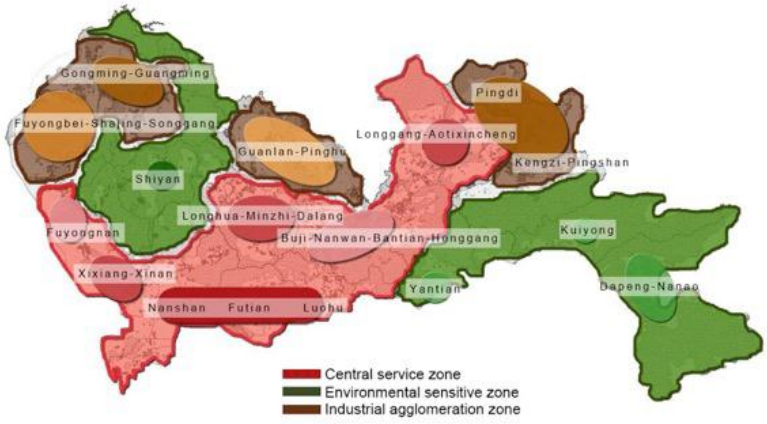


Figure 12 overall spatial structure for urban regeneration Source: research on Shenzhen urban regeneration strategy

Shenzhen is a city with high-density population, so the government also tries to lead a Transit Oriented Development mode to create a livable and efficient city. The areas within 500m to subway station or to the existing urban centers are taken as the key areas to provide public facilities and affordable housing through regeneration, within which the three olds are all required to renovate. In addition, density zoning also reflects the idea of TOD model, the closer to subway station, the permitted density is higher. Besides, Shenzhen tries to become a global city by upgrading its industry, encouraging innovation industry and attracting high-skill people from the world. It tries to enhance the control of ecological boundary taking this good regeneration opportunity, therefore, old industry land and villages, are planned to clean for a better open space (Figure 11, Figure 12, Figure 13; Table 3).

Figure 13 Industrial land within 500m of the central area and the transit station source: as above

Figure 14 Industrial land within the ecological land boundary source: as above

Categories	Aim	Target land type and location（km²）	Area（km²）
Demolition and reconstruction or Functional change	Construction of public facilities	Industrial land within 500m of the central area and the transit station, 15 km²	> 60
	Commercial, residential real estate redevelopment	Old villages within 500m of the central area and the transit station, 14 km² Industrial land within 500m of the central area and the transit station, 15 km² Mix use area, 6 km²	
	Industrial building, lands redevelopment	Industrial building in Industrial Park, 10 km²	
Comprehensive renovation	Improve the public service facilities; environmental remediation	Old residential, 8 km² Old village 36 km² Industrial land 86 km²	> 130
Ecological restoration	Restoration of ecological green space	Old villages within the ecological land boundary, 6 km² Industrial land within the ecological land boundary, 13～29 km²	> 19

Level	Zoning	Basic FAR	Limit
1	I\II	3.2	≤6.0
2	III	2.8	≤5.0
3	IV	2.2	≤4.0
4	V	1.5	≤2.5
Location	Distance to subway station	Subway categories	
		Station complex	Normal station
	（m）		
	0-200	+0.60	+0.40
	200-500	+0.40	+0.20

Table 3 Regeneration strategy and target lands for improvement Source: as above

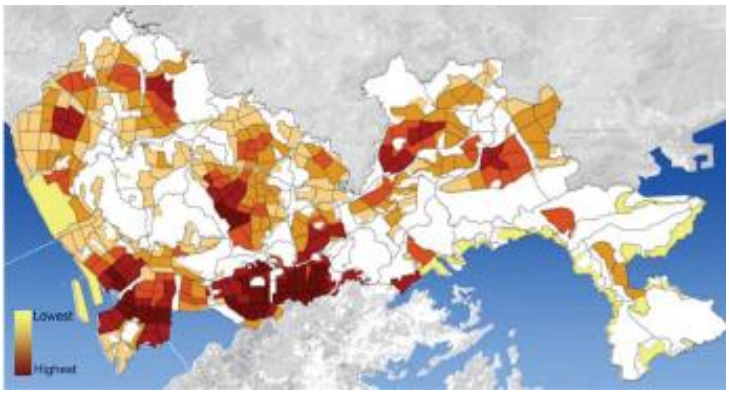


Figure 15 Density zoning for Shenzhen urban regeneration

(2) LAND USE MANAGEMENT REGULATION

For land use management, the key problem is the 70% illegal lands. While creative policies and regulations are generated as effective tools for the government to re-define the land development right and make the difficult illegal land regeneration possible with the help of developers (Figure 16). The government makes a platform for all the stakeholders. Collective village organization owing lands with illegal property less than 40% (before 2014, 30%) could hand over 20% land to the government, and then transfer the 80% lands to the developers, obtaining compensation and legal housings. While the developer could conduct regeneration after handing over 15% lands for public use with government`s approval, thus through the game of redevelopment right, everyone gets the benefits they want. However, it also causes some problems like interest group, irrational game from information asymmetry and super high house price for citizens. The government set up a disguised way for the legalization of illegally lands, expanding collective land rights to non-collective and non-indigenous villagers through policy, but the legitimacy is worthy of reflection. In general, under the condition of clear property rights, the market can better transact interests, achieving balance of interests and promoting social equity. But in Shenzhen, although it seems protect the collective interests, but it actually causes great spillover of land added value and possible injustice.

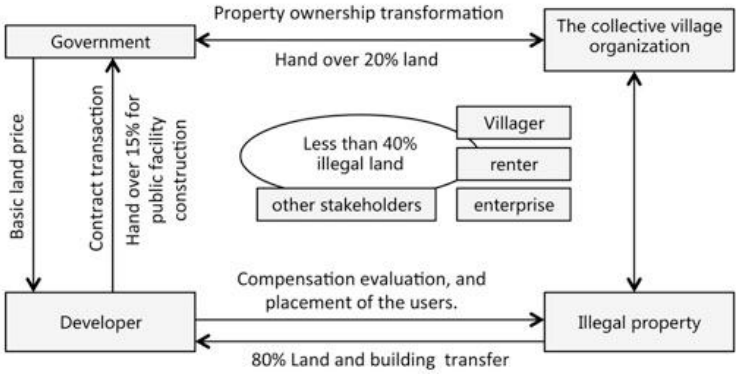
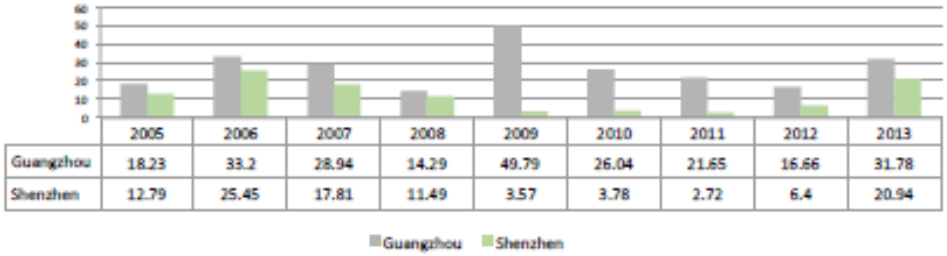


Figure 16 "15+20" property clearance and regeneration approach for old villages with less than 40% illegal land and multiple stakeholders in Shenzhen by author Refer to: Liu, Zhang, 2015.

3.3.3 PERFORMANCE OF THE INSTITUTIONAL ARRANGEMENTS

Regeneration in Shenzhen is relatively fast, following the rules of legalization and marketorientation. Rather than focusing on profits from regeneration, it pays more attention to facility supply and affordable housing construction, to provide attractive environments for high-end labors to settle down. Based on the statistic of regeneration unit drafts, the redevelopment process is growing steadily. Markets could positively involve in the process, with less intervention from the government. Agreements could be achieved between stakeholders and market directly, reducing the transaction costs. The government serves as a night watcher relay on market`s initiative, underlining the important indicators for spatial governance, like FAR, proportion of affordable housing, and the land ratio for public use. Compared to

Guangzhou, the government is weak but efficient, with enough finance provided by developers and more possibility for society participation. Not only the local state, but also the stakeholders themselves, could carry out urban regeneration according to their needs. Thus, the financial burden is divided among all the stakeholders. Public finance will not have too much pressure to resort for land premium compared to state-led Guangzhou (Figure 17). However, in the long term, this full market-oriented regeneration may eventually lead to heavy burdens for the citizens due to the increasing living cost generated. And for illegal property, the policies permit fully market-oriented compensation, acquiescing the legalization process of illegal. But this defect may cause inequality and leave hidden dangers to the further. Too large developing volumes create heavy burden to infrastructure construction, and the space gentrification is less inclusive for the society gradually, especially the renters or migrants who have no rights, are totally forgotten by the policies (Tian et al., 2015). What`s more, the touchiest question for the next generation is, who is able to afford another round urban regeneration cost much higher than the current one?



	2005	2006	2007	2008	2009	2010	2011	2012	2013
Guangzhou	18.23	33.2	28.94	14.29	49.79	26.04	21.65	16.66	31.78
Shenzhen	12.79	25.45	17.81	11.49	3.57	3.78	2.72	6.4	20.94

Figure 17 The proportion of the land premium income to the total state fiscal income in Guangzhou and Shenzhen

3.4 URBAN REGENERATION IN SHANGHAI: ECLECTIC APPROCH

Shanghai used to have a glorious history of industrial development, leaving not only amounts of heritages, but also plenty of outdated lands for regeneration, the output value of which is declining with the upgrading process of innovative industry (4,9 billion/km2 in 2011). In addition, a large number of industrial lands are distributed scattered in suburban[1] (Zheng, Lu, 2015). The overall spatial structure towards a livable global city is waiting for adjustment. Faced with the bottleneck mentioned in section 2, industrial land regeneration could only be realized very slowly in an informal way. Meanwhile, the last two decades also witness large-scale demolition and reconstruction of the old residential buildings (about 112 million m2 are demolished, while 747 million m2 are reconstructed[2] with high FAR). Gradually, the limited lands are subject to high development intensity, while livelihood is kidnapped by real estate. We are pity for the disappearance of historical features at this stage. After a lasting reflection, Shanghai start to explore institutionalized urban regeneration respect for land transfer legalization, historical protection, vitality simulation and facility optimization.

3.4.1 INSTITUTIONAL ARRANGEMENT AND GOVERNANCE

(1)ADMINISTRATIVE AGENCY STRUCTURE AND LEGISLATION SYSTEM

Urban regeneration in Shanghai is charged by regeneration office under the Municipal Planning and Land Resource Management Department, similar to Shenzhen. Shanghai also take the concept of “urban regeneration unit” to connect with the original regulatory detailed planning. Until now, the set up of regulation system is still on the march. Measures for the implementation of urban regeneration in Shanghai (short as Measures in Shanghai in the following) sheds light on principles and a general framework for regeneration. It is supported by detailed rules for implementation and relevant industrial land use transfer measurements. Measures in Shanghai put great emphasis on public interests in this stage of spatial improvement, requiring for regional public facility supply and need assessment report following the overall

[1] accounted for 36.4% of the total suburban lands
[2] Source: Statistics Yearbook of Shanghai, from 1995 to 2014

planning; all the public elements, including public facilities, open space, infrastructure, cultural facilities, linkages, should be concluded into a implementation list as mandatory for regeneration.

(2)FINANCE MEASURES

In this process, FAR award is used as a primary bargaining tool for the government to solve finance obstacle. The FAR of historical area is strictly controlled, while increase for other areas must base on the increase of public facility and open space (Table 4). All the spontaneous regeneration subjects have the obligation of public facility construction inside his property. Therefore, regeneration costs are mostly covered by the market investment. Mix use transformation is encouraged except for non-residential to residential land.

Conversely, residence is permitted into public facilities or affordable housing usage. Because Shanghai didn`t have the special rights given by the Ministry of Land and Resources, it could not balance industrial regeneration costs by property owners` self operation. Therefore, the bottleneck is still in the position. One creative approach is to get added land values by substitution from collective to state-owned land (Tian et al., 2015), but this`s just a drop in the ocean for the total number.

	Provide public space			Provide public facility	
Condition	Provide independent public space and transfer the property to government	Provide independent public space and open to public use, but cannot transfer the property to government	Open public space to public use for 24 hours, but cannot provide independent public facility and transfer the property to government, for example, public corridor, ground floor	Provide public facility and transfer the property to government	Provide public facility but cannot transfer the property to government
FAR Award	2 times as the original FAR	1 time as the original FAR	0 8 time as the original FAR	1 time as the original FAR	0 5 time as the original FAR

Table 4 additional floor areas Award for commercial land

Note: the above award is for space within the outer ring, for space outside the outer ring, the reduction coefficient is 0.8. To provide underground public facilities, the reduction coefficient is 0.8. To provide both public facility and space, there`s another reduction and award ratio.

(3)FULL CYCLE MANAGEMENT PROCESS

As mentioned in above, Shanghai didn`t get the “privilege” for experimental innovation of land system, so the current so called “regeneration” could be regarded as an integration of the previous work. The policy seems to have an intention but no strong strength in all aspect regulation. For example, full cycle management process in Shanghai is relatively simplified compared to Guangzhou and Shenzhen. The procedures could be divided into three main processes, regional assessment, urban regeneration implementation plan, planning permission approval and implementation (Figure 18), in which the current policy document could only highlight the regional assessment process, while the detailed provisions on management is less included (following the previous policy instead). Regional assessment report emphasis on public interest, requiring on detail investigation, demand and needs list of public elements.

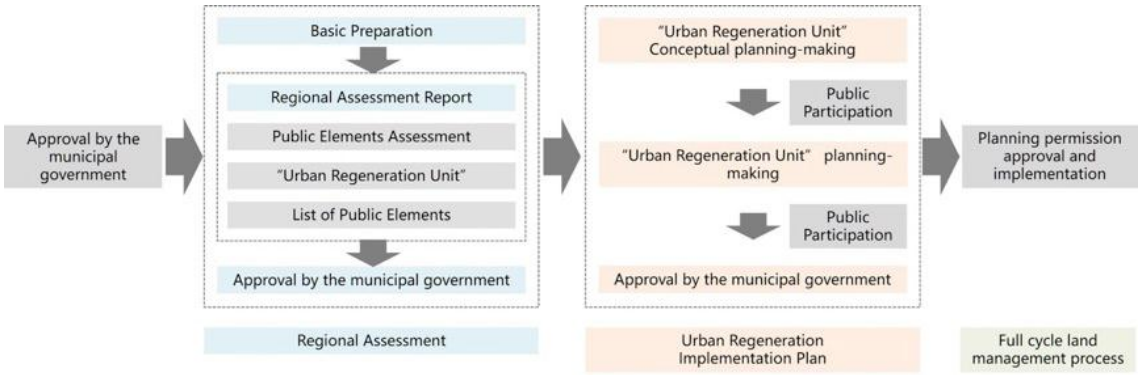


Figure 18 Planning and implementation process for urban regeneration units in Shanghai

3.4.2 PLAN-MAKING AND REVIEW PROCESS

(1)PLANNING AND LAND USE MANAGEMENT REGULATION

At present, the plan of Shanghai urban regeneration has not yet been published officially. There is only a regeneration vision towards four directions, which includes Sharing community, Innovation industrial park, Charming cityscape, and Leisure network. Reflecting the coordination of the regeneration plan and the master plan is still in progress, that urban regeneration unit is the only connection for currently. So the regeneration process is actually going under the table instead of being leaded by an overall planning. The units` conceptual planning-making, implementation planning-making, approval is controlled by planning department, quite similar to other non-regeneration projects. For land use management, the legalization process blocks the path of informal regeneration, Land transfer period of the urban renewal project may be re-agreed according to the specific circumstances of the project progress. Among them, The use term should deduct the used period from its original use nature and cannot exceed the longest use term regulated by government; the land use term shall be consistent with the original contract if the change of land-use is not involved; The re-agreement use term shall not exceed the corresponding maximum use term regulated by government. While the benefits maybe that it provide an exit approach for historical land.

3.4.3 PERFORMANCE OF THE INSTITUTIONAL ARRANGEMENTS

Although regeneration institutionalization in Shanghai is still in process, it still shows more rationality after 20 years` experience and lessons. The concept and principle are inclined to public services and interests, instead of economic one. However, from the perspective of legal system construction, it is lack of a specialist bureau for management. In addition, due to heavy construction load, regeneration subjects feel inactive for upgrading, and the process will slow down. Cost-balancing dilemma remain as a trouble. Besides, organic community regeneration is not reflected in these physical improvements. In current semi-mature stage, Shanghai is facing a longer period challenge in general. More innovative policies and more freedom for bottom-up efforts are needed for a more livable and creative international metropolis.

4 DISCUSSIONS AND CONCLUSION

These three metropolitan governments form their own strategies to cope with the complexities of dilemmas, taking into account the characteristics of development, historical property rights, and industrial updating needs. The institutional innovation and differentiation indicate the different modes of the state as controller (Guangzhou), supervisor (Shanghai), and promoter (Shenzhen), thereby resulting in different trajectories featured in efficiency and effectiveness. From Table 5, we could have a brief understanding of these three different modes. In Guangzhou, the government withdraws the land by storage gradually, sharing most added values with by property owners, while this path-dependent approach has a negative impact on the initiate of market. Shenzhen gives full freedom to the market by legalization of illegal land, land property transfer and intensify development; by this way, it provides enough public facilities to the city. While Shanghai could only realize this aim by FAR award due to no special land policy permitted by the central government. The common ground is the public participation under the control of the government,

requirement for market to provide public goods, which finally realize the optimization of urban image, public facilities optimization, but also widely space gentrification. Besides, in Guangzhou and Shenzhen, the real estate market has become the biggest beneficiaries, achieving great amounts of economic benefits and profit in quite a short time, which is similar to the housing boom from 1970 to 1980 in Europe. Once the government loses control in the coming years, this will finally damage the real economy and social stability. It`s not wise to repeat the history again. With the increasing land value and compensation cost for urban regeneration, we need a more careful and accurate institutional arrangements to eliminate the loopholes and think over the profound influence on our cities.

		Guangzhou	Shenzhen	Shanghai
Financing mode		Land storage for finance; mostly dependent on Market investment;	Dependent on Market investment;	Market investment and public finance;
		Public finance for old town and historical area;		
Governance mode		State-led and market operation;	Market-oriented;	State-led and market operation;
Legitimacy		Independent agency; relatively completed regulation systems but no legislation;	Relatively completed regulation systems but no legislation;	Regulation systems is set up gradually;
Authentic participation by stakeholders		Process participation in form is high, but controlled by the government;		
Public interest		Emphasis on historical protection;	Emphasis on ecological area, affordable housing;	Strongly emphasis on facility, historical protection and ecological area;
		Require the market to provide according to the supply need;		
Effect on Industry		Land prize increase;		
Accountability		Relatively high and free, but Controlled by the government; openness to interest intermediation;		
Outcome effectiveness		Relatively slow with property clearance, TOD development;	Fast with affordable housing and ecological land optimization, property clean up, TOD development, and increased urban density and pressure for public facilities;	Slow with historical area protection, green space, public facilities, linkage optimization, and Suburban land control;
	Common effectiveness	Historical area protection; City image optimization; land price rise; public service facilities optimization;		
Sustainability		The mode of finance is a alienation of previous land finance	Better finance mode but resulting in high living pressure for citizen due to historical property;	Sustainable bout faced with the difficulties to execute
		High space gentrification, not inclusive for low-income group		

Table 5 Comparison of regeneration of the three metropolises

Due to the rapid expansion in previous stage, metropolises have been immersed in problems such as traffic congestion, environmental pollutions, inadequate facilities and irrational industrial structure. These complex “disease” forced the governments to carry out innovative urban regeneration as “medicine” for optimization. Institutional arrangements are taken to deal with the contradiction between long-term benefits and short-term high costs, to weigh the pros and cons and avoid straitened circumstances. The content description and practice comparison of market-oriented, government-oriented, and eclectic modes of governance together reflect some core principles and unhealthy hints in metropolises` regeneration governance in China.

4.1 GOALS AND PRINCIPLES: OPTIMIZATION AND IMPROVEMENT OF URBAN ENVIRONMENT RATHER THAN MAKING A BIGGER CAKE

Regeneration is originally meant to optimize the land use structure, improve sustainability, and provide space for industrial updating. However, the results sometimes turn out to be an interesting phenomenon featured by vertical growth in the post-Land Finance era, that governments get benefits from high intensive redevelopment instead of monopoly of land premium, misleading regenerations to make a even bigger cake for stakeholders who focus on interests rather than real needs of the city. It`s important to jump out of the circle of expansion and land finance, taking full consideration of social inclusive, green development, spatial justice and resource sustainability. Regeneration should be a new phase of giving rather than deprivation and vertical urban sprawl. Therefore, to achieve a diversified, high-quality regeneration, principle and goals should be clarified and followed.

4.2 BOTTOM LINE: SUPPLY OF PUBLIC FACILITIES AND FAIR ALLOCATION OF INTERESTS AMONG GROUPS

The government is supposed to responsible for public facility supply and coordinating multiple interests no matter it`s a dominator or not. Public interest is the bottom line, involved in public service, infrastructure, and social justice. Policy allowing for deprivation will lead to social segregation, gentrification, so as to polarization between the rich and poor, that the gain cannot make up for losses for the entire city`s balanced development. Rules for implementation by the three cities Guangzhou, Shenzhen and Shanghai, all underline the importance of public realm, so as to the historical areas. Guangzhou and Shanghai also emphasize on the control of developers, land market, and actors` behaviors to reduce speculation; While Shenzhen even formulates specific provision to regulate the assorted affordable housing construction. In the previous rapid expansion tide of the cities, it is difficult to rationally forecast the demand of infrastructure and public service facilities, leaving a center-periphery structure featured by intensive facility agglomeration in the center, while the periphery is quite insufficient. Therefore, institutional arrangements should put public facility optimization and supplementation in first, finding elastic approaches flexible for the resilient needs of city.

4.3 CORE ISSUE: COST AND BENEFITS

The core issue to influence actors` participation is cost and benefits. The institutional arrangements should match against the requirements of urban regeneration. Policymaking could directly regulate the allocation of profits among developers, city-state, and individuals. Subsidies policy can promote the initiative by actors, while policy with excessive deprivation will slow down the process. The governments have an option to increase long-term industrial tax income by providing affordable lands for companies, or obtain short-term land incomes for public finance, which is not sustainable in the long run. In other words, policies are valve to control the participators and speed of urban regeneration. In addition, institutional arrangements should also play a restricted role to limits the markets` hitchhiking, speculation and other behaviors damaging the public interests. Though less intervention and weak control of real estate by policies in Shenzhen, a significant rise in housing prices inevitably occurred, leading to a high living cost for all the citizens. Therefore, effective supervision and penalty is necessary for unreasonable speculation (Chen, 2012).

4.4 ENDOGENOUS BARRIERS: THE GOVERNMENT'S ROLE AS RATIONAL ECONOMIC MAN

In the game of interests balance, the government itself also has the attribute of rational economic man, as an endogeneity. In order to accumulate for public finance, the government is inclined to domain the allocation of interests and gets benefits from selling storage land. The balance of interest between governments and markets will raise the threshold for market investment and increase the costs. For example, the government-oriented mode in Guangzhou emphasizing on land storage, has limits the speed

of regeneration process. In this case, the government doesn`t not maintain neutrality but involve too much, focusing on short-term profits rather than long-term return.

4.5 DEMOCRACY AND PUBLIC PARTICIPATION: TRADE-OFFS AND RISKS

Democracy and public participation are challenges we will face in the near future. In the process of regeneration, coalition of stakeholders, market and society coalition, government and market coalition, could theoretically reduce the transaction costs, accumulate positive social benefits, and achieve a win-win goal (Yuan, 2015). The establishment of trust among stakeholders could be realized by both formal and informal institutional arrangements. However, there still are risks for failure due to the internal inequality and power imbalance. Therefore, the adoption of public participation requires deep understanding of the local situation, culture and historical background. In addition, the democracy quality of regeneration should be considered in the decision-making process of facility construction, willingness evaluation, and allocations of profits. The approach to keep accountability should be unfolded from the black box. Current public involvements are passive and LESS-effective, resulting in less consideration of local needs and social feedbacks.

Institutional arrangements for regeneration in Chinese metropolises are still in its infancy, many featured problems vary from place to place have not been recognized and excavated, requiring for constantly experiment and exploration to deepen the understanding. In order to develop more effective governance, we need to further strengthen the legalization and distingush the advantage and disadvantage of marketorientation principles, paying attention to democratic process. The power structure is seeking for approaches to activate all possible resources, and promot the process of institutional reform and democratization in China.

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ID 1442 | COMPARISON OF TWO URBAN DEVELOPMENT’S MODELS AND REDEFINITION OF URBAN PLANNERS’ ROLE-- A CASE OF YUZHONG DISTRICT, CHONGQING, CHINA

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ABSTRACT: Urban planning’s aim is to seek social equity, to achieve social goals through the development of spatial manipulation and management system in the face of market economy and government ideology. In the face of the complex urban planning, planners should be targeted to the big city and small town planning, which should be strictly controlled at the macro level, planners and government should be the leading force and actively advocate all fields of the city to cooperate together. When it comes to the community and village level, residents can be encouraged to participate in the community’s planning to their initiative, and the planners and government can formulate a series of rules and regulations to guide them appropriately, in order to create more local characteristics of the environment. Planners should have the basic quality of the space aesthetics , also need to consider the principle of market economy and social operation’s mechanism behind the space, finding an association between market rules and social relations and spatial structure, to make planning policy and management regulations to achieve a better tomorrow through the improvement and adjustment of city spatial entity.

KEYWORDS: urban development's model, urban planning, market economy

1 THE SIGNIFICANCE OF THE EXISTENCE OF URBAN PLANNING

Cities and urban planning appeared very early in the history of the development of human civilization, however, since the emergence of urban planning, it has been plagued by criticism.To achieve a better living environment, planners should define their own role and figure out how to cooperate with the government, the market and the public,which is a problem worth exploring.For a long time, planners have been misunderstood that they only plan "the ultimate blueprint", emphasizing the material determinism without the comprehensive rational attitude towards social and economic factors(Zhang Bing,1997). For example, Jan Jacobs criticized the urban planning in the "The death and life of great American cities" that the economic and social and no city like this is to be controlled, planners only focus on the appearance of city, but neglect the social and economic operation's mechanism behind it (Jane Jacob,2006). But Jacobs was looking forward to another kind of Utopia. She did not find out that Le Corbusier , who had already died, have the planning ideas on human care, the public space and the value of the sun.In the city is not a tree, Alexander Christoph believes that the tree structure,which is commonly used in the urban planning, can not reflect the complex network system behind the city(Christopher Alexande,2004). Planners are criticized that don't consider the operation mechanism of criticism and complexity behind the city, but in fact the modern urban planning has planned the space environment and elaborated the policy and laws in various towns in face of out of control market economy's problems, such as metropolitan diseases and rural decline etc. As Lewis Mountfort mentioned in the "The history of urban development: origin, evolution and Prospect", the capitalism destroys the structure of city life, put it in the impersonal basis of money and profit(Mumford Lewis,2008). Thus in the process of development, money is more than anything, the government and developers prefer to the land intensive development, leading to the demolition of the high historical value buildings may be removed at any time, ordinary people also learned to speculative reselling, land is regarded as commodity it is very difficult to implement effective supervision and control. In market forces dominating today, planners and urban and rural planning is of significance, planners are not only skilled technicians, but also social workers. If science and technology are accustomed to the evaluation of efficiency, social science's evaluation is fair(Zhang Tingwei,1993). But the planners' aim isn't struggling with the market economy, planners should pursue the aesthetics form of space environment and take the economic and social harmony and stability into account at the same time.

Now the globalization era has come, the city and the country which are developed by the residents purely almost disappear, residents can use local materials according to local conditions and custom's characteristics and create a vivid and friendly environment.But when it comes to large public infrastructures and public utilities etc., cities need to have a overall planning and financial support. It's very hard to realize its deployment for the local residents without professional planners' planning and government's finance.For example, in 2010 Qiongkushitai village of Tex town in Xinjiang province was listed in "national historic and cultural village", which has been kept original ecological a long time because of the traffic inconvenience. is influenced by the modern economy is small,It keeps the original ecological life style and vernacular architecture, but until now the village still has not been powered and the villagers have to use small hydroelectric generators, life is very inconvenient(Figure 1,Figure 2).

Figure1 and ,Figure2-Qiongkushitai Village of Tex Town in Xinjiang Province(Photoed by Writer)

At the same time, if we only rely on the planners and the power of the government from top to bottom, set high rate of urbanization blindly and build the new districts without control, and ignore the actual life's demand of the residents and market rules , it could result in ghost towns,which many Chinese cities have,

a new district of skyscrapers and wide streets likes the new towns of Erlianhot, Alaer, Beitun, Aletai, Zhangye,etc. It can be seen, whether in the city or the countryside, planning requires multilateral collaboration and participation, planners' role is indispensable, but differs in the extent and managed means of different conditions and different means of planning and management .

2 THE TRANSFORMATION OF THE PLANNERS' ROLE

Planning as a prospective discipline, planners must predict and estimate the possibility of the problems and propose the solution in advance, this uncertainty may lead to the imperfect after plan's completion. At the same time, urban planning is also a comprehensive discipline,Government's departments of planning and academic institutions are lack of the solid theoretical foundation which can guide the research, because this foundation contains subjects more and more, such as economics, sociology, geography, political science and so on.Boundaries of the urban planning profession has become increasingly blurred, with each course penetrating into each other(JMcloughlin J B,1969). It can be said that this confusion comes from the origin of city planning is the material source, but with the development of the city,there are dislocation between the needs of clients and the actual material basis of professional planners, leading to planners' own rejection.So the modern planning education and social needs hope that planners can have comprehensive academic background and accurate judgment for the future, while taking into account the different needs of government and ordinary citizens, paying more attention to the combination of two working modes(top-down and bottom-up).Planners can guide the development of the city and the whole society correctly through learning social and economic geography of a certain extent, and considering these factors when plan the space environment and formulate policies and regulations of management.Although some planning concepts considered the social, economic factors,The construction of the so-called "good" city practice is far more difficult and complex than the expected actual implementation, the garden city, neighborhood units and the new metros under the planning and construction were not more attractive than the city without planning , and even less(Zhu Jieming,2012). Because the formation of a good city is complex and diverse, it is not enough only with the efforts of the planners, we can create good city with the cooperation by the government, planners, developers, and the public participation, then clarify and adjust the economic and social relations behind the space environment.

In order to show the differences between the top-down and bottom-up city development modes, the comparison of the Jiefangbei CBD and Shibati historical areas will be shown next, then reflect and imagine the future development paths of the two area.And planners should figure out what the role they play and what kind of positions they stand.

3 THE FORMATION AND DEVELOPMENT OF JIEFANGBEI AND SHIBATI, YUZHONG DISTRICT, CHONGQING -TWO DIFFERENT MODES OF URBAN CONSTRUCTION

The mountain city of Chongqing originated from the Yuzhong Peninsula, overlooking from the air, Chongqing city is surrounded by two rivers, likes the floating leaf, the ancient saying said that "Ba country likes a leaf floats up and down, two rivers like straps go by the Fotu barrier".Because of the special terrain and history, the old city of Chongqing is known as the upper and lower cities, upper city is the central business district, the core of which is Jiefangbei, while lower city mainly is cultural historic district such as Shibati ,a slum of Bayu dwellings' characteristics（Fig. 3）

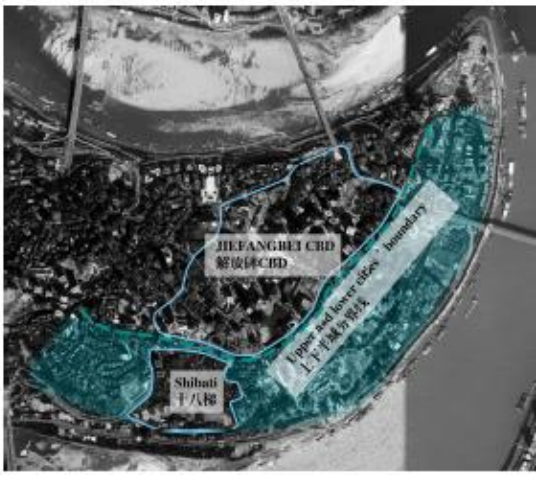


Figure3-The Upper and Lower City's Satellite Map(Drawn by Writer)

3.1 INTRODUCTION OF JIEFANGBEI OF THE UPPER HALF OF THE CITY

According to the overall planning of Chongqing,Jiefangbei CBD (central business district) is an important part of the "central business district (CBD) of chongqing". In the history the "hard core" part was the area surrounding"Dashizi ', " cross street of gold ",including east to the Xiaoshizi, north to Jiangbai road,Linjiang door and Minsheng road, west to Jintang street, south to the Heping and Xinhua road etc, covering an area of about 0.92 square kilometers.(Baidu Encyclopedia of Jiefangbei). The contrast with 18 ladder for discussion of jiangbei district mainly refers to the hardcore part of the central business district (CBD) of chongqing. Before the founding of the People's Republic of of the temporary capital（Fig. 4）in 1946, which was the first comparatively consummate and systematic urban general plan in the history of Chongqing City.

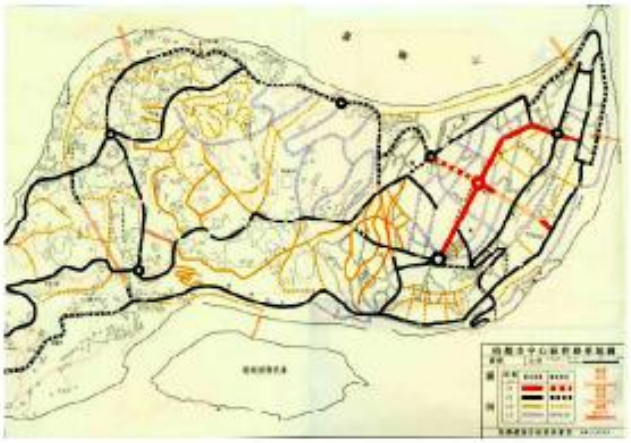


Figure4-Draft plan for construction of capital for ten years (http://roll.sohu.com/20130704/n380680675.shtml)

During the War of Resistance Against Japan, Chongqing, as the strategic command post of the Asia-Pacific region, experienced a rapid increase in population, and various public facilities, especially transport facilities, were extremely unsound. The planning drew extensively on the Western planning thinking, and fully considered the unique topography of Yuzhong Peninsula, which basically decided the road network structure of Yuzhong Peninsula, laying the foundation for the prosperity and development of the peninsula in the future, especially the urban core districts established at that time --Jiefangbei and Cross Street, which are also the symbols of Chongqing's CBD today. However, since this plan, the center of Chongqing has developed from the lower half of the city, flourished with the terminal culture, to the upper half, where the motor traffic was more convenient. The lower half of the city was planned to be the ordinary residential area, and the construction of a host of private houses appeared at Shibati, which turned a high-density urban area during this period . Thus the lower and the upper halves of the city gradually formed completely different styles, seperated by the Xinhua Road.

After the liberation, Jiefangbei gradually became the business and financial center of Yuzhong. Later in 1997, Chongqing turned to be the municipality directly under the Central Government in 1997, and the governments of the city and the district transformed the original Jiefangbei cross (2.24 million square meters) into China's first commercial pedestrian street, which is the so-called Jiefangbei Center shopping plaza . Since then, Yuzhong District Government expanded the square to the middle section of Bayi Road,

and the extension of Minzu road, while the area increased to about 36,000 square meters, respectively in 2000 and 2001. In 2003, Chongqing made the "Chongqing Central Business District Plan" , in accordance with the "Chongqing City General Plan (1996-2020)" afterwards(Qiao Hong and Yang Qingyuan, 2013). It can be said that Jiefangbei Area, as the core area of the city, has been subject to the relatively more stringent government management and planning control, which leads to buildings and the environmental in better quality. The present Jiefangbei Area, gathers all kinds of large commercial complex and business office buildings, including over 60 CBD key buildings, mostly located along the Zhonghua Road, Jiaochang Road and Zourong Road--Minzu Road area. The 60 key buildings has on average 30 layers above the ground level, and 3 to 4 underground layers[9]. 45.8% of them are office buildings, 36.4% are commercial ones, and the remaining 17.8% are hotels and apartments, whose capacity rates ranges from 3.71 to 44.96(Qiao Hong and Yang Qingyuan, 2013). While the average capacity rate is 3.6, way higher than Shanghai Lujiazui's 1.3 and Shenzhen Futian's 2.0 (Fig.5).

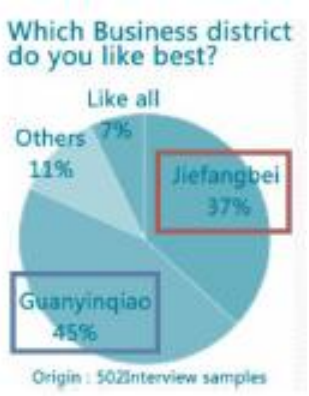


Figure5-Jiefangbei CBD Texture Map (Drawn by Writer)
Figure6-A Survey on the Preference of Chongqing 's Business District
(Huirong Website of Chonging Business Newspaper 2013-05-09)

In recent years, due to lack of space and regional industrial competition, Jiefangbei has also faced further transformation and upgrading challenges. In the past, Jiefangbei was the product by the cooperation of the powerful government and planners in the face of strong capital-driven, which was the typical type of top-down planning. In this process, in order to pursue market efficiency, certain amount of public space was given up and the ecological benefits were ignored, hence compared with the rising Guanyinqiao shopping area in Jiangbei District during recent years , Jiefangbei, as the core of the old region, is short of public space and landscape, and the popularity has been lost(Fig.6).

In addition to Jiefangbei and Cathay Pacific Museum of Art, the spatial layout and architectural style of the region are both lack of certain geographical features, affecting the further development and upgrading, which also proves the lack and necessity of public participation in Its planning and development process. Taking Singapore for example, where the top-down plans are strictly enforced. In order to ensure the democratic and impartial nature of the planning as a government function, the planning law clarifies the legal procedures for public participation and planning appeals. Both the strategic conceptual planning and the implementational of the guidance planning for development need the link of public comments, which are reported to the Minister of State Development later, and properly handled(Tang Zilai,2000). Top-down urban development model can meet the basic needs of the city, but there are also problems such as insufficient public participation, similar faces of thousands of cities and so on.

3.2 INTRODUCTION OF SHIBATI OF THE LOWER HALF OF THE CITY

The lower half of the city, especially the Shibati area, is the symbol of the spontaneously formation from bottom to top. The history of Shibati area is far longer than Jiefangbei. As early as the Ming Dynasty, Shibati got its name after the 18 ladders from the houses of the inhabitants to a well here. Before the demolition, Shibati represented the lifestyle of this old mountain city, where the tortuous mountain streets were filled with all kinds of snack shops , fruit stands, hair salons, carpenters, tailors and the so-called Bang Bang playing cards on both sides, which contributed to the living atmosphere. The majority of the

residents living at Shibati were indigenous, and Shibati is just one part of the old Chongqing. In recent years, with the rapid development of Chongqing, there came some foreign population. But the ordinary people living at Shibati has never stopped for a moment,being eager to leave this place as soon as possible, because the Shibati's infrastructure is just a mess, . Residents in better economic conditions have been gradually removed. It can be said that Shibati is an inclusive and ample settled city (Fig.7,Fig.8), and its richness of life and the diversity of space is invisible in the upper half of the city. Despite the road system and fire protection facilities which are met the planning norms, the demolition of the population density up to 1700 people / square kilometers, the low and ruined buildings inside the blocks whose building density is up to 79%, the floor area ratio comes to 2.5, and the land use efficiency is low. While Shibati is still the card of the Old Chongqing. In recent years, Chongqing, whose cultural industry is relatively backward, has also had several films taken, such as "Hero of Hot Pot", "Passing Your World". And the main viewfinders are located at Shibati, Baixiang Street in the lower half of the city, indicating that the lower half is actually very characteristic and representative of the old Chongqing. At the same time, the cultural and creative industries in Shanghai are mostly gathered around the historical neighborhoods, also showing the significance of the preservation of the old city, especially the historical and cultural blocks.

Figure7-Historical images of Shibati Figure8-Shibati Main Street'Section and Plan
(Tencent Dayu Network) (Drawn by Writer)

However it is a pity that Shibati does not possess the ability to update autonomously like Tianzifang, while Chongqing, compared with Shanghai, has relatively limited needs for the development of the cultural and creative industries and tourism. Besides that, because of the location close to Jiefangbei, the economic value of the land is enormous. It has been a long time since the latest improvment of the environmental facilities done by the authorities, leading to too much debt, which caused the government to give up the update work due to the high cost, and decided to retain only part of the relatively new high-rise buildings and cultural relic protection units such as the Consulate General of France, and the rest would all face the demolition and redevelopment. Even the core protecting areas in the historic district have been removed, and the official program has been announced. Some blocks imitating the original texture, composed of pseudo-classic buildings, around with the construction of high-rise commercial offices replace instead, whose volume rate rises up to 2.5 from the original 4.1 (Fig.9,Fig.10).

Figure9 and Figure10-The Form Plan and The Rendering, From The Comprehensive Plan of Shibati
(East China Architectural Design Institute Co. Ltd)

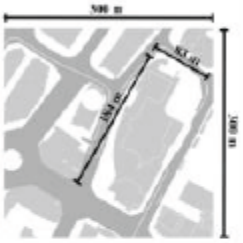
It can be said that this is a so-called "compromise" measure taken, confusing the "historical blocks" and "style blocks" , leading to the demolition of most of the blocks, leaving only the graded heritage buildings. The original historical and cultural elements will lost the authenticity of the historic district itself through a deductive way to rebuild(Li Heping and Wu Qian,2015). Meanwhile, city officials have forgotten the origins

of the city, the Shibati is the mother town of Chongqing, and its existence means the right given to people by Chongqing, to take root here.

Research has shown that the exact contradiction of Shibati is that the local residents can not stand the bad living environment, but their employment and survival still depend on the area. Most of the demolished residents are resettled in other more remote areas, such as Nanan District, Shapingba District, etc. (Fig.10), but there are still some people who come back every day for small commodity retailing, old goods reselling, fortune telling and other business activities. There are a total of 24 letters in the Chongqing Municipal People's Government open mailbox, whose titles contain "Shibati". Among them, there are 4 proposals for the renovation proposal, 17 for relocation and resettlement problems such as compensation standard and resettlement house allocation, and 3 for rebuilding process problems such as slow transformation and construction impact. After researching “Shibati demolition” in Baidu, the messages on the first research page basically revolves around the problems the masses complain about including the low efficiency of the government, the slow speed of demolition, the too low resettlement compensation and the shame for the disappearing Shibati. From the situations above, there are 3 core issues on the demolition of Shibati: 1. The lack of progress causes the various contradictions occured in the negotiations between the demolition office and the masses; 2. The government and the residents are difficult to reach an agreement on the demolition compensation standard. The residents measure their property value according to the market price of Yuzhong District (9,300 yuan / square meter in 2010), while the government only meets the purchase of resettlement housing standards through the assessment of institutions for compensation(4,300 yuan / square meter in 2010) , which just reaches half of the amount raised by the masses. Some businesses are losing their stores for surviving, thus their livelihood is worrying the standard for Shibati relocation compensation is too low(government website mayor mailbox,2014). Ordinary people, tourists and scholars are full of regret on the disappearance of Shibati, and appeal the new construction to restore the style and lifestyle of the old mountain city(government website mayor mailbox,2014). Wang Yuanling's "Goodbye-Shibati" photographic notes also mentioned the blind massage parlors, herbal shops, Mengshaqier Cheongsam garment factory, Roundhouse hotel, etc. at Shibati, which are the business whose customers’ loss is unsustainable because of the demolition, or moving to other places to continue the meager income(lu Feifei and Wang Yuanling,2011). I believe that these are the stores with certain history and local reputation at Shibati, maintaining the local social network and playing the "street eye" role of the carrier of the street spirit, which have the possibility to operate after the transformation. The future of Shibati would only become the continuation of Jiefangbei CBD, and the antique-style Bayu residential buildings are difficult to reminiscent of the original appearance of the old Chongqing. This is the helplessness of the government in the face of market forces, but also the dereliction of the planners’ duty.

3.3 TWO MODELS OF URBAN DEVELOPMENT: COMPARISON OF JIEFANGBEI AND SHIBATI

Jiefangbei CBD core area is formed under the mode of top-down city development, and gradually brings the strong popularity and high economic output, but due to the lack of public participation, there are not enough geographical features and public space. While the Shibati historic district is formed by the down-top city development pattern, and full of historical and distinctive features. But due to the lack of planning control and government management, the poor living environment and incomplete infrastructure construction finally bring about not only the demolition and reconstruction with high cost, but also the loss of city memory. It shows that the down-top mode inspires people's creativity, and creates the formation of certain geographical features, but there is such a disadvantage of the disability to continue the healthy development. Both the top-down and the down-top mode have its own advantages and disadvantages. (Tab.1)

	Jiefangbei CBD	Shibati
Formation mode	Top-down, led by the government, planners and the market	Down-top, led by the public and the market
Area	92.4 hectares	18.9 hectares
Patchment		
Spatial characteristic	Modern commercial and office buildings, mainly of high-rise and super high-rise	Bayu traditional houses, mainly low layer and middle layer
Activity and population type	Consumer groups, business people, mainly high income, highly educated	Migrant workers, mainly low income, low educated
Function	Business office, leisure and entertainment	Living, low-end business
Resident population density	55,000 people / square kilometers	73,000 people / square kilometers
Capacity rate	3.6	2.5
Building density	63%	79% (Before the demolition)

Tab 1-Monument of the Comparison Between Jiefangbei and Shibati (Drawn by Writer)

4 CONCLUSION

The top-down mode of city development is often the cooperation between the government and the planners, which is lack of public participation. While planning, the space structure is always emphasized and the function of land use is clearly determined, which is of high efficiency and convenient management, but also more rigid, unbeneficial to the characteristics vitality of the city. Even while facing the old city, planners are accustomed to ignoring the present situation, and imposing the function partition and the relationship of the axis and nodes on it . In fact, after a long process of development, the old city has mostly formed the situation of mixed functions. Residential land is mixed with commercial function, and part of the business district also contains residential function, which obviously does not comply with the planners' popular method of clearly dividing the residential and commercial land use. It can be said that this is the advantage of the down-top urban development mode, which can be explained by the creativity of the residents driven by the market economy so as to form dynamic city blocks. However, due to the lack of planning and management control, public space is often occupied and the land is not used intensively. In addition, the extremely high construction density and the nonstandard traffic system also cause certain security risks.

Therefore, urban planning is essential, while the cooperation and participation of the government, market capital and public organizations are also extremely important. In addition to the basic spatial aesthetics, planners need to consider the principles of market economy and the social operation mechanism behind the space. But finally we have to return to the space entity, discover the relevance between the market law, social relations and spatial structure, material environment. It is the aim of planners to achieve the urban and social enhancement through the improvement and adjustment of spatial entities, and the formalation of planning policy regulations. Large cities like Shanghai, which have national and even global influence, must strictly control its planning at the macro level. Planners and the government ought to lead the planning and actively promote the market economy, civil society organizations, scientific research institutions and other forces to participate in the process and collaborate with each other at the same time, while paying attention to a certain degree of public participation. As for the specific small-scale spatial construction of urban and rural communities, the residents could be encouraged to exercise their subjective initiative, appropriately guided by the formulation of a series of rules and regulations by planners

and the government, so that the folk wisdom can be fully inspired to create the space environment with more local characteristics.

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ID 1461 | GOVERNING URBAN REGENERATION: PLANNING AND REGULATORY TOOLS IN THE UK

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1 INTRODUCTION

The PARCOUR (Public Accountability to Residents in Contractual Urban Redevelopment)[1] project involves a comparative analysis of urban development (of previously used land) led by public-private partnerships

[1] PARCOUR is a three-year international Research Project (2015-2018) funded jointly by the ESRC (UK), FAPESP (Brazil) and NWO (Netherlands). The participating universities are UWE (UK), Sao Paulo (Brazil) and Amsterdam (Netherlands). The focus is on 'the reuse of previously developed land' or what are usually termed Brownfield sites. This paper draws on the initial research on the UK case studies, no reference is made to the case studies in Brazil or the Netherlands, or to the comparative dimension.

and includes nine case studies (three per country) of regeneration projects in Brazil, the Netherlands and the United Kingdom (UK). This paper draws on the initial work of the project and investigates the forms of governance arrangements that have developed in the UK case studies (Bristol, Gloucester and Taunton). The paper discusses the planning and regulatory instruments that are used as part of the public-private urban development partnerships. The research is designed to explore the form(s) of governance that exist, the associated 'planning instruments' developed and whether these arrangements are able to deliver outcomes that are in the 'public interest'. In particular we focus on how the governance forms created when contractual arrangements are made between the public and private sector parties structure/influence the aims and delivery of urban regeneration. This relates to what van der Veen and Korthals Altes (2011) have termed as 'government by contract' and Raco (2012 and 2013) has described as 'planning by contract' and 'governance through detail'.

As part of the wider PACOUR project we seek to assess the extent to which planning and regulatory tools were able to provide some form of accountability to residents and other interested parties as well as to deliver outcomes that were in the 'public interest'. Indeed it is part of the project's aims to determine how the notion of the 'public interest' was constructed/understood and operationalised by the various parties involved in the development process in each case study.

Part of what we hope to do is to understand how contractual relationships, particularly between the public and private sectors, affected/influenced public accountability (in terms of transparency of decision-making) and the delivery of outcomes that were, at least in part, in the 'public interest'. The risk we perceive is that contractual relationships are shrouded in 'secrecy' under the guise of commercial confidentiality that obscures the 'public gaze' and runs the risk of effectively undermining both accountability and the 'public interest'. Thereby creating a form of 'subterranean governance' that structures the way in which these partnerships operate without being subject to any rigorous public scrutiny and accountability.

The following paper is therefore set out in six sections. Section two provides a summary of each to the three UK case study sites and the public/private partnership arrangement that exists on the site. Section 3 provides a summary of the UK national planning policy through the last 20 years. Section 4 outlines the research methodology and Section 5 presents the findings from the research to date. Section 6 discusses what the findings mean in the context of urban regeneration and includes the initial conclusions of the study.

2 UK CASE STUDIES

The three case studies sites were selected as each has developed a different type of public-private partnership approach to delivering an urban regeneration. The case studies of Gloucester and Taunton provide an assessment of regeneration of previously developed land in small to medium towns and cities in the UK, an area that is currently under researched. Each case study provides insight into the challenges faced by all parties in ensuring that public-private partnerships deliver schemes that are profitable and provide benefits to the location.

2.1 BRISTOL HARBOURSIDE

The redevelopment of Bristol Harbourside was a long and complex redevelopment history, dating back to the 1960s with the planned closure of the docks (Priest and Cobb, 1980). The local planners wanted to fill in Bristol's docks and use the land for offices and an urban motorway (*Ibid*, 1980). Following a significant level of public objection and the conversion of existing warehouses into arts and cultural centres this plan was eventually scrapped. This left Bristol with a large area of derelict land to the west of the city centre that was used primarily for city centre parking. In 1993 the local authority, and one of the area's land owners, Bristol City Council formed the Harbourside Sponsors Group with the area's other land owners (Bristol City Council, 1998; Clement, 2010). This body, along with funding from the National Lottery created a separate company called Bristol 2000 who delivered @Bristol science museum, a cinema (now an aquarium) and a public space called Millennium Square (Bristol 2000, 1996).

This left the area to the west of the site open for redevelopment. In February 2003 land owners Bristol City Council, Transco (Gas), Secondsite Properties (now National Grid) and Lloyds Bank signed an agreement

with Crest Nicholson PLC to redevelop this area, following Crest successfully being awarded planning permission on 17 October 2001. This was Crest's third attempt to secure planning permission after the first two were rejected due to fierce public opposition. The development formed a public-private agreement that Crest Nicholson, their subsidiaries and contractors would deliver the regeneration of this site before handing the roads, pavements and opens spaces back into the control of the City Council (see Heurkens, 2012, pp262-290 and Heurkens & Hobma, 2014 for discussions of the Harbourside development). The final development, although slowed down by the financial crash of 2008, was completed in 2014 and at present Crest Nicholson are in negotiations to return their remaining land holdings into the control of Bristol City Council.

2.2 GLOUCESTER QUAYS

The redevelopment of Gloucester Quays differs from Bristol in that Gloucester City Council was not the land owners of the site that was due for redevelopment. The now defunct government quango British Waterways entered into a public private partnership with Peel Developments in 2002 to redevelop the area of Gloucester Docks known as Bakers Quay. Peel Developments wanted to open a new shopping centre on the site. In addition to this Gloucester College relocated to the site and a new Sainsbury's supermarket opened on the western side of the docks.

This redevelopment was aided by the creation of the Gloucester Heritage Urban Regeneraiton Company (for a brief description of what a URC is see McCarthy, 2007, pp40-41) by Gloucester City Council in 2004 as a means of regenerating the city. This was a registered company with a formal status and was wound up at the end of 2014. This partnership, included Gloucestershire County Council, English Partnerships and the South West Regional Development Agency (SWRDA). English Partnerships and SWRDA were government organisations who provided funding and expertise to enable the supporting access infrastructure to be delivered, enabling the shopping centre to open in 2008. Due to the financial crisis of 2008 the regeneration of the housing element of the site has yet to take place, although negotiations are ongoing.

2.3 TAUNTON FIREPOOL

Taunton Firepool is the least developed of the three case study sites and as yet and much of the proposed redevelopment has yet to be realised. The development is a public private partnership between Taunton Deane Borough Council and developers St Modwen and the initial application for planning permission was rejected in August 2016. The primary reasons for rejecting this development were related to the design of the scheme and potential flood risk to the site. Like Bristol and Gloucester the development was delayed by the 2008 financial crisis, which forced a change Taunton Deane Borough Council's plans for the site to be used for office development to a retail led development.

Taunton Deane Borough Council, like Gloucester City Council created an alternative planning body to enhance the regeneration process and Project Taunton was set-up to operate as an arms-length organisation between 2004 and 2011. This was a partnership between the Borough Council, SWRDA and Environment Agency and delivered several infrastructure and flood alleviation schemes prior to being wound up.

2.4 SUMMARY

All three of our cases studies were engaged in redeveloping previously used land and all three developed public-private partnerships to carry out the redevelopment process. However, as can be seen from the brief descriptions above each developed a rather different form of partnership, which reflects past experiences (or lack of) with such activities and decisions taken by the relevant council in response to local conditions as they perceived them. What this highlights is that the term public-private regeneration partnership can cover a range of different organisational forms.

3 UK PLANNING POLICY 1990-PRESENT

UK planning policy can be broken into three distinctive levels: national, regional and local. The following section provides a summary of the regulatory instruments that exist at each level.

3.1 NATIONAL LEGISLATION AND GUIDANCE

The Town and Country Planning Act 1947 provides the basis for the post-1945 planning system in the UK. This document has been supplemented and amended by a range of subsequent pieces of legislation, circulars and other pieces of guidance. The most relevant piece of planning legislation for our case studies is the Town and Country Planning Act, 1990. This act provides an overarching list of regulations to all areas of planning and is supplemented by legislation related to specific areas such heritage and the environment. In addition to acts of parliament there has been several *"guidance"* documents issued from central government. These include general strategic guidance documents relating to planning to the more detailed technical guidance such as Planning Policy Statements (PPS). PPSs formed a comprehensive set of guidance designed to cover all areas of planning to ensure that things such as the local heritage and environment were protected.

Guidance documents are not legally binding but are designed to assist local planning authorities and this means that due to their prescriptive nature the authorities can choose to disregard the guidance if they believe it is not in their best interests to implement it. The Planning and Compulsory Purchase Act 2004 did however state that PPSs should be considered before planning would be granted. PPSs formed an important part of the regulatory framework during the early construction phases of the case study sites, however in 2012 the UK Government introduced the National Planning Policy Framework (NPPF), a 65 page document that replaced all existing PPSs (CLG, 2012).

3.2 REGIONAL GOVERNANCE AND GUIDANCE

Regional Development Agencies (RDAs) played an important role in the regeneration of all three case study sites been their inception in 1999 and their abolition in 2012. In relation to our case studies the relevant RDA was the South West of England Regional Development Agency (SWRDA). Their work was supported by a Regional Assembly (SWRA) and the Government Office of the South West (GOSW). The most relevant document produced by SWRDA during this period was the Regional Economic Strategy, which outlined how SWRDA planned to deliver growth to the whole of the south west of England over the next 30 years. SWRA produced the Regional Spatial Strategy for the South West and although neither document was legally binding, local authorities were required to take them into account when producing their Local Development Frameworks/Plans. This was the case until 2012 when SWRDA was abolished.

Following the abolition of the RDAs the UK Government created another regional organisation, called Local Enterprise Partnerships (LEPs). The LEPs lack the spatial range, scope, funding and land holdings of the RDAs and are formed of voluntary partnerships between local authorities and businesses at a sub-regional level. As such they form a different type of public-private partnership. Through our research they have been described by an interviewee as "bidding vehicles" for central government funding, rather than a facilitator of urban regeneration in a similar way to SWRDA.

3.3 LOCAL DOCUMENTS AND LAWS

Local Authorities were required to create Local Development Frameworks or Plans that set out where planning and development would be supported in the local region. These have been replaced with Core Strategies since 2012 that set out planning expectations to 2028. Local Authorities can also create supplementary planning guidance, specific to their locale that outlines what is likely to be permitted for development in the area. In the case of Gloucester this includes details specific to the protection of historic buildings within the city. Other key documents that need to be considered include conservation plans and local by-laws that outline what activities and development are permitted within the site and surround area.

National Planning legislation allows local authorities, as part of any planning agreement, to request financial contributions by the developer to pay for infrastructure works that enable the development to go ahead. This is called Section 106 (S106) funding. Section 106 refers to the Town and Country Planning Act 1990. This S106 payment is designed to offset the impact of the development and in the three case studies has been used to fund highway infrastructure improvements, public transport infrastructure and flood alleviation works. The S106 payment was replaced by the Community Infrastructure Levy (CIL) in 2011, which was to provide funding that was not specific to the development site, but could be spent anywhere within the local authority's area. In all three of our case studies such agreements were entered into, although it should be noted that private developers often sought to renegotiate these agreements after contracts had been signed (for an overview see Burgess, Monk and Whitehead, 2011).

4 METHODOLOGY

The PARCOUR project explores the contextual and historic basis of each of the three case studies identified above to analyse the elements of the regeneration process that are similar and those that are different within the regulatory framework of the United Kingdom. While the project has developed an overarching theoretical and methodological approach to structure the research, particularly the comparative dimension, (see Atkinson et al, 2015), in relation to the case studies the research uses an inductive grounded theory approach to generate data from interviews with the key people involved in the regeneration process. At present there have been eight interviews conducted in Bristol and Gloucester and six in Taunton. Utilising a 'snowballing approach' each interview has led to the identification of both key people and documentation related to the development. This has led to contact with the key people and requests for access to the documentation, where it is publically available.

The data gathered has been analysed using NVIVO software to identify the key themes and issues that have arisen in each case study. The data has been coded into four primary categories:

- Partnership;
- Governance;
- Planning; and
- Public.

The data in each of these codes has been broken down into further sub-codes to highlight how each development unfolded.

All 22 interviews to date have taken place face-to-face, as this has allowed the interviewer to interpret both the verbal and non-verbal language used within the interview (Denzin, 2009). Each interview was semi-structured to allow the interviewer to retain control of the discussion. This approach also allows the interviewee to bring forward new information that had not been found in the desktop study or in prior interviews, providing new information for the research.

A second phase of interviews will be conducted at a future date to identify the 'missing pieces' within each case study. This stage will include interviews with some of the original interviewees, as well as other people that have been identified through the research.

5 FINDINGS

For all three case studies the interpretation of national legislation and guidance, regional guidance and local documents sit with the planning authority. How this is interpreted and developed varies depending on each site. This section will discuss how this system worked and the issues this created in terms of governance and delivery of schemes that were seen to be in the public interest.

5.1 BRISTOL HARBOURSIDE

As discussed in Section 2.1 it took Crest Nicholson three attempts before they were eventually granted planning permission to redevelop the Harbourside site. This was because the first two applications,

submitted in 1999 and 2000 were rejected due to issues over the quality of the outline planning applications. Objections came from both the public and the Church of England, due to the proximity of the development, in particular a multiplex cinema, to Bristol Cathedral (Combe, 1999). In March 1999 Crest Nicholson were asked by the Council to with draw their application and find a 'different solution' (Onions, 1999). The second application was rejected in January 2000, with the City's Planning, Transport and Development Committee stating:

> *"The development would fail to provide sufficiently a coherent network of well-defined streets and spaces 'appropriate to Bristol city centre and this prominent historic urban context'"* (BCC, 2000).

As part of our interviews, one interviewee who was part of the planning committee in 2000 said that the scheme was rejected as: *"there was no imagination, nor thought or any detail of urban design"*. In this case the planning committee were making their decision based on the Planning Policy Guidance 15 (Planning and the Historic Environment), by stating that the development did not fit within the historic context of Bristol. This also links back to Bristol City Council's own 1998 Planning Brief for the site, which the proposal by Crest Nicholson did not adhere to. In this case the public interest was served by the local planning authority by ensuring a development did not go ahead that did not match the type of development that was expected, both by residents, interest groups and the planning department in Bristol.

5.1.1 HARBOURSIDE SPONSORS GROUP

The Harbourside site had been difficult to redevelop due to the mix of landowners based on the site. In addition the land owned by British Gas (Transco) would need decontaminating to enable the development to take place. Bristol City Council therefore set up a formal agreement with the other land owners in 1993 to promote and facilitate the regeneration of the site (CABE, 2001; Clement, 2010; Huerkens et al., 2015). Each member of the Sponsors Group signed a non-legally binding agreement called the Harbourside Accord, where each party agreed to work together and take their profits out of the scheme at the end of the redevelopment process. The Harbourside Sponsors Group provides an example of an important governance arrangement that enabled the redevelopment process to happen at this site. Bristol City Council had two roles within the redevelopment process, both as the planning authority and the land owner. This meant that there were competing agendas within the Council in terms of delivering the scheme. The member of the planning committee admitted: *"there was a lot of pressure to approve the scheme",* from within the city council. The head of the Planning committee, Cllr Helen Holland, had to step aside from this role, due to a conflict of interest in the planning application due to her role as part of the Sponsors Group. Nevertheless, the planning committee stood firm and decided to reject a scheme that they felt was wrong for the city.

5.1.2 REGIONAL SUPPORT

The Harbourside Sponsors Group were very supportive of Crest's application and in October 1999 wrote to the local paper, the Bristol Evening Post, outlining the benefits that would be brought forward if this development were to take place. One of the reasons they highlighted for supporting the scheme was that the development would bring forward £18.5m of funding from SWRDA (Evening Post, 1999). It is through funding, rather than strategic policy that the regional support was the strongest, as this funding would be used to enable the site to be decontaminated and pay for the infrastructure links for the scheme. This provides an example of how regional governance provided a powerful ally to, and catalyst for, local authorities wishing to bring regeneration forward. It is doubtful whether at least two of the projects could have progressed without this external (financial) support.

5.1.3 DELIVERING THE PUBLIC GOOD

As discussed in Section 2.1, Crest Nicholson were eventually successful with their third planning application. This is because they completely redesigned their masterplan for the site. This was in part due to the extensive level of public consultation that was undertaken between the 2nd and 3rd applications, where Crest Nicholson and the City Council set up the Canon's Marsh Consultative Group (CMCG) that

included consultation with all the key stakeholders at the site (Bassett et al., 2002). The inclusion of these groups within CMCG meant that many of the issues, such as sight lines between the harbourside and the cathedral were retained in the masterplan. However, several of the interviewees were dismissive of the CMCG approach, with one interviewee calling it "*PR dressed as consultation*". One of the key members of the Sponsors Group also admitted that the CMCG was a means of *"suppressing the loud noise"* from the protest groups, enabling the development to move forward. Despite this the protesters felt their concerns were listened to and the scheme was eventually given planning consent in 2001.

There were, however, several questions on whether the scheme delivered a 'public good'. In general all interviewees agreed that the site was an improvement on the derelict site and car park that was there before, but many felt that it could have been *"so much better"*. Despite being approved for outline planning permission several of the buildings constructed during the development have been criticised for their quality in terms of of both their construction and design. The Civic Society also continued to challenge each building through the planning process to ensure that they were delivered to a higher standard than was proposed by the developer. With the completion of the final building in 2014, the final public space was opened with the Millennium Mile providing a path through the site from the SS Great Britain to the south of the site, through to the centre of Bristol. In this sense the area has therefore provided a public good in terms of creating a space for people to use and access around the whole of Bristol Harbour.

5.2 GLOUCESTER QUAYS

The redevelopment of Gloucester Quays differed from Bristol, as discussed in section 2.2 the City Council were not the land owners. This meant that the public-private partnership was created between a non-departmental government organization British Waterways and the developers, Peel Holdings. Both parties came to a formal agreement to develop their land together in 2002 and this agreement stayed in place until 2012 when the UK government abolished British Waterways and they became a charitable trust called the Canal and Rivers Trust (CRT). At this point Peel Holdings purchased the remaining development land at the site from CRT. The Gloucester Quays development plan included a shopping centre, a new campus for Gloucester College, housing, a supermarket and a new 4* hotel for Gloucester.

5.2.1 PLANNING APPLICATION

In the early 2000s the planning system in Gloucester was seen to be in a 'log jam' with little activity taking place. The College had identified a site within the Peel/British Waterways site to relocate to, but British Waterways were not willing to release the land unless they received planning consent for a shopping centre. The college had been awarded £30m towards the costs of the relocation by the Department for Education and they had secured the sale of their existing site in the city centre to SWRDA, but they were at risk of losing both if an agreement was not met over how the development was to proceed.

In 2003 all the key parties were summoned to Westminster to agree to clear the 'blockages' and allow the development to go ahead. Within the meeting it was agreed that British Waterways would release the land and that Gloucester City Council would take Peel/British Waterways planning application to the full council, instead of the planning committee, to ensure that the decision was given the highest priority. British Waterways were criticised by one interviewee for being: "*too commercially minded and not considering the public good*", when it came to initially preventing the development of the college from going ahead. Planning was eventually granted and the shopping centre opened in 2008.

5.2.2 GLOUCESTER HERITAGE URBAN REGENERATION COMPANY

Due to the issues associated with the redevelopment of their own land, Gloucester City Council, along with partnering organisations set up the Gloucester Heritage Urban Regeneration Company (GHURC) in 2004. This comprised of four main government bodies: Gloucester City Council, Gloucestershire County Council, SWRDA and English Partnerships. Each of these bodies provided funding for GHURC, giving it a budget of £750,000 per annum to facilitate regeneration. The GHURC proved to be a useful vehicle in enabling funding from both SWRDA and English Partnerships, as well as Section 106 funding, to be invested into new transport infrastructure. This included the construction of the High Orchard Bridge, which provided a

link to the shopping centre car parks. In addition GHURC invested £7m in enhancing the links between Gloucester Quays shopping centre and Gloucester city centre.

The GHURC was incredibly inclusive in terms of engagement with both the business community and local community groups, often giving them sight of confidential documents prior to their release. This enabled a dialogue to be open between the community and the decision makers. By doing this GHURC was able to overcome both any local opposition (particularly from shop owners in the city centre) and to break the previously existing 'log-jam'/inertia that had surrounded the redevelopment of the area and the city more generally.

5.2.3 DELIVERING A PUBLIC GOOD

Like Bristol, the Gloucester Quays redevelopment saw the enhancement of a derelict site close to the city centre. Due to a combination of the consultation process and the mixed use development that was delivered, there has been little or no public criticism of the development. This may be because of low expectations, with many interviewees saying that prior to the shopping centre being completed many residents commented: *"We'll believe it when we see it".* The main criticisms of the redevelopment came from the existing businesses within the city centre and a local covenant was put in place that stated no existing shops would be able to relocate to the site. The shopping centre therefore became an 'outlet centre' rather than a new city centre. Also access from the city centre to the development was put in place through a range of improvements in public connectivity. In terms of the public good, all interviewees were very happy with what has been provided at the site to date. The college has been successful and expanded the number of students, creating footfall in the area, and the shops have created a new destination in Gloucester that was a 'no go zone' prior to 2004. The development has therefore been seen as a success.

5.3 TAUNTON FIREPOOL

Taunton Firepool, has to date been less successful than the other two sites. The land was a mix of ownership between National Rail, who owned the land now known as Firepool Lock, and Taunton Deane Borough Council, who own the former cattle market site. It is more complex than the other two case studies given that it covers several different sites, albeit in the same area but not physically connected. At present Crest Nicholson are in the process of building out the Firepool Lock site, whilst St Modwen's proposal for the cattle market site was rejected in August 2016.

5.3.1 PLANNING APPLICATIONS

National Rail sold their former goods yards (Firepool Lock) to Abbey Manor Developments, who subsequently sold the land to Crest Nicholson. In addition social housing developers Knightstone Housing developed 200 affordable homes on the site, with a £3.5m grant from the Homes and Communites Agency (formerly English Partnerships) in 2012 (BBC, 2012). This provides a public good in terms of the quality and availability of social housing in Taunton.

The second site has been more problematic to deliver. The Cattle market closed in 2001 and Taunton Deane Borough Council sought to redevelop it. The initial plans were to use the site to construct offices, but this plan was unsuccessful as Taunton Deane Borough Council were unable to get an 'anchor' organistion to agree to be located on the site. This meant that St Modwen's second application was based on providing retail on the site, but again this application was rejected. The issues were for similar reasons to both Bristol and Gloucester, in that the aesthetic quality of the design was considered to be poor, with one interviewee describing it as a: *"wriggly tin roof development"*, and the fear that it would take business away from the city centre. The second issue highlighted was the potential for flooding, despite extensive flood alleviation work being delivered by Project Taunton.

5.3.2 PROJECT TAUNTON

Project Taunton was set up as an arms-length organisation by Taunton Deane Borough Council, SWRDA and the Environment Agency in 2004. Project Taunton was described by one interviewee as a *"URC lite"*, as the organization was designed to facilitate development, but without the bureaucratic structure or funding levels of the GHURC in Gloucester. Project Taunton was successful in delivering flood alleviation through the development of Long View Meadow, an area that was designed to capture flood water and prevent the town centre from flooding. Project Taunton failed however to deliver the redevelopment of the cattle market site, primarily due to the global economic downturn reducing the demand in office space in the town.

5.3.3 DELIVERING THE PUBLIC GOOD

In terms of delivering the public good, it is still uncertain what will happen to the cattle market site. The development of Firepool Lock does provide, both social housing and a new road link, although that is yet to open due to a dispute between the County Council and their contractor who constructed the new road. The delivery of the flood alleviation project constitutes a public good, as the land used forms a public park, when it is not flooded, and allows the redevelopment to take place, should St Modwen be successful in being awarded planning permission. It is clear from this application that the planning department at Taunton Deane Borough Council have acted in accordance with planning guidance, both on a national level, and locally in respect to ensuring that the cattle market site delivers a scheme that provides a benefit to the community.

6 DISCUSSION AND CONCLUSION

It is important to note that we have only conducted the first phase of our fieldwork vis-à-vis the case studies and at this stage it is not possible to draw any firm conclusions regarding the issues we are investigating. While we have had access to many of the key individuals (for interviews) and documents a considerable amount of work remains to be done. In particular the private sector developers have been the most difficult to meet with. Moreover, to date we have had limited access to the contracts signed between the public and private sectors (only in the Bristol case have we obtained the contract). Nevertheless a number of things have begun to emerge.

Each local authority has sought to address the development of previously used land in their area in somewhat different ways. As noted above each developed different approaches to the partnership arrangements they put in place. For instance in the case of Gloucester a formal body, the GHURC was set up, while in Taunton an ad hoc arms-length body, Project Taunton, was set up. While in the Bristol case, which took place over a much more extended time period than was the case with the other two, a range of bodies played a role, some 'informal' role as with the Harbourside Sponsors Group, which then set up Bristol 2000 to deliver aspects of the redevelopment. Subsequently remaining elements of the development were delivered through a variety of ad hoc arrangements involving the City Council and the developer.

In part these different 'governance arrangements' reflected past experiences (or lack of) with regeneration and the local politics of each town/council. In the cases of Bristol and Taunton they also had to contend with the fact that the local authorities were significant land-owners and there was a potential conflict of interest that needed to be addressed. Although interestingly it was Gloucester City Council, which owned none of the relevant land, that decided to go for the most formal arrangement by setting up a URC. Bristol did not do this, even though the option was available post-2000, perhaps reflecting the council's earlier hostility to the setting up of an Urban Development Corporation and the fact that a developer had been selected before the option to set up a URC was available. In the case of Taunton Project Taunton rather than a URC due to a lower level of funding being made available. The idea was to take the best bits of a URC and create a dynamic organisation that could *"talk to businesses"* and not be seen as an extension of the Borough Council.

The developments also reflected what the relevant planning committees and councils hoped to achieve through the development process and how they chose to interpret relevant national legislation. This refers

not simply to planning legislation but also other environmental and heritage legislation. In the case of the latter two it became clear during the course of our initial work that in all three cases they set certain 'limits' (i.e. acted as a form of regulation) on the developments and what could (and could not) be done. In particular the legislation related to flood risk was a major limitation on the Taunton project, and this required significant public sector investment to ensure the sites were able to meet relevant standards, but this applied, albeit to a lesser degree, to the other two sites as they each were structured around water areas.

What is clear from our initial research is that national bodies, notably English Partnerships, played an important role in terms of providing resources for important infrastructure work (e.g. site remediation) essential to the development of relevant sites. Similarly the regional level, SWRDA, was significant in being able to focus significant resources on the sites, bring people together and where necessary 'knock heads' together. The abolition of the regional level would appear to be a serious loss in terms of current and future developments as LEPs lack the resources and powers to fill the gap left by the abolition of the RDAs. In addition key individuals (or small groups) also played a significant role in bring key actors together, mediating disagreements and addressing uncertainties at critical points in the development process.

One respondent noted that other organisations such as the Confederation of British Industry (CBI) were organized on a regional level and this meant that the staff at each organisation knew each other in a working capacity making it easier to bring proposals forward. The situation is now fragmented and this means that there is a lack of spatial planning undertaken to ensure that schemes join together between sub-regions.

The preceding paragraph points to a wider issue related not just to the termination of the experiment with regional government but also the abandonment of any pretense of engaging in strategic spatial planning (Baker and Wong, 2013). The LEPs may, in some places, offer a partial replacement in terms of 'strategic spatial planning from below' but as Baker and Wong (ibid, p99) argue "The problem is that this may only happen in a few isolated areas, producing pockets of surviving strategic thinking in a surrounding strategic vacuum.". In other word any 'strategic' thinking about planning and (economic) development will take place in a fragmented and isolated manner, arguably accentuating competition between locales and creating yet more 'winners and losers'. Moreover, LEPs are unlikely to take into account issues such as environmental impact(s) and social cohesion.

In all three areas there were either no, or relatively, small numbers of people living there, so this removed many obstacles to the developments. However, there were often significant 'spill overs' from the proposed developments that did elicit, often strong, objections from within the wider city or adjacent areas affected by the developments. In the Bristol case much of the debate was around the impacts on sight lines across the city and the design quality/impacts of the proposed development. In Gloucester the main concern was the impact on existing city centre businesses. While in Taunton similar objections were present along with concerns about the design quality of what was (is being) proposed and the impacts of infrastructure provision (e.g. a road associated with the development).

It also appears that there have been 'renegotiations' around exactly what the developers were to provide in terms of agreements linked to S106, although the full extent of these renegotiations remain unclear at the moment. But this is very much in line with what the literature has highlighted elsewhere (see Burgess, Monk and Whitehead, 2011). Factors such as the economic crisis in 2008 meant that developers needed to renegotiate S106 agreements to ensure they were able to continue the regeneration process. Financial pressures meant that many developers went out of business and this meant that local authorities had to make tough decisions about whether the development should continue without the S106 agreement, or remain unfinished.

Perhaps the most difficult issue to address is the extent to which the developments have been able to deliver projects that are in the 'public interest' or enhance 'public good' (see Atkinson, 2015). Setting aside the tricky issue of defining what these two terms mean theoretically and in practice, in a somewhat simplistic manner one can argue that in the cases of Bristol and Gloucester areas that were previously derelict or used for purposes such as car parking have been regenerated and made accessible to the people of each city. Site visits reveal areas that are now being used by people and they are now undoubtedly vibrant places that people visit and engage in a range of relevant leisure, shopping,

educational and commercial activities. In the Gloucester case there appears to be general satisfaction with the development, although this perhaps reflects a starting point of 'low aspirations'/disbelief that anything would happen. While in Bristol opinions are somewhat more divided and nuanced with a number of our interviewees feeling that more could have been achieved, particularly in terms of the overall design quality of the area and of individual buildings. Concern was expressed over the use made of several of the buildings in terms of their single-use (e.g. as offices) rather than the original mixed-use designation (e.g. the inclusion of more cafes and other leisure facilities), it was felt that more mixed-use of some buildings would have drawn more people into parts of the site and enhanced the presence and flows of people. It also has to be kept in mind that the redevelopment of Bristol site took place over an extended period of time and that there were considerable external changes (e.g. within the national economy post-2008) and internal changes within the city that affected the nature and pace of the development. The Taunton case is rather different, partly because of its fragmented nature and also because of the fact it is an on-going process. Nevertheless, there is a general agreement that these sites need to be brought back into use, the debates are about 'what type(s)' of use, the design quality of what is being proposed and the impacts on the existing city centre.

More generally we need to situate our case studies within debates over the wider planning system and forms of governance. As is well known the wider context in which the UK operates is seen as a 'neo-liberal regime' which has had significant impacts on both planning and governance at a variety of different scales. However, this overarching notion of neo-liberalism has increasing been recognised as too general and lacking a recognition that there are varieties of neo-liberalism. Moreover, it has been acknowledged that even within a particular country there have been 'phases of neo-liberalism'. For instance Allmendinger and Haughton (2014) have sought to distinguish between the 'roll-back' version of the 1980s, the 'roll-out' variety of the 1990s and 2000s. Our case studies largely fall in what they term the 'roll-out' phase which is characterized by "…a variety of market supportive state forms and modes of governance." (ibid, p11). Arguably the case studies we have considered exhibit examples of how local, regional and national bodies sought to support and facilitate market based developments in different ways related to local contexts. In addition they go on to point out that:

This approach also placed a growing emphasis on partnerships as a means of promoting public and private sector coordination and improved policy integration. In this new accommodation, the state's reworked role was not simply to de-regulate, divest, and open up markets. The role of government was also to reregulate and where necessary invest in ways that reconcile a continuing pro-growth agenda with wider societal issues, not least growing concern about environment and citizenship. (ibid, p12).

We can also detect concerns with these elements in our case studies as each of them has, in different ways, sought to address these wider issues. Part of the problem, however, is that we also need to consider what Taşan-Kok and Korthals Altes (2012) have referred to as the 'capacity to act' and Servillo, Atkinson and Russo (2012) have termed the 'mobilization process'. In both cases the authors are referring to the ability of (local) governance arrangements or 'systems' to get things done. As Servillo, Atkinson and Russo (2012, p.359) point out:

This requires the existence of links, often articulated through organizational arrangements (for example, partnerships) between stakeholders, local authorities, agencies and citizens, in order to identify, create and mobilize assets and develop policies to achieve specific…strategies.

In each of the case studies our local authorities and the associated partnerships they have developed displayed differential capacities to act by mobilizing assets, developing relevant strategies and putting them into practice. Indeed, it is clear that without 'external support' from regional and national bodies they were unlikely to have been able to push the development process along.

In terms of the governance issue and our concern to address the argument that contemporary regeneration processes and their associated public-private partnerships involve complex legal and regulatory activities that frequently involve forms of privatisation which may be subject to 'governance through detail' (Raco, 2012; 2013) articulated through 'government by contract' (van der Veen and Korthals Altes, 2011) or 'planning by contract' and (Raco, 2012; 2013) we have as yet little to say that is concrete. However, our initial work in scoping out the various institutional/organisational relationship in which our partnerships were embedded revealed a bewilderingly complex web of relationship involving national, local, regional, governmental, quasi-governmental, private (for profit) and non-profit bodies. When

mapped out these relationships are most aptly described as resembling ‘a bowl of spaghetti’. Such a situation is hardly conducive to transparency and accountability, making it difficult to identify where decisions are taken and who can be held to account for them.

More generally the forms of governance we have observed in our case studies strongly resemble what Levi-Faur (2011) has described as hybrid forms of governance along with hydridized forms of regulation (Levi-Faur, 2010) that involve a range of regulatory forms. He argues:

We need to conceptualize a world order where governance is increasingly a hybrid of different systems of regulatory control; where statist regulation co-evolves with civil regulation; national regulation expands with international and global regulation; private regulation coevolves and expands with public regulation; business regulation co-evolves with social regulation; voluntary regulations expand with coercive ones; and the market itself is used or mobilized as a regulatory mechanism. (Levi-Faur, 2011, p.17)

Disentangling the various forms of regulation (not least that exercised by the planning system) and their relationship will be a major task of our future work if we are to understand how governing and planning by contract operates in our case studies.

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ID 1495 | THE GAP BETWEEN PLANNING AND REALITY: THE EVALUATION OF COMMERCIAL LAND USE PLANNING IMPLEMENTATION IN KAOHSIUNG CITY, TAIWAN

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ABSTRACT: The urban planning system in Taiwan has followed the America and Japan systems aiming at controlling and directing private development rights. The statutory plan, the land use control measures as well as zoning ordinances are the main tools for the conformance-oriented plan. To make the conformity, the land development rights tend to be assigned in advanced along with the collective strategies of zoning plans. In most high-density cities in Taiwan, such land use control and management tools are considered highly important for better development orders and environmental quality. Nevertheless, the overall zoning ordinance implementation in Taiwan is considered weak for the two following main reasons. First, the actual urban development of Taiwan could date back to Qing dynasty and the modern urban planning system has been implemented from 1964. Second, to cope with the existing urban form and speedy population increase, mixed land use was widely adopted in the zoning ordinance. As a result, a variety of the types of land use seem to be acceptable in different zones. For instance, residential buildings are allowed to be in commercial districts as well as most service uses are allowed to be in residential districts. Furthermore, property markets, political influences, and citizens' expectations are three major factors on how developments are actually carried out. As a result, in reality, many land development events might, on one hand, comply with the zoning ordinance. Yet, the actual use afterwards fails to comply with the master plan and planning vision on the other hand. Take Kaohsiung city for an example, approximate 35% of commercial districts in the downtown area are occupied by pure high-end residential developments. It further indicates that the zoning plan in Taiwan has rather weak control power to the actual development.

KEYWORDS: conformance, statutory plan, commercial districts, zoning ordinance

1 INTRODUCTION

The history of Taiwanese planning system has been existed for about 100 years, which has been constantly influenced by two major countries, Japan and America, due to the historical events. According to some characters in planning, such as land use control measures, zoning ordinances as well as statutory plan etc., planning system in Taiwan is regarded as conformance-oriented plan.

However, although Taiwan has built the zoning ordinances, they are weak because of two main reasons. The first is that the existence of cities is longer than planning, and the second is that the land use control in Taiwan tend to be on negative listings, which means the specific land use would be forbidden to some explicit and strict degree. Hence, a variety of land use types are all permitted in different zones. Take the commercial districts in Kaohsiung city, for example, almost 35 per cent of them are high-end residential development with no commercial facilities, which is one of the most famous issues for legal non-conformance.

Owing to the lack of investigation, we cannot know actual land use activities. Therefore, I will focus on a commercial district and take Lingya District, which is located in the central part of Kaohsiung City, as a case study to figure out how the real land use is performed in Taiwanese city. After excluding the underdeveloped area (such as earlier buildings, vacant lands, parking lot, etc.), most of the legal non-conformance structures are religious buildings, churches, temples, for example, as well as the popular issue mentioned above: the high-end residential buildings. Through this study, I want to propose a chance to reexamine the land use system in Taiwan, and to respond to the future amendment of the zoning ordinance in Taiwan.

2 PLANNING IMPLEMENTATION: CONFORMANCE VERSUS PERFORMANCE

According to the concept advocated by Andreas Faludi in 1989, there are two types of plan, which are 'Project plans' and 'Strategic plans'. The former belongs to blue print, and the determinate effect must conform to the specifications. As for the latter, they belong to the projects that are coordinated by multitude actors. They should be allowed to have negotiations and the future vision always remains open (Andreas Faludi, 2000). With these two sorts of plan types, they separately reflect two major planning systems — Conformance and Performance-oriented planning— in contemporary planning mainstream.

In conforming planning, it matches the forms, manners, or characters to develop its project, whereas in performing planning, it shapes the claims, promises, or requests through the plan (Umberto Janin Rivolin, 2008). With the frontal description, project plans will connect to the conformance-oriented planning, and strategic plans prefer to link to the other, performance-oriented planning. However, performance plan cannot apply to planning systems themselves and to planning as a whole (Umberto Janin Rivolin, 2008), so performance plans will also involve some concepts of project plans to illustrate the plan.

3 THE HISTORY OF TAIWANESE PLANNING SYSTEM

The construct of Taiwanese urban planning system was basically produced during the era of Japanese reign, which is the year from 1895 to 1945. With the different goals the Japanese government wanted to approach, the history of Taiwanese urban planning could be divided into four episodes: (1) basic investigation and related rule announcement from 1895 to 1900 (2) the practice of the spatial plan in Taipei and Taichung cities as well as the innovation of Taiwanese planning framework (3) extension and correction of the planning areas and the production of the village-scaled plans before the World War Two (WWII) (4) constant revisions the existing plans until the end of the war (Shyh-Meng Huang, 1985).

In general, the plan produced in these years is called 'City renovating (市區改正計画)', and it was focused on existing village as the boundary of the plan. With the lack of future vision and existing distribution of buildings, the plan in every town was revised again and again (See figure 1). The situation didn't stopped until the 1930s when the dominator realized the important of comprehensive plans.

After the WWII, Republic of China (ROC) got the sovereignty of Taiwan. As a newbie for ROC, Taiwan needed much more attention from ROC to reform the rules, which were handed down by Japan. However, the Chinese Civil War broke out right after the end of the WWII, and it made ROC have no idea to figure out the method to revise the land managing policy. Therefore, at the beginning of the ROC governance, Taiwan provincial government used the pre-existed rules formulated by Japanese (Chun-ping Chiu & Chyuan-Jenq Shiau, 2015).

Because of the failure of ROC, Chiang Kai-shek led the militaries and government to Taiwan and promulgated the Taiwan martial law. With the practice of the martial law, the territorial managing policies as well as the statutory plans were manipulated by the central government. With the industrialization and urban population soaring, urban planning in Taiwan was simplified as a population-oriented land use plan, and every relative rule was legislated by the government. What the planners did were to follow the rule step by step: proposing the need by the spatial and social-economic analysis, then arranging the land use distribution. During the period of the execution of the martial law, the planners were controlled by politicians and related investors, so most of the plans made by the planners suffered the political kidnapping (Tsu-Lung Chou, 2004).

With this sort of constraint, almost every plan was planned by these stakeholders, and what they wanted to achieve was to blueprint everywhere. Besides, what the stakeholders wanted was always focused on the benefits they might get, which was not the perfect idea for the planners. It made many statutory land use differ from what the planners initially expected.

After Taiwan canceled the martial law, the planning system has become more flexible than it used to be, and some NGOs or charities gradually get the right to participate the urban planning. However, every item about planning is still stuck in the related law, and the power of decision-making is also controlled by the government (Tsu-Lung Chou, 2004). Basically, the government would listen to every comment from every stakeholder, but their decisions only pay attention to the development of land use, ignoring the facts about

the real land use behavior as well as the population decrease. Hence, the power of decision-making about urban planning nowadays still not totally belongs to all citizens.

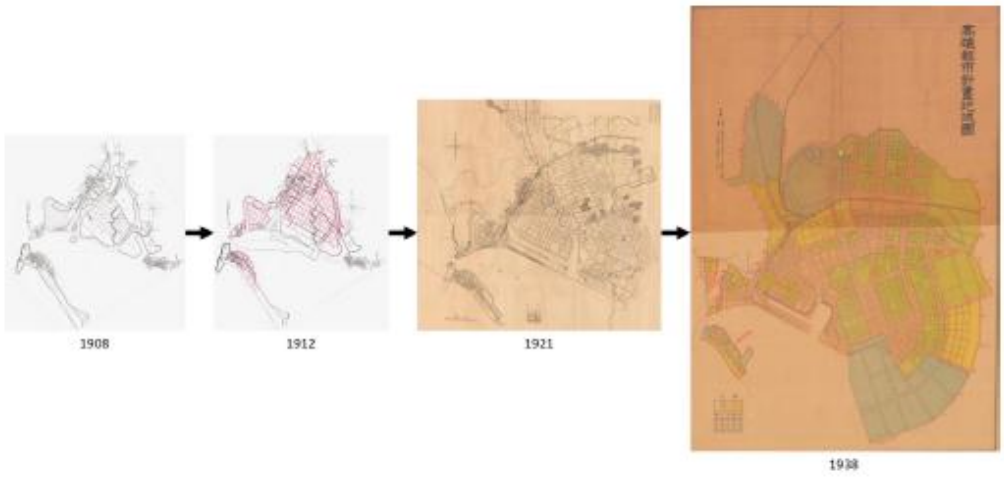

Figure 1-Boundary of Kaohsiung City during Japanese rule (1895~1945)

4 THE TENDENCY OF TAIWANESE PLANNING SYSTEM

Initially, there was no specific vision in Taiwanese spatial plans. However, they were then exhibited in the blueprint planning, and everything the planner made focuses on determinate goal —— improving the public health. With the blueprint planning, it manipulated the inanimate objects in immobile environment, but the consequence we originally expect might not happen. According to the process of the evolution of Taiwanese spatial plans, it is clear to know the plans were revised and adopted continually (See Table 1). In this pattern, Taiwanese planning system was close to the conformance-oriented planning.

Year	Location	Year	Location
1900	Downtown of Taipei and Taichung	1917	Zhushan
1905	**Extension of Taipei and Hsinchu**	1921	Yuli, **extension of Tainan, Chiayi, Kaohsiung, Keelung, and Taichung**
1906	Changhua and Chiayi	1922	Xingang
1907	Keelung	1924	Douliu
1908	Kaohsiung	1929	**Extension of Tainan**
1910	Hualien port	1931	Matou

Year	Location	Year	Location
1911	**Extension of Tainan and Taichung**	1932	Yilan, **extension of Taipei**
1912	Shoushan, Beidou, Nantou, Magong, Dax, **extension of Kaohsiung**	1934	Luodong, Dajia, **extension of Hualien port (Milun)**
1913	Pingtung, Beigang, Taitung, **extension of Chiayi**	1935	Lukang, Dounan, Caoshan, **extension of Taichung**
1914	Puli	1936	Yuanlin, **extension of Kaohsiung and Beigang**
1915	Fenglin	1937	Hsiluo, Rnifang, Yuanli, Tongxiao, Xinying, Yanshui, Jiali, Xnejia, **extension of Pingdung and Keelung**
1916	**Extension of Hualien port**, Puzi	1938	Qishan, Pan-Chiao, Zhongli, Gangshan, Fengshan, **extension of Hsinchu, Changhua, Zhudong, Taidung, Kaohsiung, Hualien port**

Table 1-List of Taiwan city plan
Source: Shyh-Meng Huang, 1985, Study of the History of Taiwanese Urban Planning, 1895-1945

After the Japan lose the WWII, the ROC government used the previous planning system in the beginning because of the Chinese Civil War. The planning rule never changed until 1949, the time that Chiang Kai-shek moved to Taiwan, the government practiced the 'Urban Panning Law' in (Tsu-Lung Chou, 2004). With the American financial support, the development of Taiwanese planning system began to be influenced by the other nation, America. Combining the original context and the development after WWII, it is easy to figure out that the planning system in Taiwan now still belongs to conformance-oriented planning.

5 THE ZONING AND LAND USE CONTROL IN TAIWAN

The urban planning in Taiwan is constructed from rigorous zoning system, which contains general zoning constrain and land use density control for each kind of zoning. In general, zoning in each master plan includes residential districts, commercial districts, industrial districts, agricultural districts, etc., every zoning has its own rules for land use control whose images are described in article 32 to 41 of Urban Planning Law. Take the commercial districts for example, according to the article 35, Commercial districts should be "demarcated with promotion of business development taken into consideration. The use of land and buildings may not impede the business activities in such areas."

Based on these articles, every local government has the right to plan their own list to practice the actual land use in different zoning. In general, the lists in every administration can be separated into two systems: positive and negative listings. The former draw up every acceptable type of land use on the lists. That means when a specific type of land does not show up on that, this sort of land use is forbidden. As for the latter, it is totally contrary to the previous. They list the banned categories to avoid citizen developing. Overall, compared to each other, the former are stricter than the latter, and the former may help citizens to keep a high-quality life (Yi-jung Li, 2005).

However, most of the planning districts in Taiwan are negative listings. Only some special district or new town plans use positive one in order to control and limit land use for specific development. Hence, land use control in Taiwan is in accordance with the regulations but not the suitable development.

Except for the classification about the direction of land use, every district has their own subdivision in order to adapt to the local demand as well as achieve the goal of developing density and control (Nan-yuan, Huang, Fang-zi, He, 1979). The standard of these sorts varies from place to place; however, no matter how local government sets the criteria, it follows the unified rules formulated by central government, and population density, road width, area of public utilities, etc. are all included. (Nan-yuan Huang, Fang-zi He, 1979, Keh-Wann Tzou et al., 1990). In general, planners adjust the land use density in order to guide the trend of population growth, besides, the spatial arrangement will rely on the different road width: blocks next to wider loads would be allowed to have higher development density whereas those next to narrower roads has lower, in contrast. At the same time, in order to prevent citizens from using limited public utilities, the setting of land use density will be controlled by the supply of public spaces.

With these two kinds of rules, which includes zoning and density control, land use system would be regulated by not only developing form but also the suitable density. The former can define the direction of the land use while the latter can control the density, which depends on the condition of each block.

6 CLASSIFICATION OF NON-CONFORMANCE IN LAND USE

As the saying by Laurian et al. (2004), a methodology designed to be used by practitioners to evaluate their plans should be based on the way they use those plans. Therefore, the land use implementation in Taiwan should be checked by conformance evaluation. With the examination by evaluation, it is easier to not only figure out the degree of decisions handed down in land-use cases (Carolyn G. Loh, 2011) but also check the progress and the goal that the government sets for the city.

According to the paper from Carolyn G. Loh (2011), she separated the non-conformities into three types: (A) "land use is agriculture or a natural area, but the land is planned for a more intensive use", (B) "the presence of a 'grandfathered' use in an area planned for a different use", and (C) "land-use decisions have

been made, which directly contradicts the plan's future land-use vision". She thought the most disputed one is the last item which are in conflict with the master plan.

However, in the cases in Taiwan, the last type Loh figured out is not the most serious one, because it may get punished by government if they are willing to conduct the searching. Although the planning system in Taiwan is close to the conformance plan, it just means that the plans are blueprint and they are regulated by government with laws. The range of acceptable land use is very wide in every kind of land use, and most of them belong to 'Negative listings', which means that the government has set the forbidden land use for every urban planning division. As long as the project is not noted on this list, it is acceptable for the government.

Despite the categories set by Carolyn G. Loh, I will add one new type: land-use decisions have been made that conform the land-use, but contradict plan's future vision. According to the development in Taiwan, political power was extremely strong, and it interfered Taiwanese planning system in some degree.

Take industrial and residential districts for example, the government encouraged people to combine working to living in the 1970s, which led many legal factories located at residential district, at the same time, residences were also accepted in industrial district (Kuo-Jung Tang et al.,2011). With the strong demand of living space, many building cases focus on industrial districts for high-rise housing because of the higher floor area ratio (Kuo-Jung Tang et al.,2011). In this case, people who want to build firms always get obstacles and difficulty because the industrial districts are full of residences, and the ridiculous thing is that they are legitimate.

Therefore, I will adapt the concept of the former three categories discussed by Dr. Loh to reflect the real condition in Taiwan, and set a new type (Type D) to represent the condition I have mentioned above. In non-conformity (Type A), Loh's idea is basically acceptable in Taiwan, but in the catalog of land use, there are some additional land uses that are close to this concept, including barren land, vacant lot, parking lot, etc.. Therefore, I tend to transfer her explanation into 'land use is agriculture, natural area or some similar low-density use, but the land is planned for a more intensive use'. As for non-conformity (Type B), this type was considered to be an actual land use, but it is originated from ancestral construction, and it might not match contemporary zoning. Combine this concept with Taiwanese density control, I will consider some properties whose floor area ratio are quite lower than the regulation whether they have commercial activities or not. The type C, which is outright non-conformity, was thought of as 'land-use decisions have been made that directly contradict the plan's future land-use map', and I will use this concept directly. The last, the new type of non-conformity I add (Type D) was seen as 'land-use decisions conform to the rule of land-use, but does not match the picture of future land-use'. I will emphasize the actual influence on surrounding space caused by this kind of land use, trying to analysis the result the type D may lead to.

7 CASE STUDY: NON-CONFORMANCE IN THE COMMERCIAL LAND USE IN KAOHSIUNG CITY

According to the definition of commercial districts in Urban Planning Law that I have mentioned above, it informs everyone that as long as people use the land with no interference in commercial activity, it would be acceptable. Besides, based on the Enforcement Rules for the Urban Planning Rule (Kaohsiung), it lists negative listings for every kind of land use. On this list, commercial districts are forbidden to be developed as the industrial districts. Whatever on the list are about manufacturers, cleaning industry, polluting activities, firecrackers, etc., and all of them are widely known as impossible activities in commercial districts. With the rules that normal people would hardly break, their actual land use is always permitted legally.

Take Lingya District as an example, it is located in the downtown of Kaohsiung City, and about 25 per cent of land (the land use for road are excluded) belongs to commercial districts (See Figure 2). With the high percentage of commercial district, their actual use becomes relatively important. Once they do not conform, it also presents that the zoning in this administrative area is fail.

According to the Enforcement Rules for the Urban Planning Rule (Kaohsiung), the commercial districts are separated into different groups based on different floor area ratio (See Table 2). In the cases of Lingya District, most of the commercial districts along the main streets are category 3, 4 or 5 commercial districts

and the density decrease from category 4 commercial districts to 2 with the increase of the distance of the main road.

Type	Building Coverage Ratio (%)	Floor Area Ratio (%)
Category 1 commercial district	40	240
Category 2 commercial district	50	300
Category 3 commercial district	60	490
Category 4 commercial district	60	630
Category 5 commercial district	70	840
Other commercial districts	80	Depends on the rules of each plan

Table 2-List of building coverage and floor area ratio for commercial district in Kaohsiung City plan
Source: Enforcement Rules for the Urban Planning Rule (Kaohsiung)

In general, type A in Lingya District is not a big problem. Most of them now are used for private parking lot. That kind of underdeveloped land use provides some space of infrastructure to sooth the demand of parking, which is helpful for the development of the commerce.

Based on the previous concept of the classification, type B gets the highest percentage. Most of them were constructed as housing, and some of them also serve as business facilities now. Their building type, in general, is a row house with about one to three floors. Besides, according to the observation of their actual construct area, they are not suitable for building coverage ratio as well as floor area ratio, which means that

the housing was well-constructed earlier than the implement of the master plan in Lingya district. Combining the inference above and the additional information received by their appearance, such as early typical design and construct method at early stage, it is acceptable to deduct that these buildings, which are considered as type B, are in keeping with the definition mentioned above.

With the negative listings, type C, in fact, is just a few in Lingya District. However, the land use is rationally non-conform, but legally conform, which is considered to be type D accounts for a large proportion. Most of them were constructed as the high-end residential buildings with no commercial facilities. Basically they did not violate the article of Urban Planning Law mentioned above, but once this sort of land use built gathers, they will block the connectability of the commercial activity, which impedes the regulation mentioned in article 35 of Urban Planning Law: “use of land and buildings may not impede the business activities in such areas”. Besides, some blocks in Lingya were constructed as religious buildings, which are permitted in condition based on Enforcement Rules for the Urban Planning Rule (Kaohsiung): The buildings or land use have no noise, vibrations, special smell, pollutions, breaking the commercial activities, community peace, public safety, as well as sanitary. However, religious buildings are well-known as the center of traditional or religious activities. With such events, it is hard to define if religious constructions break this conditional permission or not.

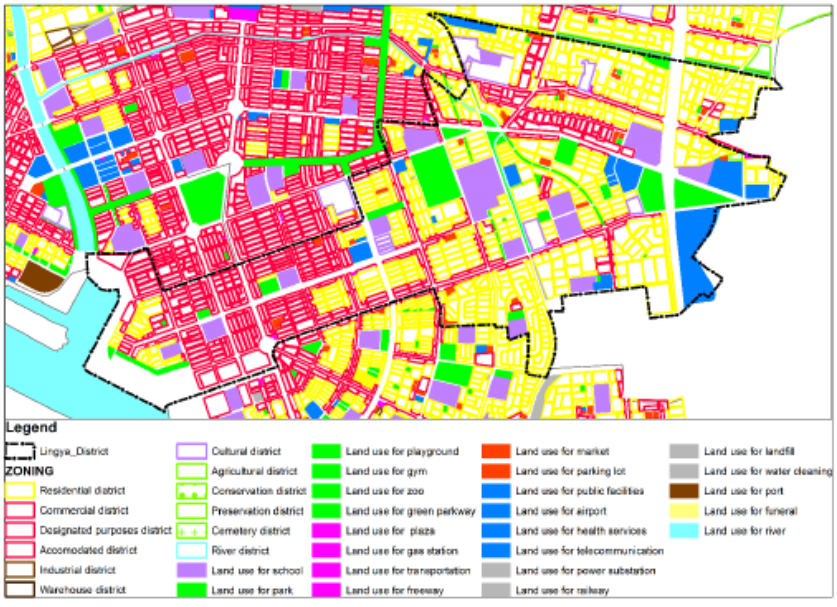

Figure 2-Boundary of Lingya, Kaohsiung City

8 CONCLUSION

According to the case study in Lingya, some of the commercial districts, which are defined as type D were constructed as pure housing as well as religious buildings in major. We think the reason why this two kinds of land use show up is based on the tradition of mixed land use. People in Taiwan are used to developing whatever they want on their own properties. With the negative listings, it is hard for citizens to violate land use control. When we observe them only with a few buildings, everything would be fine, and all of them follow the rules peacefully. However, when we zoom it out in larger scale and tons of constructions crowd in at the same time, every unit will connect to each other, which leads to a much more complicated situation. Once the builders construct something the planner don't prefer, but acceptable land use, the conception of every district would become meaningless, so would commercial district. With the threat the contemporary rules may cause, I think we should pay attention to type B, as well as the revision of relative rules. The reason for the former is that only little land is vacant now, old buildings will regenerate in the future. Therefore, type B may become the target of builders. As for the latter, we hope the planner and the government should face this problem and correct the loophole made by the regulations, preserving enough commercial accessibility and facility in the place they should develop.

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ID 1518 | THE EVOLUTION MECHANISM OF CLAN - SPACE IN URBAN VILLAGE - CASES OF LIEDE AND CHEBEI IN GUANGZHOU

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1 INTRODUCTION

Since the reform and opening to the outside world, China has begun the largest urbanization expansion in the world. The expansion of big cities and the birth of new central cities are staggering. According to Chinese Academy of Sciences in October 2012 "2012 new urbanization report" data show that China's urbanization rate of the mainland reached 51.3%, an average annual growth of 0.98%. Large numbers of villages and rural lands were swallowed up by urban sprawl. Under the influence of the two yuan system of urban and rural areas, they formed a unique regional spatial phenomenon - "village inside the city". Before mid 90s, the phenomena and problems of villages in cities were not yet apparent. In the middle and late 90s, the process of urban sprawl and suburbanization accelerated, and the urban village began to attract the attention of the city government and all walks of life. It retains the original social structure and social relations network, and changes its economic structure to second and third industries. In the case of this paper, Guangzhou is located in the coastal developed areas, and the number of villages in urban areas is more than more than 130. The traditional village of South of the Five Ridges has evolved into a city village in the process of urbanization, and the continuity of the cultural context and the village tradition is facing challenges.

Since September 2000, the Guangzhou municipal government has proposed the transformation of the village in the city for the first time, and proposed the concept of the transformation of the urban village and the first overall framework of the transformation of the village inside the city. The decision in 2002 through to the point "to implement the transformation of villages, 7 villages to determine the pilot reform. Over the past few years, the reform work has mostly stayed in the blueprint for regional reform, and no substantive progress has been made. In 2005, the government drew on the idea of rebuilding the dangerous buildings, but because of the restriction of fund-raising methods, the reform was carried out slowly. In 2007, under the impetus of the Xinguang express line and the construction of the bridge under the column, the Liede village became the first comprehensive urban village in Guangzhou. As the host for the Asian Games, the transformation of villages as the focus of the government, January 2010 "on accelerating the transformation of the" three old "work opinions" pointed out that the next 10 years to complete the transformation of more than 130 villages, of which 52 completed a comprehensive transformation of villages in 3-5 years. Although the government has introduced a number of reform policies, the problem of villages in cities has not been changed to a great extent.

Clan space refers to the public space used for holding clan activities in the village, including ancestral halls, ancestral houses, ancestral tombs and so on. The concept of clan space in this article is the clan, ancestral hall and its outer space in the village of the city. The clan space is closely related to the clan, and has strong clan color. It reflects the cultural and artistic ideas of the clan in the material form. In the use of the space with the clan as the main features of a clan kinship as a link, with great consciousness, exclusion of non clan members. In the traditional village structure, the clan space is an important spatial composition, and the ancestral hall is the highest rank in the village. The ancestral hall is prominently located in the traditional village, and some are located in the geometric center of the village, and some are located at the entrance of the village or a certain highland. The ancestral hall also plays a leading role in the surrounding residential buildings, and has an influence on its architectural orientation and building height. Apart from the important symbolic value and use value of the villagers and villages, the ancestral temple also has important historical value and cultural value for the society. Most of the ancestral halls were built in the Ming and Qing Dynasties, and they have a long history, which embodies the aesthetic and

craftsman skills of the clans. Most of them are similar to places of historic interest and famous residences. They are cultural treasures.

This paper focuses on the evolution mechanism of clan space in the village of Liede and Chebei village. On the one hand, from the clan of the village to understand space, provide a new perspective for the research on urban village; on the other hand is also transformed into protection, village village ancestral temple building provide the basis for the development of the ancestral temple, in the village reconstruction process can be better protected.

2 EVOLUTION CHARACTERISTICS OF CLAN SPACE

2.1 VILLAGE DEVELOPMENT

2.1.1 CHEBEI VILLAGE

Chebei village is located in the southeast of Guangzhou, Tianhe District. North Zhongshan Road, South Whampoa road. It belongs to Po street. Has been transformed into the Economic Development Co., Ltd. Po, under the jurisdiction of 15 economic cooperatives. Village land area of about 1.6 square kilometers, the resident population of about 9 thousand, 56 thousand of the foreign population. The urbanization process began in 80s. At the end of 50s, the Guangzhou nitrogenous fertilizer factory and other units requisitioned the village with a total land area of 1422 mu. After the reform and opening up, the national land acquisition increased, in 80s the expropriation of the village land 776 acres. In 90s, 2318 mu of land was requisitioned. Since 1979, the number of migrants from the village began to increase. In 1985, the state relaxed the household registration system. At the same time, foreign businessmen to invest and set up factories in Jubei area, attracting a large number of migrant workers, the car industry has been developing rapidly Po village two or three. In 1998, the village collective net income exceeded one hundred million yuan mark.

There are altogether 53 surnames in the village, of which 8 have surnames and ancestral halls. The ancestral hall of the pavilion has a long history, and the earliest ancestral halls were built during the Ming dynasty. There are 23 ancestral halls in the village, of which there are 10 main shrines.

Figure 1 – Spatial location of Chebei Village

2.1.2 LIEDE VILLAGE

Liede village is the first city in Guangzhou to carry out a comprehensive transformation. It belongs to Tianhe District de Tak Street, located in the south of Zhujiang New town. German Liede village has established economic development Co., Ltd., the implementation of the withdrawal of the village system. Before the reform, the land used for Liede village was about 0.3 square kilometers, the resident population was about 8000, and the total population was more than 10 thousand. The current land area is 0.14

square kilometers, and the construction area is 930 thousand square meters. There are nearly 6000 villagers moving back. In the 50-60, the country in the German village gradually 240 acres of land acquisition. In 90s, with the large amount of land requisition, the German village developed second and third industries, and its economy developed greatly. In 1994, the Pearl River new town construction took 2499 acres of land acquisition, and the Pearl River Metro entered the big construction period in 1996 and 1997, and a large number of migrant workers poured into the Liede village. From 2007, the German village was reformed. In 2010, the transformation was completed and the villagers moved back.

There are 81 surnames in Hunter village, including 4 surnames and ancestral halls. Before the reformation, there were 16 ancestral halls in the village, mostly built in the Qing dynasty. All the ancestral halls will be demolished and rebuilt. It was completed in 2009.

Figure 2 – Spatial location of Liede Village

In the course of rapid urbanization in the past 30 years, the village and the German village of Guangzhou have been annexed by the wave of urban construction. They change from the traditional agricultural villages into transitional communities - villages in the city. The spatial structure, the industrial structure, the organizational structure, the population structure, and even the villagers' life style and values have undergone tremendous changes in this process. As an important spatial composition and cultural carrier of traditional villages, clan space has evolved with the development and transformation of villages. Mainly related to space layout, architectural features, the use and economic situation.

2.2 CHANGES IN ANCESTRAL TEMPLE LAYOUT

The ancestral halls of villages in the city gradually disappeared into the dense buildings. The development of villages in cities is forcing the expansion of the urban land boundary, the reduction of streets and alleys, the heightening of buildings and the internal expansion of encryption. In the early stages of the development of village in the city, the ancestral hall at the village exit or road exit was swallowed into the village, and the prominent spatial position was replaced. After the construction activity inside the village is active, the ancestral hall in the tunnel is sheltered from the reduction of the surrounding reconstruction or new construction road, and the position is relatively close to the front. The flat shape of the ancestral hall is three times and two. The area is 6-8 times as many as that of the common folk house, and it is beside the main road of the village. But in fact, in the village location is significant only Liang Su temple, ancestral hall, Qingchuan Songshou Haogong Ci and the same chapter Jane temple. Other ancestral halls generally need access to their roadway, only to the front of the building. In the stage of urban village transformation, the village space has been re arranged, the villagers spontaneous construction behavior stopped, and in the overall spatial structure, the ancestral temple has returned to the prominent spatial position. The relatively independent layout of the ancestral hall in the village after the reconstruction, in the west of the reconstruction area, is close to the main entrance and the location is conspicuous, and has become an important landmark in the Liede village.

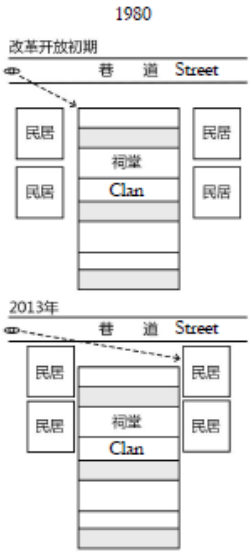

Figure 3 – Spatial location of Liede Village | Figure 4 – Spatial location of Liede Village

Ancestral halls are an important height pole in traditional villages. Today, this traditional constraint is practically useless. The height of the building in the village has been continuously raised, and the number of buildings surrounding the ancestral temple has also been increasing. Originally, the 1-2 floor of the house was rebuilt into 3-4 layers, after the capital recycling and then built, and finally built a shack on the roof. If the urban village transformation, the volume rate will be higher than the villages in the period, is behoove things on the height of the arrogation of ancestral temple. Liede village volume rate of 5.2, the ancestral hall surrounding buildings nearly 40 storeys, although the ancestral hall has 30 meters or so distance, still formed a strong contrast.

Figure 5 –Building height contrast | Figure 6 – Building height contrast

2.3 CHANGES IN ANCESTRAL HALLS

The space pressure faced by the ancestral hall is also making some ancestral temples break through the general plane shape in the stage of reconstruction and expansion. They responded with a more flexible and special approach. No similar practice has been found in the redevelopment of the village. Some of the new ancestral halls in the village abandoned the symmetrical layout and built a subsidiary room on the side of the middle road to expand the space of the ancestral hall. These ancillary rooms and the main building with different styles, strictly speaking, does not belong to the temple, and the middle of the building similar to the formation of two ancestral temple of the plane. Huang ancestral hall is an example. Reconstruction of ancestral temples, built a bungalow on the left side of 50 square meters, as for the clan banquet kitchen. The attached rooms are not decorated and are connected to the middle building. However, it differs greatly from the traditional architecture in that it maintains the symmetry of the ancestral hall to some extent.

Figure 7 –Unilateral subsidiary housing Hall | Figure 8 – One side with auxiliary rooms

The traditional architectural brick, wood and stone as building material, construction cost is more expensive. Chebe village ancestral reconstruction in 2010, the first in the brick wood structure, cost per square meter to 6000 yuan. Two, three with steel and concrete structure, the cost per square meter of only 2000 yuan. Liede village Lee's ancestral hall of brick wood structure, covers an area of more than 1200 square meters, a total cost of about 7500000 yuan. The high cost enabled the villagers to start looking for alternatives. When the ancestral temple was rebuilt and rebuilt, it tried to add the modern building materials such as concrete, steel bar and tile to the construction of the ancestral hall. There are 11 cement houses and ceramic tiles in the ancestral hall, 8 of which are brick concrete or steel concrete structure. In the construction of the temple of Hao Feng and the hall of longevity and longevity, modern building materials completely replace wood and stone.

Figure 9 –Cement beam Figure | 10 – cement column stuck with tile

Figure 11 –Cement beam Figure | 12 –Wood structure

Cultural heritage does not mean the complete duplication of ancestral halls, but rather the preservation and continuation of styles that reflect local culture and historical traditions. In the development of village in the city, the cultural significance of some ancestral temple building blocks has been neglected and forgotten, and the traditional style has been abandoned. In recent years, some of the important building

blocks have been changed more freely during the reconstruction of the ancestral hall in the village. For a comprehensive transformation of Liede village, change problem is more prominent, the new temple in ridge, door and other aspects of the changes in Sook are quite different with the traditional place.

The new ancestral hall in Liede village is a mass producing product. It is not a continuation of the original ancestral hall of the ancient clan names, but also because there is no difference in the aesthetic of the various surnames.

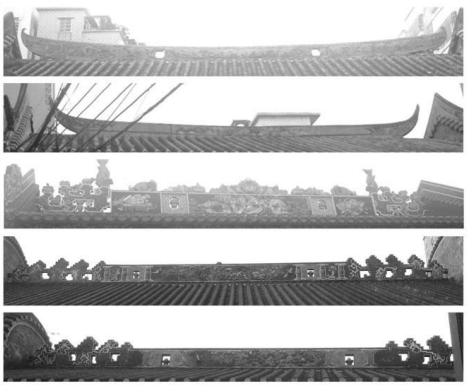

Figure 13 –Ancestral hall ridge contrast | Figure 14 –Detail comparison

2.4 ANCESTRAL HALL USAGE CHANGES

Ancestral halls are public houses in the clans, mainly for clan activities, and provide space for parties and festivals. Around 2000, Guangzhou implemented the policy of changing the village to the village, and the quality of community life of the villagers was concerned. The economic society began to use the ancestral hall as the center of the villagers' activities. After that, the clan actively offered the ancestral halls to the daily activities of villagers as a supplement to the public space. There are 12 ancestral halls open to villagers. The number of people used is about 7-8 people, mainly in the patriarchal clan. The 5 ancestral halls of the village are also available to the villagers, but the number of people used is less than the village, with only 3-4 people. With the increasing use of the ancestral temple, the use of space shows the characteristics of daily life. The use of ancestral hall space mainly focuses on the ancestral hall, the hall and the hall of enjoyment. The outside of the entrance hall is connected with the streets and alleys, and there are benches or stone chairs. The villagers chat here, chat with passers-by and pick up children from school. Enjoy the spacious room, tables and chairs and tea sets are complete, the villagers stay here longer, activities are more diverse, including reading newspapers, playing mahjong, playing table tennis and so on. In the inner part of the ancestral hall, there are walls, lighting conditions are poor, villagers use this space less. All kinds of activities and the clan, ancestral hall itself is not directly related to the general entertainment activities. The ancestral hall is more represented as an ordinary public space, and is no different from an ordinary city center. The etiquette and tradition of the clan are also invalid in use, and the villagers act in daily ways with less taboo and less concern.

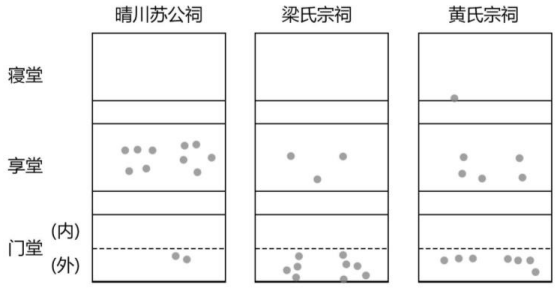

Figure 15 –Distribution of ancestral temple users

2.5 CHANGES IN THE ECONOMIC CONDITIONS OF CLAN

The beginning of reform and opening up, chebei village ancestral temple construction, renovation costs mainly comes from the clan members and families to donate. Ancestral temple's limited economic ability, often unable to make ends meet. Under the influence of urbanization, the change of economic structure, the increase of economic income and the economic condition of the ancestral hall have changed greatly. Total revenues from a single donation temple to property rental income into economic agency funding, the clan members and families to donate by. Economic society will be part of the rental property assigned to the main hall, the rental income to the ancestral temple all. On the Qingming Festival, the Dragon Boat Festival, the Chung Yeung Festival and other festivals, or when the ancestral hall was rebuilt and rebuilt, funds were allocated so as to increase the income of the total ancestral temple from a great deal before. Our ancestral property located in Zhongshan Avenue and Jubei Avenue, in the property rental income accounted for a high proportion of total nearly 500 thousand yuan a year. Organized clan activities without clan members to donate tissue. The living place is near the village of Su's ancestral hall, and the annual rental income is nearly 100 thousand. The economic expenses of the ancestral hall in the Liede village are held by the German economic company, and the clan activities after the reconstruction have not been charged to the villagers.

The increase of income has positive effect on the activities of clan activities and the construction and renovation of the ancestral temple. Our ancestral income is mainly used to hold together the clan activities. Qingming worship, a banquet for more than 100 tables, for each member of the tribe to pay 10 yuan of red envelopes. The Dragon Boat Festival Dragon Boat set meal, entertain visiting relatives. The Chung Yeung Festival has a feast for the elderly and 300-500 yuan for the elderly who participate in the retirement. Compared with previous years, ancestral clan activities scale, banquets level to the next level, clan members to participate in the enthusiasm also improved. About one hundred thousand of the total surplus is accumulated annually as a fund for rebuilding and rebuilding the ancestral temple.

3 THE EVOLUTION MECHANISM OF CLAN SPACE

3.1 ALTERNATION OF MANAGEMENT: CONJUNCTION MECHANISM

3.1.1 TURNOVER OF MANAGEMENT ORGANIZATIONS AT THE GRASS-ROOTS LEVEL

The economic society is a collective economic organization in which the village in the city is divided into a certain geographical area, and has undertaken a great deal of community management work. It is the main grass-roots management organization in the village. Its members are elected by villagers and led by district offices. The clan organization for village development, clan members behavior management authority deprived, clan rules and family about loss of control effectiveness. The control of the ancestral hall was weakened. Some harsh and strict rules about the use of ancestral halls have been abolished, management becomes loose, and new activities and functions enter into the inner space of ancestral halls.

The control ability and the right to speak of the clan organization in the village decreased, and the protection ability of the clan space also weakened. In the process of spontaneous and disorderly construction of villages, they were unable to stay out of the situation and were influenced by the outside. The ancestral temple building no longer enjoys the privilege given by the clan, and its rank in the village space is declining, and it is sheltered and besieged by the common folk houses. And the loss of leadership to the surrounding buildings is transcended at a high level

3.1.2 CONNECTION BETWEEN CLAN CONCENTRATION AND ORGANIZATIONAL STRUCTURE AT THE GRASSROOTS LEVEL

The clan members are linked together by clan and ancestral hall. The economic community is divided according to the region, and respect the original boundaries. The division of economic society and the layout of the original clan have a spatial fit, which makes the members of the economic society have the characteristics of close kinship and single surname, similar to the branch of the clan.

From the combination of the clan settlement and the organizational structure at the grass-roots level, the villagers expressed their wishes through the will, so that some decision-making and management behaviors of the economic association also have the value orientation of the clan. The survival and development of ancestral halls have been helped by economic society. The right of the ancestral hall to retrieve the ancestral hall is managed and used by itself. In the distribution of economic, social and collective property, support for the ancestral temple, some of the property will be placed under the ancestral hall, and allocated funds for ancestral ancestral temple activities, or renovation and reconstruction.

3.2 OPPRESSION OF ECONOMIC ENVIRONMENT: TRANSFORMATION MECHANISM

3.2.1 OPPRESSION OF LIVING CONDITIONS

Because of the development of the surrounding urban areas, most of the farmland in the city has been expropriated. Farmers get compensation for land acquisition, but also lost the basic way to make a living. Most of the villagers are under the low education level, their own quality can not adapt to the city's labor demand, after losing farmland, they are faced with enormous pressure to survive. Based on the strong demand for urban low-income housing, the villagers turned to rental housing for income. After the increase and increase of rental income, the survival oppression evolved into pure interest pursuit, and the villagers fought for the space in the village. They built new houses or built additional houses, which increased the rent income and formed a huge expansion force.

Comparatively, the economic income of clan space depends on the exterior. Moreover, the space structure and mode of use are relatively stable, and there is no need for space expansion. In the city village, when the villagers build new and additional houses for expansion, the ancestral hall itself has no outward thrust against it, and is in a weak state of passive coping. This also led to the surrounding residential areas to press the ancestral hall, the roadway space was eroded, and the ancestral hall space structure was compressed.

3.2.2 INDUCTION OF ECONOMIC BENEFITS

The use of ancestral activities in ancestral halls is mainly during the gathering or festive celebrations. Although the outer space is an important component of the clan spatial pattern, the actual use is not much. Relative to the use of other spatial extracts in urban village, the use efficiency and strength of clan space are low, and it has great development value in space utilization. Driven by potential benefits, more use functions are placed in the clan space. The ancestral hall, as a ready-made building space, is used as a complement to public space. Vacant halls are used as parking lots to collect parking fees. A dilapidated ancestral hall for rent as a warehouse or production plant.

The inducement of economic benefits also led to the disintegration of ancestral hall space. City Village rental housing demand, with the rise in urban housing prices, rents are also rising. Without affecting the main function of the ancestral hall, the ancillary space of the ancestral temple will be transformed into a new house for rent, and a more profitable profit can be obtained. Therefore, the part of the ancestral hall was cut, lining two, demolished three temple. Because of the differences in the intensity of the use of the inner space, the inner space of the ancestral hall has been destroyed by the overall economic environment of the village.

3.2.3 CHANGE IN ECONOMIC DEVELOPMENT

After the transformation of villages in the city, the economic development model of villages has changed. Relying on modern management and management, more efficient and intensive. Economic society or villagers no longer rely on space for more benefits, and spontaneous and disorderly construction behavior has been curbed at the root. Under these circumstances, the force of oppression and inducement of the clan space was weakened in the original economic environment of the village.

On the one hand, the space pressure that the ancestral temple faces in the reconstruction is greatly reduced, and there are more abundant land resources to construct, and it has the space condition to rebuild the whole space structure again. On the other hand, after the restoration of the outer space, such as the surrounding roadway, the earth hall and the pond, the integrity of the space has been maintained in the subsequent development. Originally, part of the evolution of villages in the city features, such as the weakening of the characteristics of space nodes, the compression of external space, the use of the use of external space, because the weakening of the impetus, did not re emerge.

3.3 THE IMPACT OF CULTURAL TRADITION - ADAPTATION MECHANISM

3.3.1 THE INFILTRATION OF MODERN URBAN CULTURE

Villages in the city are surrounded in the process of urbanization. Traditional culture is impacted by urban culture. The villagers are influenced by their ideas and values, and reduce their traditional self-identity. In the interview, it was found that the concept of cultural continuity held by the clan members in the rebuilding and rebuilding of ancestral halls was very general. The first problem is the reservation of the clan space, which is regarded as the symbol of the rise and fall of the clans.

The infiltration of urban culture has also changed the way people live. The facilities and services in the city are better than those in the traditional villages, which bring great convenience to the villagers. While enjoying the facilities and services of the city, the villagers also have their identification and dependence. The city's facilities and services are integrated into the villagers' lifestyle, replacing traditional amenities and customs. The traditional ancestral temple banquets, unavoidably by the clan members including one RBI, food cooking, with tables and chairs placed, tableware cleaning, sorting and other aspects of the ancestral hall. These things are trivial and are replaced by catering services or restaurants in the process of evolution.

3.3.2 THE ADAPTABILITY OF CLANS

The clan has stronger adaptability and vitality. It has been adjusted in different societies, different economic systems and different political systems, and has survived for thousands of years. The clan began in feudal society and slave society, and was closely integrated with the regime in feudal times. It was badly damaged after the founding of the people's republic. After the reform and opening up, a new revival has taken place. There are two main changes in modern patriarchal clan system, from closed to open, from authoritative to democratic.

As a symbol of the clan, the ancestral temple is closely integrated with the development of the clan. The changes of clans also lead to the active evolution of clan space and meet the needs of modern society. The change of attitude of the ancestral hall to the people outside the clan has changed from vigilance and resistance to acceptance and welcome, and the openness of the space has been greatly improved. The important decisions of the ancestral temple are mostly voted by the villagers, and the publicity of various matters is more adequate.

4 CONCLUSION

4.1 SUMMARY AND EVALUATION

In the process of rapid urbanization, the traditional agricultural villages were swallowed up by the cities and became "villages in the city"". And then experienced the transformation. The clan space in the village also evolved during the process. Study found that by Jubei village, Liede village temple and the villagers, the village clan revival, spatial evolution after power Pactrometer development, rehabilitation and complete the transformation of four stages.

The results show that the development of urban village, the transformation process of rapid changes in the economic environment is intense, force on the evolution of the clan of the huge space, especially in the

villages in the period to the clan space has brought many negative effects. Cultural penetration has also led to some loss of tradition, relative strength is not sufficient protection of the ancestral hall. Government departments or academic structures should intervene in time to provide guidance and help for the evolution of the clan space in the urban village, so that excellent traditional culture can be preserved. The contribution of this paper is to enrich the research object of villages, and village hall space provide the basis for protection and reconstruction.

4.2 ADVICE

To formulate the guideline of ancestral temple in Guangzhou, and to provide the basis for the reconstruction of ancestral temple. In the urban area of the village according to the cultural characteristics of classification, make each kind of villages in the corresponding ancestral shape interpretation guidelines, significance and importance of building components and building decoration peculiar to the ancestral lineage, and gives the retention or transformation of the views. As for the Liede, Jubei is south of the Five Ridges water village is the heritage of the Dragon Ridge retained ancestral temple, the heritage of the village has Hengsha scholarly advice should be reserved and the hall of Taiwan kuixinglou sook. So that the clan has more profound understanding of the ancestral hall, and guide them in the ancestral temple building activities to make more reasonable decisions, so that cultural traditions better pass down.

We should improve the protection and declaration of cultural relics in ancestral halls, and strengthen the protection of ancestral temples of historic value. To strengthen the cultural relics declaration of the ancestral hall of the city and district level cultural relics protection units in Guangzhou, and classify them in a hierarchical manner. Establish the links between the municipal cultural departments, the university scholars and the ancestral halls, so that the government departments and scholars participate in the construction and management activities of the ancestral halls in the villages of the city. On the one hand, it provides consultation and guidance for the clans, and on the other hand, it plays a better supervisory role.

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ID 1532 | WHAT FACTORS AFFECT PUBLIC PARTICIPATION IN THE URBAN REDEVELOPMENT PLANNING PROCESS IN CHINA

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1 INTRODUCTION

Since 1978, China has experienced almost the largest scale of urbanisation process in human history due to the demand of rapid economic development (Campanella, 2000). During the last three decades, urban planning in China led by the government had pursued high economic growth rather than higher living conditions of urban residents (Li, 2012). Now, China has entered the later stage of accelerated urbanisation which is identified as the “decelerating, transformative, and diversified” period. It is important to be human-oriented, adaptable to local conditions and environmental friendly in urban planning (Yang and Chen, 2015). In this “New Normal” era, more factors can be involved in the urban redevelopment planning process.

Public participation, as one of these factors, plays an increasingly essential role in urban regeneration. Smith (1973, pp275-295) describes participatory planning as a democratic process supporting value creation, definition of communities and development of residents’ identity, leading to a harmonious society. In the United Kingdom, the “Town and Country Planning Act” passed in 1947 stipulated public participation as a legal step in urban planning, which protected the public rights in the urbanisation process. This participation lead to better policies and implementation decisions in urban planning (Irvin and Stansbury, 2004).

Public participation in China boosted in the 1990s. At that time, the public’s willingness to participate in the urban regeneration decision-making process have increased because of more attention to life quality and individual properties (Zhang, 2015). Meanwhile, the government began to realise the importance of public participation due to conflicts of interest between involved groups in the planning process, such as real estate developers and residents. In 2006, the “Measures for Formulating City Planning” illustrates the necessary of information acquisition and public notification for draft proposals in detailed planning (Wei and Dai, 2015). In 2008, “Urban and Rural Planning Law of the People’s Republic of China” was implemented. It acknowledges public participation in explicit terms, illustrates the public’s rights of awareness, specifies the approach of public participation and emphases the importance of participatory planning (Sun and Yin, 2008), providing a legal base for democratic participation in the urban planning process. However, the lack of specific approaches in relevant provisions provides few instructions for the participatory planning practice in China.

This paper will first illustrate the status quo of public participation in urban renewal projects in the New Normal era, following by practical cases in the urban redevelopment planning process in China. After that, it will illustrate several factors, including government policies, interest groups and public consciousness, which may hinder the public from participating in urban planning based on former cases and experiences in Chinese context. Then it will evaluate the practice of participatory planning in China with that process of the neighbourhood planning in London, analysing reasons for the formulation of these factors in different context. Finally, the paper will provide some suggestions which may improve public participation in the urban redevelopment planning process in both China and the Great London area.

2 PUBLIC PARTICIPATION IN URBAN RENEWAL PROJECTS IN CHINA

Metselaar and Priemus (1992) argues the concept “urban renewal” is more than the improvement of the stock of buildings and the restricting of old city districts. It is the systemic intervention relating to economic affairs, public health, culture and social affairs for a higher living condition. From the opening-up policy to the New Normal era, the desire for sustainable communities promotes public participation in practical cases, and social problems led by rapid economic development need to be eased by restructuring and upgrading. However, these renewal processes, including the redevelopment of historical districts, upgrading urban villages, transformation of old residential areas, and so forth, mainly led by local governments who often act as protectors of commercial interests rather than that of public demands (Qian, 2009). To avoid further social conflicts, public participation, as a useful tool, is essential to balance the real needs and these commercialised plans.

Due to a long-term lack of participatory planning tradition, public participation in China is now still in a nascent stage. Most of the research in China remain in the theoretical level because of the lack of successful studies, but progresses have accumulated in the practical level in recent years. The early attempt to introduce participatory planning in urban renewal projects occurs in 2008 in regulatory detailed planning in downtown Beijing. To encourage the confidence and interest of the public, this participatory planning focused on small interventions about social infrastructures which could surely be changed after the participatory process. Further to showing information on noticeboards after the planning process, 259 questionnaires for residents had been gathered before the decision-making process. Participants had rights to comment on the current public services, green gardens, new constructions, public buildings, and parking areas in their communities (Chen and Ye, 2013), but their ideas were deeply influenced and chosen by government-led consultants. With further interviews and seminars, the facilities were changed and partly spaces were repurposed between 2008-2010, which is regarded as a significant case in early participatory planning in China.

A wider and more complex participatory planning in the urban regeneration programme in Haizhu District in Guangzhou started in 2009, showcasing the application of traditional mass media in the participatory renewal process. The renewal programme, relating to complex ownership of households and plenty of demolitions and new constructions, encouraged not only residents, but also citizens, consultants, experts in various fields to participate in, showing the importance of balance among multi-stakeholders. Planners had made 1600 brochures and 1250 leaflets particularly for the public, and got wider feedback for demands of residents. Meanwhile, detailed timelines had been made and published to regular the participatory process, and traditional mass media, including newspaper and TV comments, also pushed this programme further and influencing the process (Shi, 2010).

Although a huge progress had been made in this case, many deficiencies have risen. One of these is the veracity and comprehensiveness of media reports, some public media probably exaggerated the problems, leading to misunderstanding among stakeholders, especially between governments and the public. Additionally, governments still have the right of discretion in final decision-making process. Suggestions offered by the public cannot be judged by clear and explicit items in law, and thus the results of public participation were likely to be ignored, even as evidence for other's interests.

As the increasing practical cases accumulated, the awareness of public participation has been awoken, nevertheless the real role these suggestions gathered from the public play are limited because of the incomplete policy system and top-down planning pattern. In 2015, a new attempt to renewal programme of housing zones implemented in Shanghai, following bottom-up pattern. The programme, "Beautiful Home", aimed to refurbish old housing zones by renewing social infrastructure, refurbishing old buildings, managing traffic roads and parking areas and enhancing the living environment in communities in Pengpu town, introducing the concept of "self-organised communities" and "participatory planning" in the renewal process. The public could participate in all procedures including planning, survey, conceptual development, decision-making, implementation and management (Kuang and Lu, 2015). Clear timelines and procedures and layered implementation led by residents contributed to operational interventions in participatory planning. However, the efficiency of communication was restricted by simple approaches taken in the planning process.

Based on three practical cases above, public participation shows its potential and the essential role in urban renewal projects in China, however, problems and limitations are obvious. First, the top-up planning pattern can hinder the public from participating in decision-making process. Insufficient policies for communication and expression restrict the impact of participatory planning. Moreover, a lack of transparency could lead to corruption and violation operation in planning process among different stakeholders, especially between governments and developers. Second, the degree of involvement of the public does not achieve the expectation in practical cases, and suggestions they offer are too general and hard to be implemented. Third, traditional mass media cannot meet the demand of speed and range of information dissemination, resulting in a lack of veracity and comprehensiveness of communication in the participatory planning process.

3 FACTORS INFLUENCING PARTICIPATORY PLANNING IN CHINA

3.1 THREE FACTORS INFLUENCING THE PARTICIPATORY PLANNING IN CHINA

According to the practical cases and problems discussed above, factors influencing the participatory planning process, especially in complex renewal projects are a lack of explicit public policies, inefficient communication among interest groups and a lack of public consciousness. Among them, a lack of explicit and operable items of participatory strategies at the legal level because of the late start in China is the first and foremost reason. Although the “Urban and Rural Planning Law of the People’s Republic of China” implemented in 2008 provides the right of awareness and public participation in public affairs, detailed strategies and policies need to be made based on local conditions. Nevertheless, the city planning in China is usually decided by governments without the further discussion and vote by the People's Congress at the local level. Without the efficient and comprehensive solicitation of the public’s opinion, the policies of participatory planning cannot be implemented in practice.

The excessive power of local governments leads to the top-down pattern as the dominate one in urban renewal projects, which may not meet the public’s rights. Insufficient detailed policies about the regulatory procedures and criteria result in the lack of legislative participatory planning processes in projects. In that case, governments prefer to achieve ideal redevelopment planning goals for economic purposes in master plans rather than satisfying the residents. They can also take advantages from the top-down planning system by controlling sources of information to avoid compromises and the long-term participatory process. Moreover, due to a lack of transparency, the delimitation of obligation among governments and multi-stakeholders is vague, causing the corruption and inefficiency in the implementation process. Besides, without an effective feedback system, the redevelopment planning process may cause conflicts between the public and government officers, especially in land use and demolition.

Secondly, inefficient methods of information disclosure and communication among interest groups adverse to the participatory process. Ambitious interest groups such as real estate developers are reluctant to show detailed procedures and design plans and invite the public into the decision-making process because their commercial benefits might be limited by the public’s opinions. Moreover, their profits are relatively combined with that of the local government, so sometimes this subtle relationship between stakeholders and the government can form “interest coalition” in the renewal process. In the coalition, the government can gain not only the revenue but implicit benefits by renting the land use rights (Wu, 2007), and stakeholders, would prefer to influence the policy-makers for maximum profits. Thus, the public become vulnerable groups in the urban redevelopment planning process.

Furthermore, scholars and planners, as coordinators, cannot develop a larger impact in the participatory process because of inefficient means of communication. Some argues the monopoly of plans and skills by scholars makes it easier to gain profits for the “interest coalition”, and measures must be taken to restrict the power of planners (Yan, 2011). However, the planning process can be time-consuming and led to uncertain results without the coordinator role and efficient methods of communication. To protect the equal right to know among stakeholders, symmetry of information and feedback systems for the public are essential in the urban regeneration process.

Thirdly, a lack of public consciousness prevents the public from deep participation in urban regeneration projects. With a long-term absent of public participation in the decision-making process in public affairs, the public considers participatory planning as a symbolic process, and treats this legal procedure casually. Meantime, due to the lack of professional approaches and knowledge, their voice has limited operability, offering the reason for the government and interest groups to exclude the public from policy-making process. Furthermore, the lack of professional knowledge leads to a lack of citizen responsibility and public consciousness, forming a vicious circle in participatory planning. In practical cases, residents draw much more attention on their own profits than the whole living environment and social sustainability. Further to that, some are reluctant to compromise and communicate with planners and other interest groups when facing with disputes. Thus, strategies and procedures of public participatory planning can be implemented smoothly in small projects, but it is hard to be done in district-scale or city-scale projects.

In recent years, planners and mass media act an important role in the public education by doing surveys, delivering booklets and teaching technical terms and citizen rights to the public in participatory

programmes. However, the propaganda has territorial limits. Urban renewal projects are still controlled by the government and interest groups in most cities in China.

3.2 EVALUATION OF NEIGHBOURHOOD PLANNING IN LONDON

In 2011, neighbourhood planning was encouraged in the Government's scheme through The Localism Act 2011, whereby powers are devolved from central government and transferred to communities. Similar to the participatory planning in urban regeneration programmes, most of the neighbourhood planning concentrate on the renewal and upgrading of current communities for a more sustainable future. For example, Hackbridge was chosen as one of the original 17 communities to be front-runners in the neighbourhood planning (DCLG 2015). Following the Sutton Local Plan, the survey and participation began in 2012, and the final neighbourhood plan was proposed in March 2017. The comparison of the long-term participatory planning at a neighbourhood level in London and the third participatory case above in Shanghai can show different strategies and procedures in the planning process.

Compared to the case in Shanghai, residents in Hackbridge have stronger public consciousness and more professional knowledge due to the democratic tradition in city planning, which benefits for the self-management in the whole process. This self-managing group acted as the link among all the stakeholders and organisations, enhancing trust between the local authority and residents. Further to that, explicit strategies were made at the beginning of the participatory plan, completing with timelines and detailed schedules. These strategies can be various in terms of borough plans, but the overall procedure is decided. Moreover, the information is transparent and shown timely on specific websites and homepages in Twitter and Facebook, reducing the potential of information asymmetry and offering opportunities for a wider range of citizens to participate in. With multiple methods in the participatory process, residents are willing to involve into the decision-making process.

Additionally, cultural events such as photography and painting were held in communities by the consultation group, enhancing the sense of identity for residents.

However, the disadvantages of this participatory neighbourhood planning are shown in the draft proposal. Strategies and approaches are vague and weak to be implemented probably due to the result of compromise of stakeholders' profits, but a long-term decision-making process with limited operable results can sometimes be disappointed. Further to that, most of interventions offered by residents are for small-scale, while strategies proposed by authorities are general ones for the further development. Different concerns may lead to the difficulty of the communication. Also, considering the issue of funding and complex ownerships in this case, to what extent will the participatory result will be implemented remains unknown.

4 SUGGESTIONS

Factors above show the complexities that public participation presents in the Chinese context in the urban redevelopment planning field and its differences with the neighbourhood planning in London. As Klimova (2010, pp.32) reports, aiming to improve participatory practices in renewal projects in China, ladder of public participation by Plummer and Taylor (2004 cited in Klimova, 2010, p.32) shown in Figure 1 should be used to interpret the whole procedure of democratic participation. Public participation will not in its first stage of "Notification and attendance" if the government, scholars and the public itself make concerted efforts.

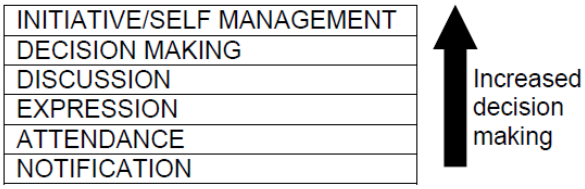

Figure 1 - A ladder of public participation in China
ource: Plummer and Taylor, 2004, cited in Klimova, Z., 2010. Public Participation in Urban Renewal Projects. Master Degree. Lunds University.

Firstly, detailed policies should be made to regular participatory procedures in which responsibilities of each stakeholder need to be defined at all level. Since in the new “Urban and Rural Planning Law of the People’s Republic of China”, detailed steps of participatory planning have written as the compulsory terms, terms relating to regulating participatory steps in the local level should also be made soon in the future, such as operational methods of distributing responsibilities and economic profits in urban renewal projects. Additionally, strategies of encouraging general education of planning knowledge and citizen rights need to be taken in the participatory planning process. With the explicit policies at all level, multi-stakeholders will involve into the participatory process with clear authorities and responsibilities, working as a virtuous circle in urban planning.

Secondly, the necessary of community planners and individual consultation groups has shown in the participatory planning process. As coordinators, these experts, not sharing the common interests with other stakeholders, are expected to establish a planning administrative system which is not controlled by the upper-level planning bureau (Li, 2012). This neutral system is responsible for balancing the interests of the local government, all the stakeholders and the public in practical planning projects. In that case, suggestions from this third section system can be advantageous to the public to some degree.

Thirdly, digital media can work as an efficient method of communication and information disclosure, and stakeholders can communicate in real time. Now, new platforms combining social media with big data are popular. For example, it is easier to monitor the traffic condition in a certain district by gathering the commute information based on daily records on phones. Based on that, new attempts have been tried in Beijing. Planners invented mini programmes on Wechat, one of popular social medias in China, to ask for comments on busy roads in rush hour. Citizens can definite these roads in real time by clicking on the phone screen. In this way, the veracity and comprehensiveness of information can be guaranteed and the statistics is easier.

Inspired from that, mini programmes can also be invented in mobile phones and on online websites as efficient platforms and feedback systems, contributing to the symmetry of information in the urban redevelopment planning process. In that case, the public can keep abreast of the projects, join in the survey and interviews, vote for their favourite designs and monitor the process though online platforms. However, such systems are still at the early stage, deeper data analysis need to be done in the future by inter-disciplinary groups. Such methods can also be implemented in the participatory planning at a neighbourhood level in London for more effective procedures and a strong result.

5 CONCLUSION

Learned from the practical cases in China and the neighbourhood planning in London, three main factors has been proposed including a lack of explicit public policies, inefficient communication among interest groups and a lack of public consciousness in the urban redevelopment planning process in China. By now, the publish of Urban and Rural Planning Law has been regarded as the promising beginning of the participatory planning in the early stage in Chinese context. Following the general items in law, detailed strategies and consultation groups at a neighbourhood level are necessary, and the essential role new mass media plays can optimise procedures in practical cases. A new order can be expected in the New Normal era in urban redevelopment planning process, of which the structural change will contribute to the social and cultural sustainability.

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ID 1537 | URBAN REGENERATION PROJECTS IN BRAZILIAN CITIES: HEGEMONIC DISCOURSES AND POLICY MODELS

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1 INTRODUCTION

The central purpose of this article is to analyze planning traditions, regulatory frameworks and the social construction of legitimizing discourses on urban regeneration in Brazil. It presents an overview of the main argumentative lines underlying the discursive construction of the notion of public interest in the context of urban regeneration initiatives in Brazilian cities and shows how the convergence of different, and eventually conflicting assumptions and propositions related to urban development have provided ideological support for the widespread assimilation of urban regeneration initiatives as socially desirable interventions. It comprises the following sections: Introduction; The construction of the arguments; The Urban Reform; Sustainability; The strategic planning of cities; The trajectory of urban regulation and regeneration policies in Brazil; The recent process; Conclusions.

The point of departure of an urban regeneration project is the recognition of a certain urban situation as problematic, and the assumption that an intervention aimed at fixing it is socially desirable. These projects are backed by narratives constructions addressing what the urban problems are, and what sort of

measures should be adopted in order to fix them in a way that is consistent with what is assumed to be the public interest4. Though the notion of public interest is disputed and contingent, taking on different characteristics according to the context, the evocation of this concept is always present in urban regeneration projects. The justification of urban interventions promoted by the state inevitably requires the formulation of discursive constructions aimed at showing their alignment with the notion of public interest, regardless of how this is conceived. In the case of urban regeneration projects targeting previously developed land, which usually affect a variety of both particular and collective interests, a verifiable connection between their alleged purposes and the pursuit of goals embedded in interests of a higher kind is necessary if they are to attain a minimum level of legitimacy and political feasibility. Referring to the public interest may be regarded as an unavoidable argumentative step to justify urban regeneration projects.

These discursive constructions are usually based on more or less explicit assumptions of what the socially desirable patterns of urbanization are, and also of why certain policy arrangements are more suitable than others to improve them. In this sense, thinking of the relations between urban regeneration projects and discursive formulations on the public interest develops in two dimensions of analysis, which could be summarized as a programmatic one and an instrumental one. The first is dominated by questions like the general goals and strategies of urban development that underlie urban regeneration projects, and the reasons why these projects are expected to generate positive impacts in the city. The second discusses the way in which they are implemented, the alleged reasons for the choice of certain kinds of regulatory arrangements rather than others. These two dimensions are somehow intertwined, both reflecting broader trends of the contemporary urban development models. However, the distinction may be useful for analytical purposes.

Rather than being built upon a one-dimensional line of reasoning, the discursive constructions backing urban regeneration policies are usually based on an amalgam of different principles and claims which are somehow associated with the notion of public interest. Their power rests on the ability to make urban regeneration projects be perceived as expressions of the public interest by a diversified set of agents at different geographical levels, and, by doing so, setting favorable ideological conditions for the formation of strong developmental coalitions. The formation of coalitions imposes the necessity of accommodating interests and claims that may be contradictory. If the shaping of public interest narratives within urban regeneration projects requires some degree of openness of policymakers to the diversity of aspirations and existing needs in cities, this notion is also employed as a powerful rhetorical device to hide conflicts and forge political consensus. Though the way these narratives are woven may change according to local features, it is also possible to identify discursive constructions that are recurrently applied to legitimize urban regeneration projects on a public interest basis, which makes them hegemonic discourses.

The term 'urban renewal', attributed to intervention in the pre-existing urban fabric, became commonplace, according to Compans (2004) with the end of World War II, in view of the need to rebuild the European cities destroyed by the conflict and to respond to the housing deficit accumulated over the previous decades. Later, in the 1970s, with the restructuring of production and the economic recession, programmes were started to convert abandoned and degraded port and industrial areas. The simultaneous crisis of public finance led to a framework of pragmatism that sought association with private initiative in configurations with a greater or lesser degree of state intervention, depending on the context.

Urban regeneration projects with private sector involvement were highly developed and important in Brazil during the 1990s. Since then there have been a proliferation of policies of this kind, which has also entailed the continuing development of a directly or indirectly related legal and regulatory apparatus. It is important to stress that this process has been spatially uneven. Though urban regeneration initiatives are spreading throughout an increasingly broader geographical base, they are still highly concentrated in major cities and metropolitan regions. This trend is even more explicit if considering the situations in which these projects are carried out with a relevant involvement of the private sector

In this scenario, certain local experiences in major cities have been playing a substantial role in shaping the regulatory landscape of urban regeneration projects, and these local experiences have been even more influential than national legislation and programmes. A number of urban regeneration processes recognized as successful experiences within hegemonic discourses have been assimilated as benchmarks for the formulation of regulatory arrangements related to this kind of intervention, and have become referential models in various Brazilian cities. The city of São Paulo has played a particularly important role

as a laboratory of regulatory arrangements related to urban regeneration initiatives at least since the 1990s, and the influence of regulatory arrangements originally conceived in São Paulo can be seen in specific projects promoted in other localities and even in national legislation, which has incorporated some of its instruments and given them the status of standardized regulatory tools applicable in the country as a whole. More recently, the city of Rio de Janeiro has also become a centre of the development of urban regeneration policy frameworks. Taking the previous experiences of São Paulo as an inspiration, this city has deployed complex schemes of urban regeneration with private sector involvement. The latter have been regarded as more sophisticated than those previously structured in São Paulo, and also as potentially influential models for further generations of interventions of this kind.

Cities like São Paulo and Rio de Janeiro can be seen as uncharacteristic of the Brazilian scenario, with specific attributes related to their size, economies and managerial capacity that are far from being a generalized pattern throughout Brazilian cities. Thus, the urban regeneration schemes in these cities cannot be simply transferred to smaller towns as ready-to-use regulatory frameworks. Even if they are willing to replicate urban regeneration models developed in São Paulo and Rio, most smaller towns and cities do not have the necessary economic and institutional conditions to enable them to function. However, these major cities do exert an influential role on defining policy paradigms, guiding governmental agendas, exporting regulatory frameworks, which means that they act as incubators of policy arrangements of this kind.

Urban regeneration actions are loosely regulated at the national level if regarded from a more "programmatic" perspective. There is nothing like a comprehensive national plan of urban regeneration, and neither is there a well-structured federal policy to guide or support these initiatives at the municipal level. There is also a lack of legal and regulatory devices clearly defining urban regeneration as a goal to be pursued by local governments. The connections between federal regulations and urban regeneration are limited to general principles that exert an indirect influence on initiatives of this kind.

In order to present the Brazilian context, two policy instruments used in urban regeneration processes will be scrutinized: the urban operation and the public-private partnership. These two modalities are linked to different processes and origins, but they have in common the fact of being urban instruments which enable the articulation between the public power and the private initiative with the purpose of expanding the capacity of promoting urban interventions that will allegedly benefit society in the future. While the urban operations come from an urban matrix ideology, in which a goal of urban renewal is present, whatever the content that it acquires, the public-private partnerships are based on large public infrastructure works which are mainly focused on the field of production or on sectorial policies that require large-scale equipment, such as in the case of health, with the need for the construction and management of large hospitals. They therefore come from a management matrix.

The following sections of this paper present an overview of the main argumentative lines underlying the discursive construction of the notion of public interest in the context of urban regeneration initiatives in Brazil. They seek to show how the convergence of different - and eventually conflicting - assumptions and propositions related to urban development provided ideological support to the widespread assimilation of urban regeneration initiatives as socially desirable interventions. In this sense, these sections explores the recent evolvement of the ideas of 'urban reform', 'strategic planning' and 'sustainability' within urban policy debate in Brazil and their influence over the imaginary of urban regeneration. The last two section address the regulatory framework related to urban regeneration policies in Brazil. They present an overview of the roles played by different governmental spheres in structuring these policies, their level of institutionalisation and the legal and regulatory instruments more directly employed in their implementation.

2 THE CONSTRUCTION OF THE ARGUMENTS

There are three levels of the Brazilian state, with federal, state and municipal legislative and executive authorities. The complex framework of plans and regulations takes place in these three political-administrative spheres, but the tradition of Urban Planning and Regulation has always been at the local level, that of the municipalities. This shows the fact that the urban question has traditionally been the “particular interest” of the municipality.

The overlapping of the urban question with the national sphere has always been very fragile, historically passing through some periods of regulation and others of almost invisibility, but this issue gained visibility when the Ministry of Cities was created in 2003, as will be seen later in the “The Recent Process” section. The construction of these instruments (Urban Operations and PPPs), validated in Brazilian Law, is a result of the form that ended up by acquiring a set of concepts and principles formulated in a context in which the domain of discourse was that of social development but were materialized in another more liberal and pragmatic period.

Different and even conflicting concepts and principles of different natures were used and linked to support urban renewal proposals and to present them as socially desirable actions. In this sense, the instruments currently used in Brazil bring together elements derived from traditional Urban Regulation and its practice, and the diverse ideas present in the debate on urban policy in Brazil, namely Urban Reform, Sustainability Ideals and Strategic Town Planning.

3 URBAN REFORM

The references to Urban Reform come from the “Basic Reforms” formulated at the heart of great mobilization of intellectuals and social movements in Brazil in the early 1960s, with a view to overcoming social inequality and technological backwardness. According to Maricato (2008: 8),

> “*Those with the greatest repercussion and visibility were the proposals for Agrarian Reform, Educational Reform and Health Reform. But, despite having less critical mass, the Architects joined this national movement. In 1963 a National Congress of Architects held in Petrópolis in the state of Rio de Janeiro proposed Urban Reform, with public control of land use and social housing as central issues of a manifesto resulting from this important event.”*

Shortly after, military intervention interrupted this process for a considerable period by establishing a centralized system of government and suppressing elections for state governors and state capital mayors, who were now nominated by the government in Brasília.

From the end of the 1970s the model began to run out of steam, and social movements expanded. In smaller cities and towns and in those around the state capitals, where the mayors continued to be elected, various experiences of participation and democratization of public actions were undertaken, with the interaction of social movements. In this context, and with the mobilization, claims and proposals of the urban social movements, it was possible to once again launch the ideals of Urban Reform.

In 1987, the Popular Amendment for Urban Reform was presented by a wide field of popular urban movements, trade unions and professionals, non-governmental organizations, university sectors and civil servants. The amendment clearly states what is coming, beginning with the title: ON URBAN RIGHTS, with the following two articles (Emenda Reforma Urbana, 1987):

> *"Art. 1 - Every citizen has the right to decent urban living conditions and social justice, and the State is obliged to ensure:*
> *I - Access to housing, public transportation, sanitation, electricity, public lighting, communications, education, health, leisure and security, as well as the preservation of environmental and cultural heritage.*
> *II - The democratic management of the city."*
> *Art. 2 - The right to decent urban living conditions requires the exercise of the right to property in the social interest in the use of urban properties and subordinates it to the principle of the state of necessity".*

With reservations and cuts, the proposals were partially incorporated into the Constitution, forming the Chapter of Urban Policy, as part of the section named "On the Economic and Financial Order". The chapter is made up of articles 182 and 183, with a central focus on the institution of the social function of property and the city. As the state of Brazil is at three levels, as mentioned, with federal, state and municipal levels of legislative and executive authority, the elaboration and approval of the State Constitutions and Organic Municipal Laws followed those of the Constitution.

Approved in 1990, the Organic Law of the Municipality of São Paulo reaffirmed and detailed the provisions of the Constitution stating that, in order to ensure the fulfillment of the social function of the property, the Municipality shall: I. Prevent distortions and abuses in the economic fruition of urban property and speculative use of land as a reserve of value; II. Ensure the suitable use of the potential of urban land for building, respecting the limits of the installed capacity of public services; III. Ensure the fair distribution of the costs and charges arising from the works and services of the urban infrastructure and recover for the community the increase in real estate value resulting from the action of the Public Power. The right to build shall be exercised in accordance with the principles set forth in this Chapter and criteria established by municipal law (Art. 151). In these terms, the city becomes a public, collective good, with the fruition of any real estate subject to this condition.

The inclusion of the Urban Order as the attribution of the Government, from the text of the Constitution itself, reiterates this nature of a collective asset attributed to the Government, which has the responsibility, according to the Constitution, of “the defence of social interests” (CF, art. 127), whose functions include the protection of “diffuse and collective interests "(CF, art. 129, III). However, according to the Constitution, the principles expressed in the Urban Policy chapter would only come into force after the national regulatory law, as in the terms of the law in articles 24 and 182. However, this regulation of the two articles of the Federal Constitution regarding Urban Policy and its developments, incorporated at state and municipal levels, required thirteen years of persistence, mobilization and negotiation, until the approval in 2001 of the City Statute - Federal Law n 10,257 / 2001.

As the expression of more than two decades of struggle by popular, trade union and professional movements after the proposal and collection of signatures for the Popular Amendment of Urban Reform, the City Statute resulted in a negotiated project which included some of the demands of the social movements but also the counterpart of elements favourable to capital, as required by the real estate development and production sectors.

It was this set of developments that, in a context of democratic advancement, provided the basis for the establishment of principles that pointed in the direction of a fair city, an urban order based on a comprehensive notion of public interest. These are the principles of the Urban Reform movement, which unfolds into guidelines such as: more intensive use of areas with good availability of infrastructure, services and jobs; preventing speculative retention of unused real estate properties; reduction of social and spatial inequalities between different regions of the city; balanced distribution of the costs and benefits of the urbanization process through the establishment of a redistributive tax system; socialization of the gains associated with "urban surplus values". This last principle is the one that provided the justification to charge the granting of development rights, which would also constitute the core of urban operation's financial engineering, as discussed below in more details.

The articulation between, on the one hand, the ambiguity of the meaning of “diffuse and collective interests” in an unequal society such as Brazil, and, on the other, the conflict between the various sectors of capital that contain the materiality of the city as their object of production, has been modulating the design of new urbanistic instruments. It is in these terms that an instrument such as the Urban Operation Consortium will emerge and expand in major capitals and large cities, with varying formats and specificities.

4 SUSTAINABILITY

Sustainability is one of the themes coined in the twentieth century as a facilitator of dialogue in a context of disputes. Based on an environmental approach, resulting from the perception of the finiteness of natural assets, it has ended up as a broad spectrum concept, able to include very different interpretations, allowing for convergence in declarations and agreements, without however signifying a convergence of understanding. Sustainability, as a guarantee of availability of natural resources for present and future generations, is the thematic core that unites different agendas.

Behind the word there is an ideological dispute that is not explicit. The neoliberal consensus model that depoliticizes social relations, concealing or naturalizing all forms of conflict, also includes the term Sustainability. This magic word, this widely held unanimity, incorporates the most diverse and antagonistic contents.

The City Statute, for example, establishes among the general guidelines of the Urban Policy the "guarantee of the right to sustainable cities, understood as the right to urban land, housing, environmental sanitation, urban infrastructure, transportation and public services, work and leisure, for present and future generations" (art. 2, I).

The National Policy for the Environment, as conceived in the law that creates the National Environmental System (Law No. 6.938 / 81), aims to preserve, improve and recover the environmental quality conducive to life, aiming to ensure, in Brazil, the conditions for the socio-economic development, the interests of national security, and the protection of the dignity of human life (art. 2). The Decree n ° 99.274/90, which regulates it, explains that the National Environmental Agenda is the document that recommends the themes, programmes and projects considered as priorities for the improvement of the environmental quality and the sustainable development of Brazil (art 7º § 4º).

On the other hand, for the World Bank, a sustainable city (Rivière d'Arc, 2001) is one that contains: Competitiveness - an effective land market, an efficient traffic circulation system, a broad and available communications system; Quality of life (liveability) - a decent standard of living, the ability to overcome urban and environmental degradation, the provision of cultural resources and "amenities"; Good governance – organization to simplify and reduce exchanges / decision flows, overcome corruption, have explicit rules; Bankability - Credibility as a borrower.

In short, sustainability viewed as a socially just, environmentally balanced, or economically balanced pattern of urban development allows for a broad field of legitimacy and consensus around the term, but not of content.

Therefore sustainability is one of the key terms of functional approximation and a central argument for Urban Operations that, prioritizing the "competitive" city's economic perspective, ensures functional quality conditions and the infrastructure required by large corporations, without extracting this cost directly from the public budget. More than this, it aggregates the positive image of sustainability as expressed both in Brazilian international commitments and in its environmental and urban development legislation.

In this field are included questions as environmental preservation, the expansion of green areas, drainage management, and the quality of water bodies, as well as the compact city model, which avoids peripheral expansion, reducing impact on natural areas, providing transportation and expanding the supply of social housing.

These two meanings of sustainability – one in the economic sense, other in the environmental one – give indirect support to urban regeneration in the sense that it can promote better local environmental conditions, support the shift towards a compact city model that avoids sprawl and consumption of natural sites, and also foster financial sustainability.

So that, if one hear just the formal justification, everything seems positive in this broad spectrum of discourse on urban development. Who could be against it?

5 THE STRATEGIC PLANNING OF CITIES AND TOWN PLANNING WITH RESULTS

In Europe the economic recession of the 1970s provoked a reaction from local governments and key economic actors to "promote cities" in order to attract investments, generate jobs and renew the productive base of cities. In addition, according to Nickson (1998), the World Bank and the Inter-American Development Bank, after two decades of ignoring local government programmes in the late 1980s, have become strong advocates of decentralization and the institutional strengthening of local governments. Firstly, given the demands of structural adjustment policies, they recognized the benefits of decentralization in helping to overcome the state's fiscal crisis by incorporating the vast and untouched fiscal potential of local governments. Secondly, they saw local governments as an institutional arrangement to produce services more efficiently and effectively. Thirdly, local governments could play an instrumental role as a more efficient administrator of poverty reduction programs during structural adjustment. Thus, the local element is seen less as "government" than, pragmatically and instrumentally, as "local administration". The Habitat Agenda adopted at the United Nations General Assembly in

December 1996 stressed the importance of decentralization as a transfer of power and the attributions of central government to cities.

It is in this context that, inspired by concepts and techniques from business planning, comes the proposal of the Strategic Planning of Cities. It was disseminated in Brazil and Latin America “by the combined actions of different multilateral agencies (The World Bank, Habitat) and international consultants, mainly Catalans, whose aggressive marketing systematically disseminated and promoted the success of Barcelona” (Vainer, 2000, p. 75).

A Strategic City Plan is, according to Castells and Borja (1996), a joint action between the local government and the main economic and social agents in carrying out a transformation of urban infrastructure to facilitate the transition from the traditional industrial model to that of a qualified tertiary centre and a change of image to suit the new requirements of the global economy and international competitiveness. According to them, the Strategic Plan is based on building a strong and positive image of the city “supported by an offer of infrastructure and services (communications, economic services, cultural offerings, security, etc.), which attract investors, visitors and user with money to the city and which help its 'exports' of goods and services, and of professionals, etc. The local government have to act as the promoter, with the role. of creating the conditions that enable actions to be made by public or private agents (through planning, political campaigns, economic compensation, etc.)” (Castells & Borja, 1996, 160). In order to make the Strategic Plan viable, it is also necessary to promote the city internally with its inhabitants, fostering a sense of belonging, collective will and trust, and belief in the future. Castells and Borja believe this internal promotion must be based on visible works and services, both monumental and symbolic, and those aimed at improving the quality of public spaces and the well-being of the population.

This vision of urban and economic development thus requires a solid political leadership, visible authoritarianism or considerable marketing work in order to bring together the expectations of entrepreneurs, trade unions, community organizations, scientific institutions, NGOs and inhabitants in general, around certain projects. In summation, it is eloquent the alignment of the urban regenerations with the pragmatic and entrepreneurial logic advocated in the discourse of strategic planning.

6 THE TRAJECTORY OF URBAN REGULATION AND REGENERATION POLICIES IN BRAZIL

Brazilian cities are made up of superimpositions, as Benedito Lima de Toledo (1981) wrote when referring to São Paulo: three cities in a century (mid-nineteenth to mid-twentieth): "The city in mud (taipa)” with its churches and the two storey colonial houses; the “palimpsest”, seen in the mansions and neoclassical and eclectic public buildings; and, at the end of the 20th century, the modernist skyscrapers "Designs for a Metropolis".

These transformations in the centre, and the city expansion through subdivisions of land in the outskirts, were triggered by private owners and interests, with little public intervention, and were seen as “progress". Only at more authoritarian moments there have been plans for major public interventions, such as the São Paulo Avenues Plan (1930) or the remodeling of Rio de Janeiro, the Agache Plan (1930).

Up to this point, according to Villaça (1999), public intervention consisted of the beautification plans beginning in 1875 in Rio de Janeiro, with the Plan of the Engineers (the first general plan on a monumental scale), which took up a large part of the public budget. He states that the term "urban beautification" was used to characterize the performance of city halls and clearly expressed the proposals of the dominant classes for the cities, in some cases to crystallize and spatially demonstrate the domination of the State, in others such as São Paulo to show the victory of capitalism, with the beginning of the rise of the industrial bourgeoisie, and to aesthetically resemble the great world capitals and to feel driving away the recent slave-owning past (Villaça 1999: 171, 243).

In 1929, the Arthur Saboya Code was established, regulating works in the city of São Paulo that extended the scope of its predecessor, the 1886 Code of Postures of the Municipality. This norm was reference for numerous cities and was regularly amended until 1972, when the General Law of Zoning No. 7.805 / 1972 was adopted, using the zoning model for the whole city, with differentiated indexes of land use and occupation, according to the district. In order to stimulate certain actions by private investors, the first

flexibilizations of utilization coefficients appeared, allowing planning gains for certain uses such as schools and hospitals.

It was during the 1970s, with the increase in verticalization, that, inspired by international experiences, the term "built surface" was coined: the emergence of an area built on the same plot or territorial boundary. This concept alerted to the fact that that more area had been created without the corresponding donation of public area as required in the cases of land parceling. In this period, the norms of land use and occupation, aiming at inducing some form of urban design, proposed different development potentials according to the area of the city.

In parallel with this process in the 1970s, the Law 101/71 was created, which dealt with the establishment of a public company (EMURB) with the purpose of developing urban renewal programs associated with projects contained in the Integrated Development Master Plan (PDDI), a legal document that translated the guidelines of the Basic Urban Plan of 1968: the implementation of a metro network in the São Paulo, the construction of expressways, as well as the redevelopment of areas along the first line of the new metro.

Among the measures was the proposal that the expropriations to be made by the metro for the implantation of the stations would be greater than what was effectively necessary, as these areas could then be marketed, with higher rates of utilization, resulting in profits for the metro, for the continuation of works and the expansion of lines. EMURB was the first attempt of using a public company governed by private law in the provision of public works.

From the end of the 1980s, urban planners began to be aware of the unfairness of the differentiation of development rights across the city, which attributed more intense conditions of use to certain lots, without any counterpart on the part of the owner of the lot for this differential, and the notion that this differential was equivalent to a “surplus urban value” generated not by the merit of the owner, but by all the investments made in the city, became clear. The idea that these owners should be charged some counterpart, an “onerous concession”, that they should repay to the "public" the value of this virtual lot, to which they would have access by means of the higher utilization coefficient, was thus consolidated.

In 1986, this flexibilization took on a new dimension, with the adoption of Law no. 10.209/1986, which introduced the Interconnected Operation, establishing as a counterpart to the potential construction gain the production of social housing. This device was applied to areas with favelas in the most wealthy and expensive regions of the city.

From 1990, a new concept for Interconnected Operations was no longer aiming at removing favelas. The practice of charging for the granting of additional development rights was generalized to the entire city, and the resources generated were directed to housing policy. The cost of the concession was estimated by municipal technicians according to certain rules and criteria to assess the earning potential that the expansion of the building potential would provide to the entrepreneur. This practice continued until it was contested by the Court of Justice in 2001.

As a result of the history of failures in the legal field, a new concept, the Urban Operation was constructed and proposed in the 1985/6 Master Plan, which was approved after the expiry of the statutory time limit.

Later, drawing on a strategically designed format, based on well-elaborated discourses and a negotiation process to include certain social demands and achievements, the idea of the Urban Operation Consortium was included in the Plan drawn up in 2002/2003 and approved in 2004. It basically consists of an infrastructure and urban improvement plan targeted to a delimited area of a city, where the works are paid through the sale of development rights to be used within the area.

7 THE RECENT PROCESS

At the same time that the constitution was completed in 1988, establishing a series of social rights, a government with a neoliberal platform took office in 1990. Countering this governmental platform, a wide political mobilization, bringing together housing movements, representatives of the urban reform movement, academics, the Workers Party (PT), and other stakeholders, demanded a stronger commitment from the central government in terms of social policies in general, including playing a greater

role in the field of housing and urban policy. After the victorious campaign of Lula for President, this political agenda started in 2003 to be institutionalized, with the creation of the Ministry of Cities as its emblem. Initially, the Ministry team included several actors engaged in the political mobilizations for the construction of a progressive urban agenda in the previous decades. One of the first actions carried out by the group in charge of the Ministry was to initiate a broader attempt to structure coordinated national sectoral policies, targeting areas like housing, mobility, sanitation, and waste management.

The role of federal institutions in this area had diminished significantly since the macroeconomic crisis of the 1980s. The roll back of federal interventions in this field can be understood as a combined effect of macroeconomic conditions and institutional changes witnessed during the two last decades of the twentieth century and was influenced by features like the cutbacks in social expenditure of the central government in a context of fiscal crisis, the privatization of state owned companies previously providing public services, and the municipalist paradigm affirmed by the Federal Constitution of 1988, which had devolved a wide range of attributions to local governments. Many municipalities, however, lacked the necessary financial and institutional conditions to adequately perform the roles assigned to them by theConstitution, which prevented, in the majority of cases, the expected quality gains as a result of greater autonomy, from actually taking place.

This process, however, suddenly suffered a significant setback. The fragile political balance of Lula's first term of office obliged the government to make a deal with other parties to ensure governability. The strategy was to extend the space of conservative political parties in the composition of the government, with the consequence that the control of the Ministry of Cities was transferred to a right-wing political party, resulting in the formulation of sectoral urban policies being relegated to a marginal position within the governmental agenda. Some policies were developed, while others were almost paralyzed during the following years. One of the policies affected by this political shift was the "Urban Centres Regeneration Programme".

This program had been launched in 2003, the first year of the government, and was the most explicit federal initiative directly related to urban regeneration, focusing on supporting municipal governments engaged in urban regeneration initiatives by providing financial aid, transferring federal properties located in urban centres, and helping local governments to implement actions related to institutional development and capacity building.

Its concrete results went little further than the publication of a policy guidance document, with no consistent set of concrete actions. The federal government provided some financial support to isolated urban regeneration initiatives promoted by local governments, but it failed to build a comprehensive program with systemic impact.

Municipal regulations in some cities provide relatively comprehensive legal backgrounds for urban regeneration projects, and it is common to find systemic definitions of targeted areas for urban regeneration within municipal master plans. In São Paulo, for instance, a recent municipal decree established a specific methodology for the formulation of urban interventions, covering issues like the definition of envisaged goals, participatory mechanisms, and the establishment of financial and regulatory instruments. However, it is important to stress that the level of complexity of municipal regulations related to urban regeneration is very uneven throughout Brazil. In many towns and cities, regulations of this nature are very basic, or even totally absent.

When we consider the regulatory devices of an instrumental nature, in addition to the government level programmes, there are federal regulations such as the City Statute that play an important role as a background for urban regeneration initiatives. Most of the tools employed to implement urban regeneration projects with private sector involvement are regulated at the federal level, and even though some of these instruments were initially enacted by municipalities, most of them have been subsequently incorporated into national legislation.

The Urban Operation Consortium is the most emblematic instrument of this kind now in Brazil. The conception of this regulatory tool can be traced back to the 1980s, as previously shown. However, the first time it was used within an urban regeneration project which was actually implemented was in São Paulo in 1995, with the creation of the Faria Lima Urban Operation Consortium. Before it, the intervention in the centre of São Paulo, called the Urban Centre Operation, utilized the award of building rights in order to obtain resources to invest in infrastructure works but did not arrive to implement a consortium mode

Afterwards the Urban Operation Consortium was then included among the urban instruments established by the City Statute, which was enacted in 2001. This law outlines the general conditions for the use of this instrument in Brazil, establishing a general basic pattern for its use by municipalities, and is particularly representative of the penetration of a market oriented logic in urban regeneration projects. In brief, an urban operation consortium as designed in the Faria Lima project consists of an infrastructure and urban improvement plan targeted to a specific area of a city and sponsored through the sale of additional development rights by the municipality within the area of intervention. It requires the enactment of a specific municipal law, which must define the area of the project, the envisaged improvements, the total number of additional development rights within the area, the governance regime, among other aspects. The rules concerning the commercialization of development rights within urban operations are also regulated at the federal level. These rights are traded by municipalities through the issuance of financial bonds called CEPACs (Certificate of Additional Building Rights) and their subsequent auctioning on the stock exchange. The CVM (a national independent authority responsible for the regulation of capital markets) is the competent authority to establish the general regulations concerning the trading of CEPACs and transparency in the management of urban operation consortia. It is also entitled to authorize the issuance of CEPACs in individual urban operations and to supervise their development. The norms issued by CVM explicitly define CEPACs as a capital market instrument, illustrating the financial rationale underlying this urban redevelopment scheme. This regulatory tool is present in two of our case studies, the Água Espraiada Urban Operation Consortium in São Paulo, and the Rio de Janeiro Porto Maravilha Project.

Another regulatory tool of growing importance in the field of urban regeneration interventions carried out with private sector involvement is the public-private partnership (PPP). This contractual instrument was firstly introduced into the legal system in Brazil by legislations at state level. By the early 2000s, several provinces had started enacting local PPP laws and launching privatization programs based on this instrument. A national PPP law was enacted in 2004, outlining the general conditions for its utilization. Certain municipalities also enacted local PPP laws, regulating in greater detail this contractual regime at the local level. This regulatory instrument has a broad scope as it is not specifically targeted to urban regeneration projects, but to actions combining the building of infrastructure and the provision of public services in general. Before the enactment of PPP laws, the delegation of economic activities to the private sector was regulated by a general law of concessions, which was enacted in 1995 to support the process of privatization carried out in that period. This was more directly suited to the concession of profitable activities, in which the concessionaire could be remunerated through the payment of tariffs by final users. The most important innovation of the PPP laws was to design a contractual regime in which the remuneration of the concessionary may combine tariffs and direct transfers made by the State. Arrangements of this kind were not legally impossible in the previous period, but there was no adequate contractual instrument to support them. Thus, the introduction of PPPs should not be regarded as a groundbreaking legal change, but rather as an incremental step in a longstanding process of legal and institutional reforms oriented towards supporting privatization. Another issue addressed by the PPP laws was to establish mechanisms to assure the security and profitability of concession holders. In a general sense, the introduction of this contractual regime enhanced the attractiveness of a wider range of activities for private agents, expanding the room for privatization. PPPs started being used in urban regeneration programmes in the early 2010s. The Porto Maravilha Project in Rio de Janeiro, which involved a comprehensive PPP contract covering a wide set of public works and the provision of public services within the area of intervention by the concessionary, may be considered a hallmark of the use of this contractual instrument in the specific field of urban regeneration initiatives. This paradigmatic experience gave rise to a proliferation of initiatives focused on urban regeneration using this instrument. Most experiences of this kind are still at the formulation stage or at a very initial phase of implementation, but the PPPs may already be considered a well-established model for urban regeneration within hegemonic policy discourses.

8 CONCLUSIONS

The diffusion of urban regeneration projects as a common trend of hegemonic conceptions and practices of urban planning is rooted in the recognition of these interventions as potential solutions for problems and challenges faced by contemporary cities in general. The strength of discourses portraying urban

regeneration as socially desirable interventions rests fundamentally in the diversity of urban problems which they supposedly address.

When assessing the literature and policy debates on urban planning within the Brazilian context, it was possible to identify the confluence of different, and even paradoxical, discourses and lines of reasoning as a basis for the rise of a favorable mindset for the proliferation of urban regeneration policies. At least three discursive streams have played a significant role in supporting such interventions. An initial significant discursive approach backing urban regeneration is that which is rooted in the “urban reform” mobilizations, where urban regeneration is associated with political demands oriented to the promotion of social justice, the provision of housing for low income groups in well-serviced areas, and the struggle against sociospatial segregation. Here urban regeneration initiatives are conceived as potentially helpful paths in the pursuit of an inclusionary urban agenda. A second discursive approach is that associated with the ideas of strategic planning and urban competition. Within this pragmatic and market oriented perspective, urban regenerations are regarded as means of improving the image of cities, turning them into attractive places for investment and reinforcing social cohesion at the local level. Associated to this is the idea that the works constructed with resources of building rights should not be a onus on the public funds and may redirect resources to social policies. A third perspective is that related to sustainability, where urban regenerations are regarded as potentially helpful alternatives to counter urban sprawl and move towards a compact city model, helping to rationalize the use of resources, reduce the environmental impact of the urbanization process, and provide the city with more green and open space. These perspectives are representative of different interests and goals and are voiced by different social actors. The ideological power of hegemonic discourses on urban regenerations rests precisely on their ability to forge an multifaceted image of such interventions as an amalgam of these diverse aspirations, hiding the underlying conflicts and social struggles and embedding them into narratives of public interest.

In a context of longstanding market oriented reforms, the implementation of urban regeneration projects has increasingly relied on regulatory schemes conceived to enhance the role assigned to private agents within urban development processes. This trend is seen in the growing presence of governance arrangements of a contractual nature, such as the urban operation consortium and public-private partnerships, in urban regeneration processes. Some emblematic experiences of urban regeneration have not been mere recipients of previously established regulatory arrangements but have also worked as important sites for the incubation of such models. In the wake of the increasing influence of a contractual paradigm, urban regeneration projects have been progressively conditioned by a business rationale, which is diminishing the space for concerns about the promotion of social inclusion and equity within cities.

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ID 1552 | THE SUBSTANTIVE IMPACT OF A PROCEDURAL RULE: THE CASE OF THE DUTCH 'LADDER' FOR SUSTAINABLE URBANIZATION

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1 STEPS TOWARDS SUSTAINABLE URBANIZATION

Since the dawn of the new millennium, the Netherlands, world famous for its protected Green Heart, growth centers, mainports and prohibition of out-of-town shopping malls, has been busy dismantling its national planning (Zonneveld and Evers 2014). In 2012, it opted to decentralize, deregulate and replace all remaining national urbanization policies with a single procedural rule called the ladder for sustainable urbanization. The 'ladder' owes its name to the three steps that local zoning plans must consider when granting rights for new urban development (see text box below). In short, they must argue that (1) a regional need exists, (2) explain the siting within the urban fabric and, if out-of-town, (3) consider multimodal accessibility. This substantiation should be included in the plan's explanatory notes.

Like many regulatory instruments, the ladder is a procedural rule aiming to achieve substantive ends, in this case, reining in the overproduction of housing and commercial property on car-dependent greenfield sites which had characterized post-2000 urban development in the Netherlands (Janssen-Jansen and Mulders 2012). One could easily be forgiven for not believing that a requirement to explain planning decisions in non-binding explanatory notes would overcome the powerful economic logic of land development. Indeed, an initial evaluation found the application of this rule in local plans to be clearly inadequate (Evers 2015a). Even so, the ladder – and more particularly its enforcement through the court system – has since been blamed for hampering development and in the summer of 2017, less than five years after it entered into force, it was relaxed.

Given the benefit of several years of implementation history, it is now possible to shed light on the impact of this instrument in more detail and reflect on whether the ladder was as ineffective its proponents had feared or as obstructing as its detractors had claimed. The research draws on an analysis of hundreds of

explanatory notes over the 2012-2016 period, a review of jurisprudence and 43 structured interviews conducted with a random sample of municipal planning officials in 2016. A guiding principle of the evaluation are the concepts of 'conformance' and 'performance' in planning theory (Faludi and Mastop 1998). Conformance, as the word implies, indicates the degree to which the rule is followed in practice, in this case whether a zoning plan that should have applied the ladder, actually did. Performance goes a step further, asking whether this application affected planning practice in a meaningful way. It can be assumed that conformance is a necessary but insufficient condition for performance.

> *Spatial Planning Decree (Bro) Article 3.1.6, Section 2 Section 2: The explanatory notes of a zoning plan enabling new urban development must contain the following: a) A description of how the foreseen urban development satisfies a current regional need; b) If the description in part a shows that a current regional need exists, a description shall be provided of the extent to which this need could be accommodated in the existing urban area of the region in question by reusing, refurbishing or transforming available space; c) If the description in part b shows that the urban development cannot be accommodated within the existing urban area of the region in question, a description shall be provided of the extent to which this need will be met at locations that are, or can be, suitably connected by different modes of transport.*

Source: http://wetten.overheid.nl/BWBR0023798/geldigheidsdatum_09-02-2015, own translation.

This paper will first provide a brief overview of the literature on plan and policy assessment to contextualize the evaluation undertaken for the ladder. Next, the terms conformance and performance will be operationalized and the methods of the empirical research explained. The last section presents the results and conclusions.

2 LITERATURE REVIEW

Even though planning generally gravitates towards ex-ante evaluations (i.e. survey before plan), assessing the impact a plan or planning policy ex-post has a long tradition as well (Talen 1996; Seasons 2003). Generally, this draws on the policy analysis literature, and more specifically implementation studies. One of the most important insights to emerge from this literature is that a great gap can exist between what is written on paper and what happens in actual practice (e.g. Pressman and Wildalvsky 1973).

What is the nature of the policy being evaluated? The ladder is a procedural rule with the ambition to achieve substantive aims (sustainable urban development) and in this sense, works indirectly. This resembles other instances of institutional design, where "[t]he tacit assumption is that changing the rules of the game will affect gameplay in a durable and predictable way, and that this will ultimately result in substantively different outcomes" (Evers 2015b, p. 428). Specifically, the ladder seeks to influence urbanization processes by mandating that plans argue why the development meets a regional need, and if applicable, why a greenfield site is necessary for this and whether the location is multimodal. Because the ladder is essentially a policy instrument prescribing an assessment be made, assessing its impact has the character of a metaevaluation. In this respect, we can turn to the extensive literature on the effectiveness of environmental impact assessments (EIA), which have similar aims and mechanisms as the ladder (e.g. Chanchitpricha and Bond 2013). Like the ladder, an EIA assembles information about the desirability of a development project given its potential impact with respect to alternatives. Like the ladder, the EIA's purpose is to improve decision-making (Oliveira and Pinho 2010). And, finally, like the ladder, it seeks to contribute to sustainable development. On reflecting on how to study the effectiveness of EIAs, Sadler (1996) made a distinction between procedural effectiveness (if and how the procedures were implemented as required), substantive effectiveness (the extent to which the EIA led to actual change) and transactive effectiveness to the mix (whether these changes were cost-effective). Baker and McLelland (2003) added the criterion of normative effectiveness (the extent to which normative goals were achieved).

These notions correlate well to a distinction made in planning theory between conformance and performance (e.g. Barrett & Fudge 1981 cited in Faludi 2000, p. 305). Conformance relates to the extent to which practices comply with rules or development follows plans. Most conformance research in planning is carried out when clearly defined objectives are present, such as housing targets in particular locations (Bontje 2001; Korthals Altes 2006, Alfasi et al. 2012). In the case of a procedural rule like the ladder,

conformance is tantamount to the 'procedural effectiveness' identified by Sadler (1996) above. In other words, if the explanatory notes of a plan granting urban development rights contain the necessary substantiation, it is ipso facto in conformance.

Performance, on the other hand, regards how rules work themselves through organizational practice. This is particularly important for strategic plans where targets are long-term and hard to quantify. According to Faludi, a vocal proponent of this evaluation method, "[p]lans perform their role if and when they help decision-makers make sense of their situations, and so they need to be evaluated in this light" (Faludi 2000). With respect to the EIA literature, this notion of performance carries with it elements of both 'substantive' and 'normative' effectiveness.

I contend that in the case of the ladder, both conformance and performance is relevant for understanding its effectiveness. It is reasonable to claim that non-conformance means that this rule has not meaningfully affected municipal planning practice (performance). Conversely, the faithful application of the ladder (conformance) may entail some degree of organizational effort (performance), unless this was already standard procedure at the municipality. Performance is vital, however, since the ultimate substantive aim of the ladder, to make urban development in the Netherlands more sustainable, means going beyond simply applying the rule, but internalizing it and acting accordingly.

3 METHODS

This study takes the aforementioned distinction between conformance and performance as a point of departure, elaborating on these terms from the insights gained from the EIA evaluation literature. The research draws on an analysis of explanatory notes, a review of the relevant case law and structured interviews. Some results have been published (in Dutch) by the Netherlands Environmental Assessment Agency.

In our evaluation of the ladder, conformance is defined as the extent to which the explanatory notes of a local plan falling under the requirement contains explicit argumentation on the points stipulated by the ladder. This was performed in two steps. The first was to determine whether a particular (randomly selected) zoning plan provided for 'new urban development' as defined in the regulation, whereby application of the ladder was compulsory. This was not as straightforward as expected and often required close reading. As a result, plans were sorted into the following categories (1) noncompulsory (no significant urban development), (2) unclear/indeterminate, (3) possibly compulsory (small-scale building or rezoning uses in existing buildings), (4) clearly compulsory (significant new or expanded zoning for residences, industry or retail). Afterwards, the explanatory notes were scanned and the application of the ladder, if present, read. A score was then awarded according to how well the ladder was applied: (A) complete and proper application, (B) an argument given why it was not applied, (C) partial or incorrect application (e.g. cursory remarks, skipping steps), and (D) not applied and/or mentioned (it was assumed that if a plan made no mention of the ladder, it did not apply it). Obviously, of all possible combinations, the most relevant cases are 4A and 4D. The analysis was carried out using a sample of approximately one thousand explanatory notes in the 2012-2014 period (randomly drawn from a pool of approximately 5,000 plans) and repeated two years later using the same methodology for the 2014-2016 period. During this time, ladder case law was followed in order to keep track of how key issues were being interpreted, such as the evolving definitions of 'new urban development' and 'existing built-up area', but no changes were made to the methods in the two periods for the sake of comparability.

The performance of the ladder was carried out using mixed methods. The first entailed a reflection on the data obtained during the conformance analysis. As stated, performance was considered absent in cases of noncompliance: it is unlikely that the ladder had a significant effect on the plan if it was not even mentioned. A sample of 200 explanatory notes of zoning plans were therefore randomly selected that did mention the ladder and sorted according to type of urban development being granted and the kind of argumentation being put forward. This analysis was more qualitative and entailed subjective interpretation as regards quality of argumentation. Like the conformance analysis, this analysis was carried out twice for the 2012-2014 and 2014-2016 periods respectively.

The second method to measure performance concerned structured interviews with planning officers from 43 randomly selected municipalities. The interviews were carried out by planning students from the

University of Amsterdam in the spring of 2016 using a standard set of 18 questions and were approximately 60-90 minutes in length. The results were single-blinded in so far as the respondents were told that the interview was about the effects of national planning policy on local planning in general and not on the ladder specifically. This allowed some strategic questions to be posed at the beginning of the interview on ladder-related issues to see if the respondents would spontaneously mention it on their own behalf and volunteer information about its impact. The ladder was only raised as a topic after the respondents had reflected on the impact of other national and European policies on plan-making in their municipality, making their assessment of the ladder more consistent and balanced. Towards the end of the interview, respondents were invited to reflect on the meaning and significance of the ladder (i.e. how it compares to the Dutch planning concept of 'good spatial planning') and to share their opinions on the ladder and provide advice to the national government. The interviews were transcribed and analyzed qualitatively by hand (coding in margins and tallying in Excel). In order to protect the privacy of respondents, the results are presented anonymously.

4 RESULTS

The degree of conformance and performance of the ladder will be presented along the lines of the four criteria for effectiveness of EIAs discussed earlier, but using terminology more attuned to planning. As stated, Sadler's 'performance effectiveness' strongly resembles the concept of 'conformance' in plan evaluations and will be treated first. The remainder of the paper evaluates the performance in several sections. First, the performance in terms of 'substantive effectiveness' or the impact of the ladder on municipal planning (both in terms of content of plans as well as the planning process) will be assessed. This will lead to a discussion about 'normative effectiveness', that is the extent to which the ladder is aligned with the municipality's own policy objectives and broader notions of 'good spatial planning'. Finally, the matter of 'transactive effectiveness' will be considered by presenting some results about the added value of the ladder as an instrument vis-à-vis some of its perceived side effects.

4.1 CONFORMANCE

As explained, the level of conformance is ascertained in two steps: (1) whether a given plan enables 'urban development' and therefore is required to apply the ladder and (2) whether this plan applied the ladder. This exercise was performed on approximately 1,000 plan explanatory notes in 2014 and repeated two years later. Each time, approximately 250 plans were found to enable urban development and thus these plans comprised the units of analysis.

The two periods reveal remarkable differences in conformance. In the 2014 assessment only 8% of plans applied the ladder in full and 72% did not apply it at all (Evers 2015a). It is reasonable to assume that the low level of conformance with the rule is related to the 'pipeline effect' of plans slowly making their way through the system when the ladder entered into force in October 2012. A second factor concerns the awareness of the existence of this requirement, a matter which was greatly enhanced after the Dutch administrative court struck down some plans for non-compliance in late 2013. Both explanations would suggest improved compliance in the future, an expectation which was confirmed by the 2016 assessment. In the second period about half of the plans applied the ladder in full: about six times as many as in 2014. The figures strongly suggest that this instrument is becoming institutionalized in local planning practice, especially considering that an additional 24% had made an attempt (i.e. partial or incorrect application). In this period, the ladder was widely discussed in professional trade journals and seminars, further contributing to awareness and, presumably, conformance.

4.2 PERFORMANCE

Since the ladder is the last existing national rule on urbanization, its performance is no trivial matter. In order to investigate the extent to which it impacted local planning practice, a number of tests were carried out. First, the argumentation in the plans was evaluated. Second, the opinions of the 43 municipal planners were analyzed about how and if the ladder affected planning content and processes and how they felt about these impacts.

4.2.1 SUBSTANTIVE IMPACT

As a first step to understand the performance, a random sample of ladder texts were read (200 in each period). Already in the selection of plans for further analysis, it became abundantly clear that awareness had improved: about twice as many plans mentioned it explicitly in 2016 than had in 2014, confirming the analysis on conformance above. Another interesting difference related to the kind of plan being made: a greater share of plans enabled development, but these developments were generally smaller and, saliently, under the legal threshold for the ladder as defined in the jurisprudence (i.e. 10 housing units, up from about 5 in the 2014 analysis). Obviously, the degree to which plans are legally required to apply the ladder will affect its impact on local planning practice and substantive outcomes. Since a majority of plans are now under the threshold, they do not have to consider regional need or provide arguments regarding siting or multimodal accessibility. This means that the ladder is ineffective in curbing, and indeed may even encourage, piecemeal urban sprawl. Moreover, in both periods only a small fraction of plans (less than 10%) pertained to commercial property development, which was at the root of the problems surrounding poor siting, multimodal accessibility and oversupply/vacancy, and a major reason why the ladder was introduced in the first place. One can therefore question, purely based on these figures, the real impact the ladder has had on municipal planning.

A reading of the argumentation itself casts further doubt on the impact of the ladder on substantive planning decisions. Of the three steps, by far the most attention was devoted to the first (regional need). For new housing, the plans generally stated that the foreseen development fit within the allotted capacity granted to the municipality within a provincial or regional strategy. The justification for commercial development, particularly retail, was more substantial and generally included quantitative needs assessments carried out by consultancies. With respect to the second step (siting), the ladder applications resembled ex-post rationalizations of decisions already taken; it did not seem like the ladder was guiding decision-making. Reasons for greenfield locations included the need for large parcels, open space (for luxury developments) or costs. Finally, the third step (multimodality) was rarely applied, or unconvincingly (e.g. that the site was multimodal because it could be reached by taxi as well as a car, or that public transport could be supplied at a later date).

The 43 interviews carried out in 2016 largely confirm the impressions gleaned from the textual analysis. When asked what the most important change had occurred over the past 10 years in their municipal planning, only 10% mentioned the ladder spontaneously, and only one respondent called it the most important change. Matters like the economic crisis, more vocal citizens, regional cooperation and a shift in planning doctrine towards more pro-development planning were considered far more important. The following questions on ladder-related issues (including one explicitly on national policy) elicited more mentions, bringing the total up to half of respondents. Still, the impression is not one of great significance (later, it was evident that all respondents were familiar with the ladder).

To measure the substantive impact further, the planners were asked whether the ladder had led to changes in plan content in their municipalities. Nine felt that it did have tangible impacts, and two provided examples of plans being abandoned or resubmitted. In most cases, the application led to a reduction in the number of homes or type of homes being zoned (only one regarded the second step, resulting in a different location for development). One of the most important impacts on local planning was a new fixation on qualitative analyses to argue that a ‘regional need’ existed. This was viewed as particularly difficult (but not impossible) to do in areas of slow growth or demographic decline.

4.2.2 PROCEDURAL IMPACT

The impact on planning processes was also discussed. In theory, the ladder is a new requirement, requiring extra time and effort to research and/or write up justification. Estimations ran a large gamut: some claimed it could be done in less than a day or even ‘in about an hour’, while others revealed that they had been dealing with the ladder application for over a year. One planner bemoaned the fact that a plan had been held up for a long time in court because the ladder had not been applied, and when it was applied, it was just a simple one-page explanation. Finally, as most zoning plans are written by consultants, many respondents admitted that they had no direct experience of how much time and effort was required. In general, the respondents agreed that the larger the plan, the more work was required for application. Another factor was the quality of the planning environment. The existence of regional housing visions, accurate and up-to-date information and the like expedite the writing of ladder applications. The

most important impact on planning processes, however, was on intermunicipal coordination. The ladder acted as a clear stimulus to work together on surveying the number of plans in the region to gauge the level of regional need.

4.2.3 DESIRABILITY

The previous sections dealt with the level of impact, but not whether this was regarded as positive. Although this was not explicitly asked, the respondents volunteered a great deal of opinions which were subsequently qualitatively analyzed. This was done by ranking opinions on a Likert scale. The findings revealed that respondents were almost exactly divided about the desirability of this instrument.

The intent of the ladder was rarely questioned. Instead, its various effects and side-effects became the object of scrutiny. The most frequently mentioned positive effect was that the ladder forced municipalities to reflect on and articulate their spatial decisions. It was praised for improving transparency and awareness about sustainable urban development. Some claimed that this led to better plans and breaking through old habits like viewing greenfield development as a default. Its acceleration of regional coordination was also viewed positively. Finally, a few respondents felt vindicated by the ladder because it obstructed, in their view, the cravings of overzealous local politicians for development. This was especially applicable to politicians elsewhere in the region: 'the ladder is useful for the other municipalities' a respondent candidly remarked.

Many criticisms were voiced as well. For the most part, these pertained to implementation. Some felt enforcement through the courts had injected a new uncertainty in the planning process. Stakeholders overcompensated for this by concentrating on quantitative analyses to prove their point, resulting in an arms race of information, which only benefited consultants. One respondent lamented that "the ladder gave us extra costs, hardships, risks and time-consuming procedures. It slows down the system and gives opponents ammunition to fire at the plan." It can also strain relationships with stakeholders; municipalities find themselves having to defend the rule to developers who are skeptical or openly hostile to the idea.

4.2.4 ADDED VALUE

Since 2012, municipalities drawing up zoning plans enabling new urban development must apply the ladder – requiring an explanation about regional need, location and, in the case of greenfield development, multimodality. These are rather standard considerations for zoning plans and arguably should have always been included, in one form or another, in the explanatory notes. Indeed, a close reading of a sample of the notes of non-complying plans in 2014 found that almost half had applied the ladder implicitly or inadvertently by treating these issues somewhere in the notes without having explicitly mentioned (and probably being unaware of) the ladder. This calls the added value of imposing additional argumentation into question.

To explore this point further, the responses to the interview questions on impact were examined in more detail. The ladder was often seen as having no effect because 'we were already doing that' in the municipality. One respondent explained "plans were always well-argued, but now it's just being written down" while another joked that the national government had stolen their idea. The reflections on the meaning of the ladder with respect to the notion of 'good spatial planning' (in the Spatial Planning Act, all zoning must be done in accordance to this principle) also indicate that the two are very closely related: only 14% felt otherwise. The rest believed the ladder to be tantamount to, part of or an instrument towards good spatial planning. The latter, like the ladder, means trying not to waste space and being transparent in decision-making. Given this, one can seriously question the added value, or at least the novelty, of this instrument.

5 CONCLUSION

The results of four years of implementation history seem to indicate that the 'ladder' is becoming institutionalized in local practice and impacting planning practice both in terms of content and process. Conformance has improved dramatically since 2014. From the interviews in 2016, there are some clear

examples that the ladder influenced decisions to alter and reduce the amount of urban development or, in a few cases, opt for a different location. On the other hand, some developments have occurred that demonstrate a blatant disregard for the spirit of the ladder, while still following it in letter. Moreover, given that a majority of plans are too small to be required to apply this rule, the ladder is powerless to affect piecemeal urban sprawl.

Arguably more important are the impacts the ladder has had on the planning process: it has proved in some cases costly and time-consuming and created tensions with stakeholders. On the other hand, it has stimulated regional coordination, something which enjoys widespread support. The jury is still out regarding the desirability of this instrument on balance; the municipal officers interviewed were highly divided in their opinions. Nevertheless, the national government has decided to rewrite the ladder in order to make it less demanding. The first step, which had the most significant impact, has been weakened (the term 'current regional need' has been replaced by the more vague 'need') and the third step on multimodality scrapped. The lighter version of the ladder will enter into force in the summer of 2017, inevitably sparking a new round of jurisprudence and evaluation.

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ID 1558 | HOW CAN PUBLIC-PRIVATE PARTNERSHIP (PPP) APPROACH CONTRIBUTE TO A DYNAMIC BUT CONTROLLED URBAN DEVELOPMENT: THE CASE OF PPP IN SLOVENIA

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ABSTRACT: Slovenian planning legislation states that the main objective of spatial planning is to enable coherent spatial development by the consideration and coordination of different development needs and interests and assuring public benefits, especially in the areas of environmental protection, the conservation of nature and cultural heritage, etc. Coordinated planning approaches aim to contribute to a balanced and sustainable spatial development, which is also one of the biggest challenges of contemporary urbanism. The problem in facing this challenge is in the actual realization of urban projects which is often hindered due to the financial obstacles. Lack of financial resources in both public as well as private sector contributes to an increasing necessity for collaboration between public and private investors. Not rarely only the involvement of a private partner into a project which is in a public interest makes the investment possible. If the process goes smoothly, this way the city's development needs as well as the desires of private investors are met - shared investment in the urban projects may contribute to the fulfillment of economic objectives of the private investor and spatial planning objectives of the planning authority at the same time. The PPP tool has been introduced into Slovenian spatial development practice rather recently. Most often the improvement of the quality of the living environment through brownfield redevelopment, built-structure renovation, energy efficiency improvements etc. are achieved by the implementation of PPP, which also contributes to a more controlled creation of urban space and increases the flexibility of the traditionally rather ossified planning process in Slovenia. The paper presents the most common forms of PPPs used in all eleven Slovenian urban municipalities. The ongoing research attempts to define different types of urban projects that are suitable for implementation in a form of PPP, and other different instruments that municipalities have at their disposal to facilitate the use of PPP within a specific current context of post-socialist neo-liberal system in Slovenia. Through the examination of concrete PPPs different approaches to activate land or buildings in public ownership with private capital are recognized, risks, benefits and potential problems revealed and possible solutions to overcome the obstacles identified. Different examples show the relationship between public and private partners in terms of investments, responsibilities and benefits during the realization of an urban PPP project which greatly reflect the fact that PPP as a tool has not got a long tradition yet.

1 INTRODUCTION

Public-private partnership (PPP) plays an important role as an instrument of planning and implementation of public infrastructural projects, including urban projects that affect the dynamics of urban development. PPP sector in Slovenia remains underdeveloped. The Public-Private Partnership Act (ZJZP, 2006) was only adopted in 2007. PPP mechanisms provide for private investments in public projects and public investments in private projects, insofar as the latter are in public interest: for instance, building, maintenance and management of public infrastructure, and, in certain cases, performance of public services or activities, insofar as those are in accordance with terms and conditions, valid for public utilities in general. The main advantage of PPP is provision of investments without or with minimal burdens for public finances. Through PPP projects, private economic initiative and its efficiency are introduced into construction and use of public infrastructure, while at the same time, usually by default, all of the costs of the public infrastructure are in a largely borne by its users, as a general rule in proportion to the frequency of use.

This paper is based on the work commisioned by Slovenian Research Agency and Ministry of Spatial Planning of Slovenia. This is an ongoing research project being implemented in a cooperation between

Urban Planning Institute of the Republic of Slovenia and University of Ljubljana – Faculty of Architecture and Faculty of Law.

The paper presents the results of the first two phases of the project. It reports the key results of interviews conducted with, first, representatives of local authorities and, second, investors. The main goal of the interviews was to determine the level of the current practices in the PPP sector in Slovenia. It furthermore identifies the models of PPP that are in use in Slovenia and proposes the needed improvements of PPP system. It also identifies possible urban development projects that can be implented by the usage of PPP in future.

2 METHODOLOGY

We tried to determine the current level of PPP mechanism use in Slovenia in two ways: by assessing materials and data from publicly available data bases, and by conducting semi-structured interviews with representatives of relevant municipal departments and municipal services from all 11 Slovenian city municipalities, and with representatives of private investors.

Our goal was to test developmental needs and plans of city municipalities, their up-to-date experiences with the PPP model (their preference or non-preference for the mechanism in principle, problems encountered in the use of the mechanism, etc.), and both the plans and needs of the municipalities, connected to PPP mechanism project implementation in the future.

For each interviewed group we set up the questions on the basis of a prior review of literature and sources and available data on existent PPP practices in Slovenia. The basic structure of the questionnaires was tested through informal talks with representatives of local public administration, state public administration, and investors. On the basis of informal talks we were able to establish common features, valid for the majority of the city municipalities, such as: key motivations for the application of the PPP mechanism; assessment of the suitability of the legislative framework; key obstacles to the implementation of PPP; financial aspects of the implementation of PPP and forms of incentives for a larger participation of private capital; key open questions and dilemmas; guidances for improvement of the existing PPP system.

Interviews with private investors provided insight into their perspective on PPP: why they opt or refuse to opt for participation of this sort; their proposals for changes of the existing PPP system in Slovenia; the types of PPP-model urban projects of interest to private investors; the types of PPP-model projects they are already involved with. We were also interested in the types of goals pursued by private investors involved in PPP-model project, and whether those were markedly different from the goals pursued in projects lacking a public partner; the resons for absence from participating in PPP-model projects; the needed changes on the part of the public partner (state, municipality, etc.) in order to be able to realize more PPP-model urban projects, as well as on the part of the private investors; financial and other mechanisms that should be established in Slovenia in order to allow private investors to realize PPP-model projects in an increased and simpler way.

Interviews with the representatives of city municipalities were conducted in the period from November 2016 to December 2016, and those with the representatives of the private investors in May and June 2017, for the most part at the headquarters of institutions involved. On the basis of the results and informations we gained, we were able to identify the PPP-model-based urban projects that can, and the ways in which they are able to, contribute to dynamic and controlled urban development.

3 EXAMPLES OF RELEVANT PRACTICE

According to Corrigan et al. (2005) a successful PPP depends on ten crucial steps: 1) consistent development of a public-private partnership, 2) creating common vision, 3) mutual understanding of partners and key shareholders, 4) clear definition of both risks and rewards for all shareholders, 5) establishing a clear and rational process of decision-making, 6) ensuring fulfillment of obligations of all shareholders, 7) ensuring consistent and safe projec management, 8) frequent and early communication, 9) arranging a fair structure of negotiation, 10) establishing mutual trust as a basic value (eg Corrigan et al., 2005). Scholars (Tasan-Kok and Zaleczna, 2010; Kościelniak and Górkab, 2016; Moskalyk, 2011)

point out main benefits for the public partner involved in the PPP-mechanism-based projects: engaging private partners provides part-financing of the project, thus shifting financial burdens away from the public budget. Furthermore, private capital limits and reduces the risk of bringing implementation or construction of a project to a halt, thus increasing the possibility of infrastructural improvement. Cooperation with a private partner enables and enhances the use of the latest advanced technologies, transfer of knowledge and exchange of experiences. Efficient management of projects and human resources reduces the time necessary for the investment performance and significantly lowers the costs involved. Participation of the private sector lowers the risk of political pressures. Market benefits include both efforts of local administrative services in locating private investors and thus outside sources of financing, and promotion of cooperation with the private sector. On the other hand, benefits for the private sector, involved in PPP-based projects, include: potential high rates on return on the investment and furthermore, cooperation with the public sector may result in a transfer of knowledge and experiences, all of which both partners may find useful in future projects. Last but not least, long-term investments into these kinds of projects provide security for the private capital, which may also count on various market benefits (Kościelniak and Górkab, 2016).

Kościelniak and Górkab (2016) also give a good example of a successfully managed and realized PPP-based set of urban projects. They address projects such as investments into transport infrastructure, environmental protection, and development of residential renewal. Furthermore, they write about projects, directly affecting basic needs of the population: environmental management, public transport and communications, sports, tourism, recreation, residential construction, revitalization of degraded areas, development of science and technology. These reflects a wide range and variety of possible urban projects to be implented by PPP.

Another increasingly important aspect of managing the contemporary city life is its brending. In European context this is often related to the issue of cultural heriatage preservation and development and PPP mechanisms offer some useful approaches. Zhao (2015) cites the example of Chinese cities that have, in dire need of renewal of their architectural heritage, found the necessary funds – and consequently faster ways of project realization – in a linkage with the private capital. The private sector has been allowed to directly market the heritage. Since the private capital was directly interested in the success of the projects involved, both marketing and »city branding« proved to be extremely effective, leading to the establishment of a financial current with positive effects.

Global practice has developed numerous types of PPP models. They are useful for different types of projects. Their differences consist of the following (internet sources 1 and 2):

1 what type of relationship exists between the parties involved in the PPP (grantor of concessions – public partner, concessionaire – private partner);
2 who is responsible for the design and the preparation of project documentation;
3 who finances the implementation of different phases of the projects;
4 who implements the construction, renewal or other forms project implementation;
5 who manages or who is responsible for the operation and maintenance of the completed project;
6 who and when becomes the final owner of the completed project.

Below we will mention a few examples of PPP models currently in use in Slovenia.

4 COMMON FORMS OF PPP IN SLOVENIA

The most common types of urban projects, implemented by PPP mechanism, that we have encountered in conducted interviews, are the following:

1 construction of sheltered accomodation for the elderly (mobilization of publicly owned land through private capital being the most common form);
2 construction of educational facilities (for insance, kindergartens);
3 implementation of urban infrastructural projects (construction and maintenance of roads, construction of markets, etc.);

4 upgrading of energy infrastructure in publicly owned facilities (schools, kindergartens, health clinics, administration buildings, sports facilities, cultural facilities; often part-financed by cohesion funds);

Speaking of PPP projects in economic sense, there are several different relations between public-and private-law entities. Below we cite some examples of the PPP models, encountered in our interviews. Hopefully they will at least partly illuminate the complexity of the PPP phenomenon in Slovenian practice. It needs to be noted that in some cases combinations of models exist in practice.

4.1 MODEL DFBOT (DESIGN-FINANCE-BUILD-OPERATE-TRANSFER)

This model is used for energy-efficient sanation of public facilities, owned by the City Municipality of Ljubljana, including construction, technological and energy samnation of facilities, with the goal/consequence of improving energy efficiency of said facilities and thus lowering energy use. Sanation encompasses 125 municipality-owned buildings of the following types: kindergarten, school, health centre, administration building, sports facility, cultural facility. Concessionaire (being a natural or legal person) will, as stipulated in the agreeement, contractually provide energy performance services, implement measures to achieve energy performance and manage energy maintenance services (internet source 3).

4.2 MODEL DFBTO (DESIGN-FINANCE-BUILD-TRANSFER-OPERATE)

Should realization of certain objects of energy-efficient sanation in certain facilities prove to be either economically unviable or impossible to conduct according to the model DFBOT, model DFBTO will be implemented. If use of neither model proves to be impossible, a combination of both will be used. Energy-efficient sanation of public utilities owned by the City Municipality of Celje is planned in a similar fashion and will be implemented in kindergartens, schools, business premises, cultural facilities, sports facilities, health facilities, public-law institutions (internet source 4). Energy-efficient sanation of 23 facilities in the City Municipality of Novo mesto, energy-efficient sanation of public facilities of the City Municipality of Koper and in other cities are to proceed in a similar way.

4.3 MODEL DBOT (DESIGN-BUILD-OPERATE-TRANSFER)

A successful example of this type of PPP model is construction of kindergartens in the City Municipality of Slovenj Gradec. In this particular case, existing buildings are to be demolished and new ones to be built, maintained, insured, operated in an energy-efficient manner and finally transferred into public ownership. The private partner provides for the obtaining of the building permit and for the construction project. The private partner also assumes responsibility for all risks connected to the demolishing of the existing and the construction of the new buildings, as well as those connected to operating the facility. The private partner has the right and the obligation to perform the services of acquiring the building permit, of demolishing the existing buildings, of construction of the new buildings, of ongoing maintenance, of insurance, of energy management and of charging users of the building. The private partner charges the users for the use of the facilities for the period of 15 years. After the expiration of the concession contract all buildings are to be transferred – without compensation – into the ownership of the city. The concessionaire covered 60% of the costs of construction, while the municipality as the grantor of concessions covered the remaining 40% (with 15% of its own participation and 85% co-financed by the EU). Implementation of the PPP model in the construction of the kindergarten enabled the municipality to save 30% of the cost. The whole process from designing the project to its implementation to 15-year maintenance is to be provided by the concessionaire.

4.4 MODEL BOT (BUILD-OPERATE-TRANSFER)

This model was used in the construction of the market place in the City Municipality of Celje. The market place was built by the private partner. On the basis of the concession contract for construction, operation and maintenance the private partner was to operate the market place for the period of 10 years. However,

after 5 years the private partner went bankrupt. The municipality solved the problem by buying a share of the liquidation proceeds and continued to operate the facility on its own.

4.5 COMBINED MODELS

Sometimes two or more models are combined. Two models have been used in the construction of the sheltered accommodation for the elderly in Ljubljana (more on that below); namely for the public part of the project the construction concession model DFBTO (Design-Finance-Build-Transfer-Operate) and for the public part of the project the construction concession model DFBOO (Design-Finance-Build-Own-Operate). The private partner has been granted the right to operate and provide care for the entire complex of sheltered accommodation for the elderly (both the public and the private part) in ways and under conditions stated in the PPP contract. Division of the project into public and private part was agreed upon by the public and the private partner during the private-partner-selection process.

5 MOBILIZATION OF PUBLICLY OWNED LAND THROUGH PRIVATE CAPITAL

We will now have a detailed look at one of the most common current forms of use of PPP mechanism in urban development in Slovenia, e.i. mobilization of publicly owned lands through private capital. This chapter presents an example thereof in the case of construction of sheltered accommodation for the elderly and problematizes this sort of contribution to a controlled and dynamic urban development.

This particular urban project using the PPP mechanism concerns the establishment and construction of two buildings, intended for sheltered accommodation for the elderly, and the operation and supply of the established sheltered accommodation facilities throught the partnership period. The private partner had two years to prepare the project documents, gain the building permit, construct the buildings and finally transfer the appartments to the public partner. The complex in question is Sheltered Accommodation Apartments Mijaks (internet sources 5 and 6), in the Šiška-Dravlje part of Ljubljana. 54 housing units were built in 2016, with total GFA measuring 4,477.76 m². All apartments have already been sold. Apart from the construction of the sheltered accomodation the contract also stipulates arrangement of 46 exterior parking spaces and of surrounding environment, as well as provision of supply and arrangement of management for the entire part. The value of the entire project is 5,498,684 Euro (excluding VAT). The PPP model implemented in this particular project is the construction concession model DFBTO (Design-Finance-Build-Transfer-Operate) for the public part and the construction concession model DFBOO (Design-Finance-Build-Own-Operate) for the private part of the project. The public partner of the project is the Public Housing Financing Fund of the City Municipality of Ljubljana. The following criteria for the selection of the private partner were used: the total area offered of sheltered accommodation appartments that was to become part of the public part of the project and was to remain in the ownership of the public partner; the share of the rented appartments offered in the private part of the project; the market rent on sheltered accommodation appartments offered in the private part of the project; the sales price of sheltered accommodation appartments offered in the private part of the project.

For the purpose of the realization of the project the public partner granted to the private partner the building right for the area, the extent of and duration of which had been agreed to during the process of selection of the private partner. The City Municipality of Ljubljana is the owner of the land area of roughly 4,045 m², invested into the project and exclusively intended for the purpose of construction of sheltered accommodation. Total financial contribution of the public partner amounts to 1.153,900 Euro (excluding VAT) and includes the land area, the building right, and the communal tax. As well, the public partner puts at the disposal of the users of the sheltered accomodation the shared use of the public park, which they will be able to share with the care recipients of the Šiška Elderly Home that stands in the vicinity of the project. In accordance with the contract of public-private partnership the public partner has to establish mechanisms that will ensure efficient protection of public interest.

The private partner finances the project in its entirety and is responsible for the design, land preparation and construction of the two buildings, intended for the sheltered accommodation, acquires the building permit and other corresponding administrative permits, necessary for the transfer and functioning of the sheltered accommodation apartments, such as the operating license. The private partner has been granted the right to operate and arranges supply for the entire building complex (both the public and

private part) for the entire concession period in the way and under the conditions, stipulated in the PPP contract. The private partner also assumes the larger part of business risks involved with the implementation of the PPP, risks connected with financing the entire project, risks connected with designing the project, acquiring the building license and construction and all other connected risks. The City Municipality of Ljubljana acquires 10 sheltered accommodation apartments that represent the public part of the project, together with the corresponding share of common spaces. The public and the private partner sign a contract on division of floor property of the constructed buildings (which has in principle already been agreed upon during the private-partner-selection process). Based on the contract on division of floor property the public partner transfers the agreed-upon share of the property rights in the part of the land and buildings, corresponding to the private part of the project, to the private partner. The share of land and buildings, corresponding to the public part of the project, remains the property of the public partner.

The private investor has therefore found a »market niche« in the project of construction of sheltered accommodation and successfully established cooperation with the public sector, aimed at improving living conditions and quality of life for the elder population of Ljubljana. The city gains a complex of sheltered accommodation, adapted to persons in the »third age« of their lives who are thus provided with a new, higher quality of living. At the same time, the burden on retirement homes is lessened and the active part of the elderly population can age more comfortably. Sheltered accommodation apartments are one of the important aspects of improved quality of life. The public sector and the private sector have jointly, the former through ensured unding and investment, the latter with its own means, contributed to the accomplishment of those goals. Construction of sheltered accommodation apartments in Ljubljana, implemented through the PPP mechanism, is a good example of a dynamic, controlled urban development.

6 FINDINGS

This chapter, based on conducted interviews and research of sources, will present the main characteristics of the implementation of projects, based on the PPP mechanism. It will discuss the motivations and advantages of such urban projects, main risks and key obstacles, and proposals for improvements of the existing system. The chapter will also introduce a typology of urban projects that can be achieved throught the use of the PPP mechanism, in order to ensure dynamic and yet controlled urban development.

6.1 MOTIVATIONS AND ADVANTAGES OF PPP MECHANISM IN CITY MUNICIPALITIES

Based on an overview of PPP projects that have been (or have failed to be) carried out and semi-structured interviews at city municipalities, we have established that two main motivational factors are important in order for the public partner to resort to the use of PPP mechanism:

1 overcoming financial capabilities and contraints encountered by the municipalities and
2 achieving objectives within shorter delays, meaning that the municipality no longer needs to wait to accumulate enough financial means in order to undertake the project on its own.

The bigger the investment, the higher the motivation for the use of PPP, since bigger investments usually mean a combination of several forms of financing, such as budget resources, EU grants, resources of private partners. In this way the municipality appears less indebted, its administration is relieved of the additional bureaucratic burden, and the municipality can divert its resources into other developmental projects that cannot be implemented through PPP mechanism, while at the same saving money at the PPP-based projects which might not be otherwise directly economically viable. All of the above may also contribute to developments in the urban space and, consequently, to faster growth, since financing or cofinancing various developmental project also encourages municipal economy. Furthermore, in this way private capital means are directed towards public benefits and improvements in quality of life of the local population (such as construction of sheltered accommodation, kindergartens, etc.). Private investments into, for instance, construction of kindergartens can thus quickly positively contribute to city life and to satisfaction of the population (instant rectification of deficiencies, better working conditions, more economically efficient structures, etc.). Participation of private capital in public projects can lead to fast and efficient developmental interventions. PPPs often mean a search for alternative, smart solutions, but also a more rational approach to solving the urban developmental challenges (since projects are approached in

an economically more reflective fashion). Participation of the private sector, pursuing its own interests, is an additional testimony to the commercial viability of the scheduled projects. PPP mechanism represents both a more rational approach to financing and to risk sharing. PPPs are a good economic model for project cases with financial effects and therefore assured economic viability. One of the incentives for the PPP-based projects is the possibility of absorption of the EBRD funds. EBRD cofinances projects through consulting and other services up to the execution of the project itself. In this way a municipality can, for instance, order project documentation, expanded energy inspections and investment documentation for all facilities and buildings it wishes to make more energy-efficient without implementing its own resources.

6.2 RISKS AND GENERAL OBSTACLES IN THE IMPLEMENTATION OF PPP¬BASED URBAN PROJECTS IN SLOVENIA

Private partners involved with PPP-based urban projects often assume several risks, such as the risk of financing the entire project, designing, land preparation, acquiring the building permit, the risk of construction/demolishing buildings and associated risks. They have to acquire additional administrative permits, necessary for the transfer and operation of already constructed objects, such as the operating license. Then there are risks connected to object maintenance – energy-efficient sanation can, for instance, easily lead to a too large consumption of energy products. In short, private investors may face a myriad of risks.

Constraints and problems faced by the municipalities in the implementation of PPP-based urban projects include (but are not limited to): systemic obstacles, inappropriate organisation of municipal administrations, lack of cadres and knowledge, unrealistic expectations on part of either the public or the private partner, possible unreliability of the private partner (for instance, bankrupcy). There is a lack of knowledge and information on what, with whom and on which contents PPP-based projects should be concentrated, so as not to try and implement them with public resources alone. There is little successful practice; insofar as it exists, it is not being well-promoted. There are doubts about the PPP-based projects, usually based on negative stories or negative public opinion. PPP has acquired a generally negative connotation, no doubt partly for the fear of connection between PPP and corruption (since PPP represents a junction between the public and the private). Fears are often based on the long-term perspective of PPP contracts. There is too little cooperation between smaller municipalities in solving spatial and urban challenges, as well as too little action towards common projects that might be PPP-based. Partly to blame is the legal basis. Currently existing Public-Private Partnership Act was tailored for larger projects and larger city municipalities equiped with administrative services, strong project offices with several employees, etc., while the current state of affairs of PPP-based project implementation in Slovenia would require smaller projects. On the other hand is the act too complicated, often requiring minute details, and too demanding in certain segments. Since every PPP-based project is a specific one, such stickling for detail makes the implementation very difficult. Potential private partners often express strong mistrust. Any review of the state of affairs must necessarily point out several open questions and dilemmas, connected to the financial implementation of PPP-based projects on municipal level: combinations of financial resources and insurance, financial risk-taking (vulnerability of the public partner), expediency of combining different sources of financing, ambiguities in connection with the use of cohesion funds and CTN mechanisms, implementation of larger projects with a larger number of shareholders, and other dilemmas.

6.3 PERSPECTIVES OF THE PUBLIC PARTNER ON THE PPP-BASED PROJECTS: OVERCOMING THE BARRIERS ON THE PART OF CITY MUNICIPALITIES

Having reviewed the information passed on by the city municipalities, we must conclude that simplifications of certain segments of legislation and simplifications of procedures are sorely needed. The existing Public-Private Partnership Act from 2006 is outdated and deficient, and in certain segments written too broadly. Provisions for a more detailed definition of the preliminary procedure are lacking. Such provisions would contribute to a preparation of better materials, suitable to informed and responsible assessment in municipal councils. Also needed is a database with a proper selection of good examples of implemented projects and/or cases from past practice. The PPP system has to be corrected and adjusted to the level, suitable for the Slovenian environment. A division/distinction between larger and smaller

projects, adjusted for specifications of each, is necessary. The government needs to take a more goal-oriented approach towards PPP and provide better administrative support, which in practice means a stronger role for individual government ministries. Establishment of a new authority (for instance, a regional authority, that would conduct supervision, promote examples of successful practice and provide integration of projects from municipalities with similar challenges) could be a major answer to problems encountered by smaller municipalities with meagre cadres. Our municipal interlocutors have also expressed a desire for the establishment of a management body that would, together with competent ministries, form »rules of the game« necessary for adequate absorption of funds, intended for financing urban development projects. Also needed are additional financial instruments and incentives on the basis of concurses. The question of the absorption of European Cohesion and the current status of its use needs to be solved in the light of State aid. Development of financial instruments for a better absorption of EU resources deserves a special emphasis. Also needed are support mechanisms for cases in which one of the partners (usually the private one) is unexpectedly unable to meet its obligations and the responsibility for the further development of the project falls on the shoulders of the other partner (usually the public one).

Other suggested measures include: development of »know-how« through promotion and exchange of experience and information on good practices in Slovenia, training of professionals in municipal administrations, development of study programmes with specific emphasis on PPP. Furthermore, professional support institutions (from competent ministries) should provide unambiguous answers to municipalities as far as problems and unclear cases are concerned. The municipalities have expressed a strong desire for the establishment of an advisory body that could help them with questions regarding the implementation of PPP-based projects.

6.4 PERSPECTIVES OF THE PRIVATE PARTNERS ON THE PPP-BASED PROJECTS

Having reviewed the information from investors, we can conclude that private businesses are strongly interested in PPP-based urban projects and that they in that regard possess directions, useful to the potential public partners. Investors that we have interviewed have been carrying out the following projects: construction of residential neighbourhoods, construction of sheltered accommodation apartments, central activities, renewals of degraded urban areas, construction inside cities. Investors submit their willingness for cooperation and implementation of all types of PPP-based projects that would contribute to the quality of urban space and individual groups, communities, neighbourhoods and inhabitants, projects that would raise competitiveness of cities or parts of cities or towns, and projects that would result in an adequate above-average financial gain. Such projects include: renewals of residential neighbourhoods, new energy-efficient types of apartments, commercial buildings and facilities, service activities (better logistics, work organization and lower management costs), shopping malls, logistics of centres, warehouses, etc. One of the investors submits to have worked on several projects but no on PPP-based ones; he blames the frequent passivity of the public sector. The investor claims that while the public partner was invited to participate, there was complete lack of interest on part of the latter. The same investor cites several possible programmes that might be of interest to public partners: university programmes, public administration, services in the broad city area, parking houses for public programmes. Lack of interest on part of the public partner simply means that potential private investors carry all risk. Private investors are the most interested in projects in which the public investment comes in form of the land. Several different PPP-based projects have already been realized in this fashion (the case of sheltered accommodation apartments). However, according to private investors, the public partners are often prone to overvaluing their lands.

Private businessmen involved in PPP-based projects pursue different goals. Judging by the interviews, investors are often pledged to achieving public good, not the least because it is good for their public image. Such goals are achieved through participation in projects that contribute to the development of the city and its functions – aspects usually associated with the public sector. Naturally they also follow the motive of making a profit which should generally be much higher than bank interests or in accordance with the risks involved (5–15%).

Investors see a major problem in lack of suitable land or lack of their mobilization, often due to questions of ownership. Another important factor for lack of interest on part of investors is modest or slow return on invested capital. They see possible incentives in subsidies for private partners who would thus, based on

previously fixed percentage of profit, be able to decide on cooperation even on less attractive, more peripheral locations. They also propose simplifications of laws and rules governing the implementation of PPP-based projects. Private investors also emphasize successful implementation of PPP-based projects requires market-based equal rules and duties for both public and private partners. They emphasize the importance of trust and equality in relations between the partners. They wish for more safety and reduced risks, provided by reasonable deadlines for documentation certification and project implementation. In this sense, the system of public service contracts needs to be improved, as well.

When it comes to the development of financial and other mechanisms that would enable more simple and more frequent private participation in the realization of PPP-based projects in Slovenia, private investors see a positive sign in ongoing battles between banks and insurance companies. Insurance companies offer better conditions than banks. Municipalities should not meddle with particular project but merely fulfill their end of the bargain. Subsidies for private businesses are necessary. Greatly desired is stability of the scale of public service contracts – the state, cities and municipalities should have a roughly equal yearly number of such contracts, instead of perpetuating delays and five-year gaps. Banks should provide credit to private investors without extreme interruptions. Banks should support such investments and private investors. Private businessmen should be adequately qualified and, above all, professional. Investors should not be politically involved. The availability of land and the preconditions for construction should be better regulated. There is a lack of developmental and implementation mechanism as well as a lack of professional analytic documentation and studies of potential locations (a number of untapped potentials that might be of interest to private investors). Frequent problems leading to implementation difficulties include fragmented ownership and lack of proper documentation. A proper solution would be a combination of positive components of both partners: for instance, a city might possess a strategy but is operatively weak, while the private partner knows how to operatively implement a project. Fast-operating private investors are contrasted with alleged slowness of the public sector.

6.5 POSSIBLE PPP URBAN PROJECTS FOR A DYNAMIC AND CONTROLLED URBAN DEVELOPMENT

The future planned development of urban municipalities in accordance with their specific characteristics could implement several urban projects, based on the PPP principle, which would – through use of appropriate models – contribute to a more dynamic and controlled urban development. Based on the review of the development plans of Slovenian city municipalities, as well as the outcomes of the interviews with relevant stakeholders, here below we propose some possible spheres of future urban development based on PPP:

1. Revitalization of historical urban centres: comprehensive refurbishment of public and private building fund (housing, public buildings…), including upgrading of energy infrastructure, stationary and architectural renewal, and organized maintenance and management of building stock, public and trafficked areas, etc.
2. Revitalization of degraded industrial areas: development of existing degraded industrial areas, renewal of infrastructure and development of models of infrastructural management, renewal of industrial buildings, etc.
3. Residential housing: construction of residential buildings, solving the housing problem (residential cooperatives, housing schemes for younger and elderly citizens, flat-sharing communities, intergenerational centres, etc.), sheltered accommodation for the elderly, construction of affordable accommodation of all types, establishment of day centres / intergenerational centres, programmes for persons with difficulties in finding accommodation, and provision of suitable accommodation units.
4. Public space development: renewal of urban open public spaces – public squares and streets, parks and green spaces, platforms, playground and multi-purpose facilities, meeting places, etc.; modernization and upgrading of public infrastructure and foothpaths; supplementing equipment and regulation of open public spaces – greening measures, public street lighting, installation of urban furniture and other urban equipment, information and orientation markings, facilitation of accessibility for persons of reduced mobility, etc.; public park arrangements, tree rows, sports parks, urban lawns.

5. Traffic: provision of alternative parking spaces for residents and users (construction of underground parking garages, management of parking platforms/public parking spaces; managment of public traffic, comprehensive management of roads, bicycle lanes and pavements.
6. Tourism: land use planning conducive to comprehensive tourism products, development of youth tourism, revitalization of castles, thematic paths.
7. Urban marketing: promotional activities, construction of markings and comprehensive graphical presentation, information portals for residents and visitors, etc.; design and marketing of tourist attractions and products, managing urban infrastructure for public events.
8. Education: upgrades and extensions of spatial capacities of school and kindergartens and their energy networks; construction of campuses, technological parks, business incubators; management of coworking spaces.
9. Sports facilities and areas: systemic renovation and upgrading of sports and recreational areas and infrastructure, management of sports halls interiors, provision of sports grounds, playgrounds, etc.
10. Infrastructural arrangements: renovation and upgrading of urban market places, renovation of water and sewerage system; waste recycling centres, etc.
11. Energy efficiency: improvements in energy efficiency of buildings, energy-efficient sanation of public lighting network, etc.

7 CONCLUDING REMARKS

The review of the state of the art after 10 years of PPP mechansim being introduced to Slovenian spatial development practice gives a clear evidence that public and private partners are still trying to find their common way to make best use of PPP. In order to make the PPP mechanism more widely used a number of measures have to be introduced, among others institutional support in a form of an advisory body to advice both public and private partners when they encounter unbigities or obstacles in implementing PPP projects. Furthermore new ways of cooperation between local authorities need to be introduced if they want to implement bigger PPP projects of regional relevance in cooperation with private investors that will be eligable for cohesion funds. New financial mechanisms to support the private partners have to be developed too in order to attract private investors to less attractive locations. Another striking obstacle is of a socio-cultural nature and relates to the relatively negative public image of PPPs in Slovenia that shall be improved by presenting examples of good practices to professional and wider publics. A proper implementation of PPP tool into Slovenian urban development practice however proves to be a suitable tool for a controlled and dinamic urban development in the future.

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ID 1561 | CONSULTANCY FIRMS AS INTERMEDIARIES: THEIR PERCEPTIONS ON COMMUNITY INVOLVEMENT IN URBAN DEVELOPMENT (WORK IN PROGRESS, PLEASE DO NOT CITE WITHOUT PERMISSION)

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1 INTRODUCTION

Consultancy firms are key-players in urban development as they are knowledge depositories, and have knowledge of regulations, real estate development, and planning processes in the western world. They are intermediaries for public and private parties and can play a role in the exchange of policy ideas and views. The responsibility of translating community interests in informal and formal agreements in urban development is increasingly outsourced to consultants. As external agents, they can shortcut institutional boundaries and find new ways to engage with communities and other stakeholders in urban development projects (UDPs). This study explores the role of consultants in urban planning practices. Specifically, their role in how to involve communities in the planning processes and how to incorporate community interests in urban development. This study is part of a broader research, aimed to investigate community-linked incremental urban development and its ability to find smart solutions to address economic, social and environmental challenges. The following research question is stated: 'Which perceptions on community involvement in urban development do employees of consultancy firms have and how do they incorporate or forfeit community interests in urban development?'

To explore the role of consultants in urban development I have chosen for a single case-study. A singlecase study helps to explore in depth the perceptions of of consultants on the involvement of community interests in urban development. I also explore the relationship of consultants with their clients. The relation between consultants and their clients is described ranging from the idea that consultants are neutral actors because they are hired by their clients to the idea that consultants are some kind of 'shadow government' or 'consultocracy' (Hodge and Bowman, 2006; Saint-Martin, 1998).

In the first section of the paper I summarize the existing literature on the role of consultants in urban development. In the second I describe the methodology I use the answer the research questions. Next, in the third section, I describe which agreements consultants can use to incorporate community interests. In the fourth section, I describe three possible perspectives consultants can have on involving communities in

urban development and in the fifth section I reflect on the relationship between the client and the consultant. We end the paper with a conclusion and suggestions for further research.

2 CONSULTANCY

Saint-Martin (1998) linked the growing tendency of involving consultants in producing and executing public policy to the increase of New Public Management (NPM) methods by public authorities. In his historicalinstitutional analysis of the influence of consultants on public policy he describes how especially right-wing politicians aim for involving consultants in public policy, in order to reform bureaucratic processes in Canada, the UK and France. The involvement of consultants gave credibility to policies because they came from the private sector and were seen as more efficient (Saint-Martin, 1998). The increase of involvement of consultancy firms in public policy has led some scholars to argue that consultancy firms have become a new bureaucracy, they introduce the term 'consultocracy' or 'shadow government' (Grijzen, 2010; Hodge and Bowman, 2006; Saint-Martin, 1998). Hodge and Bowman (2006) describe consultancy firms as the sellers of solutions for complex policy problems for public authorities that the public authorities themselves cannot fix. This has resulted in a flourishing market for consultancy firms. For consultancy firms, there is a direct interest in keeping the market expanding; government reforms are business cases for consultancy firms. However, there is no direct link between increased spending and increased influence. Consultancy firms are benefiting from the demand for private sector solutions, but public authorities, in democratically governed nation states, have created the demand (Hodge and Bowman, 2006). McCann describes how public-private coalitions hire consultants in order to create urban plans. Often the consultants claim to use collaborative, inclusionary methods to create urban plans, but McCann shows in his single-case study of the new planning vision for Lexington how they reproduce existing power relationships (McCann, 2001). In a survey under planning officials and consultants, Loh and Norton (2014) explored why public parties hired consultants. They found that both consultants and their clients think that the benefits of outsourcing planning activities outweigh the disadvantages of higher costs and the lack of local knowledge (Loh and Norton, 2014).

Grijzen (2010) has investigated the involvement of consultants in regional spatial planning in the Netherlands. Her research argues that consultants are hired to solve problems of cooperation and coordination. She argues that governments struggle to find new ways of involving communities. Consultants can solve those problems because they have an outside position and can overcome bureaucratic obstacles.

This gives them the ability to design and implement policies with multiple stakeholders, issues, and regulations. Consultants can help to create new ways for communities to get involved and therefore enhance democratic legitimacy. However, they also can erode democratic legitimacy. Public policy can become inconsistent and ad-hoc, especially concerning the participation of citizens. Furthermore, partly through the 'revolving door' mechanism, were former public officials are hired as consultants, consultants can become too focused on the institutions and organizations they have connections with. This can create the problem that consultants are becoming indispensable for planning practices and public officials lose too much expertise and knowledge (Grijzen, 2010).

3 INCORPORATING COMMUNITY INTERESTS INTO UDPS

Consultants can use three types of agreements to incorporate community interests into UDPs. They can use informal agreements, formal agreements and contracts to incorporate community interests. Informal agreements are the least powerful agreement and contracts are the most powerful type of agreement. Informal agreements are agreements that are not formalized and mainly used to manage and improve relationships. An example of an informal agreements is an assurance to a citizen that his concerns will be taken into account in the new plan. Informal agreements are made because legal terms are not able to capture the relationship between stakeholders (Schepker, Oh, et al. 2014; van der Veen and Korthals Altes, 2011). Formal agreements are agreements that are written down but are not enforceable by court. An example of a formal agreement is a summary of the commitments that are made by public officials concerning community during a public hearing. Lloyd (2015) notes that increased use of legal agreements to manage governance networks is accompanied by the introduction of formal agreements that are not

enforceable by court. He defines those agreements as ‘soft contractualism’. Soft contractualism is the way of managing relationships between stakeholders and guide cooperation. They mainly regulate communications between stakeholders, cooperation in policy development, the exchange of knowledge and they regulate the confidently of information within a project (Lloyd, 2015).

Contracts are the most powerful agreements in urban development, because they can force stakeholders to act. According to Van der Veen and Korthals Altes (2011), contracts in urban development has four functions. The first function regulates the exchange of goods and services. The second function concerns the procedural rules. The third function is the planning function, which contains the conditions for the realization of the project. The fourth function names the instruments for realizing public goals (van der Veen and Korthals Altes, 2011).

4 METHODOLOGY

In order to find out which perceptions employees of consultancy firms have on the involvement of communities in urban development, I will use the Q-method. Q-method is a method were respondents have to sort statements in a normal distribution ranging strongly disagree to strongly agree. After the statements are sorted, I perform a factor analysis to analyze the perspectives about community involvement there are within the consultancy firm. After the Q-sort I have asked the employees questions in a semistructured interview. The semi-structured interview is used to reflect on the sorting of the statements.

Furthermore, I asked questions concerning how the employees engage with communities and how the client influences the relationship between the employee and the community.

Q-methodology is designed to identify clusters of perceptions. The method is a mix of quantitative and qualitative approaches. The Q-method consists of six phases. First, a research question is stated. Second a broad spectrum of statements about the research question is created. The statements are based upon quotes from a range of sources and perspectives. Third, a sample is taken out the spectrum of statements that will function as the Q-sample. The sample should represent diverse opinions and a broad range of concepts. The fourth step requires a respondent to rank the Q-sample. Each statement has to be arranged in a normalized distribution ranging of nine categories ranging from strongly disagree to strongly agree. This step reveals the subjectivity of the respondent because the respondent controls the ranking of the statements. The fifth step is to correlate the sorted Q samples using a factor analysis. The sixth step is interpreting the data (Cuppen, Bosch-Rekveldt, et al. 2015; Robbins and Krueger, 2000).

Originally the q methodology was created in order to erase bias and design an objective method to measure subjectivity. However, the researcher has six moments in which it can decisively influence the research questions (Kampen and Tamás, 2013). Therefore, it is important to not claim the absence of the researcher but to make explicit when the researcher is a presence and to make the research process transparent (Robbins and Krueger, 2000).

The Q-sample of this study consists of six statements about making informal, formal and legal agreements with communities in urban development. Of those six statements, three statements are positive about using informal, formal or legal agreements in order to incorporate community interests and three statements are negative about using informal, formal or contracts in order to incorporate community interests. Five statements cover opinions about how and when communities should be involved in urban development. This will define how the consultant think about how and when communities should be involved in urban development. Twelve statements follow about the political, social and economic utility of community involvement, six of those statements are negative and six are positive. Those statements measure why the consultant find community involvement in urban development important or not. Then sixteen statements follow about the role of communities, civil society organizations, the private sector and public authorities in incorporating community interests in urban development, eight of those statements are negative and eight are positive (see table 1). Those statements are based on the typical stakeholders in UDPs (Janssen-Jansen, and Van der Veen, 2016).

Statements	Neutral:	Positive:	Negative:
Using informal agreements, formal agreements and contracts		3	3
Process of community involvement	5		
Political aim of community involvement		2	2
Economic aim of community involvement		2	2
Social aim of community involvement		2	2
Role of public parties in involving communities in UDPs		2	2
Role of market parties in involving communities in UDPs		2	2
Role of NGOs in involving communities in UDPs		2	2
Role of citizens in involving communities in UDPs		2	2
N	5	17	17

Table 1: Categories of statements used in the Q-sort (authors)

Employees of AGA were asked to sort the Q-sample. The first eight employees that sorted the Q-sample were selected by senior employees of AGA. They are selected because they work in different departments of AGA, what helps to get a broad range of views on community involvement. I have used snowball sampling to perform the next three Q-sorts. During the ranking of the statements, the employees have been asked to articulate their choices by thinking out loud. This was helpful by analyzing the outcomes of the research.

5 FACTOR ANALYSIS

The factor analysis showed that there are three factors with an eigenvalue higher than one. Based on convention, only factors with eigenvalues greater than or equal to one are considered significant (Raje, 2007). Next, I performed a Varimax rotation to identify the three significant factors. The standard error for a factor loading is calculated by the expression 1ÖN, multiplied with 2.58(SE). This gives the indication of a meaningful relationship between the participants Q-sort and the factor type (Raje, 2007). Thus, in this research, loadings of or more than 0.41 are significant at the level 0,01. Ten of the eleven Q-sorts were loaded within the three factors (see table 1). Respondent 5 loaded in both factor 1 and factor 3 and is therefore excluded from this study. Here I describe the three perspectives that resulted from our Q analysis.

Respondent:	Factor 1	Factor 2	Factor 3
1	0.70x		
2	0.57x		
3	0.66x		
4			0.73x
~~5~~			~~0.55~~
6		0.69x	
7			0.70x
8		0.74x	
9	0.70x		
10		0.64X	
11			0.77x
% expl. Var.	22	17	19

Table 2: Loadings Q-sort in factor types (authors)

5.1 CITIZEN EMPOWERERS

The respondents of this factor identify strongly with the statements 38 and 39, which state that the bureaucracy of the government obstructs the involvement of citizens in UDPs and that civil servants perceive protesting citizens as complainers. The respondents that identify with this perspective are clearly negative about the government. In interviews, they tell that the bureaucratic procedures, between civil servants and citizens and within the government itself, of civil servants temper the involvement of citizens. The perspective also agreed, although to a lesser extent, to statements 16, 17 and 25. Those statements note that involving citizens in UDPs is beneficial for social cohesion, that involving citizens in UDPs is an adequate instrument to fight spatial inequalities and that the involvement of citizens in UDPs is necessary as counter force for civil servants and the private sector. Again, those statements show a negative perspective on the government. However, it also shows that the respondents that identify with this perspective think that involving citizens in UDPs will have an important impact on society. In the interviews, they put emphasis on the knowledge citizens have about the area of an UDP. Furthermore, they believe that citizens have energy and good ideas to improve UDPs.

The respondents strongly disagree with the statements 13 and 37, which state that citizens have enough legal and political means to influence policy and that civil servants look after everybody's interests. Again, a statement that is negative about the government and a statement that points out that new legal and political tools are necessary to let citizens influence policy. One consultant noted that citizens do not have enough insight in how to influence legal and political procedures. According to the consultant are those procedures often too slow and technocratic for citizens.

To a lesser extend the perspective also disagreed with statements 22, 26 and 28 which state that it is more important that an UDP is beneficial for economic development than that the interests of citizens are safeguarded, the reason to not involve citizens in UDPs is that do not have sufficient knowledge and expertise to be valuable contribution to a project and that the involvement of citizens in UDPs only succeeds through the help of NGOs. This shows that the consultants that identify with this perspective are positive on the role of citizens in urban development and are convinced that the interest of citizens should be decisive in an UDP. Often the consultants note that citizens the local knowledge of citizens is very valuable for UDPs.

I label this perspective the citizen empowerers, because the respondents that identify with this perspective are very critical on the role of the government but strongly belief that if citizens can improve UDPs. They also think that if citizens play a significant role in the UDP, it will benefit social cohesion and challenge inequalities. The following quote is a good example of the logic of a 'citizen empowering consultant':

> *"I think that the knowledge and expertise resides with citizens instead of on the other side of the table. People know a lot, people work, they are not stupid. I really think it is ridiculous if you think like that. It is not respectful towards the citizens. They know the*

environment and make use of it. The designs only become more beautiful. [respondent 3, 2016]"

5.2 PROFESIONALISTS

The respondents of the second factor identify strongly with statements 18 and 27. The statements note that if citizens can get involved in an UDP only loud citizens participate and that citizens in UDPs only focus on their own private interests. This respondents that identify with this perspective are therefore negative on the role of citizens in UDPs. The consultants argue in the interviews that it often costs much time and money to let citizens participate, which is not necessarily a bad thing. When citizens participate they often struggle to see the benefits of the UDP for the broader community.

To a lesser extent this perspective agreed with statements 1, 6 and 15, stating that it is important to write agreements with citizens down, conflicts in UDPs often emerge because it is not thought through how agreements with citizens are made and the involvement of citizens make it easier to solve political problems. The high scores of those statements put emphasis on the necessity of making clear agreements with citizens and that they can solve political problems. The consultants state that when clear agreements are made with citizens, political problems can be avoided.

The respondents strongly disagree with statements 4 and 34 which state that new legal instruments are needed to involve citizens in UDPs and that the government listens more to the private sector than to citizens. The respondents that identify with this perspective note that citizens already have much legal possibilities to get involved in the urban development process and that therefore both public and private parties have to listen to the concerns of citizens.

They also disagree, although to a lesser extent, to statements 20, 28 and 30. Those statements note that citizens are involved in UDPs to hide budget cuts, that the involvement of citizens in UDPs only succeeds through the help of NGO and that the position of citizens is voiced the best by NGOs. The consultants note that often participation processes are expansive and that NGOs are mostly focused on the interest they represent and not necessarily with the interest of citizens.

I label the consultants that identify strongly with this perspective the professionalsts. I have chosen for the term professionalists because they believe that much conflict within UDPs comes from not thinking trough well enough how agreements are made with citizens. They are also note that if citizens have too much influence, it would take too much time to develop a project. The following quote is representative for the logic of the professionalist consultant:

"As long as you know what their interest are, and if you know their struggles, than you can give them the feeling that they are being heard. You cannot develop a project that everybody likes, that is just not possible. Than you have to go into another trajectory [if citizens obstruct an UDP], legal frameworks are available. We live in the Netherlands luckily, where everything is neatly organized, if you identify the possible threats and plan the process well. [respondent 8, 2017]"

5.3 BALANCERS

The respondents of the third factor strongly agree with statements 18 and 25. Those statements reflect that that if citizens can get involved in an UDP only loud citizens participate and that the involvement of citizens in UDPs is necessary as counter force for civil servants and the private sector. The respondents that identify with this perspective, note the importance of involving citizens, but acknowledging that they do not reach every population group. One consultant noted that it is very hard to reach elderly people, lower educated people or people with a minority background.

To a lesser extent, they agree with statements 1, 5 and 32 noting that that it is important to write agreements with citizens down, that legal agreements scare citizens and that the private sector sees citizens as a way of doing market research. The consultants that identify with this perspective note that writing agreements down has symbolic importance. This happens mostly in summaries of public hearings

and is important because it symbolizes that the concerns of citizens are taken into account. The consultants noted that the private sector is mainly driven by making profit and therefore is not very interested in giving citizens influence.

The respondents strongly disagree with statements 11 and 13. Those statements note that citizens should have to feeling that they are involved but should not have real influence, that citizens have enough legal and politics means to influence policy. One of the consultants that identify with this perspective has written a book on how he was not taken seriously as a citizen when a new station was built near his home. He stated that everybody that worked in urban development should participate once in a whole urban development process that learn how important it is to take citizens seriously. Another consultant described how political and legal instruments are mostly used by politicians, civil servants and the private sector but not by citizens.

They disagree to a lesser extent to statements 23, 26 and 35. Those statements express that the involvement of citizens in UDPs saves money and time, that the reason to not involve citizens in UDPs is that do not have sufficient knowledge and expertise to be valuable contribution to a project and that the private sector listens better to citizens than the government. The consultants that identify with this perspective explain in interviews that the participation process for citizens often does not save time or money but that it is necessary because the citizens have local knowledge about the area. They also point out that every stakeholder has his strengths and weaknesses.

I classified this perspective as the balancers. They are looking for a new balance between the community and other stakeholders. I have chosen for this definition because the consultants argue that the involvement in UDPs can be beneficial but that the interest of the citizens should be weighed against the interests of other stakeholders. The following quote reflects the logic of a balancer-consultant:

> *"The private sector wants to reduce costs as much of possible. The government has the role to balance between both sides [private sector and citizens], but they also have to deal with politicians and maybe NGOs and they have to deal with many more interests than only the interests of the triangle [of citizens, private sector and government]. And citizens often don't look beyond their own interest. They do not really think about the rest. This can change, if you organize the process well and focus on the interests of other stakeholders, but at first instance they do not think beyond their own interest. [respondent 4, 2016]"*

5.4 REFLECTION ON VARIATION OF THE Q-SORT

Giving an explanation for the question why consultants identify with a certain factor type is based on this research difficult. The working experience, departments and functions are quite spread across the different factor types (see table 2). However, the two community managers working in the spatial planning department are both citizen empowers. This makes sense because their job is to involve communities in urban development. This could suggest that frontline workers tend to be more often citizen empowerers. However, more research is needed to explain the variation of factor types within the consultancy firm.

Respondent:	Factor type:	Working for Antea in years:	Working experience before Antea:	Department:	Function:
1	Citizen Empowerers	27	No	Infrastructure	Project manager
2	Citizen Empowerers	11	Public party	Water & environment	Environmental specialist
3	Citizen Empowerers	6,5	Market party	Spatial planning	Community manager
9	Citizen Empowerers	11	No	Spatial planning	Community manger
6	Institutionalists	14	Public party	Real estate & law	Real estate /legal adviser
8	Institutionalists	24	No	Architecture	Architect
10	Institutionalists	11	Public party	Planning	Project manager
4	Balancers	1,5	Public party	Real estate & law	Real estate/legal adviser
7	Balancers	27,5	No	Spatial planning	Project manager
11	Balancers	6	Market party	Contracts	Real estate/legal adviser

Table 3: factor types with department and function of the respondents (authors)

6 RELATIONSHIP BETWEEN THE CLIENT AND THE CONSULTANT

The relation between consultants and their clients is described ranging from neutral actors to a shadow government (Grijzen, 2010; Hodge and Bowman, 2006; Saint-Martin, 1998). In the interviews, I asked the consultants why clients hired them and how they disagreed with clients on the topic of involving communities in urban development. The consultants told that they were mostly hired because of their expert knowledge. The expert knowledge can be divided in two types of knowledge, knowing how to get things done and knowing certain skills. Two consultants also mentioned that they are sometimes hired because of trust issues between communities and public authorities. The consultants are than presented as mediators between all the stakeholders. One of the consultants nuanced their ability to be seen as neutral actors, because could give them the benefit of the doubt, but that they were still seen as intermediaries of public authorities or the private sector.

When inquired how the consultants disagreed with the clients the answered mostly with advice. They present alternatives to the preferences of the client and they can strongly urge to choose for an alternative. But in the end the decision is the decision of the client. When asked to give examples of situations where the consultants disagreed with the clients, they often gave examples where they disagreed with politicians. One consultants described a situation that an alderman ignored the outcome of a participation process and the consultant had to go with the decision of the consultant. However, the consultant actively reached out to citizens to point to their rights and how they could legally object against the decision of the alderman. Thus, based on their own perception, consultants, not surprisingly, do not seem themselves as part of a shadow government. This does not mean that they are neutral actors, because they have their own experience, skills and knowledge. Their experience, skills and knowledge shapes the way they give advice to their clients. Giving good advice is the essence of the consultant's job, and a good adviser also gives advice that is contrary to the client's opinions. However, in the end, the consultants will follow the decision of the client.

7 CONCLUSION

The findings of this study suggest that at least three perspectives on the involvement of communities in UDPs exist in the consultancy firm Antea. The variation of perspectives within one consultancy firm implies that consultant are not neutral actors, but that they have their own experience and beliefs that will shape their interactions with communities. Furthermore, the perspectives show that the consultants have very different attitudes towards the government and their relation with communities.

The citizen empowerers are consultants that are the most passionate about incorporating community interests. They argue that new legal and political instruments are needed to cater for the involvement of enthusiastic citizens in UDPs. Contrary to the citizen empowerers, the institutionalists are more skeptical about the involvement of citizens in UDPs. They argue that citizens are mostly focused on their own private interests and that it is very important to make clear agreements, based upon existing procedures, with citizens to prevent conflict in UDPs. The balancers are consultants that note that it is very important to incorporate community interests, but that the group of citizens that participate lacks diversity and that they tend to be focused on their own interest. Agreements should be written down, but legal obligations for citizens are too farfetched.

8 DISCUSSION AND FUTURE RESEARCH

The limit of this research is that it is a single-case study of an engineering- and consultancy firm. More research is needed on if this or other variations exist in other types of consultancy firms. Furthermore, observations of consultants that cooperate with citizens is needed to validate the interviews with the consultants. Next, an international comparative study could explore whether the variation is typically Dutch or that there is an international pattern.

With the limits of this research in mind, the findings of this study suggest consultants have quite different perceptions on involving communities in urban development. More research on this topic is needed, and therefore I propose three proposition that should be explored further. The first proposition states that citizen empowerers are more successful in incorporating community interests in urban development than professionalists and balancers. Citizen empowerers could benefit from their positive perception of citizens, but this could also mean that they have blind spots concerning the real needs of communities.

The second proposition that could be explored is the proposition that balancers are more successful in incorporating community interests because they acknowledge that not every population group is reached in their efforts to involve communities. Therefore, they are more inclined to find new ways to involve communities.

Based on the q-sorts and the interviews, the proposition that the interests of communities weigh less than the interests of others stakeholders could also be explored. Most consultants mentioned that in the end the interest of communities are taken into account when possible, but that community interests are not the dominant concern in their work.

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ID 1595 | FLEXIBILITY IN URBAN RENEWAL PRACTICES: THE CASE OF TURKEY

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ABSTRACT: In Turkey, urban planning is provided through the regulatory planning system. However, significant changes in the planning system since 2000 have triggered a shift in the planning system which is defined as regulatory in theory, towards a flexible planning system in practice. A flexible system is also evident in urban renewal practices. Flexibility in urban renewal implementations occurs in two different ways. Firstly, urban renewal practices are excluded from the regulatory planning system due to a project-led approach instead of a plan-led approach. Urban renewal practices are applied in accordance with special laws that have been in effect since 2004. These special laws bypass the hierarchy that exists within the regulatory planning system. Moreover, development rights, which are prepared in accordance with the regulatory planning system, expire once an area is declared an urban renewal area. This situation enables a great deal of flexibility in urban renewal practices, in sense of giving of new development rights. Secondly, the legal regulations regarding urban renewal differ from the legal tools of the regulatory planning system in that the former give both the central and local administrations discretionary power on various issues, such as the identification of the renewal area or the completion of the implementation.

KEYWORDS: Flexibility, regulatory planning, urban renewal, practices, Turkey

1 INTRODUCTION

Cities are affected and governed by various internal and external factors, such as processes of capital accumulation in the country, along with efforts for institutionalisation this brings about, in addition to the demands of their administrators. Differences in the process of capital accumulation between countries create differences in terms of not only opportunities, but also of problems. This difference also varies

depending on the countries' periodic characteristics, as well as the qualitative and quantitative data. As changes occur in factors such as international relations, political structure, mode of production and social structure, they create differences within the dynamics of space and therefore the problems and expectations of its users. Consequently, this process brings about discrepancies in administrative structures and planning actions (Tekeli, 1994; Ramazanoğulları, Turgut, 2004).

The purpose of this paper is to analyse this flexibility and its consequences that have resulted from the legal regulations regarding urban renewal via examining actual urban renewal practices. The extent and content of such a flexibility, which has emerged due to legal instruments regarding urban renewal since 2004, have changed over time in Turkey. This situation directly affects the results of the implementations.

In the first section of the paper, the features and characteristics of the regulatory planning system in Turkey are evaluated. In the second section, we will go through how flexibility has increased in Turkey's planning system and urban renewal practices from past to present. In the third section, flexibility and its consequences that have emerged in the legislation about urban renewal practices since 2004 are comparatively evaluated through various examples. Finally, in the fourth section, the structure and consequences of such a flexibility provided by the legal resources in urban renewal practices in Turkey are evaluated.

2 CHARACTERISTICS OF TURKEY'S PLANNING SYSTEM

Planning systems are divided into plan-led regulatory planning systems and project-led discretionary planning systems (Özkan and Turk, 2016). The plan-led planning system is designed to lead the development of space in accordance with the decisions of the plan. It is transferred to the development plan of the new use decisions of the land in order to apply these decisions which have definite results (Rivolin, 2008). Rivolin (2008) defines the planning system in his study as being based on "hierarchy," and technically "legally binding," characterised by "certainty" and "rigidity."

One of the important characteristics of the plan system in Turkey today is the existence of a "hierarchical" order (Demir, 2009). Planning legislation consists of hierarchically interdependent planning scales (Demir, 2009; Kanlı, 2003; Özkan, 2012). In addition, each subscale is expected to involve more information and detail compared to the scale above and include the necessary information and data of its unique scale, while at the same time preserving the main decisions of the scale above (Ersoy, 2000). However, since the regulatory planning system cannot respond to the dynamics of a city within the last 25-30 years of planning history in Turkey, it is a fact that the upper scale planning approach has been disregarded by the local administrations, and urban space development has become dependent on small-scale projects instead of plans, due to the influence of neoliberal policies. Today, especially the development of big cities, it is almost entirely dependent on small scale projects (BIB, Urbanization Forum, 2009). There is a view suggesting that for a plan to be binding for all real and juristic persons and to acquire a legal document status, it needs to be adopted and approved by political decision makers (Keles, 2012). In Turkey, Reconstruction Law No. 3194 states that local spatial plans shall go into effect following the approval of the city council. In this sense, the framework presented by the planning approach and implementation is a regulatory system that highly depends on "certainty" and that sets the standards for all cities at the national level (Ünlü, 2006). In addition, plans that reach the suspension time limitation and are finalised are worthy of legal document status, with significant consequences that bind real and juristic persons (Keles, 2012). For this reason, each local spatial plan is a whole within itself and has its own legal qualifications (Özkan, H. A., 2012). Therefore, it is evident that Turkey's planning system is a regulatory plan-led system that depends on precision in terms of development legislation. However, today's planning processes are evolving towards a more project-led approach, which is becoming increasingly preferred as an alternative (Munoz Gielen & Tasan-Kok, 2010). Urban renewal practices in particular stand out with project-led approaches.

3 AN EVOLUTION TOWARDS "FLEXIBILITY" IN PLANNING SYSTEMS AND URBAN RENEWAL PRACTICES IN TURKEY

In Turkey, the most significant transformation particularly for the big cities was through the immigrations in the 1950s, resulting in housing, employment, and transportation becoming the main problems of the metropolitan areas. Cities began transforming horizontally and vertically at a fast pace (Özden, 2008). The increasing emergence of gecekondus in the suburban areas also took place in this period. These gecekondu areas are among the first areas where a need for urban renewal in Turkey emerged (Kütük İnce, 2006). The gecekondu phenomenon, which sheds light on the social history of the cities and encompasses the foundation of social and physical life, is going through a different phase following the urban renewal policies of today (Şen & Türkmen, 2014).

With the influence of neoliberal policies at the end of the 1970s, urban development was increasingly shaped by private sector dynamics. As the private sector settled into a more and more influential role, the public sector became more and more passive (Tasan-Kok, 2008). Consequently, an illegal urban texture emerged during the 1980s due to general building amnesty legislation that aimed to solve the issue of gecekondus; while destructions also took place on a large scale and functional transformations began (Özden, 2008). For example, in Istanbul's Başıbüyük District, 48% of the area benefited from the amnesty law and received 'land allocation certificates' (tapu tahsis belgesi). Gecekondus that received land allocation certificates began transforming into apartment blocks (Şen & Türkmen, 2014). Consequently, structures that arose thanks to the amnesty law, especially in Istanbul, shaped the discourse in urban renewal approaches (Dinçer, 2011). Furthermore, legal and institutional structures of urban planning were deregulated with the introduction of neoliberal policies (Gür & Türk, 2014). Even though central planning has always been crucial for determining urban and regional policies in Turkey, a new era emphasising local administrations began with the help of institutional regulations during the neoliberal economic transformation process that started in the 1980s. Nevertheless, these regulations also adopted an inflexible, normative and rigid approach and no new regulations were introduced that could respond to the ever-changing real estate investment and implementation styles (Tasan-Kok, 2006). To manage the change in urban space, the planning system offers a perspective based on plan-led approaches. "Local spatial plans" at the urban scale are inflexible and rigid (Ersoy, 2000; Keleş, 2012, Özden, 2008; Tasan-Kok, 2006; Özkan and Türk, 2016; Famous, 2006). In this sense, in the process of change management in the urban space, it was far from providing the necessary flexibility, potential for interpretation or opportunities for contribution (Ünlü, 2006). The bureaucratic restrictions were then overcome in alternative ways, due to these shortcomings in the regulations.

In the 1990s, changes in the urban space began with the influence of globalisation, and large office buildings and shopping malls led to extensive transformations in the urban space (Özden, 2008; Güzey, 2016). For example, several changes were made in the residential areas in Istanbul and their usage: With the construction of the second bridge over the Bosphorus and peripheral highways, financial centres were built on these axes (Ergün, 2006). In addition, during this period faulty urbanisation policies and partial implementations have increased in urban areas, whereas central and local governments failed to develop urban spaces, construct residences and establish mechanisms to inspect the urban structures in terms of their eligibility for local spatial plans. As a result, this horizontal one-storey illegal housing turned into a vertical multi-storey illegal configuration. The need for urban renewal thus increased, given all the aforementioned negative developments (Köktürk & Köktürk, 2007).

Moving towards the 2000s, urban renewal was emphasised again as a risk mitigation tool for natural disasters following the sensitivity after the Marmara and Düzce earthquakes. There emerges the issue of both modernising the settlements that are already built and reconfiguring the earthquake-prone residential quarters, especially in the metropolitan areas. For this reason, urban renewal has been an important component of urban development. Special urban renewal projects were introduced by the local administrations, and developed through a cooperation between the public and private sectors. These projects were implemented in high-rent areas and considered as the only alternative for the improvement development plans (ıslah imar planları) for squatter settlements (Genç, 2014). However, the flexibilities and open negotiation processes in the relations between local administrations and the private sector, as is the case in countries with discretionary planning systems, did not emerge here. On the other hand, the stable and rigid framework of local spatial plans, compared to the dynamism of the social space, might fail to produce urban spaces (Ünlü, 2006). At this point, urban renewal projects have progressed on project-

led approaches, developing a dynamic structure in contrast to the static local spatial plans. This situation was also supported by new legislation concerning some special urban renewal projects.

In the recent years, Turkey's planning system has adopted an approach that makes decisions based on fragments of the cities instead of considering the city as a whole. This situation encompasses an increasingly flexible and project-led approach. For this reason, planning becomes an implementation tool that can accommodate different and flexible applications according to market demands. New land use decisions that are requested in fragments across the urban land, or changes to the existing land use decisions, spread rapidly and create differences across the city (Tasan-Kok, 2006). However, the pressure to increase the capital/land ratio due to the rising land prices in rapidly growing cities, and the resulting demand for high density reconstruction of the non-functional or decentralisation of industrial zones into urban fringes, and an increased demand for the reconstruction of licensed or unlicensed residential buildings, along with the projects of local administrations that are in competition to receive the capital in the era of globalisation have raised the momentum of urban renewal practices (Kocabaş, 2005). For this reason, numerous large-scale, mixed-use, prestigious redevelopment projects have been proposed by the private sector. Haydarpaşa, Galata Port and Dubai Towers projects can be given as examples for these implementations. Some of the urban renewal practices today are considered to be due to commercial developments in central areas, where the private sector has a high demand, and of housing projects that target the high-income group (BIB, Urbanization Forum, 2009).

4 "FLEXIBILITY" IN THE LEGISLATION ON URBAN RENEWAL

The concept of planning has changed through the impact of transformations and dynamics created socially, economically and politically, on a national and international level. Also, decision-making systems are affected by macro-level structural changes, such as globalisation and neoliberal policies (Munoz Gielen & Tasan-Kok, 2010). The discussions between planning systems are about the dilemma of flexibility versus certainty. In the planning literature, there is a reoccurring pair between the concepts of regulatory planning and strategic planning (Rivolin, 2008). Faludi (1987, p. 260), on flexibility, states that "Flexibility helps to achieve as much certainty as possible in a world." Moreover, the regulatory planning system has shown a move away from certainty towards flexibility. At the same time, the developments regarding sustainability and economic growth have led to rigid, inflexible discretionary planning systems that fail to realise the strategic policy vision (Steele & Rumig, 2012). In a comparative study, the European Commission found a two-way trend in planning practices: countries with regulatory planning systems actually tend to be flexible. On the other hand, countries with strategic planning systems are seeking greater certainty (European Commission, 1997). In fact, many planning systems show a combination of the features of regulatory and strategic planning systems. This two-way trend suggests that the ideal planning system is somewhere in between deterministic and flexible (Steele and Ruming, 2012).

Over the past 30 years, more flexibility and less rigid rules have become a common trend in planning practices (Munoz Gielen & Tasan-Kok, 2010). In cities that have a planning system based on rigid rules, planning seems to be challenged in developing a creative approach that will balance the needs of the market with the public interest given the new developments. Instead, it appears that there is a corrective-regulatory trend to approve new developments within the rules and constraints of the existing system. Within this framework, local governments have made efforts to revise existing plans by evaluating individual requests rather than developing strategies for new developments in the city as a whole (Tasan-Kok, 2006).

Generally speaking, flexibility has developed both as a reason and a consequence of the legal change in the political, institutional-administrative, and plan-making processes. Nevertheless, this has become more evident when local governments turned towards a more entrepreneurial and participatory approach. Inclusion of the partnership between the public and the private sector at each stage of the supply and development of services on the urban land to the processes of plan making and implementation has affected the concept of flexibility. In this respect, factors such as the balance between neo-liberal policies and public and private sector actors in urban planning, countries' unique planning approaches, economic processes, financial strength of the public sector and the investment demands of the private sector affect the tendency towards the concept of flexibility (Özkan, 2010).

A flexible system also comes forward in terms of urban renewal practices. Flexibility in urban renewal practices occurs in two different ways.

First, urban renewal practices are excluded from the regulatory planning system due to the project-led approach instead of a plan-led approach. Urban renewal practices since 2004 are applied with special purposed laws. These special purposed laws bypass the hierarchy that exists within the regulatory planning system. Thus, development rights, which are prepared in accordance with the regulatory planning system, expire once declared to be in an urban renewal area. Urban renewal practices are a tool of intervention that affects directly property rights. The 35th item of the Turkish Constitution states the entitlement to property rights by persons and that these rights cannot be limited except for public benefit. Although the right to property is protected by the Constitution, establishment of healthy living spaces is enabled by the renewal projects that aim to restore 'derelict' and 'obsolescent' areas economically, socially, physically and environmentally in the long term. From this point of view, the right to property, which is protected by law and can only be restricted for the public welfare, is interfering with the urban renewal projects (Tarakci and Turk, 2015). For this reason, the concept of "property rights" has been key since the beginning of urban renewal projects and determines the way in which urban renewal projects are managed through categorising its residents. Property rights are a concept based entirely on the document of property and defines the extent to which the inhabitants are involved in the projects. Since Turkey's urbanisation policies depend on day-to-day politics, the periods during which the property documents were received have resulted in the formation of various types of properties even in the same neighbourhood. Urban renewal practices are constructed on a system based on the legal status of property (Şen & Turkmen, 2014), such as holders of land allocation certificates, holders of land titles and those without any certification. The land allocation certificates distributed in the 1980s with the amnesty law allocate the right for actual utilisation to gecekondu owners. Thus, the owners of the gecekondus have gained some legal rights. This confusion of property consequently creates profound distinctions between those who have land allocation certificates and land registration (title) documents, and those with no documentation. Those who have legal property are equipped with the power to refuse the offers of municipalities. On the contrary, those who have no documents are more willing to participate in the projects by accepting offers in negotiations (Kuyucu & Ünsal, 2010). Moreover, changes occur in the structure of property and actual situations arise due to numerous unlicensed constructions (Göksu, 2006). The existence of different property structure gives the power of discretion to authorities on both important issues such as valuation and expropriation. This situation enables a great deal of flexibility in urban renewal practices.

Second, urban renewal legislation gives discretionary power to both central governments and local administrations on various issues, such as determination of the renewal area or completion of the implementation, unlike the legal instruments of the regulatory planning system. The main actors of the urban renewal implementations are central and local governments. TOKI and the Ministry of Environment and Urbanization are the most important actors for urban renewal in terms of central governments. In 2004, TOKİ received significant authorisation in urban renewal areas with Law No. 5162. Relocation of the low-income groups both living in gecekondu areas and collapsing city centres to remote areas by TOKI has become one of the staple policies during this period. Finally, the Ministry of Environment and Urbanization has become the main actor of urban renewal projects with Law No. 6306 since 2012. The ministry takes the authorisation for the determination of urban renewal areas, making and approving plans regarding these areas and certifying the constructions to be built on these areas. In short, the Ministry is the sole authority in the implementation of an urban renewal project from the beginning to the end (Gür, Türk, 2014). For example, the risk of earthquake is the most emphasised rationale for urban renewal in Turkey. The JICA report regarding the risk of earthquake (IBB-JICA, 2002) stated that there were more than 400 districts that required large-scale redevelopment or strengthening. The Istanbul Earthquake Master Plan (METU, ITU, BÜ, YTÜ and İBB, 2003) has further improved this analysis. However, Tarakci and Türk (2015) revealed in their study conducted throughout Istanbul that the urban renewal areas declared by the Ministry were not identified in light of the results of the JICA Report and the Istanbul Earthquake Master Plan, but instead based mainly on the housing market. This situation was enabled by the power of discretion given to authorities by the urban renewal legislations. From the point of view of the local administrations, it is stated that the contribution of the public sector to the partnership is the planning of land use and supply of land, municipal services and infrastructure services, and most importantly, establishing and sustaining the communication between the public and the private sector (Özden, 2008). With the introduction of the recent legal instruments, the authority of the central government has increased, while the role of local administrations has decreased regarding urban renewal. This situation demonstrates that discretionary powers are mostly held by the central government.

The above-noted situation clarifies that the central and local government units have played important roles in urban renewal practices. These roles have been shaped by the special legal resources listed below, targeting urban renewal that have gone in effect since the beginning of the 2000s:

- North Ankara Entrance Urban Transformation Project Law No. 5104, dated 2004
- Law on Protection and Usage of Historical and Cultural Immovable Assets by Renewal Law No. 5366, dated 2005
- Municipalities Law No. 5393 Item 73, dated 2005 and Amendment Law on Municipalities Law No. 5998, dated 2010 acting on the aforementioned item.
- Transformation Law for Areas at Risk of Natural Disaster Law No. 6306, dated 2012

The common point of the aforementioned legal arrangements is that they redefine planning as a structure that is flexible and that regulates spatial development taking into account market dynamics, instead of an obstacle that impedes project implementation. In this respect, the flexibilities for urban renewal projects by these laws are explained in detail below.

4.1 FLEXIBILITIES THROUGH THE NORTH ANKARA ENTRANCE URBAN TRANSFORMATION LAW NO. 5104

The North Ankara Entrance Urban Transformation Law that came into effect in 2004 aims to restore the spatial structure of the implementation areas of the North Ankara Entrance Urban Transformation Project, improve the appearance of the environment, and provide a healthier residential layout to ultimately increase the standard of living.

The key aspect of the North Ankara Entrance Urban Transformation Project is its aim to create an identity for the area around the protocol road and northern peripheral areas that suits the image of the capital city (Kütük İnce, 2006). The project has a total area of 1580 hectares and has a projected population of 70,000 people. The project is implemented in stages, and the first stage covers an area of 400 hectares. Within the first stage, there are 18,000 housing units, 47 hectares of special recreation area, 2 hotels and congress centres, 18 hectares of pond area, a total of 3 km-long roads, tunnels and viaducts (www.toki.gov.tr). The project is carried out through a public-private sector partnership. A company named TOBAS and the Metropolitan Municipality are the main actors in the project. The financing of the project is mainly through the cooperation between the private sector and the local administration (Kütük İnce, 2006).

With the law, hierarchy and authority in Turkey's planning system have been intervened by allocating the authorisation of making plans to the municipality. Moreover, flexibility has been ensured by granting the power of discretion to the municipality about whether the current plans would be continued or new plans be developed. According to this law, old development rights will no longer be valid and new development rights will be determined by the local spatial plan.

According to this law, the project is implemented within the framework of the agreements made between the property owners and title holders. In cases where no agreement can be reached, real estate properties owned by land owners can be expropriated by the municipality.

In addition, owners of uncertified constructions and gecekondus who do not have a land allocation certificate but who certify that it was made before 1 January 2000 can also be entitled to the right of property. The title holder whose land allocation certificate states an area of 400 square metres can take a residence whose size is determined by the city council. The owners of the property with fewer than 400 m² in the land allocation certificate are charged with the housing contract.

The North Ankara Entrance Urban Transformation Project is developed in an effort to satisfy the land owners instead of owners of the gecekondus. The approach for renewal suggests getting rid of the gecekondus in the area completely and building common spaces and high-rise buildings (Kütük İnce, 2006). Moreover, the city council holds the authority of the distributions at the end of the project and there are no objective criteria for distributions, as it is based on agreements. That is, the city council has been authorised to determine the qualifications of houses and workplaces that will be given to real estate owners in accordance with the land amounts, the size that is required for property right ownership and the qualifications of the houses that will be given to owners of the gecekondus with land allocation certificates.

However, the criteria for application of these acts are not explained by the law or its regulations. At this point, flexibility in the distribution of ownership at the end of the project has been enabled by allocating a great deal of discretionary power to the municipalities.

4.2 FLEXIBILITIES INTRODUCED BY LAW ON PROTECTION AND USAGE OF HISTORICAL AND CULTURAL IMMOVABLE ASSETS BY RENEWAL NO. 5366

Regarding the areas declared as protected areas in 2005 and the renewals to be made in these areas, the Law on Protection and Usage of Historical and Cultural Immovable Assets by Renewal No. 5366 has gone into effect as an important tool for carrying out urban renewal implementations.

It is a well-known fact that 'derelict' and 'obsolescent' areas in the historic parts of the city host the poorest groups. These areas have been abandoned by upper income groups and have become a shelter for the poor. These regions provide easy access to workplaces because of their central location, while offering cheap accommodation facilities. After the 1980s in Turkey, these regions have drawn investors' attention due to the potential of rents and have become the most important targets of transformation and renewal projects with the support of local governments (Türkün & Sarıoğlu, 2014).

By the law, municipalities are given broad authority with regards to the establishment of renewal project zones, preparation of projects and implementation of these projects. The renewal zones are identified by the absolute majority vote of the total number of members of the municipal general assembly in special provincial administrations and of the city council in cities whose decisions (and in the case of metropolitan cities, upon the approval of the decisions of the district city councils by the metropolitan city council) are then presented to the cabinet by a proposal from the Ministry of Environment and Urbanization. Even though the local administrations are the first authority for identifying the area, it may be implemented with the decision of the central administration. Here, the broadened authority given to local governments with regards to urban regulations is thus indirectly under the control of the central administration.

For example, Tarlabaşı in Beyoğlu, Istanbul was declared a "Renewal Zone" with the decision of the cabinet on February 20, 2006, with a similar rationale to those in other parts of the world. Twenty-one city blocks were declared urban renewal zones with this decision. In the first stage, the implementation procedures and principles of the Tarlabaşı Stage One Renewal Project, consisting of only nine city blocks, with the decision of the Beyoğlu City Council on November 10, 2006 (Türkün & Sarıoğlu, 2014). The Tarlabaşı project is also part of the protected area of Beyoğlu. For this reason, after being declared a renewal zone based on the law, "renewal protection" was implemented in parts of the area, while other parts were under "conservation only", in accordance with the Law on the Conservation of Cultural and Natural Assets.

Nevertheless, the renewal zone, prepared for approval by the cabinet, which is the highest policy maker of the government, is grounds for debate on the basis of urban rights, urban governance, and that its boundaries are based on observational and subjective data (Dinçer, 2010). The fact that the declaration of the urban renewal zone is not based on scientific criteria is one of the problems brought about by the law (Özden, 2008). Since the criteria for determining the area are not identified in the law and its regulations, local governments have been given the power of discretion in this respect and flexibility is provided.

In a process starting for the first time with the declaration of renewal zones in the Beyoğlu District on February 20, 2006 with reference to the law in question, five more renewal zones were identified within the same year. The renewal zones in the Beyoğlu District vary greatly in size and location. Those in Fatih and Eminönü, on the other hand, are located near the coasts and city walls, with the historical heritage site of Süleymaniye and Kapalıçarşı sections being the biggest renewal zones in the centre (Dinçer, 2010).

One of the most important aspects of this law is the common emphasis on "project" rather than on "planning". This is to such a degree that the law in question mentions simply "renewal projects", without reference to local spatial plans, drawing up a plan, and approval, or in short, with no information on anything with regards to planning (Özden, 2008). The law in question makes no mention of a relation between the projects and the local spatial plans in use for the zone the projects refer to. As things stand, it is understood that the urban renewal projects will be implemented individually in the determined protected areas and that areas of reinforcement such as housing, commercial etc. will be formed in accordance with

the principles stated in the zoning plan (Üstün, 2014). Various decisions made by the state council state clearly that for the implementation of local spatial plans, it is an absolute requirement to include a local spatial plan and that implementations in violation of the purposes prescribed by the current local spatial plans are unlawful (Üstün, 2014). This shows that the law offers in general an approach far from an integrated approach of planning, in refusal to be a natural part of the planning process, and promoting fragmented/small scale solutions (Özden, 2008).

Even though the regulations in the law do not specify a plan-project relation, it specifically emphasises the concept of a preliminary project. The regulation of the law entitles the approval of the preliminary project following the approval of the renewal project. Furthermore, it rules that renewal implementation projects should be prepared on the basis of renewal preliminary projects. However, with regards to principles of urban planning, it is unacceptable that a renewal zone declared in a protected area is described only in terms of architectural preliminary projects and implementation projects. This is because in renewal zones that are restricted to regulating the physical space, detracted from the planning discipline, not only are historical and cultural heritage values threatened but also implementations emerge which cause the deterioration of the socio-economic equilibrium (Dinçer, 2010a). Current practices indicate that the protection-renewal relationship in conservation areas is not properly constructed in some places, and that renewal applications do not take the original texture of the area sufficiently into consideration (BIB, Urbanization Forum, 2009). For instance, in Neslişah and Hatice Sultan neighbourhoods (Sulukule), an area of about 9 hectares was declared a renewal zone in 2005. By law, the project was carried out jointly, in accordance with a protocol signed by the Fatih Municipality, the Istanbul Metropolitan City, and TOKI. Even though the said project was cancelled on the basis that it was "not in line with urban development principles and not in public interest", it was completed by the time the decision was approved (Üstün, 2014).

Within the scope of this law, for evacuating and demolishing the structures within renewal zones during the implementation process of the projects, the primary method is agreement. Where no agreement can be reached, the method of expropriation for the estates in the possession of juristic persons is used. However, in order to expropriate, a public interest ruling is required. Still, in areas declared as renewal zones, the matter of possession casts a much broader impact than simple expropriation. Following the declaration of a renewal zone, the sales and leasing values of the estates reach a much different price level than the free market rates (Dinçer, 2010a). For example, it is known that the price per square metre for the 360 Ofis Project built and sold after the Tarlabaşı Urban Renewal reached $7,500. All five-storeys of the registered building right next to this project, on the other hand, was expropriated for 760,000 Turkish liras ($420,000). This means that this person whose building was expropriated will be unable to buy even a 100m2 office from this project (Türkün & Sarıoğlu, 2014).

On the other hand, the regulation of the law in question states that if it turns out that the usual expropriation process leads to delays in the implementation of the project, urgent expropriation may be employed following the provisions of Article 27 of Expropriation Law No. 2942, consulted when under extraordinary circumstances; in addition to the criteria with which to determine possible delays not having been explained. This way, administrations are provided with a certain flexibility to tend towards urgent expropriation.

When the regulations in the law are considered as a whole, an approach emerges that regards the renewal zone as an entire project area. At the same time, it is stated that the renewal project can be made in the parcels, provided that the authorised person considers it appropriate and the integrity of the project has not deteriorated. However, the expenditure of this renewal project or its permit processes is not defined. Moreover, it is also ruled that individual projects that are not completed on time may be completed or expropriated by the administration in order to preserve the integrity of the project. The administration is provided with a discretionary power with regards to this choice. When considered in terms of the right to property, this situation restricts the individuals' right to disposition of their properties in their own discretion and allows the right to an individual project only with approval from the administration (Üstün, 2014).

Likewise, the law in question suggests that in addition to municipalities and public or private institutions, implementations of renewal projects may be carried out by a partnership with TOKI. Nevertheless, it is stated that all inspections and supervisions during the implementation would be performed by the municipality. Since there are no detailed instructions in the law and regulations that refer to which principles this relation is based on, a project partnership will be formed, a certain flexibility that may allow

differences in individual implementations. That being said, it encourages implementations in renewal zones via exemption from all kinds of taxes, levies, duties and fees.

4.3 FLEXIBILITY FROM AMENDMENTS TO MUNICIPALITY LAW NO. 5393 AND MUNICIPALITY LAW NO. 5998

Municipality Law No. 5393, which regulates the duties, powers and responsibilities of city municipalities as well as their working procedures and principles in 2005, was one of the studies carried out within the scope of the Local Administration Reform studies. Article 73 of the law defined the roles and responsibilities of cities with regard to urban renewal, and cities started acting as the local authority in urban renewal. When Municipality Law No. 1580 and Reconstruction Law No. 3194, which were in force before Municipality Law No. 5393, are inspected, it is observed that the matter of implementing renewal projects is not defined in clear terms and that the cities are not authorised for renewal projects. It should also be noted that before Municipality Law No. 5393, there were significant restrictions with regard to intervention by cities in earthquake risk zones (Tarakçı and Türk, 2015).

In 2010, Amendment to the Municipality Law No. 5998 went into effect for amendments to Article 73. With this law, the authority of the metropolitan municipalities has been extended. The law in question rules that the area to be declared an urban renewal zone should be no smaller than 5 and no bigger than 500 hectares and that more than one place related to the project area may be declared one urban renewal zone, provided that the total is no less than 5 hectares. On the other hand, there are no parameters for determining the size of the area. For example, in the Maltepe district of Istanbul, a 93-hectare area has been declared Başıbüyük Neighbourhood Urban Renewal Zone. The initial work on urban renewal in the area started with the "Protocol Regarding the Urban Renewal Project in Maltepe, Istanbul" signed by TOKI, the Istanbul Metropolitan Municipality, and the Maltepe Municipality on February 24, 2006 (Şen & Türkmen, 2014). A total of six 14-storey blocks were built in this area by TOKI in the first stage and the process is ongoing. The most recent development is the approval of the land use plan for the area by the Istanbul Metropolitan City Council on March 18, 2017. This law assigns to metropolitan municipalities the authority to declare urban renewal zones within metropolitan borders, to make plans of any scale and the implementation of these plans, to grant construction and occupancy permits and undertake all sorts of development processes as such for the declared zone, and to exercise authorities given to cities with Reconstruction Law No. 3194. With this law, the authority of district municipalities in urban renewal zones is reduced and almost all of the authority is transferred to the metropolitan municipalities. For example, 66% of the urban renewal zones in Ankara belong to the Ankara Metropolitan Municipality due to this law (Bektaş, 2014). This provides the cities with a broad discretionary power for urban renewal practices, which completely disregards the integrity brought about by the Reconstruction Law. The decision of the Supreme Court dated October 18, 2012 and numbered E:2010/82 and K:2012/159 states that “It is a requirement that the power of discretion in the implementations of urban renewal and development projects should be given to cities through the rules in question. As cities are areas of constant change and improvement, which leads to difficulties in predetermining the ever-changing needs of a city, it is not possible for the law to prescribe in detail how these needs might be satisfied,” acknowledging the existence and necessity of the power of discretion.

Bektaş (2014) reveals that following Municipality Law No. 5393 in 2005 and Law No. 5998 in 2010, declarations of urban renewal zones gathered momentum and that when the years of declaration in Ankara are examined, a 26% section was concentrated in the year 2005. At the same time, an 80,000-hectare residential area of Ankara includes about 45% urban renewal zones, which further proves the extent of these zones. In addition to urban renewal implementations being a planning option, declarations of urban renewal zones cover nearly half the city's residential area (Bektaş, 2014). This shows that in a city as important as Ankara, half of the city is under a regulatory planning system whereas the other half is under a discretionary planning system. However, this distinction is not in two different areas, but the renewal areas are located in different parts of the city. For this reason, regulatory planning dominated by 50% of the city is ineffective with fragmented interventions.

4.4 LEGISLATIVE FLEXIBILITY ABOUT THE TRANSFORMATION LAW FOR AREAS AT RISK OF NATURAL DISASTER LAW NO. 6306

In 2012, the Transformation Law for Areas at Risk of Natural Disaster (Law No. 6306) entered into force as an important and controversial legal tool for urban renewal. The main purpose of the law is stated as identifying areas of disaster risk and structures outside of these areas, and thus improving and/or disposing of them in order to create healthy and safe living environments in accordance with the rules of science and art, as well as with common standards in those fields and lands where risky structures are located. The ultimate goal stated is to ensure that no further casualties occur in the face of any disaster, and to transform cities into healthy and safe living environments (www. csb.gov.tr).

The purpose of this law is to identify risky areas for disaster, as well as other urban and rural lands in which risky structures outside these areas are located, and to specify the procedures and principles of improvement, liquidation, and renewal. Risky areas and risky structures, which constitute the basis of the law, are defined in Article 2. According to this definition, risky areas are those that bear the risk of causing loss of life and property due to the ground structure or the construction on the ground. These areas are determined by the Ministry or the Administration and later confirmed by the cabinet upon the proposal of the Ministry. Risky structure refers to a structure, within or outside the risk area, that has completed its economic life or is determined to bear the risk of collapse or serious damage on the basis of scientific and technical evidence.

With this law, upon identification of "risky areas" and "risky structures," a generalised authorisation is given to the Ministry of Environment and Urbanization for the "improvement", "liquidation" and "renewal" of structures existing in all risky areas for disaster across the country. It has been stipulated that municipalities and special provincial administrations or TOKI can only utilise these areas and structures upon assignment by the Ministry.

Here, the most fundamental change introduced by Law No. 6306 is the authorisation of the central government in the process, while in all laws enacted since 2004 local administrations had been granted discretionary powers and the flexibility in the planning system had been regulated for local administrations. Especially considering the broad framework of the definitions for risky structures, risky areas and reserve spaces, the greatest flexibility is provided in the authorisation for planning; and thus, the Ministry of Environment and Urbanization is granted the flexibility to conduct any type and scale of plans as preferred.

Article 57 of the Constitution imposes important duties on the state in terms of housing legislation. The state is obligated to take necessary precautions for the residence of its citizens in healthy housing. The measures taken under Law No. 6306 can be considered as measures to meet the need for healthy housing (Simsek, 2015). Based on this reason, Law No. 6306 grants administrations a very broad authority and with this authority, flexibility is provided both in planning and implementation. This flexibility is especially in terms of the central government. In addition, construction companies seem to have a significant say in these processes. However, there would be much benefit in including the municipalities in the implementation. The municipalities' coordination of relations between the construction companies and their owners can facilitate implementation. The law prevents this function of the local administrations by giving more authority to the Ministry (Üstün, 2014).

The first of the flexibilities in the law relates to the identification of risky areas, reserve spaces and risky structures, which forms the basis of the law. Thus, according to Law No. 6306, the Ministry of Environment and Urbanization, municipalities, metropolitan municipalities and special provincial administrations have been authorised to identify the urban renewal areas. A risky structure can be identified on the basis of certain concrete criteria, despite being impossible to be fully defined. However, the criteria for identifying risky areas have not been determined in concrete terms, but are left to the discretion of the administration. For example, the Derbent district (Şen & Öktem Ünsal, 2014), which is located next to the Maslak-Büyükdere Hill and has the highest land prices in Istanbul, 92% of which is composed of gecekondus, is worthy of attention for its unresolved urban renewal issues especially since the beginning of the 2000s. As a solution, the area was declared a "risky area" on 03.01.2013 by the decision of the Council of Ministers. This verdict for a risky area was annulled as a result of the lawsuit filed by the residents of the neighbourhood, in 2014, by the 13th division of the state council on the grounds that the area was declared risky based on "observational and general information, not a technical report." However, with another decision of the Council of Ministers on 03.01.2017, the area was once more announced as risky.

Likewise, the characteristics of the reserve space, whether it is risky or not, were not clearly defined in the law, and the appointment of reserve spaces was left to the discretion of the administration. The Ministry of Environment and Urban Planning has identified 8 reserve areas of 34,704 m² in the European side of Istanbul.

The second flexibility granted by this law is the restriction of use. The Ministry may request from the relevant authorities not to provide electricity, water and gas to the structures in risky areas or to risky structures. This restriction of use was not found contrary to the Constitution. According to the decision of the Constitutional Court dated 27.02.2014, numbered E: 2012/87 K: 2014/41, it is considered reasonable action to stop providing electricity, water and gas services for residents who refuse to evacuate the buildings that are at the stages of "evacuation and destruction," and thus force their evacuation. However, withholding the services of electricity, water and gas in accordance with this regulation is a threat to an individual's right to health. This may lead to the abnegation of a public benefit (health) which is superior in terms of ensuring the continuity of the project. On the other hand, the above-noted regulations are not compatible with the principle of uninterrupted provision of public services or the social state principle (Üstün, 2014).

The third flexibility presented by the law relates to the stakeholders of the risky areas, real estate where the risky structures are located and reserve spaces. The law states that decisions can be made by at least two thirds of the stakeholders after liquidation in these risky areas, on the real estate where the risky structures are located, and at the reserve spaces. The land shares of the stakeholders not participating in the decision making are then sold to the rest of the stakeholders by auction based on their market value. In cases where sales are not made to the stakeholders, it is purchased by the Ministry for its market value. The ratio of 2/3 stipulated by law has been criticised for not being based on objective data and life experiences (Özsunay, 2015). However, the explanation has been that this regulation was made out of the ordinary with a broader perspective on the law, due to an intention to accelerate the procedures. However, the most fundamental issue here is the obligation to take the shares of the stakeholders who do not participate in the majority. This is considered a new situation where the consequences of non-participation are outlined as exclusion from that community (Kürşat, 2013).

The fourth power granted by this law that provides flexibility concerns the expropriation of private property (land) on which a structure has been demolished. It is stipulated by law that such land can be urgently expropriated by the Ministry, TOKI or the Administration, if at least two thirds of the property owners cannot reach an agreement. Urgent expropriation in such cases has been included in the decision of the Constitutional Court dated 27.02.2014 numbered E: 2012/87 K: 2014/41. It is stated in the court decision that the expropriation by the relevant public institutions and organisations of real estate at disaster risk not utilised by their owners at their own will, as part of the reorganisation of the real estate's residential status, is of public benefit.

The fifth of the flexibilities provided by the law is that persons for whom rent or temporary work or housing allowance can be made are: owners and tenants of the structures evicted by agreement, or workplace owners. It is unclear whether it is possible to grant discretionary power to the related institutions and organisations within the boundaries specified by the rule in the "can be made" statement (Simsek, 2015).

5 GENERAL EVALUATION AND CONCLUSION

While Turkey has a plan-led regulatory planning system (Özkan & Turk, 2016), a project-led system is adopted with laws relating to urban renewal. In addition, a discretionary planning approach becomes evident in the laws, with discretionary powers given to the central government but also to the local administrations. The purpose of this report is to analyse the flexibility created by the legal regulations on urban renewal and its consequences based on actual urban regeneration practices. As summarised in the table above, the flexibility resulting from the legal means of urban renewal has increased over time and has shifted from local administrations to the central government. Throughout the process, discretionary powers have been increased with every law. However, negotiations, which are the basis for discretionary planning systems, have never been defined in the law. Although all laws presume that "agreement forms the basis", the right to expropriation and even urgent expropriation creates pressure on property owners. Negotiations for agreements in cases where there are no equitable and equal rights do not have the attributes of an actual negotiation.

The scale and content of the flexibility that emerged in Turkey due to the legal means related to urban renewal, which has emerged since 2004 up to the present day, have changed over time. When this situation is considered in terms of planning systems, we find that while the planning system was initially a regulatory system instead of a discretionary one, the laws for urban renewal areas have developed a discretionary system. A project-led approach has been adopted in urban renewal practices, moving away from the previously more plan-led system. Especially the concept of a preliminary project mentioned in the law creates loopholes in the planning system. That is to say, a phrase stating that a preliminary project will be implemented in the designated area ensures that there are no limitations on structure heights and population densities and enables the developer to identify design criteria to a great extent. Thus, municipal planning units cannot interfere with building heights, dimensions and shapes of structures, floor areas, architectural features, residential typologies, etc., based on plan decisions. In actuality, these specifications are made very strictly in the traditional planning approach in Turkey. The freedom granted to the developer by the planning unit, with no guidance or restrictions imposed, causes the implemented projects to develop in an incompatible fashion to the texture of the surrounding residential areas (Özkan & Türk, 2016). Furthermore, loopholes are created through urban renewal plans in the planning approach of laws referring to the regulatory planning system. This is because these plans have been made in a fragmented fashion. Moreover, authorising only one institution throughout the process, starting with planning of any type and scale until the end of the building license procedures causes a lack of supervision.

On the other hand, starting with the identification of the area to undergo urban renewal, a significant amount of discretionary power is given to the administrations in the restriction of use and the identification of property right ownership. The process involves granting discretionary power first to the municipalities, which are then transferred to metropolitan municipalities, and finally to the central government. The latest legal regulations in particular seem to transfer the powers held by local administrations to the central government, causing almost all of the urban renewal areas to be managed, identified and planned by the central government. For example, the first findings of research done in Ankara reveal that 94% of risky areas fall within regions previously declared as urban renewal areas according to Article 73 of Municipal Law No. 5393 (Bektaş, 2014). This demonstrates that the wide-reaching authority assumed by the central government has been used without changing the quality or the justification of the urban renewal areas. The latest legal regulations in particular seem to transfer the powers held by local administrations to the central government, causing almost all of the urban renewal areas to be managed, identified and planned by the central government. As deduced from the Constitutional Court's decision published on 23rd of July 2012 in the Official Gazette, both the aforementioned discretionary power and the project-led approach to the planning system are found reasonable.

It appears that all of the flexibility gained through both a project-led approach and discretionary power benefits the private sector. Most of the flexibility interventions seem to increase the profit of the private sector, accelerate the process, and provide the land. On the other hand, it is evident that as a result of such flexibilities caused by law, the leaseholders as well as property owners especially in gecekondu areas and historic city centres suffer financial as well as psychological damage.

Another important issue is gentrification, which is the most discussed issue for urban renewal practices in Istanbul. The most fundamental problem of urban renewal areas such as Tarlabaşı, Sulukule, and Ayazma has been the gentrification in these areas. Studies show that gentrification is not a problem caused by local governments, but rather a consequence of greater powers to restructure and regulate urban production, and thus the displacement of the urban population (Uzun, 2015). In urban renewal practices, the newly created social and technical infrastructures cause the unit prices of housing to increase, and the actual property owners cannot live in the area; the projects are conducted according to the demands of national and international capital, and as a result, these areas are gentrified. In the urban renewal applications on a single building scale, however, the property owners become residents along with other people in the same income group preferring to reside in the area, and thus, there is less gentrification (Gür & Türk, 2014).

Differences in urban problems require different scenarios and different methods to be applied in urban renewal applications. For this reason, it is a good measure to create the appropriate arrangements for different cities and situations. However, general arrangements are necessary in terms of the procedures, duration, limitations on individuals, and the relationship of the plans and projects with plans on higher levels. Otherwise, the administration may have an unlimited discretionary power, as well as various

solutions for similar situations based on different laws, and the constitutional principle of equality will suffer (Üstün, 2014).

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ID 1608 | ADAPTING TO ADAPTATION: FLEXIBLE PLANNING, POLICY MAKING, AND THE TRANSITION FROM REACTION TO (PRO)ACTION

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1 INTRODUCTION

Traditional planning relies on a cycle of plan formulation/implementation/revision to keep planning instruments up-to-date and more or less effective in face of evolving planning contexts. The inability of static physical plans to respond to changes in the planning context (such as shifts in demographic trends, varying demands for certain land-uses, requests for new facilities or infrastructures, or the obsolescence of others) has been the subject of a long line of inquiry in planning theory. The frequent revision of a plan may help in increasing the plan's adherence to the changing reality, but in essence, a plan becomes increasingly obsolete from the moment it is crystalized in a fixed regulation and maps. As a response, several innovations have been introduced to the planning practice so as to allow the plan to remain as suited as possible to the evolving planning context, such as scenario planning or flexible planning (Friedman 2007).

Climate change and, more specifically, Sea-Level Rise (SLR), introduces a new dimension of variability which is yet to be adequately addressed by planning theory and, especially, practice. Our point-of-view is based on the idea that SLR is instilling the planning setting or context, with an uncontrollable (at the local/regional scale) change to the planning setting, and one that cannot be planned- or zoned-out.

The natural variability and uncertainty over the evolution of a given area are arguably the principal reason planning is required in the first place, so some degree of uncertainty over the outcome of a given planning cycle has always been a major preoccupation of the planning process. Nevertheless, we have developed solutions and means of averting or promoting certain outcomes (by way of zoning, by-laws, incentives, taxes and building restrictions). These solutions have tended to require that the outcomes be reasonably predicted from the onset, so that the planning solutions may be adopted in order to prevent them or promote them (Hopkins, 2001).

For most urban transformations, these outcomes are the result of purely anthropogenic actions, whether they be a single major decision from a public entity (such as the relocation of a container terminal) or the consequence of a multitude of individual decisions (the gentrification of a given neighborhood). Being the consequence of human action, most of these alterations can be planned for and, more importantly, controlled through the introduction of mechanisms encouraging or discouraging the said changes.

This is not the case with SLR. It cannot be controlled as a phenomenon, as it will occur regardless of any decisions one may introduce at the local level. And it is an undesirable change for most urban settings, as infrastructure and urban development were not designed to face it. But, unlike most other undesirable changes to the planning context, it cannot be "planned-out". It is unreasonable to ignore the effects SLR will have over shorelines and safety ratings of coastal protection infrastructure, and yet most planning

instruments are still not equipped to address the specific challenges posed by this threat, as they are unequipped to deal effectively with high levels of uncertainty.

What we propose is a model of agile/pro-active planning that addresses precisely the issue of dealing with uncertainty. We advocate that this model is especially suited to address planning with SLR: whereas SLR cannot be “planned-out”, it can certainly be “planned-for”, by adjusting the planning mechanisms to allow speedy and effective adjustment of its actions and respective tasks as new knowledge, including assessment of impacts or innovative adaptive solutions, become available. Our model allows an expedite adjustment of the planning process so that the dynamic nature of the changes being experienced by the planning context itself may be adequately addressed by the planning framework, and subsequently planned for.

Our main contention is that a static (or rather, “episodic”) plan as the result of arbitrary planning cycles is no longer an adequate response to an ever-changing, and highly unpredictable, planning context. If the complexity of the urban phenomena and ecological processes were already compelling arguments for introducing flexible and adaptive planning frameworks, we trust the intrinsic variability introduced onto the system itself by climate change will make the adoption of adaptive planning frameworks, more than a possibility, rather a necessity.

The difficulty in adapting environmental planning frameworks to these new challenges arises not only from the unique nature of sea-level rise, but equally from the frequent unwillingness of policy-makers to adopt new solutions, especially when these will have potential impacts over the existing status quo. Depending on the geographical context, these will range from the rejection of expanded public budgets or mandates for environmental planning, resistance to all measures that may have impact over existing property rights, the outright disavowal of sea-level rise as a legitimate issue, the inflexible defense of existing jurisdictions and mandates, or resistance to the introduction of planning mechanisms that would entail the sharing of decision-making power.

2 PLANNING WITH UNCERTAINTY

The inability of traditional planning to adequately respond to highly dynamic and uncertain planning contexts has led to the identification of a necessity to instill the planning practice with greater flexibility and a capacity to adjust to a shifting planning context. While revision can help realign the plan with ongoing strategies, in essence, a plan becomes increasingly obsolete from the moment it is crystalized in a fixed regulation and maps.

Planning has, therefore, typically depended on the certainty of outcomes in order to fully succeed: the “good” outcome of the planning practice is that, at the end of the plan’s implementation, reality will “adhere” as closely as possible to the planned outcome. Also, it typically relies on a reactive stance of revision based on the shortcomings identified ex post as a result of an earlier plan’s implementation. In contexts of high uncertainty, this often means the plan is permanently attempting to “catch up” with the planning context.

2.1 UNCERTAINTY IN PLANNING

In contexts of high uncertainty, though, the expectation of entirely predictable outcomes is often questionable. It is exactly in settings where levels of uncertainty are higher that we tend to speak of “failed planning”, or “unruly” or “uncontrolled” development.

Urban planners tend to underestimate the importance uncertainty plays in the evolution of the planning context (Christensen, 1999), be it due to the difficulty in isolating and identifying factors of uncertainty or because of the increased levels of complexity added to the planning process by uncertainty.

Unlike other concepts in urban planning, uncertainty has been somewhat difficult to clearly define. We think its useful to draw from a couple of notions: according to Keynes (1937), it is equated to the impossibility of defining the relative probability of a certain outcome being achieved as a consequence of one’s choices; Mack (1971) introduces uncertainty as complementary to knowledge, the gap between what

is known and what needs to be known in making correct decisions; Abbot (2005) is “a perceived lack of knowledge, by an individual or group, that is relevant to the purpose or action being undertaken.”

Some factors commonly identified as having a great influence over the level of uncertainty in the planning process are: i) context; ii) time frame; iii) assumptions; iv) complexity. Besides these factors, uncertainty can also be triggered by events of uncertainty. Simply put, an uncertainty can be triggered by events generated within the planning process itself or by changes to the planning context. Abott (2005) reinforces this notion, distinguishing between process uncertainty (or uncertainty in planning) and context uncertainty (or uncertainty to planning).

2.2 ELEMENTS OF AN AGILE AND PROACTIVE PLANNING FRAMEWORK

As a response to the shortcomings of traditional planning, including its inability to adequately address uncertainty, several solutions have been proposed that allow the plan to remain as suited as possible to an evolving planning context.

Flexible planning proponents (Rosenhead 1980, Friedman 1997, Allen 2003, Desfor and Jorgensen 2004) highlight the benefits of quickly adjusting the solution to suit new challenges or changes to the planning context; Adaptive planning (Cooper et al 1971, Kartez 1987, Lessard 1998, Holling et al 2001, Kato and Ahern 2008, Crawford and Davoudi 2009), which has seen strong support as a necessary adjustment to planning as response to climate change, similarly presupposes that the planning exercise is capable of adjusting to changes in the context without compromising overarching objectives, or that it is capable of reformulating those objectives accordingly in a timely fashion; Collaborative planning (Christensen 1985, Healey 1998, Innes 1999, Camacho 2005, Saavedra and Budd 2009) highlights the importance of stakeholder involvement from the early stages of planning, both as a way of investing different interests in a common goal and by facilitating the incorporation of local or expert knowledge in the formulation stages.

It is clear to us that increasing the robustness/resilience of planning requires a reassessment of some of the pitfalls of traditional planning, namely its inability to readily cope with uncertainty, and that the elements proposed by flexible, adaptive, scenario, and collaborative planning are all valid and useful starting points to generate a comprehensive model that could instill flexibility and agility to the planning practice, while not deviating so far outside the typical legal framework for land-use planning, so as to allow a relatively straight-forward adoption within existing planning limitations.

As a result, we propose an Agile/Pro-Active Planning Framework, that relies on a project management framework capable of incorporating a broadened set of actors/stakeholders, an iterative ongoing reassessment of the plan’s tasks and actions according to a continuous monitoring of the performance of key indicators, and thus allow a rapid readjustment of the plan to incorporated the latest knowledge and adjust readily to changes to the planning context.

We highlight ahead some elements that we consider relevant in setting up an agile and proactive planning framework.

2.2.1 PERFORMANCE

The more traditional conformity perspective of plan evaluation/ex post monitoring focuses on the evaluation of the adherence of the plan’s results to what was initially planned (intentions, objectives, goals…). The performance perspective, on the other hand, assumes that mere conformity is insufficient to evaluate a plan’s success. As uncertainty is an integral part of the planning process, what was planned for from the onset may become inadequate during the plan’s implementation. The plan is approached, under the performance perspective, as a framework for decision-making and its evaluation should be based on how (well) it is used, how it influences the decision-making, and also how those decisions affect the outcomes.

2.2.2 EFFICIENCY AND EFFECTIVENESS

The concept of performance, widely used in management, incorporates two essential concepts: that of efficiency and effectiveness. Drucker simplified the distinction between the concepts: “effectiveness is doing the right thing, efficiency is doing the thing right”. Effectiveness (“doing the right thing”) means using the best strategies and related actions to achieve a competitive advantage. In planning, this means achieving the set goals. Efficiency (“doing the thing right”), on the other hand, draws on the balance between outputs and inputs to the system, and is focused on the conclusion of a process resorting to the least amount of resources. While efficiency is entirely focused on the process, effectiveness is concentrated on the achievement of goals/objectives (Sudit 1996).

This raises the question of how to evaluate the plan’s performance and which tools to use in its evaluation.

2.2.3 PERFORMANCE EVALUATION

Performance evaluation is an important element in determining the level of success of a process. According to Neely et al. (1995), performance measurement is the quantification of the efficiency and effectiveness of an action. This narrow definition has been expanded by others, and Gates (1999), Otley (1999) and Ittner et al. (2003) think of performance evaluation as the assessment of the strategic performance that informs the strategies with the greatest potential in achieving the desired outcomes, (re)aligning process management (goal definition, decision-making…) with those objectives.

2.2.4 FLEXIBLE MANAGEMENT

Flexibility in the planning process renders both the plan and the planning process more adaptable and less restrictive, which may be paramount to their ability to react to, or even anticipate, changes to the planning context. According to this perspective, the flexible management of the plan presupposes rendering it with the capacity to resist fluctuations without disintegrating (Ascher 1998) that is, to instill it with the capacity to integrate and resolve uncertain or unpredictable situations, during its implementation stage.

According to Correia (1994) planning should always preserve a strategic stance, meaning that within a stable framework of objetives and guidelines, there should the capacity to inflect, shift or adjust the implementation of actions and tasks.

As a response to the dynamic nature of planning, the plan should be equipped with management mechanisms capable of rendering flexibility to the plan’s implementation. This dynamic can be related to either time or complexity. The flexibility conferred to the plan will only be successful if the essential element to inform the necessary adjustments –knowledge – is permanently up-to-date and available to planners and decision-makers. Knowledge, here, meaning the information systematically gathered through monitoring and evaluation of the planning procedures.

Howell et al. (2010) propose a project contingency framework (UC-Framework), which identifies three management models/styles: "plan driven", “problem structuring", and “agile". The first model, "plan driven", is framed within the traditional approach to project management, which suggests a project is composed of a set of activities that require programming and execution, according to a pre-set plan. The main objective is the achieving the goals within the prescribed timing, cost, and scope. It is most effective in low-uncertainty contexts. The second model, "problem structuring" is suited for contexts of high uncertainty, such as exploratory projects. In project management, this is acceptable for risk ventures or innovation, but it may be inadequate to deal with land-use planning contexts, where total failure is not an option. The third model, the “agile” model, from which we will derive some elements of our proposal, is especially adequate in contexts that express one or more of the following elements:

- The objectives of the project may have been ill-defined in the early stages;
- The process is highly iterative, and involves partial execution of targets, followed by a redefinition of these targets based on the feedback from the implementation.

In an ideal scenario, this constant reassessment during implementation would make the model independent from the level of uncertainty, but in actual planning practice, where a comprehensive and robust plan is required, the level of flexibility is necessarily somewhat constrained and does not allow permanent reassessment.

Shenhar (2012) addresses, among others, the issue with how to adapt management in an “agile” framework to a specific context. He links this with the necessity of instilling the strategic aspects of project management with operational concerns during implementation. The author develops the methodology so as to expand the dimensions of success, which include efficiency, but also results/outcomes and preparedness for the future. So as to achieve success in the project, Shenhar and Dvir (2007) advocate that we should accept the reality that virtually all projects go through shifts in their paths, accepting this is a normal situation to be dealt with, rather than an exception. They recommend therefore the adoption of a flexible approach to decision-making support and successive waves of planning, in coping with the idea that not everything can be planned for in advance.

To address unexpected events that result from the interaction between a project and its context, Soderholm (2008) posits that there are 3 important practices that may be adopted during an ongoing project implementation: re-opening, revision, and fine tuning. Re-opening of a project means to trigger the redefinition of activities, timelines and costs, yet maintaining the integrity of the project (same general objectives established from the onset) in spite of significant changes.

One of the recurring ideas in project management is that a project requires “programming”, that is, it is expected that the preparation of the project in its early stages sets up the conditions for it to achieve its goals. Yet, in projects with long timeframes, such as land-use plans, it is virtually unavoidable that there be changes to the activities and resources, resulting from changes to the context. Once the need to alter actions and specific objectives becomes too extensive, a revision might be required. We highlight here that, if one takes for granted that changes to the context will indeed occur, the main factor influencing the continued adequateness of the plan to the context is its ability (or inability) to adjust actions and specific objectives while preserving the main strategy/goals as viable and desirable. The ability to cope with change and still thrive is a possible definition of a resilient plan, which is a major objective of our proposal.

3 A SOLUTION: AGILE AND PRO-ACTIVE PLANNING FRAMEWORK

3.1 WHY GO FOR AN AGILE/PRO-ACTIVE SOLUTION

This alternative planning framework builds on a number of earlier sources on adaptive and flexible planning, and is aimed at greater applicability from a practitioner's perspective. It focuses on the success of the process, and not in achieving a static outcome. It requires a continuous questioning of whether the initial goals are (still) achievable. At any point, the "trajectory" can be adjusted, as long as the adjustment is supported by results of an ongoing performance assessment.

The framework presumes that there is no single, perfect solution to a/the problem, but a number of solutions that can be applied, abandoned or combined throughout the process, as long as they are still beneficial in adjusting the trajectory so as to best achieve the desired outcomes. For this to work, the plan should be seen as a combination of document, process, and a platform facilitating stakeholder interaction.

A first step is to build a roadmap, setting out major goals/objectives that the plan should/must achieve as a measure of success. The outline of this roadmap should be clear, well-structured, simple, and focused on establishing clear measures of performance, rather than static solutions. The process management should be agile/flexible and quick to adapt to changes to the system, or when monitoring identifies a divergence that may compromise the plan's overall success.

As well as a decision-support tool, developed in close interaction with decision-makers and coordinating planning staff, the plan should also include/set out a platform for participation, where frequent meetings between stakeholders (naturally including individual citizens and NGOs), scientists, and planners can inform, help improve, and allow cross-breeding of solutions implemented by multiple actors.

3.2 ELEMENTS OF AN AGILE/PRO-ACTIVE SOLUTION

Our model is based on an iterative interaction between stakeholders and an evolving knowledge base, through which the planning process advances and quickly responds to changes to the planning context by way of an agile management of tasks and actions, through the ongoing performance assessment of state

indicators. It therefore centers on a pro-active stance to quickly address the plan's divergence from the original path, allowing a quick reassessment and incorporation of corrective solutions.

It is comprised of three major elements: a Knowledge structure, where information, expertise and policy are kept permanently updated and available; a Platform promoting formal and informal communication and knowledge exchange among decision-makers, stakeholders, and experts; and the planning Process, which is the "swivel joint" through which the interactions between the Platform and the Knowledge base feed off each other, promoting the early readjustment and evolution of the planning process.

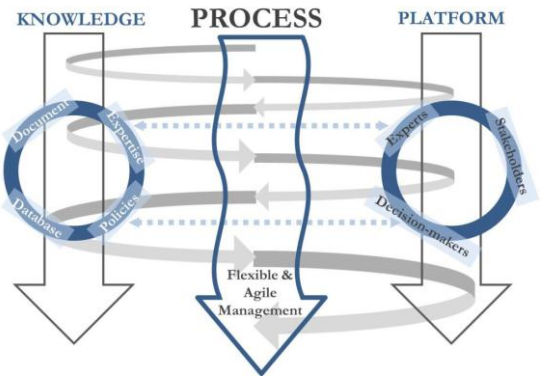

Figure 1 – An Agile/Pro-active Planning Framework

3.2.1 KNOWLEDGE

The element Knowledge consists on a repository of all the permanently updated information, necessary to inform the planning process and its stakeholders. It must be able to respond to the dynamic and solicitations of the planning process.

We perceive this Knowledge element as multi-faceted, and composed of distinct components, namely: database, document, expertise, policies.

Database is the interface over which the contents of all the knowledge components (document, expertise, policies) are stored and accessed. The technology available for data storage and processing has greatly developed in the last few decades, and this resource is yet to be fully explored by planning. Planning Support Systems (PSS) have been affirmed as a possible solution, based typically on web-GIS platforms that allow for a flexible and dynamic knowledge exchange platform. Yet, more traditional historic archives (now mostly digital) storing the full backlog of the process, should not be foregone, as they are essential to retrace past decisions or events, and their consequences to the planning process. The combination of both, as well as insuring the continuity in the team tasked with information archival and its exchange, is essential to ensure that past and current information and expertise is adequately stored and circulated among stakeholders and decision-makers.

The Document is the permanently-updated blueprint of all elements that are enacted at any given time. For the agile/proactive management of the process it is essential that the most up-to-date and comprehensive version of all documents is made widely available among decision-makers. These can be equated mostly to a repository of all the "decisions" already produced by the planning structure, and must be widely-known and accessible to all actors so that the ongoing decision-making process remains updated and informed. It should emphasize especially the elements of the plan's programming that are active or have already been decided at any given time, such as the Strategy, Objectives, Actions and Tasks.

Expertise comprises all the contributions by experts, as well as the sectoral documents, that inform the decision-making. These include the latest available solutions or findings from the scientific community, but also inputs from local actors about specific local issues (local knowledge) and technical maps/reports from public institutions (census data, geological maps, infrastructure networks…).

Policies are the outputs of the ongoing interaction between stakeholders, experts and decision-makers. Decision-makers are ultimately those responsible for deciding which policies are to be transposed onto document. Some policies may be left out of the document because they are unsuited to the overall

strategy/objectives, while others may remain “in the backburner” until they become feasible/adequate to be incorporated onto the document.

3.2.2 PLATFORM

The Platform is the forum, the “space of dialog” for interaction between decision-makers, experts, and stakeholders. It should be designed to promote easy and frank bilateral or multilateral communication among actors, and be composed of both formal/scheduled instances of interaction (meetings) but also encourage more frequent, informal, contact among two or more actors.

We distinguish three main types of actors, although it is possible for one person of group to be involved in the plan in more than one capacity:

Experts produce scientific knowledge as an input to the Plan, which may be incorporated into the knowledge database as expertise. It is a prime source of knowledge that should inform decision-making and ultimately influence the plan’s policies and documents.

Decision-makers are traditionally politicians, although planning should encourage collaborative decision-making whenever deemed appropriate, and planners can, and should, influence the decisions of politicians. The decision-makers are tasked with the ultimate decision to select which policies to enact or include in the plan’s document, and establishing or adjusting the plan’s programming accordingly (strategy, objectives, actions and tasks).

Stakeholders are all actors that hold a stake in the planning process, out of self-interest or because they are invested in a collective stake. We include here the general public (and especially local communities), NGOs, and private stakeholders such as corporations, investors or private landowners. Public agencies often hold significant stakes in the planning process, because of their mandates or as landowners.

Stakeholder involvement is fundamental in promoting the plan’s awareness and, even viability. From the planner standpoint, encouraging the collaboration of stakeholders in the decision-making process can allow the adjustment of solutions so as to promote receptivity to the plan’s document, but also, ideally, result in inputs to the knowledge database deriving, for example, from local expertise. The involvement of stakeholders from early on in the process will also increase the chances of the plan’s implementation being well received and, thus, the plan’s success.

3.2.3 PROCESS

Whereas Knowledge and Platform are “static” structures for any given moment in time, even if capable of permanent adjustments, Process is the set of elements and structures that promote the dynamic interaction between elements of knowledge and the platform. It is the Process that promotes the discussion of planning solutions, between stakeholders, experts, and decision-makers with the aim of transferring their inputs from the Platform onto the Plan’s Knowledge Database, as policies, expertise, or, ultimately, document. These elements of the Knowledge Database, in return, feedback to the Platform, where actors will process new information in order to promote the discussion of elements resulting from the plan’s implementation (monitoring).

The Process should, therefore, promote a dynamic assessment of the plan’s evolution: the latest knowledge in the database, deriving from monitoring, should influence new decisions, which in turn feed onto new policies, which may alter the plan’s programming (if needed), generating an updated knowledge database (the helix shown in Figure 1). This constant evolution is the basis of an agile (because of its flexibility and stakeholder involvement) and proactive (because of its ability to incorporate the latest knowledge) planning process.

3.3 APPLYING THE AGILE/PROACTIVE MODEL

The document, explained before, should be seen, at the plan's enactment, as the roadmap for the implementation of the agile/proactive model. After "programming" the initial roadmap, there is the need to articulate the findings (derived from monitoring the plan's implementation) and new knowledge (resulting from inputs from the platform) so they can feed back to the improvement of the document, promoting its "agile" updating whenever necessary.

While the initial programme should be as good and comprehensive as possible, it will be based on the set of information (database) available at the moment of its creation. It will include an assortment of tasks that are aimed at achieving the objectives and strategy (an "ideal trajectory"), but time is likely to introduce changes to planning context that make the original path unattainable. As a consequence, tasks need to be changed accordingly and the overall "trajectory" of the planning process may be compromised. This adjustment can be conducted in an expedite and timely fashion (pro-actively), as soon as the divergence from the desired path is detected (Figure 2). Acting early to correct the trajectory may allow alternative actions or tasks to be implemented that will still allow the general strategy to remain robust, while minimizing the divergence from the original "targets". Unfortunately, as is more often the case, it is only once a plan's strategy or objectives come under jeopardy that action is taken (a reactive stance). This delay in addressing the issue may entail an extensive revision of the plan's formulation, and by then the achievement of the original targets may no longer be feasible.

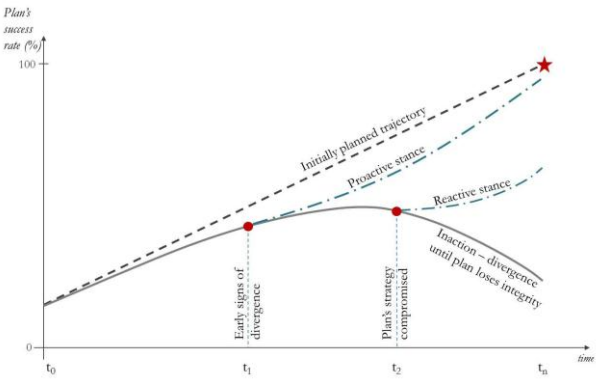

Figure 2 – Proactive and reactive stances in adjusting the plan to changes in the planning context

Our model is based on a performance and context assessment, and we propose that the level of disruption introduced to the system may be minimized by: 1) the permanent updating, completing and recirculating of all the information stored in the database, and 2) by selecting an adequate tool for the analysis of the most recent information, so that decision-makers are able to adjust the "trajectory" in an agile manner.

For the first issue, we believe that the use of Key Performance Indicators (KPI) can be useful in that it is a reasonably well known methodology that is compatible with most planning structures and does not require any major adaptation to the legal framework for planning in order to be implemented. The careful selection of the KPI should be focused in creating an "early warning" system, that will be triggered once certain thresholds, that may compromise the plan's integrity, are surpassed.

Therefore, the indicators should be oriented to carefully portrait the level of "effectiveness" of the proposed courses of action and well time-delimited. It should be triggered whenever a task or objective is underperforming, and significant deviation from the planned target should inform corrective measures. We propose the development of specific KPI for each task/action, centered on performance, complemented by compound indicators of effectiveness for the objectives centered mainly on results.

It is from the interpretation, by planners and decision-makers, of the results of the KPI's permanent monitoring at the moment t that the information on the plan's ongoing performance is derived, and input to the database. In case some significant performance issues are identified, a partial correction of the "trajectory" should then be considered in as early as possible (t'), so as to minimize the risk of mid- to long-term failure of the planning exercise (Figure 2).

The second issue highlighted is the selection of an adequate tool for the analysis of this most recent information, as a decision-support tool that facilitates the adjustment of the plan's "trajectory" at the project management level. This management should not be focused exclusively on the results of the performance assessment, but also on the input of the stakeholders, experts and decision-makers resulting from the interpretation of the outcomes of that assessment. With that in mind, we propose the use of a Balanced Scorecard (BSC) or similar methodology that can facilitate each actor's interpretation of the results and promote a weighing of alternative solutions on how to address the underperformance and possible corrections to the plan.

For the KPI assessment and the interaction with the Platform (the actors) to be successful, it is important that a clear "strategic map" of all the actions and respective indicators be kept updated at all times, highlighting both the expected outcomes of each task, but also the indication of how each task is linked to, and is expected to affect, the achievement of its respective Action, and how the set of actions would promote the achievement of their Objective.

Ideally, a KPI would trigger an "alert" that a certain task was underperforming in a timely fashion, allowing the correction of that specific task without compromising the integrity of the plan. This would be a major aspect in promoting an "agile/proactive" plan, as it would be able to quickly respond to changes to the context, while preserving its overall objectives and strategy intact (Figure 3). Only in case of a task being compromised would a revision of the action be required, and so forth.

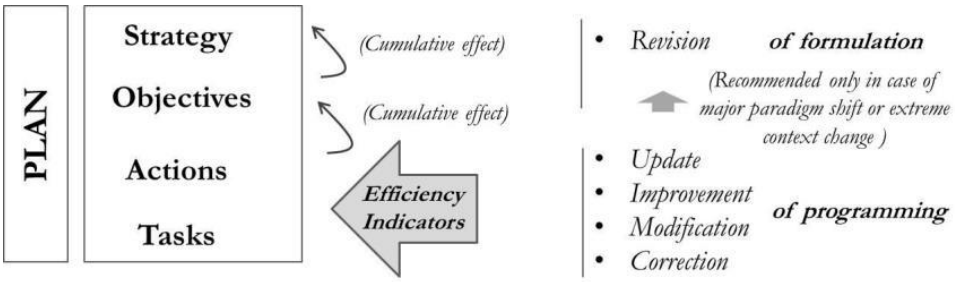

Figure 3 – Efficiency indicators trigger early warnings, promoting the frequent adjustment of the plan's programming (tasks and actions) without compromising the plan's formulation.

If adequately implemented, this strategy would keep a plan's overall strategy viable and up-to-date in face of significant disturbance to the planning context., only requiring full revision in case of a major shift in planning paradigms or deep changes to the legal framework (Figure 4), that is, events capable of triggering alerts on the performance of effectiveness indicators. These exceptional events would then provoke a redefinition of the plan's formulation, including the overall strategy, and the reassessment of objectives, actions and tasks.

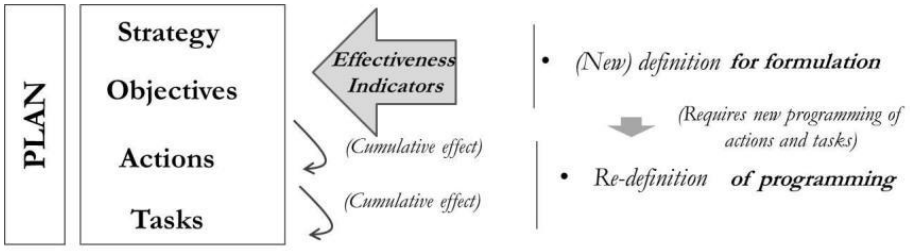

Figure 4 – Only in the event of an unpredictable shift in paradigm or deep change to the planning context, triggering alerts on the performance of effectiveness indicators, would a redefinition of the Plan's formulation be required.

Efficiency indicators, being linked to actions and tasks (Figure 3), are fundamental in triggering alerts once they underperform. These alerts are early warnings that problems in the execution of the process are occurring, such as insufficient resources, inadequate timing, or problems with their implementation. Since we are within the domain of process, it is the strategic map of actions and tasks that should serve as a reference and be tweaked so as to adjust the plan to the new challenges. These changes should be

produced swiftly, and adjusting them appropriately will avoid the need to revise the formulation (strategy and objectives).

In a well-formulated plan, the effectiveness indicators (Figure 4) should be designed so as to be triggered only by events which could compromise the integrity of the plan's formulation, such as significant and unavoidable changes to the planning context, or major unforeseeable events (natural disasters, deep economic depression…) that would require a complete revision of the objectives and strategy. Once that revision is started, a reassessment of the actions and tasks would ensue.

3.4 SEA-LEVEL RISE: MANAGING THE UNMANAGEABLE

We take planning in the context of accelerating sea-level rise (SLR) as a case-study for the application of our model. SLR introduces a new dimension of variability which is yet to be adequately addressed by planning theory and, especially, practice. With Sea-level rise (SLR), land-use planning faces a challenge: in that it is not necessarily the planning practice that is failing to adequately predict changes to its planning context (at least, not according to its traditional standards), but rather that the "uncontrolled variable" (SLR) is too unpredictable or too untamable to allow traditional planning, or even scenario planning, to closely predict/adapt to it. This phenomenon cannot be planned-out or zoned-out (unlike most man-made uses or activities), it will occur regardless of any decisions taken at the local level, and represents a threat to most coastal urban settings, as infrastructure and urban development were not designed to face it.

The traditional stance towards SLR adaptation, and indeed most natural hazards, has been a Reactive stance: adopting reactive measures to deal with impacts already being experienced by the system. It often relies on the vulnerabilities of the system being revealed by events through the failure, or near-failure of the system as a whole or in some of its aspects (reactive adaptation over a vulnerable system);

More recently, though there is increasing pressure to instill planning with a pro-active stance (): early adoption of pro-active measures, which attempt to anticipate future impacts and mitigate them by increasing the system's resilience ("readiness") so as to withstand SLR without losing fundamental capabilities to perform up to an acceptable standard (proactive adaptation for a resilient system).

The level of uncertainty SLR introduces to the planning context render planning with SLR a perfect example where we believe the adoption of an agile/proactive model of planning would be ideally suited.

Lempert (2000) states brilliantly the sort of questions planners are faced with regarding SLR:

> *The key step in solving a complex problem is often asking the right question. Prediction-based policy analysis requires that we ask 'what is likely to happen in the future?' We believe that the proper question is 'what actions should we take, given that we cannot predict the future?' The answer we propose is that society should seek strategies that are robust against a wide range of plausible climate change futures. By definition, robust strategies are insensitive to uncertainty about the future. For risk-averse policy-makers, such strategies would perform reasonably well, at least compared to the alternatives, even if confronted with surprises or catastrophes. Robust strategies may also provide a more solid basis for consensus on political action among stakeholders with different views of the future, because it would provide reasonable outcomes no matter whose view proved correct. Clearly, robust strategies are desirable. The question is, do such strategies exist and, if so, do we have the means to find and assess them?*

3.4.1 APPLYING THE AGILE/PRO-ACTIVE MODEL TO PLANNING WITH SLR

Our model addresses several of these issues specific to planning with SLR:

1. By incorporating in the Plan's database information that is kept "on the backburner", that is, expertise and policies that are not a part of the document at a given time, but that may be introduced to it readily in case of a shift to the planning context, we increase the ease of quickly adjusting the plan to that new reality, while preserving its integrity. A perfect example of this

would be a solution for sea-level rise adaptation, such as the relocation of a neighborhood, which would be prepared in advance but that, due to its cost, would only be enacted into the plan after a certain threshold of SLR was surpassed. Having prepared for that scenario in advance, would allow experts and local stakeholders to debate the merits of alternative solutions and possibly reach new ones that may be beneficial to more actors (Birkmann 2010). Also, having been the subject of ample debate by the time of their adoption, these solutions would likely be met with greater receptiveness, when compared with reactive, hasty, decisions. The ease of implementing the necessary tasks would therefore be much facilitated and the plan's overall robustness much improved;

2. As our framework presupposes the establishment of formal and informal communication channels among actors in the platform (including experts and decision-makers), this would allow the plan to be constantly instilled with the best and most up-to-date science and adaptation solutions, allowing for an improved and speedy consideration of new data or technology;
3. The timeframes for adaptation are very long (Hallegatte 2009), and not compatible with the typical political cycles (Wilson 2007). Therefore, strategic adaptive strategies require stable planning frameworks, capable of generating multi-year, or indeed multi-generational, commitment to a certain strategy. By "shielding" the Strategy as the stable consensus that is unlikely to require revision unless there is a major paradigm shift, our model proposes that reassessment based on KPI be mostly confined to the adjustment of tasks, without compromising the overarching strategy of the Plan. It is therefore well-suited to implement long- to very long-term strategies such as climate adaptation;
4. The model addresses another major problem with climate adaptation: most solutions being advanced for dealing with SLR in urbanized waterfronts are far from consensual, whether because they demand hard land-use planning choices to be made, because they are not economically feasible, or simply because they are controversial. Also, one stakeholder's dream solution may be another one's worst nightmare (for instance, phased withdrawal or large seawalls). By emphasizing the importance of the Platform in establishing frank and open communication among actors, and allowing the timely debate of solution before they are enacted in the Document, our model allows tough solutions to be matured through debate before being implemented.
5. Implementing a proactive approach to planning requires the recognition that uncertainty and complexity are inherent to the planning process, as our model explicitly does. Planning for a specific goal or threshold can prove inadequate in case real trends fall outside the estimates, unless a certain degree of flexibility is preserved and instilled onto the adopted solutions.

Since most adaptive planning solutions tend to fall into the category of hard (and unpopular) decisions, which are precisely those that tend to get more readily removed from plans by decision-makers, they are also especially unsuited for the traditional planning style, which tends to follow closely the political cycles (Wilson 2007) and therefore neither have the time, nor the interest, of introducing these unpopular measures, except in a reactive stance to an already occurring phenomenon (such as the aftermath of a natural disaster).

Our model, falling well within the scope of the flexible, adaptive planning models, promotes pro-active stances, where future disruption is addressed in a timely fashion, by slowly circulating among the actors in the Platform before the tasks are finalized, while the overarching objectives and strategies of adaptation can be established as integral to the Plan for its earliest iteration. This would allow the solutions to be matured as a component of the Plan over a few political cycles, even if the specific tasks remain in discussion, therefore distributing the burden of "hard choices" over a large number of decision-makers and political cycles.

Although one can hardly manage for uncertainty, it is possible to manage for the risks that uncertainty may introduce to the plan's integrity. This can be achieved through thoughtful strategy and goal-setting, by allowing for ready and effective revision, complemented by a clear definition of the actions necessary to preclude failure or achieve improvements, and a constant updating of the planning framework with revision of the tasks' performance and possible revision of actions and objectives, within a stable and long-term strategy. This is a radical departure from the static planning framework of recent, where the "plan" as a product is the ultimate goal of the planning practice, regardless of how well it responds to the solicitations of the planning context itself.

4 CONCLUSIONS

Current planning structures tend to deal poorly with uncertainty and variability. This is especially evident in planning with SLR, where the level of uncertainty is vastly increased by an uncontrollable variable. In traditional planning structures, the typical revision occurs after a certain static scenario collapses, and therefore a new scenario for the end-result of the planning process is “required”. These are all “static” scenarios, which get redesigned over time in reaction to the plan’s underperformance. By then, typically a full revision of the Plan is required, and adaptation to changes to the planning context are slow and, typically, not very effective.

Our model builds on theories of flexible and agile project management and flexible, adaptive and collaborative planning to create an agile/pro-active planning framework, which may address more adequately the high level of uncertainty present in today’s planning contexts.

By taking uncertainty as a given, and not an unexpected event, the model accepts readily the need for speedy and easy adjustments according to early signs of underperformance, provided by indicators. The permanent monitoring of the plan’s implementation should track its performance in pursuing the strategy and objectives, and whether the selected actions and tasks are being successfully executed. The open channels of communication among experts, stakeholders and decision-makers would process the new information and produce or revise tasks and actions so as to allow the plan’s overall performance and strategies to remain valid over a changing planning context. By acting readily and pro-actively, the plan’s “trajectory” may be corrected early on, avoiding the collapse of the overarching objectives.

Our vision is therefore that planning should be inherently dynamic and pro-active, and that it should recognize the uncertainty of the planning context from the onset. This uncertainty should be dealt with by increasing the plan’s resilience, and this can be achieved by broadening the range of solutions by involving experts and local stakeholders in a constant strive to gather the latest, best, knowledge and making it readily available to decision-makers. Another aspect we highlight is the possibility of reserving some solutions “in the backburner”, as policies that may be incorporated at a later date or a given indicator crosses a certain threshold.

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ID 1610 | THE NEW "PLANNING AMNESTY" IN PORTUGAL: HOW FAR SHOULD PLANS ACCOMMODATE NONCOMPLIANT DEVELOPMENT?

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1 INTRODUCTION

In 2014, Portugal introduced legislation[1] imposing amendments on statutory plans to accommodate illegal structures "that are incompatible with land management instruments or land use restrictions" applied to productive units such as industrial, farming, waste management and quarries. The initial deadline for application was January 2016, but was extended until June 2017[2]. This amendment also introduced "subtle" changes, to include buildings in which construction had not been finished, and some types of warehouses. The pressure for a solution to illegal development arose from restrictions on real-estate transactions and conditions placed by the EU on eligibility for its funding mechanisms. Though not

[1] Decree-Law 165/2014, from November 5.
[2] Law 21/2016, from July 19.

intended as such, this new legislation has several similarities (but also important differences) to other planning amnesties implemented in other Mediterranean countries.

How far should plans accommodate noncompliant development? The object of the paper is to formulate a perspective on the new planning amnesty in Portugal and to elaborate on expected results, built on the experience of similar programs in other Mediterranean countries.

1.1 COMPARATIVE INSIGHT

In general, planning amnesties are “programs” or, in other words, “time-window” opportunities for private owners to formalize illegal building, installation, or uses that are not compatible with statutory plans. These amnesties have become “traditional” in some countries, e.g. in Turkey, where they have been granted 16

times since 1983 (Unsal, 2009), and in Italy, and repeatedly since 1985 (Zanfi, 2013). More recently, Greece implemented a similar program, but with temporary effects. In September 2009, a new law was adopted by the Greek Government to allow the legalization of “minor” alterations in buildings located in planned urban areas, provided they did not exceed the volume of the building, and the approved urban planning indexes in terms of height and construction area. It allowed, for example, the legalization of marquees and the closing of semi-open areas of buildings. With the same scope, Law no. 3843/2010 permitted the temporary legalization of such changes for a period of 40 years, upon presentation of a declaration. This was practically optional between 2010 and September 2011, and, since transactions and real estate mortgages with such changes were not prohibited, they had a reduced impact.

Law 4014/2011 made it compulsory to declare illegalities, major or minor, in planned or unplanned areas (excluding those located in protected areas such as public space, too close to roads or streets, forestry land, seashores, beaches, too close to coastlines or riverbeds, archeological or historic sites) (Lalenis, 2015). Small changes within the volume of buildings in planned areas continue to enjoy a period of immunity from enforcement actions for 40 years and the remainder for 30 years. Within this period, the local administration is supposed to implement the necessary regeneration and urban renewal plans. Simultaneously the law introduces a restriction on the transaction of illegal or semi-legal buildings requiring the presentation of an owner´s declaration and an up-to-date certificate from a private expert regarding the compatibility of the work with the approved project. The procedure has thus become more rigorous, but consequently, the transaction is based on more bureaucracy with higher costs (also for legal buildings). The Ministry of Environment has recently clarified this certificate is not required in the case of mortgages. By May 2013, 562,263 declarations had been submitted, despite that only 68.6% of these completed the process by paying the appropriate fees. For the period 2009-2013, the estimated revenue from the amnesty to the public asset is around € 1 billion. The total expected revenue resulting from the new Law no. 4178/2013 was about 5 billion euros. However, it is estimated that, by keeping these informal constructions out of the economic cycle, the annual GDP loss is about € 3 billion (Potsiou, 2015). Other South-eastern European countries have implemented similar policies: Montenegro, Albania, the former Yugoslavia Republic of Macedonia, Greece and Cyprus (Potsiou, 2014). All these provide some kind of “pardon” for illegal development.

But amnesties should not be viewed as the only option in dealing with non-compliant development. Other public policies have been designed to respond to non-compliant development in private property in South European countries, with different options in content and form. In Spain, the status of “similar to out-of-order” (assimilado a fuera de ordenación) provides a second type of permit for non-compliant buildings. It has a long background, coming from the 1965 Law of the Soil and was adopted by jurisprudence from the end of the 1980s, undergoing a gradual process of adjustment (Cortés Moreno, 2011; López Pérez, 2010) with significant changes in 2016. In more discretionary planning systems, as in the UK and Israel, there is no special legal framework to answer non-compliant development, but neither there is any restriction on selling illegal or semi-legal real estate. A reliable registry system and buyers’ demand on “legality” (more in the UK than Israel) seem to be enough to avoid major growth of an illegal development market. Portugal is included in the list of countries where real estate restrictions were implemented.

The Portuguese government has opted, until very recently, to ignore the existence of illegal development, except for the particular case of semi-informal settlements (called “loteamentos clandestinos”), for which a

special legal framework was designed since the 1970's[1]. However, the ongoing process for semi-informal settlements relates mostly to the provision and payment of urban infrastructures and not to buildings – after tenure regularization it still requires a second step of building legalization to the same standards as required in formal land. Despite the mature level of the planning system, national planning literature is short in addressing the issue of non-compliant development in private property. For political, social and economic reasons, planning enforcement is seen as a burden on public administration.

But illegal and noncompliant development is not an inconsiderable problem, especially regarding illegal housing in the district of Lisbon (Rolo, 2006; Silva & Farrall, 2016). Estimates point out to 158,000 illegal dwellings built between 1970-1981 and a total of 314,400 in the sum of 12 districts (Cardoso, 1983, p. 350). A more recent study shows that the phenomenon is not only from the past, and about 285.000 dwellings were built without a building permit between 1991-2011 (Calor, 2017). This number is similar to Andalusia Autonomic Community in Spain (about 300.000 dwellings) but lower than the Greek estimate (1 million buildings with different uses). The reason why the discussion was been absent from planning agenda in Portugal is probably related to the social inconsideration of building illegalities, the absence of government recognition of the problem and the lack of legal framework.

In amnesties, design "details" do make a difference. There are two major differences to other planning amnesties (i.e. Greece, Italy and Turkey): (i) the Portuguese amnesty applies only to a selective use of buildings and (ii) it allows/promotes the formalization of buildings and extensions in areas where development restrictions were before more strict: natural parks, coastal areas, environmental and agriculture reserves. It is worth mentioning that it only applies to private property, not to squatting settlements or semi-informal ones.

2 THE PORTUGUESE PLANNING AMENSTY

2.1 LEGALIZATION BACKGROUND

Ad hoc legalization has been the main way of dealing with illegal development in Portugal and has gained increasing relevance due to the restrictions on selling implemented in 1999[2]. The number of legalization submissions has continuously increased since then, becoming a "burden" in land development (Calor & Pereira, 2015). In regular mode, legalization (or retrospective permits, as they are called in Britain) is theoretically very strict and depends on compliance with plans at the time of approval. In municipalities, bending planning rules to allow legalization is a common and accepted way to avoid the personal and political costs of demolition or imposing changes to buildings. Despite its significance, Portuguese legislation only incorporated "legalization" in 2014 (article 102-A of the Decree-Law no. 555/99, of December 16). In the same year, the new "selective" planning amnesty for economic activities was implemented (Decree-Law no. 165/2014, de November - RERAE[3]). Oliveira & Lopes (2016) call the sum of these pieces of legislation (together with the old law for regularization of semi-formal settlements) the new "legalization policy".

Exceptions for non-compliant development of economic activity were previously set in Portuguese law before 2014, but because they were in separate pieces of law (one for each of the economic activities[4]) they had less visibility. Their impact was reduced because plan amendments were optional, and in fact hardly any occurred. The reason why the amnesty program was selective to economic activities (and not general to other buildings use, as in other countries) is not entirely clear and it poses some obvious questions of proportionality, social-fairness and the point of having a binding planning system. For one, housing illegalities (especially extensions) are far more frequent and, second, no exception is made in law for those built out of necessity or even for those illegally built before plans implementation (Calor, 2013). National economic growth, inherent in economic activity, may be of public interest, but non-compliant buildings for other uses do not have a compatible solution.

[1] Decree-Law no. 804/76 of November 6 and Law no. 91/95, of September 2.
[2] Decree-Law no. 281/99, of July 26.

[3] RERAE is the abbreviation to "Regime Extraordinário de Regularização das Atividades Económicas".
[4] For example, Article 69 of Decree-Law no. 209/2008 (Legal framework of the Exercise of Industrial Activity)

From a social perspective, amnesties give advantages to developers who, at first glance, did not care to follow the rules. In an opinion article, Schmidt (2014) wonders "what message this piece of law transmits to the many compliant entrepreneurs who put significant effort in fulfilling environmental and public health law? That crime pays? As is evident, it is also a problem of disloyalty provoked by the state." The economic boost can be seen as public interest (job creation or maintenance of the existing ones and seizing the opportunity of economy growth to access European Funds) but may be regarded as too "selective". Regularization of development driven by a developer's profit (not necessity) may aggravate the already high mistrust of the Portuguese legal and planning system.

2.2 AMNESTY TIMMING AND PROCESS

The time-window of RERAE was originally scheduled to finish by January 2, 2016. However, Law no. 21/2016, of July 19 (extemporaneously) extends its deadline between that date and July 24 of 2017. Although not mentioned in the preamble, this law also extends the scope of situations and activities that can be regularized. Since July 19, RERAE can also be applied to the "regularization" of buildings which have not been started, have started and then ceased, or have been suspended for more than one year, provided there were some kind of building or physical structures (whether started or finished). Besides industrial, farming, waste management and quarries, it now also allows the regularization of "establishments and farms intended to support agricultural activity, agriculture, horticulture, fruit growing, forestry and beekeeping, such as warehouses, outbuildings and cold-storage plants".

The process of application foresees the need to obtain, in advance, a declaration of municipal interest issued by the municipality and a study of economic viability of the company. The owner should submit the application to the responsible body (different, according to the activity[1]) and pay a fee (variable accordingly to administration body and municipalities). After acceptance of initial documents, it is subject to evaluation by a multilevel Government Commission, and a decision is made during a "council meeting" with representatives of all bodies with jurisdiction over the land or activity. Accordingly to CCDR representatives, very few submissions have been denied. If operating conditions are considered adequate, a two-year permit is issued. Municipalities are then required to promote an "automatic" amendment to general master plans within that period. Regular plan amendments are usually long, highly bureaucratic and expensive. It is still uncertain and unclear how the "automatic" amendment process will be undertaken and the costs involved. Nothing being said, it is likely that they will be mostly, if not entirely, supported by municipalities.

2.3 AMNESTY IMPACT

The reach of the amnesty can, somehow, be measured by the number of submissions. As there was no previous published data, we asked the coordinating body (CCDR[2]) for quantitative data that would allow a general perspective. In this paper, we provide data from 2 out of the 5 regions in Portugal: (i) North and (ii) Lisbon & Tejo Valley Region. These are expected to be the regions with more applications (having more dynamic economic activity). A total of 687 applications were submitted in both regions until March and April 2007.

[1] IAPMEI for industries Type 1 and 2 ("heavy" industry); Municipalities for industry Type 3 ("light" industry); DRAP for farming; CCDR for waste management and; DGEG for quarries. It is unclear which body is responsible for agriculture structures.
[2] CCCR is the abbreviation for Comissão de Coordenação e Desenvolvimento Regional.

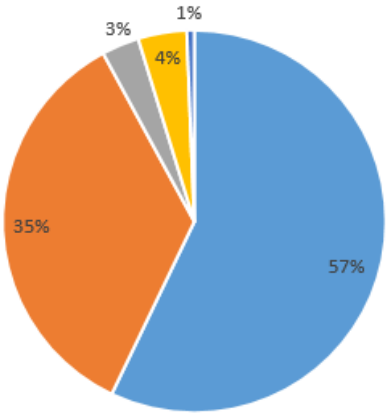

Figure 1 – Number of applications under RERAE in North region, by sector submitted before March 6, 2017. Source: CCDR-North

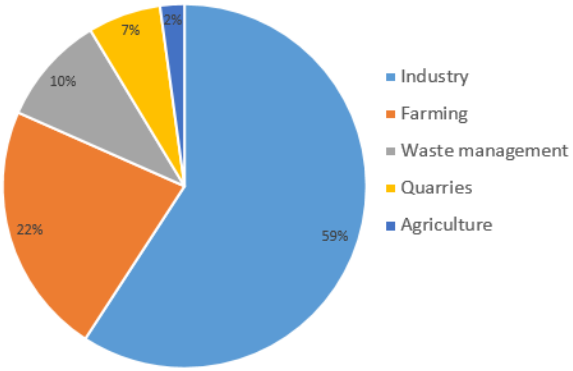

Figure 2 – Number of applications under RERAE in Lisbon & Tejo Valley Region, by sector submitted before April 18, 2017. Source: CCDR-LVT

Figures 1 and 2 show the activities with most impact, industry representing more than half the applications (184 in North Region and 219 in Lisbon & Tejo Valley Region) and animal farming is the second (111 in North region and 83 in Lisbon & Tejo Valley Region). Waste management and quarries are less representative. Agriculture warehouses have only ten submissions, which is explained by the uncertainty about which body is responsible for regularizing this type of building. Therefore, the extension of the "scope" of RERAE by Law No. 21/2016, of July 19 did not have major effect yet.

Figures 3 and 4 show results by sector and municipality. It indicates that in both regions there are significant differences among municipalities, and a few municipalities have a greater share of the total submissions. Vila Nova de Gaia (36) Sintra (72) and Ourém (60) have numbers much higher than other municipalities, which all set under 30. More than half of the municipalities have below five submissions and 54 municipalities (not represented in the chart) have no submissions. Difference in numbers does not seem related to municipality size, population or other geographic or social factor.

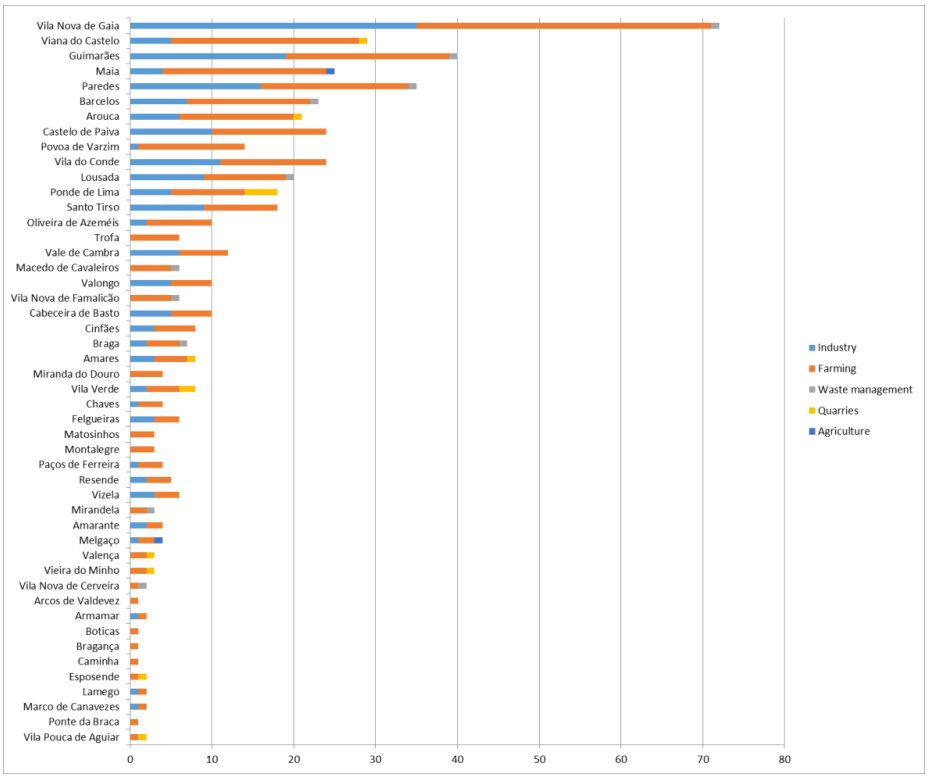

Figure 3 – Applications under RERAE in North region, by sector and municipality submitted before March 6, 2017. Source: CCDR-North

In a future investigation it would be interesting to understand if these numbers are a result of high numbers of illegalities or, as we believe might be more accurate, a consequence of a more active approach from municipalities (in creating expectations and incentivizing owners into submitting an application).

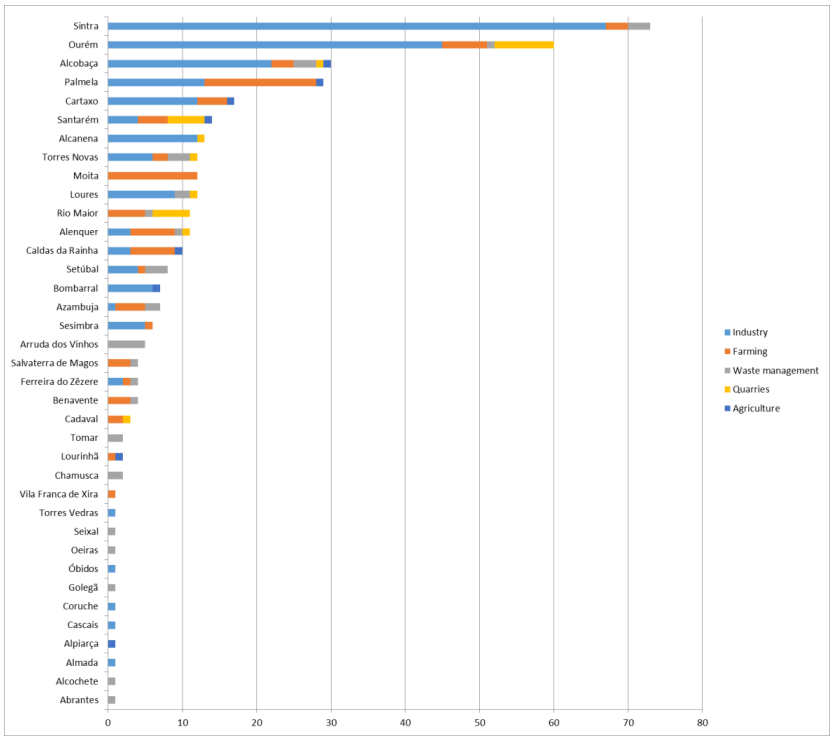

Figure 4 - Applications under RERAE in Lisbon & Tejo Valley Region, by sector and municipality submitted before April 18, 2017. Source: CCDR-LVT

2.4 EXPECTED RESULTS

The newness of the diploma and the embryonic state of progress of the regularization process, have not allowed them to achieve their full potential; but, considering its expected length, we believe it will not reach owners' expectations. Affordability, and short term results are considered by Potsiou (2014) as key to achieving positive results, and these effects are not expected from the Portuguese amnesty.

The legislator's choice to impose the change on the planning instruments seems inconsistent with the proposed objectives. By demanding that final regularization be made through conventional legalization, and making it dependent on the change to plans, the process does not meet the interests of timing and costs for the entrepreneurs. On the other hand, the costs of plan amendments will be up to the municipalities.

3 CONCLUSIONS

Planning amnesties are not new in South European countries, having been implemented in different stages and forms. The Portuguese amnesty is a "selective" one because it relates only to certain types of economic activities; therefore, the number of submissions cannot be compared to broader planning amnesties in other countries. Quantitative data from the North Region and Lisbon & Tejo Valley Region show that the numbers are not very significant. Only in a few municipalities have "visible" numbers, being industry the activity with the biggest share.

Plan amendment costs are relevant but have not been given much consideration, which will very likely delay municipalities making the "punctual" amendments that are required to complete the process. Mandatory plan amendments require a long time and it is unlikely that municipalities (especially small

ones) will have the human and financial resources. Economic interests behind planning prevail over spatial planning principles and, as in all planning amnesties of this nature, there is a sense of injustice to compliant individuals.

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ID 1662 | GROUP DECISION MAKING

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1 INTRODUCTION

How to take into account various players' values? How to balance interests of various parties engaged in city development? How to divide resources between various groups? How to prepare city strategies so that no one feels omitted? Urban planners face these questions all the time during their work. It is a challenge to meet the needs of several groups: developers, local authorities, lobbyists, environmental activists, and – last but not least - citizens. These are just few groups whose interests shall be considered and taken into account while preparing new plans and strategies. The purpose of the paper is to encourage a discussion on possible solutions and answers to the questions listed above.

An overall description of the Polish spatial planning law is followed by presentation of methods derived from operational research as it seems that multi-criteria decision analysis (MCDA) might serve urban planners with several promising tools. Methods such as Analytic Hierarchy Process or PROMETHEE Group Decision Support System could aid the planning process at local or regional level. The paper offers a brief description of these methods and discusses examples of how to use them in everyday work of urban planners in order to make the policy making process more transparent and objective.

2 SPATIAL PLANNING SYSTEM IN POLAND

To describe the spatial planning law in Poland, an overall picture of the country's territorial division is necessary. According to the Constitution, the territorial system of the Republic of Poland ensures the decentralization of public power. The institutions of the state have competence at one of the four levels of territorial division: central (country), regional (voivodeship), supra-local (poviat), and local (commune). The inhabitants of communes form a self-governing community in accordance with the law. The local governments participate in the exercise of public power. A substantial part of public duties statutorily lies in the jurisdiction of the communes, which they perform in their own names and under their own responsibilities. There are several acts and regulations which constitute the Polish planning law. The Act on Spatial Planning and Management issued on 27th March 2003 states that the spatial planning system shall be managed adequately to the territorial division of the country at all governmental levels. The basic instrument of spatial planning in Poland is the local spatial management plan. Its regulations are binding and serve as the basis for implementing planning decisions. An attention should be paid to a relatively large number of bodies, institutions, and groups involved in the decision making process and the fact that the interests of these parties may sometimes be in conflict. Therefore, developing a new approach which would take into account all important challenges of urban policy making seems to be unavoidable in the next years. Following factors seem to be crucial (Ossowicz, 2003):

- the essence of city governance: definitions (city management, city governance, spatial policy, urban policy, etc.), features of governing, city governance in the light of organization and management theory, uncertainty and risk in spatial planning;
- local government: its role and tasks, structure, features, and management instruments;
- urban planning: actors, features and attributes of the local level spatial planning, models of integrated planning in cities, models of strategic planning (including models taking into account the specificities of public organizations management);
- city finances;
- controlling and monitoring.

The participation of local society is described in the Spatial Planning and Land Development Act from 2003 in the article 11 and 17. Both articles of the Act allow the local society to submit remarks to planning documents and to take part in public discussions on them. However, these rights are not always executed by the local community, as "they do not believe that it can change anything in their life or in the local unit" (Feltynowski, 2015). As OECD (2016) notices, indicators of social capital and social trust are exceptionally

low in Poland; however, a culture of public engagement in the planning process is growing. According to the Spatial Planning and Development Act from 2003, public participation has three goals:

- to inform the society about making up of new plans,
- to receive feedback from actors involved in the planning process,
- to accept (or reject) the resulting feedback.

In general, two main steps can be distinguished; firstly, society is offered proposed changes and may submit their observations or hints and secondly, the local plan is presented and undergoes public discussion. The legal aspect of issuing a plan, including public input and engagement, is checked by the regional authority. Nevertheless, public engagement is perceived to be rather limited, "formal and only protecting interests of inhabitants and owners, while failing to encourage municipalities to offer alternative development solutions" (OECD, 2016).

Consequently, large number of players involved in the decision making process and policy formulation requires new approach and new methods in order to ensure fair participation of all stakeholders. Not only tools supporting coordinated and transparent process shall be developed, but also several improvement within legal frameworks shall be carried out; otherwise, the planning process will remain limited and archaic.

3 METHODS

There are several methods that could aid the spatial planning process and structure decision making problems. It seems that urban planners may look for solutions among methods derived from other disciplines. MCDA (multi-criteria decision analysis) or MCDM (multi-criteria decision making) is a sub-discipline of operational research and was developed in 1960s in the business sector. MCDA is used in the situation of having multiple, usually conflicting, criteria. Such situations we approach in everyday life, e.g. when choosing a car we take into account price, size, fuel consumption, safety, comfort, etc. Instead of following the intuition, the decision making process could be made more rational with use of the MCDA methods. The development of MCDA is related to the computer development, which enabled to decision makers to conduct complex analyses of multi-criteria problems. MCDA addresses mainly discrete ill-defined problems (no optimal solution) with not very large sets of alternatives. It can be used to conduct following operations: choice, ranking, or sorting (Xu, Yang 2001). Therefore, it can be used to choose (new location for an investment, team of workers, investment plan), rank (cities, regions, universities, students), or sort (research projects, cities).

Value function can be used to derive preferences for the alternatives. To give an insight into these methods, the Analytic Hierarchy Process (AHP) can be briefly described; the method is based on mathematics and psychology and it is widely used to help decision-makers in the fields of business, transportation, or education. The most important feature is the group decision making, where each decision-maker can have different priorities and values. The problem is decomposed into sub-problems. The pairwise comparison of various aspects of the problem and pairwise comparison of criteria are conducted independently. The decision-makers can either provide concrete data or just use their individual and subjective judgement. Those evaluations are computed in order to obtain a comprehensive evaluation of the decision problem. The capability to compare incommensurable elements distinguishes the AHP from other MCDA methods (Saaty, Peniwati 2008).

The second group (methods based on outranking relations) is widely known mostly for two approaches, i.e. ELECTRE and PROMETHEE. Outranking methods were first developed in France in the late sixties following difficulties experienced with the value function approach in dealing with practical problems. As in the value function approach, outranking methods build a preference relation among alternatives evaluated on several criteria. It is a binary relation S on the set X of alternatives such that xSy if there are enough arguments to declare that x is at least as good as y while there is no essential reason to refute that statement. In most outranking methods the outranking relation is built through a series of pairwise comparisons of the alternatives (Bouyssou 2001). ELECTRE I is the first outranking method and it gives a good notion of the ideas behind outranking. Other outranking methods are more advanced as they accept differences in the strength of the decision maker's preferences as well as the possibility of the decision maker being indifferent with respect to two alternatives (de Boer et al. 1998). Another outranking method is

PROMETHEE (and its descriptive complement geometrical analysis for interactive aid which is better known as GAIA). The fields of application are similar as in the aforementioned AHP technique. The main advantage of the PROMETHEE method is the clear reasoning which helps decision makers build well-structured framework for the decision problem. It is useful for solving complex problems with several criteria that need to be evaluated. The method could be applied to: choosing the best location for an investment, ranking action projects or investment plans, allocating resources. The information requested by PROMETHEE and GAIA is particularly clear and easy to define for both decision makers and analysts. It is based on a preference function associated to each criterion as well as weights describing their relative importance. Usually there is no alternative optimising all the criteria at the same time, therefore a compromise solution should be selected.

The algorithms, most common uses, and possible extensions of AHP and PROMETHEE methods are well-described in literature. The algorithm of PROMETHEE is following:

Step 1: Using the data contained in the evaluation matrix, the alternatives are compared pairwise with respect to every single criterion. The results are then calculated and expressed by the preference functions, which are calculated for each pair of options and can range from 0 to 1, where 0 means that there is no difference between the pair of options (indifference), 1 indicates a strong preference, and value between 0 and 1 indicates weak preference:

$$Pj(a, b) = Fj\,[dj(a, b)]\ \forall a, b \in A$$
$$\text{where:}$$
$$dj(a, b) = gj(a) - gj(b)$$

For criteria to be minimised, the preference function should be reversed or alternatively given by:

$$Pj(a, b) = Fj\,[-dj(a, b)]$$

In order to facilitate the identification of preferences six types of particular preference functions have been proposed (Brans and Mareschal, 2005). Additionally, such parameters as threshold of indifference or threshold of strict preference can be used.

Step 2: Aggregated (global) preference degree for each pair of alternatives on each criteria is calculated:

$$\pi(a,b) = \sum_{k=1}^{q} P_k(a,b) \cdot w_k$$

Step 3: Positive and negative flow scores are calculated:

$$\phi^+(a) = \frac{1}{n-1} \sum_{x \in A} \pi(a,x)$$
$$\phi^-(a) = \frac{1}{n-1} \sum_{x \in A} \pi(x,a)$$

Step 4: Net flow score is calculated in order to obtain a complete ranking of alternatives:

$$\phi(a) = \phi^+(a) - \phi^-(a)$$

Step 5: Group decision making. The global evaluation and GAIA analysis for group decision-making are carried out so that all the decision makers are advised on the potential conflicts. The last step of the process is summarized as follows:

$$P_i(a,b) = F_i[\phi_i(a) - \phi_i(b)] \quad i = 1, \ldots, m$$

where $P_i(a,b)$ denotes the preference of alternative a to alternative b for DMi.

$$\pi_{gdss}(a,b) = \sum_{i=1}^{m} P_i(a,b) w_i$$

where **Π**gdss(a,b) is defined as the weighted sum of Pi(a,b) for all decision makers with wi as the weight for DMi. The PROMETHEE partial and complete rankings are obtained from the following equations:

$$\phi^{+}{}_{gdss}(a) = \frac{1}{m-1} \sum_{x \in A} \pi_{gdss}(a,x) \text{ and } \phi^{-}{}_{gdss}(a) = \frac{1}{m-1} \sum_{x \in A} \pi_{gdss}(x,a)$$

$$\phi_{gdss}(a) = \phi_{gdss}{}^{+}(a) - \phi_{gdss}{}^{-}(a)$$

Therefore, PROMETHEE GDSS can capture multiple decision makers' beliefs, calculate them, and provide better insight into the decision making problem (Tavana et al, 2013). The second method, namely Group AHP, serves the same purpose; however it algorithm is different (Saaty and Shang, 2007; Saaty and Peniwati 2008):

Step 1: Creating a pairwise comparison matrix A. The matrix A is a m×m real matrix, where m is the number of evaluation criteria considered.

Step 2: The normalized pairwise comparison matrix Anorm is computed:

$$\overline{a}_{jk} = \frac{a_{jk}}{\sum_{l=1}^{m} a_{lk}}.$$

Step 3: The criteria weight vector w (that is an m-dimensional column vector) is built by averaging the entries on each row of Anorm

$$w_j = \frac{\sum_{l=1}^{m} \overline{a}_{jl}}{m}.$$

Step 4: Computing the matrix of option scores:

The matrix of option scores is a n×m real matrix S. Each entry sij of S represents the score of the ith option with respect to the jth criterion. In order to derive such scores, a pairwise comparison matrix B is first built for each of the m criteria, j=1,...,m. The matrix B is a n×n real matrix, where n is the number of options evaluated. Each entry of the matrix B represents the evaluation of the ith option compared to the hth option with respect to the jth criterion. Second, the AHP applies to each matrix B the same two-step procedure described for the pairwise comparison matrix A, i.e. it divides each entry by the sum of the entries in the same column, and then it averages the entries on each row, thus obtaining the score vectors s(j), j=1,...,m. The vector s(j) contains the scores of the evaluated options with respect to the jth criterion. Finally, the score matrix S is obtained:

$$\mathbf{S} = [\, \mathbf{s}^{(1)} \dots \mathbf{s}^{(m)} \,]$$

Step 5: Ranking the options. Once the weight vector w and the score matrix S have been computed, the AHP obtains a vector v of global scores by multiplying S and w, i.e.: v = S · w

Step 6: Checking the consistency index. Consistency Index (CI) is obtained by first computing the scalar x as the average of the elements of the vector whose jth element is the ratio of the jth element of the vector A·w to the corresponding element of the vector w.

$$CI = \frac{x - m}{m - 1}$$

Step 6: Group decision making. We can consider two issues in group decision making. The first is how to aggregate individual judgments, and the second is how to construct a group choice from individual choices. For the purpose of the study presented in the next chapter of this paper, weighted geometric mean is used to conduct aggregation of individual judgements (AIJ):

$$c_{ij} = \exp \frac{\sum_{k=1}^{N} w_k \ln a_{ij(k)}}{\sum_{k=1}^{N} w_k}$$

Both methods can be used while solving decision problems with several alternatives evaluated on several criteria by several decision makers. An example of how to use Group AHP for the purpose of spatial planning is discussed in the next chapter.

4 EXAMPLE – CHOOSING A SITE LOCATION

In Poland, participatory processes have recently been applied more frequently; however, their performance is still low in terms of engaging key actors and sharing decision-making power with them (Cent et al, 2014). While making important decisions related to formulation of city policies, several bodies and parties are involved in the process. The possibility to take into account all players' needs and objectives is a key challenge for city authorities. In this chapter, a theoretical example use of Group AHP method is offered.

Let us assume that city authorities are facing a problem where to locate a new bridge. The actors involved in the process might be:

- Department of Transportation – a body within a municipality which is interested in improving transportation system and road network while taking into account limited budget of the city,
- Department of Environment – a body which main focus is on environmental protection,
- Urban Development Department – a body consisting of urban planners, who try to balance costs of investments with their functionality and aesthetical function in order to improve citizens quality of life.

All these actors take into account the same criteria, such as: cost of building, impact on transportation network, design and aesthetics, impact on environment. Of course, each decision maker can have different from others values and preferences on the criteria and available alternatives. By conducting pairwise comparison of the adopted criteria, we can gain an insight into the opinion of each decision maker. Furthermore, consolidation of decision makers' preferences allows for numerical and transparent presentation of the decision making process. Results of pairwise comparison of criteria by each decision maker and consolidated results are presented in the Table 1. All calculation were conducted using MS Excel.

	Department of Transportation	Department of Environment	Urban Development Department	Consolidated (according to DMs weights)
Cost of building	26%	10%	7%	**13,6%**
Impact on transportation network	56%	26%	48%	**48,5%**
Design and aesthetics	6%	4%	26%	**11,1%**
Impact on environment	12%	60%	19%	**26,9%**
weights	*0,3*	*0,3*	*0,4*	*1*

Table 1. Consolidated decision matrix for criteria

Similarly, decision makers can conduct pairwise comparison of alternatives (instead of criteria). Partial ranking of bridges can be also consolidated into one global ranking. The results of this calculation are presented in the Table 2.

	Department of Transportation	Department of Environment	Urban Development Department	Consolidated (according to DMs weights)
Bridge A	28%	24%	10%	**18,9%**
Bridge B	65%	67%	64%	**67,8%**
Bridge C	7%	9%	26%	**13,3%**
weights	*0,3*	*0,3*	*0,4*	*1*

Table 2. Consolidated decision matrix for alternatives

Furthermore, the Group AHP method allows for calculating consistency of decision makers. In the first case (evaluation of criteria) consensus equals 61,8%, while in the second case (evaluation of alternatives) consensus reached 90,3%. Results obtained within this case study can be further used to obtain global ranking: to combine consolidated alternatives with consolidated criteria, or – with use of other methods – to provide other rankings with additional input provided by experts. The case study offered above is an example of how to use Group AHP for providing better insight into decision making process, but PROMETHEE GDSS could be also used for this purpose.

5 CONCLUSIONS

The paper offers an example of bringing together group decision support systems and urban management in order to make the decision making process within spatial planning more rational, transparent, and inclusive. Large number of players involved in planning procedure demands comprehensive and fair methods which can ensure that each player's voice is taken into account. Consequently, looking for solutions outside the discipline of spatial planning seems to be unavoidable. Methods discussed in this paper can be used to better structure the decision problem and to obtain ranking of alternatives, while incorporating evaluations provided by various actors, whose interests may sometimes stay in conflict. Numerical approach to the planning procedure seems to be an interesting solution, which shall be further developed.

Moreover, observations of planning practices and literature review suggest that comprehensive and transparent grasp of various stakeholders' views and opinion is rarely happening. Shortcomings of the current legal framework and planning reality in Poland discourage some members of local community to participate in the planning process. Therefore, establishing new approach supported by innovative methods ensuring fair treatment might in the next years an interesting challenge for urban planners and researchers.

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ID 1663 | A SOCIO-JURIDICAL CRITICISM TO URBANISTIC LAW FOR A NEW URBAN STRATEGY IN NATAL/RN/BRAZIL

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1 INTRODUCTION

The principle of the dignity of the human person is a moral, social and juridical value inherent in the person, that is, every human being is endowed with this precept, and this is the highest principle of the democratic state of law.

While it is a right the idea of dignity in a collective dimension concerns tolerability per temporal, spatial and cultural circumstances. Thus, the city must be the place of the exercise of the dignity of the human person.

Based on this idea and based on a dialectical perspective, the research proposes to discuss the effectiveness - notably ineffectiveness - of the norms of urban law, through the confrontation between the Federal Constitution, the City Statute, the Metropolis Statute, and the Municipal Master Plan in the State of Rio Grande do Norte located in Brazil.

For purposes of this work, effectiveness is understood as the conformity of the actual situation to the legal situation granted or determined by the standard. In this sense, the first stage of the work consists in the revision of the literature focused on the legislation and legal instruments of urban law that regulate the urban space in the municipality of Natal.

Next, we intend to criticize the illusion of urban law and the predominantly positivist conception that predominates both in the elaboration of legislation in Natal-RN and in the application of such norms. In addition, to investigate the causes of noncompliance with norms of urban law, it is necessary to study the city and society in which we live, the relation of identification and belonging of the individual with the city in which he lives, what mechanisms of participation Effectiveness of such individuals. In other words, we must understand in depth the ideas of democracy and justice, from the precepts of freedom and equality to the understanding of our reality. In this sense, the objective is to evaluate if the usual means and procedures used in the city of Natal-RN in the legitimization of public decisions in the sphere of urban policies, are backed by social legitimacy, once we experience the daily practice of civil disobedience in relation to the laws in the coexistence of the legal city and the illegal city.

Thus, it is essential to discuss the right to the city from the study of popular participation. Therefore, it is urgent to rethink conceptually law as a science, specifically the role of urban law and urban plans in the current Brazilian scenario, and the necessary change from its normative-rationalist character to a more pluralistic view that the promotion of less unequal social and territorial justice.

2 THE RELATIONSHIP BETWEEN URBAN STRATEGY AND POPULAR PARTICIPATION

Thinking about a new urban strategy also means rethinking political participation and social control in city management. In other words, the understanding of the city can only be reached from the unit of two levels of analysis: that of capital and that of society where the individual is first a citizen with all the rights that the term implies (Carlos, 2015). It is also important to emphasize here the original relationship between the words city and citizen, which appears long before the established legal provisions. According to the etymology of the words, both derive from civilians. In this way, city (civitas) is a political community whose participants, the citizens, organize and govern; And citizen is the individual who enjoys the right of city, that is, is the subject that belongs to a certain place.

Here it is important to mention the theoretical contribution of Ellen Wood (2011) in her work "Democracy against capitalism: the renewal of historical materialism", where the author warns against the dangers of the uncritical use of the terms citizenship and civil society. For democracy to recover its true meaning of government by the people or the people, it is necessary to radically transform capitalism, an economic and social system that gradually removes several spheres of social life from popular and democratic control. He explains that since capitalism generates, among other things, new forms of domination and coercion beyond the reach of the instruments created to control traditional forms of political power, it also reduces the emphasis on citizenship and the achievement of democratic accountability (Wood, 2011)

According to our Federal Constitution, urban policy must necessarily be a product of popular participation. But the issue is not just legal. Brazil has no tradition of effective instruments of participation or sharing in solving problems in the public sphere. It should be noted that the constitutional command of guaranteeing popular participation and the State's duty to carry it out is not sufficient. Another element must be added: the political and programmatic commitment of the government, which commands the different portions of the State.

Regarding the specific social control for urban policies, it is basically that popular participation permeates the state's performance in the management of the city since the 1970s (Ataíde, 2015). Currently the social control in the municipal scope in the current context of the Urban Planning and Management System of the Municipality is provided for in article 93, paragraphs 1 and 2 of Complementary Law No. 082/07. The Council of the City of Natal - CONCIDADE is the central articulator of the sectoral councils (Municipal Council of Urban Planning and Environment - CONPLAM, Municipal Transit and Urban Transport Council - CMTU, Municipal Council of Housing of Social Interest - CONHABINS and Municipal Council of Basic Sanitation - CONSAB) and counts on the popular participation obeying the criterion of territorial and sectorial representation, being composed by fifty two members.

It appears that the existing councils are still often based on the classic idea of social control, consolidated until the beginning of the country's re-democratization as a set of methods conducted by the State with the purpose of establishing the social order and the purpose of disciplining individuals. In other words, still far from a dialogical relationship between the State and Society, which allows the broad participation of the organized sectors in the formulation, monitoring and verification of policies, at a more general level to the plans, programs, and projects in their different stages of development. Implementation, including the allocation of resources.

It is believed that the essence of social participation is embodied in the universalization of social rights, in the expansion of the concept of citizenship and in a new understanding of the role and character of the State, understood as the arena of political conflicts where different groups of interests vie for space and meeting their demands, from a public debate.

For example, in all the meetings that participated, the bills were brought ready for the approval of the council, without the least concern for popular participation in the various instances of the process that go from the discussion to the formulation and implementation of the public policies presented. That is, in the current scenario, even with the existence of a theoretically democratic and representative model, one must question the legitimacy of urban policies and programs.

It is well known that Brazil's problem is not a lack of law or regulation. The denial of the right to the city in Natal / RN (as elsewhere) is expressed in land irregularity, housing shortage and inadequate housing,

precariousness and deficiency of environmental sanitation, low mobility and quality of collective transportation and degradation Environmental (Maricato, 1996). At the same time, wealthier elites and layers continue to accumulate more and may enjoy a pattern of exaggerated luxury consumption (Harvey, 2009).

In the words of Professor Ermínia Maricato (1996), it is exactly in the context of this contradiction expressed in urban segregation that violence explodes and the power of organized crime grows in the city. The hegemonic paradigms of urban planning and urban planning have revealed their limits and are failing to respond to the contemporary problems of large cities.

This idea is based on Habermas's theory (2001), it is believed that the list of problems that currently imposes must be thought of in a political agenda capable of giving the individual confidence in participating in the actions of the state and provoking The transformation of society. The diagnosis of social conflicts becomes a series of political challenges only when the egalitarian institutions of rational law are connected to an important premise, namely, the admission that the citizens of a democratic collectivity can configure their social and Can develop the necessary action for the intervention.

It is often verified that the Administration is not in favor of the participation, even in folders that historically adopt models in "democratic" thesis. Take, for example, a public hearing. In this the citizens can expose their ideas in person, by dialoguing with a public manager democratically elected or with those responsible for conducting the public policies indicated by him or under his hierarchical control. In concrete terms, what is perceived is that there is no complementarity between the ways of participating. There is no dialogue for the construction of concrete proposals and projects. What we have are spaces where the manager publishes ideas previously constructed without the popular participation and the audiences serve only to give a certain appearance of popular legitimacy.

From the moment that it is considered that participation, as a fundamental right, would be based on the popular sovereignty already emphasizes a visibly political aspect of the administrative participation. In this way the participation should be effective, with real possibility of intervention in the decisions of the public power and in the directions of the society in which the citizen is inserted.

For Habermas (2001) the legal concept of self-legislation must gain a political dimension and be broadened in terms of the concept of a society that acts upon itself in a democratic way. Only in this way can one read in the existing Constitutions the project of implementing a just and well-ordered society.

We understand that in order to overcome certain occult forces, or at least that is how they present themselves, such as financial capital, political oligarchies and real estate speculation, we must renegotiate the relationship between the State and society as a way to avoid mitigating decision-making and participation spaces Popular, as a means of curbing legislative authoritarianism and thus trying to save what remains of a "democracy" (if one can use that term after our theoretical study and the clash with the reality of the motherland).

From this perspective, from the lessons of Lefebvre and the idea of popular participation as a corollary of democracy, we must think of a new urban strategy where the right to the city manifests itself as a superior form of rights: the right to full liberty, individualization in socialization, Habitat, and habitation, as well as the right to work (the participant activity) and the right to ownership (other than the right to property). However, for urban society to represent social emancipation, it is necessary to renew critical theory and to overcome the limits imposed by urban law.

3 TO RE-THINK THE URBAN LAW

The present stage of evolution of urban society, characterized by complexity, seems to threaten the consistency and coherence of law. In Brazil, the distance between constitutional idealities and social realities is indicative of this diagnosis. Official law, to maintain its coherence and consistency, in the face of what is traditionally understood as deviation, dysfunction, or social contradiction, ends up producing its own operational continuity and, therefore, distancing itself from the society that legitimizes it.

Given this context of ineffectiveness of legal monism, legal pluralism presents itself as an alternative capable of representing the opening of the legal system before the society that surrounds it, increasing its effectiveness. In other words, it is no use concentrating all efforts for the legal city if the illegal cities and the irregular cities where individuals live, not less citizens or subject human beings coexist in the same space and time.

At this point, the contribution of Boaventura de Souza Santos in the works "Renewing critical theory and reinventing social emancipation" and "The criticism of indolent reason: against the waste of experience", which affirms that the final crisis of modernity is more visible As an epistemological crisis (a crisis of modern science) than as a societal crisis (a crisis of the capitalist world).

For the author, modernity collapsed as an epistemological and cultural project (Santos, 2011), which opens a wide range of future possibilities for society, one of them being a future non-capitalist and socialist eco (The postmodern opposition).

It is believed in the reflection on the epistemology of a disciplinary field of human knowledge that we can unravel its limits, pose new questions, and overcome old obstacles. In the case of the legal field, it is necessary to realign its praxis with the praxis of academic research, which means to return to the legal world the primacy of rationalist doubt and critical historical configuration.

In the words of Boaventura de Souza Santos, the emancipatory scientific knowledge of law aims to discover, invent, and promote the progressive alternatives that social transformation may require. It is an intellectual utopia that makes possible a political utopia (Santos, 2011).

Thinking about the right to the city implies thinking about Urban Law, as well as the instruments and structure that can perform this task, which in turn refers us to the debate on public policies and social policies, as well as a global analysis of the Democratic State of Law itself. At this point are the theories of Henry Lefebvre with his critique of knowledge and theories of Boaventura de Sousa Santos in the perspective of an ecology of knowledge for social transformation.

As opposed to the natural environment, the cities, in which most of the contemporary population lives, constitute the built heritage. In this sense, we can define urbanistic law as the branch of law that regulates the production of the built environment. Specifically, about its installment, occupation and use.

The definition of these functions in contemporary cities requires adequate planning in the sense of separating and integrating the different uses and investments to be made by the public and private sectors. In addition, increasingly frequently, the production of the built environment must consider the need to preserve environmentally sensitive areas located within the urban perimeter of cities.

In this sense, the urban master plans stand out as an instrument of the municipal planning process aimed at the integrated achievement of objectives in the physical, economic, social, and administrative fields. Alongside this function, after the 1988 Constitution, the master plan becomes a basic instrument of municipal urban policy with a view to the full development of the city's functions. But in reality, the state never stopped the monopoly of law, and it is important to recognize the sociological existence of a constellation of rights and its rejection by the political order. In addition, it is essential to understand that law has contributed decisively to the dichotomy of the state / civil society that hides the nature of power relations in society (Santos, 2011).

It is well known that one does not change the world and urbanism at once, but using the lessons of Boaventura de Souza Santos it is important to do two things: to work within the conventional university and to create parallel institutions. For a long time, we will have to act like this. This is characteristic of a time of transition: working the old to renew it, being necessary to reinvent knowledge-emancipation. We are at a time when it is necessary to think of a critical utopia (Santos, 2007).

4 THE IMPORTANCE OF DIALOGIC ADMINISTRATION FOR A NEW URBAN STRATEGY

In recent decades, the transformative movements of the contemporary state have sought not only to reassess the ends of the state, but also to re-examine the typical functions of the social state model and the way in which such functions were commonly performed.

With the rise of phenomena such as the network state (Castels, 2002) and Public Governance, a new form of administration emerges, whose references are dialogue, negotiation, agreement, coordination, decentralization, cooperation, and collaboration.

Thus, the process of determining the public interest starts to be thought from a consensual and dialogical perspective, which contrasts with the dominant imperative and monologic perspective, averse to the use of communication mechanisms internal and external to the administrative organization.

Explicit JJ Gomes Canotilho (2006), referring to the expression Good Governance, whose normative meaning would be "responsible conduction of State affairs", that Public Administration not only addresses the direction of government and administration matters, but also the responsible practice of Other powers of the State such as the legislative power and the jurisdictional power.

According to Odete Medauar (2003), the consensus-negotiation activity between Public Authorities and individuals, even informal ones, began to assume an important role in the process of identifying public and private interests, under the protection of the Administration. It no longer holds exclusivity in the establishment of the public interest; Discretion is reduced, the practice of unilateral and authoritative decision-making is tempered. The Administration must be turned to the community, getting to know better the problems and aspirations of society.

According to our Federal Constitution, urban policy must necessarily be a product of popular participation. But the issue is not just legal. Brazil has no tradition of effective instruments of participation or sharing in solving problems in the public sphere.

It should be noted that the constitutional command of guaranteeing popular participation and the State's duty to carry it out is not sufficient. Another element must be added: the political and programmatic commitment of the government, which commands the different portions of the State.

As already mentioned, it is often verified that the Administration does not favor participation, even in portfolios that historically adopt "democratic" models.

Specifically, what is perceived in Natal and in several cities throughout the country is that there is no complementarity between the ways to participate. There is no dialogue for the construction of concrete proposals and projects. What we have are spaces where the manager publishes ideas previously constructed without the popular participation and the audiences serve only to give a certain appearance of popular legitimacy.

Probably still a remnant of the authoritarian view of management derived from the liberal matrix of administrative law. This is because administrative law was developed based on the liberal model of state, in force from the 16th century onwards. XIX, a period in which imperativeness (a notion expressing the authority of the State in relation to individuals, resulting from sovereignty) ended up conforming the institutes and categories of this legal branch (Oliveira and Schawanka, 2009).

By this power of empire, typical administrative action was forged, which was manifested through administrative acts, whose essential attributes were subject to the notion of authority. Such a vision can no longer thrive in the present context. In this sense, several administrative emphasize the importance of consensual as a line of evolution and transformation of Public Administration in the 21st century.

Thus, giving more scope to the citizen, the contours of participation as an implicit fundamental right, could be more adequately unveiled by thinking of it as a political right.

Exemplifying the right to popular participation and the right to the city in the local context it is necessary to remember the total lack of commitment of the public power with the accomplishment of the councils provided for by the Statute of the City.

In this context, the study intends to study the role of Urban Law in a broad way for the necessary social adequacy and its current importance for the regulation of the urbanization, occupation, and land use in cities (Pinto, 2000).

The proposed criticism is based on the understanding that the norms and the current juridical-institutional framework are in disassociation with reality from the beginning of its conception and are presented in the service of the hegemonic strategy of capital.

Such discussion is inserted in the context of the concept of Networked State and of Public Governance, while the new public administration in the 21st century. It turns out that it is urgent to discuss Public Governance in the study of Law as not only a new generation of administrative and State reforms, but mainly the foundations that aim at joint action, carried out in an effective, transparent and shared manner, By the State, by companies and by civil society, aiming at an innovative solution of the social problems and creating possibilities and chances of a future sustainable development for all the participants of the life in cities.

5 FINAL CONSIDERATIONS

We tried to proceed to the conceptual reconstruction of the right to the city from a political conception by essence. This idea is fundamental to address the issue of legitimacy and legitimation of public

decisions within the city of Natal-RN as well as has an influence on the analysis of the experiences found associated with new urban practices.

It is not our intention to make closed conclusions about the subject. On the contrary, the purpose of these reflections was to promote the debate about the relation between law and urbanism, specifically to verify the difficulty of a true popular participation and effective exercise of the right to the city in the current context of the study of the urban right from the lessons of Henri Lefebvre and Boaventura de Sousa Santos and walk towards new possibilities.

It is believed, therefore, that deconstructing certainties to meet new certainties is part of the course of knowledge. Research demands discernment in the choices and preserves its essence in the exercise of the options of how to do science, especially when it comes to thinking the law without reproducing the private logic, which is almost always the logic of profit, combined with the absence of effectively democratic instruments, often worsening social inequalities, and contributing to injustices in the space sphere.

In other times the scientific article would begin with the normative text, probably extolling the force of articles 182 and 183 of the Federal Constitution of 1988 and the great progress achieved with the Statute of the City. And, it would probably develop all of it from the rhetoric of the legal instruments of planning and management of the cities characteristic of urban law.

However, the study of the right to the city took other dimensions after joining the universe of social sciences. Our pre-established ideas have turned into real dilemmas; That is, it ended up bringing some dissatisfaction with what was being investigated. This discomfort provoked by the theoretical debates led to the development of this brief study. The answers we have about the right to the city and popular participation do not seem satisfactory to us. In fact, not even the questions on such topics seem to us to be well formulated to address the crux of the problem. It does not only matter to encourage the creation of collegiate bodies of urban policy or public hearings for the implementation of the democratic management provided by the Statute of the City, but we must go further.

It is noteworthy that there is something intrinsically wrong in the way that science and urban law have adopted to maximize their effectiveness in converting the model of sociocultural modernity in cities with capitalism. The problem to be discussed is how the state can choose its priorities to give meaning to true

social participation. To overcome the problems of the city we believe that only the mobilization of the community can transform our reality.

We realize that an important challenge is the recognition of the rights of popular participation and the right to the city by the population. It is hard to claim what you do not know. We stand for collective and conscious participation. And not a maneuver for politicians. As we have tried to argue, the effective participation of the population in management indicates the potential of this space in constituting a public sphere of concertation between the different actors and their respective interests around socially agreed public policies. In conclusion, we can walk towards the utopia of the right to the city from the popular participation, which is essential for an urban strategy beyond the fetishism and technicality of urban law.

Based on all that has been exposed the only conclusion we can come to is that the dialogue about the right to the city as utopia and rights of participation is essential to minimize the effects of inequality and domination in cities. However, the paths to effective implementation are diverse and deserve further study. It is hoped that this will be a first step towards utopian aspiration and the strengthening of new urban strategies with a view to promoting the right to the city.

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ID 1703 | CORRUPTION AND ORGANIZED CRIME IN THE FIELD OF URBAN PLANNING

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1 ILLICIT FORMS OF URBAN DEVELOPMENT AND GOVERNANCE

Although corruption and organized crime are the focus of a great many recent studies published in political science, sociology, and criminology, very few of these studies pay much attention to the spatial dimension and urban scale of these phenomena (Hall, 2013; Weinstein, 2008). For example, the inquiries that pivot specifically on the problems of corruption and organized crime in the domain of urban planning are a handful[1]. This omission is somewhat bizarre given the extent of the phenomena in question. For instance, according to Transparency International (2013), some 21% of people interviewed in countries all over the world admitted they had paid bribes for "land services", and another 21% had greased palms for "registry and permit services", which includes land registry and building permits. In fact, many researchers have noted that corruption is particularly rife in the planning sector (Chiodelli & Moroni, 2015; Cullingworth, 1993; Gardiner & Lyman, 1978; Murray & Frijters, 2016). Moreover, the research available at present entirely lacks in-depth case studies that would provide greater insights into the real mode of operation of corruption in a specific political-institutional system.

The present paper is a first attempt to fill this gap. In particular, it conducts a detailed study on some recent episodes of corruption in the field of urban planning in the municipality of Desio, close to Milan (Italy). These episodes took place in an environment characterized by the rooted presence of a mafia-type organization known as the 'Ndrangheta[2]. The analysis aims to shed light on the various types of corruption that prevail in the planning field related to the case in question. It outlines the main issues at stake, the key public agents involved, and the stages of the planning process most vulnerable to corruption. This makes it possible to formulate some general hypotheses about the main institutional factors determining corruption in the planning domain, and about the role of mafia-type organized crime within this framework.

To be noted is that this inquiry provides also new input to the ongoing discussion regarding the "dark side" of planning. Several authors have dwelled upon the regressive aspects of planning and its use as a tool to consolidate the political agenda of dominant groups (see for instance: Chiodelli, 2017; Gunder, 2003; Flyvbjerg; 1996, 2015; Yiftachel, 1995, 1998). To date, however little or no research has sought to ascertain how planning is employed (and the incentives that it generates) for unlawful ends, such as favoring real estate operations by organized crime, or enabling certain individuals in positions of power to obtain special personal benefits through corrupt practices.

For this reason the present paper is divided as follows. The first section provides some background details, in particular those linked to the presence of organized crime in Desio. The second section gives a detailed report on various instances of corruption related to the local master plan of 2009. The next section enquires into the particular kinds of corrupt practices which have taken place in the case studied. It also presents some general hypotheses as to the factors determining corruption in the planning domain. The last section is devoted to the conclusions.

[1] The most comprehensive study currently available on corruption in the planning field is by Gardiner and Lyman (1979); among recent theoretical contributions to the discussion, see Chiodelli and Moroni (2015). Other research concerns specific countries: for Spain, see García-Quesada, Jiménez, & Villoria (2013, 2015), Jiménez (2009), Jiménez,Villoria, & García-Quesada (2012); for Italy, see Cappelletti (2012), Granata and Salvoldi (2012).
[2] On the specific features that distinguish mafia-type organized crime from mere organized crime, see Sciarrone and Storti (2014). For an overview on the 'Ndrangheta, see Sergi and Lavorgna (2016).

2 THE CONTEXT: ORGANIZED CRIME, CORRUPTION, AND URBAN DEVELOPMENT IN DESIO

2.1 THE 'NDRANGHETA IN LOMBARDY AND DESIO

Since the 1990s several judicial investigations have brought to light a phenomenon that is new to Italy: the infiltration and settlement (Sciarrone and Storti, 2014) of mafia-type organized crime in various regions of northern Italy (Sciarrone, 2014)[1]. The north was for long considered off-limits to mafia-type organized crime, a phenomenon generally associated with the south of the country. However, Lombardy has been infiltrated, and the kind of organized crime currently most common in this region is the 'Ndrangheta, which originates in Calabria (the "toe" of Italy) (Sergi & Lavorgna, 2016). The 'Ndrangheta in Lombardy is conspicuously present in Milan, and in boroughs scattered across the city's metropolitan area (Chiavari, 2011; Ciconte, 2010; Rossi, 2015; Storti, Dagnes, Pellegrino, & Sciarrone, 2014).

The most extensive judicial investigation so far conducted on the 'Ndrangheta's presence in Lombardy goes by the name of "Endless" [Infinito]. The investigation was conducted over a span of several years, and in 2011 led to the conviction at first instance of around 160 individuals. The Infinito probe revealed the presence of various 'Ndrangheta locali (cells)[2]

The municipality of Desio has around 40,000 inhabitants, and lies some ten kilometers north of Milan[3]. It sits in an extensively built-up area with many factories and production units, all closely connected with Milan from an economic and functional point of view.

Desio was one of the first cases of 'Ndrangheta's infiltration in northern Italy (Tribunale di Milano, 2010b). In fact, the Desio cell had already begun its activities in the 1970s (Storti, Dagnes, Pellegrino, & Sciarrone, 2014), extending its tentacles into various fields, both legal and illegal. It operates also in the real estate sector, where its returns are guaranteed through close contacts with politicians and bureaucrats in the public administration[4]. According to the magistrates involved in the Infinito inquiry, in fact, the Desio cell has managed to "permeate the nerve center of the local political system […] to such an extent that we can readily state that members of the local 'Ndrangheta cell can rely on several important figures in public office to avoid obstacles and achieve their aims within the public administration" (Tribunale di Milano, 2010b, p. 688).

Following the publication of assorted material evidence (photographs and wiretaps) linked to the Infinito investigation, in November 2010 most of the members of the Desio council handed in their resignations, causing the collapse of the local government.

'Ndrangheta, corruption and town planning in Desio

An inquiry carried out after the Infinito investigation revealed widespread corruption in the field of urban planning and development in Desio. It was particularly linked to the 2009 local master plan [Piano di governo del territorio, PGT]. Among those involved in this system of corruption were politicians, municipal civil servants, and entrepreneurs.

Note that the inquiry into the PGT of Desio is separate from the Infinito investigation, and not explicitly linked to the activities of the 'Ndrangheta cell in Desio. There are two points, however, that should be stressed.

[1] On the factors that occasioned the transplantation of mafia-type organized crime to northern Italy, see Varese (2006, 2011).

[2] The term "cell" [locale] refers to an offshoot of the core 'Ndrangheta group that usually comprises one or two 'ndrine (families) from the same district of the Calabria region in the south of Italy. A cell operates in a distinct area (e.g., in one or more council constituencies) on a practically 'exclusive' basis, which means that there are no other competing cells in that area. Although each cell has autonomy in its activities, there is a higher-level structure that coordinates the various cells (Gozzoli, Giorgi,& D'Angelo, 2014).

[3] In 2009 Desio passed from the Province of Milan to the newly-created Province of Monza and Brianza.

[4] For an explanation of why criminal activity is rife in the building sector, see for example Lavezzi (2008).

Firstly, the judicial inquiry revealed that several key figures in the PGT investigation were in touch in various ways with individuals linked to the 'Ndrangheta. One of them was Rosario Perri, at the time director-in-chief of the planning office of Desio Municipality. According to the judicial inquiry, he had been "leaned on" by members of the 'Ndrangheta cell of Desio (Tribunale di Milano, 2010b, p. 697). Massimo Ponzoni, the then regional alderman for environment affairs and a local real estate entrepreneur, reportedly on several occasions came in contact with members of the 'Ndrangheta in Lombardy (Tribunale di Milano, 2010a). The latter, again according to the magistracy, channeled votes to Ponzoni during the regional elections of 2005 (Tribunale di Monza, 2012). More in general, as Ricchiuti observes (2013), "from the wiretaps, videos, and photographs, it has come clear that numerous political exponents and individuals in the administration have close relations with figures linked to the 'Ndrangheta."

Secondly, to be noted is that the cases of misconduct uncovered by the magistracy form part of an array of illicit dealings connected with Desio's urban development (which suggests that the incidents identified by the inquiry are probably only the tip of the iceberg) (L. Fregoni, the current director-in-chief of the planning office in Desio, personal communication, 8 April 2016). This context of widespread illegality is part and parcel of the climate of intimidation, omertà (code of silence) and impunity that the presence of the 'Ndrangheta has generated in Desio (Storti, Dagnes, Pellegrino, & Sciarrone, 2014), whose existence, in fact, was well known to anyone living and working in Desio long before the Infinito inquiry was launched (D. Cassanmagnago, alderman for urban planning in Desio from 2011 to 2015, personal communication, 3 March 2016).

Therefore, even though nothing emerged to prove any direct interference by organized crime in the formulation of Desio's PGT, as we shall see in Section 5, the presence of the 'Ndrangheta most likely indirectly fostered the instances of corruption analyzed here.

3 THE CORRUPT PLAN

3.1 INSTANCES OF CORRUPTION RELATED TO THE 2009 LOCAL MASTER PLAN

In April 2014 the Monza court issued a judgement at first instance in the trial concerning several matters linked to the 2009 Desio PGT[1].

The trial pivoted on three people – Massimo Ponzoni, Antonino Brambilla, and Rosario Perri – all sentenced in the first degree to several years in prison. At the time of the events, Ponzoni was the regional alderman for the environment, and regional coordinator of the Forza Italia party[2]. Brambilla was the alderman for urban planning in Desio. Perri was director-in-chief of the planning office in the Desio municipality. In many cases, the corruption mechanism worked as follows: Massimo Ponzoni applied pressure on Antonino Brambilla and Rosario Perri so that certain decisions were taken in favor of specific people or companies, from whom Ponzoni received various benefits (such as money for himself or funds for his political activities). Meanwhile, in exchange for their services – and thanks to Ponzoni's intervention – Brambilla and Perri obtained consultancy posts for both public bodies and private companies, and even public offices (both were appointed aldermen for the Province of Monza and Brianza), together with money and material benefits of other kinds (Tribunale di Monza, 2014).

The most salient instances of corruption in the investigation concern similar occurrences whereby, broadly speaking, the 2009 PGT allowed building on land that had previously been assigned to agriculture, with

[1] The inquiry was dubbed "Pellicano" (Pelican) by the newspapers, which borrowed the name of one of the real estate companies at the centre of the investigation. This was one of the few recent cases in which the Italian magistracy has focused its inquiries exclusively on corruption in the planning sector. Given the methodological difficulties of studying corrupt practices (Ades & di Tella, 1997), the documents of the magistracy are therefore extremely useful: the wiretaps, interrogations, and reports made available furnish a detailed picture of the entire affair that would otherwise have been impossible to reconstruct. The judicial material was integrated with detailed investigations in the field conducted by the author from May 2015 to September 2016.

[2] Forza Italia is the political party created by Silvio Berlusconi in 1995. The party governed the Lombardy Region from 1995 to 2013, through the presidency of Roberto Formigoni.

various advantages accruing to the indicted trio or persons associated with them. An example is provided by the events regarding the so-called “Transformation Area No. 2” [ATR No. 2] (see fig. 1)[1].

The ATR No. 2 concerns a portion in the northeast of the Desio council area, which is prevalently farmland and hosts a rural hamlet dating to the seventeenth century with several historic buildings. The 2009 PGT envisaged a change in zoning from farmland to development, for which two large building projects were proposed: a scheme of residential units next to the historic hamlet, and a mixed shopping and office complex in the northeast segment of the area (Comune di Desio, 2009a, pp. 183–84). The change in zoning land-use alone would have netted the owners some 16 million euros (Tribunale di Monza, 2012, p. 97) – on top of which we can add the value generated by the sale (or rent) of the buildings constructed on the parcel of land in question.

To be noted is that the PGT authorized this transformation of the zone even though the same plan elsewhere acknowledged the unique value of the area as one of the very few remaining stretches of Desio’s territory with significant environmental and historical value (Comune di Desio, 2009a, pp. 145–47). This, moreover, is the reason why the Milan Provincial Authority [Provincia di Milano] – which by law was empowered to express judgement on the Desio master plan and the compatibility of its contents with the broader Provincial Territorial Scheme [Piano Territoriale di Coordinamento Provinciale] – issued a detailed report strongly advising against the transformation of the area in question, and urging that the planning decision be rescinded.

The situations of the other three ATRs in the plan followed a similar pattern: the zones switched from farmland to residential, commercial, or tertiary areas. Overall, the value of the land of the four ATRs in question rocketed from 8.7 million euros before the PGT to 62.3 million after (Tribunale di Monza, 2012, p. 97). According to the judicial report, in all the cases mentioned the reason why the local master plan allowed the building development of these green areas can be traced back to corruption practices and illicit pressures.

That said, illicit behavior and corruption were not exclusive to the manipulation of land-use for these four areas. For instance, in the case of the ATR No. 4, the areas ceded by the real-estate developer to the Municipality in exchange for the reallocation of end-use were less than the amount required (54,000 sq.m instead of 72,000); urbanization levies were far less than those envisaged by law (2.7 million euros instead of 5.7); and the gross surface area of paving effectively awarded by the Municipality for development was around 3,000 sq.m more than the quota required. Note that these figures were not established in the PGT, but specified in the detailed scheme [Piano di attuazione] and in the planning agreement [Convenzione urbanistica] relative to the transformation area in question – according to Italian law, in fact, the development of a plot zoned as a building area in a local master plan requires the drafting and approval of a detailed scheme and a planning agreement that provide all the specifics of the project.[2] To this back-story we should add that a portion of the area scheduled (amounting to around 2,000 sq.m) was purchased by the real estate company from the Municipality for a sum below the market price (i.e. 160,000 euros instead of the likely market value of around 400,000 euros); furthermore, certain bureaucratic problems regarding the ownership of the development area were sidestepped by the Municipality so as not to slow down the planning procedureof the area scheduled (amounting to around 2,000 sq.m) was purchased by the real estate company from the Municipality for a sum below the market price (i.e. 160,000 euros instead of the likely market value of around 400,000 euros); furthermore, certain bureaucratic problems regarding the ownership of the development area were sidestepped by the Municipality so as not to slow down the planning procedureof the area scheduled (amounting to around 2,000 sq.m) was purchased by the real estate company from the Municipality for a sum below the market price (i.e. 160,000 euros instead of the likely market value of around 400,000 euros); furthermore, certain bureaucratic

1 According to the regional by-law on urban planning, the “Strategic Plan” [Documento di Piano] must contain clear indications of the transformation areas [Ambiti di trasformazione], i.e. areas of considerable size on which significant transformations are intended to take place. The Strategic Plan is one of the three documents that compose the local master plan, together with the “Public Services and Facilities Plan” [Piano dei Servizi] and the “Regulatory Plan” [Piano delle Regole].

2 For instance, the exact location of each building unit, the layout of the streets, the areas that the private party must cede to the Municipality, the sums that the private party will disburse as a contribution to public works.

problems regarding the ownership of the development area were sidestepped by the Municipality so as not to slow down the planning procedure[1]. (Tribunale di Monza, 2014)

The judicial inquiry uncovered further illegal business regarding other urban developments, albeit of less magnitude that those cited above. This concerns, for instance, some other cases of change of end-use ad personam: specific areas were assigned with building rights for the main purpose of benefiting specific landowners, who had ties with the three figures indicted in the trial. Another instance is the deliberate delaying of the necessary joint signing of a planning agreement between the Municipality and a developer so as to exert pressure on the latter to sell a building to one of the indicted parties for a lower price.

Generally speaking, as the court itself wrote, all these operations were "openly in contrast with the principles of impartiality, standard procedures, and proper conduct of the Public Administration […]. The only logical explanation for such conduct lies in the presence of a set of private interests served by public officials, and in the relative 'payoffs' that those public officials received in exchange" (Tribunale di Monza, 2012, p. 70).

3.2 THE REST OF THE PLAN

The judicial inquiry concerned a limited number of the land transformation cases envisaged by the PGT (mainly the four ATRs) (see fig. 1). And yet one gains the impression – despite the lack of substantiating evidence – that other sections of the PGT may also have been subject to illicit pressures. This impression is given by various factors.

The 2009 PGT foresaw the urbanization of around 1.4 million square meters of council land. A small portion of these transformations (some 400,000 sq.m) concerned the four ATRs involved in the judicial inquiry; the rest regarded the so-called "Infill zones" [Ambiti di completamento]. These were lots which, on paper, ought to be fairly small in size and located within the built-up area, and which were hence presented as "filler" schemes for the existing urban fabric (Comune di Desio, 2009b, p. 51). In practice, however, a fair number of these appointed infill zones included empty parcels of land outside the built-up area, some of considerable size, others in actively cultivated farmland (see fig. 1).

Fig. 1 – Areas of urban expansion (Transformation areas and Infill zones) envisaged by the 2009 Desio PGT. Source: Comune di Desio (2009a) (elaborated by the author).

1 Planning laws impose that a prerequisite for the approval of a detailed plan is that the subject proposing the transformation must effectively be the owner of all the areas in question. In the case of the ATR No. 4, when the detailed plan was approved, the private company did not yet own a land parcel involved, which was instead still owned by a public subject.

It is very unlikely that the decision to convert all these tracts of land into buildable areas took place without any form of illicit maneuvering. Indeed, accusations of assigning building permits “on the basis of surnames” were voiced on various occasions during City Council meetings on the PGT (Comune di Desio, 2009c, 2009d). Note, for instance, the words of a professional close to the municipal administration (D.C, personal communication, 17 May 2016): “Rumor has it that in many cases the business of marking out areas for infill operations was done systematically: if you wanted a given plot to be zoned as a building area, you had to pay someone off. And, in fact, if you look at the plan, there are some glaring cases of atrocious decision-making.” Similarly, during the draft phase of the plan, there was widespread talk of property shifting hands, basically plots of agricultural land that soon afterwards were relabeled as buildable in the 2009 plan (R. Corti, Mayor of Desio from 2011 onwards, personal communication, 28 May 2015). Some of these rumors were confirmed by the judicial inquiry (Tribunale di Monza, 2014).

Moreover, the sheer size of the buildable areas inserted in the 2009 PGT is striking when seen in light of the fact that the Desio Council’s territory is already densely urbanized: in the year 2012 that area amounted to 67% of the council’s total surface (9.84 sq.km out of 14.66) (PIM, 2015). At the same time, within the town itself there are various pockets where revitalization and densification projects are possible (Comune di Desio, 2015; A. Lanzani, planner in charge of the new PGT of Desio, approved in 2015, personal communication, 3 March 2016). The 2009 plan, in fact, makes repeated reference in the clearest of language to the importance of limiting the urbanization of new land, and conserving the scant agricultural land still pertaining to the community: “The consumption of land has reached levels of serious alarm. […] We are facing a] process of ongoing assault and rampant consumption of the territory and natural amenities. […One] of the main issues that planning must tackle is the urgent need to retrieve, regenerate and conserve our agricultural land” (Comune di Desio, 2009b, pp. 137–38). In spite of such outspoken declarations of principle, the plan itself has enabled the urbanization of no less than 1.4 million square meters of vacant land, equal to 10% of the council’s entire territory (a third of its unbuilt surface area). Paradoxically, this choice is justified by its proponents by the need to protect green areas (Comune di Desio, 2009a, 2009d): in exchange for the building permits conceded, the Administration has apparently had the opportunity to obtain significant areas of land which it would subsequently safeguard or transform into greenspace amenities. However, in the eyes of the Monza Court, these justifications are hardly defensible (Tribunale di Monza, 2014). In fact, the conservation of unbuilt spaces of land may be easily accomplished without having to convert spare terrain into buildable land, the simplest way being to re-zone (or to keep the end-use of) these areas as greenspace.

Note that these contradictions between the declarations of intent in the plan and the technical choices effectively made recur in several other passages of the document. Take for example the question of heritage conservation. Here and there the plan proclaims the need for Desio to safeguard the meagre remaining testaments to its past (Comune di Desio, 2009b, p. 25). This heritage is declared to be in need of special conservation schemes aimed at preserving “its fundamental original features” (Comune di Desio, 2009b, p. 29). Among the few heritage sites that the plan identifies (a total of four), one is the rural hamlet lying alongside the ATR No. 2 cited earlier. Nevertheless, as noted above, despite the clarion call for conservation of the said area, in the same breath the plan advances a scheme for a massive building program that would utterly disfigure the area’s original nature. The Tribunale di Monza (2014) is outspoken on the matter: for the Court, the declarations of the planners regarding the “technical reasons” for such planning choices are “seriously disconcerting” and betray “professional incompetence or dishonesty”.

Consider that the 2009 PGT was actually drawn up by some noted planners currently holding positions at one of Milan’s main public universities. So far the magistracy has excluded them from any legal liabilities, while underlining the fact that their modus operandi “does not honor the profession, given that these technicians merely accepted the requests of the politicians involved in the procedures and drew up the plan according to those requests” (Tribunale di Monza, 2012, p. 71). One of the planners involved in the PGT admitted to receiving heavy political pressure not to oppose the urbanization of certain areas; so heavy, indeed, that she was forced to reach a “compromise” (Comune di Desio, 2008). What emerges from all this is that the PGT provided a sort of “technical cover” for the background operations (some of which were wholly illicit) that certain political figures aimed to actuate in order, for example, to keep the political parties opposing their strategies quiet (Corti, personal communication, 28 May 2015; Lanzani, personal communication, 3 March 2016).

4 DISCUSSION: FORMS AND DETERMINING FACTORS OF CORRUPTION IN THE PLANNING DOMAIN

4.1 FORMS OF CORRUPTION

The instances of corruption in the Desio case concern two distinct phases in the planning process (see Table 1).

Phase	Planning Documents	Object of the corrupt transaction	Main figures with decisional power and/or influence
Drafting the local master plan	Local master plan [*PGT*]	- assigned end-use of the land - building quotas	Political bodies (e.g., Local Planning Commission, executive committee of the Municipality, City Council) and town-planners
Implementing the decisions of the local master plan	Detailed scheme [*Piano di attuazione*]	- buildable surface area - ratification of developer's requirements prior to plan approval	Technical bodies (planning office, and its director-in-chief)
	Planning agreement [*Convenzione urbanistica*]	- urbanisation taxes - amount of areas ceded by the real-estate developer to the Municipality in exchange for authorized development - procedure timeline	
	Other	- price of public areas to be purchased from the Municipality	

Table 1 – phases, types, and parties involved in planning corruption

The first is the phase in which the PGT was drafted and approved, and during which the crucial factor was the assignment of land-use and building quotas. What the corruptors wanted was to have specific areas designated for building development and to obtain high building quotas. Decision-making on the PGT was largely in the hands of the political branches of the Municipality and the planners assigned to drafting the plan; hence, we might suppose that, in this phase, the person most involved in maneuvering things behind the scenes was the alderman Brambilla. The planners themselves admitted that many choices were largely expressions of political intent, and were not based on a specific technical rationale. Similarly, Brambilla was credited as being the "artificer and inspiration" behind the plan (Comune di Desio, 2009d). It must be stated that in all the cases cited, the planning decisions followed the formal procedures to the letter: they remained within the legitimate bounds of political involvement, and were carried out in compliance with the procedures prescribed by the law. Nonetheless, the magistracy deemed that, despite the formal respect for the legal procedures, the decisions were made for illicit ends, i.e. in favor of specific private interests – for instance, those of the owner of the land now re-assigned as developable, and those of the politician who gained private rewards in exchange for his role in the decisions taken (Tribunale di Monza, 2014).

A second phase of the corruption process in Desio concerned implementation of the general decisions taken in the master plan. In this case the situation is more complex than in the previous one, owing to the complexities of implementing a master plan decision in Italy. The stakes were also varied. The main technical documents involved in the illicit pressures were the detailed schemes and the planning agreements.

In some cases, this illicit pressure was applied to obtain fraudulent benefits, such as a reduction of the standard urbanization levies disbursed to the Municipality by the private developer. This kind of operation works by bending the interpretation of planning regulations, or through outright fraud. This is made feasible by two factors. The first is the ambiguities of Italy's planning regulations, which leave a certain margin for interpretation in several instances. The second is that those who deliberately bend these interpretations are probably well aware that the sheer mass of intricacies, complex procedures, and myriad technicalities that characterize the Italian planning system ensure that scrutiny is very difficult and the fraud will almost

never come to light. Although many planning decisions are in fact submitted to democratically elected bodies – such as the Local Planning Commission, the Executive committee of the Municipality and the City Councilsecond is that those who deliberately bend these interpretations are probably well aware that the sheer mass of intricacies, complex procedures, and myriad technicalities that characterize the Italian planning system ensure that scrutiny is very difficult and the fraud will almost never come to light. Although many planning decisions are in fact submitted to democratically elected bodies – such as the Local Planning Commission, the Executive committee of the Municipality and the City Councilsecond is that those who deliberately bend these interpretations are probably well aware that the sheer mass of intricacies, complex procedures, and myriad technicalities that characterize the Italian planning system ensure that scrutiny is very difficult and the fraud will almost never come to light. Although many planning decisions are in fact submitted to democratically elected bodies – such as the Local Planning Commission, the Executive committee of the Municipality and the City Council[1] – their supervision covers only the basics of a given decision, and approval is often almost automatic. In fact, the political bodies in question are either pressed for time or lack the qualifications necessary to assess the technical details of the planning procedures that they are required to vote upon. These technicalities are entrusted to the municipal planning office, and they are the responsibility of the office's director-in-chief, who is therefore a key figure in the entire cycle of planning procedures.

In other cases, illicit forms of pressure take advantage of the margin of discretion legally permitted by the decision-making system. This can happen for instance during the negotiations of terms for a planning agreement. Here too no formal procedures are actually violated; and yet, according to the law, any public decision to make special concessions to a specific private citizen is unlawful if it is not ultimately in the public interest: witness the case above in which a parcel of public land was sold for far less than its market price. It is worth stressing that an illicit special treatment can also be geared to work against a private individual: for instance, the above-mentioned threat to delay a planning procedure is a form of illegal pressure that can be exerted on a building developer. As in the preceding case, once again the director-in-chief of the municipal planning office is a key figure, since he is directly in charge of these procedures.

4.2 THE FACTORS DETERMINING CORRUPTION

There are various theoretical models to explain the emergence of corruption in the public sector. Each of them emphasizes a particular aspect of the phenomenon (see Jain [2001] and Johnston [1996] for a review of different models). For example, certain approaches focus on the socio-cultural characteristics of a specific context (such as ethical norms and social values); other models stress the rational calculation of the costs and benefits brought by a certain illegal transaction.

Particularly interesting for the purposes of this study is the "neo-institutional" model, which emphasizes the burden of the internal dynamics and characteristics of a given institutional system. According to Vannucci and Sberna (2014, pp. 202–4), the spread of corruption in a specific period of time within a given political-institutional system (Ct) may be expressed with the following formula:

$$Ct = f\,(R; D; I; -A; -MC; Ct\text{-}1, t\text{-}2,\ldots)$$

where R represents the economic returns generated by a public decision; D is the degree of discretion allowed to the public authority in creating, distributing and expropriating those returns; I is the potential of reserved information available to public officers to use for corrupt transactions; A is the degree of accountability within the public bodies; MC stands for the "moral weight" of the illicit transaction; C t-1, t-2,… is the backlog of corrupt practices, and how this inheritance fosters further involvement in corrupt dealings (ibid.).

What emerges from our study of the Desio case is that both the presence of organized crime and certain features inherent to the planning system itself influence the variables contained in the above formula.

[1] In Italy, the Planning Commission is composed mainly of the councillors; also the alderman for urban planning and the director-in-chief of the planning office usually attend the meetings of the commission. The commission analyses all planning decisions in detail, and expresses non-binding assessments on them. The Executive Committee is chaired by the Mayor and it is composed of appointed aldermen. The City Council consists of the elected councillors.

In our case, the presence of the 'Ndrangheta appears to contribute to the proliferation of corrupt practices in the planning field especially because of its influence on the moral costs (MC) and the mounting backlog of corruption (C t-1, t-2,…). In fact, the cell's presence in Desio has probably fostered the spread of many kinds of illicit dealings within the council administration for several decades, generating a climate of lawlessness and impunity in the town (Storti, Dagnes, Pellegrino, & Sciarrone, 2014). In this way, the cell has managed to lower the "moral cost" of fraudulent behavior in Desio, greatly increasing that "inherited backlog" of corruption in the building and urban development sectors. For example, Cassanmagnago (personal communication, 3 March 2016) speaks of a well-tested mechanism to control and share out building programs and real-estate operations in Desio: "there was a well-oiled mechanism in place whereby several political figures steered the planning decision-making processes, aided by technicians within the planning office and the collusion of estate agents." Likewise, Fregoni (personal communication, 8 April 2016) mentions numerous shady deals in Desio's planning sector over the past decades, particularly ones aimed at speeding up the issue of building permits, or reducing the risk of site controls.

While the presence of organized crime weighs on the moral costs (MC) and the backlog of corruption (C t-1, t-2,…) contained in Vernucci and Sberna's formula, the remaining variables seem to be linked mainly to the characteristics of the planning system. Let us consider these one by one.

Economic returns (R). In a great many cases, the economic returns generated by the planning field through public decision-making are considerable. A simple line drawn on a planning chart can determine whether or not a lot is developable, exponentially affecting its value[1].In the case of the four ATRs of the 2009 PGT for Desio, the mere identification of those areas as buildable land increased their value by over 50 million euros. A similar added value, obtained simply by the stroke of a municipal decision, becomes a huge incentive for landowners to put pressure – legal or otherwise – on those within the public administration with clout in the decision-making process.

Discretional margin (D). These planning decisions, with their promise of huge returns, are characterized by a high degree of discretion. This is due to both "internal" and "external" reasons.

One of the internal reasons is the fact that the technical rationale of planning is particularly weak; the consequences are that, in many cases, it is subordinated to a political rationale, meaning that the main reasons for a great many planning decisions are of a political nature (Alexander, 1981; Chiodelli, 2012; Flyjberg, 2002, 2003; Mazza, 1995, 1999; Reade, 1987). Put briefly, there is no decisive technical basis to the planning choice made; that is, there is no "natural necessity" to determine whether a certain area is zoned as residential (and in what ratio) or left as farmable land. Obviously, this gives a great deal of discretional power to the decision-makers. As said, during the drafting phase of the Desio PGT, for example, the planners commissioned admitted that some of the crucial choices related to land-use were of a distinctly political nature; for one, no technical factors were decisive in pinpointing the ATRs.

Among the external reasons is the fact that, at least in Italy, the public officials involved have few constraints in terms of their decisions on planning issues, for instance in terms of land-use and building quotas assignations (Moroni, 2007). To this we may add the fact that in Italy – as in other Western countries – during certain phases of the planning process, urban planning regulations explicitly allow a margin of discretional negotiation between public and private. This refers, for instance, to the contents of the detailed scheme and planning agreement.

The Desio case reveals that there is also another type of discretionary power, which comes into play with the interpretation of the planning regulations: some of these norms allow a margin of discretion, because they are either incomplete or ambiguous. Consider for example when the schedule for signing the planning agreement is largely at the discretion of the municipal officer in charge: this kind of broad margin can clearly be used in an unlawful manner, as indeed happened in Desio. To sum up, as Epstein (2005, pp. 12) states, "The amount of discretion built into the [planning] system is simply inconsistent with the rule of law".

[1] 13 Due to the current crisis in Italy's building sector, today the economic returns from changes in land-use have diminished drastically; consequently one would expect the incentives for corrupt practices of this type to have diminished accordingly.

Reserved information (I). For certain planning decisions, the municipal officials can use their inside knowledge of confidential details as bargaining chips for personal gain in the course of illicit transactions. For example, they may have information on which areas will be assigned as developable in a local master plan. Here too, the case of Desio is instructive: it was rumored at the time that several properties changed hands in the run-up to the plan's approval (Corti, personal communication, 28 May 2015). The judicial inquiry confirmed those rumors: for instance, individuals later implicated in the inquiry purchased certain areas of ATR No. 1 a few years prior to the approval of the PGT on the basis of Ponzoni's promise to them that those lots would become developable. As indeed they did with the 2009 PGT.

Accountability (A). The degree of accountability in planning matters is often remarkably low. This is the result of two internal factors[1].

The first is linked to the aforementioned fact that many planning decisions (e.g., land-use assignations) are not based on an ineluctable technical necessity; in many instances, they are the result of discretionary power of a political nature. It is therefore extremely difficult to wind back and determine whether such decisions were made by means of unlawful pressure, also considering the fact that, from the outside, they are often procedurally correct – what is illicit is the motive behind the decisions made. This is exactly the case of several instances reported in the judicial inquiry on the 2009 PGT. Again, it is hard to prove the true motive behind a given planning decision, and this can only come about through lengthy and complex judicial investigation. "The background standards – shared benefit, public interest, convenience, necessity and so on – are so nebulous that even where there is a system of judicial review it is difficult to work out the grounds on which decisions have been made and whether they are right or wrong" (Esptein, 2005, p. 11).

The second factor is tied to the fact that, in certain phases of the planning process, the issues at stake are highly technical and complex. Take for example the calculation of the fees owed for urbanization, or the areas to be ceded to the public domain. It is therefore difficult, not only for the citizenry but also for the town councilors who vote on such decisions, to recognize choices that may have been made under illegal circumstances. Here the Desio case once again offers a useful yardstick: several choices cited regarding the detailed schemes for some of the ATRs turned out to be illegitimate; but, despite the fact that all these choices were submitted to the Local Planning Commission, which included several honest and scrupulous councilmen, nobody managed to detect the grave legal problems that were later detailed by the magistracy.

5 CONCLUSIONS

It is likely that criminal activities such as corruption and operation by organized crime groups exact a heavy toll on the spatial development and governance of a great many of cities worldwide. Despite the gravity of this fact, there is a glaring lack of empirical study on this phenomenon, and how it affects the urban planning domain in particular. With this in mind, the present paper hopes to start filling this gap. The analysis of what took place in the town of Desio (Italy) provides a particularly interesting illustration of the mechanisms involved: it has brought to light various aspects of how corruption manages to infest Italy's planning machinery. In particular, the Desio case enables us to pinpoint the critical moments in the planning process in which illicit dealings take place, and it illustrates which are the main public actors involved and what in particular is at stake.

For example, we have illustrated how corrupt practices can impact on both the local master plan, and the detailed schemes for implementing the master plan's decisions. The stakes change, however, depending on the phase, and likewise the kind of individual involved also changes, as well as the forms that corruption takes. In short, with reference to the draft phase of the master plan, the illicit activity aims principally at influencing the allocation of land-use and the relative building quotas allowed. This takes place mainly through operations that are formally correct yet driven by illicit motives, namely to ensure directly and specifically the advantage of both the corruptor and the corrupted (at the public's expense). The role of the political component (in this case, the alderman in charge of planning) is fundamental in enabling illicit operations of this kind of to work. With reference to the implementation of the master plan

[1] It goes without saying that the meagre level of accountability for planning decisions in Italy is linked also to factors not inherent to the planning system, such as, for instance, the sluggish and inefficient judicial system.

choices, the planning decisions become involved in more complex and nuanced forms of corruption. The latter affect various phases and documents pertaining to the implementation schedule (e.g., the detailed schemes and the planning agreements); they aim to obtain illicit benefits of different kinds (e.g. a reduction in development taxes, greater areas for building, fast-tracking the bureaucracy); and they assume various forms (including both directly illegal dealings, but also formally correct ones driven by illegitimate motives). During this phase, a key role is played by the technicians in the municipal planning office, particular the director-in-chief.

Generally speaking, analysis of the Desio case seems to corroborate the claim that corruption in the planning field is "in part due to certain features of the existing planning systems that offer various 'incentives' that encourage corrupt practices" (Chiodelli & Moroni, 2015, p. 451). The presence of organized crime – which forms the shadowy backdrop to the scenario discussed here – is a constant enabler of these illicit practices, for instance, because it fosters a climate of basic impunity and exemption within the political and institutional spheres. However, it is probably not their main and direct cause.

The above hypotheses concerning the incentives to corruption offered by the features of a planning system require further in-depth study and verification. However, if these hypotheses prove to be true, they can provide critical input for institutional expedients (e.g., an overhaul of planning procedures) that may hopefully reduce the incentives that the current planning system offers to corruption. Of course, this would not eliminate corruption entirely from the planning field (a fundamental role is played by the ethics of planners, politicians, and public officials; along with mechanisms of oversight and sanctions for wrongdoing); nor is it by any means the only way to combat corruption. But it would be a great improvement on the current situation, with its pervasive corruption in areas of urban governance and development, about which we still know very little, and to which few solutions can therefore apply.

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ID 1732 | THE EFFECT OF LEGISLATIVE FRAMEWORK IN CONSERVATION PRACTICES: EXAMPLE OF TURKEY

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1 INTRODUCTION

In the last decade, site conservation and ideas against site conservation such as transformation and renewal have become considerably contradictive subjects in Turkey. The implementation on these subjects and new projects are also taken into consideration as research studies. Along with these implementations about conservation and renewal, it is important to think what is expected for cities in near and distant future.

In conservation and renewal studies, apart from their architectural, artistic, historical and esthetical values, cities should be evaluated with their social values. Moreover, it is a fact that that they have a living identity.

As is known, the historical background of a built environment is the most important features that creates the identity of an area. Therefore, the conservation of historical environment has become an important component for the planning process. Important experiences have been obtained related with planning site conservation areas in Turkey, however there are significant problems in implementation especially at administrative level. Foremost among these problems are the troubles in the process of conservation planning and difficulty in creating a healthy relationship between urban planning system and conservation plans. Currently, urban areas and site conservation areas are planned within different legislations and organizational structure. Moreover, contradicting laws and regulations for site conservation areas result inconsistent implementations which different from each other in the same urban area.

The aim of this paper is to compare two legislations on protected areas in terms of functioning and implementation and investigate contradictory parts of these two legislations on public and personal property rights by comparing them item by item. Also, analyse the differences between these two legislations that based on conservation and renewal is another purpose of this paper. To answer the question “Are these legislations protecting or renewing?” we analyze causes and consequences of verdicts of Supreme Court on two public prosecutions. One of the Supreme Court decisions examines the obtained results, which are based on objection to protection and renewal studies within the scope of No.2863 Law on the Conservation of Cultural and Natural Property and the other No. 5366 Law On Renovatıng, Conservıng and Actıvely Usıng Dılapıdated Hıstorıcal and Cultural Immovable Assets. In conclusion, the urban conservation areas, in accordance with the no. 5366 Law On Renovating, Conserving and Actively Using Dilapidated Historical and Cultural Immovable Assets, Renewal area announcements and projects in site area are excluded from the conservation plan approaches, principles and processes of the historic area. Because city planning and protection plan decisions are not co-produced, problems arise. As a result, the difference of these two laws are examined and evaluations are done regarding the solutions to these problems generated in urban spaces.

No. 5366 Law On Renovating, Conserving and Actively Using Dilapidated Historical and Cultural Immovable Assets and announcements and projects of renewal areas in site conservation areas are segregated from site conservation planning approach of the area. Therefore, this situation creates the problem, which is the inability of producing urban planning and site conservation planning decisions together.

2 ANALYSING CONSERVATION AND RENEWAL LAWS WITHIN THE SCOPE OF LEGAL LEGISLATION FOR HISTORICAL AREAS IN TURKEY

In this part, ‘Law no: 2863 Law on the Conservation of Cultural and Natural Property’ and ‘Law no: 5366 Law on Renovating, Conserving and Actıvely Usıng Dilapidated Historical and Cultural Immovable Assets’ are analysed item by item in order to understand their similar and contrasting sides with regard to process and implementation.

2.1 EXAMINATION OF LAW NO: 2863 ON THE CONSERVATION OF CULTURAL AND NATURAL PROPERTY

The aim of this law is “to define movable and immovable cultural and natural property to be protected, regulate proceedings and activities, describe the establishment and duties of the organization that shall set principles and take implementation decisions in this field”(Url-1).

In the law, concepts cultural such as property, natural assets, site, conservation, protection, conservation area conservation development plan, street improvement projects and implementation, interaction-transition area are also defined. Among these concepts, an article in the description of conservation development plan is important for this study. According to this article, the plan should take the interaction and transition zone into consideration and aim to conserve the cultural and natural assets in accordance with sustainability. What is more, the plan should be prepared on a base map and it should include a field

research, which involves archeologic, historic, natural, architectural, demographic, cultural, socio-economic, property and settlements data. Another important subject is that in article 7, which is related with identification and registration process, immovable cultural and natural property, and natural sites are described. The identification of immovable cultural and natural property and natural sites shall be coordinated by the Ministry of Culture and Tourism by obtaining the view of the relevant institutions and organisations the activities of which will be affected(Url-1).

Article 9- “Immovable cultural and natural property to be protected and conservation sites shall not be interfered with physically or by any way of construction, and used for service or modified for use contrary to the decisions of the Regional Conservation Councils within the framework of the resolutions of the Superior Council for Conservation. Substantial repair, construction, installation, sounding, partial or complete demolition, incineration, excavation or similar works shall be regarded as physical intervention and intervention by way of construction”. The significance of conservation councils is mentioned(Url-1).

About who has the authority and administration on decisions taken related with conservation;

Article 10 – “The Ministry of Culture and Tourism shall be authorized to take the necessary measures or have others take the necessary measures to conserve immovable cultural and natural property, regardless of ownership or administration, control or have public institutions and organisations, municipalities and governorships carry out control”. It is stated that the authority and method belong to the ministry(Url-1).

In the law, descriptions about expropriation areas are made. Moreover, information about how conservation development plans are prepared in the transition period with conservation rules and conditions of use in site areas.

Article 17 – (Amended: 14/07/2004 - 5226/8 art.)

a. The proclamation of an area as a conservation site by the Regional Conservation Council shall halt all kind of planning implementation of any scale in this area. If applicable, any planning decisions and notes of the scale of 1/25.000 pertaining to the surrounding interactive area of the conservation site shall be revised by taking into account the status of the conservation site and be approved by the relevant administration.

(Amended: 8/8/2011-KHK-648/42 md.) Until completion of the conservation plan, the Regional Conservation Council shall determine the principles and terms of use to apply for the transition period within three months. Afterwards, the descriptions will shed light on the comparison and analysis of adjudications(Url-1).

In Article 57 the functions of the conservation councils are determined as follows:

Article 57 – (Amended: 17/06/1987 - 3386/14 art.) Regional Conservation Councils shall have the following duties and powers bound to the resolutions of the Superior Council for Conservation:

a. To register cultural and natural property to be protected as determined by the Ministry,
b. To group cultural and natural property to be protected,
c. To identify terms and condition for building in the transition period within three months after the registration of conservation sites,
d. To examine and decide conservation plans and all kind of related alterations,
e. To determine the conservation site of immovable cultural and natural property to be protected,
f. To delete records of cultural and natural property to be protected that have lost their specific characteristics,
g. To make decisions on implementation relating to immovable cultural and natural property to be protected and conservation sites(Url-1).

2.1.1. EXAMINATION OF REGULATION ON THE IMPLEMENTATION OF THE LAW ON CONSERVATION BY RENOVATION AND USE BY REVITALIZATION OF THE DETERIORATED HISTORICAL AND CULTURAL IMMOVABLE PROPERTY

With the following additional paragraph: (Additional paragraph: 04/02/2009 - 5835/3 art.) “The Regional Conservation Councils for Preservation of the Cultural and Natural Properties which are set up as per Law No 5366 to approve any renovation projects in the renovation zones declared pursuant to Law No 5366 of 16/6/2005 On Preservation by Renovation and Utilization by Revitalizing of Deteriorated Immovable Historical and Cultural Properties Law, have the task and authorization to carry out the works which are specified by this article.”

This article shows that both boards of the two laws have the same authority for the same places. Therefore, this results authority confusion for the two boards where one of them aims conservation and the other aims renovation(Url-1).

The traditional structures of urban areas, which are defined as urban sites with their cultural properties, and the traditional tissue can gradually lose their original qualities for various reasons. As a result, it is foreseen that in areas, which are registered and identified as site areas by Cultural and Natural Heritage Conservation Board should be restored in accordance with the development of the region, and No. 5366 Law On Renovating, Conserving and Actively Using Dilapidated Historical and Cultural Immovable Assets went in effect.

2.2 EXAMINATION OF LAW NO: 5366 ON RENOVATING, CONSERVING AND ACTIVELY USING DILAPIDATED HISTORICAL AND CULTURAL IMMOVABLE ASSETS

Article 1- The purpose of this Law is to ensure that metropolitan municipalities, district and first-tier municipalities within boundaries of metropolitan municipalities, provincial municipalities and district municipalities, and municipalities with populations above 50,000, and special provincial administrations for the areas outside the purview of such municipalities, reconstruct and restore, in a manner consistent with area development, the areas registered and announced as protected areas by the cultural and natural heritage conservation boards and protection zones of such areas which have been dilapidated and are about to lose their characteristics, create zones of housing, business, culture, tourism and social facilities in such areas, take measures against risks of natural disasters, renovate, conserve and actively use historical and cultural immovable assets(Url-2).

This Law covers the procedures and principles relating to the designation of renovation areas which shall be formed according to the purposes specified above, the determination of technical infrastructure and structural standards, the design, implementation, organization, management, supervision, participation and utilization of the projects.

DESIGNATION OF AREAS

Article 2- Renovation areas shall be designated by a resolution of general provincial councils in case of special provincial administrations, and that of municipal councils in case of municipalities, passed by the simple majority of the full membership. The resolutions passed by general provincial councils in case of special provincial administrations, and by municipal councils in case of non-metropolitan municipalities shall be submitted to the Council of Ministers. In case of metropolitan municipalities, such resolutions as passed by district and first-tier municipalities shall, upon approval by the metropolitan council, be submitted to the Council of Ministers. The Council of Ministers shall decide within three months whether or not to implement the project in question (Url-2).

The implementation in the areas accepted by the Council of Ministers may be designed in consecutive phases within a program.

Phased projects and programs shall be implemented by a resolution of the council passed by the simple majority of the full membership and the approval of the mayor in case of municipalities, or of the governor in case of special provincial administrations.

All immovable assets within the boundaries of the designated area shall be subject to the renovation project to be realized under this Law after the cultural and natural heritage conservation board approves the renovation projects prepared by the municipality and the special provincial administration in question.

Renovation projects within boundaries of metropolitan municipalities but not prepared by metropolitan municipalities shall be approved and put into effect by the metropolitan mayor after such projects are prepared by district and first-tier municipalities and adopted in the councils. Expropriation and implementation shall be executed accordingly (Url-2).

Procedures and principles relating to the establishment of technical infrastructure and structural standards for the renovation areas, the management and organization of such areas and the participation of the right holders or local people shall be laid down in a regulation.

IMPLEMENTATION

Article 3- In the areas designated as renovation areas, special provincial administrations and municipalities shall implement or cause public entities or natural or legal persons to implement the renovation projects which special provincial administrations and municipalities have prepared or caused to prepare. In such areas, it shall be possible to implement the projects jointly with the Housing Development Administration or cause the same to implement them (Url-2).

In metropolises, district and first-tier municipalities shall alone or jointly implement or cause to implement the projects not initiated by metropolitan municipalities.

In respect of implementations in plots within the renovation area, the owner of the plot may implement the renovation with exact preservation of the building and plot provided that the integrity of the project be preserved, the design approved by the municipality be fully observed and the building be used for the purposes as designated by special provincial administrations and municipalities. In such cases, it is essential that the implementation be started and completed simultaneously with the project. Otherwise, special provincial administrations and municipalities shall apply the provisions of this Law (Url-2).

During the implementation of renovation projects, special provincial administrations and municipalities may make necessary arrangements including refinements and impose prohibitions for the renovation projects in order to implement necessary measures in the areas designated as the Ministry of Public Works and Settlement as running risks of natural disasters. Procedures and principles relating thereto shall be laid down in a regulation (Url-2).

Special provincial administrations and municipalities shall execute or cause to execute and finalize all control, supervision and monitoring actions during the implementation. Such actions shall be entrusted to specialist persons, institutions and teams according to the nature of the project. Implementations in the renovation area shall be exempt from all taxes, duties, charges and fees.

Regional boards of conservation of cultural and natural heritage shall be established as many as necessary pursuant to Article 51 of the Law No. 2863 on Conservation of Cultural and Natural Assets. The projects approved by the board shall be implemented by the special provincial administration or the municipality (Url-2).

RESTRICTIONS ON PROPERTY RIGHTS AND EXPROPRIATION

Article 4- The special provincial administration or the municipality may impose temporary restrictions of construction, utilization or operation on the existing immovable properties in the areas declared as renovation areas until the project is completed (Url-2).

Mutual agreement shall be the fundamental rule in dealing with the evacuation, demolition and expropriation of buildings located in the renovation areas. Where an agreement is not reached, special provincial administrations and municipalities may expropriate the immovable property owned by natural persons or private law legal persons. The expropriations to be effected under this Law shall be considered as expropriations with the purpose of realizing the housing projects stated in the second paragraph of Article 3 of the Law No. 2942 on Expropriation. Expropriation actions shall be executed pursuant to the same Article for those immovable properties for which no owners are identified in the land registry, a trustee has been appointed or on which there are disputes or legal action pending, and on which property rights or non-property rights have been established. For expropriation actions, special provincial administrations and municipalities shall be authorized to obtain decrees of heritance from courts, have trustees appointed or take action according to the owner last recorded in the land registry (Url-2).

Special provincial administrations and municipalities may, if they deem suitable, instead of expropriating the immovable property, purchase the property, exchange it on the basis of land for flat, or establish limited property rights through usufruct rights or right of construction as regulated in the relevant Articles of the Turkish Civil Code No. 4721(Url-2).

(Amended fourth paragraph: 27/4/2008-5793/45 Art.) The immovable properties owned by the Treasury located in the renovation area, excluding those which are allocated for public service, those which have preliminary permit or rights of easement established, the places covered under the Law No. 2565 on Military Forbidden Zones and Security Zones, civil and military airports and areas within the obstacle plans, shall be transferred free of charge to the special provincial administration or the municipality executing the project upon a proposal from the Ministry of Finance and by the Decree of the Council of Ministers. Transfer transactions shall be exempt from all taxes, duties and charges. The immovable properties which are not used in accordance with the transfer purpose within five years from the transfer date shall be registered free of charge, ex officio in the name of the Treasury. Fifty percent of the revenues derived from the said immovable properties after deducting project and implementation expenditures shall be transferred to the Treasury.

At places declared as renovation areas, the immovable properties covered under the renovation project may not be sold, leased, allocated or be subject to preliminary permit or right of easement by the Treasury until the transfer transactions are concluded(Url-2).

But it is foreseen that, there will be changes in property owners and other uses of the area as a result of the sua sponte implementation authority which is given to administrations with the Law no: 5366. Therefore, the most important axis of the law to be analysed contextually is the contradiction between planning discipline and the description of renewal area (Dinçer,2008).

The extreme example of sua sponte implementation authority, which is given to administrations, is that it made investors partners with property owners. The law does not seek for agreement. Moreover, if landowners do not come to a mutual understanding, it is possible to expropriate. This creates a one-sided power to administrations. In conservation areas the municipalities, which preferred this model rather than using public resources, created with Cultural and Natural Heritage Conservation Board, evaluates the historical district as an ordinary tender area(for example Beyoğlu Municipality) (Dinçer,2008).

INAPPLICABLE PROVISIONS

Article 7- The provisions of other laws contrary to those of this Law shall not apply to the renovation areas covered under this Law, without prejudice to the obligations arising from international law(Url-2).

This article of the law invalidates housing and property rights written earlier in the Turkish Constitution.

In the application regulations, the descriptions of concepts such as Cultural and Natural Heritage Conservation Board, renewal area, renewal concept project, renewal implementation project are given. It is crucial to understand these descriptions in order to understand the authority scope of both laws (Url-4).

Article 4-d) Conservation regional council: shall mean In accordance with Article 3 of the Law, The conservation of Cultural and Natural property Regional Council shal be established in accordance with Article 51 of the Law on the Conservation of Cultural and Natural Property No. 2863(Url-4).

e. Immovable culture and nature assets: shall mean In accordance with the Law No. 2863,they are registered and declared by Cultural and natural property conservation council as immovable cultural or natural assets.
f. Renewal area: shall mean an area of which boundaries are approved by the Council of Ministers upon the proposal of the competent authority in the Regions registered and declared as sites and conservation areas and conservation areas within this area,
g. Renewal preliminary Project: that is concluded by the conservation of cultural and natural assets in accordance with Article 2 of the Law, It represents the preliminary reports of static, plumbing, electricity, transportation and infrastructures, and architectural preliminary project, which will be the basis for the renewal implementation projects.
h. Renovation implementation Project: Shall mean is concluded by the conservation of cultural and natural assets in accordance with Article 3 of the Law, Historical and cultural immovable assets within the renovation area, constructions to be repaired or reconstructed and Survey, restitution,restoration projects state to the urban design, landscaping, architectural, static, mechanical-electrical installation and infrastructure projects which are envisaged in the development legislation(Url-4).

PARTICIPATION AND INFORMING THE PUBLIC

Article-7 “Property owners who are in the area of renovation by the competent authorities or Meetings are held to inform the people of the region about the implementation and their views are taken and their participation is ensured (Url-4).

The competent authority may organize consultation meetings with universities, professional organizations, civil society organizations ,public institutions and neighborhood representative and may inform about the projects by means of press and publications tools” (Url-4).

In the article 7, the participation is defined. However, this definition does not overlap with the concept of participation in the latest examples of planning discipline and implementation. It is observed that the regulation has a centralism scope and mandatory rules for planning and project process. The concerned ones are only informed about the result, are not included in the process. In other words, the process is totally left to administration’s initiative (Dinçer,2008).

ESTABLISH OF THE REGIONAL CONSERVATION COUNCIL

Article- 12 In accordance with Article 51 of the Law on the Protection of Cultural and Natural Assets, number 2863, the Regional Conservation Council is formed as necessary to limit the powers and responsibilities to the renewal areas and to conclude the renewal projects (Url-4).

The ministry of Culture and Tourism has assumed the procedure of law enforcement in site areas. Moreover, it is validated that boards responsible for renewal areas will follow the same procedure as in Cultural and Natural Heritage Conservation Boards. In this respect, the Resolution on the Grouping, Maintenance and Repairs of Immovable Cultural Property No. 660 dated 5.11.1999 of the Supreme Council conservation is a binding document (Dinçer, 2008).

Thus, from today in the declared renewal areas with the Law no: 5366, the regulations and resolutions of Cultural and Natural Heritage Conservation Board has started to implemented. This slightly diminishes the concerns about conservation of physical tissue in historical heritage areas(Url-4).

Article 17- Following the decision of the Regional conservation council The renewal preliminary Project which is done or made by the competent authorities enters into force with the approval of the mayor in the municipalities and the governor in special provincial administrations (Url-4).

Within the borders of the municipality of the metropolitan, the Renewal preliminary project, which to stay out of the metropolitan municipalities’s applications, enters into force with the approval of the mayor in the Metropolitan municipalities after the acceptance of district and the first-tier municipal councils(Url-4).

Renewal implemantation projects are prepared on the basis of renewal preliminary projects and are implemented after approval of the Regional protection council.

PARTICIPATION IN THE PROJECT

In the applications of the parcels in the renovation area , the building which owned by natural and legal persons with the public institutions and organizations and to be preserved or renewed in the same way can be done by natural or legal persons or public institutions or organizations Provided that it is approved by the competent authority and the integrity of the project is not impaired. It is essential that this type of application be started and finished simultaneously with the project. The competent authority may expropriate such premises which are not completed on time, as if they could be completed by themselves.

As can be understood from the article 22, the statements in the regulation about project participation contrast with participation principle of planning (Url-4).

EXPROPRIATION

Article 24- The way to deal with the evacuation, destruction and expropriation of the structures in the renovation areas is essential. In cases where no agreement is reached, Immovables owned by natural or legal persons may be expropriated by the competent authorities. expropriations which made pursuant to Law are considered as expropriation.for the realization of Settlement Projects of the second paragraph of Article 3 of the Expropriation Law No. 2942 (Url-4).

Even though it is not stated in law, in the regulation's article 24, which organizes expropriation, it is mentioned that: "…If it is understood that the ordinary expropriation process will cause delay in the implementation of the project, urgent expropriation can be made according to the provisions of Article 27 of Law No. 2942…" This important verdict strengthens the administrations and brings the expropriation of all ownership within the renewal area in a short time. These expropriated ownerships are marketable to third parties and this creates a situation against public interest (Dinçer,2008).

Under the light of all these analysis, the differences and similarities of the laws are shown in the table below (Table 1).

No.2863 Law on the Conservation of Cultural and Natural Property	No. 5366 Law On Renovating, Conserving and Actively Using Dilapidated Historical and Cultural Immovable Assets
The description for Conservation Development Plan is made.	While it has not mentioned any conservation plans, it describes renewal concept projects.
Is for sustain while conservation purpose.	Is for sustain while conservation purpose.
Pays attention to socio-cultural structure.	Without taken into consideration the socio-cultural structure, physical plans are made.
It has collaborative planning perception.	The description of "collaboration" in 7th article does not overlap with the collaboration concept in planning discipline and practices.
Creates substantial solutions in most instances.	Intends to create gentrification.
	Gives sua sponte implementation authority to administrations, which results making investors partners with property owners.
	Invalidates housing and ownership rights, which are written before No. 5366 Law.
Expropriation is done when needed.	Promotes expropriation.
	Without a plan, the firm and municipality can make agreements and then produce projects. Company executives make deals with property owners. If they are unable to agree, expropriation rises as a threat. Yet it is not possible to expropriate without a plan.
	Project-based intervention manner.

Table 1. Comparison of two laws

As understood from the table, No. 2863 Law provides a collaborative planning perception via taking into consideration the socio-cultural structure of the area and on site conservation of historic tissue. On the other hand, No. 5366 Law brings a number of justifications in order to demolish and rebuild dilapidated historic tissue. This law has not mention any conservation plan although it describes renewal concept projects. For that matter, the firms and municipalities can create projects without a plan. In short, within this law, project-based major physical interventions can be done via ignoring socio-economic structure to historical areas.

3 ANALYSING THE DIFFERENCES BETWEEN NO. 2863 LAW AND NO. 5366 LAW IN THE IMPLEMENTATION PROCESS WITHIN THE SCOPE OF ADJUDICATIONS

These two laws to understand which cases are the subject of the file of these two laws and to examine the decisions made regarding the case was examined two desicion of Council of State 6th Chamber. One of which is determined as a renewal area which is mentioned Ulus, Hacıbayram Mosque and Bent Runnel and Ankara Castle and Surroundings in Ankara's historical city center covered by Law No. 5366. Another decision is related to changing the degree of the natural site boundaries of Hill of Dragos and its surroundings.

3.1. ADJUDICATIONS OF ACCORDING TO NO. 5366 LAW

In order to understand the contradictions between these two laws in the implementation process with the scope of adjudications, two Supreme Court Decisions are examined. Supreme Court Decisions are related with the cases of implementation process of two renewal projects in Istanbul (Council of State 6th Chamber,2008).

A claim was filed to Council of State 6th Chamber for the cancellation of the decision numbered 935, which is for the urgent expropriation of the structure in Ankara Province, 19959 island with the number 8 parcel by Ankara Metropoliten Municipal Council. The area which is mentioned Ulus, Hacıbayram Mosque and Bent Runnel and Ankara Castle and Surroundings in Ankara's historical city center, is actually determined as a renewal area according to article 2 of the Law No. 5366 with with the decision of the Council of Ministers taken in 2005(Council of State 6th Chamber,2008).

According to the definition[1] of the renewal area (in article 4); in order to determine a renewal area, the area must be initially registered as a site area by Cultural and Natural Heritage Conservation Board and the same area has to be worned and started to lose its characteristics.

Under the light of these information, the case file is examined. According to the examination, it is founded that in this urgent expropriation decision, the boundaries of the area is not detailly specified. For this reason, an expert examination has been done. According to this examination it is stated that the boundaries of the area are indicated as X and Y coordinates due to the size of the area, these coordinates are not shown in the current maps and the boundaries of the conservation area and site area which is decided under the scope of Ankara Historical City Center are not signed. Therefore, the decision of the Council of Ministers on the determination of the boundaries of the renewal area is not in accordance with Law 5366(Council of State 6th Chamber,2008).

It is mentioned that in the proposal of the Renewal Area boundaries presented to the Council of Ministers, Ulus, Kale, Ankara old town tissue and archeological sites are are found. However, is determined that in the proposed sketch urban and archeological site areas and their conservation areas are not shown. Besides archeological areas cannot be accepted as renewal areas(Council of State 6th Chamber,2008).

In his example, firstly the renewal area is declared. Then in this renewal area, a conservation area is planned and afterwards approved by Ankara Cultural and Natural Heritage Conservation council. Thus, an area which have not been identified by Cultural and Natural Heritage Conservation council is declared as a renewal area.

According to Law No. 5366, in order to be able to detect a region as a renewal area, it is necessary to show that the region should contain site and conservation area, also it should be pointed out that the area is worn and about to lose its character. For this reason, it has been determined that the decision of the Council of Ministers is not in accordance with the Law No. 5366, since the decision of the renewal area is given without examining whether or not it carries the conditions stipulated by law. As a result, Council of State 6th Chamber cancelled the urgent expropriation desicion(Council of State 6th Chamber,2008).

3.2. ADJUDICATIONS OF ACCORDING TO NO. 2863 LAW

Another case filed to the Council of State 6th Chamber was investigated in accordance with the Law No. 2863 on the protection of cultural and natural property.In 1999 with the conservation decision numbered 513/5385 It has registered the forested area which of the upper part of hill of Dragos in Maltepe, Istanbul as 1 st degree of natural site and The zone is south-west of this area and the area along the coastal path south of Drogos Hill as 2 st degree of natural site and the area of enclosing both this areas as 3 st degree of natural site as shown in the scale of the 1/5000 plan borders. The case has been filed with the cancellation of this conservation desicion(Council of State 6th Chamber,2002).The report prepared by the Administrative Court after the investigation of the expert and viewing and documents in the case were evaluated together.

According to this; Hill of Dragos ,which is a special and potential value for the region in an urbanized area, is suitable for the definition of 1st degree natural site due to Hill of Dragos has a positive effect on silage and it needs to be purified from the constructions because its location and position in the topographic patern and the sea-filling areas constructed by the human hand can not be evaluated as the 2st degree natural site and The part declared at the 3st degree natural site is constructed in large scale and

1 The definition is given in the part, which is entitled as 2.1.1.Examination of regulation on the implementation of the law on conservation by renovation and use by revitalization of the deteriorated historical and cultural immovable property.

Evaluation of this constructed areas as site don't comply with the principles defined in the law. It was decided to canceled due to the fact that Registered of Immovables within the borders of Maltepe Municipality as 2st and 3st degree site don't compliance with the law. This decision has been appealed by the respondent administration and the intervening deputy.The conservation as a whole of Dragos Hill and its surroundings which is an important place in the landscape of Istanbul is a right decision in terms of conservation principles(Council of State 6th Chamber,2002).

Decision based on the expert report ,which is not based on sufficient examination by ignoring the fact that Removal of immediate environment from the boundaries of the site by the Administrative Court will be difficult to conservation, was not considered appropriate.

In accordance with paragraph (a) of Article 3 of the Law No. 2863 on Conservation of Cultural and Natural Poverty which is defined to refer to all assets on the ground, under the ground or under the water pertaining to geological periods, prehistoric periods until present time, that are of unique kind or require protection due to their characteristics and beauty(Council of State 6th Chamber,2002).

According to Article 7 of the Coastal Law No. 3621 "Where public good necessitates and with the resolution of the application structure plan, lands can be acquired through filling and desiccation by considering the ecological features of seas, lakes and rivers" due to the fact that It is clear that these lands can not be qualified as natural assets above-mentioned(Council of State 6th Chamber,2002).

For this reason, according to the decision which is subject to appeal no: E. 2002/1652 K. 2003/3386 T. 29.5.2003 of the Council of State 6th Chamber Part of 2st degree of the natural site area is approved and Part of 3st degree of the natural site area has not been approved. It opens the way for the reconstruction of a demolishing registered of structure.

These two adjudications will be evaluated; According to Law No. 5366, urgent expropriation is required to be made. So that, as mentioned in the regulation's article 24, these expropriated ownerships are marketable to third parties and this creates a situation against public interest. And in the other case a situation related to the Law No. 2863. By lowering the grade of the 1st degree natural site, It is requested that these areas be permited to build. This ıssue is against this conservation. For this reason, the Council of State canceled the decisions in accordance with the laws.

4 CONCLUSION

The majority of Turkish cities have lack of upper scale plans; therefore, they are not ready for point projects. No. 5366 Law is completely a framework, which consist of only nine article and left to local municipalities. With this legislation, new conservation decisions are created peculiar to regions and the resell of expropriated areas after regulation became a current issue(Url-7).

Reviving desolated historic centres and traditional residential areas around them constitutes a very important problem. These areas are under a heavy migration pressure. The changes made in Conservation Law in 2004, socio-economic values, renewal and collaboration have started to be handled with conservation. Nevertheless, after almost 11 months from these changes with No. 5366 Law, conservation concept has been pushed into background. While planning is abolished, renewal at building scale and expropriation concepts are highlighted. By this way, No. 5366 Law, which breaks off the integrity of site areas and historical spaces, has become a debatable issue even before its implementation (Tekinbaş,2008 and Url-7).

In this context, Historical Peninsula where this law has been first implemented has faced urban renewal projects, which ignore master plan.

Municipalities evaluated the opportunities which comes with No. 5366 Law in 2005 and they take serious steps for producing and implementing "renewal projects" under the name of "conservation projects". These projects is the Sulukule renewal project, which ignores the socio-cultural aspects of conservation and foresees the dislocation of Romany and culture living in Sulukule for more than a thousand years. New projects such for Balat is added day by day. Treating proprietary constructions in the areas which should

be protected within the scope of the law projecting “renewing” and trying to do it by overcoming the restrictions which make transformation difficult cause lots of problems(Dinçer,2008).

The most important problem is that focusing on physical interventions neglecting research about socio-cultural structure.The main problem in renewal projects for such as Tarlabaşı and Sulukule, which are the most important historical places of Istanbul is that, they do not have a plan. In an area that has lack of a conservation plan does not provide a planning hierarchy or planning process.

In no. 5366 law economic and especially social situations are ignored. Instead of boards, municipalities prepare Conservation Development Plan but organization of these plans delayed. When an application is performed without a plan, it creates wreckage. The expression of “Law On Renovating, Conserving and Actively Using Dilapidated Historical and Cultural Immovable” results an incomprehensibility. Will it renew or conserve? (url-7).

Instead of conserving cultural assets in site areas via its complete historic, cultural and natural features, no. 5366 law foresees changes in property, social and physical renewal, usage of different user with different functions. As a result one can see that no. 5366 Law On Renovating, Conserving and Actively Using Dilapidated Historical and Cultural Immovable Assets considers no.2863 Law on the Conservation of Cultural and Natural Property as an obstacle and tries to surpass it.

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ID 1733 | ENVIRONMENTAL VERSUS URBAN PLANNING AND MANAGEMENT – A COMPARATIVE ANALYSIS BETWEEN METROPOLITAN AREAS OF FORTALEZA (BRASIL) AND LISBON (PORTUGAL)

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1 THE METROPOLITAN AREAS IN BRASIL AND IN PORTUGAL

The process of industrialization in Portugal, if compared to the rest of Europe, occurred belatedly, coinciding with the same period in Brazil, in 1940, 1950, 1960. During this period a large number of people migrated from the countryside to the major cities in search of better living conditions, and settled in the territory, in a continuous process for decades.

The public authorities' actions were quite limited in these two countries. However, in Lisbon between 1935 and 1948, one third of the city was expropriated by initiative of Duarte Pacheco, then Minister of Public Works and Speaker of the House in Lisbon. The centralizing policies comprised a strong territorial intervention in a period of intense population growth, the city was endowed by planning instruments that allowed to tame urban expansion. In Portugal until 1965, the public administration took over exclusively the planning and production of urban land, acting with some urbanistic coherence.

This fact was not observed in Brazil, considering that the instruments of urban management were created after the enactment of the Federal Constitution in 1988, decades after the great immigration. Thus, the population that migrated from the hinterland into the Brazilian state capitals, for the most part settled in remote areas, far from any infrastructure, often occupying conservation or risky areas in the proximity of railways or next to flammable activities.

The growth of the industrial economy and urban lifestyle sought by the vast majority of the world's population produced a dense urban network, comprised of municipalities linked by economic interactions. In this context Brazil's Federal Government created, through Federal Act No. 14, of 08 June 1973, nine metropolitans regions in Brazil: Fortaleza, Recife, Belém, Salvador, Rio de Janeiro, Belo Horizonte, São Paulo, Curitiba and Porto Alegre. In Portugal, the metropolitan areas of Lisbon and Porto were created two decades later, through Act No 44 of 2 August 1991, amended in 2003 (Law 10/2003).

The survey was conducted in the Metropolitan Areas of Lisbon and Metropolitan Region of Fortaleza despite their different economic, social, cultural, environmental, and urbanistic conditions, these areas have some similarities and both are coastal and comprise an equivalent number of municipalities. Moreover, they are the most densely populated areas in each country.

1.1 THE METROPOLITAN REGION OF FORTALEZA

Fortaleza is a Brazilian municipality, capital of Ceará State, located in the Northeastern portion of the country. It is located on the Atlantic coast, with an average altitude of sixteen meters, with 34 km of beaches. Fortaleza has an area of 313.140 sq. km and an estimated population of 2 609 716 inhabitants in 2016, along with the highest demographic density among the capital cities of the country, with 8 334.0 inhabitants per sq. km. The climate is tropical, hot, with an average annual temperature of 26.5°C. According to IBGE (Brazil's Census Bureau), the metropolitan area of Fortaleza boasted a GDP of R$ 80.4 billion in 2014 (corresponding to 8343€ per capita). This number has placed the Metropolitan Region of Fortaleza (RMF) as the third richest in the North-Northeast, behind Salvador and Recife - and the 11th in Brazil.

According to Ugeda Junior (2014), urbanization in Brazil occurred in an accelerated pace, even in the regions where the industrialization process was not so intense, as is the case in Brazil's northeastern

region, plagued by long periods with no rainfall, known as "droughts". In this region people are constantly migrating to the capital, in search of subsistence, which contributes to an increased population, as is the case of the city of Fortaleza.

In 1973, the city of Fortaleza, together with the municipalities of Caucaia, Maranguape, Pacatuba and Aquiraz constituted Fortaleza Metropolitan Area – RMF, with an overall population of approximately 1 million people. In 1991, RMF already had 2,292,524 inhabitants and in 2010 it exhibited a population of 3,615,767 residents. Currently it boasts four times the initial population, 4,019,213 inhabitants, of which 2,609,716 live in the city of Fortaleza, plus the eighteen municipalities that integrate RMF, known as the Great Fortaleza. It is currently the most populated area in northern and northeastern Brazil and ranks as the fourth largest metropolitan area in the country, and the 131th largest urban area in the world (Wikipedia).

Over the years one may observe that investments in urban mobility and the creation of new economic centers in the metropolitan area changed the economic and social dynamics, allowing for a greater balance in the relationships among the cities that make up RMF. The participation of the city of Fortaleza in the metropolitan area in 1970 was 82.75%, and in 2016 it dropped to 64.93%.

According to Souza (2015), the metropolis spread along with the process of industrial dispersal in neighboring municipalities of Fortaleza. First in the municipality of Maracanaú, following the creation of the Industrial District established in the late 1960s. As a consequence several housing complexes emerged, with the encouragement of housing policies, which corroborated the formation of a real estate metropolitan axis in tandem with the interests of the productive metropolitan axis.

The RMF municipalities are integrated by state and federal highways, which shape the road system, as the main transportation mode used by population in the municipalities. The metro line, completed in 2012, connects Fortaleza with only two of the cities that comprise RMF, Maranguape and Maracanaú, the largest cities after Fortaleza.

According to the Brazilian Census Bureau (IBGE 2010), water supply and sewerage networks in RMF, responded to 87.42% and 49.9% coverage, respectively in 2010, and since then there have been no substantial modifications in this scenario.

Fortaleza Metropolitan Area, currently with three times the original number of municipalities, has been losing institutional strength, until it was completely excluded from the plans of the State of Ceará, which operates with specific and unarticulated projects. There are no regional land use plans, and out of the nineteen municipalities that integrate Fortaleza Metropolitan Area, there are still four municipalities with no Master Land Use Plans.

The Metropolis Statute, approved by Federal Act No. 13,089, of 12 January 2015, establishes general guidelines for planning, management and implementation of public initiatives of common interest in metropolitan areas and in urban agglomerations created by the States. It also establishes the obligation to draw up and approve within 3 (three) years, the integrated urban development plan for metropolitan areas or urban agglomerations that were created until the date of entry into force of the law, through complementary state law, incurring the penalty of administrative improbity the governor who fails to take the necessary measures.

1.2 THE METROPOLITAN AREA OF LISBON

Lisbon Metropolitan Area (LMA) is equivalent to 3,015 sq. Km, has a maximum altitude of 528m, and an annual average temperature ranging between the maximum of 21,3° C to 13,1° C. The Metropolitan Area of Lisbon is home for the centres of decision of the country's economy, with a GDP of 64,010 million euros, 22.8 thousand euros per capita, representing roughly 37% of the national GDP and employing approximately 1,316 thousand people (29% of employment in the country), expressing an apparent labour productivity 1.3 times higher than that of the country as a whole (Lisbon, 2016).

Since the 20th century, LMA has been a continuous growth of the population in the country having nowadays more than a quarter of the country population (15% in 1940, 22.4% in 1970, 28.1% in 2011). The population value recorded in 1981 was the highest achieved by the city of Lisbon. In the 1980s, with

the intensification of metropolization, coupled with a stagnation of housing supply in Lisbon, the capital loses about 18% of its population to neighbouring municipalities. In the 1990s the situation remained, despite an increase in housing supply, and Lisbon lost more than 15% of the population, confirming a trend of population loss (REOT - LISBOA).

The rising price of real estate in Lisbon, as LMA expanded in the periphery, reinforced the migration to more affordable suburban land and housing. On the other hand, Lisbon has gradually lost population and is currently stabilized in the 550,000 inhabitants.

Lisbon is the traditional and symbolic centre of the LMA, which is the motor of the region's economy. The city daily sees the number of its users increasing from 547,000 to 925,000 people, a result of the commuting movements of home and work. Home-school. The number of people entering the city daily corresponds to 425,747 and the number of people leaving the city daily is 47,521, resulting in a balance of 378,226 people entering Lisbon (LISBON, 2016).

Lisbon and its metropolitan area have a very wide and modern transport network. The various modes of transportation, and their infrastructure, are arranged so as to substantially reduce automobile traffic in the metropolitan area, especially in its centre area. Circulation in the city of Lisbon is fast and efficient, for users within the city and people coming from the outskirts. The subway, trains and vehicles on light rail are the most important public transport.

Two bridges connect the city to the south bank of the Tejo river: Ponte 25 de Abril that connects Lisbon to Almada, inaugurated in 1966. And Ponte Vasco da Gama, with a length of 17.2 km,[4] the longest bridge in Europe and the fifth longest bridge in the world, which connects the Eastern area and Sacavém to Montijo (Wikipedia).

In LMA the population served with systems for collection and drainage of wastewater reaches around 91%, while the population served by the treatment systems is roughly 75%. According to INE, in the municipalities of Amadora, Cascais, Oeiras and Lisbon, the rate of coverage, both for the collection and drainage systems, as for wastewater treatment plants is 100 %. In the counties with lower service coverage for collection, disposal and treatment, the infrastructure is being completed in order to meet the current needs for wastewater treatment. (CCDR LVT, 2009).

The Regional Territorial Plan for Lisbon Metropolitan Area was prepared in 2002 by Central Government. The intermunicipal plan it is not mandatory however, all the municipalities that integrate LMA have Master Land Use Plans since 1992, and some have already been revised after 10 years. Only few of them have their Status Reports on Spatial Planning – REOT - finished.

2 URBAN AND ENVIRONMENTAL PLANNING AND MANAGEMENT

The urban policy envisaged in the Constitution of the Federative Republic of Brazil, regulated by the City Statute, as well as the Regional Planning and Urban Policy envisaged by the Constitution of the Republic of Portugal, and regulated by the Basic Law of Public Policy, Spatial Planning and Urbanism, granted extensive powers to municipalities to promote the adequate land use, establishing guidelines that govern the use of urban property for the collective good, the safety and well-being of citizens, as well as the environmental balance throughout the territory.

In both countries, the control over urban development does not involve the possession of the land by the public authority. When it comes to occupancy of land, a limited natural resource, we are faced with the issue of the distribution of this important commodity, which happens in a very disproportionate way, particularly in Brazil, since the private sector becomes the main actor responsible for the transformation and production of urban land.

During a period of about 30 years, the Portuguese cities had an urban growth similar to that of Brazil, in which the private sector is charged with the production of urban land, and with the subdivision operations and the construction of infrastructure, causing a dysfunctional growth, guided by operations that do not comply with any development plan. This finding resulted in significant alterations in urban planning in Portugal.

2.1 PLANNING AND MANAGEMENT IN FORTALEZA

In Brazil, out of the instruments provided by the City Statute, the Master Plan is the basic tool for city planning and urban management, through an urban policy integrated with the city planning system. The multi-year plan, the budget guidelines act and the municipal budget law should be guided by the fundamental principles, general objectives and strategic priorities contained in the Master Plan.

The Master Plan for the Municipality of Fortaleza (PDP), Law No 62 of 02 February 2009, sets out the principles and objectives of urban policy, guidelines and strategic actions. To comply with the guidelines for regional planning, the territory was subdivided into Urban Macrozoning and Environmental Protection. The city of Fortaleza is considered as 100% urban, excluding the demarcations of Macrozone of Environmental Protection, intended for the conservation of ecosystems and natural resources, subdividing into zones according to:

> *"I - the environmental systems consisting of the water network, the waterfront, mountain vegetation, remnants of vegetation, mangrove forests, riparian forests, dunes and permanent preservation areas;*
> *II - the morphological and typological characteristics of the built environment;*
> *III - the systems of environmental sanitation, installed and planned;*
> *IV - the mobility system;*
> *V - the areas of trade, services and industry;*
> *VI - public areas, green and leisure areas;*
> *VII - the urban infrastructure and public facilities;*
> *VIII - the areas intended for housing."*
> *In the quest for the attainment of the objectives, the PDP defines differentiated urban parameters for each of these areas, to be followed by the owners for new subdivisions, uses and land occupancy, and these procedures must still meet other requirements. For example, we have the parameters for the Preferential Occupancy-2, ZOP-2, which is characterized by partial availability of infrastructure and urban services and areas with limited availability of density; and the intensification of land occupancy.*
> *"Art. 85 - parameters4 of Zop 2 are:*
> *4The utilization index is one that, multiplied by the area of the land, results in the computable construction area.*
> *I – Basic utilization index :2.0;*
> *II- maximum utilization index :3.0;*
> *III - minimal utilization index :0.2;*
> *IV - permeability rate:30%;*
> *V - occupancy rate:60%;*
> *VI - occupancy rate of subsoil:60%;*
> *VII - Edification Maximum Height: 72m;*
> *VIII – Plot minimum area size: 125m ;*
> *IX - Minimum Front Size: 5m;*
> *X - Plot Minimum depth: 25m."*

In turn, the public managers should make use of the instruments for plan implementation, established by the City Statute to which the urban property must comply with its social function. Thus, Fortaleza Master Plan makes use of these instruments in accordance with the objectives proposed for each of the specific areas.

> *"Art. 86 - The following instruments shall be applied in the area of preferential occupancy 2 (ZOP 2),:*
> *I – Compulsory subdivision, construction and utilization;*
> *II – Progressive IPTU (property tax);*
> *III - Expropriation upon payment by public debt securities;*
> *IV- Right of pre-emption;*
> *V - Right to surface;*
> *VI - Granting right to build;*
> *VII - Transfer of the right to build;*
> *VIII - Urban operation in consortium;*
> *IX - Real estate consortium;*

X - Neighbourhood impact study (EIV);
XI - Environmental study (EA);
XII -Special Area of Social Interest (ZEIS);
XIII - Instruments of land regularization."

According to Muniz (2006), Brazilian cities are experiencing the abandonment of strategic planning. The urgency to heal the daily problems replaces the medium and long term planning. Another reason for abandoning strategic planning is the concern of the municipality annually to prepare its budget in order to guarantee funds from the federal and state government, as well as external financing for the execution of its projects, which are, in most cases, punctual projects.

The Statute of Cities, Master Plans and other urban legislation are instrumental that require a policy that implements and manages them. The absence of policies and the way to manage cities with a short-term vision render urban planning instruments inefficient, demonstrating extreme resistance in the acceptance by the public power that uses them in extreme cases to make feasible punctual projects.

The process of land use and occupancy starts with the licensing of the land subdivision (Land Subdivision processes), the procedure of dividing the land into legally independent units, with their own individuality, for purposes of edification, and can be done by subdivision and dismemberment. All subdivisions, should be integrated into the existing urban structure by connecting with the existing road system and the networks of public services, both existing and planned.

The quantification of areas to be donated to the municipality of Fortaleza, must comply with Law No. 5532/81, Codes of Works and Postures of the municipality, which sets out a total of 45% regardless of the activity and of zoning area in which the property is inserted, of which 20% will be intended for the street network, 15% for open areas (plazas, parks, gardens), 5% for institutional areas, and 5% for the land fund (housing of social interest), the latter may be donated at a different location.

In Fortaleza, the parceling of land has no relation with density, and is limited to an indication of the plots, the blocks, the road system and the areas to be donated to the state. In this stage, it should exclusively be informed the type of predominant use the subdivision is intended to; it is not necessary to submit any building design. The entrepreneur will carry out the approved subdivision and will be charged with the costs and construction of the entire infrastructure (except sewage treatment), but will not contribute for their maintenance. Finally, each plot in the approved subdivision is registered and notarized.

When the subdivision is duly registered, the entrepreneur will, in due time, assign use and occupancy of the property, and will define the activity and its size, provided that it adapts to the road system in which it is inserted and meets urban parameters for the area. It is common to have plot merging, approved normally with a minimum area, for the implementation of large-scale projects. It should be noted that once the project is approved and the building is erected, at any time a new use and occupancy may be approved, provided that the activity adequates to the road system, and meets the urban parameters.

Figure 1 shows the current scenario of a city portion inserted in Preferential Occupancy 1, proposed in the draft bill to be one of the Special Areas of Urban and social and Economic Dynamics - ZEDUS, which aims to introduce and/or intensify social and economic activities. This area is characterized by the availability of infrastructure and urban services and by the presence of buildings, not used or underused; and the intensification and acceleration of land use and occupancy. The scenario was devised using CityEngine software, with database of the city of Fortaleza.

The constructions, in their majority, represented in the color blue, are residential unitswith 1 to 2 floors. The buildings in yellow, are intended for commercial use, in general small stores. The color magenta depicts the public facilities, which are university, churches, hospitals, schools.

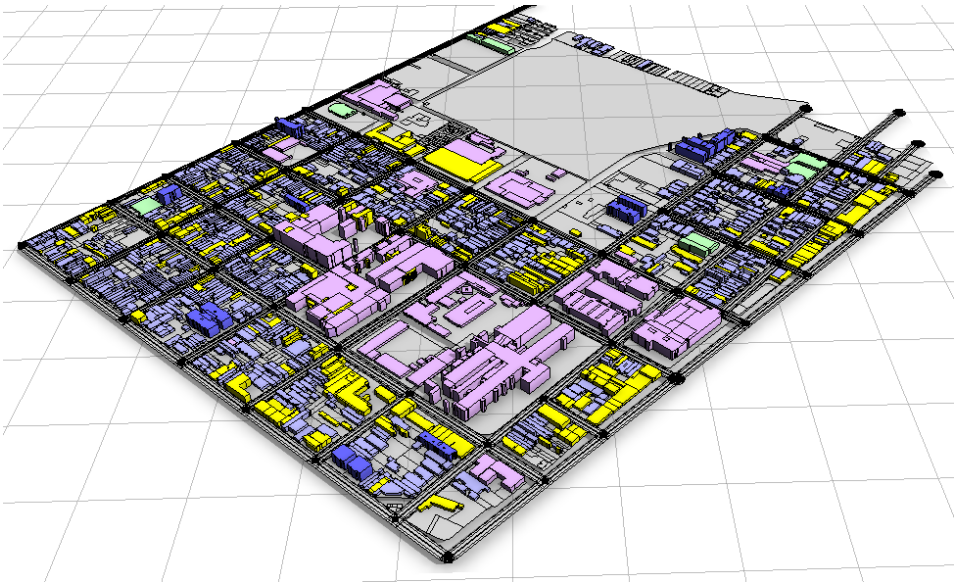

Figure 1 – Existing scenario

A simulation was performed, using the maximum urbanistic levels, given the rules of urban planning, in which only the public buildings have been preserved. The plots for small dwelling units and stores were unified, to allow for large-scale housing projects, with heights ranging from forty-eight (48) meters to seventy two (72) meters, complying with the setbacks of ten (10) meters mandated by the legislation for this activity. As a result, we have a large concentration of residential buildings a common feature in the neighbourhoods of the city that have been the object of urban development. In this area, the groundwater level averages a 2.00m depth, thus there should be a lowering of the water table in this whole area.

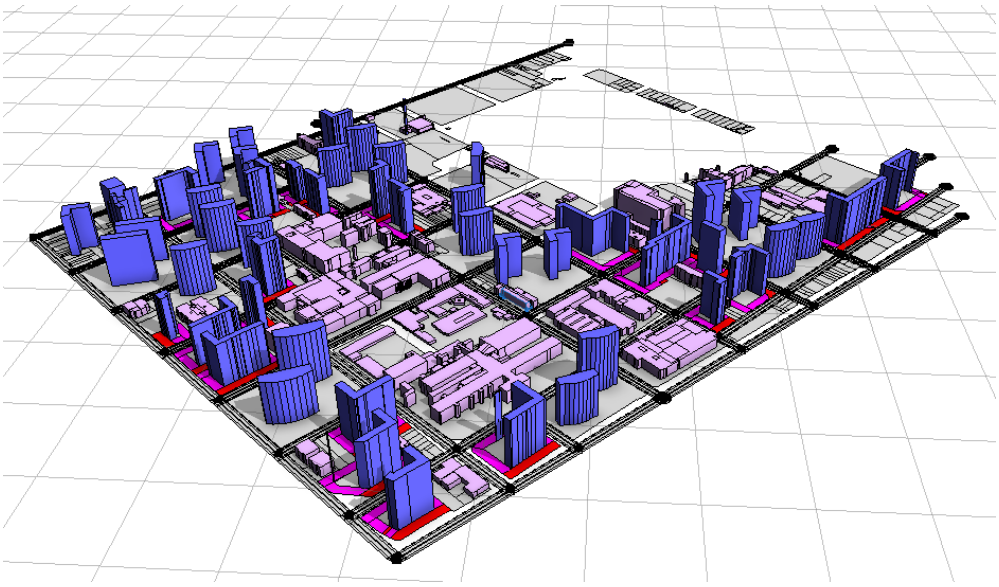

Figure 2 - Simulation

The large-scale initiatives illustrated in Figure 2, must be environmental licensing, in accordance with the environmental legislation Law nº 208, dated July, 15, 2015. The law classifies the works according to its size and its impact, and considers the conditions of the terrain, including the level of groundwater and the urban area in which it is inserted. For each type of work there are specific procedures for environmental licensing that are linked and have priority over urbanistic permits.

Environmental licensing is one of the instruments of the National Environmental Policy, Law no. 6,938, dated August 31, 1981, which allows the public to intervene preventively in carrying out works, plans and activities that could endanger the environment, requiring the prediction of potential damage and the

creation of conditions to minimize them, when unavoidable. It is, therefore, an instrument of preventive control, which can be accompanied both by the public and by society.

2.2 PLANNING AND MANAGEMENT IN LISBON

The establishment of a democratic regime in 1974 and the creation of the Local Authority after the enactment of the new Portuguese Constitution in 1976 was followed by a difficult period of legislation changes and planning practices at the local level. In the early 1980s it was obvious that the issue of clandestine occupancy and illegal urbanization had become a problem. It was clear that the legal system of production of dwellings at LMA was not coping with the influx of migrants from the hinterland and the former colonies, for whom urban growth was dysfunctional.

Only after the integration of Portugal to the European Economic Community (EEC) in 1986, in which a new law (DL69/90) mandated the municipalities to draw up Master Plans (PDM), a period of effective planning control, construction and urbanization supervision began. That Act was a milestone in Portugal, since it established that, for the municipalities to enter into contracts and programs with the government, with access to European funds for the implementation of infrastructure and facilities, they should have their Master Plan approved by the local planning authority.

After the new instruments were in place, one may observe the intervention of public administration, with the supervision and control of regulatory compliance with planning regulations for licensing. The city administration began enforcing the laws and regulations dictated by the plans. In general, besides these efforts in conducting the process, citizen participation was very limited.

The new Law of Bases of Public Policy, Planning, and Urban Development - LBPOTU defines the system of land use through land classification and dedication. Land dedication determines the use a given development is targeted for, and the distinction between rural and urban land use. Rural land is the one which, by their recognized vocation is destined for agricultural use, farming, forestry, conservation, enhancement and exploitation of natural resources, geological resources, or energy resources, as well as the land intended to become natural spaces, cultural, tourism, recreation and leisure activities or protection from risks, even if it is has infrastructure. Urban land is the area that is already fully or partially developed or built and, as such, has to have a territorial master plan for urban development.

Land dedication defines the content of exploitation by reference to the development potential of the area. The area of the Municipality of Lisbon, considers the degree of urbanization of land and the degree of morphological or typological consolidation, featuring the following categories: consolidated spaces and spaces to consolidate.

According to PDML (the Master Land Use Plan for Lisbon), land dedication is carried out through an integration of the following land categories, depending on the predominant use, mapped on the plan for dedication of urban space: central and residential spaces; areas for economic activities; green spaces; areas of special use for equipment; areas of special use for infrastructure; spaces of special use on the river waterfront.

In the Municipality of Lisbon, the Mayor's Office is charged with urban planning and urban licensing. Urban planning includes the implementation of the Municipal Master Plan, Urbanization Plan and the Detailed Plan, the latter may be by initiative of the public or private sectors and should produce regular reports.

The State, the Autonomous Regions and local authorities may acquire or dispose of real estate property to pursue the purposes of public policy. Among the plans implementation instruments envisioned in LBPSOTU, we have: the right of preference, right to surface, demolition, expropriation, and forced sale.

The operations of subdivisions may be carried out by public or private initiative. For the purposes of legalizing existing buildings, the operations of conversion of the Urban Areas of Illegal Origin (AUGI) will be a municipal initiative, or any modification of a subdivision licence issued prior to PDML entry into force. A Municipal Regulation approving the System of Incentives for Urban Operations with Municipal Interest is expected to pass in the future.

In 1998, the Law of Bases of Public Policy, Planning, and Urban Development - LBPOTU (Law 48/98, 11 August) introduced the principle of fairness in planning policy and urban development. In this context, equalization appears as a goal to distribute the benefits and costs of the plans among the owners and private promoters and local public administration. Decree 380/99, as Legal Regime of the instruments of Urban Management - RJIGT regulates the equalization and specifies the rights and duties with respect to plan implementation.

In the operations of subdivision, the land surface is intended for private use, and should comply with the rules for consolidated areas and areas being consolidated, which are specific to the Central and Residential Areas, and to the Areas of Economic Activities defined by law. The area is measured in sq. m., susceptible of construction, excluding those that will be transferred to municipal ownership, such as infrastructure, roads, green spaces, and areas of collective use. The donated areas are related to the built areas, therefore at this stage the architectural projects and building specifications must also be submitted for approval.

Land transfer to the municipalities for social facilities (due in the case of private subdivision projects), must comply with rules inscribed in each Municipal Land Use Master Plan or should follow what is prescribed in a general regulation that imposes approximately a quantity of land of 63sq.m. per dwelling for open and green spaces and other public facilities.

In the Master Land Use Plan of the Municipality of Lisbon, the Art. 88 says:

"1 - The parameters for measuring the areas to be transferred to municipal domain, for green spaces and collective use, in an area not covered by the detailed plan or per unit of execution that implement the equalisation mechanisms, are listed in the following table:

	Area to yield per 100 m2 area of floor
Consolidated spaces, urban polarities (POLU) and areas of economic activities to consolidate	30sq.m
Spaces to consolidate	50sq.m

Table 1 - Land transfer - Lisbon

However, among the 18 municipalities of LMA, there are a great variety of values for that parameter which is related, in part, with different land needs for social facilities and also with some competitiveness between municipalities struggling to attract investment.

Once approved the subdivision, it may be subjected to alterations, as long as they do not change the project's original concept. This ensures that the donated public areas are proportional to the density, ensuring the maintenance of the characteristics of the surrounding areas of the property, minimizing real estate speculation.

In Lisbon, the urban plans and programs are subject to an environmental assessment, in compliance with European Union policy 2001/42/EC. The preparation of an environmental assessment at the planning and programming levels ensures that environmental impacts are taken into account during the preparation of a plan or program and before its approval, thus contributing to the adoption of innovative and more effective and sustainable solutions, and control measures to prevent or reduce significant negative environmental impacts arising from the implementation of the plan or program (Decree-Law no. 232/2007).

According to Verocai (2002), since 1985, the European Union obliges all member countries to adopt and incorporate general standards of environmental impact assessment into their legislation. The goal was to solve a problem of competitiveness: the economy of some countries benefiting from environmental requirements that are less stringent than others. Until then, Portugal did not include environmental assessment procedures in the country's legislation.

The planning and environmental licensing is under the responsibility of the Portuguese Environmental Agency, which since 1985 is under the influence of the directives of the European Union, which took environmental management to a scale that was higher than urban management. The Municipal Land Use

Master Plans, the Urban Development Plans and the Detailed Plans are now subject to environmental assessment, thus ensuring the operations of subdivisions.

3 RESULTS

Planning and urban management in Fortaleza presents a flexible model of city, allowing changes in the use and occupancy at any time, after subdivisions occurred.. The small dwelling units make room for large projects, whenever there is an upgrade of an area due to infrastructure works, for example, which increases the buildings' value making them vulnerable to real estate speculation.

The lack of a demand for a definition of buildings in housing developments, makes this type of transaction a simple procedure, favouring a rapid growth of the city's urban mesh, including the areas devoid of sanitation infrastructure. In Fortaleza and in its metropolitan area, the lack of such infrastructure produces serious environmental impacts. Wastewater does not receive adequate treatment in places where there is no public collection and often they are discharged in lakes or rivers, thus polluting the environment. In poor areas, wastewater accumulates next to the housing units, and cause disease outbreaks and contaminate the resident population.

The public areas transferred at the time of the subdivision of land operations in Fortaleza and Lisbon under different rules, let's look at their application in an area of 10 Hectares:

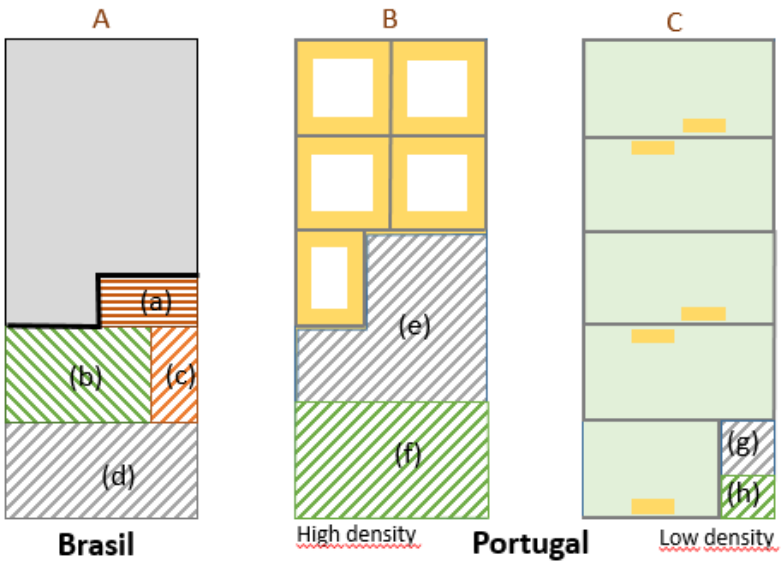

Figure 3 - Different quantities of land dedication which is required for the approval of the development by the local planning authority

Figure 3 illustrates a subdivision in Fortaleza. The remaining area is 55% and the area to be transferred to the municipality is 45%, where "a" corresponds to 5% of Land Fund, "b" corresponds to 15% of Green Areas, "c" corresponds to 5% of Institutional Area and "d" represents 20% of Road Network.

Plates B and C of Figure 3 illustrate an area to be subdivided in LMA (considering the rules of the general law) in areas with high density (about 80 dwellings/Hect) and low density (3 dwellings/Hect), respectively, in which the areas to be transferred are proportional to the built area, being 35 sq.m/120sq.m for Social Facilities 28m2/120m2 for Green Spaces. In drawing B, the areas assigned "e" and "f" are 52.5%, with the remaining area of 47.5%. In drawing C, the areas "g" and "h" totalling 5%, and the remaining area are equivalent to 95%.

Land donations in Fortaleza are equal to those of Lisbon, when they occur in areas of high density; however in Fortaleza the utilization index in some areas can reach a value 3.0, which means that it can be built three times the land area, while in Lisbon, the utilization index does not exceed the value of 1,5. Thus, the areas granted in Fortaleza are undersized when compared to those in Lisbon, especially when the neighbourhoods increase in value and go through subsequent changes of use in buildings.

In Lisbon, the availability of infrastructure in the municipality, the unchanged density and characteristics of buildings in areas already built, the predictability of density in other areas favour a more accurate urban planning. The plans and programs are subjected to environmental assessments, which safeguards the operations of subdivisions, and it is not necessary to issue an individual environmental license to each building.

The urban planning, carried out in a 1:20,000 scale in Brazil, does not distinguish natural characteristics of the terrain, when making the definition of urban and zoning parameters. In turn, the lack of a definition of activities, their size, building typology and urban form, in the Land Subdivision Processes hamper the environmental assessments and make extremely difficult any planning tentative to control / guide or influence a more general and comprehensive urban form. Environmental licensing is done separately for each large size development, not allowing for an integrated larger scale view, which is essential for the analysis of environmental impacts. Lowering the waterbed in a plot may not cause consequences, but on a larger area it may cause irreparable environmental impacts, as well as damage in surrounding buildings, as is the case of Fortaleza, in which public services, such as hospitals and universities are in place.

As a result of the transformation in regions that have experienced real estate appreciation in Fortaleza, one may observe a large concentration of residential buildings, shaping a common scenario in the neighbourhoods of the city, once the adequacy of activities is related to street classification. The 10-meter setback requirement for these large-scale developments creates private leisure facilities and reduces the need for the use of public spaces, resulting in a loss of identity of the region and decreased community interaction.

In Lisbon, the buildings are approved in tandem with the operations of subdivisions and are under the responsibility of the developer, therefore the areas to be subdivided become smaller than in the city of Fortaleza. The smaller the area of urban intervention the greater the accuracy of planning and distribution of public areas and the best is the management of these areas.

The planning models of the municipalities that comprise the metropolitan areas have similar urban planning systems and environmental issues as those of the capital cities, following national guidelines. The legal and licensing procedures are similar in Lisbon and Fortaleza, thus exacerbating the urban problems, and causing environmental damage in an even larger scale.

4 CONCLUSIONS

Lisbon metropolitan area and the metropolitan area of Fortaleza present historical, economic, social, environmental, and geographic differences related to the integration with their municipalities, but the comparison of these two areas allowed for an understanding that enhancing the integrated urban planning and environmental management will result in a more balanced relationship between the cities that integrate those areas.

The low investment made in Fortaleza Metropolitan area reflected quickly in the reduction of the participation of Fortaleza in its metropolitan area, with a trend to a slight drop in population growth in the metropolis. In Lisbon, the population is currently stabilized, which in turn intensified the economic and housing activities in the neighbouring municipalities, thus demonstrating how Portugal responded to the great immigration caused by industrialization, which occurred in the same period in the two countries; Portugal is ahead in planning and urban management when compared to Brazil.

There are great cultural differences despite their common origin, in Brazil cities are recent and seem to have a stronger liberal attitude in terms of urban control, perhaps due to US proximity and cultural influence which makes a low preocupation to the control of urban form. Moreover there are the very high migration flows, from the rural interior to cities and consequently, the difficulty to control land use and respond to the social needs of affordable housing producing it very quickly, in short periods of time, by local authorities or private entrepreneurs.

In view of those findings, we sought to deepen our research in the city of Fortaleza, where the lack of an integrated urban and environmental planning brings conflicts in the administration of the territory, by means of licensing, supervision and control. The territory of Fortaleza, which is a result of so many

subdivisions could bring down the scale of urban planning and prioritize interventions in areas where there is a greater trend for transformation and urban development.

The Master Plan of the Municipality of Fortaleza envisions the creation of Special Areas of Urbanistic and Socioeconomic Dynamics - ZEDUS, through a delimitation of portions of the territory for

the deployment and intensification of social and economic activities taking the local diversity into account, and pursuing the principle of sustainability.

The Master Plan recognizes the ZEDUS as areas with potential for the deployment of plans and strategic projects of socioenvironmental development. Therefore an opportunity for an integrated planning, in which the public authority can use the instruments for land management provided by the legislation, that is, expropriation, the environmental impact studies; instruments of land regularization; right of pre-emption; right to surface; urban operation in consortium; real estate consortium; granting the right to build.

The research will proceed with experiments in SIG3S, using software of Geographical Information Systems, including Arcgis, and urban simulation, Esri CityEngineTM, software for three-dimensional modelling expertise in urban environments, by means of survey data, on-site observations, technical studies and research in areas proposed by the administration to become ZEDUS.

The use of the GIS3D appears in this case as an important planning tool, allowing from an expert point of view:

- Improve the rules of construction and urban development defined in the plan, through simulation and its technical validation of its 3D impacts in the urban form;
- Improve the integration of these rules with environmental rules, which often involve restrictions on land use or construction;

And from the public participation point of view:

- Improve people awareness of the 3D effect of the proposed urban and environmental rules, allowing their comparison and verification with the current occupation (licensing) that is taking place.

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T16 | URBAN METABOLISM AND TERRITORIAL EFFICIENCY

CO-CHAIRS: MENDEL GIEZEN; SARA CRUZ

Cities have been growing not only in size and density, but have also been evolving towards more complex systems. Dramatic changes in the functioning of urban systems – referring to the physical environment, the patterns of flows, and type of practices – have had a strong impact on the structure and functioning of socio-ecological systems and the services they provide. There is an urgent need for a better understanding of the consequences of these changes on the environmental, spatial and social sustainability. One of the concepts that can help planners towards this better understanding is urban metabolism.

Urban metabolism can be defined as the processing of inflows and outflows of resources and energy within the city. These flows are determined by a combination of (1) the physical needs of a city and its infrastructure, (2) the opportunities and limitations that the natural and geo-physical environment poses to the provision of these needs, and (3) the socio-economic and political processes and power structures within the city. Understanding these conditions determining both supply and demand of resources is crucial to achieve more efficient and sustainable urban systems. Issues, such as uncertainty, diversity and multiplicity are, undoubtedly, aspects that strongly characterize our societies and communities and therefore should be taken into consideration when envisioning territorial efficiency through an urban metabolism perspective.

Despite all the research and debate around issues of climate change, natural resource management and sustainability in general, there is still a knowledge gap on planning responses to the complexity of settings, problems and challenges urban systems face. In addition, different issues reflecting contemporary and future societal challenges, such as, social justice, migration, economic crises and geo-political developments, all pose new shocks to these systems and are topics that need to be addressed. Therefore, some key issues we would like to explore in this track are:

- The potential of the concept of urban metabolism; the advantages and limitations/shortcomings of this approach, as well as ways of overcoming these limitations? Understand how this integrative concept can contribute to a more systemic approach in urban management and planning?
- What are the innovative instruments (tools and methods) developed to study urban metabolism, and how they can be articulated and contribute to spatial and environmental planning? And more general, how can we achieve a more comprehensive and integrative knowledge of the city's functioning in all its dimensions and components?
- How does the objectives of territorial efficiency and environmental justice come together, and what are the policies and strategies needed? How do local people and their knowledge contribute to environmental justice challenges, and what is their role in making spaces of dialog?
- How can we learn from new practices and experiences through bottom-up approaches to increase environmental efficiency?

This track aims to address these issues in accepting theoretically grounded papers of international research and experience, exploring the limits, as well as, the potential of urban metabolism and territorial efficiency in spatial planning.

ID 1525 | URBAN METABOLISM AND WATER-ENERGY-FOOD NEXUS, NEW CHALLENGES FOR SPATIAL PLANNING

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1 INTRODUCTION

Resource scarcity has been rising as an increasingly urgent matter in the last decades and particularly in the last years. A combination of factors such as climate change, population growth, rise of the middle class and deterioration of ecosystems contribute to increase the concern on present and future resource availability. Given the situation there is a need for new approaches to resource management in order to change the business as usual model and find sustainable and innovative solutions. To this end, the water-energy-food nexus (hereafter nexus) approach received particular attention in the policy and academic arenas. The rationale behind the nexus is to acknowledge and take in account relationships, synergies and trade-offs between water, energy and food sectors with the aim of finding sustainable and common solutions for the management of these resources (Hoff, 2011). Connections between water, energy and food undoubtedly exist in any circumstances and they occur more or less explicitly. Depending on how these connections are taken into account, they can become opportunities (best-case scenario), or if not considered they can become missed opportunities or develop in unexpected conflicts and problems (worst-case scenario). The nexus approach is still an immature and not well-defined concept (Allouche, 2015), but even so, researches from different academic fields and disciplines increasingly focus on it. Authors discussing on the nexus generally put water at the center of the debate and focusing on agriculture considering water and energy as inputs for the food production. Other researches argue on conflicts that rise for the use of water for agriculture and other purposes. Furthermore, research and analysis on the nexus are typically carried out on global, national, regional or river basin scale. In this panorama, where main focus is on agriculture and large scales, cities and their role on water, energy and food management have been neglected, which is quite bizarre considering the close connection between cities development and resources and the huge amount of energy and materials needed to sustain cities metabolism. Exploring an urban perspective on the nexus is even more important considering that more than a half of the global population is living now in urban areas and this percentage is bound to increase in the coming decades (UNPD, 2011). Developing of cities have been strongly linked to local resource availability for centuries, but this relationship between potential urban settings development and amount of resources available on site has weakened due to a series of events such as industrial revolution, green revolution, technological innovation and globalization (to mention most recent examples). This set of developments have enabled the development of larger urban areas that depend less and less on the local availability of resources such as water, energy and food. In this paper, we propose a path to follow in order to understand where the nexus of water, energy and food lays is in cities and which role it can have in turning cities in more resilient and sustainable systems. In doing so, simplified supply chains of water, energy and food are considered and decomposed in sequential steps to facilitate the identification of connection points between systems. This has the objective of making clearer which are the nexus aspects that more likely fall within urban areas, which is the domain of urban policies and urban planning.

2 FOCUS ON CITIES

Cities are the center of human development and global growth. More than 80% of global GDP is generate in cities (World Bank, 2017) and, despite they occupy around 1% of the Earth's surface, they host more than a half of the world's population. This concentration of activities makes urban areas the greatest consumers of natural resources. The need for linking urban development with sustainable development is well-established and recognized worldwide, although the operationalization is far from ideal. The New Urban Agenda adopted at the Habitat III conference held in Quito in October 2016 set out principles for sustainable urban development, maintaining a close link with what is indicated by the Sustainable Development Goals. The New Urban Agenda often refers to efficiency and reduced consumption of resources in cities and, among other things, there are specific references to water, energy and food. In particular, the New Urban Agenda aims to ensure food security and nutrition strengthening food system

planning, equitable and affordable renewable energy fostering energy efficiency and use of clean resources, access to affordable drinking water and sanitation promoting a sustainable use of water along all the water cycle. More generally the New Urban Agenda commits to reinforce the sustainable management of resources and promotes the local provision of basic goods and services such as water, energy, food and other materials, which usually rely on remote sourcing and thus increasing cities vulnerability to supply disruptions. Furthermore, it promotes "[…] the coordination of food policies with energy, water, health, transport and waste […] and other policies in urban areas to maximize efficiencies and minimize waste[…]". The New Urban Agenda asks for an "enabling environment" to be implemented. In the document one can distinguish a set of factors such as economy, laws, national urban policy, institutions and systems of governance, which try to control urbanization forces to achieve equitable growth. On the other hand, there are factors such as urban planning, local fiscal systems and basic services and infrastructures, which are more operational. Despite the New Urban Agenda is not a binding agreement, it is still important that the global vision on the future urban development is linked to sustainability principles and resource management plays a central role in it. Although not always explicitly, sustainable urban planning has been concerned about resource management. Agudelo-Vera et al. (2011) synthetically, but carefully, described this connection between sustainability and urban planning and its evolution in history. Furthermore, they conceptualized the link between resource management and urban planning in a sustainable development framework. The paper revealed that resource management and urban planning evolved separately because they faced different priorities. On one side, resource management deal with the demand for resources, on the other hand urban planning copes with increasing quality of life in cities. Urban planning could play a central role in sustainable development, but to do so, it must go beyond its traditional tasks and engage with different fields and sectoral planning. If resource management is a key connection between urban planning and sustainable development, what is the role of the water-energy-food nexus and urban metabolism approaches in the planning and transformation of our cities? Approaching the nexus from an urban perspective means to reconsider the cities role on the global resource availability. Considering and taking action at the urban-local dimension has the double advantage of improving the internal efficiency of the "city system" as regards resource management and it might reduce cities dependency on external flows and their negative impact on hinterlands and global resource availability. New challenges raised by the nexus approach are necessarily part of a global-local dialectic (Giatti et al., 2016). Water, energy and food security are global challenges, but it is necessary to identify analytical and geographical framework in order to implement actions able to contribute to greater systemic efficiency within the local-global dynamics. Independently from the scale chosen (city, community, river basin, country, etc…), it must be considered as an open and self-organizing system. In this case, one must recognize the system interdependence with other systems. It is therefore impossible to conceive all the elements of the nexus between water, energy and food as part of a single city. In this way, analyzing and taking action in an integrated way at the city scale requires to be able to recognize that sustainability is inherent to connections and dependences to external means. Once the territorial scale has been defined, optimization and efficiency should be sought within the object of analysis. Nevertheless, results must take into account impacts and external dependences. Decision-making on nexus issues is inevitability characterized by multi-level and multi-sectoral governance, which implies the involvement of a wide variety of actors. The nexus approach further complicates the multi-level governance, already very articulated, by adding complexity and indispensable new arrangements between sectors and supply chains concerned with water, energy and food (Giatti et al., 2016). Sustainable urban development can be achieved only through an integrated approach that meets the various dimension of urban life (environmental, economic, social and cultural). In the same way, the nexus can be operationalized at the urban level combining measures on economic development, social inclusion, education and environmental protection with physical urban transformation (urban planning domain). Furthermore, such an approach calls "[…for strong partnerships between local citizens, civil society, industry and various levels of government…]" (European Commission, 2016). Therefore, urban planning plays a crucial role in the implementation of water-energy-food nexus at the urban level, but a strong cooperation with other urban policies and sectoral measures is necessary. Depending on the current configuration of water, energy and food supply chains and the different objectives for the future development of cities, there are a number of different opportunities to affect the water-energy-food nexus for urban planning and urban policies.

3 GOING ALONG THE SUPPLY CHAIN

In order to identify areas of intervention and understand the flow of resources, it is useful to visualize, albeit simplified, the water, energy and food supply chains and their components (Fig. 1). Every supply chain consists of nodes and connections that may or may not be associated with nodes and connections of other supply chains. The water supply chain, which is embedded in the hydrological cycle, may be different depending on local conditions, but it will normally include collection, treatment, distribution, consumption and wastewater treatment stages. The energy supply chain is composed of energy sources, generation/production, distribution, consumption, emissions stages. Furthermore, the food supply chain may differ greatly from case to case, but it is traditionally composed by production, processing, distribution, consumption, food waste management. Understanding resources supply chains is essential for operationalizing both urban metabolism and nexus approaches. Supply chains changes from context to context and they interest urban areas in different ways and at many levels of the chain. Local urban authorities are therefore able to take action only on certain segments of the supply chain by implementing urban policies and urban planning practices. We here identify some of these fields of action.

3.1 FOOD IN URBAN NEXUS

The food sector is heavily dependent on water and energy inputs along all the phases of the supply chain. The level of consumption of water and energy varies in every phase and depends on factors such as kind of product, technologies and techniques, climate, culture and behaviour, regulations. Despite the differences between countries and cities, the energy consumption in the food sector counts for about 26% of final energy consumption in EU and the energy embedded in food products changes along the supply chain (European Commission, 2015). The energy embedded in the food consumed is distributed as follows: production of food (agriculture and breeding) counts for 33%, 28% processing, 9% logistic, 11% packaging, 13% consumption, 6% waste management and disposal. Dealing with food issues in cities encounters a first major obstacle, food has not been considered an urban issue neither in people's mind nor in urban agenda for a long time. On the other hand, the urban dimension cannot be neglected any longer. Although food has been forgotten by urban planners for a long time on the pretest that it is a subject associated to rural planning rather than urban, it is also true that food is related to many other sectors such as land, transport, social justice, public health, water and energy, which are of main interest for planners (Morgan, 2009). The food system is a quite large matter that comprehends a set of connected actions (Pothukuchi and Kaufman, 2007), and each of these stages has a different level of connection with urban planning and the urban dimension, furthermore they have distinct impacts on water and energy sectors.

3.1.1 URBAN AGRICULTURE AS GREEN INFRASTRUCTURE

Food production is not a function commonly attributed to urbanized areas, cities have indeed become more and more places of consumption rather than production. This has not been always the case, ancient civilizations survived through time also because of the proximity of food systems to urban settlements (Barthel and Isendahl, 2013). Despite the proven importance of local food systems in increasing the resilience of urban settlements, the bond between place of production and place of consumption has been fading. Lately, urban food come back in the political agenda due to events such as the 2007-2008 world food price crisis and an increasing interest by the civil society in initiatives such as urban agriculture and horticulture. Cities such as Belo Horizonte in Brazil, Toronto, London or Amsterdam turned this increasing interest in urban food policies. The city of Belo Horizonte has been a pioneer in the introduction of urban food policy a decade earlier than London did. Main goal of this policy was to tackle hunger and malnutrition, equal access to quality food through several programs such as subsidized food sales, food and nutrition assistance, supply and regulation of food markets, support to urban agriculture, education for food consumption, job and income generation. Although the importance of such programs, it is clear how they are geared to respond to social and economic needs in order to achieve food security whereas, instead, sustainability concerns such as relieving the pressure on water and energy resources are neglected or no expressly addressed. This is also the case of the Toronto Food Policy in which security, hunger and social justice are priority objectives rather than sustainability. That is because sustainability is a much more political issue that may not be welcomed by industry and agriculture representatives (Blay-Palmer, 2009). Urban food strategies have a crucial role in transforming the current food system.

Nonetheless, in activities such as urban and peri-urban agriculture, although ecological benefits are expressed both among motives and objectives, they are rarely considered at the design stage. This can be better understood with two classic examples of climate change effects in urban areas with an inherent potential through the lens of nexus thinking: urban flooding and urban heat island effect. Storm water is a major cause of flooding in urban areas and it is also a threat to human and environment health due to different pollutants transported by storm water (Barbosa et al., 2012). One of the main causes of urban flooding is the combination of extreme storm water events and impervious surfaces. The latter contribute to exacerbate urban heat island effects in some areas. It is thus clear how a different land management, which prefers permeable and green surfaces, may contribute to a better storm water management and to reduce the effects of heat wave in built-up areas. Scholars and practitioners identified green infrastructures as one of the possible (soft) solutions in response to this kind of problems. But following a nexus thinking, which seeks for synergies between water, energy and food, and that prefers solutions that incorporate a greater variety of co benefits, why should not we consider urban agriculture as a green infrastructure? Urban and peri-urban agriculture have the potential to be a challenging socio-economic activity, but at the same time, it can contribute to increase permeable surfaces, reducing runoff and lowering the urban heat island effect. In order to achieve such results more efficiently, the areas intended for food production purposes have to be identified according to a set of criteria. Despite this, re-thinking green infrastructures including food production purposes requires a considerable step forward in terms of research and understanding of the compatibility between different typology of urban agriculture, type of soil, and type of vegetation and ecosystem services that can be provided. In order to do so, urban agriculture initiatives cannot be considered in isolation and implemented randomly, which has been often the case until now, but they have to be part of a more extensive and broader strategy for green infrastructure planning. This can be reached only with regulatory framework and the political commitment of city authorities, which should lead the design process of an urban agriculture system across the municipal territory. Urban agriculture has evident and direct connections with urban planning such as transport sector, land use, economic development, housing, storm water management and other. Including urban agriculture in day-to-day city planning means, for example, to rethink zoning regulations and land use indicators to facilitate urban agriculture development in certain areas. Local authorities might set specific goals including, for example, the preservation of existing urban and peri-urban agriculture areas, conversion of a certain portion of municipal land (e.g. vacant lands) into food production areas, or establishing how much of the food consumed in the city should be produced locally. In this sense, inserting urban agriculture as category in the land use management may facilitate control of such activities, promoting the development of different urban agriculture typologies, each of which is more suitable for specific urban areas. Despite the potential of urban agriculture, it is very unlikely that cities have the capacity, farms, gardens, land or space to even get close to meet their own food demand. A study conducted on the city of Cleveland (Grewal and Grewal, 2012) demonstrated how using 80% of every vacant lot, 9% of every occupied residential lot and 62% of every industrial and commercial rooftop, the city of Cleveland can meet between 46% and 100% of Cleveland's fresh products needed depending on the vegetable production practice, 94% of poultry and eggs and 100% of honey. These kinds of results show how even post-industrial cities have the chance to become more self-reliant in food using proper typologies of urban agriculture. By the way, this can be achieved through massive transformations in cities which are unlikely to happen in the near future. Despite the scepticism in the vision of cities producing entirely their own food, urban agriculture activities can still have their role in bringing back food issues in cities putting them to the attention of city dwellers and encouraging the consumption of healthy and sustainable food, reducing also energy consumption due to long distance transportation. Furthermore, urban agriculture and local food systems more generally shall be considered and designed beyond the food production function, taking maximum benefit from other ecosystem services and to reduce pressure on water and energy resources. Although local food systems are often portrayed as the solution, a local-scale food system is not inherently more sustainable than a global-scale food system (Born and Purcell, 2006), much more important than the scale are the actors and agendas involved and it has to be less dependent on fossil fuel and chemicals fertilizers, occupy less greenfield lands and reduce the "food miles". Characteristics of the site are also very important, it is clear for example that trying to impose a food local system in arid territories could bring ecological benefits for the reduction of fuel in transport that would be outweighed by the need of large water inputs (Born and Purcell, 2006).

3.1.2 FOOD WASTE

Another segment of the food supply chain directly linked to urban areas lies in the food waste management and disposal. Food waste is one of the metabolic outflows of materials after consumption and transformation processes that took place in the city. Nexus thinking, on the other hand, recognizes waste food intrinsic value and the opportunities for more sustainable solutions that involve also the water and energy sectors. Every year around 88 million tons of food are wasted only in the EU (FUSIONS, 2016). This is not just an economic issue, but it implies some serious environmental impacts and it puts under a great deal of pressure limited natural resources. The “waste management hierarchy” proposes a hierarchical order of preference of waste treatment and disposal methods based on sustainability principles and environmental impacts. More specifically, there is the hierarchy for the bio-waste management, in which prevention is still the most desirable solution followed by recycle (preferably composting and anaerobic digestion), energy recovery (incineration), final disposal. Food waste prevention and reduction has a great potential in decreasing water and energy consumption. Encouraging a more efficient consumption of food will result not only in the reduction of waste flows volume produced by cities, but it will also have the effect of reducing food demand and thereby reducing inputs of food flows into cities. This will change the metabolism of cities, reducing also their ecological footprint, water footprint and carbon footprint. In fact, food flows are comprehensive of other virtual elements such as water, energy and nutrients (phosphate, nitrogen, etc.). The reduction of food production should lead to a reduced waste of water and energy with global environmental benefits. But there are also more specific synergies between food waste and energy. Embedded in waste there is a great potential for direct and indirect energy production. Different forms of energy come from a variety of renewable sources such as waste from dwelling, agriculture or industries (Kothari et al., 2010). In cities is more likely that a great portion of waste comes from dwellings (household waste) and a great portion of this waste is composed by food waste. There are of course different models to deal with food waste, and some of them treat food waste in order to preserve the highest value in it. However, even considering that other approaches such as reducing food waste production by changing consumer behaviour, nutrients recovery, compost production for farming purposes, alternative markets for low quality food (e.g. not meet aesthetic standards) or other forms of recycling could reduce significantly the amount of food waste, an unavoidable residual food waste is likely to still remain. According to nexus perspective and a closed loops model, this residual food waste can still become a valuable resource for energy production purposes. Incineration with energy recovery does not seem to be a noble end for food waste, but still it is a practice that provides a certain payback in terms of energy and it is a valid alternative to fossil fuels resources, especially considering decentralized local-based energy production systems. Amsterdam for example, is planning to abandon the domestic use of natural gas by 2050, switching to a centralized system of district heating working on a variety of different resources. Waste, and food waste in it, is already an important alternative source for the waste to energy incinerator that provide heat to 70000 houses of the city through the district heating system (DutchNews, 2016). If incineration still raise doubts and uncertainty regarding efficiency energy transformation, security and air pollution problems, other systems of producing energy from food and organic waste may be considered. The anaerobic digestion of food waste, for example, is a complicated process, which results depends on technology, composition of the waste and others. The composition of the waste is quite important for successful results, it is then fundamental that the organic waste is collected separately from the other materials in order to produce good quality biogas through anaerobic digestion process. Treating organic waste with anaerobic digestion rather than other alternatives, such as composting, has the advantage of producing biogas that has a high percentage of methane that can plays like fuel, composting on the other hand, produce biogas that contains a high percentage of carbon dioxide with no energy value (Curry and Pillay, 2012). More than that, what remains after the digestion process is rich of nutrients that can be used as fertilizer. But, despite potential benefits coming from anaerobic digestion, it is still not a common practice in urban areas. Despite food waste management should have a central role in urban sustainable strategies, urban planning contribution is rather limited compared to other urban policies. Urban planning can contribute to redefined areas intended to food waste management, identifying suitable areas for facilities and respecting criteria of security, self-sufficiency and proximity. At a smaller scale, urban planning can contribute to develop areas in which food management and urban agriculture are combined, but it must be done in strength coordination with other urban policies.

3.2 WATER AND ENERGY IN THE URBAN NEXUS

Water and energy, in addition to being central elements in the nexus approach, are also main flows to consider in urban metabolism assessment. In fact, they are a large proportion of cities inputs and, more than other materials, are essential for almost every activity. In urban metabolism studies, water and energy are considered separately most of the time, failing in highlighting connections between these flows which could otherwise bring out sustainable integrated solutions. The connection between energy and water flows in urbanized areas appears to be a little bit clearer compared to food related issues and it is strongly related to the infrastructure systems related to these resources. Water and energy are generally connected by a two-way kind of relationship, water use along the energy supply chain and, on the other hand, energy use along the water supply chain. Actions to reduce water and energy consumption can be taken along both the supply chains and they include introduction of new techniques and technologies, institutional arrangements, changing in regulations, involvement of actors, policies. Some of these solutions fall within the urban domain both with local and global effects.

3.2.1 WATER

Discussing about water and cities is important to make a first distinction between direct and indirect water issues as explained by Renouf and Kenway (2016). Cities directly rely on local/regional water sources to meet basic needs (drinking, cleaning, etc.) and productive uses (energy production, manufacturing, etc.) and they are usually supported by centralized urban water infrastructures that extend far from cities to exploit water supplies. On the other hand, cities have also a great impact on the indirect consumption of (virtual) water embedded in the products consumed such as food. While acknowledging the importance of both direct and indirect water issues, in this section we focus on direct water, which we consider closer to urban policies and planning domain. The water supply chain is heavily dependent on energy. Around 3 % of the electricity used in the US is, for instance, related to the water sector for pumping, treating and transporting activities and in some cases, it represents the municipality's largest operating expense (OECD and IEA, 2016). To reconfigure the urban water system in order to reduce the pressure on the energy sector is a challenge to be faced at different levels of the supply chain. Water utilities are main actors to be involved in the transformation of urban water systems since they manage different parts of water systems on behalf of national, regional or local authorities. Furthermore, they can play a main role in planning and manage urban water in coordination with urban planners. However, cities have also other opportunities to improve the water supply chain rather than leaving it entirely under the utilities control and this include the support of decentralized systems and grassroot activities. Energy conservation in the water supply chain can come from the combination of different activities at different points of the supply chain. Fields of action can be a compound of the use of alternative water resources with decentralized systems, infrastructure renewal, water conservation and alternative energy use. Since cities are increasingly dependent on imported water from far hinterlands, finding local alternatives such as storm water, rain water and reuse of wastewater can drastically contribute to the reduction of energy consumption and to make urban areas more resilient. Wastewater reuse is less energy-intensive than imported water or desalinization practices (although it must be considered on a case by case basis). The city of Los Angeles is a good example, in which has been proven that recycled water is less energy intensive than imported water from the California Aqueduct. For this reason, the Los Angeles Department of Water plans to increase the share of recycled water in water supply. Recycled water is a clearly viable solution for Los Angeles in which the imported water negatively affect the city energy balance (Younos and Grady, 2011). Other cities might not present the same characteristics and other water supply options should be considered. Besides wastewater, decentralized systems based on the reuse of storm water runoff (both for potable or non-potable uses) is an alternative to overcome energy issues due to water pumping on long distances and difficult topography. Rainwater harvesting systems, as well as reducing urban flood risk, are much more energy efficient than recycled water systems. In this respect, physical readjustments of the urban fabric are necessary and urban planning has a central role both in identifying suitable areas for implement decentralized systems and in the defining the best design criteria. When it is not possible to reduce the energy consumption of the water system, alternative energy use might be considered to reduce GHG emissions. Usually, particular attention has been paid on the wastewater treatment stage because the possibility of energy production from biogas and industrial symbiosis projects (e.g. between energy and water utilities), but energy alternative uses can be implemented along the entire water supply chain by the responsible water utilities. Energy needs of the water system can be met, for instance, through the implementation of renewable energy forms such as wind turbines or use of photovoltaic panels, which are

less water consumptive than fossil fuels. Nevertheless, more appealing and challenging for water utilities and providers is the potential energy embedded in water. Water itself, in fact, contains energy in form of thermal and chemical energy. Examples of water thermal energy is the use of surface water and groundwater temperature for both cooling and heating purposes (van der Hoek, 2011) depending on the period of the year. Other form of thermal energy is embedded in household or industrial wastewater. Part of the drinking water used in household is heated and leaves the house with a temperature that can be still recovered utilizing heat exchangers and heat pumps at different scales (single shower, building, sewage system, etc.). Similar utilization can be applied to heat wastewater streams coming from industries and other productive activities that heat water in their operations. Chemical energy recovery, on the other hand, comes from wastewater and is based on anaerobic sludge digestion and anaerobic treatment of wastewater, which produce biogas usable in both electricity and heat generation. Biogas is also a valuable resource for green gas production, which can be used in houses instead of natural gas or as fuel for vehicles. Chemical energy can also be recovered from drinking water, recovering methane from the drinking water processes. More explicit integration of water and energy (and waste) sectors demands for cooperation between utilities. Waste-to-energy plants and wastewater treatment plants can both benefit from exchange of flows with positive impacts also for the environment. Waste-to-energy plants can, in fact, burn biogas and sewage sludge coming from wastewater plants and produce energy in form of electricity and heat that can be directly used for the plants operation or delivered to the energy network (e.g. district heating) of the city. Utilities can be guided and encouraged to taking such initiatives by the public authorities, but cities have also other options rather than rely only on centralized solutions and they imply a greater involvement of urban planners, civil society and implementation of other urban policies. These kinds of solutions require paying particular attention to the spatial dimension, the link between different city functions, the proximity between potential producers and consumers of resources.

3.2.2 ENERGY

Local initiatives at the city levels on the energy sector are less likely to have direct effects on the local water cycle, mainly because a great part of energy and energy resources that are consumed within the city are instead produced somewhere else. It is here possible to use a similar rationale to that used for food sector. Taking action in the energy sector at the local level is more likely to have effect on water systems at national or global scale rather than locally. Different forms of primary energy production and power generation, such as oil and gas, coal, biofuels, thermal power generation (fossil fuel, nuclear, bioenergy), concentrating solar power, geothermal and hydropower, affect differently water systems both in quantity and quality terms (OECD and IEA, 2016). Other non-thermal renewables, such as wind and solar photovoltaic use very small amounts of water and for this reason they are much more suitable for the future of the energy sector that will have to be less dependent on carbon but also on water. These technologies use less water at the electricity generation stage, but they also have almost no water consumption for the production of fuel inputs and they have a minimal impact on water quality. Biofuels usually need of water for irrigating feedstock crops and for fuel transformation, but on the other hand, biofuels derived from waste products require no water for feedstock, since water is allocated to the activity of primary value such as food production. Wind energy, photovoltaic panels and biofuels from waste are all energy generation systems that help to decrease GHG emissions, but also reduce the pressure on water resources. Furthermore, PV and second generation biofuels from waste are suitable to be implemented at the local-urban level more than other renewable sources. Priority areas for the transition to renewable energy in cities are buildings, transport and smart grids (IRENA, 2016). At the building level is possible to act both with decentralized and centralized renewable energy production. Decentralized measures are focused on the building itself and the implementation of PV panels, thermal collectors and biomass heating systems for each building. On the other hand, centralized systems use renewable resources to produce energy, heat and cold to be supplied to buildings through energy networks (e.g. district heating network, smart grids, etc.). Buildings have the potential to change their status of the largest energy consumers in cities and become the most available urban resource thanks to the large potential of rooftop PV panels installations. Transport sector also counts a great deal of cities energy consumption, although it might change significantly between a city and another with great differences between high, middle and low income cities. It counts, for example, for the 53% of energy consumption in Mexico City, while it counts for 28% in Bologna (Italy) (UN-HABITAT, 2008). Projections show that energy demand for transport will increase further in the future, but fossil fuels cannot be the main source in the transport sector due to their impact on GHG emissions. At the same time, great investments in first generation biofuels will lead to

further stress water resources. Finding alternatives is therefore crucial and cities might have a key role as well. Within cities, transition towards more sustainable systems have to tackle both rail and road transport. Rail transport, trains, metro systems and light rails should be planned in order to rely on electric power. The same applies to road transport that also can count on biofuels and hydrogen technologies. It is important to note that initiatives must be supported by a certain degree of coherence. It is not standing the obvious to say that electricity used for transports must be generate by renewable energy sources. Biofuels are a good alternative, but it is important to distinguish between first and second generation biofuels in order to understand their potential both in nexus and "city" perspective. First generation biofuels (mainly biodiesel, ethanol and biogas) come from agricultural products such as crops and sugarcane and other commodities that are currently used for food (Naik et al., 2010). Although these are prevalent in the global biofuels market, they are source of conflict for the land destination and they put great pressure on water resources. Furthermore, they are not suitable, at least at the production stage, to be considered in urbanized environments. On the other hand, second generation biofuels are made of biomass not from edible feedstock and they largely consist of waste and lignocellulosic material (Naik et al., 2010). Second energy biofuels might be a valiant resource for energy generation in urban and peri-urban areas where there is a large production of municipal organic waste, in which food waste is a substantial part. It is clear that this kind of energy production will not be sufficient by far to meet cities energy demand, even considering only the transport sector, but cities are called to give their contribution in every field of sustainable development. Extending the area in analysis beyond the city's boundaries, and considering metropolitan areas is more likely to find a larger supply of local renewable resources. For example, The Metropolitan Region of Lille is a good example as it started in the early '90s to use half of the city's organic waste for energy purposes and to produce biomethane for use in public buses (GIZ & ICLEI, 2104).

4 THE ROLE OF URBAN PLANNING

Cities are great consumers of resources, but they also have the potential to reverse this trend and make a huge contribution to the sustainable development process, the only possible on the long term. Moving towards a more sustainable resource management at cities level will have effects at different scales. It is crucial to understand that exists a strong bilateral cause-effect relationship between global dynamics and what happens at the local level. And this is not different when it comes to resource management. Urban metabolism studies try to give a scientific dimension of how cities work and what impacts they have on resources. Indicators such as ecological footprint, water footprint and carbon footprint have also similar purposes, but they all fail at the operationalization stage. Change the metabolism of cities, reducing their impacts on global resources, but maintaining high quality of life and economic development is a major challenge. Water-energy-food nexus approach might help to give a common vision and a set of principles shared by departments, utilities and stakeholders engaged in resource management and that usually work in "silos". Local authorities are called upon to be leaders in this transition process establishing a clear vision for the future of cities and urban planners have an important role in this. Urban planning is the profession that more than others can coordinate the many factors involved in the transformation of the urban environment and its functions and it can support a fair process of transition towards a more sustainable resource management and city development, bringing together stakeholders and considering the prosperity of the entire population. In addition to this role of coordinator, urban planning in conjunction with other urban policies can act directly on specific fields of the nexus to improve cities resilience and sustainability. Identify the water, energy and food supply chains and their connections allow to distinguish areas of intervention in which urban planners can contribute and it helps to identify main actors that need to be consulted and involved. It is also important to acknowledge cities as open system and be aware of the dependency with other systems and the cause effects relationship between them. Planning departments and urban planners across the world have the skills to give a great contribution to the transition towards more sustainable cities. However, this is not going to happen without a close cooperation with other local stakeholders both from the public or private sector. Planning systems are different, they are subjected to different regulations and they have diverse degree of responsibilities on resource management issues. There are different dimensions in which spatial planning can be integrated and they have different impacts on city metabolism and the nexus. Spatial planning cannot be central in every aspect of the cities transition towards resilient and sustainable systems, there are many other tools that can be predominant in specific aspects (e.g. technology innovation, regulations and financial system among the others). We here focused just on certain areas of interest in which spatial planning is called to

give a significant contribution and we proposed a path to follow, which nevertheless need to be tailored to the specific cases.

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ID 1629 | BUILDING URBAN PLANNING FOR A SUSTAINABLE FUTURE THROUGH URBAN METABOLISM

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1 INTRODUCTION

In the last years, we have been tackling such challenges as rapid population growth, increased materials and energy consumption, growing resource scarcity, climate change, loss of biodiversity, increasing social inequality and poverty (Bina et al., 2016). Cities are the centre of all these challenges, as world population is more and more urban: some 70% of the world's population in 2050 will live in cities (UNDESA, 2015). As a consequence, the combination of urbanization and sustainability results one of the crucial challenges of the coming years (Girardet, 2003; Agudelo-Vera et al., 2011; Musco, 2011). Understanding the relationship between the city planning, urban life style, and the availability of necessary environmental, social and economic resources, is only the first step to build a sustainable and resilient future. City and urban planning become respectively a place and a privileged tool for achieving these two goals (Bulkeley & Betsill, 2003; Pickett et al., 2013).

In recent decades, Urban Sustainability (US) and Urban Resilience (UR) have been two concepts widely studied, both theoretically (WCED, 1987; Jabareen, 2008) and practically (Jabareen, 2006; Jabareen, 2013; James, 2015). However, despite the world scientific community shares a number of issues regarding the achievement and development of sustainable and resilient cities (for example: integrated approach and management, green cities, dense and compact cities, use of renewable energy sources, equity and participation, etc.), it has not yet defined a unique methodological framework. In this regard, in recent years, a series of studies have been developed on the Urban Metabolism (UM), which could represent the nexus able to develop an integrated approach to planning, capable of contributing to the achievement of both US and UR (Kennedy et al., 2011; Thomson & Newman, 2017), also in ecological terms. Nevertheless, these studies remain very generic in connecting UM with spatial planning, and in most cases dealing only with very specific themes like energy and transport (Pincetl et al., 2012).

Within this context, this paper aims to suggest an approach to fill this gap, exploring how the UM can be used as scientific framework, within designing specific plans and policies for cities having as main objective to build US and UR. The theoretical framework presented in this paper stems from researches and studies developed in a Horizon 2020 Project (URBAN_WINS). The URBAN_WINS objective is to develop and test methods for designing and implementing innovative and sustainable Strategic Plans for Waste Prevention and Management as to enhance urban environmental resilience, in 7 different urban areas (Turin, Cremona, Rome, Bucharest, Sabadell, Manresa, Lleira), located in 4 EU country (Italy, Romania, Spain, and Portugal), according to an inter-disciplinary and participatory approach. Specifically, the development of Strategic Urban Plans will be built on the basis of improved knowledge of the factors that influence the UM of the cities.

The work is organized in 4 sections: first, the analysis of relationship between US and UR in urban planning approach; second, introduction to UM; third, analysis between metabolic flows and sustainable and resilient urban planning features. Finally, implication for urban planning and introduction of a new planning paradigm.

2 URBAN SUSTAINABILITY AND URBAN RESILIENCE

'Sustainability' appears as a concept in 50s for the first time, but only in 1987 with the UN World Commission on Environment and Development, it is acknowledged as a development paradigm that minimizes the use of environmental resources and reduces the anthropic impact on the environment, through processes which simultaneously stimulate economy and improve quality of life (Newman, 1999). Since that moment, the link between sustainability and cities became clear, and in 1992, Yanarella and Levine suggested that all sustainabilityrelated initiatives had to be embodied in design, recovery and urban development strategy. Over the years, the concept of US has consolidated as an urban transition process rather than an ultimate and optimal goal: it is a steadily moving target, as knowledge, technologies and capabilities are always improved. Therefore, the US is the concept that crosses and links all plans and measures that insist on a city, creating a flexible support structure and a continuous process of change (van Timmeren, 2014). After a 30-year-debate, US remains unclear in practical and operational terms and recently has been flanked by the concept of UR. Resilience can be defined as the ability of a system, community or society to resist, absorb, tolerate disturbance while retaining its structure and function. Thus, ideal urban resilience can be understood as a city that can easily live and cope with an ever-changing and sometimes risky environment (Fiksel, 2003; Wamsler, 2014). The adaptive capacity, which may lead to new equilibria, is highlighted, and in a resilience perspective, sustainability is not about maintaining a system at its equilibrium state, but rather it should focus on the capacity to create and test opportunities and maintain adaptive capabilities (Holling, 2001). Thus, resilience has become the key to achieve sustainability: there was a shift from a perspective oriented around stability, optimality and predictability to a perspective focusing on inherent uncertainty.

Finally, we may argue that:

- resilience is a prerequisite for sustainability;
- all sustainable systems must be also resilient, but not necessarily always stable;
- in order to achieve US, we should focus on creating and maintaining UR.

As far as implications for urban design and planning are concerned, despite there is no universal design for all cities, as envisioned by Walker and Salt (2006), resilient systems could be characterized by the following features:

1. Diversity: promoting diversity in all its dimensions, from biological to economic, and encouraging multiple components and resource uses to balance and complement homogenizing trends.
2. Ecological variability: Seeking to understand and work with the boundaries of the inherent variability of ecological and socio-ecological systems; attempting to tame such variability is often a recipe for disaster.
3. Modularity: maintaining modularity can help hedge against dangers of low resilience caused by overconnectedness in system structure and function.
4. Acknowledging slow variables: managing for resilience means understanding the slow or controlling variables that underpin the condition of a system, especially in relation to thresholds. By recognizing the importance of these critical variables, we can better avoid shifts to undesirable stable states and possibly enhance the capacity of a desirable regime to deal with disturbances.
5. Tight feedbacks: tightening or maintaining the strength of feedback loops allows us to better detect thresholds. The weakening of feedback loops can result in an asymmetry between our actions and the consequences stemming from them. Salient examples of such dynamics include pollution and overconsumption.
6. Social capital: promoting trust, social networks, and leadership to enhance the adaptive capacity for better dealing with the effects of disturbance.
7. Innovation: embracing change through learning, experimentation, and promoting locally developed rules. Instead of narrowing our range of activities and opportunities, we should be seeking to explore and cultivate new ones.
8. Overlap in governance: developing institutional arrangements that manage for cross-scale influences. Developing redundancy and overlap in governance frameworks enhances response diversity and flexibility.
9. 9. Ecosystem services: recognizing and accounting for ecosystem services while managing and designing for resilience. The benefits society derives from nature are regularly underprized and ignored. Such services are often lost as socio-ecological systems shift into different, less desirable regimes. Considering cities as complex systems, only pursuing a comprehensive and

general UR will be possible achieve US in an uncertain world. Thus, urban planning must be able to consider all these features and turn them into strategy, policy, action and design.

3 URBAN METABOLISM

The concept of metabolism emerged in the 19th century in order to describe the exchange of matter between an organism and its environment. The application of this concept to the city, namely, the concept or Urban Metabolism, is more recent, and it was developed in the industrial ecology field by Abel Wolman (1965) to determine the urban metabolism of a typical American city. UM is used as a metaphor for the resource consumption of cities, and it includes systematic studies of the inputs, outputs and storage of energy, water, nutrients, materials and wastes for a city. UM can be defined as “the total sum of the technical and socioeconomic processes that occur in cities, resulting in growth, production of energy, and elimination of waste” (Kennedy, et al., 2007). In the last decade, following the seminal work of Wolman, many other metabolism studies have been conducted to cities worldwide (Newcombe et al., 1978; Newman, 1999; Barret et al., 2002; Chrysoulakis, 2008). These studies, from the industrial ecology and urban ecology fields, point out particular aspects (such as urban form, material supplies, infrastructure network supplies, or groundwater withdrawals) in the calculation of the overall UM. Within the UM concept, US is considered as a problem of flow (material and energetic) between urban community and its environment. Currently, cities’ UM is mostly linear: for their resources, cities depend on hinterlands and other cities for water, energy, goods import and waste export. The uses of these resources in such linear way is inefficient and unsustainable on long-term, and the external dependency makes cities more vulnerable (Cola et al., 2005) and less resilient. This model is not sustainable and it is associated with two main problems: a) the high rate of resource consumption threatens resource availability; b) massive disposal of waste causes pollutions (Agudelo-Vera et al., 2011). Opposite to linear metabolism, there is the circular one, that is similar to the metabolism of natural ecosystem, has a low consumption rate, and includes reuse and recycling of different urban flows. Circular metabolism has less impact on the environment and contributes to the urban resilience. In the purpose to design more resilient and thus more sustainable cities, UM is also a platform to base a comprehensive urban analysis (Pincetl et al., 2012), and a useful framework for urban planning aimed at UR and US development. As far as our knowledge, all previous studies and researches about UM and urban planning have been vague, or focused only on very specific aspects of planning.

4 FLOW AND URBAN PLANNING

Resource consumption patterns in cities are closely linked with land use and urban functions. But despite it is possible to estimate consumption of different material and energy categories, after establishing ‘the system boundaries’, it is not possible to take for granted the geo-localization of flows in the urban fabric, or establishing the direct links among economic activities, resource final uses, and life cycle impacts. However, material and energy flow analysis (MEFA) is the scientific methodology used to account any kind of flows within a system, and it has already been successfully implemented in several cases with different scales (Browne, et al. 2011). Mapping flows of a city is only the base of the work aimed at reducing consumption and waste production is a resilience and (strong) sustainable-based perspective. After that, the central issue is the capability of assessment environmental impacts of material and energy flows, due to anthropic activities in urban areas, and their qualitative differences among sustainability conditions in different social and economic setting (Fiksel, 2006). This deals with the life cycle approach, and in particular the life cycle impact assessment, that can be used to estimate a large range of impacts, and so, contribute to the environmental strategic assessment, the definition of environmental integrated policies, and monitoring their implementation, even through complex impact indicators. The Life Cycle approach is also useful to define the multi-scalar system boundaries of an urban area, because it permits to include all the other systems and sub-systems connect to the target one. Generally, they are all the systems where input flows originate, and where output flows end. At the same time, not only flows move through a complex of multi-scalar systems and sub-systems, but also the impacts can be effective at different levels at the same time, not only local or global, with different features. In order to understand the behaviour of cities, as complex systems, interactions among flows, urban patterns and ecological and socioeconomic processes operating at differing temporal, spatial, and organizational scales. Cities are driven by a huge

number of processes, facilitated by various institutions, and operating at different levels. Dealing with any single issue separately is not sufficient to address the UR of the city as a whole.

5 CONCLUSION

Even according to an urban metabolism approach to city planning and management, cities are more than a mechanism that processes resources and produces waste. In fact, they are places where opportunities are created (Newman, 1999), and, as a consequence, the US can not only concern the reduction of metabolic flows (input & output) and related impacts, but must also aim at the improvement of living conditions.

Cities, as complex systems that consume energy and material and produce waste, have the possibility and capacity to became resilient and sustainable, producing their own renewable energy, reuse and recycle their waste as internal new resource. To achieve this sustainable future a new urban planning approach must be developed. UM can be used as a useful framework to support and inform urban planners and policy makers. Moreover, we believe that using UM framework is fundamental to construct real and effective strategic planning, able to work at the same time and in a coordinate manner on the several features of UR, in order to improve US.

The challenge for urban planners will be understood in each different case how UM flows are related with city characteristics, such as urban form, infrastructures networks, social and economic situation, in order to build strategic plans, through a combination of new technology, city design and community based innovation, which together will create a resilient city for a more sustainable future.

In this perspective, we have to mention other two other mainstream ideas, both, stemming from the Europe 2020 strategy related to urban systems deal with UM: the Circular Economy and the Smart Community.

Both of them, they require a community-based approach in policy definition and implementation, and a complex vision of sectoral integration, which can be easier achieved at community level, through local institutional cooperation, urban stakeholders' involvement, and citizens' direct participation.

The above mentioned UrbanWINS EU project represents an exceptional example for the definition of strategic urban policies aimed at a more sustainable urban waste management, and reduction in resource consumption. On the one side, these policies are based on the metabolic approach, and are built on the UMAN model, provide by the University of Chalmers (Sweden), aimed at accounting urban material flows, on the other are designed since the idea of circular economy at urban scale, and since the idea of a smarter management of cities, which finally result 'systems', according to such different points of view, as the social, economic, ecologic, territorial, and technological.

The high number of above mentioned fields of work, and research, demonstrates how contemporary city management is complex, and multidisciplinary, and how necessary is the integration of competences in planning, but also in implementing and monitoring 'sustainable' urban development policies.

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T17 | BIG DATA, OPEN SOURCES, GENERATIVE TOOLS

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Advances in information technology are rapidly accelerating and the spectrum of digital data resources for spatial planning and design is constantly growing due to the flourishing of real-time open Big Data sources. In the present context of uncertainty and rapid change, the methods and general approaches to information communication and analysis need constant innovation for taking advantage of the potential for putting knowledge into action. Global and local environmental and societal challenges require the ability to generate real-time deeper insights on territorial conditions and dynamics, to generate alternative solutions to guide evolution, to understand the implication and make decisions based on consensus.

To what extent can we take advantage of this Big Data avalanche to address these challenges? To what extent do we need to revise traditional methods and tools to elicit useful knowledge by new data sources? To what extent the use of digital method and tools can help to keep track of planning and design processes for more democratic and responsible decision-making? To what extent those data can contribute to get better insight on the planning and design process itself?

Academic and practitioners are invited to share their findings and discuss the challenges on the use of Big data, open sources, generative tools in territorial representation, dynamics analysis, evaluation, design, impact assessment, and decision-making. Such themes as spatial data infrastructures (SDI), volunteered and social geographic information (VGI and SMGI), big data representation and visualization, spatial analysis and environmental modelling, generative design methods and tools, Planning Support Systems (PSS), and Geodesign.

The emphasis will be therefore broad, covering methodologies, methods, and approaches but fully engaging in the present day challenges and future ways forward.

A selection of papers presented in this track may be invited for publication in a special issue of an international journal.

ID 1393 | WHERE IS THE COMMUTERS? RESEARCH OF SHANGHAI COMMUTING TRAFFIC BASED ON TRANSPORTATION CARDS DATA

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1 INTRODUCTION

With the rapid urbanization, revolution of housing policy and the development of public transportation technology, the high price of city center drives people to move to the suburbs, the distance between home and workplace shows a sharp rising. Daily commuting becomes an important part of daily life and a crucial issue that cities need to face. On this occasion, commute is becoming a universal phenomenon and a prevalent research issue.

Without exception, commute is becoming a widely common phenomenon in Shanghai which is located in the Yangtze River Delta metropolitan area. In Shanghai, most of commuters select metro as the tool of commuting because of the relevant reliability and punctuality. As shown in the figure 1, hundreds and thousands of commuters crowd onto the metro during the morning and evening rush hours every day in Shanghai. Such curiosity gives rise to this commuting behaviors, emphasizing on spatial distribution of the places that commuters live and work, the commuting transportation tool (diversification or simplification) they choose, some potential suggestions and advice for the decision-making and policy-setting produced based on the commuters' behaviors, with appropriate quantitative evidence and visualization illustrations.

Figure 1 – The metro commuters in Shanghai (Source from: Liu Xiaochang, 2017)

The commuters' behaviors play an important role in studying the structure of jobs-housing spaces. Robert Cervero (1996) proposed that the imbalance between home and workplace contributed to the commuting behaviors [1]. Levinson proposed the accessibility to substitute the balance between employment and residence to analyze the impact of urban commenting. He found that higher accessibility contributed to the less time consumption for commuters. Therefore, Levinson concluded accessibility was more convincing to analyze the commuting behaviors. [2] The commuting behaviors were impacted by the urban spatial structure, major researches focus on the scale of city, the density of residence and employment, as well as mixed land use. Cuertis' research indicated that high-density and inclusive development was beneficial to public transportation. [3] Besides, social elements were also regarded as the important aspects to analyze the commuting traffic. Based on Hanson' research, some social and economic indicators such as age, gender and income can be applied to analyze the commuting behaviors. [4] For many western countries, the official data like the data of population census are open, specific, easy and free to obtain, even some data in individual level are also public, which provide the data base to analyze the groups of commuters and even the individual commuter. Therefore, western researches of commuting traffic are more quantitative and precise.

However, Chinese researches of commuting behaviors are mainly based on fieldworks and social observations. Yanwei Chai (2002) applied the theory of time-geography, and found that the features of time, space, travelling and the methods of travelling were the main elements impacting the commuting traffic. [5] Ke Wang (2010), Yaping Wei (2012), Lin Qiu (2007) found that the percentage of commuters who directly choose the metro as commuting tool would gradually decrease, if the distance from work place or home to metro station increased. Comparatively, the percentage of commuters who took bus firstly and transferred subway would obviously raise. [6] [7] [8] Owing to the limitation of official data about

the relationship between working space and residence place for inhabitants, majority of data are from the survey observation, and sample quantification is significant small. Therefore, a lot of researches only focus on the descriptive analysis of individual commuting behaviors, rather than some particular groups' behaviors.

Compared with traditional, sampling, partly-quantitative and qualitative analysis methods, the approaching Big Data era provides totally systematic and quantitative methods. Traffic and passengers flow can be precisely described and analyzed based on the whole sample statistic and database. From the macroscopic perspective, the structure of jobs-housing space in Shanghai can be described precisely and analyzed quantitatively in this research. Meanwhile, characteristic rules of special commuters' behaviors from the microscopic perspective. Furthermore, some specific and precise suggestions and advice can be provided for the decision-making and policy-setting of transportation.

2 DATA MINING AND ANALYSIS METHODS

2.1 DATA MINING

The database is based on the metro transportation card data of five continuous weekdays from 30th March, 2015 to 3rd April, 2015. Specifically, database includes the average 9.1 million pieces of data per day from 288 metro stations of Shanghai. There are five important attributes of any certain piece of data: the card number, the name of start metro station where one certain commuter starts his/her commuting travelling, the name of the end metro station where one certain commuter finishes his/her commuting travelling, the time of entering the start metro station for one certain commuter, the time of leaving the end metro station for one certain commuter and the duration from start metro station to end metro station, which are presented in the table 1.

Card number	Name (Start)	Name (End)	Time (Start)	Time (End)	Duration
79796	Road Yan'an	Road Guilin	7:52:05	8:36:42	44
84407	Road Songyuan	Road Siping	9:40:09	10:08:06	28
92416	Beixinjing	Lujiazui	7:44:46	8:14:38	30
.....	.....	.....	.....	.....	.....

Table 1 – The main attributes of metro transportation cards data (Source from: Liu Xiaochang, 2017)

2.2 DATA CLEANING

The subject of research is commuter, therefore data cleaning is necessary. There are three principles of data cleaning. First of all, commuters have nearly same commuting travelling modes every day. If one certain card number only appears once or twice in the database during the five continuous weekdays, the owner of the certain card will not be studied as a commuter in this research. Therefore, this research only focuses on those card numbers that continuously appear three and more than three times. Secondly, this research only focuses on the time of leaving the end metro station is before noon (12:00). In other words, the owner of the certain card who leaves the end metro station after noon will not be regarded as commuter, because the nearly all companies in Shanghai are open before 12:00. Last but not least, the duration of commuting is less than 2 hours (120 minutes). If one certain data simultaneously satisfies the three principals, the data will be defined as the effective one of the database.

2.3 ANALYSIS METHODS

The time of entering and leaving the metro station is random. If this research adopts the method of classification on separated time points, the quantity of data will become significantly huge and the classification will become more difficult. Therefore, classification on comparatively longer period of time is adopted as the analysis method. Precisely, this research defines 30 minutes as one unit period and divides the running time of metro (from 5:00 to 23:00) into 38 periods. In every period, frequencies of entering and leaving metro stations will be accumulatively and independently counted as shown in the table 2 and table 3.

	5:00 - 5:30	5:30 - 6:00	6:00 - 6:30	6:30 - 7:00	7:00 - 7:30	7:30 - 8:00	8:00 - 8:30	8:30 - 9:00	9:00 - 9:30	9:30 - 10:00	.....
Xinzhuang	94	291	998	2435	4609	7675	7733	5376	3250	2034	.....
Road Waihuan	20	53	228	585	1178	2229	2372	1522	854	464	.....
Road Lianhua	36	338	850	1939	3389	5595	5208	4613	2915	1651	.....
Jinjiangleyuan	27	119	315	898	1609	2549	2570	1791	1212	737	.....
South Railway Station	212	145	504	1336	2725	5077	5614	4352	2761	1375	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Table 2 – The statistics of accumulative frequencies for the start metro stations in each period
(Source from: Liu Xiaochang, 2017)

	5:00 - 5:30	5:30 - 6:00	6:00 - 6:30	6:30 - 7:00	7:00 - 7:30	7:30 - 8:00	8:00 - 8:30	8:30 - 9:00	9:00 - 9:30	9:30 - 10:00	.....
Xinzhuang	0	1	177	720	1644	2166	3071	2485	1514	1404	.....
Road Waihuan	0	0	19	94	337	504	279	232	176	129	.....
Road Lianhua	2	4	113	503	1032	1400	1442	1713	1140	860	.....
Jinjiangleyuan	1	22	58	262	548	816	853	691	543	394	.....
South Railway Station	2	33	154	897	1185	1464	1460	1490	1231	934	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Table 3 – The statistics of accumulative frequencies for the end metro stations in each period
(Source from: Liu Xiaochang, 2017)

Based on the statistics of accumulative frequencies for the start and end metro stations in each period, the net change of accumulative frequencies in each period can be calculated as shown in the table 4. The value of net change plays a significant role in researching the jobs-housing space structure. For a certain metro station, if the net change is positive value in the morning rush hours and negative value in the evening rush hours, the area in which the station is located is commuters' employment space. Commuters' employment spatial aggregations rise with the value of net change. On the contrary, for a certain metro station, if the net change is negative value in the morning rush hours and positive value in the evening rush hours, the area in which the station is located is commuters' residence space. Commuters' residence spatial aggregations rise with the value of net change.

	5:00 - 5:30	5:30 - 6:00	6:00 - 6:30	6:30 - 7:00	7:00 - 7:30	7:30 - 8:00	8:00 - 8:30	8:30 - 9:00	9:00 - 9:30	9:30 - 10:00	.....
Xinzhuang	-94	-290	-821	-1715	-2965	-5509	-4662	-2891	-1736	-630	.....
Road Waihuan	-20	-53	-209	-491	-841	-1725	-2093	-1290	-678	-335	.....
Road Lianhua	-34	-334	-737	-1436	-2357	-4195	-3766	-2900	-1775	-791	.....
Jinjiangleyuan	-26	-97	-257	-636	-1061	-1733	-1717	-1100	-669	-343	.....
South Railway Station	-210	-112	-350	-439	-1540	-3613	-4154	-2862	-1530	-441	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Table 4 – The statistics of net change of accumulative frequencies for metro stations in each period
(Source from: Liu Xiaochang, 2017)

3 GENERAL FEATURES OF METRO COMMUTERS

3.1 DATA INTEGRATION

Through some methods such as data mining, data cleansing, data process and data statistic, this research integrates the average weekdays' data of metro commuters. As shown in the figure, x-axis means the different periods with 30-minutes interval in one day from 5:00 am to 23:00, and y-axis means the net change of frequencies in one certain period. The value of net change includes different five subsections, which are from -10000 to -5000, from -5000 to 0, from 0 to 5000, from 5000 to 10000, and from 10000 to 15000.

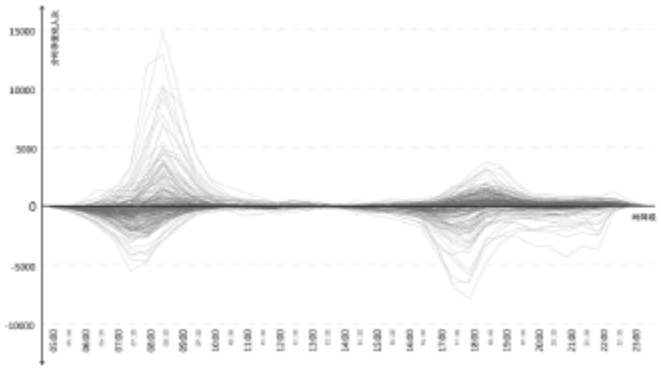

Figure 2 – The statistic of metro commuters in different period (Source from: Liu Xiaochang, 2017)

3.2 WHERE ARE THE METRO COMMUTERS FROM?

Where are the metro commuters from? The answer can be concluded from the value of net change in the morning rush hours and the evening rush hours. As mentioned before, for a certain metro station, if the net change is negative value in the morning rush hours (from 7:30 to 9:30) and positive value in the evening rush hours (from 17:00-20:00). Based on the statistic, the metro stations with top 5 extreme values of net change are Xinzhuang (-5509 in the morning rush hours and 3763 in the evening rush hours), Jiuting (-4664 in the morning rush hours and 3323 in the evening rush hours), Lianhua Road (-4195 in the morning rush hours and 3253 in the evening rush hours), South railway station (-4154 in the morning rush hours and 3155 in the evening rush hours), and Tonghe workers' village (-4074 in the morning rush hours and 2316 in the evening rush hours), as shown in the figure 3.

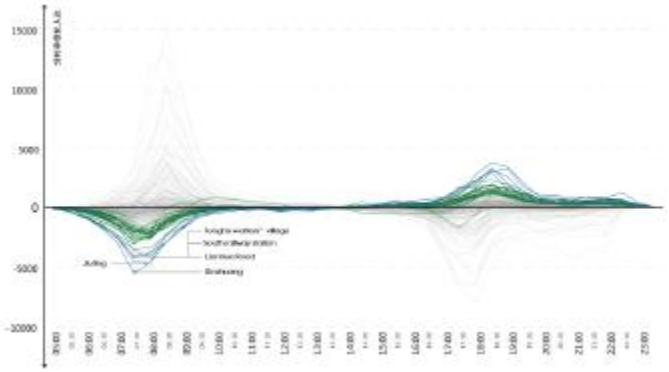

Figure 3 – The statistic of net changes for metro commuters who live near by the stations in different periods (Source from: Liu Xiaochang, 2017)

Meanwhile, the areas in which the stations such as Waihuan Road, Luheng Road, Yangsi, Chengshan Road, Yanggao Road, Jinxiu Road, Fanghua Road, Longyang Road, Century Park, Guanglan Road, Tangzhen, Boxing Road, Shiguang Road, Gongkang Road, Pengpu workers' village, Zhongtan Road, Dahuasan Road, Xingzhi Road, Gucun Park, Taopu workers' village, Nanxiang, Jinyun Road, Beixinjing are located are the significantly typical residence places for the metro commuters, as the blue and green spots shown in the figure 4.

From the distribution of residential spaces, some features can be included: First of all, metro commuters live in between the inner ring and the intermediate ring. Secondly, major metro stations are located within 10km to 15km from the city center, and part metro stations are located within 15km to 20km. In other words, the commuters spend 40 minutes to 60 minutes by metro from their residential spaces to the city center. Last but not least, from the perspective of stations' spatial distribution, the stations are spatially located in the eastern and western sides of Line 2, eastern and western sides of Line 9, the northern and southern sides of Line 1, the northern and southern sides of Line 7, the northern and southern sides of Line 8, the western side of Line 12 and the northern side of Line 5.

Meanwhile, some open-source data such as Baidu Point of Interest (POI) and price of housing from the Fang.com can be used to further demonstrate and analyze the spatial distribution of commuters' residential places as well as the motivation to choose the residential places for the commuters.

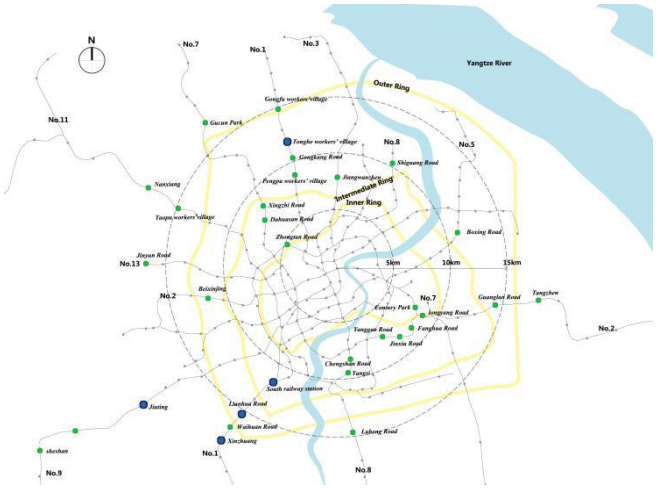

Figure 4 –The resident spatial distribution of metro commuters (Source from: Liu Xiaochang, 2017)

A Baidu POI is a geographic information point with specific coordinators, and it can represent a residential building, a shopping mall, a theater, a metro station, a bus stop, a business building, or a square with its own classification. This part applies the data mining technology based on the Baidu POI with residential attributes. In addition, this part collects the data of average price per square meters of second-hand houses. Although the data of POI and housing price don't have extremely high precision, they are easy to collect with wide coverage. Furthermore, it is an efficient analysis method of spatial structure to do the comparative research based on the same platform including the function, housing price and urban spatial structure.

Therefore, the figure 4 which is the spatial distribution of the areas where the metro stations are located with the typical residence features of residence metro commuters is further analyzed combining the figure 5 which is the spatial distribution of Baidu POI with residential attributes in Shanghai and figure 6 which is the spatial distribution of housing price.

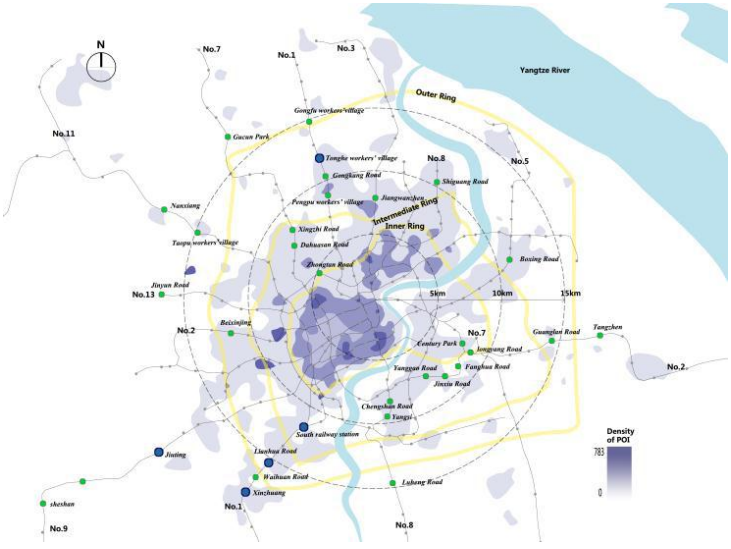

Figure 5 –The analysis of metro commuters` resident style stations overlapping the Baidu POI
(Source from: Liu Xiaochang, 2017)

It can be concluded from the overlay analysis: all the metro stations highlighted based on the data transportation cards are nearly located in the areas with significantly high kernel density of residential POI, as shown in the figure 5. It should be noted that, the density of POI is highest in the city center. However,

there are not highlight metro stations in the city center, the reasons can be found in the figure 6. As shown in the figure 6, the housing price per m²in the city center is at least 50 thousand yuan/m²(approximately 7 thousand Euro/m²), which is not affordable for major commuters. Therefore, residence choice for commuter is a comprehensive process with multi factors such as the time cost and life cost. The commuters are more likely to choose the places with adequate facilities for life (the area with high kernel density in the figure 5), moderate commuting time consumption (40 minutes to 60 minutes by subway, 5km to 15km from commuters' living places to the city center), as well as the affordable and appropriate housing price (from 15 thousand yuan/m² to 35 thousand yuan/m², from 2 thousand Euro/m² to 5 thousand Euro/m²).

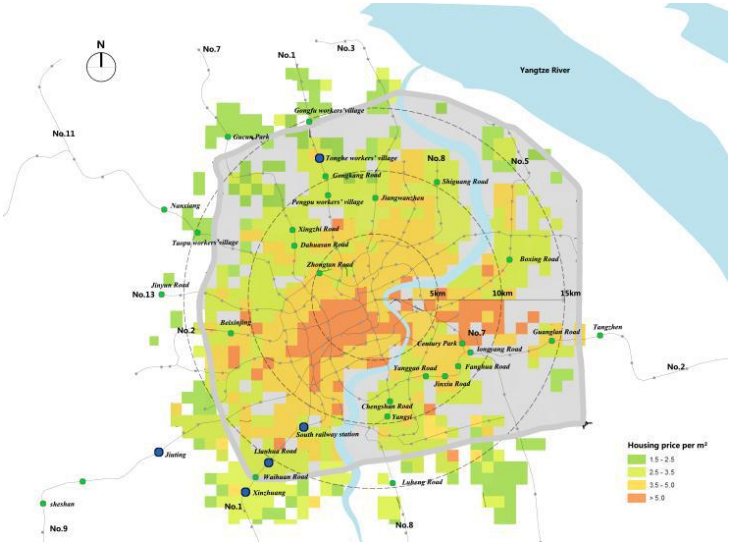

Figure 6 –The analysis of metro commuters` resident style stations overlapping the Housing price
(Source from: Liu Xiaochang, 2017)

In summary, the areas with moderate commuting time consumption, moderate housing prices and sufficient facilities related with residence are along the Line 2 from the city center to the east and west direction, along the Line 1, Line 3, Line 7, Line 8 and Line 11from the city center to the north and south direction. The residential areas of commuters are mainly concentrated around the metro stations such as Waihuan Road, Luheng Road, Yangsi, Chengshan Road, Yanggao Road, Jinxiu Road, Fanghua Road, Longyang Road, Century Park, Guanglan Road, Tangzhen, Boxing Road, Shiguang Road, Gongkang Road, Pengpu workers' village, Zhongtan Road, Dahuasan Road, Xingzhi Road, Gucun Park, Taopu workers' village, Nanxiang, Jinyun Road, Beixinjing, etc.

3.3 WHERE DO THE METRO COMMUTERS GO?

Where do the metro commuters from? The answer can be concluded from the value of net change in the morning rush hours and the evening rush hours. As mentioned before, for a certain metro station, if the net change is positive value in the morning rush hours (from 7:30 to 9:30) and negative value in the evening rush hours (from 17:00-20:00). Based on the statistic, the metro stations with top 5 extreme values of

net change are people's square (14940 in the morning rush hours and -6550 in the evening rush hours), Lujiazui (12892 in the morning rush hours and -7848 in the evening rush hours), Jingan Temple (10004 in the morning rush hours and -5486 in the evening rush hours), Xujiahui (9193 in the morning rush hours and -3811 in the evening rush hours), and East Nanjing Road (7795 in the morning rush hours and -4148 in the evening rush hours), as shown in the figure 7.

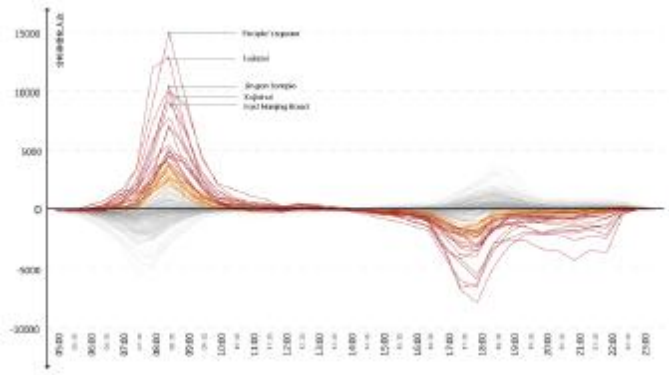

Figure 7 – The statistic of net changes for metro commuters who work near by the stations in different periods (Source from: Liu Xiaochang, 2017)

It should be noted that there are multiple lagging peaks during the evening rush hours, because commuters will spend their evening activities such as dining, recreation and entertainment in the city center that is full of commercial, entertainment and catering facilities until approximately 21:00 p.m. to 22:00 p.m., then they will take subway to go back home. Therefore, as shown in the figure 7, after the evening rush hours (from 17:00 to 19:00), there is a second peak around from 21:00 to 22:00. Although the value of net change of the second peak is not as significantly giant as that of net change of the first one, the figure of the second peak is one second to two thirds of that of the first peak.

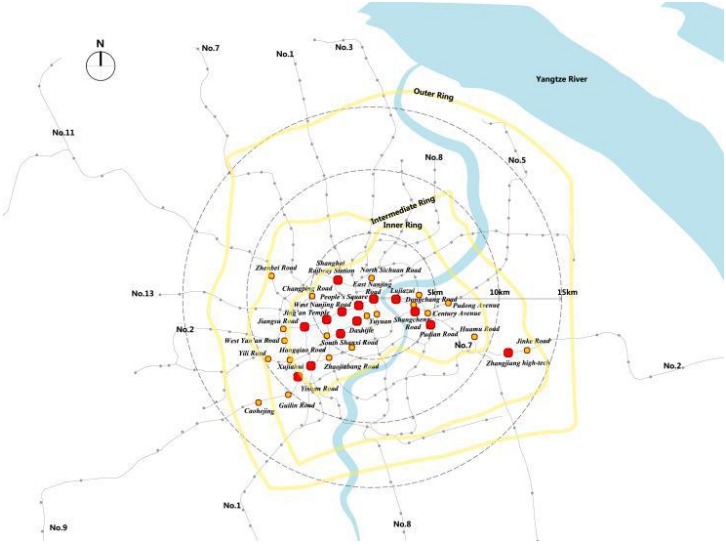

Figure 8 –The working spatial distribution of metro commuters (Source from: Liu Xiaochang, 2017)

Meanwhile, the areas in which the metro stations like North Sichuan Road, Pudong Avenue, Dongchang Road, Shangcheng Road, Century Avenue, Pudian Road, Huamu Road, Jinke Road, Yuyuan, Dashijie, South Huangpi Road, Middle Huaihai Road, South Shanxi Road, Changping Road, Zhenbei Road, Jiangsu Road, West Yan'an Road, Hongqiao Road, Yili Road, Yishan Road, Guilin Road, Caohejing, Zhaojiabang Road, Shanghai Railway Station are located are the typical working places for the metro commuters, as the red and yellow spots shown in the figure 8.

From the distribution of working spaces, some features can be included: First of all, metro commuters work inside the inner ring, and some working places are in between the inner ring and the intermediate ring. Secondly, major metro stations are located within 0km to 10km from the city center, and a part of metro stations are located within 10km to 15km. Similarly, some open-source data such as POI and price of housing from the Fang.com can be used to further demonstrate and analyze the spatial distribution of commuters' working places.

As shown in the figure 9 which is the spatial distribution of POI with office, business, commerce and entertainment attributes, it can be concluded from the overlay analysis: all the metro stations highlighted

based on the data transportation cards are nearly located in the areas with significantly high kernel density of POI with attributes of employment.

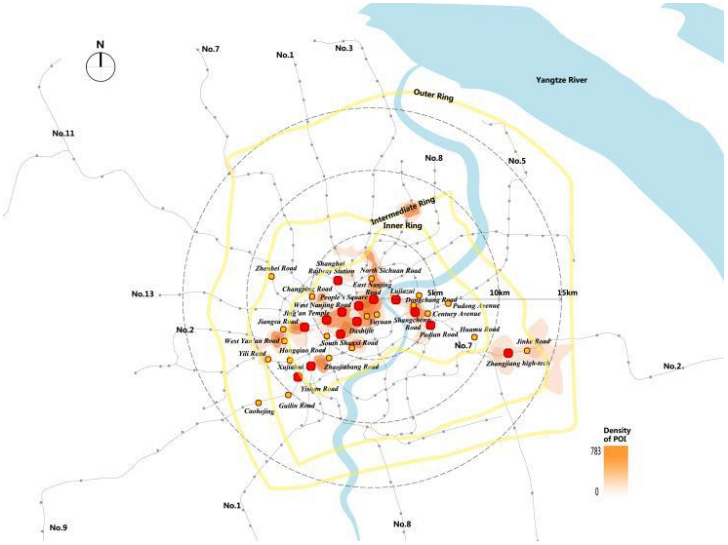

Figure 9 –The analysis of metro commuters` work style stations overlapping the Baidu POI
(Source from: Liu Xiaochang, 2017)

In summary, the working areas for commuters are along the Line 2, Line 9 and Line 10 from the residential areas to city center. The working areas of commuters are mainly concentrated around the metro stations such as North Sichuan Road, Pudong Avenue, Dongchang Road, Shangcheng Road, Century Avenue, Pudian Road, Huamu Road, Jinke Road, Yuyuan, Dashijie, South Huangpi Road, Middle Huaihai Road, South Shanxi Road, Changping Road, Zhenbei Road, Jiangsu Road, West Yan'an Road, Hongqiao Road, Yili Road, Yishan Road, Guilin Road, Caohejing, Zhaojiabang Road, Shanghai Railway Station, etc..

4 TYPICAL FEATURES OF METRO COMMUTERS

4.1 BUS-TRANSFER-METRO COMMUTERS

The Shanghai transportation card is not only available to the subway, but also available to the bus. Therefore, a particular groups who firstly take the bus and transfer metro during the commuting traffic are found in this research. This kind of data account for 20%, which is considerable. In other words, in 100 metro commuter, there are 20 people need to take the bus to transfer subway during the process. It is particularly useful to study the relationship between the bus lines and metro networks, which can provide essential and specific spatial strategies for the development of Shanghai metro systems.

This research classifies the data during the morning rush hours (from 7:30 to 9:30), if one certain transportation card with same ID has a piece of record of bus ride before that of metro one, the owner of this card is 'Bus-Transfer-Metro' commuter, as shown in the table 5 and the figure 10. It is difficult to collect the exact time when the commuters leave the bus, because the commuters will not swipe the card before getting off the bus. However, for all the commuters, they will spend the time in commuting traffic as little as possible, so they will choose the nearest metro station from the bus stop where they get off the bus. Therefore, the time consumption after getting off the bus and before entering the metro station will be ignored. That is to say, the time consumption of commuting traffic by bus is the difference between the time of the time of getting on the bus and entering the metro station.

Card ID	Bus Stop Name (getting on)	Bus Stop Name (getting off)	Time (getting on bus)	Bus commuting time	Metro Station Name (getting on)	Metro Station Name (getting off)	Time (getting on subway)	Time (getting off subway)	Metro commuting time
100052870 6	Changyi Road Luoshan Road	Lujiazui	8:17:07	16 mins	Lujiazui	Jiangsu Road	8:33:10	8:53:54	20 mins
100052620 0	Junlian New Town	Lianhua Road	7:36:26	36 mins	Lianhua Road	People's square	8:12:55	8:44:13	32 mins
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Table 5 –The record of transferring to subway from bus for metro commuters (Source from: Liu Xiaochang, 2017)

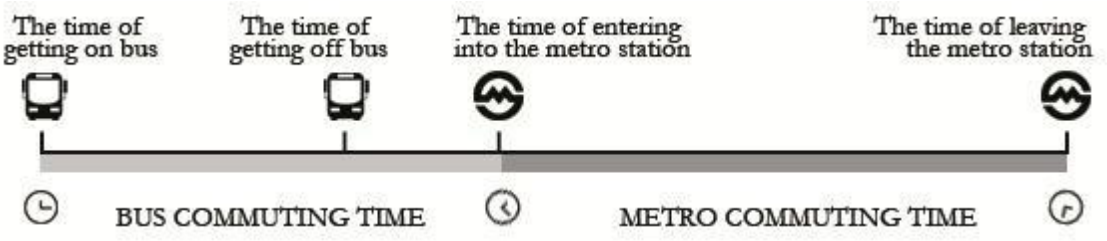

Figure 10 – The diagram of bus-transfer-metro commuters (Source from: Liu Xiaochang, 2017)

This research indicates some typical features of bus-transfer-metro commuters: Firstly, approximately 50% of this kinds of commuters spend about 6 minutes to 18 minutes in commuting traffic of bus, and around 75% of bus-transfer-metro commuters spend less than 30 minutes in commuting traffic of bus. Secondly, as shown in the figure 11, it should be noted that there are 11000 bus-transfer-metro commuters who spend 10 minutes in bus ride before the subway ride in the morning rush hours. Thirdly, with the time consumption of bus commuting increasing from 10 minutes, the amount of bus-transfer-metro commuters sharply decrease, which shows that the commuting mode of selection for the bus-transfer-metro commuters largely depends on the time spent in the bus commuting traffic.

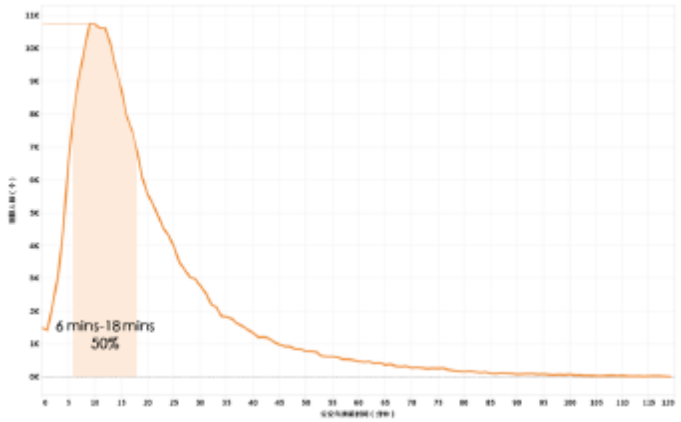

Figure 11 – The relationship between the time spent in bus and the quantity of bus-transfer-metro commuters (Source from: Liu Xiaochang, 2017)

4.2 BUS-TRANSFER-METRO RATE – TAKING THE LUJIAZUI METRO STATION AS AN EXAMPLE

Bus-transfer-metro rate is a ratio to study the situation of bus-transfer-metro commuters in one certain metro station. The bus-transfer-metro rate is the percentage through the quantity of the bus-transfer-metro commuters in a certain metro station dividing by the whole quantity of commuters in the metro station. For example, the bus-transfer-metro rate of metro station A, the rate is: the quantity of bus-transfer-metro commuters in metro station A / the whole quantity of commuters in metro station A. Based on the statistic, there are six metro station with relatively high bus-transfer-metro rate (>50%). They are Lingang Avenue

(86%, 215/250), Xinchang (66%, 1551/2350), Shenshe Road (59%, 6612/11207), Lianhua Road (56%, 9921/11715), Fanghua Road (55%, 4270/7764), and Lujiazui (55%, 3281/5965), as shown in the figure 12.

In the figure 12, the metro stations with relatively high bus-transfer-metro rate are located in the periphery of city center and the suburban areas, because the level of service of metro system in the periphery of city center and the suburban areas is further lower than that of metro system in city center. As for the commuters who live in the peripheral urban areas, the time consumption on foot from their homes to metro station far go beyond their tolerances. Therefore, they select the commuting mode of bus-transfer-metro.

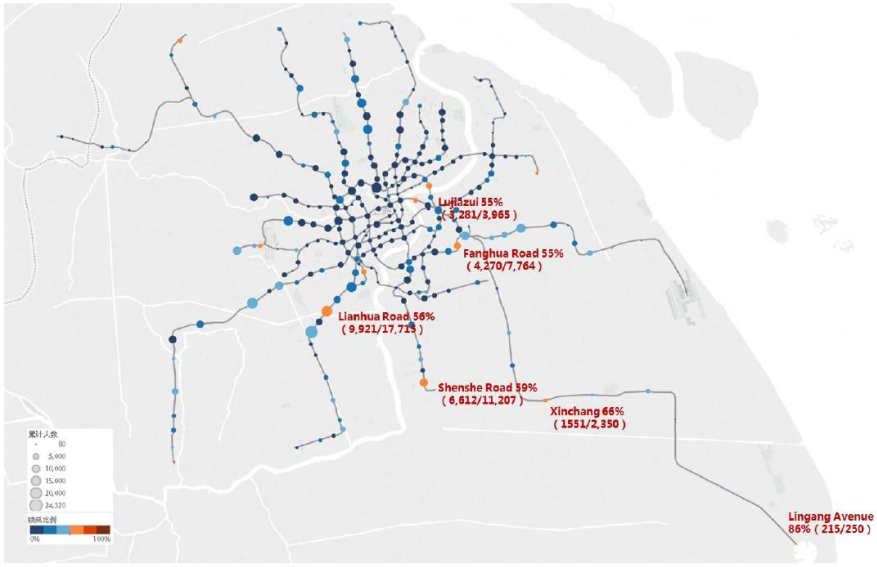

Figure 12 –The spatial distribution of the metro stations with higher bus-transfer-metro rate
(Source from: Liu Xiaochang, 2017)

Beyond expectation, Lujiazui metro station which is located in the city center has high bus-transfer-metro rate with 55%. This research tacks the 55% commuters through their transportation card ID to find the sources before entering into the Lujiazui metro station. It can be concluded that: in the morning rush hours, bus-transfer-metro commuters mainly take Bus No.85 (836), Bus No.971 (325), Bus No.799 (305), Bus No.81 (201), and Bus No. 774 (139) to Lujiazui metro station.

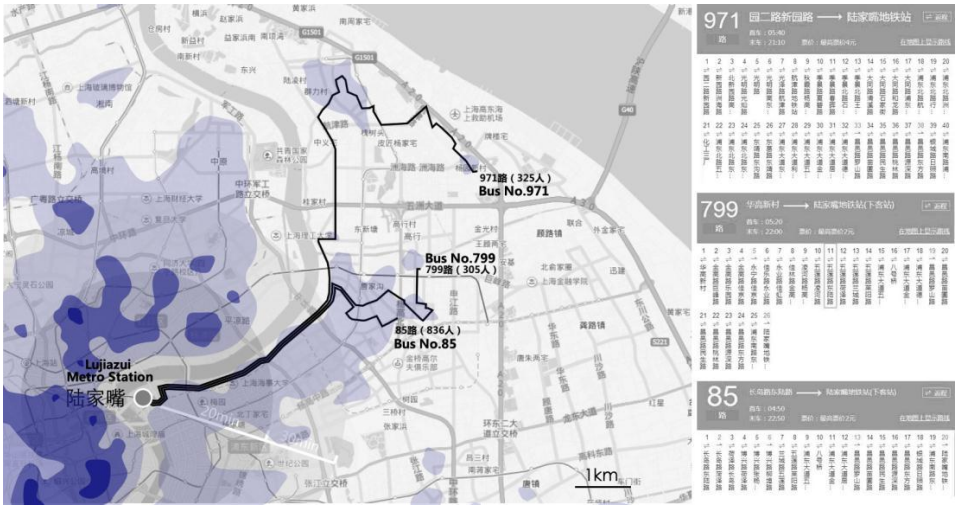

Figure 13 –The spatial distribution of Line Bus No. 85, Bus No. 799 and Bus No. 971
(Source from: Liu Xiaochang, 2017)

From the spatial distribution of the bus lines, some features can be found. Firstly, these buses lines overlap in the Pudong Avenue along the Huangpu River. Secondly, there are massive communities along the

overlapping line such as Jinbang Workers' Village, Longju Huanyuan, Luoshan Workers' Village, Haifang Workers' Village, Linggao Community, Yangjing Garden Town, Huixu-Yayuan, Xishan Community, Haiyuan Community, Meishan Community, Laoshan Workers' Village etc., as shown in the figure 14.

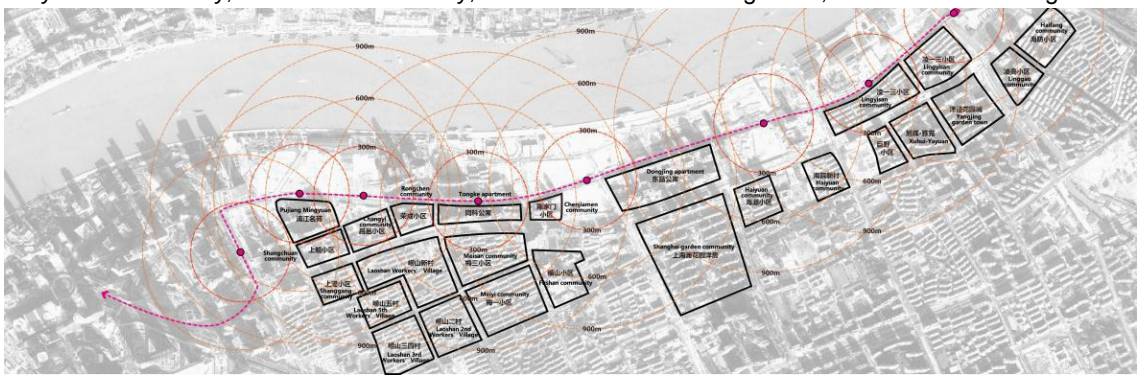

Figure 14 –The residential districts in the buffer of bus stops of Line Bus 85, 799 and 971
(Source from: Liu Xiaochang, 2017)

Meanwhile, based on the interviews of some commuters from these three lines, they gave the similar answers why they chose the bus lines before entering the Lujiazui Metro Station. They said: "We are living the residential areas along the Pudong Avenue. It will take about half an hour, if we walk to the nearest metro station which are about 2 kilometers away from home. You know, 30 minutes are very precious. We want enough time to sleep, especially in the morning. We prefer to spend this 30 minutes in the bed rather than in the way to the metro station. Obviously, we will take bus to metro station. The bus lines are well connected with the Lu jiazui metro station." According to the contents of the interviews, it is lack of accessibility into the metro system for the commuters who live along the Pudong Avenue that is the main reasons why Lujiazui Metro Station located in the city center has the relatively high bus-transfer-metro rate in the morning rush hours.

Therefore, based on this interesting phenomenon, some suggestions like planning a new metro line under Pudong Avenue can be proposed, which will improve service level of subway along the Huangpu River and increase the accessibility into the metro network for the areas along the Pudong Avenue, especially the residential areas. This proposal is demonstrated in the planning and construction of Shanghai rail transit from 2016 to 2020, a new metro line named No.14 will be constructed.

5 SUMMARY

The approaching Big Data era provides totally systematic and quantitative methods. Traffic and passengers flow can be precisely described and analyzed based on the whole sample statistic and database. Although there are still shortages like the metro stations analyzed are not the exact working places and homes of commuters or the data of POI and housing price don't have extremely high precision and so forth, it is an efficient analysis method of research the commuting behaviors based on the same platform including the function, housing price and urban spatial structure. Furthermore, through studying the commuting behaviors, the features of commuting behaviors can be the reasonable and reliable basis of some specific and precise suggestions for the decision-making and policy-setting of metro development in the future.

For the structure of jobs-housing spaces in Shanghai, the working places for metro commuters are along the Line 2, Line 9 and Line 10 from the residential areas to city center. The areas where the metro stations named People's square, Lujiazui, Jing'an Temple, Xujiahui, East Nanjing Road and Zhangjiang High-tech Park are located are the typical working places for commuters.

Meanwhile, owing to the moderate commuting time consumption, moderate housing prices and sufficient facilities related with residence, the residential places for metro commuters are along the Line 2 from the

city center to the east and west direction, along the Line 1, Line 3, Line 7, Line 8 and Line 11from the city center to the north and south direction. The areas where the metro stations named Xinzhuang, Jiuting, Lianhua Road, Shanghai South Railway Station and Tonghe Workers' Village are located are the typical living places for commuters.

In all the metro commuters, there are 20% bus-transfer-metro commuters. For the bus-transfer-metro commuting mode, 75% of the time consumption of bus ride is within 30 minutes. The metro stations with relatively high bus-transfer-metro rate are located in the periphery of city center and the suburban areas, because the level of service of metro system in the periphery of city center and the suburban areas is further lower than that of metro system in city center. As for the commuters who live in the peripheral urban areas, the time consumption on foot from their homes to metro station far go beyond their tolerances. Therefore, they select the commuting mode of bus-transfer-metro.

Besides, like some typical cases like Lujiazui metro station located in the city center with similarly high bus-transfer-metro rate, it can be concluded from the precise and quantitative analysis that the areas along the Huangpu River are lack of accessibility to metro system so that the commuters have to take bus to the nearest metro stations and transfer subway to the working places. Therefore, the bus lines along the river play an important role in commuting traffic for solving the "last one kilometer" problems. The features of commuting behaviors can be the reasonable and reliable basis of some specific and precise suggestions for the decision-making and policy-setting of metro development in the future.

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ID 1396 | GEODESIGN AS SUPPORT TO OPINION MAKING, IN LOCAL, REGIONAL AND TERRITORIAL SCALE: CASE STUDIES IN BRAZIL

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1 INTRODUCTION – THE CONTEXT OF THE STUDIES

In Brazil, since the promulgation of federal constitution, in 1988, and the City Stature, in 2001, the interests about "participatory planning" became not only a desire but a law, determining that any decision in territorial planning should be constructed considering collective values. Notwithstanding, we observe lack of methods to support the intention, and in most cases a misunderstood about the sense of participation. The idea of "participation" is understood as to "win the game", and not to choose alternative futures that are more adequate to social, economic, environmental and cultural context. In this sense, the proposal of Geodesign (Steinitz, 2012), based on a framework that stablishes steps to be followed, is a very robust methodology to support opinion making and to arrive to decision making.

We conducted three case studies in Minas Gerais, Brazil, in different scales and challenges, but all of them in areas with conflicts of interests. The case study in regional scale was Quadrilatero Ferrifero, an area of 1.000.000ha characterized by historical cities, environmental resources, axis of urban growth and the most important economic area in the state due to mining activities of gold and iron ore. The case study in district scale was Pampulha, an area of 10000ha in the city of Belo Horizonte, projected by Oscar Niemeyer that had just been nominated as Unesco's heritage because of its unique modernist architecture and urban landscape. The goal was to discuss risks of not appropriated changings in the landscape, especially urban densification, damaging the harmony in visual axis. The case study in local scale was about a slum, an area of 25ha, with the goal to face complex problems and to give support to legal regularization, considering budget restrictions, fast changing realities and needs in urban and environmental improvements. All case studies demanded studies about systems that represented vulnerabilities and attractiveness in the areas, costs and targets to be respected and achieved, and definitions about groups of interests from different sectors of society.

The Geodesign methodology was proposed as an alternative to plans generally top-down oriented, time consuming and not able to achieve sufficient participation and community consensus on priorities. In parallel with the use of Geodesign Hub, we applied geovisualization tools proposed by Geoproea (UFMG) to create a collaborative environment and enhance stakeholders' participation, based on City Engine (ESRI) and Grasshopper+Rhino 3D simulations. We also applied possibilities of interoperability with other platforms, using an App from ViconSaga Web (UFRRJ and UFRJ).

The methodology is based on web platforms and the principals of social media in the sense of sharing information, constructing proposals and arriving to decisions. Geodesign hub is a platform to make people working together. The visualization and interoperability applications amplify the conditions in participatory process, as support to opinion making. The experiences proved to be very effective and robust, as participants started to understand that the objective was not to win the game, even though they played to win, but to construct together the most acceptable alternatives. The main outcome was the capacity to transform data into information and information into knowledge, in a sense that is been called "empowerment", resulting in more reflexive and critical citizens.

1.1 THE STUDY AREAS

We had the opportunity to develop three case studies applying the framework of Geodesign in Brazil, more specifically in Minas Gerais, a state in the center of the country known by its historical cities, the first network of baroque cities, developed from 1720-1800, recognized as the base of Brazilian culture. The region is also known as the base of modernism in Brazil, since the construction of the first city from republican and positivist value, Belo Horizonte, in 1897. As an evolution from positivism to modernist stile, in Belo Horizonte received the works of Oscar Niemeyer, a very important Brazilian architect. Niemeyer

projected a neighborhood named Pampulha, his very first important project, declared UNESCO cultural heritage in 2016.

Belo Horizonte is inserted on Quadrilátero Ferrífero (Iron Ore Quadrangle), known by the production of mining resources (gold, precious stones and iron), representing the most important economic base of the state, and one of the most significant in Brazil. Among the importance of architecture and urban network, mining activities and all the economic results related to it, the area is also characterized by a notorious landscape, genius loci of the state – a landscape of mountains in which the main rivers of the state are born, with expressive vegetation cover: forests and “campo rupestre”, a native crop field that exists only in that biome, because of iron area.

In this complex territory, characterized by cultural and heritage interests (from baroque to modernism), economic interests (mining activities) and environmental values (mountains, river sources and native vegetation), as most medium and large cities in Brazil, there are also slums (they are generally around area of Belo Horizonte has 5 million inhabitants and the Quadrilátero Ferrífero has 3.5 million inhabitants. The three areas mentioned – Quadrilátero Ferrífero, Pampulha and the slum Maria Tereza were the three case studies in Geodesign. Quadrilátero Ferrífero is a region composed by Belo Horizonte and more 27 cities, in a territory of 12600 km2, around 140 x 140 km; Pampulha is a region in Belo Horizonte of 250 thousand inhabitants in an area of 50 km2, and Maria Tereza is a slum also in Belo Horizonte, that in 2010 had 400 inhabitants in 0,3 km2 (Fig. 1).

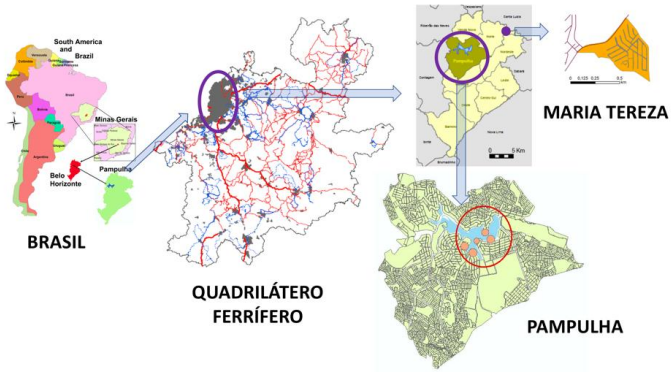

Figure 1 – Location. Source: The authors.

1.1.1. SLUM CASE STUDY – MARIA TEREZA

According to IBGE 2010 Brazilian latest demographic census, around 11.4 million people live in the 6.329 favelas (slums) identified in 323 of the 5.567 municipalities in Brazil. A favela is characterized by an illegal occupation of someone else’s vacant land (public or private), lacking at the beginning public essential services such as sewers, waste management, and public facilities, and usually showing an organic morphology and dense built environment with little open space and green areas, usually on improper sites, steep slopes, flood prone areas or even environmental protected areas where the market can’t go.

Illegal settlements may have very similar urban infrastructure and housing conditions compared to slums, only they occupy land which has been previously divided into parcels (lots) which have been sold in the informal market, meaning that families who occupy that land paid for it and feel they are owners, even though they don’t have legal ownership documents. Being implemented without going through regular planning permit procedures, they do not follow official design criteria (minimum lot area, minimum street width, maximum slope and so on), do not obey environmental constraints (steep slopes, forested areas, springs and water bodies, flood hazard areas, and so on) nor have the basic urban infrastructure that, according to Brazilian urban legislation, is due to real estate developers to implement.

Belo Horizonte has 186 favelas classified as ZEIS – Special Social Interest Zones and 29 illegal settlements classified by AEIS, by the local Master Plan and Zoning, which means they are supposed to stay where they are and be subjected to upgrading programs. Aiming at urban and environmental improvements, as well as legal ownership regularization and socioeconomic community development such as jobs and income generation, these plans, based on a traditional thematic mapping method for both data

collecting/analysis and proposal strategies, have been, however, strongly criticized for being too technical, too time consuming (usually lasting three to five years), expensive and top-down oriented, lacking sufficient participation and the necessary strategic approach to achieve community consensus on priorities under severe budget restrictions to face very complex problems and fast changing realities.

In August 2016, a three-day planning workshop was conducted by then professors from UFMG GIS Lab and technicians from the municipal administration, at Belo Horizonte City Hall, using the Geodesign framework and geovisualization tools to create a collaborative environment and enhance stakeholders' participation for the development of a PRU for the Maria Tereza Neighborhood. (Fig. 2).

Figure 2 – Maria Tereza case study. Source: The authors.

1.1.2. PAMPULHA CASE STUDY

The recognition of the landscape value and the interest on preserving the essence of the place are quite recent in Brazil. Just from the City Statute (Estatuto da Cidade), law passed in 2001 (Brazil) and the approval of the Seal of the Brazilian Cultural Landscapes from 2009 (IPHAN) the landscape protection has been mentioned for the first time. However, there is still no instrument to guide the identification, classification, characterization and to propose sustainable manners to occupy and preserve the landscape. Our studies aim to understand, prospect and develop methodological possibilities, supported by geoprocessing technologies, more specifically the Geographical Information System and Spatial Assessment Models, to start the process of identification, planning and management of the landscape. The visualization and the decisionmaking processes regarding the landscape management are assessed using simulation models and field of view representations and analysis.

We chose case studies of urban area and of remarkable landscape, in different scales of approach. Pampulha was selected for zone scale. It is an area of interest for the study because it has recently received the status of World Heritage Site by UNESCO due to the presence of Oscar Niemeyer's work – a modernist set of buildings and surroundings designed in the 1940s. It faces significant growth and transformation of the area and the risk of loss of remarkable values could be observed. The revision of the Master Plan is required, managing the conflicts of interest. (Fig. 3).

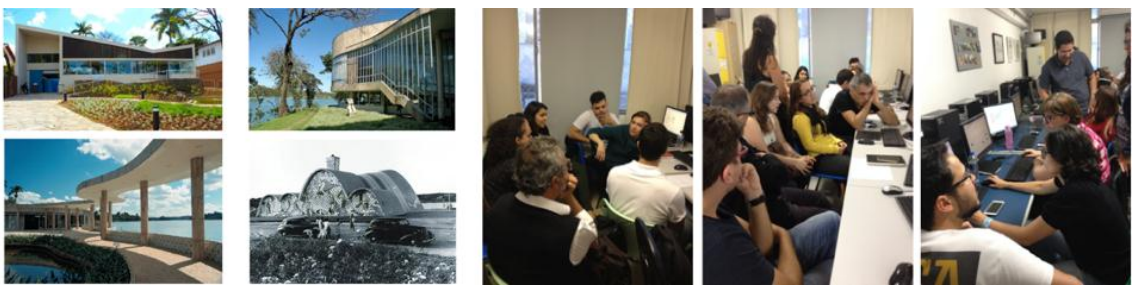

Figure 3 – Pampulha case study. Source: The authors.

1.1.3. IRON ORE QUADRANGLE CASE STUDY

For the regional scale, presenting environmental and anthropized landscapes, the study case is about the Iron Quadrangle, area of remarkable landscape and that translates the genius loci of Minas Gerais state. The first travelers got to Minas Gerais led by the mountain chains of the Iron Quadrangle, where mineral resources were found and the first cities were established, which nowadays composes the Brazilian historical heritage. However, there is a dynamics transformation in the cities network, in the environmental values and in the remarkable landscape, due to the mining activities and the expansion of the urban areas.

The Quadrilátero Ferrífero presents the most important urban network in central area of Brazil, with 95% of population in urban areas, that grow together with mining activities in the landscape. It presents conflicts of interests related to environmental protection (as it's an area of water resources with headwaters and expressive vegetation cover), economic activities (mining exploitation and the spread of urban territories), cultural and scenic values (it's an amazing setting of beautiful mountains and presents historical cities from the XVIII century). (Fig. 4)

Figure 4 – Quadrilátero Ferrífero case study. Source: The authors.

2. GEODESIGN METHODOLOGY

The Geodesign, a spatial analysis methodology proposed by Steinitz (2012), is a framework that aims to establish the forms of participation of different stakeholders in the decision-making process. The methodology derived from Geodesing is based on a representation of the landscape by several variables and on the creation of a georeferrenced database, which enables the use of spatial assessment models. It consists of modeling steps aimed at characterization, process analysis, change analysis, calculation of impacts, and adjustments in decision making concerning land use organizations and environmental arrangements. Along the process, it is created the maximization of the common consent, having in mind that there is no absolute consensus, but it is possible to manage a collective decision. The main characteristic of the methodology are iterations, collective revisions and shared decisions (Goodchild, 2010, Campagna, 2012). It is a requirement that the actors involved understand the process, which justifies investments in clear visualization of the information to support the decisions.

2.1. THE STEPS IN GEODESIGN METHODOLOGY

The Geodesign framework (Steinitz, 2012) is based on 6 steps, divided into the goal do construct assessment and to support intervention. Each of these 2 goals are achieved throw the production of data, transformed into information and producing knowledge. The first iteration is organized to understand the area, answering “why” it must be studied; the second is a review of the methods and is planned to answer “how” it should be studied, and finally the third iteration is to perform the study answering “what”, “where” and “when” the proposals can be applied. (Fig. 5).

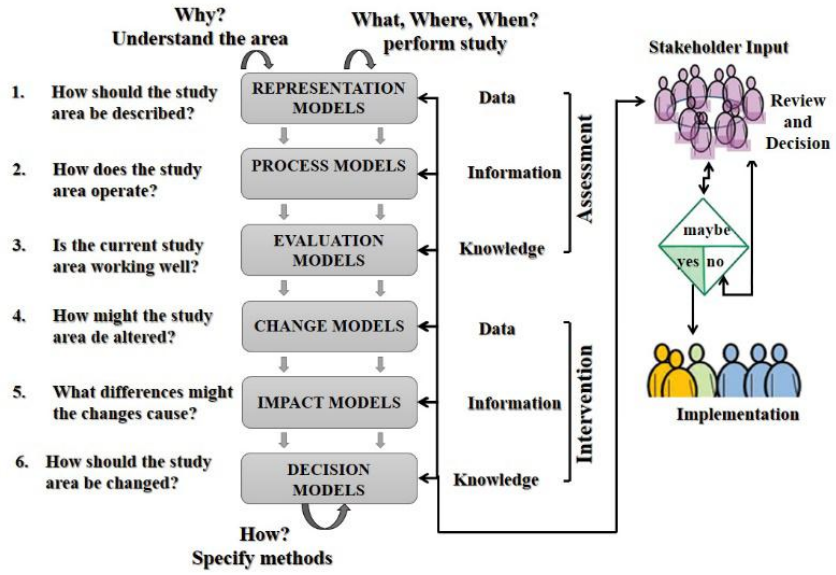

Figure 5 – Geodesign framework. Source: Steinitz, 2012.

2.1.1. STEP 1 - HOW SHOULD THE STUDY AREA BE DESCRIBED IN CONTENT, SPACE AND TIME? THE USE OF REPRESENTATION MODEL.

To propose the Representation Models the user must capture the essence of the place: it`s main characteristics, considering the vulnerabilities and the attractions to change. In all case studies data were organized and produced to represent the main characteristics of the areas, considering its genius loci, it demands, vulnerabilities and attractiveness.

In the case study of Maria Tereza (the slum) the main objective was to plan a better distribution of the many needs to requalify the area, that`s why the representation models were organized with data about exiting infrastructure, the land use, risks, environmental conditions and the commerce and services in the area. In the case study of Pampulha the main goal was to propose a plan to manage the growth of the area (densification) resulted by the very good existing conditions and to the increasing interests due to the recognition by UNESCO, but also in risk of losing this quality due to the changes. In the case study of Quadrilátero Ferrífero a big effort was done to produce new data, as the area is very complex, what resulted into inedited maps from the territory.

2.1.2. STEP 2 - HOW DOES THE STUDY AREA OPERATE? PROCESS MODEL.

Besides the study of main component variables that favor the space transformation, as catalysts variables, in all case studies it was important to investigate the process between the variables, which results in the characteristics of the spatial composition. The Process Models have the goal to transform data into information. In practical sense, it is the construction of distribution surfaces that tells about the characteristic of each spatial location according to the theme of interest.

In each situation an algorithm of distribution, concentration, combination of variables or neighborhood studies was applied. According to the objectives of the distribution surface we used Kernel Density; Delauney and Triangulated Surface followed by the calculation of slope; Multicriteria Analysis when the goal was to apply weighted sum of variables; Combinatory Analysis when the goal was to stablish some compositions in the place; Buffer zone to specify the areas of influence, and so one. (Fig. 6).

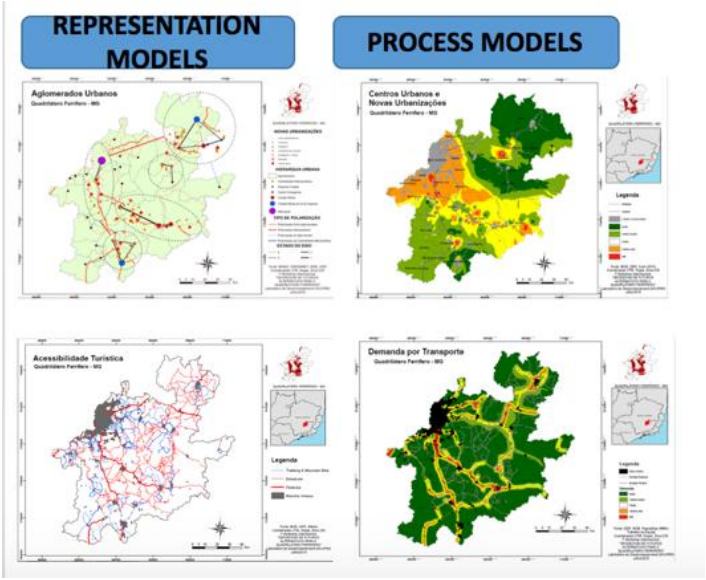

Figure 6 – From Representation to Process Model. Source: The authors.

2.1.3. STEP 3: IS THE CURRENT STUDY AREA WORKING WELL? EVALUATION MODEL.

The Evaluation Model transforms information produced by process model into knowledge. It means that after understanding the main vulnerabilities and attractiveness, it's possible to present a base to support the proposals of the projects and policies to the area. This knowledge of the possibilities and limitations of the place is described as feasible, suitable, capable, inappropriate to receive projects and policies of that theme, but also mapping the area where the resources already exists. These models are the base to construct proposals, and are the systems the participants receive to work with in the workshop meeting. They must represent reality to work as basis to the discussions and the construction of proposals. (Fig. 7).

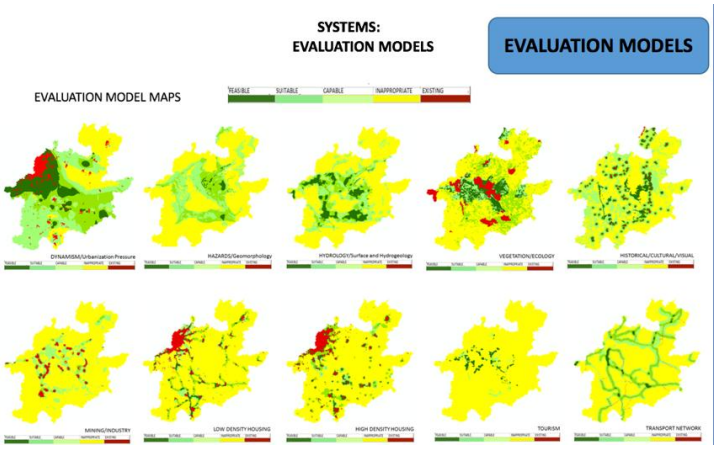

Figure 7 – From Process to Evaluation Models. Source: The authors.

2.1.4. STEP 4: HOW MIGHT THE STUDY AREA BE ALTERED? CHANGE MODEL.

Change models are the production of data in the phase of proposing interventions. They present data about the alternative futures proposed by the participants of the workshop. The participants of the workshop construct proposals of policies and projects to the area, according to each system. The proposals are presented in the format of diagrams. (Fig. 8). We observed difficulties presented by the participants in creating a relation between reality, mental maps and diagram designed. In some cases, people lost the sense of location, proportion and dimension while drawing their diagrams. As a result, we decided to face this issue improving possibilities of visualization as support to better understanding the process. The discussion of this aspect is the main contribution of this paper.

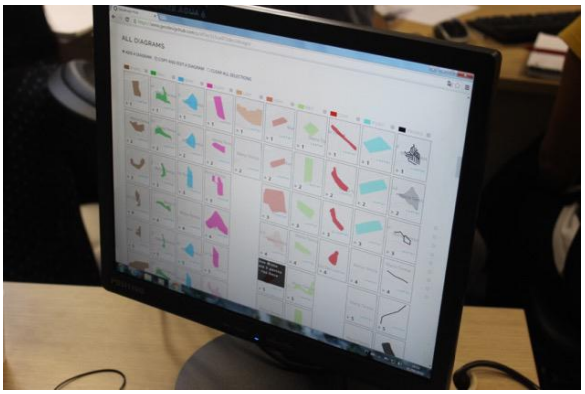

Figure 8 – From Process to Evaluation Models. Source: The authors.

2.1.5. STEP 5: WHAT DIFFERENCES MIGHT THE CHANGES CAUSE? IMPACT MODEL

The goal is to analyze possible different results to the alternative futures to urban and landscape areas. The coordinators must prepare an analysis of what means to propose a diagram (project or policy) of a system (theme) in a place of interest to other system. For example, according to the characteristics of the place, to propose a zone of commerce in an area of interest to housing can be positive or negative, going from most positive to neutral and to most negative. It is constructed a schedule of analysis in a matrix of systems impacts and cross systems impacts: the first one analyzing the combinations of the systems in general, in 5 levels of judgments (from -2 to +2, -2 meaning most negative, -1 negative, 0 neutral, +1 positive and +2 most positive) and the second one analyzing in detail if a proposal can increase or decrease the performance of an existing conditions. (Fig. 9)

The coordinators must also prepare studies about targets and costs. Targets can be understood as minimum values to be achieved in area to each system or limits of reference as maximum areas of proposals to each system (Fig. 10). To costs, the coordinator can give a value in hectare to deploy each system or theme. According to the matrix that are constructed, the user can obtain in dynamic cartography the result of each diagram that he proposes, because the impacts are calculated. It's presented in new maps simulating changes, but also in graphics that analysis how much it will cost and if the user achieved the target that was established.

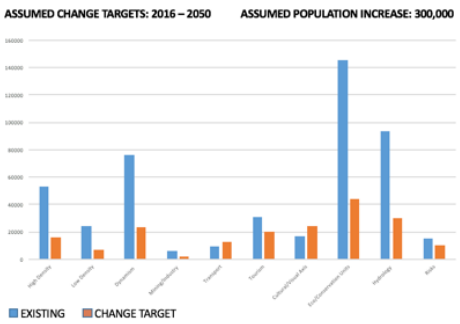

Figure 9 – Impact Analysis. Source: The authors and Figure 10 – Study of targets. Source: The authors.

2.1.6. STEP 6: HOW SHOULD THE STUDIED AREA BE CHANGED? DECISION MODEL.

It is necessary to have a broad condition to answer about the ideal landscape, considering expectations and collective values. The expectation is to use the processes and the tools to give support to decision-making about the alternative futures to the cultural landscape, choosing and proposing parameters, and structuring them in quantitative and qualitative references.

The meeting is organized to have rounds of proposals, going from 6 to 3 groups, and from 3 to just one group. The logic is the maximization of consensus. If it's not possible to arrive to a final proposal in one iteration (remember that the first iteration has the goal to answer "why" we are developing the case study), a second iteration must be done, to review the models and to answer "how", and then a third iteration can

be conducted to answer “where, what and how” the proposals can be implemented. In case study of Pampulha we could do 3 iterations, but Maria Tereza and Quadrilatero case studies we still should propose the reviews and the other iterations. (Fig. 11).

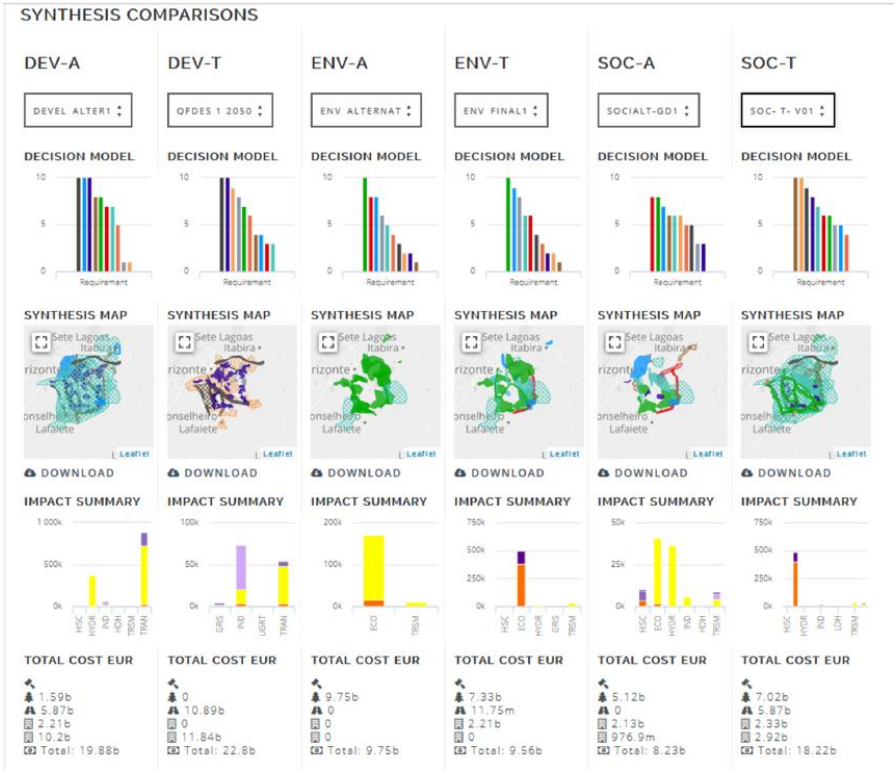

Figure 11 – The designs proposed and their performances. Source: The authors.

3. THE CONSTRIBUTION TO SUPPORT OPPINION MAKING IN DIFFERENT SCALES

While conducting the workshops we were very interested in analyzing how much Geodesign framework could really support opinion and decision making in very complex situations, characterized by conflicts of interests. Participatory planning in Brazil is still a goal to be achieved, and studies to support the processes must be developed. The Federal Constitution, approved in 1989, declares the obligation to involve citizens in all decisions about territorial planning, considering from land use to urban planning, but it was only in 2001, with the City Stature, that the first political instruments were approved.

We observe that the laws were important but not efficient to promote participation. Master Plans are voted in public meetings, with free access to citizens and their representatives, but the fact that they vote doesn’t mean they are really participating and been able to be part of the process. There is a lack in comprehension and visualization of the process (Zyngier and Moura, 2016). In the 3 case studies, we were very interested in controlling if participants were really understanding the steps and were really learning from the experience.

3.1. THE SCALE OF A REGION

In Quadrilatero Ferrifero case study we faced the difficulties in making people understanding the relation between reality and drawings, to understand the dimensions, to visualize alternative proposals and to have a common base to develop a dialog. It was the most difficult case study, because the goal was to promote participation based on defensible information and knowledge, and not only personal opinions or political opinions.

The main aspects were:

- The drawings and proposals were all completely out of scale: the users were constructing diagrams that were bigger than any other existing land use. They arrived at the point of constructing a diagram that covered almost the whole area, that has a media of 140 per 140 km.
- The users had lack of capacity of spatial location. Even using base maps, they had difficulties to understand the territory. The relation between reality, mental maps and digital maps proposed was very generalist. As a result, sometimes they were not accepting diagrams they believed were in conflict, but if they could understand better spatial references and scale they could see they were not in the same position, and the discussion could be: how far can a proposal be from another?

Some participants, as activists, didn't want to accept evaluation models proposed by others, even though the responsibility for each evaluation system was in charge of a professor from the theme. In this case, a process to promote visualization could be very interesting, to make people understand the construction of representation, process and evaluation models, so that they could recognize that the evaluations presented were sufficiently generic but also detailed to contain all their proposals and needs.

The lessons learned in this case study resulted in studies about visualization and interoperability that were tested in other case studies, and that are been in the research interest of the group. From this case study, it was developed a tool to facilitate the download and upload of the diagrams, to be seen in any other software. As a contribution to the Geodesignhub, we created a tool to promote interoperability, that could download the diagrams and designs and upload in any other application or visualization tool, as GoogleEarth or other one. (Moura et al, 2016b). (Fig. 12).

Figure 12 – Interoperability tool. Source: The authors.

3.2. THE SCALE OF A ZONE

The case study of Pampulha was about a very known zone in Belo Horizonte, that was in the central of attention as it was candidate to UNESCO's title. As it was a very known area, people were more able to present opinions and criticism about Representation, Process and Evaluation Models. But we also understood that the scale of work was quite adequate to make people feel comfort about having a mental map of the territory and going directly to discussions.

The main aspects were:

- A scale of "Zone", composed by different land uses and land cover, but connected to a common reference, because the zone has its limits and genius loci quite well defined and recognizable.
- The presence of spatial elements that could give references about dimensions, proportions and locations (as the airport, the zoo, the lake, the university, the boundaries and so one);

As a result, it was easier to the users to construct the link between reality, mental maps and digital representation. With a clear comprehension of the place, they were more able to discuss their ideas. To improve this condition, we developed, after the first iteration, a tool to improve the comprehension about combining variables to construct Evaluation Models. The tool was based in dynamic cartography and tested in in two platforms: City Engine and Grashopper + Rhino 3D. (Moura et al, 2016a).

The idea was to make people understand the role of variables and their combinations, as references to construct Representation, Process and Evaluation Models. Improving their capacity of understanding the logic, they could contribute more with suggestions in those steps, as we had already observed that they

were very interested in that. The applications developed had the goal to make people test Multicriteria Analysis in dynamic visualization, changing variables and their weight in a composition of an Evaluation Map. (Fig. 13)

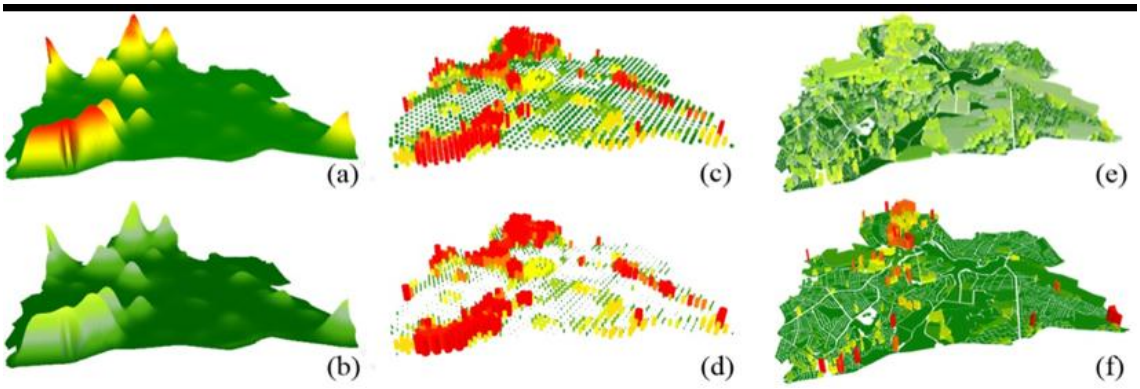

Figure 13 – Simulation of weights in Multicriteria Analysis – Rhino 3D and Grasshopper visualization facilities. Source: The authors.

3.3. THE SCALE OF A NEIGHBORHOOD

In the case study of the slum, as we had already observed the importance of providing a mechanism that people could understand the dimension of the diagrams. The need was presented to the programmer of the platform GeodesignHub that added the condition of measuring automatically the dimensions of each line of the polygon while drawing the diagrams. It was really very useful, and the measuring mechanism was added to the hub from that case study. (Fig. 14).

Figure 14 – Diagrams with measures. Source: the authors.

We also observed the importance of providing links from reality to mental maps and to digital designs. To keep the users always in touch with the idea of reality, a 3D Modeling, representing topography and the volumes of buildings was constructed, and during the workshop, while the participants were working in their proposals, a movie with the 3D representation was playing in the main screen of the room. We observed they used a lot the visual contact with 3D representation while they were projecting. (Fig. 15).

Figure 15 – 3D representation. Source: The authors.

To this level of local scale, neighborhood, the main aspects were: - The need to provide possibilities of automatically measure the dimensions, the faces of the polygons, because the lack of comprehension could result in diagrams very far from reality; - The need to improve the link between reality, mental map and digital representation while constructing the proposals;

4. CONCLUSIONS

Facing different scales of conducting a Geodesign workshop to discuss alternative futures to areas in conflicts of interests, we could contribute with tools and methods to improve the relation between data, information and knowledge. In some situations, we developed tools or procedure to contribute in the step of assessment (models of representation, process and evaluation), in others we contributed to the step of intervention (models of change, impact and decision).

This paper was more focused in situations that required improvement on visualization to face difficulties in constructing the between reality, mental map and digital drawings or projections. We also observe that different scales require more support of visualization tools to make that participants feel more secure to construct proposals. We may say that from this few case studies, that were not many but were very analyzed and observed, that the more the users don't connect with reality while taking part of Geodesign meeting, the more difficulties they will have to arrive to a common decision. Because sometimes, in the dynamic of combining diagrams and constructing a common design, they don't realize they are saying "no" to a proposal that is very similar to the one they say "yes".

The game of participation is very tricky because it has the risk to became just a game, in which people behave connected to the act of play and not connected to the act of using a tool to share opinions and decisions, even without realizing it. As much as we promote clear understanding of the steps and of the framework, the more these new digital and web-based tools can be used as a planning support system.

ACKNOWLEDGEMENTS

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ID 1472 | SOCIAL MEDIA GEOGRAPHIC INFORMATION IN SPATIAL PLANNING

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1 INTRODUCTION

The term Geodesign has recently emerged among spatial planners and GIS scholars identifying an approach to planning and design deeply rooted in geographic analysis and able to inform collaborative decision-making. As an integrated and multidisciplinary process, Geodesign includes project conceptualization, knowledge building, analysis, alternative design, impact simulation and assessment, decision-making, collaboration and participation, involving political and social actors and relying on scientific geographic knowledge support. The main innovation in Geodesign compared to previous similar approaches may be found in the extensive use of digital spatial data, processing, and communication resources, such as Information and Communication Technologies (ICTs) and GIS, which in principles may enable a more effective use of scientific and societal knowledge in planning, design and decision-making (ERVIN 2011). As claimed by several scholars, planning professionals and industry experts, the current technology may be considered mature enough to exploit the ICTs support in the planning practices, overcoming many of the barriers which until now have limited de facto the usage of new geographic information technologies. In addition, since the last decade a growing wealth of both authoritative and user generated spatial data resources has started to be freely accessible, slowly shaping into reality the concept of Digital Earth (GORE 1998). The latter can be considered a driver for the creation of a working infrastructure able to facilitate the diffusion of Geodesign methods for it substantially hinder the traditional issues of lack of digital data availability.

Currently, two major categories of spatial data resources may be considered suitable for Geodesign approaches, namely Authoritative Geographic Information (A-GI) from Spatial Data Infrastructures (NEBERT 2004) and spatial User Generated Contents (UGC), commonly referred to as Volunteered Geographic Information (VGI) (GOODCHILD 2007). These two types of spatial information are notably different in nature, but together they might foster advances in planning and design practices exploiting informed decision-making and eventually contributing to more sustainable development processes. Particularly, a subset of VGI, namely Social Media Geographic Information (SMGI), which is the information produced and shared through social media platforms, might enhance the opportunities to collect not only geographic information representing the current conditions of the study area but also the perceptions of users about spatial phenomena.

In the light of these premises, the authors present a critical review of their research findings on the integrated use of A-GI and spatial UGC in Geodesign. The remainder of the paper is organized as follows. In the next section a brief comparative review about the nature of A-GI, VGI and SMGI is given, outlining similarities and differences in production and use of these resources. Then the authors introduce a novel approach to SMGI analytics, proposing its application as support in spatial planning and design with reference to different case studies. The paper ends by a critical discussion on these results arguing for the relevance of SMGI for Geodesign and proposes issues for a research agenda in this field.

2 FROM AUTHORITATIVE TO SOCIAL MEDIA GI

Current advances in the ICTs, the Internet, and more recently, Web 2.0 technologies are affecting diverse domains of interest, increasingly channeling digital Geographic Infor-mation (GI) into daily life of a wider public. This phenomenon represents a paradigmatic shift in GI production and dissemination, as well as, in its contents and characteristics (ELWOOD et al. 2012), exploiting a new generation of digital GI. This wealth of public accessible digital GI may foster innovations in the spatial planning domain and most notably in Geodesign methodologies and practices, for the majority of information required to support analysis, design and decision-making is inherently spatial in nature. The major opportunities for innovation and development of methodologies emerge from the avalanche of “big” GI, which Web 2.0 technologies are making available to planners.

First of all, since the late 1990s, advances in Spatial Data Infrastructures (SDI) granted the access to digital geographic data, produced and maintained by public or private organizations for institutional or business purposes. Many countries worldwide started the development of SDIs in order to ease the access and sharing of spatial information between stakeholders involved in spatial governance and planning, in order to support decision-making. Along this stream, the implementation of the Directive 2007/02/CE, establishing a shared INfrastructure for SPatial InfoRmation in Europe (INSPIRE), is leading to the development of SDIs in Member States and Regions, granting the public access and reuse of available A-GI, according to common data, technology, and policy standards. INSPIRE addresses 34 key spatial data themes, such as administrative units, land-use, or buildings to name few, which are of great value for spatial planning, inasmuch planners may proficiently take advantage of these spatial data resources to analyze and understand territorial system dynamics. Secondly, innumerable initiatives and platforms continue to thrive through the Internet thanks to continuous advances in Web 2.0 technologies, which support the production, collection and diffusion of UGC (KRUMM et al. 2008). Most of these contents may embed a geospatial reference, leading the transformation of the Web in a potential innovative source of spatial data (ELWOOD et al. 2012). This novel type of GI is commonly labeled as VGI, emphasizing the role of users, which act as volunteer sensors to collect and contribute information content related to the geographic world (GOODCHILD 2007). The concept of VGI encompasses a wide range of activities and practices, which in spatial planning processes may provide pluralist sources of both experiential knowledge from local communities and expert knowledge from professionals in a bottom-up approach. In the last decade, the use of VGI has been proven useful in many application domains such as emergency management, crisis management, environmental monitoring and spatial planning (POSER & DRANSCH 2010), as well as, participatory processes and Citizen Science initia-tives (KNUDSEN & KAHILA 2012).

Lastly, the huge popularity recently gained by social media platforms and location-based social networks is fostering the diffusion of geo-referenced multimedia (SUI et al. 2012), or SMGI, among millions of users over the global Internet. SMGI may be easily accessed and shared by users, which become seamlessly producers and consumers of personal geo-referenced contents. This kind of information may be considered a special subset of VGI, inasmuch the voluntary production and sharing of GI is not the main purpose of the users. Any multimedia content or information with explicit (i.e. coordinates) or implicit (i.e. place names or toponyms expressed in natural language) geographic reference collected or produced by the users through location based social networks or mobile applications may be considered as SMGI. Moreover, depending on the production modes, SMGI may be actively or passively contributed: applications specifically developed or used to collect SMGI in participatory initiatives originate “Active SMGI”, while the harvesting of information from general purpose social networks (e.g. Twitter, Flickr, Instagram, Facebook) originate “Passive SMGI”. Despite the production differences, the major interest for spatial planning raised by SMGI concerns the opportunity to study not only the geographic facts on the

Earth surface but the people themselves, allowing investigations on humans' movements, patterns, behaviors, preferences and needs in social and urban systems.

Nevertheless, SMGI features Big Data nature due to the impetuous and fast cycles of production and consumption and, consequently, traditional spatial analysis methodologies and techniques may be not fully adequate to exploit the enclosed knowledge potential. Hence, new methods for the management of geographic Big Data, the integration with A-GI and for the development of advanced analytics are needed to enable the extraction of relevant knowledge to support Geodesign workflows, which would benefit of a broader and deeper pluralistic real-time understanding of the sense of places.

3 TOWARDS SMGI ANALYTICS

The wealth of georeferenced VGI and SMGI regarding facts, opinions, and concerns of users, freely accessible through the Internet, may strongly affect current Geodesign methods and practices, albeit several major issues may limit this opportunity. The main hurdles limiting a wider use of SMGI may be found both in the lack of user-friendly tools to collect and to manage huge and heterogeneous data volumes, and in the particular data model of this information, which barely may be processed through traditional methods without losing precious information. While the former issue is starting to be addressed by novel approaches offered by Computational Social Science, an emerging field concerned in developing methods to tackle the 'big data' complexity, the latter issue should require the development of advanced analytics methods able to manage the particular SMGI data structure. As a matter of fact, VGI and more notably SMGI are different from traditional vector spatial datasets, such as A-GI from institutional SDIs, with which though it may be integrated for eliciting useful knowledge useful for supporting spatial planning practices. Currently, traditional GI datasets feature a spatial and a thematic component, or dimension; conversely SMGI usually consists of a richer data model that includes both temporal and multimedia components (i.e. image, text, video, audio). In addition, SMGI owns a user dimension, which may include an identifier or other data useful to obtain information about the user's profile. From a semantic perspective this dimension is notably important and enables opportunities for further analyses. Moreover, the appreciation of a SMGI by the social network community, expressed through scores, stars, likes/dislikes, to name few, may increase the analytical dimensions supporting the study of popularity, preferences and opinions of users. The different data models of A-GI and SMGI are shown in Figure 1.

Consequently, any SMGI analytical framework should include not only traditional spatial analysis but also temporal, multimedia, and user behavioral analyses methods. These methods should be tightly integrated in order to fully take advantage of the knowledge potential embedded in data. From a Geodesign perspective, the integration of these methods within a GIS application would be an enormous advantage, for GIS may be considered the common platform for the planning profession due to the increasing role played by maps and spatial data in expressing the knowledge in this domain.

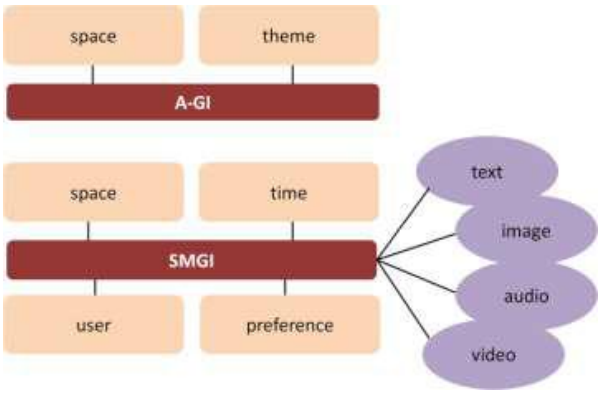

Fig. 1: Differences between A-GI (up) and SMGI (down) data models.

In the light of these assumptions, the authors developed a framework for SMGI Analytics to exploit this new GI resource in order to enrich the knowledge base about the local context from a pluralist perspective, to be used in spatial planning and governance. To this end, the framework called SMGI Analytics, relies on the particular SMGI data model and includes several analytic methods, which may be applied in different use cases for investigating spatial and temporal patterns, users' movements, opinions and behaviors, as well as, preferences on places and events.

The SMGI Analytics framework developed so far consists of the following methods:

- Spatial analysis of users' interest: SMGI and its comments may enable to investi-gate the patterns of users' interest in space by density and clustering functions. The overlay with A¬GI such as administrative boundaries, transport infrastructure, buildings or land uses, may offer useful hints to public authorities to understand which places are important to the local communities and how those areas are perceived by them. An example of such analysis is shown in Figure 2 (left), wherein popular public spaces for the local community are identified through the clustering of Instagram data.
- Spatial statistics on user preferences: collecting posts by spatial units may enable planners to analyze patterns in users' interest at different scales. An example is given in Figure 2 (right), where the hot-spot analysis of tourist satisfaction in Sardinia (Italy). Booking.com and TripAdvisor data enabled to study the distribution by municipality of positive user' assessments, and to investigate why different tourist typologies prefer certain areas or destinations rather than others.

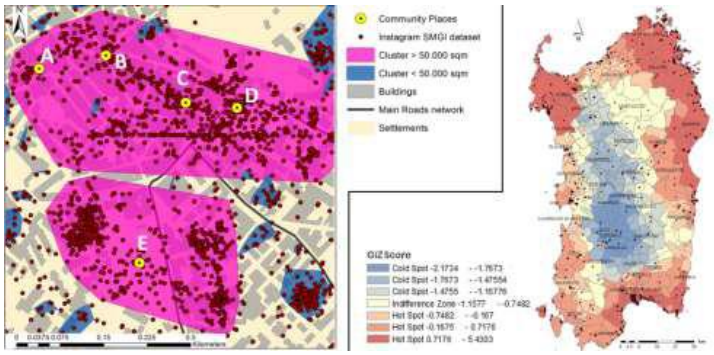

Fig. 2: Most popular public spaces in Iglesias by Instagram users (left). Tourist positive ratings in Sardinia (Italy) (right).

- Multimedia content analysis on texts, images, audios, or videos: this typology of analysis relies on simple or advanced texts analytics to extract useful information from texts (currently it is more difficult to automatically extract useful information from images, video or audio).
- Temporal analysis of users' interests: time reference is usually available for SMGI, enabling to study when specific regional destinations, urban districts, public spaces, or other services are used during different time periods. An example is shown in Figure 3, where the temporal trends of Instagram SMGI contributions are depicted in the Iglesias (Italy) to investigate the municipal temporal patterns.
- User behavioral analysis: querying SMGI by user enables to study users' behavior in space and time. This information can be also used to analyze, for example, if a public space is visited by tourists or by local people. Furthermore, this attribute can be used to apply user profiling techniques.
- Combination of two or more of the previous analyses: such combination may enable to elicit what people discuss in space and time, their behaviors and movements. Tightly coupling different analytics may ease the elicitation of further knowledge that may be proficiently used for spatial planning analysis.

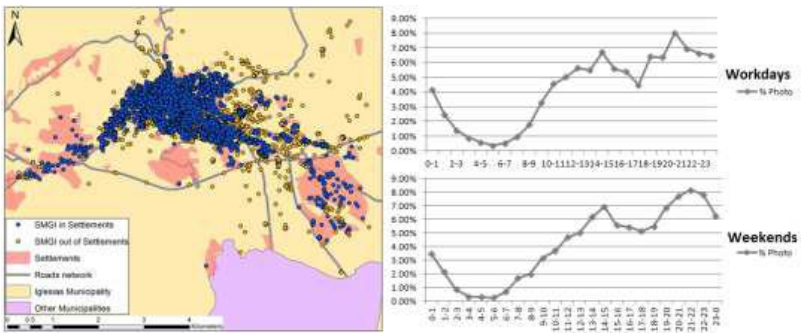

Fig. 3: Temporal patterns in the Iglesias municipality during workdays and weekends.

4 DISCUSSION: SMGI IN GEODESIGN

In the light of the opportunities offered by the SMGI analytics framework, two different categories of spatial data may thus nowadays be used in a complementary way during a planning process. Having as reference the Steinitz framework (Steinitz 2012), which may be used to apply the geodesign approach in spatial planning, in the assessment part (i.e. representation, process and evaluation models) SMGI can be used to complement the knowledge base given by traditional data sources. Unlike A-GI, which is traditionally used in planning, the user generated content may enclose experiential information that is usually missing in the official one, supporting a more pluralist vision of the geographical, social and cultural systems. On the one hand, the A-GI may offer official information about quantitative measurements, while on the other hand, SMGI, as expression of user preferences and behaviors may help in identifying particular social and cultural dynamics affecting the geographic context, as well as the community values and needs.

Operatively, A-GI and spatial UGC might be combined and processed during the process models in order to investigate how spatial phenomena evolve in time. Unlike A-GI which is usually produced and maintained through periodic workflows, SMGI provides updated and (near) real-time information, which may be used to feed predictive models and analyses aimed at identifying trends and phenomena affecting the area in the representation and process model. Moreover, thanks to SMGI analytics A-GI, VGI and SMGI together might disclose notable opportunities to evaluate the current situation of the geographic context, providing further knowledge concerning the preferences and needs of the community which may give valuable information for creation of socially-informed evaluation models. The integration of technical and experiential knowledge may represent a way to gain insights about social and cultural dynamics, which may help decision-makers to promote a constructive dialogue about the future of places, proposing informed alternatives through the help of local community's experience (MARCH 1994). Commonly, the local knowledge of the residents is considered exclusively as opinion in planning processes (FISCHER 2000), but the technical knowledge of the experts, providing only a part of the required knowledge basis, may be not sufficient to properly guide decision-making (LINDBLOM 1990). Hence, the spatial UGC may be fruitfully used to support the assessment of the impacts of the design alternatives, supplying useful knowledge about potential benefits and risks (RANTANEN & KAHILA 2009).

In addition, despite the experiential knowledge is difficult to articulate and convert into useful and explicit information (NONAKA & TAKEUCHI 1995), it can be used to stimulate the interaction among participants (TSOUKAS 2006). In this respect, planning should foster a communicative process, wherein the interlacing between expert and experiential knowledge is crucial in creating collective meanings and consensus (KHAKEE et al. 2000). The integration of A-GI, VGI and SMGI may support this process, providing knowledge about geographic and social context, which may affect the decision-making processes. Hence, the use of Social Media may be not only limited to integrating information about physical or social systems and their assessment, but also by using Social Media applications to support the intervention steps (i.e. change, impact and decision models) of a Geodesign study (STEINITZ 2012), Active social media platforms can be used to involve the local community both in the planning discourse and in the design (ERÄRANTA et al. 2015).

From a slightly different perspective, the novel Geodesign Hub (www.geodesignhub.com), could be considered a social media app for trough it participants interact collaborating to the core part of collaborative conceptual design. Also in this case, all the data produced along the collaborative design studies can be saved, retrieved and analyzed – in a similar manner as with more usual social networking app -to understand both participants' preferences and behaviors, in this case not in the real world but in the design space. This way, both technical knowledge and experiential knowledge may be used in order to build a shared and sustainable development process for the territory among the different involved actors.

5 CONCLUSIONS

This paper discusses current innovation potential concerning the use of User Generated Content and more specifically, Social Media Geographic Information in Geodesign. Through selected examples, it is demonstrated how the analysis of social media data is inherently geographic in nature and may complement official GI produced by public authorities and by the private sector in order to represent, analyse, and assess the current state of geographical systems. Moreover, this new type of information represents a unique source of information to understand people preferences and needs which express the

requisites for future territorial transformation. In addition, social media platforms may be used actively to involve citizens in the planning and design discourse. Indeed for a widespread diffusion of SMGI analytics techniques in Geodesign a number of issues should be further investigated and better understood including the issue of privacy, the influence of individuals on the overall discourse both in terms of information, preferences, and contribution to decision-making; the representativeness of the sample; the further test of operative ways and protocols to collect and include this new and peculiar type of information resources in the construction of the Geodesign frameworks models both in the assessment and intervention part of the process. However, early research results may be considered very promising and this research domain is attracting a growing community of scientists, opening alleys for the development of more transparent, pluralist and democratic decision-making in Geodesign.

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ID 1515 | COLLABORATION IN PLANNING: THE GEODESIGN APPROACH

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1 INTRODUCTION

Planning literature proposes different paradigms (Khakee, 1998) for interpreting the concept of public participation in spatial planning, ranging from early advocacy planning approaches (Davidoff, 1965) to more recent communicative ones (Innes, 1995). Different approaches highlight different perspectives on participation, including expression of pluralist community views, preferences, and values, creation of better knowledge, better transparency, and more consensus in decision making. While the Arnstein's Ladder (1969) can be still considered a reliable model to describe different degree of participation, ranging from none to full citizen control, most recent studies propose its revised application to the realm of current digital practices in spatial planning (Kingston, 1998; Carver, 2001). As shown in figure 1, Kingston (1998) and Carver (2001) argue that the highest levels of participation are achieved when citizens are actively involved in designing possible alternatives and in making decisions. However, the latter models did not contribute much to clarifying how public participation intervenes within the different phases of a planning process. Indeed, the contribution of the local community, or the people of the place (Steinitz, 2012) can affect different stages and tasks of the process: local knowledge can be collected to integrate with expert surveys, aimed at the description of the current state of the environment and of the ongoing territorial dynamics; the interests and needs of the citizens can be encoded in risk and/or suitability analyses aimed at guiding the design of future alternatives; or members of the local community can collaborate to propose changes, to assess their impacts and eventually take part to decision-making. Having a clear framework in mind can help everyone to better understand these facets and possibly to better understand the opportunities and functioning of public participation in spatial planning, design, and decision-making.

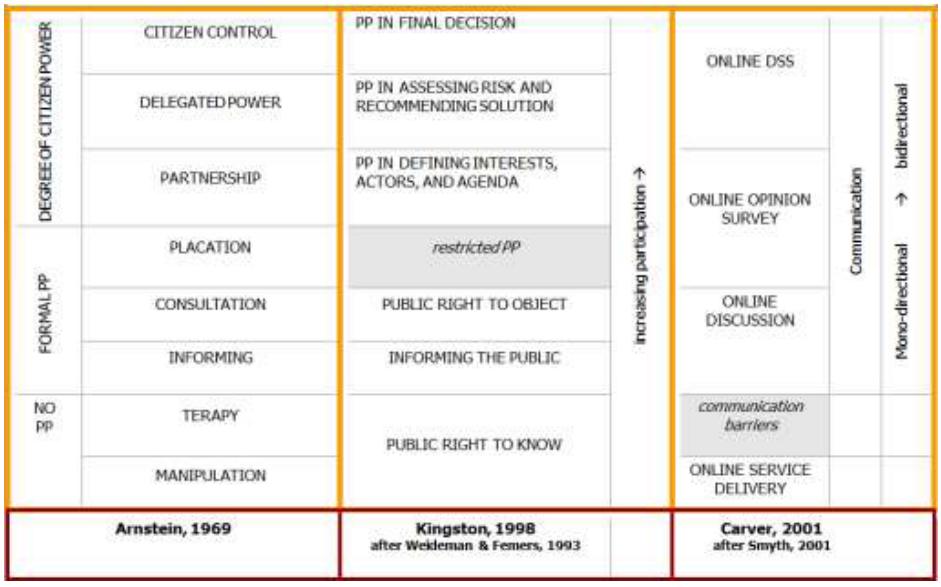

Fig. 1: The Arnstein's Ladder of citizen participation revisited in the information age.

In the light of the above premise, this paper describes the process of a Geodesign workshop held in May 2016 on the future of the Cagliari Metropolitan Area in Italy. The workshop shows how it is possible to involve teams of members of the community in what is perhaps the most critical (and least understood in its dynamics) phase of a spatial planning process, that puts knowledge into action through the design of future change alternatives. After the Geodesign framework (Steinitz, 2012), which informed the Cagliari Geodesign study, is outlined in section 2, section 3 shows how the process unfolded, from data preparation to the creation of a final agreed design solution. Section 4 proposes a final review of the results and issues for further research.

2 THE GEODESIGN METHODOLOGICAL APPROACH

Geodesign (GD) is a novel methodological approach to design and decision-making in urban and regional planning which is deeply rooted in the geographical sciences. While not strictly essential, Geodesign usually relies on extensive use of (geographic) digital methods and tools. In general, Geodesign can be defined as a process which integrates analysis, evaluation, design and decision support techniques using enabling technologies for planning built and natural environments. Given the complexity of the issues commonly involved in planning processes, Geodesign studies should ideally be carried out by multidisciplinary teams made up of design professionals, experts in the geographical sciences, information communication technology specialists, and, last but not least, members of the local community, who can provide invaluable knowledge and values to inform design and to help create consensus on decisions. From the perspective of methodology, Steinitz (2012) proposed an operational framework for Geodesign (GDF) which starts from detailed representation and analysis of the territorial context aimed at understanding territorial dynamics, in order to understand opportunities and risks of development, so informing the design of possible future states or courses of actions. The framework also includes assessment of potential impacts of change which should inform negotiation during the decision-making process in a collaborative and interactive manner. All the aspects of participation (e.g. knowledge building, collaboration, expressing values and interests, mediation, negotiation, consensus) which inform different participatory planning models (e.g. advocacy planning, transactive planning, communicative) (Khakee, 1998) may potentially be included. However, a Geodesign process is never the same: it should always be tailored to the local context through meta-planning (Campagna, 2016a). Thus, participation may assume many different facets in its application to local processes.

Implementation of Geodesign in spatial planning at various scales and within different contextual settings for decision-making has been tested by Steinitz in many case studies (among them Rivero et al 2015, Nyerges et al. 2016, Campagna et al. 2016), based on his framework. The GDF is structured in six models: the first three models, constitute the assessment phase, describing the current conditions of the territorial context and their possible evolution without new actions, while the last three models, constitute the intervention phase, which aims to identify how the study area should be altered in order to improve the current conditions if needed.

More specifically the Representation Model (RM) describes the study area in its current state, the Process Model (PM) identifies and analyses the possible evolution of the territorial context with no interventions (i.e. the do-nothing alternative), while the Evaluation Model (EM) assesses the identified processes in order to find possible risks and opportunities for future change. Then, in the assessment phase, a Change Model (CM) is built to design possible alternative future states for the study area, which are then assessed in order to find potential environmental, economic or social impacts through the Impact Model (IM). Eventually consensus among the decision-makers and the other stakeholders on a final choice can be achieved through a negotiation process which is supported by a Decision Model (DM). While the process is not necessarily strictly linear, to perform a complete Geodesign, study three iterations should be undertaken, driving the six models from the first to the sixth, or in reverse order. The first iteration aims to identify the case study purpose and this can be considered as a scoping of the study; the second iteration passes through the six steps in reverse order and should clearly define how to carry out the study in terms of methods and tools depending on the needs of the specific planning study This can be considered as a meta-planning phase. Then, during the third iteration, the study is fully carried out. During a study, the results of the design and the impact analysis can be shared among the stakeholders and visualized in form of maps, charts and graphs (Ervin, 2011) to aid participation. Feedback offers the stakeholders the possibility not only to improve their own designs, but also to collaborate to reach a solution acceptable to all parties.

The application of the Geodesign methodological approach seems to be currently highly relevant because of its strong potential to positively affect the way planning processes should be carried out in Europe according to the Directive 2001/42/EC on Strategic Environmental Assessment. Geodesign can contribute to addressing many of its current pitfalls (Campagna and Di Cesare, 2016), including those relating to the involvement of the public in the decision-making process, which are most relevant to this paper.

3 THE CAGLIARI WORKSHOP

The “Geodesign Workshop on Future Scenarios for the Cagliari Metropolitan Area” took place in May 2016 at the Civil and Environmental Engineering and Architecture Department (DICAAR) of the University of Cagliari (UniCA), Italy, in the form of two intensive planning studio days. The Geodesign Framework was customized to the local decision-making context in order to develop collaborative sustainable future scenarios for the Cagliari Metropolitan City, recently established by Sardinian Regional Law n. 2/2016. The new metro area is located in the southern coastal part of Sardinia (Italy) and is composed of 17 municipalities. Workshop preparation started in January 2016 with close cooperation in the local coordination team, which included a dozen local experts in architecture, planning and environmental engineering, including the authors of this paper.

During the first phases of the study, the coordination team identified the boundaries of the study area and its relevant territorial context, primary goals for its future development, and the main ongoing territorial dynamics: the scoping phase of the study (i.e. the first iteration through the framework). Second, the methods and the tools to be used in the Geodesign models implementation were selected (i.e. second iteration). Next, the representation, process and evaluation models were built (i.e. third iteration). It should be noted that this part of the process was implemented by the Geodesign team of experts, but citizen participation could have been part of these phases if the study had been organized differently. In order to carry out the intervention phase (i.e. CM, IM, DM) of the third iteration of the GDF, an intensive two-day workshop was organised. Thirty-two people, including academics, technical representatives of public authorities, local planning professionals, and students of architecture and civil engineering participated. The group was selected on the basis of the two main objectives of the workshop: to understand and further test the application of the Geodesign methodology, and to rapidly identify central issues, options and choices as a basis for further studies and planning.

In order to simulate local decision makers, the participants were divided in six teams representing major local stakeholder groups. All of them played a primary role in the design and during the intervention part of the GDF third iteration. The coordination team, who had prepared the early phases of the study, limited its role to coordination at this stage.

The collaborative work was supported by a web based application called Geodesign Hub (www.geodesignhub.com). Its architecture combines the concepts of Planning Support Systems (PSS) (Harris 1989) and web 2.0 principles to perform in an integrated and collaborative way the last three models of the GDF. It uses the representation, process and evaluation models, previously prepared with professional GIS desktop application by the coordination team, as input. Geodesign Hub represents a promising way to approach the complexity of the participatory design and decision-making processes. A more detailed review of the capabilities of Geodesign Hub as compared to other similar planning support tools can be found on the “Sketch Planning Tools for Regional Sustainability” report (Avin, 2016). Indeed, it integrates state of the art technologies into the Geodesign workflow, contributing through a user-friendly interface and social networking capabilities the means to facilitate the collaboration of non-expert participants of various backgrounds and skills, to work intuitively and quickly on design and negotiation.

4 THE CAGLIARI METRO AREA

Since Italian Law 7 April 2014 n.56 became effective, some Italian cities and their suburbs formed a new local government level, the so called “metropolitan cities”. Given its special status of Autonomous Region, the Sardinia Regional Government had to transpose the national principles relating to the establishment and management of these new jurisdictions. Accordingly, the Regional Law 4 February 2016 n.2 created the Cagliari Metropolitan City, defining its functions and responsibilities, as well as its boundary, which includes 17 municipalities around the region’s capital. From the spatial government perspective, a metropolitan strategic plan should be adopted as a regulatory and coordination tool for the development of the area. The workshop represented the first design effort to understand central design issues, opportunities and options.

The area, located along the southern coastal edge of Sardinia, Italy (Figure 1), represents an important economic and social attractor for the whole island. In addition, during the last decade the number of tourists visiting the region increased. Thanks to its location on the lower fertile plain of Campidano and

facing the gulf called Golfo degli Angeli, the Cagliari Metropolitan City contains highly diverse natural and cultural landscapes and offers a rich variety of agricultural and fishery activities that characterized the important food tradition of the whole region (Figure 2). The area has the highest population density in Sardinia; however, the landscape is not affected by excessive vertical or volumetric occupation. In 2011, the total population was approximately 420.000 people (Census ISTAT 2011). According to the 25-year demographic projections carried out by the coordination team until 2036 (the established time horizon for the study), there will be a growth of about 25.000 inhabitants (i.e. growth rate +0.055). An additional moderate population growth was considered as a result of policies included in the pro-development scenario of this study, resulting in an estimated total of 50.000 new people in a +25-year target.

Fig. 2: The Cagliari Metropolitan City.

Fig. 3: Cagliari Metropolitan City landscapes.

5 PRE-WORKSHOP PHASE

The workshop organization was carried out by the local coordination team, with the aim of constructing the knowledge base (i.e. RM, PM, EM) in a consistent format with the Geodesign Hub input requirements. The first step was to specify three main objectives for the Cagliari Metro Area development scenario in a twenty-five year time horizon:

- Tourism development: intended as the valorization of existing coastal tourism facilities and their improvement in less equipped areas;
- Agrifood: intended as the valorization of the local agricultural areas, promoting sustainable agriculture, and also the implementation of new tourist itineraries connected to agricultural, scenic and cultural assets, traditional production methods, and gastronomic heritage. This objective aims both to extend the tourist offering and to keep the rural territory alive;
- Cagliarifornia: intended as the creation of an ICT industry pole able to create new job opportunities and to attract new population, given the presence in the area of existing industry in this domain.

In order to describe the main characteristics of the territorial context, ten spatial systems were selected. The choice was based on analysis of the regulatory framework, and adapted to the development scenario. Three vulnerability systems were chosen, namely: cultural heritage (CULTH), ecology (ECO), and hydro-geological hazard (HYDRO). In addition seven attractiveness systems were considered: tourism (TOUR), agrifood (AGRI), transport (TRASP), low density housing (LOW-H), high density housing (HIGH-H), commerce and industry (COMIND), and smart services (SMRT). Each system was analysed starting from the description of its current condition (i.e. RM) and its evolution dynamics (i.e. PM), to the evaluation of the territory in terms of each system (i.e. EM). This gave workshop participants ten evaluation maps (Figure 4) to inform the design. All the EM maps were created by experts through land suitability analyses in a desktop GIS environment, with the aim of identifying the overall resource supply of the territory. The preparatory phase of the workshop (the first part of the geodesign study process) was carried out using a typical rational comprehensive planning approach (as defined in Khakee, 1998). However, while most of the spatial information used to create the knowledge base was retrieved from the Regional Spatial Data Infrastructure (R-SDI), in this phase the coordination team decided to test the use of passive social media geographic information (Campagna, 2014; 2016b) IThe TOUR evaluation model was informed by the indirect preferences expressed by social media users to different tourism locations. The use of social media to account for public values and preferences can be considered a form of input by the community, though involuntary.

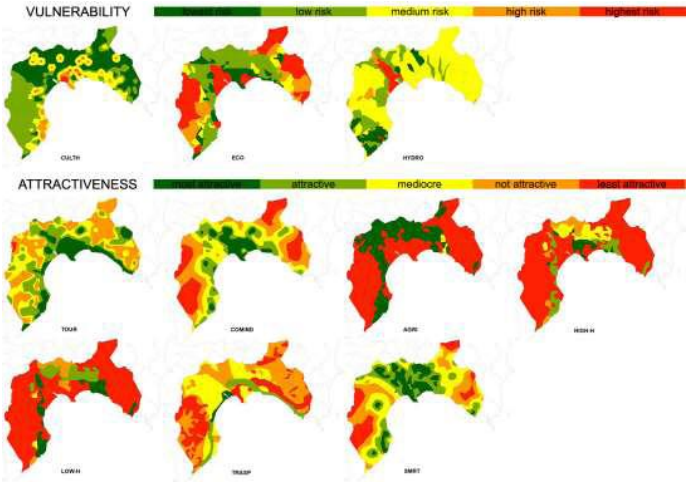

Figure 4. The ten evaluation maps.

The ten EM maps adopted the same color code. The vulnerability maps classified the study area in five vulnerability levels, where red areas indicated those characterised by a very high vulnerability, in which only actions aimed at preserving these sites can be permitted, and the dark green areas are the least vulnerable ones, in which do not present any restriction in use. Likewise, the seven attractiveness maps classified the study area into five levels, but in this case the dark green colour identified very highly attractive areas for developing action in that system, and areas depicted in red identified those of very low attractiveness. The ten EM maps were then uploaded in the GDH platform as a common knowledge base to inform the design. The design then became the responsability of the workshop participants, initiating the particiaptory part of the study.

In addition, as part of the assessment phase, a cross-systems impact matrix was compiled by the local coordination team to identify the positive or negative impacts of each single change action on over the ten systems (Figure 5). This matrix was also uploaded in the platform, enabling real-time calculation of the performance of each design proposal during the workshop.

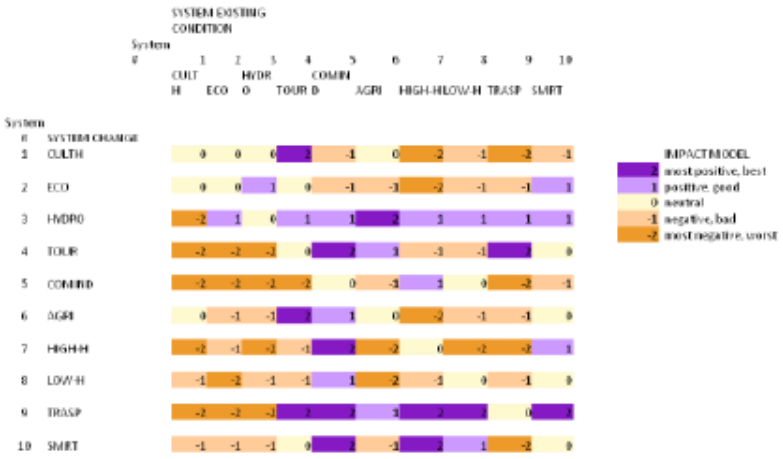

Figure 5. Cross-systems impact matrix.

6 THE WORKFLOW OF THE GEODESIGN WORKSHOP

A total of thirty-two participants were selected by the organizers to form a multi-disciplinary team, including scholars, students and local stakeholders from the public and the private sectors. As an introduction to the upcoming workshop, an open lecture given by Carl Steinitz was organized at the University of Cagliari to present the Geodesign concept and framework and their application in a number of previous international case studies. At the very beginning of the workshop the local coordinator introduced the study area, the main objectives of the development scenarios, and the ten evaluation maps, which were already available as a digital common knowledge base from which to start their design. As emphasized before, the Geodesign approach provides a workflow based on applying territorial knowledge to address planning problems from an interdisciplinary point of view, and to make informed and evidence-based designs and decisions.

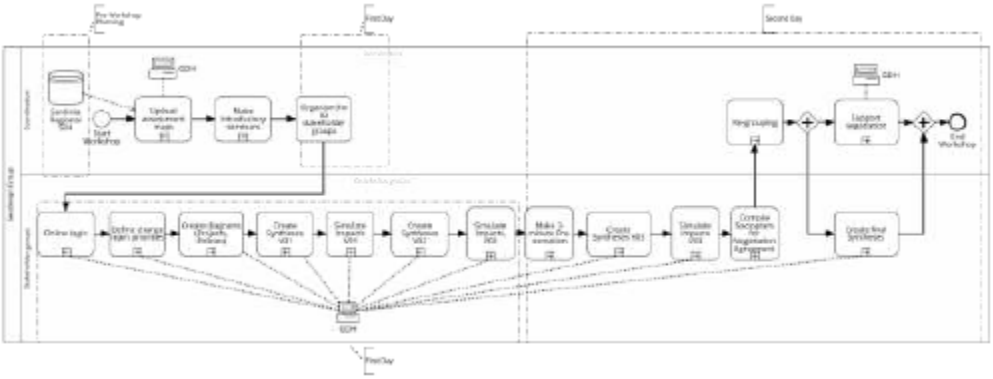

Figure 6. The workshop workflow represented in BPMN annotation.

GROUPS	
Metropolitan government	METRO
Regional government	RAS
Green NGO	GREEN
Cultural Heritage Conservation	CULTH
Developers	DEV
Tourism Entrepreneurs	TOUR

Table 1. The six stakeholder groups.

The organizing team established the workshop schedule, which concentrated complex design tasks into an intensive and time-constrained workflow agenda (Figure 6). A collaborative PSS is most useful when applied at the beginning of a study of considerable complexity. Given the scale and complexity of the Cagliari metro area and the number of actors involved, the conductor emphasized that in this phase of the planning process speed is more important than accuracy. In the first phase, the participants were arranged in six groups, each one with a different viewpoint to guide their decision-making, (Table 1 and Figure 7) and with at least one member of the local staff offering technical support and advice throughout the process.

Figure 7. The six teams and their locations in the classroom.

Each member of each team logged-in and got familiar with the online GDH platform. The first task that needed to be carried out was the definition of each group's change priorities according to their specific role and interests in the decision process (Figure 8). They were asked to prioritize -in rank order -the ten systems, through discussion or by using methods for consensus-building (e.g. Delphi Method).

Figure 8. The different Decision Models for the six groups.

Participants in each team were asked to produce a number of geo-referenced diagrams each one representing a conceptual design proposal related specifically to its system. This marked the beginning of the design part of the study, where participants could exploit the innovative potential of the GDH PSS. GDH enables two types of design interventions: projects and policies (Figure 8). Projects are a proposed physical change in the territory shown by a solid block of color, while policies represent decisions and actions that will not have a physical expression, and are shown by areas of color hatching. The GDH platform includes sketching tool for drawing lines and polygons, and visualises changes in the geographic space in real-time, facilitating the assessment of their impacts. Expert and experiential spatial knowledge acquired during the assessment phase of the Geodesign Framework directly influences the change models by giving guidance to the designers. The EM maps were available as base maps in the software design window, providing a color-coded evaluation of the current development opportunities and risks in the area for each of the ten systems. The proposed projects and policies, referred to as diagrams, could be created by an individual stakeholder's initiative or as the result of early negotiations among team members.

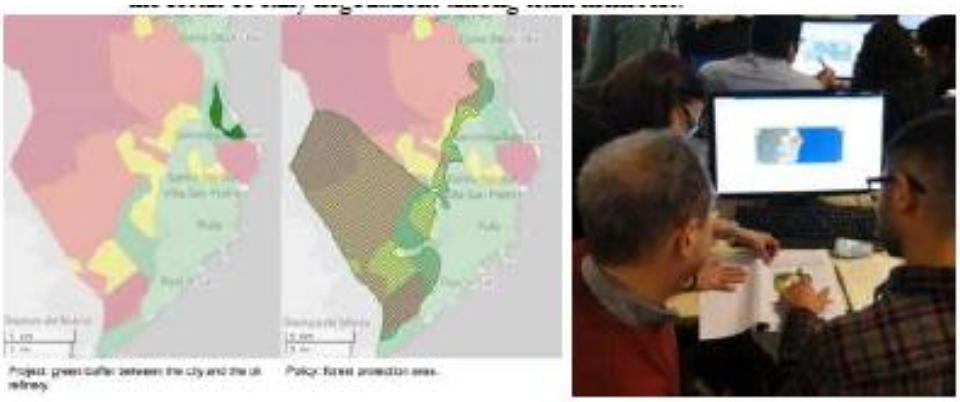

Figure 9. Projects (left) and policies (right) examples with the Evaluation Models of the related system as base map.

About 200 diagrams were created in this first stage. They were systematically organized in a matrix by the software, positioned in the column of the related system in chronological order of creation, and shared in real time among all the participants. At the end of the first morning, each group was asked to select a group of projects and policies (a synthesis) in line with their development goals and interests from all 200 diagrams in order to create their first change scenario. The GDH online platform not only supports rapid syntheses, but it also computes real-time impact assessments providing immediate feedback on a scenario's performance, creating the opportunity to rapidly revise the choices (Figure 10). More specifically, a series of maps and histograms shows: i) the direct impact of change in one system both on itself and on the other systems on a three-value scale, from positive (i.e. purple) through neutral (i.e. yellow) to negative (i.e. orange); ii) how the designs perform in light of the target goals; iii) the total cost of implementation. Furthermore, the tool enables dynamic updates to the evaluations maps as the synthesis is assembled, instantly displaying the connections between systems and the changes over the initial conditions.

Figure 10. Real-time impact assessment visualization.

Steinitz (2012) argues that the first design will never be the best one and that the synthesis process should be repeated at list three times to find an improved alternative: the second synthesis is usually better than the first one, and the third is usually the best. Hence, the possibility to rapidly revise and assess the change models represents one of the central advantages of using digital Geodesign technologies to support dynamic workflow. Accordingly, a second and a third design cycle took place, and the six teams could quickly and easily change their syntheses by modifying or creating new diagrams and adding or removing projects and policies until an agreed solution with acceptable impact performance was found.

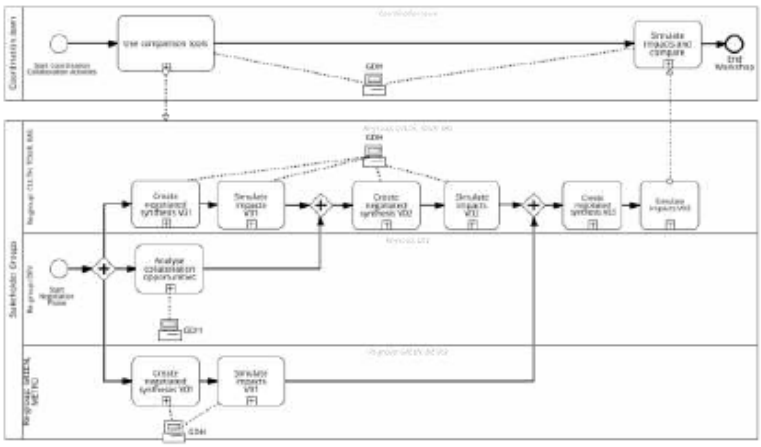

Figure 11. The negotiation phase described with BPMN annotation.

After each round of syntheses was completed, each team leader made a three-minute presentation to explain the main features of her/his group design synthesis. It was possible to notice how in the evolution from the first to the third version, the designs were gradually moving in some cases towards more similarity, in others towards highlighting conflicts At this stage, the tools in Geodesign Hub for effective visual or quantitative comparison of the alternative scenarios facilitated the early stages of the negotiation process (Figure 11). Eventually, not without some vigorous discussions, the teams reached agreement on a final synthesis.

Figure 12. The scenarios comparative tool showing the impacts performance of the six designs at their third version.

Maps and graphs enabled the participants to analyze more deeply each design version and to find differences and affinities between the groups (Figure 12). This comparative analysis greatly facilitated the efficient utilization of coalition/sociogram techniques (Rivero et Al, 2015) with the aim of identifying compatibility or conflicts between the groups. The tool is a matrix where each team could give a value from -2 (disagreement) to +2 (complete agreement) to the other groups according to the compatibility of their designs (Figure 13).

Figure 13. The Sociogram for Negotiation Agreement.

The results obtained by this approach immediately showed a first coalition that led the stakeholder teams of TOUR, CULTH and RAS to join together in a super-group displaying strong affinity among them. A second less robust alliance was formed between GREEN and METRO. The Developers remained outside the coalition-building process obtaining negative assessments from all the other teams. The two affinity groups started their negotiations, while the Developers, at first, began to think about how they should move forward on this particular situation. They eventually decided to accept compromise and to collaborate with the strongest group. Agreement for Cagliari metro area future development was reached within the coalitions through dialogue and mutual understanding which resulted in the creation of two alternatives and combined solutions. Because of the noticeable convergence towards similarities in the two designs at that point, a third process of negotiation was launched among all the participants aimed at agreeing a single final design. In such a situation, the conductor played an important role in the collaboration/negotiation phase by encouraging mutual understanding, ensuring wider and more efficient communication, and avoiding bottlenecks in the process. At the end of the second day of the workshop, an agreed +25-year change design was created (Figure 14). Then, with the support of GDH visualization tools, it was compared with the frequency map which shows in a single solution all diagrams selected in at least three different alternatives during the third round of syntheses. The two maps present many common diagrams and show the same hotspots of interests.

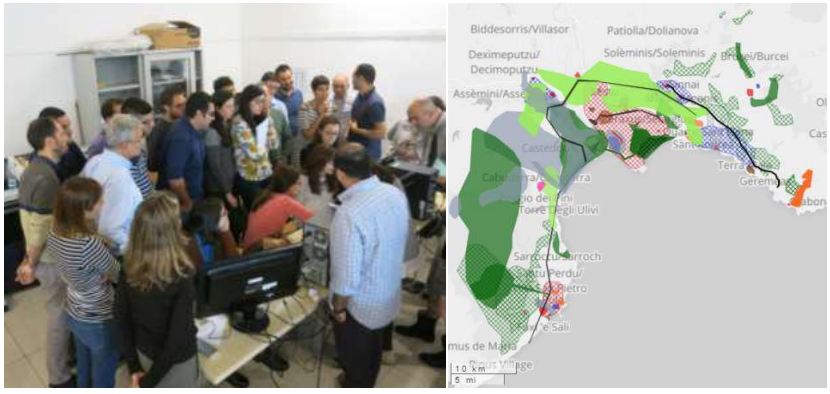

Figure 14. The negotiation process among the stakeholders and the final change design.

7 CONCLUSIONS

Over the last two decades or less, the diffusion of internet and of information communication technologies has opened new possibilities for public participation in many government domains, including spatial planning. Overcoming space and time constraints and digital divides which exist in many countries can pose challenges. Many factors affect the success or failure of digital participation initiatives. Among them, the adoption of suitable methods and tools plays an important enabling role. Geodesign methods and related technologies seem to have broad potential for contributing to collaborative design. The study presented in this paper was developed within an academic research setting, and demonstrate the functioning of a Geodesign process and its enabling technology. Other studies using the same approach and technology proved to be successful in actual practice. Although limited in complexity, this study is useful to demonstrate and describe the functioning of the Geodesign process and its potential. The collaborative method and technology presented in this paper can support participation especially in some specific working situations such as i) when working through a framework in order to understand it, ii) when there is little time and small data, iii) when starting fast to identify central issues, options and choices, iv) when it takes an experimental design to know what the questions really are, and v) when it takes a design to understand what is really wanted. Conditions i), iii) and iv) particularly apply to the Cagliari metro area workshop. In other situations, especially in ii), extending participation into the knowledge building phase of the project, including the creation of the representation, process and evaluation models can be appropriate. The latter part can be the subject of further research, especially from the perspective of using other social media networking platforms and tools to involve the citizens in volunteering data about the physical environment, about ongoing environmental and social processes, and about community values, preferences and need.

ACKNOWLEDGEMENTS

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ID 1559 | MULTI-CRITERIA DECISION ANALYSIS FOR PROMOTING BIKE-FRIENDLY CITY VISION OF IZMIR USING GIS

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ABSTRACT: Deploying GIS at its analysis of multilayered spatial data about Izmir (the third biggest metropolitan city in Turkey), this paper aims at suggesting ways of providing bicycle routes and roads in the already developed built environment of the densely populated cities. Focusing on multiple characteristics of topography, land use and population, the study deploys overlay analysis and network analysis respectively at city level and district level. Despite of the limited number and characteristics of data available about Turkish cities, this study has been limited to the lack of crime data and travel demand data of related neighborhoods.

1 INTRODUCTION

Bicycle use is widely promoted by many researches and policy initiatives of industrialized countries as the efforts related to sustainable development, carbon-free and non-motorized transportation and "healthy" cities. While some of these policies and researches relate to promoting changes in lifestyles and habits of physical activities (eg., Wendel-Vos, Schuit, De Niet, Boshuizen, Saris, Kromhout, 2004), others focus majorly on planning and design of built environment and of transportation systems (e.g., Huang & Ye, 1995; Rodriguez & Joo, 2004).

A major challenge is how to provide bicycle roads through the developed built environment of the densely populated cities that do not have any prior bicycle routes and infrastructure. This paper aims at answering this question, while deploying geographic information system (GIS) at its analysis of multilayered spatial data about the city of Izmir as being the third biggest metropolitan area in Turkey.

In recent years, making bicycle transportation a part of city life has become one of the main purposes of Izmir Metropolitan Municipality. With this purpose, Izmir aims to promote cycling routes in the following years and the Metropolitan Municipality has been making significant efforts for turning the city into a more bicycle-friendly city. However, availability of physical environment for cycling is an important factor to consider. To promote and upgrade cycling routes in a dense built environment is a challenging process. We claim that Izmir has a potential to offer alternative transportation types and networks prioritizing bicycle, despite its dense urban environment.

This study aims at promoting the bicycle-friendly city development efforts of Izmir. It tries to consider many different spatial factors while promoting bicycle routes within a dense built environment. At its analysis, the study interrelates various data about the characteristics of the natural and built environment and also the spatial distribution of population characteristics at the metropolitan, district and neighborhood scale. This study aims to combine different techniques of spatial analyze at different spatial scales in order to determine potential bicycle routes for areas with different land uses.

This study calls the determinant factors of bicycle facility planning as environmental assets. It mainly aims at taking into action the knowledge of the environmental assets by digitizing and visualizing them. Focusing on the metropolitan scale of Izmir with 30 districts at first step, this study considers environmental assets as parks, recreational areas, topography and analyzes them in the GIS environment. These are the spatial data infrastructure that would able us to reveal potential bicycle route networks. Additionally, some inhibitor factors such as population density and different age range groups are also taken into account. All these spatial data are used to detect the areas that high level of spatial infrastructure are embedded by using overlay analysis. Afterwards, focusing on central districts of Izmir, network analysis is performed between determined stops by taking into account the proximity and continuity at the road network level.

Study findings suggest that overlay analyze technique can be applied to detect neighborhood levels and network analysis can be performed to detect potential routes and to model spatial relations of local nodes. Not only local nodes but also transportation corridors are the basic unit of analysis within network analysis.

2 LITERATURE REVIEW

While promoting the use of bicycle and creation of bicycle networks within a city, it is important to give attention to recent bicycle transportation studies. Studies that relate to the question of how to determine bicycle roads in a city emerge in various fields (majorly urban geography, transportation, urban planning and urban design) and research areas especially about health, healthy living, sustainable transportation and non-motorized transportation (e.g., Huang & Ye, 1995; Wendel-Vos et al., 2004; Segadilha & Sanches, 2014).

Until now, studies related to bicycle network planning have focused primarily on route choice criteria and the factors affecting bicycle use which are giving very useful insights for designing bicycle routes within a city. These studies give emphasis on the factors that can affect bicycle use. These factors are mainly determined as the characteristics of the roadway and bicycle routes, automobile traffic, availability of public transport, and factors related to the built and natural environment (Aultman-Hall, Hall, & Baetz, 1997; Rodriguez & Joo, 2004; Segadilha & Sanches, 2014; Milakis & Athanasopoulos, 2014). Concerning the built environment, bicycle usage is very much related to the location of the areas with higher employment and population density and presence of schools, recreational areas, parks at the origin and the destination (Rodriguez & Joo, 2004, Rybarczyk and Wu, 2010). When it comes to the natural environment, topography and slope become major determinants of bicycle route planning (Rodriguez & Joo, 2004). In addition to all these, safety becomes another determinant of bicycle use (Allen-Munley et al., 2004; Parkin et al., 2007) which is related to characteristics of roadway and automobile traffic. According to Rybarczyk & Wu (2010) these determinants can also be categorized as demand based and supply based criteria for bicycle route planning; the demand-based criteria includes business and land uses such as schools, parks and recreation areas and supply-based criteria includes demographics, safety, public transportation, road characteristics and existing bicycle routes.

Overall, studies underline a set of group of factors that can direct the design and planning of bicycling roads. In particular, bicycle trips tend to increase in the presence of mixed uses of land, slight topography, improved street connectivity, direct routes without interruption and safe separation from motorized traffic

(Aultman-Hall, Hall, & Baetz, 1997; Rodriguez & Joo, 2004). High density areas, schools, parks and public transportation hubs are also anticipated as land uses that support the use of bicycle routes. Therefore, these factors should be taken into account in the planning of bicycle networks in a city.

All these information from prior studies offer the determinants for bicycle network planning however, these studies cannot offer a complete answer to where to develop new bicycle routes within an already developed built environment that lacks a well-connected bicycle network. Only a few studies have applied a comprehensive methodology to determine bicycle routes within a city (Huang & Ye, 1995; Rybarczyk & Wu, 2010; Milakis & Athanasopoulos, 2014). Additionally, as bicycle route planning requires many factors to consider, geographic information system (GIS) technology provides an excellent opportunity to process all available data for bicycle route selection. However, small number of studies have applied GIS in the planning of bicycle routes until this time (Huang & Ye, 1995; Rybarczyk and Wu, 2010). Even more, these studies were dealing with the existing routes in a city. This study, too considers various data about the characteristics of the natural and built environment and also spatial distribution of population characteristics at the city scale and neighborhood scale. While dealing with the data, GIS technology has been used. By this, it is aimed at promoting bicycle routes in the city of Izmir, while making contribution to the GIS based bicycle route planning in an already developed built environment lacking a complete bicycle network.

Relating to these research issues, the design and planning of built environment is discussed and promoted as a tool especially to motivate and assist people's use of non-motorized transportation modes, basically walking and bicycling (Rodriguez & Joo, 2004; Wendel-Vos et al., 2004). In other words, it is expected that if the built environment is designed and planned with adequate and suitable infrastructure, land use, natural assets and allocation of other resources for non-motorized transportation, people will be more willing to use such modes of transportation. Such kind of environments can provide opportunities with healthy living, sustainable living and transportation.

3 STUDY SITE

In recent years, the Metropolitan Municipality of Izmir has the goals of sustainable city development, including environmentally sensitive and sustainable transportation. As a part of these goals, the Municipality aims at promoting cycling routes and has been making significant efforts for turning the city into a more bicycle-friendly city. Accordingly, for providing mobility between districts and city center, the creation of nature-friendly corridors with cycling and walking routes has become a priority in the planning of Izmir (Izmir Metropolitan Municipality, TMP Revision, 2016). However, existing bicycle routes are incapable of providing a complete bicycle network for the city. There are no continuous bicycle routes to serve for the whole city except the coastal road, which is mainly used for recreational purposes. Additional routes are promoted for providing bicycle access to the residential, social and cultural spaces, major transfer stations, university campus areas and other major usages in the city center (See; Figure 1).

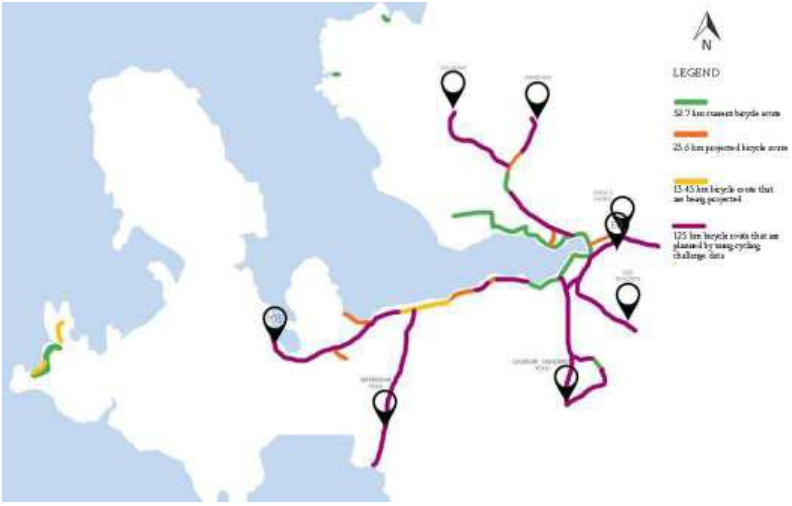

Figure 1 – Bicycle Routes

The third biggest metropolitan area of Turkey with a population near 5 million, Izmir is located on the Aegean coast, between the 37o45 'and 39o15' north latitude and 26o15 'and 28o20' east longitudes and covers an area of 12,012 km2 (See; Figure 2) (Izmir Governorship, 2017) with a mild climate during the year. Located on its bay area at the Aegean coasts, the city of Izmir has very high urban densities at central coastal neighborhoods and extends to hilly neighborhoods. With one of Turkey's densest urban population at its central districts at the coast, the city of Izmir has a metro system with its city line and regional line, a newly developing tramline, a limited level of sea transportation and very recently planned bicycle route infrastructure.

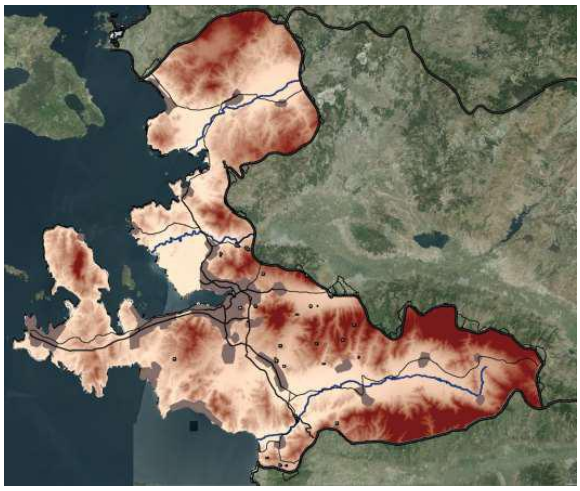

Figure 2 – Location of Izmir

In 2015, while the average age of Izmir's metropolitan population is 4.168.415, the average age in its central districts is 35-39 with an education levels higher than Turkey's average (Izmir Governorship, 2017). At a close examination of these 11 central districts, it can be seen that children (age 3—13) ranges are clustered in Karşıyaka, Bayraklı and Gaziemir districts, young (age 14—22) ranges are clustered in Karşıyaka, Bayraklı, Konak districts; while seniors (age 55+) are clustered in Karşıyaka, Bayraklı, Balçova and Konak districts (See; Figures 3).

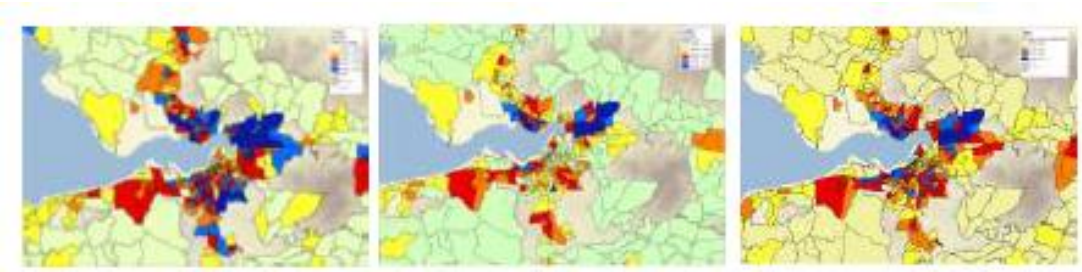

Figure 3 – Maps of age range of 3_13, 14_22, 55+

These age range thematic maps visualize and determine the clusters of different population groups demanding different spatial activity types. We admitted that we should pay attention to the accessibility of the local service areas, especially the neighborhood parks and bicycle routes, within the walking distance. Therefore, we used the "neighborhood ratio" of the age data as seen in the legends. We obtained this ratio by calculating the ratio of the number of each group of people in the neighborhood to the neighborhood population.

4 STUDY METHOD

As bicycle route planning requires many data layers to deal with, GIS can easily integrate these data layers in the form of digital information, thus can reduce the cost of data assembly. Furthermore, GIS can perform spatial operations, such as terrain modeling and network analysis, which are crucial to bicycle route planning; and its network analysis data model and path-finding algorithms make it a straight-forward

way to implement sophisticated cycling models that can incorporate factors such as traffic, topography, built environment attributes and socio-economic data at the same time (Huang & Ye, 1995).

The determining factors for walking and bicycle route planning has been differentiated as demand side and supply side (Wigan, Richardson & Brunton, 1998; Rybarczyk and Wu, 2010). While demand side talks about the spatial distribution of population characteristics such as age, education, gender, and health condition (e.g., Huber, 2003, Wigan et al., 1998), the supply side underlines the physical/environmental characteristics that include natural elements such as topography, slope and land use characteristics such as workplaces, green areas, housing, schools and transportation networks (Martens, 2007; Rodriguez & Joo, 2004). Within the supply side factors, green open spaces have great importance on bicycle route network planning. Recreation areas and parks are desirable destinations within a route (Wendel-Vos et al., 2004) as they generates high level of bicycle use. Lastly, population density provides an estimation of potential demand for and access to bicycle facilities (Huber, 2003; Allen-Munley et al., 2004).

This study calls the determinant factors of bicycle facility planning as environmental assets and takes into action the knowledge of the environmental assets in the GIS environment. Within the context of 11 districts of metropolitan area, this study considers environmental assets as parks, recreational areas, topography and roads that could be determined as supply side. These are the spatial data infrastructure that can reveal potential bicycle route networks. Additionally, some inhibitor factors such as population density, motor vehicle traffic volume and crime statistics are taken into account. All these spatial data are used to detect the hotspot clustering with high level of spatial infrastructure. Afterwards, network analysis is performed between potential clusters based on proximity and continuity. While detecting the clusters focuses on population density, parks, recreational areas, schools, weather and crime statistics, detecting the networks considers motor vehicle traffic volume, topography and main public transportation hubs.

The methodology of the study comprise of two main steps. First one evaluates metropolitan scale big data and determines subscales suitability for route planning. Available data at metropolitan scale are geo¬raster data consisting of the population density of each age range, park density, slope and digital elevation. On that aim, overlay analysis has been implemented as using population density of different age ranges, green space density, slope and elevation (srtm-dem of the Izmir province has 90 m of grid size resolution; 45 m of horizontal accuracy; and 15 m of vertical accuracy) data for neighborhood detection. Second one seeks for the bicycle route determination which may be varied based on the different activity within those neighborhoods. For this aim, network analysis has been implemented through road network, stream network and green areas.

5 FINDINGS & DISCUSSION

Within the context of overlay analysis, the population density raster of child and seniors, park density raster, slope and digital elevation data have been reclassified into three defined interval (See; Figure 4). The reclassified digital surface data have been overlapped in the ArcMap environment. The different age range maps have been used to generate different overlay maps. The different age groups have been related with the activity differentiation of bicycle users. Two synthesis maps as a combination of these factors shows the most suitable areas at neighborhood levels for bicycle planning. Within the most suitable areas of two overlay analysis; ‘Bostanlı’ neighborhood has been selected as the common area for the next step to generate the network analysis (See; Figure 5, 6).

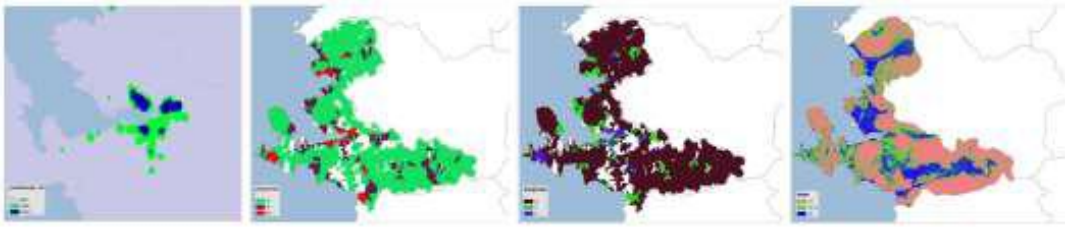

Figure 4 – Reclassified data

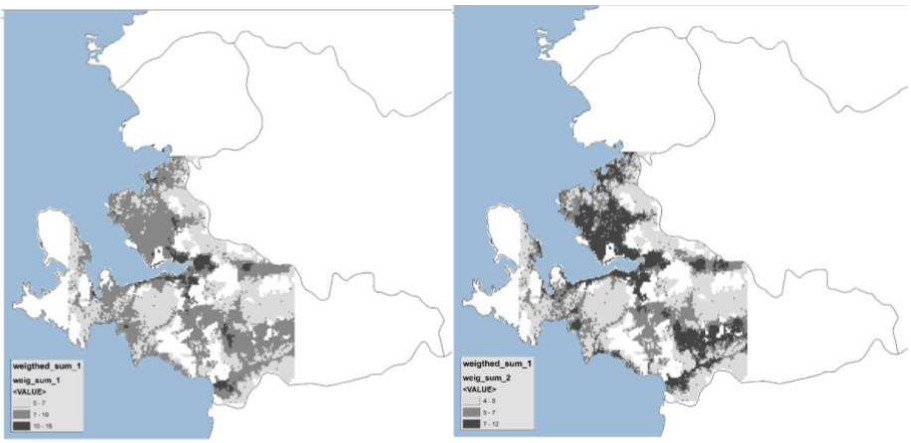

Figure 5 – Synthesis map 1 | Figure 6 – Synthesis map 2

Within the context of network analysis, road networks, work places, transportation hubs, stream networks and the parks have been used respectively for creating network dataset. While work places and road network are associated with the working age group based on transportation activity; the parks and stream networks are associated with the child and old age groups for mostly leisure activity. Therefore, the determinants of the different type bicycle usage have been defined and divided into two categories; the determinants for bicycle use for recreation, the determinants for bicycle use for mobility. Relatedly, analysis has been done according to this categorization.

As an outcome, two potential routes have been determined via network analysis that may serve for two different activity types (See; Figures 7, 8). The Figure 7 shows the route (1) passing through the few numbers of work places and parks starting from the ferry station targeting multi-modal transportation system. The other route (2) shown in the Figure 8 passes through the parks along the stream networks targeting the leisure activities.

This study aims to find out a methodology via GIS environment for detecting potential bicycle routes within the dense spatial contexts. While benefitting from digital visualizations and analyzes, we have used city scale big data to be able to determine the most suitable areas for bicycle route planning. Due to the limited data that is available about Turkish cities, this study has been limited in terms of some social characteristics of the population and the neighborhoods. Thus, crime statistics and travel demand data of the related neighborhoods have been lacked. Determining bicycle routes within the dense spatial context by using the geographical and physical data was another challenge of this study.

Figure 7 – Bicycle route (1) for mobility Figure 8 – Bicycle route (2) for recreation

6 CONCLUSION

The bicycle road infrastructure is gaining ground serving for healthy cities and well-being via non-carbonized, and sustainable mode of transportation. It has been taken as an important option both for physical activity and sustainable mobility. Therefore, the development bicycle road infrastructure becomes an important issue in urban planning agenda, especially in the era in which sustainability is a major goal for future development. As being one of the important metropolitan districts of Turkey, Izmir have also future targets on becoming bicycle-friendly city despite its dense and already-developed built environment with inadequate bicycle road infrastructure. This study aimed to contribute this target, while seeking for a methodology using digital analyzing techniques for new bicycle networks within dense built environments.

While doing this, the study tries to integrate different digital analyzing techniques. The determination of bicycle route has been done by overlapping many different big data at GIS environment. As bicycle route planning requires dealing with many different spatial data at the same time, GIS provided an efficient environment to make this analysis. As a result, two different bicycle routes have been suggested serving for different purposes; namely for mobility (route 1) and recreation (route 2), furthermore we have proposed a comprehensive bicycle route planning method using GIS for promoting the bicycle-friendly city vision of the city of Izmir.

ACKNOWLEDGEMENT

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ID 1569 | SOCIAL TOPOGRAPHY: LEARNING SPATIAL INEQUALITY THROUGH 3D REGIONAL MODEL

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ABSTRACT: The aim of this research is to develop a digital sand table to facilitate dynamic decision making capable of eradicating spatial inequality. The proposal's innovation lies in the interface it creates between a theory of spatial inequality and a unique laboratory that facilitates 3-D visualization of the mapping of social disparities. This interface, and the unique platform for the formulation of socio-spatial policy it yields, stands to constitute a turning point in the manner in which decision makers 'see' (literally and figuratively) space and subsequently make policy. This proposal's point of departure is the premise that the world 'out there' contains inequality that continues to expand and intensify on different scales in different parts of the world. In recent years, scholars have reported an increase in inequality, as observed, for example, on various scales in the United States and different countries in the European Union (OECD, 2016: 74; Hopkin & Lynch, 2016). Inequality is also intensifying in Israel[1] and its southern periphery[2].

1 THE PROBLEM: TRENDS AND DEFINITIONS

On a simple level, social inequality can be defined as a situation in which those with the highest incomes earn increasingly more while those with the lowest incomes earn increasingly less. But the situation may also be more complex. For example, some individuals or households may see increases in their income, but increases that are smaller than those experienced by others with higher incomes. This is the essence of inequality: a growing distance between groups (Tasan-Kok, Van Kempen, Raco & Bolt, 2014: 22). This proposal joins a school of scholars who have addressed the phenomenon of spatial inequality (Linda Lobao, Gregory Hooks, Ann Tickamyer, and Jamie Peck).

The study of inequality, these scholars explain, asks "who gets what and why?" (Lobao, Hooks, and Tickamyer, 2007: 1), whereas the study of spatial inequality asks a third question: "where?" In this way, studying inequality from the perspective of spatial inequality means interrogating: "who gets what where?"

This school is based on a first generation of urban and rural sociologists who have sought to advance spatialized sociology (Gans, 2002) based not on a reification of "society" or "space" but rather on an intensification of the link between the two, as well as on the work of geographers who posit that "social relationships are space forming" (Soja, 1989). Scholars of spatial inequality argue the importance of bringing the region back into sociological discussion. Regions includes cities, open areas, and villages; creates territories, such as districts and regions, that help scholars identify networks of divisions and power relations that structure inequality yet remain under the radar. "Some geographers argue for theorizing social relationships in space as a 'power-geometry,' 'a complex web of relations of domination and subordination, of solidarity, and co-operation'." (Lobao, Hooks, & Tickamyer, 2007: 9; citing Massey, 1994: 265).

Sociological and geographical studies interrogating Israeli society have adopted and developed the concepts of center and periphery (Tzfadia, 2012) as a means of conceptualizing the inequality that links ethnicity, class, and geographical distance. These concepts have established a foothold in both Israeli academics and public discourse as an effective means of characterizing inequality in the country. Indeed, the concepts of "center" and "periphery" have constituted a basis for movements of social change, which

[1] The first is the Gini Index, which indicates that as of 2014, Israel was ranked fourth of all OECD countries in terms of inequality, after the United States, Turkey, and Mexico (Keeley, 2015). It also highlights a high incidence of poverty (18%) and an extremely high percentage of employees who earn minimum wage (OECD, 2016: 53-57). At the same time, the share of capital held by the public is on the rise, as are the wages of managers. In Israel, in other words, the strong are getting stronger and the weak are getting weaker.
[2] The southern Negev region, which reflects sharp social disparities both in comparison to the country's Central region and on a regional scale. For example, 29.9% of all salaried employees in southern Israel earn minimum wage, in comparison to 18.6% in the Central District and Tel Aviv. The gap is more pronounced among women, with 38.8% in the south, 23.6% in the center, and 22.2% in Tel Aviv (Bank of Israel Report, 2014: 120).

have placed questions regarding the division of resources on the public agenda (see, for example, the HCJ land ruling; Hananel, 2009; Meidani, 2005).

The proposed study will make three primary contributions:

- Methodology: The project revolves around the development of a new methodology for the study and eradication of inequality based on the visualization of data with an emphasis on 3-D models.
- Theory: The project contributes to the field of knowledge regarding social inequality by proposing the concept of "social topography" as a new language for capturing socio-spatial relations.
- Policy Making: In conjunction with the concept "Social Topography," the new methodology will contribute to the formulation of policy aimed at eradicating inequality. To this end, I will develop a digital sandbox to help improve the dynamic process of decision making.

This study is based on a previous study that was also funded by the Ministry of Science[1], which involved building a 3-D model of the Negev. The current project proposes to develop this model into a dynamic platform to assist in the decision making process. By relying on existing technological platforms and theories, we can travel the long road from the research stage to the decision making stage. The proposed study also relies on another significant research effort in which I have been engaged in recent years, along with a number of colleagues: exploration of the labor crisis in the Israeli periphery and analysis of workers' struggles for their right to work in the periphery (Cohen and Aharon-Gutman, 2016; Cohen and Aharon-Gutman:2014).

This socio-spatial research written in the heart of a technological institute that brings significant added value to the table, both because of the access to unique technological platforms it facilitates and the methodological capacities of neighboring faculties, such as computers, civil engineering, etc.

2 THEORY: SOCIAL TOPOGRAPHY

This study will make a concrete contribution to the work of the abovementioned social inequality school using the concept of "social topography," which, I posit, enhances our ability to understand society and space as one texture.

To the best of our knowledge, the first person to use the term social topography was French planner, architect, and writer Gaston Bardet (1907-1989). Bardet (1951) contemplated how to give expression to the alchemy that occurs at the meeting point of man and the built environment. Whether in the case of cities or rural regions, Bardet maintained that this meeting point could be structured as the accumulation of people on land: "some men on land, that is to say the urban texture" (Bardet, 1951: 238). This intersection between man and the built environment – this "urban texture" – exists in villages just as it exists in metropolises. In both cases, people and the physical space that surrounds them are interwoven into an integrated social topography (1951:238):

"I came to understand that this urban fabric was made up simply of the interweaving of human activities on the land and on the map I need to represent them. Out of this was born the principle of social topography".

Social topography is not the random expression of human elements on a map; rather, it had to do with their interrelationship. Only an analysis of these elements as one assemblage could succeed in representing the urban texture.

Bardet also developed the concept of "profils sociogiques" (sociological profile), which he regarded as a tool for expressing man's movement within the maze of large social structures. Most importantly, he believed in the possibility of constructing a sociological profile for different localities. For Bardet, social profile was a visual expression (Image 1). Through the use of his images, he sought to give expression to social rhythm, dynamics, and flow. Considering the means at his disposal in the middle of the twentieth century, Bardet was without a doubt ahead of his time (Bullock, 2010: 355) in his proposal of a dynamic alternative to the inflexible concepts then in use.

[1] "The Challenge of Capital Conversion: How and under what conditions can groups and settlements acquire and trade capital for the enhancement of regional development".

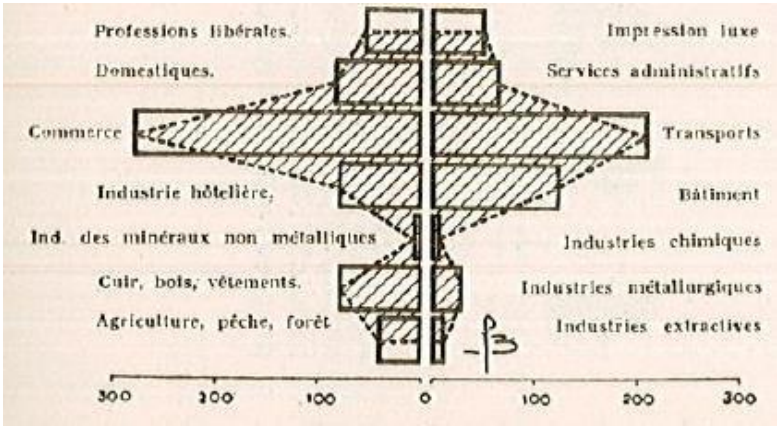


Image 1: A Visualization of social topography according to Bardet (1951).

It is from these models that urban planning, which is always strategic, emerges. The moment the model within which planning occurs is one of social topography, the urban planning that evolves is a direct response to the social element that "dilates with the soul of the social." The results, he maintains, is "a human geography created by man" (Bardet, 1951: 355).

The concept of social topography did not establish itself with the scholars of its time, and in recent decades scholars have been making minor use of it in various contexts, such as archeology (Little, 2005), psychology (Steger &Kashdan, 2006), sociology (Humphreys, 2005), and anthropology (Hindson, 1983).

In the social sciences, the concept of social topography is associated with the man who developed it in that realm: Pierre Bourdie. In an article examining Bourdie's use of this concept, Helmut, Gerhards & Romo (1995) highlight a fundamental premise of field theory: that social actors are located within the social realm, that is to say, within the topography of social relations that are shaped in accordance with their resources of economic, social, and cultural capital (Ibid., 860). In the same article, Helmut, Gerhards & Romo follow Bourdie's lead in arguing that "sociology is a social topography" (Ibid., 893; Bourdie, 1989: 16).

Bourdie's language of fields reflects a structuralist notion, which conceptualizes the dynamics of the individual within cultural and economic structures as movement within space. In this way, social structure is translated into social topography fueled primarily by segmentation and hierarchy (Ibid., 865). Forms of capital undergo segmentation that does not exist on a plane but that rather is hierarchal in nature, meaning that segmentation and hierarchy are linked. We tend to speak of "high culture" and "low culture," or "mainstream culture" and "marginal culture," which are all expressions of hierarchal segmentation (Ibid., 865). The same dynamic lies at the core of social topography. It occurs in fields such as culture, education, fashion, and economics, resulting in a social topography within and among all fields.

The proposed study applies this way of thinking – drawn from imagined sociological space and institutional and organizational space – to geographical space. In doing so, it links geographical location to socio-economic hierarchy, which we refer to as inequality. In this way, it seeks to produce a model that gives spatial expression to large social structures (such as unemployment, poverty, and education), not as abstract structures, but rather in an effort to understand the correspondence between socio-economic and spatial structure. The model's dynamic nature enables us to express and study dynamics and movement, as well as the process through which hierarchal segments are produced in the course of struggles within the fields. This allows us to give expression to the manner in which the outcomes of this social struggle for primacy and control in the field in question change the large structures in which people live their lives.

3 VISUALIZATION: A NEW METHODOLOGY FOR AN OLD PROBLEM

Social research today is based primarily on the written word, which is mediated to people through reading texts and listening to lectures. These two media require readers or listeners to paint a picture in their mind's eye. That is to say, readers and listeners must engage in a process of translating from the abstract to the concrete, and in fact to transform it into a visual object. This gap is entrenched in our culture and, as

is frequently the case, is mediated by language. We often find ourselves asking a person who has read an article: “Were you able to see the picture that emerges from the text?” It is the picture, then, and not the written word, that is perceived as the thing itself (Sontag, 1979: 91). Realism is a powerful resource for research, and on this basis we highlight the importance of visualization in socio-spatial research. On the level of research and analysis, visualization helps us “see things in ways we had not seen them before” in the sense of the accessibility of knowledge: it makes research insights accessible to increasingly wider audiences, and in this way contributes to the democratization of academic knowledge (Moody and Healy, 2014). It also serves to reduce the distance between science and policy, as policy makers also “now see the picture” and can no longer remain indifferent to it.

VizLab centerpiece is a 3-D immersive theater consisting of a 2.4 x 7.0 m screen with a 75° field of view and three high-definition Projectiondesign projectors. The laboratory provides a 3-D experience in which one participant, followed by tracking cameras, can “move” through the image or manipulate a 3-D object on the screen.

THE FIRST ATTRIBUTE: 3-D TECHNOLOGY THAT IMBUES SOCIOLOGY WITH VOLUME

The stating point was a 3-D model of the Negev. Image 2 is a 3-D representation of train-tracks, roads, industrial areas, nature reserves, etc. The model included a picture of the future of the Negev, based on a spatial representation of plans that have been officially deposited and approved. This model produces integration in a multi-variable environment, the need for which Singer-Villalobos (2014) has effectively articulated by noting that “modeling a city is a big data problem.”

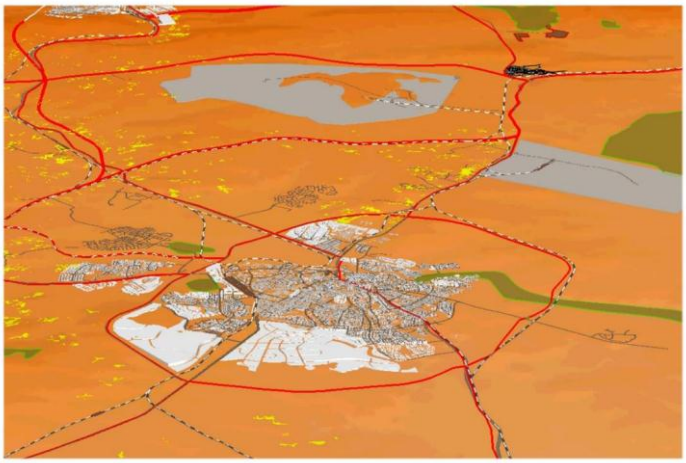
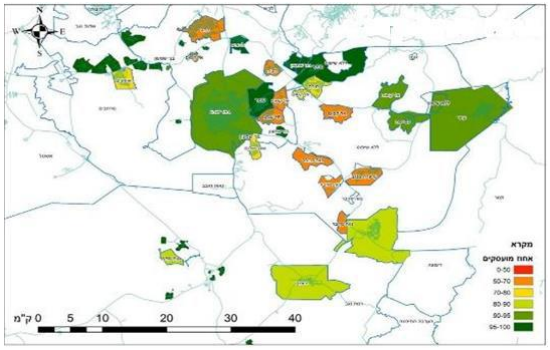


Image 2: A 3-D regional model.

By the end of the study’s first year, we had produced two significant products: a social study based on descriptive statistics and qualitative research, and a 3-D model of most of the Negev, including an image of its future. The most powerful finding of the social study was the immense social disparities it identified in a variety of socio-economic categories, such as employment, unemployment, etc. We are accustomed to consuming the disparities manifested in these categories in 2-D as follows:



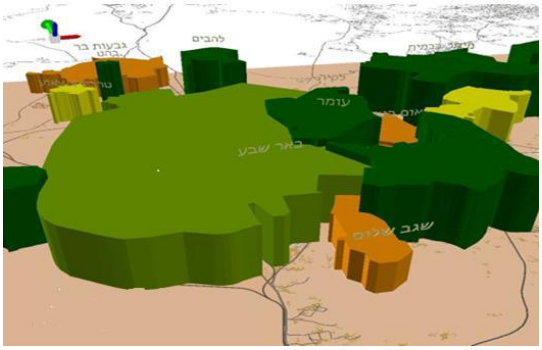


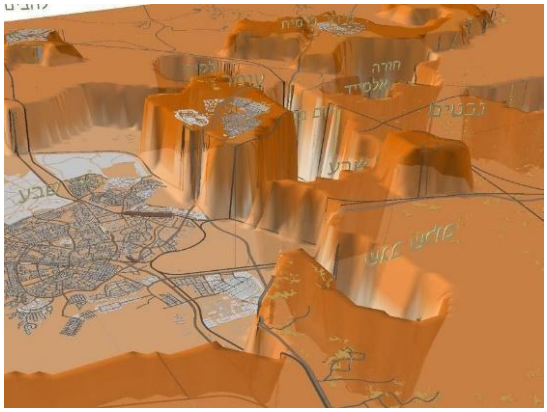
Image 3: A 2-D sociological mapping (employments rate). | Image 4: A 3-D visualization of inequality – first draft.

The 2-D mapping of employees (Image 3) is represented using two elements: geographical location and color. Despite the effectiveness of these maps (Moody and Healy, 2014), we asked ourselves how we could assimilate inequality into our physical model and the research value of doing so.

Image 4 presents our first results: a map that actually consisted of spatially-grounded histograms of sorts. We were not satisfied with this outcome, as we felt it was a “pasting” that advanced neither the research nor the methodology.

We asked ourselves whether we could take the radical step of integrating the social into our model in a way that would leave the social and the spatial inextricably bound to one another, as they are in reality, and as Bardet suggested when he spoke of urban texture as a texture that was at once both physical and social. Our aim was to transform the social into the body of the model and the basic map. In other words, we sought to convert topography into a methodology. Topography here is not only a concept concerned with the height of objects; it is also a method that facilitates the expression of hierarchies and relations of inequality over diverse realms of content.

We also adopted the terminology of geodesic mathematics, which transforms heights into terrain, and applied it to socio-economic measures according to a locality-based index. The results produced can be seen in Image 5.



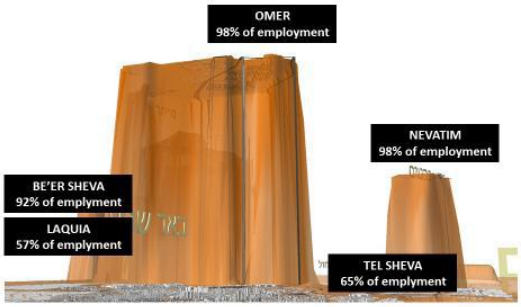


Image 5: Social Topography | Image 6: Social topography from the perspective of a resident of Beer-Sheva.

The 3-D representation imbued social structures with volume and produced congruence between the life experience in localities that are low on the socio-economic ladder and the modality of data representation, as reflected by the following angles afforded by the model:

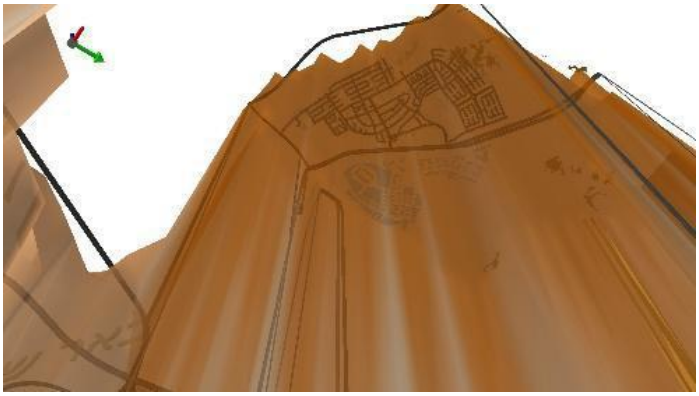


Image 7: Social topography from the perspective of a resident of Tel-Sheva, a view from Tel-Sheva toward Omer.

Images 6 and 7 represent the perspective of the residents of Beer-Sheva and Tel-Sheva when they look toward Omer on a sociological level. These images represent grounded visualization, meaning

congruence between the quantitative and quantitative research, and this, to a great extent, is the source of its power (Knigge and Cope, 2006).

THE SECOND ATTRIBUTE: MOVEMENT IN SPACE

Using a navigational device and glasses equipped with sensors, a person in the lab can navigate within the model and engage in rapid movement and transitions between different scales. The user can be inside an apartment in Yeroham one moment and out viewing the region the next. Movement within a 3-D model allows flexible analysis as a result of the quick transitions between different scales it facilitates (Base, 2014).

The movement facilitates the model's animation, allowing movement in dynamic scenarios. Movement in space is experienced as the movement of a person or a body that undergoes a specific spatial experience. Animation allows us to produce "visual narratives," as referred to from a sociological perspective (Harper, 2012), or geo-narratives, as referred to by social geographers (Kwan and Ding, 2008). In other words, we have produced a dynamic model that enables us to generate animation both of people as active agents in space and of the geo-social structures in which they function. This is significant, because it enables us to represent socio-economic structural scenarios of division of wealth and, with the press of a button, to change the social topography presented in the previous section and to analyze the impact of policy x or y on spatial inequality. This methodology lies at the core of the proposed study and is discussed in greater depth below.

THE THIRD ATTRIBUTE: THE LARGE SCREEN AND OUR COGNITIVE PERCEPTION

The third attribute facilitated by the technology employed, which lends added value to the study, is work on a large screen in a dark environment, which disconnects us from everyday life and inserts us into a "different" experience. The large concave screen yields two major attributes that play a fundamental role in fueling the Research Plan: a) the large screen facilitates emotional involvement and assimilation because, on a cognitive level, it affects us differently by producing intensities that have a particularly significant impact on our cognitive perception. b) A second attribute observed in the lab is the fact that in contrast to the augmented reality in which individuals experience intense realism alone, the large screen facilitates audiencing (Fiske, 1992) by creating a situation in which a group of people is party to a shared journey of observation and can have a discussion about it. This is of particular importance in the context of this proposal, as decisions regarding the adoption or rejection of socio-spatial policy are almost always made by integrative teams. This is especially true in the discipline of city planning, which consists of round-tables of experts from different fields, such as economics, the environment, transportation, law, and sociology. The committees in which decisions are made are similarly structured. Stated simply, in conjunction with its movement in space and its dynamic representation of social structures, 3-D realism projected onto a large screen can facilitate discussion among decision makers and yields a spectrum of attributes from which, and within which, a "different" kind of decision making process can emerge.

4 CONCLUSION

חברתית לטופוגרפיה לחזור The aim of the proposed study is to advance and promote an innovative methodology – the 'Digital Sand Table' as a Visual Means of Shaping Spatialized Social Policy. We believe that this methodology offers three major advantages. First, it gives spatial expression to the existing state of inequality in a manner that incorporates many layers of knowledge into one view, which we name as social topography. Second, it improves our ability to make decisions regarding states of inequality by visualizing the implications and impact of future scenarios. These two advantages have the potential to dramatically impact spatial inequality and social disparities on both the regional and national level. And third, due to the availability of visual technology and its consistent drop in price, the model will be a tool with a high level of applicability. Finally, it is important to note that digital sand tables for decision making do not exist today, making this model a significant step forward in developing decision makers' ability to work with an increased amount of data and, in doing so, to see the full picture.

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ID 1570 | AN ECOSYSTEM SERVICES BASED ENVIRONMENTAL SUSTAINABILITY ASSESSMENT TOOL FOR LAND USE PLANS

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1 INTRODUCTION

The mostly used and agreed sustainability definition is maybe the first one made by United Nations World Conference on Environmental Development (1987) in the Brundtland Report stating that sustainability is a development approach that enables progress today without compromising from the abilities of future generations to develop themselves. There is a consensus that human activities must be sustainable and meanwhile there has to be fixed level of disruption of resources based on human activities that reduces the ability of this capital to sustain for the humanity in the future (Arrow et.al, 1995).

In this aspect, land use planning is one of the most critical tool that shapes our living environment by setting the limits of development and urbanization. Hence planning process itself is an important factor in sustainable development. After a detailed literature review including several researches in the fields of landscape planning, landscape ecology, environmental impact assessment, ecosystem management Leitao and Ahern remark that sustainable land use planning is an inevitable conclusion of the evolution of the planning discipline into the 21st century where new social values such as the key concepts of sustainability (solidarity between present and future generations and the need to balance development with nature) are increasingly being seized upon into planning process and regulations (2002). In addition, there are various scientists claiming that sustainability is one of the integral parts of the landscape planning process (Forman, 1995; Grossman and Bellot, 1999). However it has been observed that planning discipline wasn't rapid enough to fit into the principles of ecology and therefore sustainability must be adopted more efficiently in planning process and administrating lands for which new tools are required (Leitao and Ahern, 2002) since its spatial component is strongly related to inter-dependence of land uses and to spatial processes such as fragmentation (van Lier, 1998).

In order to remove this gap, this study adopts environmental sustainability into urban plans, based on Burkhard's ecosystem service mapping approach (2009) that provides an efficient tool for understanding capacity of land use's ecosystem service provision. However, since Burkhard's approach only deals with the service side of the land use, it does not include the impact side of it and hence does not provide insight on environmental sustainability of land use. As the definition of sustainability suggests, by environmental means, the impact of land use must not exceed environmental limits of the planned area. Therefore, in this study, we made an addition to Burkhard's approach, by putting the impact dimension of land use into our analysis and developed a GIS model that calculates a land use plan's performance based on its ES provision capacity and environmental impact. Here our novel assumption is that a land use plan's environmental sustainability is equal to the difference between ecosystem services provided and environmental impacts caused.

With the development of this GIS tool, it will be available for an urban planner to analyze the sustainability difference between current land use and proposed land use plan and hence it will be available to revise the planning decisions for the good of environmental sustainability.

2 AIM & SCOPE

Basic aim of this study is to remove the gap between land use planning discipline and environmental sustainability phenomenon by developing a tool that helps planners to evaluate their decisions. Therefore, our focus is on the assessment of land use plans instead of the planning process because land use plans are the final output of the process and they are actually a combination of different decisions taken throughout the planning course. Moreover plans provide spatial data and they can be related with similar spatial entities such as land covers. In this regard by benefiting ecosystem services (ES) approach and their mapping techniques in current literature, we developed a standalone GIS tool that lets users evaluate

the difference in ES based environmental sustainability level between a proposed land use plan and current land cover. Since our aim is to evaluate the plan's environmental sustainability level, we make the assessment based on regulating ES. Because other ES focus on economic and social benefits provided by ecosystems.

3 METHODOLOGY

In this study we make the assumption that a land use plan's environmental sustainability (EnS) performance is equal to the difference between ES provided and environmental impacts (EI) caused. In order to calculate ES and EI of a land use plan we adopt the methodology provided first by Burkhard et.al. (2009) and then revised by Jacobs et. al. (2014) so called "matrix model". This approach depends on scores for ES provisioning capacity of land covers. These scores are gathered from expert reviews and then enhanced by quantitative data from sources such as actual measurements or simulations where available. In this study we customize this model by using only ES that are directly related with environmental aspects that are known as regulating services in ES literature. On the other hand in scoring process, in order to assess the difference between ES and EI of a land use plan (or a land cover data) we expanded matrix model's scoring scale of "0-5" to "-5 – 5" where negative values correspond to the impacts caused by land use type. In other words we assume that while some of the land cover types (such as forests) increase ES capacity (hence EnS), some of them (such as continuous urban fabric) has negative impact on EnS. For example in a land use plan, while forests provide air quality regulation, industrial land use types (LUTs) not only have zero level ES, but also have negative impact on air quality. Hence, they must be taken into account as sources of EI. In matrix if a value has negative value it is at the impact side of the equation. A fictional sample data is shown in Table 1 where LUT4 has negative impact on ES and EnS as well while LUT1 have positive impact.

	ES^1	ES^2	ES^3	ES^4	ES^5
LUT 1	5	3	-5	-3	2
LUT 2	4	4	-3	-3	3
LUT 3	2	2	-3	-1	2

Table 1: Sample ES scoring table

It must also be noted that although the scores provide insight on the potential on provision and/or impact of LUTs; quantity (area) of the LUTs must also be taken into account because their benefit or impact is directly related with their area. The larger the LUT gets, the larger its service or impact level gets. Therefore, after the scores are assigned, they are multiplied with their areal quantity that provide unified unit for all indicators. But for the ease of mapping and viewing purposes, in calculation areas are converted in "km2" unit.

As a result, this GIS tool calculates EnS level for each land use type by summing ES and EI level it produces based on function below:

$$EnS\ level = LUT\ Score\ x\ LUT\ Area$$

(Formula-1)

3.1 EMBEDDING THE METHODOLOGY INTO SOFTWARE

In order to embed the methodology into software, we preferred to use pre-defined classes for assessment. Since the methodology basically depends on ES and Land Cover relation (as in matrix model), we defined the variables for these two themes beforehand.

Incorporation of land use plans into system is the integral phase of the methodology but it is hard to find a standardized land use planning taxonomy by means of establishing a solid relation with ecosystems. Therefore standardizing these classes is a critical task for increasing the ease of use. Hence we needed to use a common and widely used taxonomy for this study. In this regard, instead of trying to create a new classification, we chose Corine Land Cover dataset since it is one of the most widely acknowledged dataset that can also be used almost in every planning stage as a basemap.

Meanwhile, other important task has been the selection of ES indicators related with environmental sustainability. As defined before, these are basically regulatory services as described in many ES frames, which are composed of environmental benefits provided by ecosystems. For determining the relevant indicators ES indexes of Millennium Ecosystem Assessment (MA) (2005), The Economics of Ecosystem and Biodiversity (TEEB) (2011) and Common International Classification of Ecosystem Services (CICES) (2013) (Table 2) are reviewed. In this study, we preferred CICES categorization since it is the latest version for ES classification and embraces its predecessors.

ES Frame	ES INDICATORS									
MEA	Water purification and waste treatment		Erosion regulation	Water regulation		Air quality regulation	Pollination	Pest regulation	Disease regulation	Soil formation (supporting service)	Climate Regulation
TEEB	Water purification and waste treatment		Erosion prevention	Regulation of water flows	Moderation of extreme events	Air quality regulation	Pollination	Biological control		Maintenance of soil fertility	Climate Regulation
CICES	Mediation by biota	Mediation by ecosystems	Mediation of mass flows	Mediation of liquid flows		Mediation of gaseous / air flows	Lifecycle maintenance, habitat and gene pool protection	Pest and disease control		Soil formation and composition	Atmospheric composition and climate regulation

Table 2: Ecosystem services categories (derived from The Biodiversity Information System for Europe (BISE) webpage

As a result we pre-defined two themes in the software: Land Cover Classes and Ecosystem Services. When the user uploads the data into system software enables to match uploaded data with predefined classes and reads areal values of the shapefiles to compute EnS scores. The main scoring values (varying between -5 and +5) are also kept in the system and can be updated within a new window including the matrix as described in Table 1.

4 SOFTWARE PROCESS

The software is designed with the aim of reducing software knowledge requirements of a user. Therefore it has a simple and yet comprehensible interface (Figure 1).

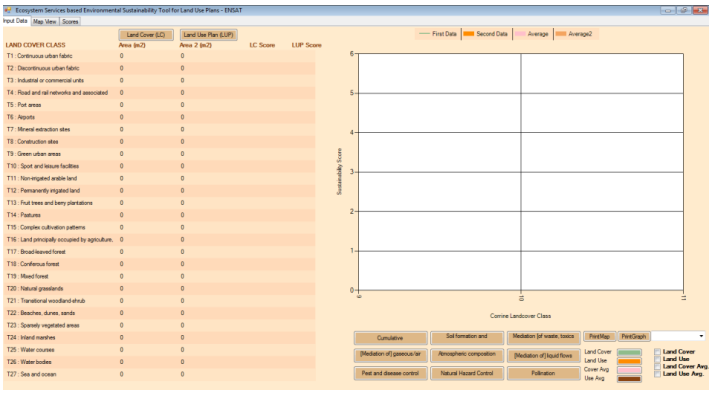


Figure 1 - Main Interface

The left column of the interface includes predefined land cover types gathered from Corine Land Cover (CLC). The right bottom corner includes ES buttons also defined beforehand based on CICES approach. The chart area is used for drawing EnS graphs of input datasets.

“Land cover” and “Land Use Plan” buttons open new dialog windows that let users upload a shapefile format including current land cover data and land use plan. When the land cover and land use plan data is uploaded the first thing system does is to prompt a window to read the land cover/land use classes and areal values (Figure 2).

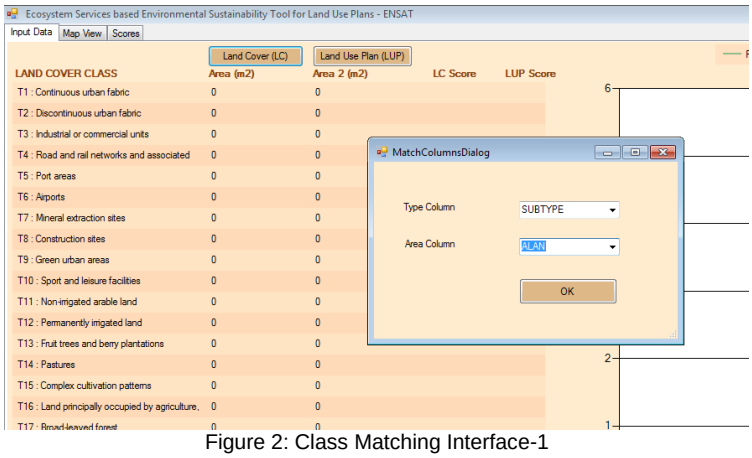


Figure 2: Class Matching Interface-1

But it is highly possible that land cover class names and class names in the uploaded data would not match exactly. So we designed another interface phase (Figure 3) for matching where user can match the classes with the defined ones in the system. For example in Figure 3 there are two incompatible types in uploaded land cover data and by selecting the suitable predefined CLC classes, matching process is completed.

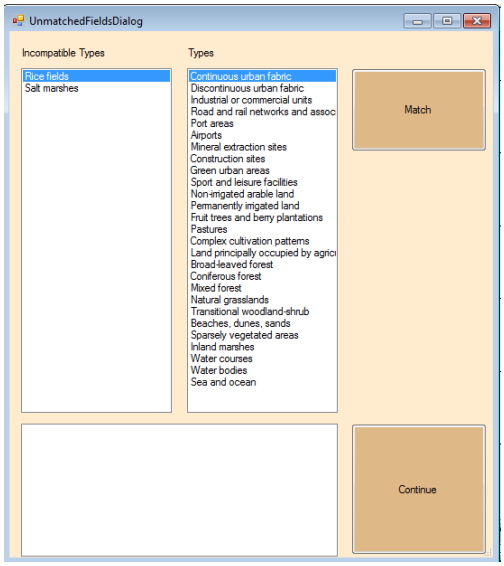


Figure 3: Class Matching Interface-2

After the data is uploaded into system software calculates the EnS scores based on areal values and ES scoring gathered from expert review and/or actual computations/measurements that are kept in “scores tab”. Then system applies “Formula 1” for both datasets and plots their graphic on the system (Figure 4).

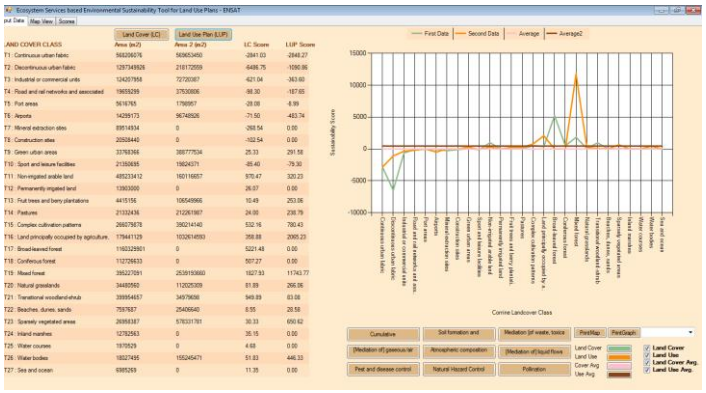


Figure 4: Comparison of Land Cover and Land Use Plan Data

The graphic is plotted as cumulative scores for each land use type which means it is the summation of all ES and EI for each LUT. Nevertheless in cases of special focus or needs, some specific ES can also be looked at. In this case buttons at the right bottom side are used for changing the graphic view for a specific ES title. In this same area of the screen, colours can also be manipulated. In Figure 5 “Natural Hazard Control” ES is looked at. The average values are the arithmetic average of scores for each datasets and they are the main output that enables to understand the change in EnS level.

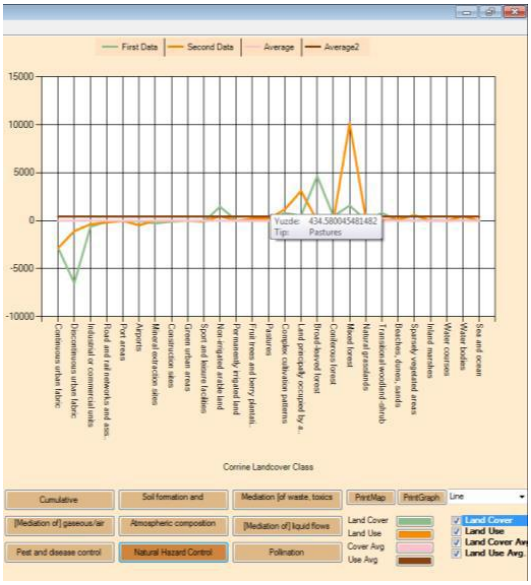


Figure 5: Natural Hazard Control Graphic Plot

In grey taskbar above, “map” tab opens the uploaded shapefiles’ location on Google Maps provided from Google Online Map services (Figure 6). In this panel the map is symbolized between green and red where green corresponds to the scores of the land use types. Green colours correspond to higher scores where reds correspond to lower scores of EnS. There are also tools that helps user to navigate in the map (zoom in, zoom out and pan) and an “info” tool to gather information about the data. The info button reads the dataset’s attribute table and prompts an info screen (Figure 7). The selected polygon is highlighted in light blue. These attributes are implemented via dot spatial framework libraries.

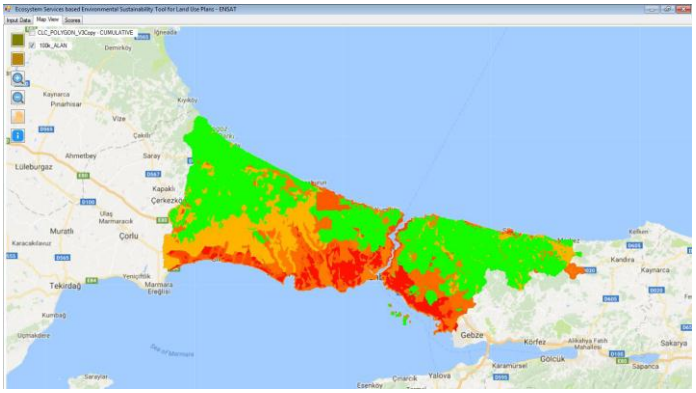


Figure 6: Map View of the Datasets

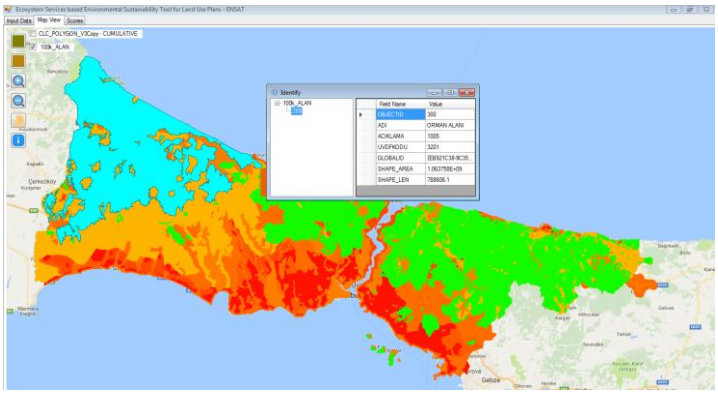
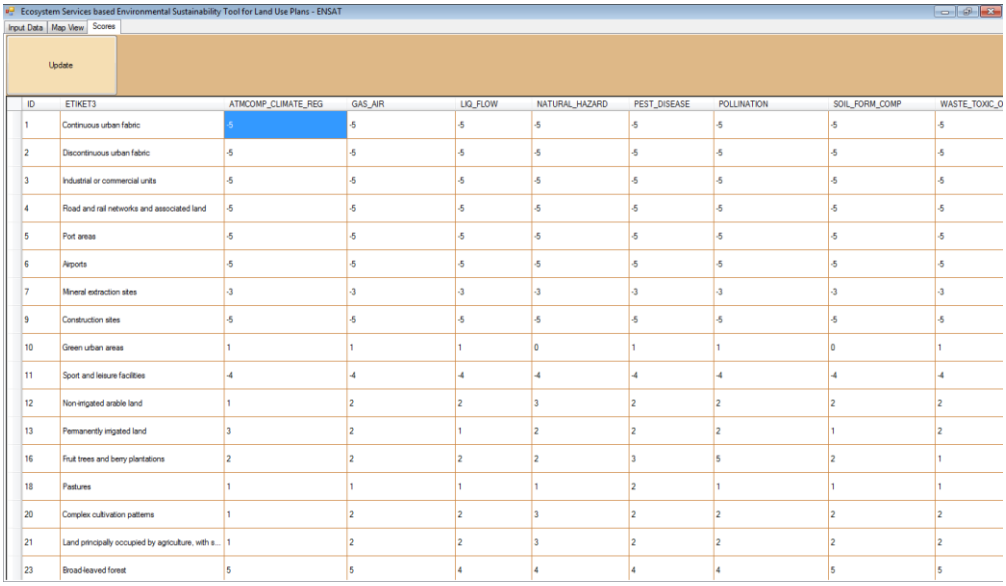


Figure 7: Info Tool in Map View

Next to the map tab there is “scores” tab that opens the tabular matrix where users can manipulate the scoring (acquired from table for their area of planning and generate a unique scoring table for their studies (Figure 8). This table is where ES and EI potential of land covers are scored. These scores are used for EnS calculation in “input data” view. Here the rows are land covers as predefined from CLC and columns are ES that are gathered from CICES frame. The values in the table can be updated by clicking on the scores and hence EnS can be renewed as well. These values are kept in a separate .mdb (Microsoft Database) file and once the table is updated, the .mdb file is updated too.



ID	ETIKET3	ATMCOMP_CLIMATE_REG	GAS_AIR	LIQ_FLOW	NATURAL_HAZARD	PEST_DISEASE	POLLINATION	SOIL_FORM_COMP	WASTE_TOXIC_O
1	Continuous urban fabric	-5	-5	-5	-5	-5	-5	-5	-5
2	Discontinuous urban fabric	-5	-5	-5	-5	-5	-5	-5	-5
3	Industrial or commercial units	-5	-5	-5	-5	-5	-5	-5	-5
4	Road and rail networks and associated land	-5	-5	-5	-5	-5	-5	-5	-5
5	Port areas	-5	-5	-5	-5	-5	-5	-5	-5
6	Airports	-5	-5	-5	-5	-5	-5	-5	-5
7	Mineral extraction sites	-3	-3	-3	-3	-3	-3	-3	-3
9	Construction sites	-5	-5	-5	-5	-5	-5	-5	-5
10	Green urban areas	1	1	1	0	1	1	0	1
11	Sport and leisure facilities	-4	-4	-4	-4	-4	-4	-4	-4
12	Non-irrigated arable land	1	2	2	3	2	2	2	2
13	Permanently irrigated land	3	2	1	2	2	2	1	2
16	Fruit trees and berry plantations	2	2	2	2	3	5	2	1
18	Pastures	1	1	1	1	2	1	1	1
20	Complex cultivation patterns	1	2	2	3	2	2	2	2
21	Land principally occupied by agriculture, with s...	1	2	2	3	2	2	2	2
23	Broad-leaved forest	5	5	4	4	4	4	5	5

Figure 8: Scoring Matrix

5 CONCLUSIONS

As a result, with the development of this tool, by using GIS capabilities and ES approach, it is easily available to assess a land use plan’s EnS performance compared to its land cover. Hence an urban planner or a decision maker can efficiently understand the level of impact or contribution made by planning process on the planning area by means of environmental aspects. As a part of an ongoing project, there will be updates to this tool to be more inclusive and comprehensive but even in this level, it helps planners to evaluate their planning decisions in the light of regulating ecosystem services and analyse whether these decisions lead to an ecological surplus in the planning area or not. Therefore it serves as an integral system to enhance land use planning decisions that are eventually one of the main pillars of sustainable human development.

6 ACKNOWLEDGMENT

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ID 1624 | MEASURING BUILDING DENSITIES (FSI/GSI) FOR THE NETHERLANDS

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1 INTRODUCTION

Densities are a key feature in urban planning and design. Density influences amongst others energy consumption, mobility, livability, food production and economy.

Building densities (that is Floor Space Index (FSI) or Floor Area Ratio(FAR)) relate the gross floor area to the surface of the accompanying base land area. The surface of the base land area can be defined on

many scales, from plot to municipality. By now floor areas, parcels shapes and building footprints etc are available as open data for the whole of the Netherlands, so we can script the calculation of building densities for the whole of the Netherlands. We did this according to the recent Dutch standard: NEN 9300:2013 nl, Areas and densities in urban planning - Terms, definitions and methods of determination. The first results have been tested in a mobility study. The results can be applied as well for morphology studies and as reference projects for future urban design.

Along with FSI we can easily calculate the Ground Space Index (GSI) which relates the footprint of a building to the surface of the accompanying base land area and an index for the mixed use of functions (MXI). This paper describes the datasets used in the script and the main steps that were scripted to calculate the building densities on several scales.

2 THE SCOPE OF DENSITIES

Densities play a key role in urban planning and urban design. High densities are supposed to have positive qualities: less mobility (Kenworthy and Newman 1999, 2015), less energy use (UNEP 2017, Bettencourt 2013, Rode et al 2014, Salat 2009), higher productivity (Bettencourt et al 2007, Raspe et al 2015),

more fine grained businesses (Hausleitner 2012) and less material use (so fewer costs) for infrastructure (Coppola et al 2014). In the social field high densities are supposed to work out in a positive way for example a higher modal share for walking (Moudon and Lee 2009), less criminality (Hillier and Sahbaz 2008), better conditions for circular economy (Rood and Hanemaaijer 2016) and higher vitality (Jacobs 1961).

Many international organisations therefore recommend to build in high densities and to densify existing cities (IEA 2009, UNEP 2011, European Commission 2014, OECD 2012, UN-HABITAT 2012, Worldbank 2014). However, higher densities may lead to a decrease of open spaces in the existing urban tissue and to an accumulation of traffic congestion, noise nuisance and air pollution (Coppola et al 2014, Breheny 1992), an increase of real estate prices and social disclusion (Coppola et al 2014), social problems (Leidelmeijer et al 2014), urban heat islands (Heusinkveld et al 2014) and health issues (Peen et al 2010).

The density effects mentioned above occur depending on the context. Effects can be tempered or intensified through flanking social, spatial, economic or mobility policies. Same goes for the design of the buildings and the public spaces that can either make or break liveability. A certain density alone is no recipe for a “good” spatial planning. It actually is a condition for “good” planning.

Knowledge about densities and being able to compare urban tissues can help finding spatial solutions for a specific intended density in a specific context. This is important in considering inner city or suburban urban growth (Van Duinen et al 2016). In the case of city extensions not only the landscape quality is under pressure, but the food supply as well (Swilling 2016).

3 INDICATORS

3.1 FLOOR SPACE INDEX

In Dutch spatial planning densities are usually measured in dwellings per hectare. This unit counts the number of dwellings (or households) on a certain land area. This unit is interesting for the residential project developers market, but doesn’t give full insight in the spatial density, since schools, offices and ware houses and the like are not included here. Utility buildings can be included in the Surrounding Address Density, that counts the number of addresses within a specific radius. This method, however, doesn’t take into account the wide range of square meters that buildings can have. A building can for instance be a 5 m2 pavilion or a 200.000 m2 office building. So address density is not the perfect indicator either. Besides, address densities are not available on the scale of the building block.

By using Floor Space Index (FSI, or its synonym Floor Area Ratio (FAR)) as a unit for density, the restrictions mentioned above are being overcome. On top of that the FSI is a more accurate indicator for an area’s physical morphology, especially in combination with GSI and MXI (see next chapter).

FSI calculates the ratio of one or more buildings' total floor space to the accompanying base land area. In case an area is covered all over with one storey, the FSI is 1. In case half of the base land area is covered with a 2 storey building, the FSI is 1 as well.

3.2 GROUND SPACE INDEX AND MIXED USE INDEX

Parallel to the FSI calculation, we can calculate the Ground Space index (GSI), indicating the share of a base area that is covered with buildings. GSI is a worldwide used indicator in urban design and urban planning.

Additionally the Mixed Use Index (MXI) being the ratio between residential floor areas to the total floor area can be calculated for a specific area (Van den Hoek 2008). A mixture of residential and working related uses contributes to a reduction of mobility, a sharing (over time) of infrastructure and parking lots (van den Hoek 2008), more vitality (Jacobs 1961, Gehl et al. 2006), a higher safety perception (Gehl et al. 2006), and, in relation to density, less criminality (Jacobs 1961, Hillier and Sabbaz 2008, Traunmüller et al 2016). On top of that a mixed use areas allow for higher densities, since locations that are unequipped for housing, for instance because of lack of daylight, can often be used for non-residential uses.

Pols et al. (2009) observe that existing mixed use urban areas do not interfere with a high liveability. PBL (2010), however, observes that an increase of mixed uses not necessarily leads to a better liveability. There seems to be a relationship between mixed use urbanism and liveability, but this is depending on the type of jobs, the grain size of the mixture and the type of neighbourhood.

4 DATASETS

So far, FSI, GSI and MXI have been hardly used in the Netherlands. Data on floor space has not been available on a large scale and had to be determined manually. That is why FSI is only being used in small scale urban design studies, such as Urhahn and Bobic (1994), dRO (2001), Nabielek et al (2012) and Faro architecten et al. (2012).

Since the availability of new datasets for the whole of the Netherlands we are able to automatically generate FSI, GSI and MXI for the whole of the Netherlands. We mainly use the following datasets: BAG (Basisregistraties Adressen en Gebouwen) which contains the floor space and use for every address in the Netherlands; National Land Registry data, containing every single parcel shapes, the digital zoning schemes and the BGT (Basisregistratie Grootschalige Topografie) containing detailed topographical information on a map (scaled 1:5000).

5 SCALE AND STANDARD

Densities differ depending on the aggregation level on which they are being calculated. The building density of a municipality is generally lower than the building density on district level, since areas for nature and agriculture are included on a muncipality level. In a similar way, district parks lower densities on district level compare to the neighbourhood level. The smallest scale that we will publish is the building block, being the space between surrounding streets, in which one or more buildings are located.

Since 2013 there is a Dutch standard: (NEN 9300) on areas and densities in urban planning (NEN 2013). In this standard is laid down which elements (such as streets, railways, parks, water) to count in for a certain level of aggregation: Parcel, building block, neighbourhood, district and municipality. The standard distinguishes in nett and gross areas on all aggregation levels. For the building block, for instance, the adjacent built-upon parcels make up the nett building block. To the gross building block half of the street profiles as well as small unbuilt parcels are being added.

This standard has never been intended to generate areas and densities automatically. Often the standard's interpretation depends on the spatial context and the user's expertise. So the results that are being generated automatically may differ from manual, analogue results. Nevertheless we have tried to

remain as close as possible to the standard and we describe the steps that we have not been able to script.

6 DESCRIPTION OF THE SCRIPTED PROCESSES

When calculating the FSI the gross floor area is the numerator and the base land area is the denominator in the fraction.

6.1 GROSS FLOOR AREA

The gross floor area is a building's floor space according to the NEN standard 2580 (NEN 2005). The gross floor area includes construction and circulation areas, as well as underground and cantilevered building parts. The gross floor area is based on the floor areas provided by address in the BAG dataset. As BAG provides usable floor area and leasable floor area, the values are multiplied by index numbers for different uses (based on IGG Bointon de Groot (2014)) in order to estimate the gross floor areas.

In case a building does not have an address (for example glass houses, barns) the footprint of the building is taken as the gross floor area. The assumption here is that these building types have only one storey. Buildings smaller than 4 m2 with no address will be excluded, in accordance with NEN9300. The buildings' footprints are being retrieved from the BGT dataset.

The gross floor area remains unchanged on every level of aggregation, but the base land areas usually increase with every step of aggregation.

6.2 BASE LAND AREA

The base land areas will be determined on four aggregation levels: building block, neighbourhood, district and municipality according to NEN9300. Below we describe the scripted process for the selection in brief.

6.2.1 DETERMINING THE NETT BUILDING BLOCK

In accordance tot NEN9300, the nett building block is determined by "land registry or other borders". In general this means adjacent built-upon parcels form a nett building block. For this scripted method we use 4 types of borders. The buildings' footprint on ground level is the connecting thread here.

1. Each built-upon parcel (from the land registry dataset) belongs to the nett building block. Since buildings sometimes exceed the parcel's perimeter minimally, we use a 2 meter buffer: Only if a building footprint takes more than 2 meter of a parcel, the parcel is added to the nett building block. Buildings that have no address and that are smaller than 4 m2 are excluded here as well.
2. Some (municipal) parcels consist of large parts of public space. Schools, children's farms or council housing for instance are located on municipal parcels that contain besides the yard, the surrounding street networks. In order to exclude the street networks here, we use the zoning schemes and select the built-upon zoning perimeters that are schemed as residential, catering, social, park, mixed or business, including adjacent garden zones.
3. From buildings situated on zones schemed for infrastructure and green, such as railway stations, road houses or bridge control buildings, we only select the footprint as nett building block, because the accompanying parcels can stretch out for kilometres long.
4. Underground buildings, such as parking garages or subway stations, contribute to the gross floor area. In case these buildings do not have a footprint, they will be excluded from the 3 steps described above. By taking the building contours from the BAG dataset - that contains (besides the footprints) projections of cantilevers and underground building parts – we can select underground buildings. For these cases we construct a symbolic square meter place holder as a nett building block.

From these surfaces, we deduct all infrastructure (roads, foot paths, cycle lanes), even if they are on private property. This infrastructure is taken from the BGT and digital zoning schemes datasets. Besides parking lots larger than 500 m2 and areas that are not schemed for building purposes will be subtracted from the nett building blocks. These non-building areas are selected from the BGT dataset categories: sand, agriculture, meadows, forest, heather, dune and the like.

Large parks and ponds are also excluded from the building blocks. They are selected from the CBS dataset on Ground Use (BBG) and will be added, depending on their size, to the neighbourhood, district or municipal aggregation levels.

6.2.2 DETERMINING THE GROSS BUILDING BLOCK

The gross building block consists of the nett building block and the tare building block. Tare is the difference between gross and nett. The tare consists on the one hand on public space smaller than 4000 m2 (such as public green and playgrounds) and on the other hand the infrastructure that is needed to disclose the nett building block. The surface of the total street profile is split and assigned to the two adjacent building blocks. If there is no nett building block available the street profile will locally not be assigned to the gross building block.

6.2.3 DETERMINING THE NETT NEIGHBOURHOOD

The nett neighbourhood is the aggregated gross building blocks within the neighbourhood contours derived from Statistic Netherlands (CBS)

6.2.4 DETERMINING THE GROSS NEIGHBOURHOOD

The gross neighbourhood is the nett neighbourhood combined with the neighbourhood's tare. The tare contains the roads that are higher in hierarchy. These are (parts of) roads that do not disclose addresses and only disclose other roads. The tare is also composed of exclusive tram - and bus lanes. All of them are selected from the BGT dataset (proxy: regional roads, tram rails, public transport lane). Parks and ponds between 4,000 and 60,000 m2 are also added to the gross neighbourhood.

6.2.5 DETERMINING THE NETT DISTRICT

The nett district is the aggregated gross neighbourhoods within the district contours derived from Statistic Netherlands (CBS)

6.2.6 DETERMINING THE GROSS DISTRICT

The gross district is the nett district combined with the district's tare. The tare contains the motorways (from TOP10) and railways (from BGT). Parks and ponds between 60,000 and 400,000 m2 are also added to the gross neighbourhood.

6.2.7 DETERMINING THE NETT MUNICIPALITY

The nett municipality is the aggregated gross districts within the municipality borders.

6.2.8 DETERMINING THE GROSS MUNICIPALITY

The gross municipality is the whole municipality. The surfaces for agriculture, nature and public spaces larger than 400,000 m2 are added to the nett municipality.

6.2.9 ALTERNATIVE BASE LAND AREAS

Perhaps the base land areas above do not suit specific purposes. Alternative land areas can be composed from for instance handpicked (nett or gross) adjacent building blocks.

In a similar way densities can also be calculated per neighbourhood as aggregated building blocks.

Another possibility is to project the gross floor areas in a grid and select the surface of a grid cell as a base land area.

6.3 FLOOR SPACE INDEX (FSI)

The floor space index is calculated by dividing the gross floor areas by the base land areas.

6.4 GROUND SPACE INDEX (GSI)

For calculating the GSI, we use the buildings' footprints from the BGT dataset. This one is without projections of cantilevered building parts and underground buildings.

6.5 MIXED USE INDEX (MXI)

The Mixed Use Index is calculated by dividing the gross floor area for residential uses by the total gross floor area for a specific land area. There is no difference here in nett and gross land areas. The BAG dataset differentiates in 11 uses, for instance residential, sports, industry, office, retail etc.

7 DISCLAIMERS

Spatial densities can be determined much more accurate if done manually instead of scripted. However, it would be a sheer drudgery to manually calculate densities for a single municipality let alone for the whole country. Scripting the calculation process has some drawbacks:

- Human interpretation is missing: Manual determination of base land areas can be more accurate. For instance tram lanes are added to a district's tare, but sometimes tram lanes are to be found in fun parks as well, where a human would classify the tram lane to the tare of a building block.
- The quality of the results depends partly on the quality of the datasets. Some datasets contain (obvious) mistakes. We expect them to be adjusted in future updates.
- Not all datasets are available for the whole of the Netherlands. The BGT datasets and the digital zoning plans are not yet complete by now. This influences the results. We expect these datasets to be fully covered soon.
- The various datasets are not internally synchronized. In the case of new constructions or demolition some datasets might not be up to date while others are.
- The gross floor area is based on the floor areas provided by address in the BAG dataset. As BAG provides usable floor area and leasable floor area, the values are multiplied by index numbers for different uses in order to estimate the gross floor areas. This estimation might be way off for individual cases.

8 RELATION TO NEN9300

In scripting the FSI and GSI we tried to follow the NEN9300 standards. In some cases we were, for the time being, not able to script this standard, because of complexity reasons.

- Whether public spaces are classified to a certain scale depends on their surface. According to the standard this also depends on the average width. We did not consider the width in our script.

- The tare of a building block is, in general, half of the street profile. According to the standard the whole street profile is assigned to a building block in case the parcel across the street is not zoned for buildings. For the time being, we did not script this exception.
- The neighbourhood's tare contains the roads that are higher in hierarchy. These are (parts of) roads that do not disclose addresses and only disclose other roads. As a proxy we selected regional roads from the BGT dataset. This proxy is quite weak.
- All water bodies have been excluded from the nett building blocks even if it is a part of private property, such as small ponds in gardens. We have not yet scripted this differentiation.

9 TENTATIVE RESULTS

We are able now to calculate all FSI, GSI and MXI for the whole of the Netherlands. We will run the script in late summer 2017. Figure 1 shows an earlier test, the FSI in nett building blocks in Leiden.

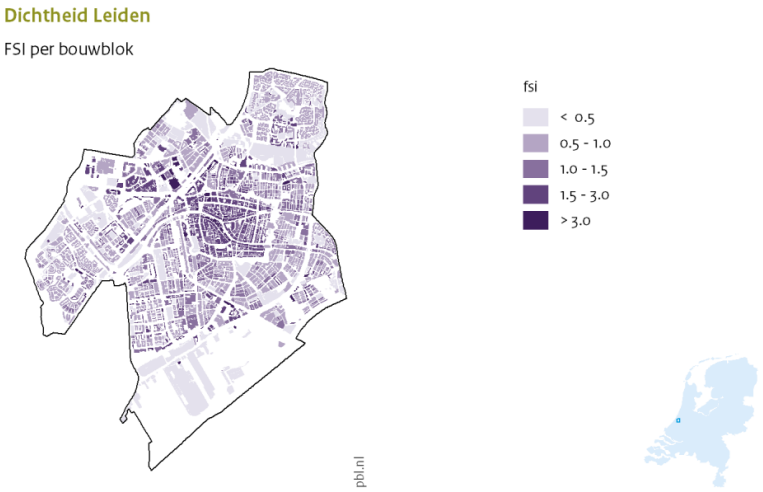

Figure 1 – FSI on nett building blocks for the Leiden municipality (draft)

The results have also been tested in a pilot study on mobility for province Noord Holland, carried out by Vereniging Deltametropool. See figure 2.

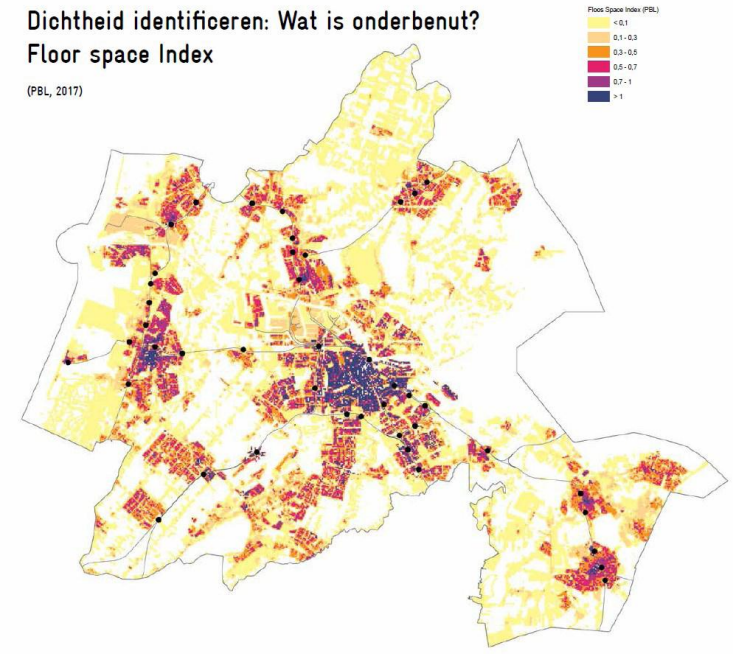

Figure 2 – FSI in the Amsterdam region

10 FUTURE APPLICATIONS

The produced FSI, GSI and MXI on several scales provide material for a wide range of research (for instance on real estate prices, liveability mobility, building capacities) and morphological comparisons.

Further ideas for the near future include:

- a website that links FSI, GSI and MXI to Google Streetview and Bing Maps (bird's eye views)
- developments over time. We can rerun the script in let's say every 3 years and monitor the changes.
- International comparisons: Berlin, Vienna, Zürich and Paris have similar datasets available

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ID 1634 | A LAND CAPACITY ANALYSIS METHOD USING GIS TOOLS, AS EXEMPLIFIED BY THE CITY OF WARSAW, POLAND

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1 INTRODUCTION

The generation of forecasts regarding the further physical development of urbanised areas is a key part of spatial planning, and indeed integrated planning as conceived more broadly. A key role in the process is played by land capacity analysis, which permits both an assessment of the current state of utilisation and management of an area and the possibilities for development – by transformation or augmentation or else

the de novo designation of land for building; along with indications as to how that land may be used. Further upgrading of methods by which to analyse land capacity can thus be seen as a priority where the improvement of planning methodology is concerned.

According to Kotarbiński [1973], a method is a planner's way of pursuing a complex task that entails a defined selection and juxtaposition or configuration of component activities that seek to bring about a single, identified objective, while at the same time being suitable for multiple (repeat) use.

However, the methodological issues actually representing such a key aspect in effective urban planning (here conceived of as an inherent feature of the process by which development is managed) are only taken up very rarely in Poland, and if they are – this is mostly as some kind of side issue. It is now ever-more typical to see authors [like Markowski 2010] espousing the idea that post-1990 Poland has experienced regress ("gone backwards") when it comes to urban-planning methodology. In this, it is also worth recalling how the output from Polish urban-planning thought is seen to include many examples of applied methods that have now passed into history. To be included among these is the threshold analysis method after Stanisław Malisz[1], as well as the "Warsaw Optimisation" method[2] after Kolipiński [2016].

Among many other things, Poland's first steps along the path to socio-political and economic reform entailed work to change the planning system. In the event, the changes were so far-reaching that they went hand in hand with a severing of continuity in virtually every aspect of urban planning, up to and including the methodological [Jędraszko 2005]. A conviction becoming widespread at that point was that physical development plans needed to minimise limits and curbs on possible development of given areas of land. In practice, that translated into local authorities (at the level of the Polish gmina) earmarking as potential building land as many sites as possible, effectively almost wherever natural conditions and the rigours of the law allow for it.

Thus, among the land that gmina-level Studies and Local Plans indicate as suitable – and even designate – for building, only a part is land in which the planning designation reflects any real or distinct market need, e.g. as reflected in rapid commencement of real-life construction work. Many other areas have gained designations as "for building" more or less "at the request" of owners of land, who see here a kind of future financial security, or else gain a regular income in the here and now by selling off parts of their estates piece by piece. This in turn denotes the appearance of exceptionally diffuse built-up areas, often coming into existence site-by-site, and in essence at chance (rather than thought-out) locations. In essence, this very specific view of "social justice" espoused at gmina level is allowing as many owners of land as possible to engage in construction work if they so wish, under conditions that are more or less similar, averaged out and so – in some conventional and oversimplified understanding of the term – "just" [Solarek 2013].

The further consequence of this approach is the disappearance from each plan of what should be – and once was – its most fundamental premise, objectively-defined need as regards development, translating into the goal or objective of the plan itself, as a whole. What this has denoted is activity to negate the sense behind the application (as in the past) of what are now defined, or dismissed as "traditional" methods of drawing up plans (i.e. with a clearly pejorative flavour now being attached to the word "traditional"). This thus represented an almost total severing of previously-existing ties between theory and practice [Zuziak 2005].

Against such a background, it becomes hugely important for local authorities to define the actual needs of given settlement units as regards development, taking real demographic processes and economic potential into account. The aforesaid huge surplus of land designated for building in gmina-level Studies and Local Plans is giving rise to irrational use and management of land, while also having hugely negative financial consequences for local authorities. And the scale of the phenomenon indicates the lack of methodological rationality characterising today's urban planning in Poland – a problem that professionals began to take note of some years ago now [e.g. Izdebski et al. 2007, Solarek 2005, Kowalewski 2013],

[1] A tool for selected strategic directions to a city's development in relations to defined time sequences. This entails the identification of limitations and thresholds relating to development which can only be overcome if disproportionately high costs – as set against the number of new inhabitants - are incurred.
[2] This is set to select what would be socioeconomically the most favourable variant for the distribution of an anticipated programme of new development across space. It entails analysis of costs of implementation of the said development, with these arising out of natural features of the land concerned, as well as locations in respect of source elements of technical infrastruture.

and one now finding its reflection in domestic law, with 2015 amendments to Poland's Planning and Physical Development Act finally generating a requirement that a series of spatial analyses be carried out for both urban and rural areas [Ustawa o planowaniu… 2003].

In accordance with the regulations now in force, the so-called "Study on Physical Development Conditions and Directions" inter alia takes account of conditioning arising out of the balance of land designated for building. Also laid down is the required scope of research necessary as such sites are demarcated. Among other things, there is a requirement that capacity be assessed as regards: "areas located on the territory of a given gmina supporting a fully-developed and contiguous functional and spatial structure within the boundaries of a settlement unit (…)", with this therefore being considered utilisable area within buildings and/or already-utilised built-up land, in which there is also an assignment of functions. Further: "estimates shall be made of the capacity of land within a given gmina designated for building in Local Plans (…), as expressed in terms of the area of utilisable building land, with a division into functions".

The results of the analyses of this kind, as combined with demographic forecasts, are compared with and set against a given gmina's financial and organisational capabilities. The effect of this is then an identification of land on which new construction work is actually to take place, along with indicator values for that work [Ustawa o planowaniu… 2003]. It is an obligation for local authorities to pursue such studies, but thus far methods by which they can discharge this duty efficiently and reliably have not been developed.

2 RESEARCH AIMS AND A CHARACTERISATION OF THE LAND SELECTED FOR STUDY

The aim of the research work detailed here has been to attempt to automate land capacity analysis using the GIS tools whose utilisation in planning has been increasing steadily in recent years. This is happening in line with increased quantity, quality and accessibility of spatial data that can serve as a basis for analyses suitable in assessing and forecasting development in urbanised areas, inter alia those discussed in this article. Use of the Model Builder application, which offers models for how to proceed compiled from tools available in its programming, can streamline the processes by which necessary spatial analyses are carried out, all the more so if the same procedures can then be implemented in respect of many other towns and cities. An activity pathway once put in place would then be suitable for multiple and repeat use.

The use of GIS tools is a matter already taken up by many researchers, albeit with some publications confining themselves to a very broad conceptualisation of the tool(s) [Foresman 1998, Gaździcki 1990, Eastman 2001, Litwin and Myrda 2005]. Others focus in on the use in planning [O'Looney 2000, Urbański 197, Malczewski 1999, Piwowarski 2009, Malczewski and Rinner 2015, Geertman and Stillwell 2003, Joerin et al. 2001], or devote themselves to matters of urban-planning design [Hanzl et al. 2011]. Making an occasional appearance in foreign literature are articles on capacity-limits in the environment when it comes to needs as regards the locating of new construction work and built-up areas [Senes and Toccolini 1998]. In Poland, there are just a few papers dealing with the use of GIS tools in forecasting spatial development [Parteka and Czochański 2003, Fogel 2007, 2013]. Only rather recently has it started to be seen as essential for new methods applicable to development planning to be devised [Biegański 2016].

Work detailed here has thus sought to fill a research gap as regards spatial-planning methods, with a view to a tool suitable for practical use by local authorities being proposed. An equally important objective has been the study and presentation of the current spatial structure characterising Warsaw as a city and as capital of Poland, with this not being confined to analysis of the spatial breakdown of functions set against each other, but also including an analysis of the percentage shares accounted for by different functions in delineated accounting units.

The work described here thus analysed the situation of land within the city limits of Warsaw, as the most functionally and spatially diverse urban area in Poland. The capital city is at present divided into 18 Districts characterised by varying degrees of urbanisation of their land. By reference to observations made, the areas of these Districts were further divided into accounting units, differing from one another in terms of their physical development – with, for example, one including areas in which the multi-family

housing function prevails, and another being characterised by a clear prevalence of more-extensive built-up areas featuring single-family housing.

3 DESCRIPTION OF THE LAN CAPACITY RESEARCH CARRIED OUT IN WARSAW

3.1 OBTAINING DATA

The first stage to the research work described here entailed the collection of the necessary spatial data concerning the city of Warsaw. Such data were obtained from the so-called EGiB[1] base (where the abbreviation for Ewidencja Gruntów i Budynków denotes registration of plots of land and buildings). These are vectoral spatial data that include, not only the geometry of buildings, but also other attributes relating to each premises. For the purposes of displaying and analysing the data obtained, use is made of the ArcMAP program, forming part of the ArcGIS package. Data on buildings and plots are displayed as layers, along with tables of attributes. Initially, the layer with buildings contained attributes as follows, i.e. a unique code for the given building, X-Y coordinates for buildings, and area data simultaneously equivalent to the area that is built-up, but also information on numbers of floors and functions (though not in every case). The layer relating to plots in turn encompassed a unique code for the object, as well as coordinates, and information on size of the area – which is at the same time equivalent to plot area.

The existence of all of these attributes make it possible to calculate basic indices like the share of building plots that is actually built on, as well as the overall floor space accounted for by built premises[2], obtained by multiplying the area a building covers by its number of floors. In fact, these attributes do not suffice to calculate the utilisable area on premises[3], even if they do represent key data for further analyses and the obtainment of relevant results. Rather, the data actually required are obtained once relevant conversion factors have been determined and applied.

Following sub-chapters detail the process by which the necessary indices are established, along with information on their use to calculate utilisable area, with a subordination of the overall figure to different identified functions.

3.2 DATA ANALYSIS TO DETERMINE THE UTILISABLE AREA WITHIN LAND UNITS

In making an appropriate selection of conversion factors applicable to buildings, it is necessary to analyse functions and means of utilisation in detail, as well as to determine the time at which buildings came into existence. This all reflects the way in which the above features impact upon coefficient values. Residential buildings arising at different times in history differ in the form and manner of construction, ensuring that conversion factors are also different. Buildings meeting service-related, industrial or commercial functions will also be characterised by various different values for the conversion factor. To streamline the process by which functions and ages are assigned to buildings, and to take account of the marked spatial differentiation present within the Warsaw city limits, it was decided to assign the accounting units identified to different zones from the point of view of the different ways in which land is utilised. The functional zones distinguished are as detailed in the table below.

[1] EGiB – Ewidencja Gruntów i Budynków or Register of Land and Buildings – this is a land-survey-related public register featuring quantitative and descriptive data on land, buildings and premises, as well as property ownership.
[2] The overall area is the sum of all floor space on all floors of a building, obtained straightforwardly by multiplying a building's area by the number of floors.
[3] The utilisable area measures the floor space on all floors within premises that serves to meet demands associated with the assigned designation, as measured here by multiplying the overall area by an appropriate conversion factor.

Symbol	Category	Additional information
EW	Hard media services	Power supply, media and fuel, e.g. heat and power plants, areas with water pipelines, etc.
MN_0	Built-up residential areas of low-rise single-family housing	Free-standing houses, semi-detached or terraced, together with other building sometimes present on plots
MN/U	Built-up residential areas of multi-family housing plus services	Built-up residential areas where housing and premises rendering services are mixed together, as where certain old villas have been adapted to serve as Embassies or the seats of firms, also buildings in which there are service premises on the ground floor with housing functions on higher floors
MW_0	Built-up residential areas of multi-family housing	Built-up residential areas of multi-family housing either lacking services or with services hardly present – as mainly on gated housing estates
MW/U	Built-up residential areas	Premises rendering services primarily located in the ground-floor
	of multi-family housing with service premises (mainly ground-floor)	areas of buildings and mainly on the edges of residential quarters
MW_U	Built-up residential areas of multi-family housing with services	Premises rendering services not confined to the ground floors of buildings, though mainly in buildings immediately adjacent to the unit's main streets. Present primarily in the city's Śródmieście, Wola, Ochota and Praga Południe Districts.
PR	Industry	Industrial premises
US	Depots and warehouses	Premises designated for storage, including warehouses designated for commercial functions, and not merely those serving industry's needs
PUS	Abandoned	Abandoned premises in a poor state or in ruins, uninhabitable
TR	Transport	Stations and airport terminals, Metro stations, bus and tram depots, multi-storey car parks, large concentrations of single-place garages adjacent to multi-family housing
TK	Rail transpor	Buildings on railway land and/or servicing rail transport (excluding the station premises included under the TR function)
UA	Administration and public security	Premises used in public administration, e.g. courts, Ministries, Embassies, District Offices, police stations and headquarters, buildings used by the Armed Forces, etc.
UB	Office buildings	Commercial premises, buildings within business or office parks
UF	Non-material services	Premises used by the financial and insurance services, finance centres, banks and exchanges
UH+UM	Commercial and material services	Service premises found mainly on housing estates
UI	Other services	Services not assignable to other categories referred to above
UK	Cultural and recreational services, the hotel industry and tourism	Local culture and community centres, theatres, cinemas, museums, stadia and sports halls, buildings associated with gyms and sporting premises, hotels and related premises and those associated with tourism
UO	Educational and scientific services	Creches and kindergartens, primary schools, junior high schools, high schools, establishments in higher education and scientific institutes
UU	Various services	Areas in which a variety of services are concentrated – e.g. shopping centres and malls
UZ	Health services	Hospitals, health centres, clinics, offices of specialist practitioners, first-aid rooms and other medical premises

Table 1 – Division of land into functinal zones. Source: author's own elaborations

This differentiation between the functions areas serve makes possible the automatic ascribing of features to the buildings present at given sites, bearing in mind the spatial relations pertaining between areas and their buildings. The use of the spatial tools is further preceded by relevant assignment of time intervals, given the likelihood that particular points in time will be associated with a prevalence of one construction technology or another, with this in particular influencing energy-consumption features of the given buildings. Information on such features can prove valuable in various different kinds of analyses of urban areas, i.a. related to their energy needs.

Category	Justification
Pre-1981	Up to the 1982 time of introduction of the PN-82/B-02020 thermal protection standards
1982-1991	Up to the 1991 time of introduction of the PN-91/B-02020 thermal protection standards
1992-2001	Up to the time of introduction of the E0 value describing energy consumption
Post-2002	Binding limit values for energy consumption, wide application of layered walls and development of insulation technologies
BD	No data – applied to buildings for which no data on age can be found
ND	Not applicable (n/a) – applied in circumstances where excessive diversity made an age determination impossible, e.g. where there are aggregations of single-family housing in built-up areas, but also where the information in question is not critical, as with warehouses and stores, as well as construction of a temporary nature

Table 2 – Categorisation of buildings in line with time of construction, given the influence on energy-consumption attributes. Source: authors' own elaboration

Supplemented in this way, the tables of attributes were used in statistical compilations concerning land utilisation within the Warsaw city limits, with a division into Districts, and beyond that into the designated accounting units. As the databases arising in this way included large numbers of these, the decision was taken to return to calculations based around Districts. This was associated with a repetition of successive steps in the case of each District. Through ArcGIS programming a model by which different tasks could be carried out in a defined order with the aid of simple tools was developed. This could then be applied successively to Warsaw's 18 different Districts, the use of the action model allowing the necessary activities to be proceeded with much more rapidly than would be the case were separate operations to be carried out.

Conversion factors allowing for the shift from overall area to utilisable area were brought together in a table later combined by relationships with the layer containing buildings. Merging was achieved using appropriate Standard Query Language queries. Utilised conversion factors are as presented below.

Type of building/premises	Time of origin	PU coefficient
MW	Old Town built-up area	0.69
	19th-century tenement buildings	0.75
	so-called "large-panel" construction	0.79
	1992-2001	0.83
	Post-2002	0.85
MN	n/a	0.7
P – halls and production-related	n/a	0.97
U – service premises	Pre-1992	0.8
U – offices, services and high-rise buildings	Post-1992	0.9
Farm or utility buildings	n/a	0.8

Table 3 – Indices used in calculating PU in relation to building ages and technologies.
Source: authors' own elaborations

Presented below is a schematic representation of the action model created for the needs of the research using the Model Builder application, which is used to create, edit and manage models for data flow between geoprocessing tools. A further aspect here is that results may serve as input data to be used by other tools.

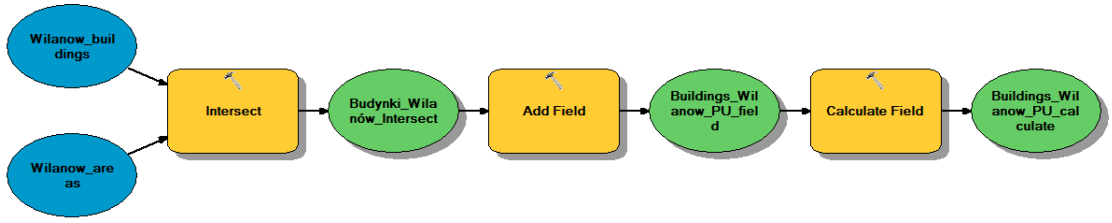

Fig. 1. The action model meeting the needs of the research conducted, under the Model Builder application.
Source: elaboration by A. M. Jachimowicz

The use of this procedural model for layers, with its spatial data relating to different Districts, allowed values for utilisable area in these Districts to be obtained more rapidly. The statistical tool developed facilitates the compiling and aggregation of data, including values for such basic indicators as overall areas, lowest and highest values, mean values and standard deviations.

GIS programming not only allows for the collection, compilation and analysis of data, but also for their presentation in a user-friendly manner, in the form of maps and graphics of which examples are provided below.

Fig. 2. Distribution of built-up areas of differing functions and ages.
Source: elaboration by A. M. Jachimowicz

To achieve a transparent presentation of the obtained totals for utilisable area related to the different functions in accounting units, appropriate values need to be assigned to the latter within units. Totals for the different units are then obtained using the Intersection tool, which can designate the geometrical common part, via a kind of multiplication of the layers by themselves. The layer containing the buildings, their functions and utilised area with a division by functions is multiplied by the layer containing the accounting units. A layer with buildings is obtained in this way, along with different attributes, with the operation resulting in a location in the appropriate accounting unit. It is then necessary to carry out an aggregation of values for the utilisable areas in respect of different functions. This aggregation is made possible by the Dissolve tool allowing for the merging of objects on the basis of defined attributes – in this case in relation to function, as well as allowing for the calculation of statistics relating to the aggregated objects that arise – with further analysis making use of the function of a total. The consequence was the obtainment for each unit of a vector layer containing a number of objects that corresponds with the number of different functions present in the given accounting unit. For results obtained to be used, not only in the form of a table, but also by way of appropriate geovisualisations, use also needed to be made of Join table, which assigns totals obtained previously to relevant units.

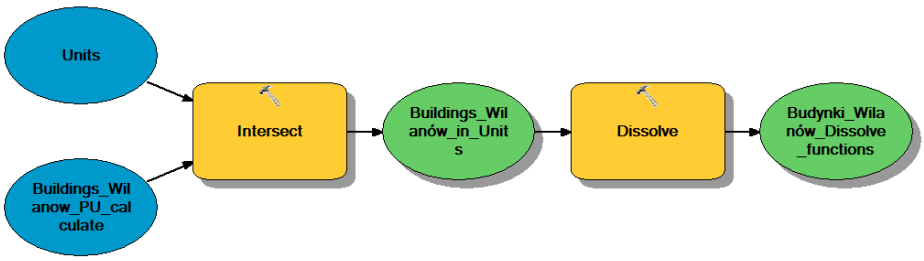

Fig. 3. Procedural diagram. Source: elaboration by A. M. Jachimowicz

Thanks to the above actions taken it inter alia became possible: (1) to use cartograms in visualising the results obtained and (2) to engage in the comparative analysis of data. An example of the use of cartograms to visualise the roles of the different functions in a given unit is given in the following figure.

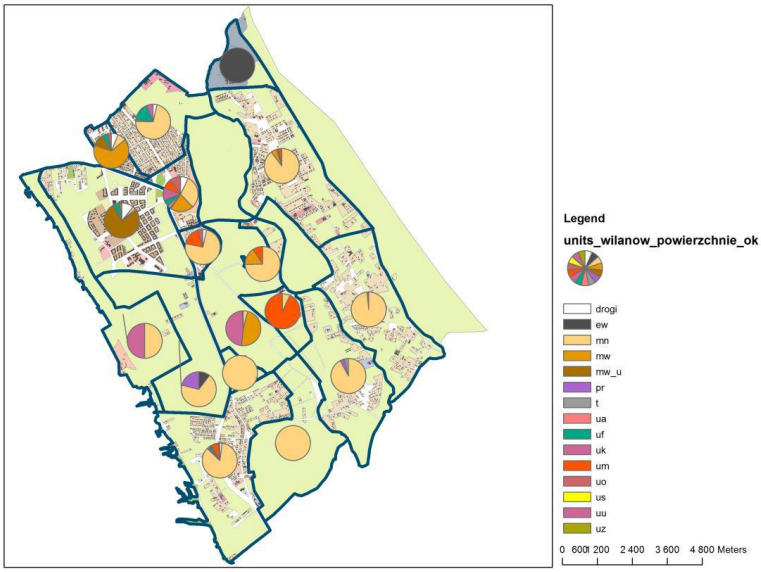

Fig. 4. Sample diagram of a District with a division into accounting units.
Source: elaboration by A. M. Jachimowicz

3.3 DATA ANLYSIS TO COMAPRE THE CURRENT INTENSITY OF DEVELOPMENT OF A BUILT-UP AREA WITH THAT PERMITTED IN THE SUIKZP[1]

The analysis involved here resembles the previous one in being carried out by reference to the spatial extents of Districts. This was again achieved by harnessing the creative possibilities of the action model, which streamlines the process by which the same kinds of analysis are pursued for consecutive Districts.

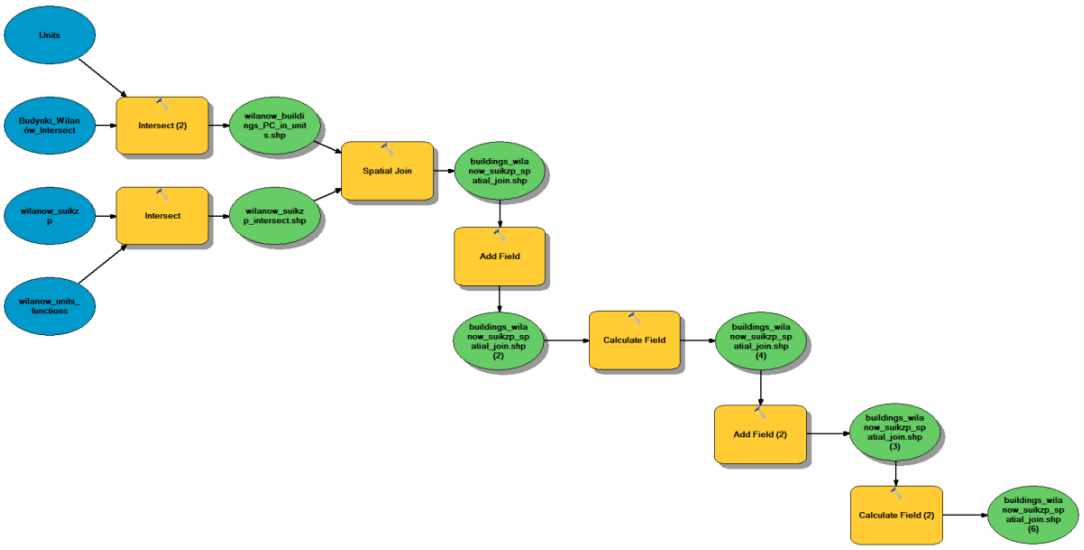

Fig. 5. Procedural diagram. Source: elaboration by A. M. Jachimowicz

The model referred to, presented above in graphic form, is described in detail in what follows. The first stage of this analytical part entails repeat application of the Intersection tool, this time in multiplying the layers with zones of management determined in the first analytical part with a layer containing a division into areas designated in the SUiKZP. This activity allows for the assignment to management zones of

[1] The SUiKZP or Studium Uwarunkowań i Kierunków Zagospodarowania Przestrzennego is the (”Study on Physical Development Conditions and Directions”) document providing mean values for the coefficient of the intensity of development into built-up areas, for land as designated in diagram form.

permitted gross values for the intensity of development in built-up areas, as designated in a Study. Subsequently, with the aid of the Spatial Join tool, it is possible to calculate the total area of all buildings located within each different zone. Following the application of this tool to the table of attributes of the layer arising, a column is added that is designed to retain values for the intensity of development indices. Calculated at this point in the management zones is the gross value of the index for the present intensity of development of the built-up area, on the basis of the formula:

Int. = GBA/Area(of plot)
where:
*BGA is the overall area with buildings = BA * NF*
BA – building area
NF – number of floors
Area (of plot) – is the area of land for which the coefficient for the intensity of development of the built-up area is being calculated

In this way, each of the management zones designated previously has a table of attributes featuring two values that relate to the intensity of development as it is at present or could be in line with what is permitted. The comparison of these values makes use of a quotient of the value for the coefficient as it is at present set against the permitted value. An extra column is thus added to store values for the quotients anticipated.

The results obtained from this activity are values across a [0; 2] interval. Values obtained for the quotient are classified in line with: present value being lower than that permitted, present value being equal or nearly equal to that permitted and present value exceeding that permitted.

3.4 RESULTS

Objectives described at the outset did prove achievable through the analysis detailed above. The methodology adopted to automate analyses and calculations showed that the application of Spatial Information System tools is particular effective as land-capacity analyses for towns and cities, or parts thereof, are carried out. Resort to Model Builder, which allows users to develop their own complex tools, facilitates the calculation process, most especially where particular operations need to be conducted in sequence for different objects. In such a case, use can be made of the iteration[1] of successive lines in the table for the layer containing the Districts making up the City of Warsaw.

The application of the aforesaid complex tools, as tailor-made using Model Builder, provides for the at-least partial automation of the analyses detailed. In consequence, a model generated one off can subsequently serve many times in calculations, as only the values for input data will change. The generation of a tool of this kind facilitates and abbreviates analyses where the necessity is to engage simultaneously with a greater number of entities, such as towns or cities or the Districts thereof.

The results of the analyses in question can be presented in various ways. The first entails the export of tables of attributes to xls files, but also to databases. The basic statistical compilations for particular layers can also be presented as a generated report containing a plot for selected data and values thereof like totals, means, minima or maxima.

Obtained results can also be visualised as maps or schematic representations. Examples of these were included in earlier chapters – a schematic representation of the distribution of a function (Fig. …), of the ages of buildings within a unit (Fig. …) or one with percentage shares of utilisable area as assigned to different identified functions.

The second analysis carried out for example provided for the identification of areas in which the quotient for current against permitted intensities of development assumes lowest values or fall within given intervals [0; 0,3]. Such low values for the quotient indicate a zone in which the current level of development is not very intensive, with land in this area capable of being designated for supplementary construction work, of course if there is no other counter-indication for that.

[1] iteration is the act of repeating (most often many times) the same instruction(s) forming part of a loop. The term is also applied to operations conducted within a loop of this kind.

4 DISCUSSION AND CONCLUSIONS

The analyses conducted allowed for determinations of percentage shares of utilisable land within given units, as broken down in relation to a variety of identified functions, and this in regard to both existing and planned physical development of the city of Warsaw.

Studies on Physical Development Conditions and Directions (SUiKZPs) designate general directions for cities' spatial development. In the case of Warsaw, the relevant document relates to the period up to 2035. This is to say that it has been drawn up in line with indicators the Study gives as permissible in the cases of the different zones. The value for overall area was to have been achieved in a period lasting approximately up to the year 2035. The largest share in this overall area is taken by built-up land serving a residential function, be this with single-family housing (in free-standing, semi-detached or terraced houses) or multi-family. By multiplying the relevant area by an appropriate proportion reflecting the way in which these two types of built-up area co-occur, and then by the conversion coefficient, it is possible to obtain the predicted 2035 figure for the area in use for single-family or multi-family housing. In turn, by comparing the anticipated area for residential use with the area currently utilised residentially, the size of the increase can also be noted. In line with the availability of land in Warsaw, the SUiKZP yields a capacity equal to around 3.5 million people. Setting the results obtained against demographic forecasts for Warsaw whose most probable scenarios assume 1.5 million inhabitants in 2050 [Śleszyński 2016], the building-land figures are markedly too high.

The analysis carried out allowed for the additional designation within Warsaw of zones that are undeveloped – as presented in Fig. 6. Consideration of the lowest figures for the quotient suggest that such units are mainly in the urban zone, or in the suburbs[1]. In the city-centre zone as such, there are only now single plots in different places that remain free of construction, with the coefficient of intensity of development for the latter now assuming values close to 0. Thanks to the results elaborated, it is also possible to offer a ratio of built-up to unutilised areas in a given District of Warsaw, or within one or other of the accounting units.

Fig. 6. Areas possible to build on them. Source: elaboration by A. M. Jachimowicz

The results obtained may serve as input data for further spatial analyses. One such analysis might involve the designation of the non-built-up areas that should be the first to commence with development. Together with the layers referred to already, layers dealing with public roads can for example be used in designating the above zones. Roads are of relevance given the way in which it is possible to determine commute times to particular parts of the city. Environmental matters are also obviously of relevance.

[1] The urban and suburban zones are two of the three that the SUiKZP identifies. The third zone is that of the inner-city sensu stricto.

While GIS instrumentation is still rarely used in the planning process in Poland, the trend for analyses of this kind is an upward one, and understandably so, given that the use of GIS can provide for the at least part-automation of the process by which land capacity is determined.

The results obtained will inform the decisionmaking process, and that shaping policy ion Warsaw's further development, while also representing input data for further spatial analyses concerning the Polish capital. The means of conducting analyses of capacity presented here can be used in practice, also of course in other cities, towns and local-authority areas.

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ID 1666 | OPERATIONAL RESEARCH IN SPATIAL PLANNING

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1 INTRODUCTION

The need to develop new methods supporting spatial planning is nowadays one of major challenges of modern urban planning. Discourse on new ways of urban management gains new meaning and is in fact a discussion about the contemporary urban planners skills and tools. The paper presents new solutions which could provide a support for coordinated, rational, and transparent decision making under conditions of risk and uncertainty. MCDA is a is a sub-discipline of operational research and was developed in 1960s in the business sector. MCDA is used in the situation of having multiple, usually conflicting, criteria and therefore has a potential for implementation in spatial planning. Some examples of using the MCDA methods for the purpose of urban management are offered. General evaluation of the proposed approach is conducted in order to identify strengths and weaknesses that could be addressed in further research. So far, it seems that bringing together economics, operational research, ICT, and applying them in the field of urban studies, could improve city policy making and urban management. It seems fair to say that urban planners might have no other choice but to look far outside their own academic discipline in search of new tools; therefore, the paper encourages a discussion on whether methods derived from operational research could be incorporated into spatial decision making process.

2 DECISION MAKING AND PLANNING PROCEDURE

In the process of urban policy making several steps can be distinguished: complex analyses are followed by formulation of a vision, mission, and main objectives, then operational tasks are identified, and finally projects/activities pursuing these goals are recognized. This procedure is connected with making up the balance of resources and time schedule of urban projects (Ossowicz 2003). Between these elements several complex interrelationships, feedbacks, and correlations could be identified. An attention should be paid to a relatively large number of bodies, institutions, and groups involved in the decision making process and the fact that the interests of these parties may sometimes be in conflict. Therefore, following issues should be taken into consideration:

- the essence of city governance: definitions (city management, city governance, spatial policy, urban policy, etc.), features of governing, city governance in the light of organization and management theory, uncertainty and risk in spatial planning;
- local government: its role and tasks, structure, features, and management instruments;

- urban planning: actors, features and attributes of the local level spatial planning, models of integrated planning in cities, models of strategic planning (including models taking into account the specificities of public organizations management);
- city finances;
- controlling and monitoring.

The decision making process both within regional and municipal planning addresses a broad spectrum of issues such as, among others: transportation, environmental protection, research and development, competitiveness and innovativeness, economic activity, or social inclusion. The interrelations between these fields are described to some extent, however, no numerical (quantitative) analysis has been conducted.

3 METHODS

Literature review and own observations of planning practices indicate lack of comprehensive and advanced tools which could support decision making at local or regional level. The procedure of prioritizing spatial projects in a big city was described by Ossowicz (2003) who also paid attention to the use of mathematical analysis in the urban policy making. However, it seems fair to say that this matter has not been thoroughly investigated and resolved yet. The need to develop new solutions providing support for coordinated, rational, and transparent decision making is an important prerequisite to undertake a research on the topic of spatial decision making. In the next chapters of this paper, numerical solutions derived from operational research are offered and discussed. MCDA (multi-criteria decision analysis) is a sub-discipline of operational research and was developed in 1960s in the business sector and is helpful in the situation of having multiple, usually conflicting, criteria. In general, it is used to improve a decision making process by making it more rational and transparent (Figueira, Ehrgott, Greco 2005). There are several methods which help with: choosing the best option, building a ranking, or sorting alternatives – in general, these methods advocate rational choices. There is also a group of methods which do not support the decision making process directly, however, they are useful for problem structuring. Two of multi-criteria decision making methods, namely DEMATEL and PROMETHEE, are the focus of this paper.

3.1 DEMATEL

Decision Making Trial and Evaluation Laboratory (DEMATEL) is a robust analysis tool used for identification of cause-effect relationships (Fontela, Gabus 1974). It can be used for both tangible and intangible factors. The method has been applied to illustrate the interrelations among criteria and to find the central criteria to represent the effectiveness of factors/aspects. It has also been applied in many situations, such as marketing strategies, control systems, safety problems, development of the competencies of global managers, and group decision making (Lee et al. 2013). The end product of the DEMATEL process, namely the impact-relations map, is a visual representation of importance and causative nature of each analysed factor. To evaluate the relations, a pairwise comparison is conducted. The measurement criteria of 0, 1, 2, 3, and 4 are used to illustrate no influence, low influence, medium influence, high influence, and extremely high influence, respectively. Despite the interesting features, no application of DEMATEL method in spatial planning (neither regional nor urban) has been identified. The steps of the DEMATEL method (Lee et al. 2011) are described as follows:

Step 1: Find the average matrix

Step 2: Calculate the normalized initial direct-relation matrix.

We then create a matrix D by using a simple matrix operation on A. Suppose we create matrix D and D = s · A where

$$s = Min\left[\frac{1}{\max_{1\le i\le n}\sum_{j=1}^{n}|a_{ij}|}, \frac{1}{\max_{1\le j\le n}\sum_{i=1}^{n}|a_{ij}|}\right].$$

Matrix D is called the normalized initial direct-relation matrix. The (i, j) element dij denotes the direct-influence from factor xi to factor xj. Matrix D shows the initial influence which a factor exerts and receives from another. Each element of matrix D portrays a contextual relationship among the elements of the system and can be converted into a visible structural model—an impact-relations map—of the system with respect to that relationship.

Step 3: Derive the total-influence matrix T

A continuous decrease of the indirect effects of problems along the powers of matrix D, e.g. D2, D3, … , D∞, guarantees convergent solutions to the matrix inversion, similar to an absorbing Markov chain matrix. The total relation matrix T is an n × n matrix and is defined as follows:

$$\begin{aligned}\sum_{i=1}^{\infty} D^i &= D + D^2 + D^3 + \cdots + D^n \\ &= D(\mathbf{I} + D + D^2 + D^3 + \cdots + D^{n-1}) \\ &= D(\mathbf{I} - D)^{-1}(I \\ &\quad - D)(\mathbf{I} + D + D^2 + D^3 + \cdots + D^{n-1}) \\ &= D(\mathbf{I} - D)^{-1}(\mathbf{I} - D^n) \\ &= D(\mathbf{I} - D)^{-1},\end{aligned}$$

where I is the identity matrix and T is called the total relation matrix. The (i, j) element of the matrix T, tij, denotes the full direct- and indirect-influence exerted from factor xi to factor xj.

Step 4: Obtain the prominence and relation.

Once T = [tij]n×n is obtained, we can define r and c as n × 1 vectors representing the sum of rows and the sum of columns of the total relation matrix T as follows:

$$r = [r_i]_{n\times 1} = \left(\sum_{j=1}^{n} t_{ij}\right)_{n\times 1},$$
$$c = [c_j]'_{1\times n} = \left(\sum_{i=1}^{n} t_{ij}\right)'_{1\times n},$$

where the superscript ′ denotes transpose.

Let ri be the sum of the i-th row of the matrix T. Then ri shows the total effect, both direct and indirect, given by the factor i to other factors. Let cj denotes the sum of the j-th column of the matrix T. Then cj shows the total effect, both direct and indirect, received by the factor j from other factors. Thus when j = i, the sum (ri + ci) gives us an index representing the total effect both given and received by the factor i. In other words, (ri + ci) shows the degree of the importance (total sum of the effects given and received) that the factor i plays in the system. In addition, the difference (ri − ci) shows the net effect that the factor i contributes to the system. When (ri − ci) is positive, the factor i is a net causer, and when (ri − ci) is negative, the factor i is a net receiver (Tzeng at al. 2007).

Step 5: Set a threshold value and obtain the network relationship map

In order to explain the structural relationship among the factors while keeping the complexity of the system to a manageable level, it is necessary to set a threshold value p to filter out the negligible effects in matrix T.

3.2 PROMETHEE

Another promising method is PROMETHEE (and its descriptive complement geometrical analysis for interactive aid which is better known as GAIA). The main advantage of the PROMETHEE method is the clear reasoning which helps decision makers build well-structured framework for the decision problem. It is useful for solving complex problems with several criteria that need to be evaluated. The method could be

applied to: choosing the best location for an investment, ranking action projects or investment plans, allocating resources. The information requested by PROMETHEE and GAIA is particularly clear and easy to define for both decision makers and analysts. It is based on a preference function associated to each criterion as well as weights describing their relative importance. Usually there is no alternative optimising all the criteria at the same time, therefore a compromise solution should be selected. (Brans, Mareschal, 2005). The algorithm of the method is as follows:

Step 1: Using the data contained in the evaluation matrix, the alternatives are compared pairwise with respect to every single criterion. The results are then calculated and expressed by the preference functions, which are calculated for each pair of options and can range from 0 to 1, where 0 means that there is no difference between the pair of options (indifference), 1 indicates a strong preference, and value between 0 and 1 indicates weak preference:

Pj(a, b) = Fj [dj(a, b)] ∀a, b ∈ A
where:
dj(a, b) = gj(a) − gj(b)
For criteria to be minimised, the preference function should be reversed or alternatively given by:
Pj(a, b) = Fj [−dj(a, b)]

In order to facilitate the identification of preferences six types of particular preference functions have been proposed (Brans and Mareschal, 2005). Additionally, such parameters as threshold of indifference or threshold of strict preference can be used.

Step 2: Aggregated (global) preference degree for each pair of alternatives on each criteria is calculated:

$$\pi(a,b) = \sum_{k=1}^{q} P_k(a,b) \cdot w_k$$

Step 3: Positive and negative flow scores are calculated:

$$\phi^+(a) = \frac{1}{n-1} \sum_{x \in A} \pi(a,x)$$
$$\phi^-(a) = \frac{1}{n-1} \sum_{x \in A} \pi(x,a)$$

Step 4: Net flow score is calculated in order to obtain a complete ranking of alternatives:

$$\phi(a) = \phi^+(a) - \phi^-(a)$$

4 RESULTS

In this chapter two example uses of the aforementioned methods are presented. The research is checking whether selected method, namely DEMATEL, derived from operational research could be incorporated into decision making process at regional level. The focus is on the 2020 Development Strategy for Lower Silesia Voivodeship which is one of the most important development documents prepared in and for the region. However, the methodology presented in this paper could be adapted and used while creating development strategies for modern and smart cities (Lorens, Martyniuk-Pęczek 2010). The method can be used for analysing linkages between urban policy goals or for evaluating planning process at local level (Ogrodnik 2015). The Development Strategy for a Voivodeship is the most important document drawn up by the self-governments of the Voivodeships (which are equal to NUTS-2). The document identifies strengths and weaknesses of the region and indicates objectives and priorities of the regional development. The strategy is a tool to design and stimulate the development: it serves as a guideline for the authorities and indicates fields requiring regulations and financing. The purpose of this document is to indicate the directions for economic and infrastructural development. It also serves as a tool for improving the life conditions of the inhabitants of Lower Silesia. The structure of the strategy is rather typical (compare: Dymon 2013, Kożuch 2011): initial analyses and diagnosis are followed by identification of

development goals; then, territorial dimension of the policy is described; next, financial aspects and implementation system are discussed; in the next step, the so-called development macro-spheres are identified; the document's last part is the monitoring section where development indicators are described. The most novel feature of the document is identification of macro-spheres which are groups of projects pursuing eight development goals. These goals cover eight key groups, so-called macro-spheres. Each macro-sphere is related to at least one strategy goal and they are aimed at strengthening the economic development of the Lower Silesia region. The relations between abovementioned macro-spheres and strategy development objectives are presented in the Table 1 below.

	Development of a knowledge-based economy	Development of sustainable transport and improvement of accessibility	Strengthening the competitiveness, especially of small and middle enterprises	Environmental protection, efficient use of resources, adaptation to climate change	Increasing the accessibility of information and communications technologies	Increase in employment and labour mobility	Social inclusion and improvement of life quality	Increasing the level of education and lifelong learning
Infrastructure		X		X		X		
Development of urban and rural areas	X	X	X	X	X	X	X	X
Resources				X				
Tourism		X	X	X		X	X	
Health and safety		X		X	X		X	X
Education, science, culture, sport and information	X				X	X		X
Society and partnership	X		X		X	X	X	X
Entrepreneurship and innovation	X		X		X	X	X	X

Table 1. Relations between adopted strategy goals and macro-spheres.
Source: own compilation; based on: The 2020 Development Strategy…, 2013.

The strategy offers also proposal of financial distribution of assets, however it is "an initial, qualitative", not quantitative, division (Strategia… 2013). This share was determined in an experts panel discussion, but no numerical methods have been used to support the process. This research offers an analysis of cause-effect relationship between the macro-spheres which could be useful for better structuring the problem. For the purpose if this study, the relations between macro-spheres have been analysed and named by the (former) Director of the Department of Regional Development in the Marshal's Office, who was co-responsible for preparing and issuing the 2020 Development Strategy for the Lower Silesia Voivodeship. The relations provided by the specialist are presented in the table below (Table 2), which is a direct-relation matrix

	Infrastructure	Development of urban and rural areas	Resources	Tourism	Health and safety	Education, science, culture, sport and information	Society and partnership	Entrepreneurship and innovation
Infrastructure	0	4	1	3	4	2	2	3
Development of urban and rural areas	3	0	1	3	4	4	4	3
Resources	1	3	0	3	3	1	1	2
Tourism	2	4	1	0	3	2	3	1
Health and safety	1	3	1	3	0	2	4	2
Education, science, culture, sport and information	2	3	3	2	2	0	4	4
Society and partnership	2	2	2	3	3	3	0	4
Entrepreneurship and innovation	3	4	3	1	2	3	3	0
Scale	0 – no direct impact (one medium to another); 1 – low impact; 2 – average impact; 3 – high impact; 4 – very high impact							
Example	Macro-sphere "Education, science, culture, sport and information" has a very high impact (4) on the sphere "Entrepreneurship and innovation", while "Entrepreneurship and innovation" has a high impact (3) on "Education, science, culture, sport and information".							

Table 2. Direct relations between macro-sphere. Expert's evaluation.

The findings indicate that "Development of urban and rural areas" is the most important macro-sphere with the value 11.98, while "Resources" is the least important component with the value 7.25. The ranking of macro-spheres based on their prominence is as follows: "Development of urban and rural areas", "Society and partnership", "Entrepreneurship and innovation", "Education, science, culture, sport and information", "Health and safety", "Tourism", "Infrastructure", "Resources". "Infrastructure", "Resources", "Education, science, culture, sport and information", and "Entrepreneurship and innovation" are net causes, whereas "Development of urban and rural areas", "Tourism", "Health and safety", and "Society and partnership" are net receivers (based on r-c values). The cause and effect diagram is shown in Figure 1. The most "causative" (i.e. the most influential) macro-sphere is "Infrastructure", followed by "Education, science, culture, sport and information" and "Resources". Two macro-spheres: "Entrepreneurship and innovation" and "Development of urban and rural areas" are very close to the cause-effect borderline. The most "effectual" macro-sphere is "Health and safety", then "Society and partnership", then "Tourism".

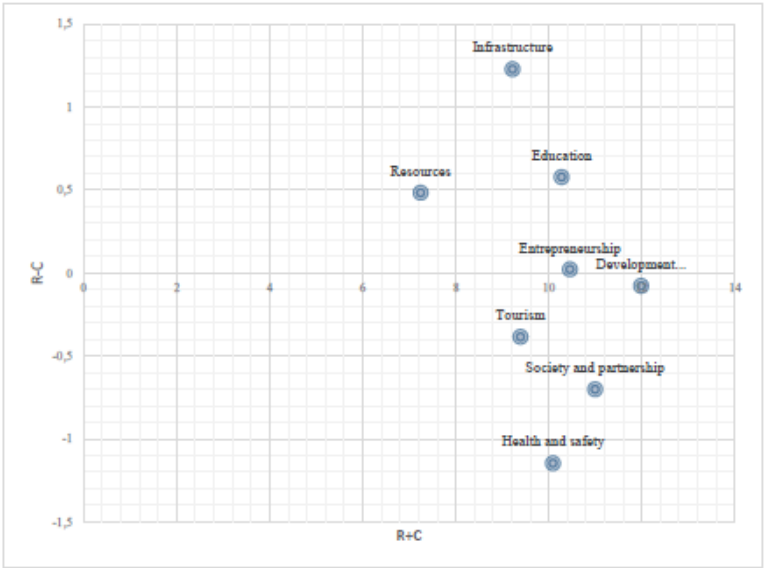

Figure 1. The relationship map.

Another method that seems to be promising for use by urban planners is PROMETHEE, which (as all outranking methods) can simultaneously deal with qualitative and quantitative criteria. Criteria scores can be expressed in their own units. The method can be used for example for solving a locational problem. If we consider buying a building plot, we take into account several attributes. For instance, we may consider following criteria:

- f1 – utilities/services (water, electricity, etc.) – if yes, then value 1; if not, then value 0;
- f2 – price of a plot (thousands, PLN – Polish Zloty)
- f3 – ground surface (square metres)
- f4 – number of shops within d = 300 metres
- f5 – distance from city centre (kilometres)

We assume that price of a plot and distance from city centre should be minimized and ground surface and number shops should be maximized. In this example we consider four alternatives ai, i={1,2,3,4}. The starting point is an evaluation matrix, which presents the performance of each alternative in relation to each criterion. Weights giving the relative importance of the criteria are given in the last row of the table (Table 3). Decision makers are required to weigh criteria and to choose a preference function. PROMETHEE does not provide specific guidelines for determining weights to criteria, but assumes that the decision maker is able to weigh the criteria appropriately, at least when the number of criteria is not too large (Macharis et al. 2004).

Alternatives	Criteria				
	f_1	f_2	f_3	f_4	f_5
a^1	0	249	850	1	21,5
a^2	1	386	923	8	7,25
a^3	1	366	873	11	12
a^4	0	324	640	4	8
w_k	0,2	0,3	0,25	0,1	0,15

Table 3. Evaluation table

Next steps of PROMETHEE method, i.e. calculating global preference degree for every pair of alternatives and calculating net outranking flows are presented in the tables below (Table 4 and Table 5).

$\pi(a^i, a^j)$	a^1	a^2	a^3	a^4
a^1	0	0,300	0,300	0,55
a^2	0,625	0	0,261111	0,525
a^3	0,486111	0,125	0	0,55
a^4	0,175	0,300	0,397	0

Table 4. Global preference degree for every pair of alternatives

	φ^+	φ^-	φ
a^1	0,383	0,429	-0,045
a^2	0,470	0,242	0,229
a^3	0,387	0,319	0,068
a^4	0,291	0,542	-0,251

Table 5. Net outranking flows

In the example discussed above, the best solution, according to the given criteria and their weights, is alternative a2, followed by a3, then a1, and last one is a4. In other words, plot number 2 seems to be the best choice for the decision maker – according to the criteria and weights he provided.

5 CONCLUSIONS

The paper presents possible application of two methods derived from operational research. Selected application case of the DEMATEL technique in spatial planning deals with the development strategy for a Voivodeship (region equivalent to NUTS-2). The calculations presented in this paper allow to determine the prominence and cause-effect relationships between important regional development strategy components. The analysis of the macro-spheres, which are directly linked with strategy goals, help with better structuring and understanding the problem. The reflections presented in the paper may serve as

guidelines for division of financial assets between macro-spheres, i.e. between groups of projects pursuing strategy objectives. The DEMATEL technique was exercised on a regional level; however, merits of the method make it suitable for solving other decision making problems, for instance in urban planning while preparing a city policy or city development strategy. It seems fair to say that such methods may be a promising tool while designing a “smart” development strategy.

The PROMETHEE methods (or outranking methods in general) could be used in various multi-criteria problems, such as ranking of investment plots (for various activities) or ranking of city development objectives/goals in the process of strategy making. By providing a ranking of alternatives, the PROMETHEE method allows for evaluation of alternatives and therefore for supporting the decision making process. Thanks to this, the process of choosing the optimal solution gains transparency and objectivity. Methods presented in this paper may be useful for solving locational problems or for formulating development policy at local or regional level.

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ID 1697 | MULTI-CRITERIA DECISION ANALYSIS FOR PROMOTING BIKE-FRIENDLY CITY VISION OF IZMIR USING GIS

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ABSTRACT: Deploying GIS at its analysis of multilayered spatial data about Izmir (the third biggest metropolitan city in Turkey), this paper aims at suggesting ways of providing bicycle routes and roads in the already developed built environment of the densely populated cities. Focusing on multiple characteristics of topography, land use and population, the study deploys overlay analysis and network analysis respectively at city level and district level. Despite of the limited number and characteristics of data available about Turkish cities, this study has been limited to the lack of crime data and travel demand data of related neighborhoods.

1 INTRODUCTION

Bicycle use is widely promoted by many researches and policy initiatives of industrialized countries as the efforts related to sustainable development, carbon-free and non-motorized transportation and “healthy” cities. While some of these policies and researches relate to promoting changes in lifestyles and habits of physical activities (eg., Wendel-Vos, Schuit, De Niet, Boshuizen, Saris, Kromhout, 2004), others focus majorly on planning and design of built environment and of transportation systems (e.g., Huang & Ye, 1995; Rodriguez & Joo, 2004).

A major challenge is how to provide bicycle roads through the developed built environment of the densely populated cities that do not have any prior bicycle routes and infrastructure. This paper aims at answering this question, while deploying geographic information system (GIS) at its analysis of multilayered spatial data about the city of Izmir as being the third biggest metropolitan area in Turkey.

In recent years, making bicycle transportation a part of city life has become one of the main purposes of Izmir Metropolitan Municipality. With this purpose, Izmir aims to promote cycling routes in the following years and the Metropolitan Municipality has been making significant efforts for turning the city into a more bicycle-friendly city. However, availability of physical environment for cycling is an important factor to consider. To promote and upgrade cycling routes in a dense built environment is a challenging process. We claim that Izmir has a potential to offer alternative transportation types and networks prioritizing bicycle, despite its dense urban environment.

This study aims at promoting the bicycle-friendly city development efforts of Izmir. It tries to consider many different spatial factors while promoting bicycle routes within a dense built environment. At its analysis, the study interrelates various data about the characteristics of the natural and built environment and also the spatial distribution of population characteristics at the metropolitan, district and neighborhood scale. This study aims to combine different techniques of spatial analyze at different spatial scales in order to determine potential bicycle routes for areas with different land uses.

This study calls the determinant factors of bicycle facility planning as environmental assets. It mainly aims at taking into action the knowledge of the environmental assets by digitizing and visualizing them. Focusing on the metropolitan scale of Izmir with 30 districts at first step, this study considers environmental assets as parks, recreational areas, topography and analyzes them in the GIS environment. These are the spatial data infrastructure that would able us to reveal potential bicycle route networks. Additionally, some inhibitor factors such as population density and different age range groups are also taken into account. All these spatial data are used to detect the areas that high level of spatial infrastructure are embedded by using overlay analysis.

Afterwards, focusing on central districts of Izmir, network analysis is performed between determined stops by taking into account the proximity and continuity at the road network level.

Study findings suggest that overlay analyze technique can be applied to detect neighborhood levels and network analysis can be performed to detect potential routes and to model spatial relations of local nodes. Not only local nodes but also transportation corridors are the basic unit of analysis within network analysis.

2 LITERATURE REVIEW

While promoting the use of bicycle and creation of bicycle networks within a city, it is important to give attention to recent bicycle transportation studies. Studies that relate to the question of how to determine bicycle roads in a city emerge in various fields (majorly urban geography, transportation, urban planning and urban design) and research areas especially about health, healthy living, sustainable transportation and non-motorized transportation (e.g., Huang & Ye, 1995; Wendel-Vos et al., 2004; Segadilha & Sanches, 2014).

Until now, studies related to bicycle network planning have focused primarily on route choice criteria and the factors affecting bicycle use which are giving very useful insights for designing bicycle routes within a city. These studies give emphasis on the factors that can affect bicycle use. These factors are mainly determined as the characteristics of the roadway and bicycle routes, automobile traffic, availability of public transport, and factors related to the built and natural environment (Aultman-Hall, Hall, & Baetz, 1997; Rodriguez & Joo, 2004; Segadilha & Sanches, 2014; Milakis & Athanasopoulos, 2014). Concerning the built environment, bicycle usage is very much related to the location of the areas with higher employment and population density and presence of schools, recreational areas, parks at the origin and the destination (Rodriguez & Joo, 2004, Rybarczyk and Wu, 2010). When it comes to the natural environment, topography and slope become major determinants of bicycle route planning (Rodriguez & Joo, 2004). In addition to all these, safety becomes another determinant of bicycle use (Allen-Munley et al., 2004; Parkin et al., 2007) which is related to characteristics of roadway and automobile traffic. According to Rybarczyk & Wu (2010) these determinants can also be categorized as demand based and supply based criteria for bicycle route planning; the demand-based criteria includes business and land uses such as schools, parks and recreation areas and supply-based criteria includes demographics, safety, public transportation, road characteristics and existing bicycle routes.

Overall, studies underline a set of group of factors that can direct the design and planning of bicycling roads. In particular, bicycle trips tend to increase in the presence of mixed uses of land, slight topography, improved street connectivity, direct routes without interruption and safe separation from motorized traffic (Aultman-Hall, Hall, & Baetz, 1997; Rodriguez & Joo, 2004). High density areas, schools, parks and public transportation hubs are also anticipated as land uses that support the use of bicycle routes. Therefore, these factors should be taken into account in the planning of bicycle networks in a city.

All these information from prior studies offer the determinants for bicycle network planning however, these studies cannot offer a complete answer to where to develop new bicycle routes within an already developed built environment that lacks a well-connected bicycle network. Only a few studies have applied a comprehensive methodology to determine bicycle routes within a city (Huang & Ye, 1995; Rybarczyk & Wu, 2010; Milakis & Athanasopoulos, 2014). Additionally, as bicycle route planning requires many factors to consider, geographic information system (GIS) technology provides an excellent opportunity to process all available data for bicycle route selection. However, small number of studies have applied GIS in the planning of bicycle routes until this time (Huang & Ye, 1995; Rybarczyk and Wu, 2010). Even more, these studies were dealing with the existing routes in a city. This study, too considers various data about the characteristics of the natural and built environment and also spatial distribution of population characteristics at the city scale and neighborhood scale. While dealing with the data, GIS technology has been used. By this, it is aimed at promoting bicycle routes in the city of Izmir, while making contribution to the GIS based bicycle route planning in an already developed built environment lacking a complete bicycle network.

Relating to these research issues, the design and planning of built environment is discussed and promoted as a tool especially to motivate and assist people's use of non-motorized transportation modes, basically walking and bicycling (Rodriguez & Joo, 2004; Wendel-Vos et al., 2004). In other words, it is expected that if the built environment is designed and planned with adequate and suitable infrastructure, land use, natural assets and allocation of other resources for non-motorized transportation, people will be more

willing to use such modes of transportation. Such kind of environments can provide opportunities with healthy living, sustainable living and transportation.

3 STUDY SITE

In recent years, the Metropolitan Municipality of Izmir has the goals of sustainable city development, including environmentally sensitive and sustainable transportation. As a part of these goals, the Municipality aims at promoting cycling routes and has been making significant efforts for turning the city into a more bicycle-friendly city. Accordingly, for providing mobility between districts and city center, the creation of nature-friendly corridors with cycling and walking routes has become a priority in the planning of Izmir (Izmir Metropolitan Municipality, TMP Revision, 2016).

However, existing bicycle routes are incapable of providing a complete bicycle network for the city. There are no continuous bicycle routes to serve for the whole city except the coastal road, which is mainly used for recreational purposes. Additional routes are promoted for providing bicycle access to the residential, social and cultural spaces, major transfer stations, university campus areas and other major usages in the city center (See; Figure 1).

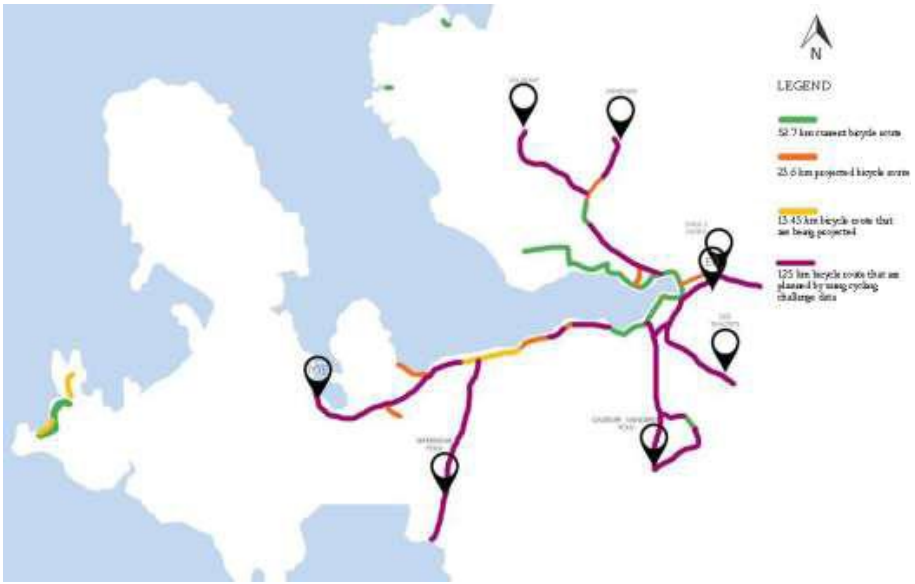


Figure 1 – Bicycle Routes

The third biggest metropolitan area of Turkey with a population near 5 million, Izmir is located on the Aegean coast, between the 37o45 'and 39o15' north latitude and 26o15 'and 28o20' east longitudes and covers an area of 12,012 km2 (See; Figure 2) (Izmir Governorship, 2017) with a mild climate during the year. Located on its bay area at the Aegean coasts, the city of Izmir has very high urban densities at central coastal neighborhoods and extends to hilly neighborhoods. With one of Turkey's densest urban population at its central districts at the coast, the city of Izmir has a metro system with its city line and regional line, a newly developing tramline, a limited level of sea transportation and very recently planned bicycle route infrastructure.

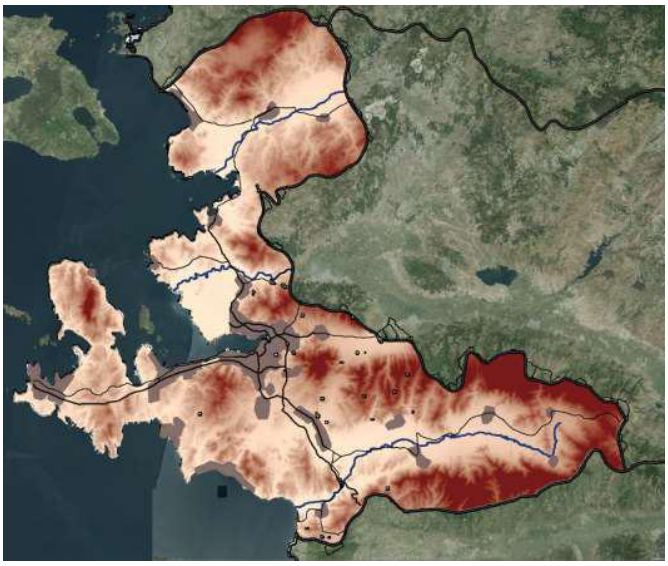


Figure 2 – Location of Izmir

In 2015, while the average age of Izmir's metropolitan population is 4.168.415, the average age in its central districts is 35-39 with an education levels higher than Turkey's average (Izmir Governorship, 2017). At a close examination of these 11 central districts, it can be seen that children (age 3—13) ranges are clustered in Karşıyaka, Bayraklı and Gaziemir districts, young (age 14—22) ranges are clustered in Karşıyaka, Bayraklı, Konak districts; while seniors (age 55+) are clustered in Karşıyaka, Bayraklı, Balçova and Konak districts (See; Figures 3).

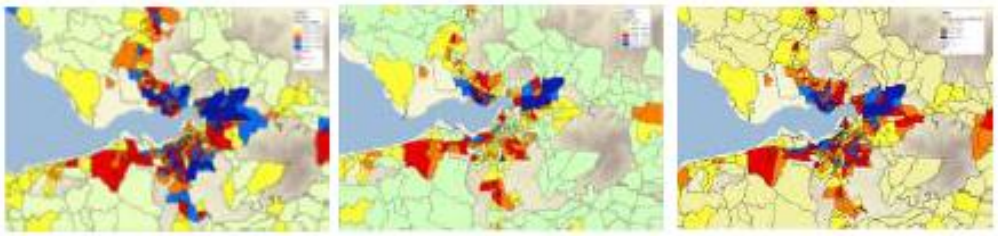


Figure 3 – Maps of age range of 3_13, 14_22, 55+

These age range thematic maps visualize and determine the clusters of different population groups demanding different spatial activity types. We admitted that we should pay attention to the accessibility of the local service areas, especially the neighborhood parks and bicycle routes, within the walking distance. Therefore, we used the "neighborhood ratio" of the age data as seen in the legends. We obtained this ratio by calculating the ratio of the number of each group of people in the neighborhood to the neighborhood population.

4 STUDY METHOD

As bicycle route planning requires many data layers to deal with, GIS can easily integrate these data layers in the form of digital information, thus can reduce the cost of data assembly. Furthermore, GIS can perform spatial operations, such as terrain modeling and network analysis, which are crucial to bicycle route planning; and its network analysis data model and path-finding algorithms make it a straight-forward way to implement sophisticated cycling models that can incorporate factors such as traffic, topography, built environment attributes and socio-economic data at the same time (Huang & Ye, 1995).

The determining factors for walking and bicycle route planning has been differentiated as demand side and supply side (Wigan, Richardson & Brunton, 1998; Rybarczyk and Wu, 2010). While demand side talks about the spatial distribution of population characteristics such as age, education, gender, and health condition (e.g., Huber, 2003, Wigan et al., 1998), the supply side underlines the physical/environmental

characteristics that include natural elements such as topography, slope and land use characteristics such as workplaces, green areas, housing, schools and transportation networks (Martens, 2007; Rodriguez & Joo, 2004). Within the supply side factors, green open spaces have great importance on bicycle route network planning. Recreation areas and parks are desirable destinations within a route (Wendel-Vos et al., 2004) as they generates high level of bicycle use. Lastly, population density provides an estimation of potential demand for and access to bicycle facilities (Huber, 2003; Allen-Munley et al., 2004).

This study calls the determinant factors of bicycle facility planning as environmental assets and takes into action the knowledge of the environmental assets in the GIS environment. Within the context of 11 districts of metropolitan area, this study considers environmental assets as parks, recreational areas, topography and roads that could be determined as supply side. These are the spatial data infrastructure that can reveal potential bicycle route networks. Additionally, some inhibitor factors such as population density, motor vehicle traffic volume and crime statistics are taken into account. All these spatial data are used to detect the hotspot clustering with high level of spatial infrastructure. Afterwards, network analysis is performed between potential clusters based on proximity and continuity. While detecting the clusters focuses on population density, parks, recreational areas, schools, weather and crime statistics, detecting the networks considers motor vehicle traffic volume, topography and main public transportation hubs.

The methodology of the study comprise of two main steps. First one evaluates metropolitan scale big data and determines subscales suitability for route planning. Available data at metropolitan scale are geo¬raster data consisting of the population density of each age range, park density, slope and digital elevation. On that aim, overlay analysis has been implemented as using population density of different age ranges, green space density, slope and elevation (srtm-dem of the Izmir province has 90 m of grid size resolution; 45 m of horizontal accuracy; and 15 m of vertical accuracy) data for neighborhood detection. Second one seeks for the bicycle route determination which may be varied based on the different activity within those neighborhoods. For this aim, network analysis has been implemented through road network, stream network and green areas.

5 FINDINGS & DISCUSSION

Within the context of overlay analysis, the population density raster of child and seniors, park density raster, slope and digital elevation data have been reclassified into three defined interval (See; Figure 4). The reclassified digital surface data have been overlapped in the ArcMap environment. The different age range maps have been used to generate different overlay maps. The different age groups have been related with the activity differentiation of bicycle users. Two synthesis maps as a combination of these factors shows the most suitable areas at neighborhood levels for bicycle planning. Within the most suitable areas of two overlay analysis; ‘Bostanlı’ neighborhood has been selected as the common area for the next step to generate the network analysis (See; Figure 5, 6).

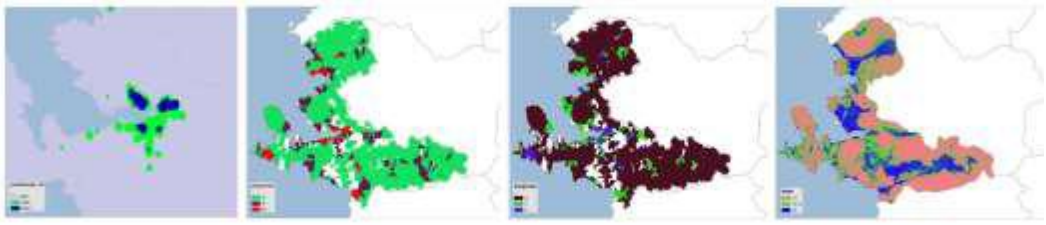


Figure 4 – Reclassified data

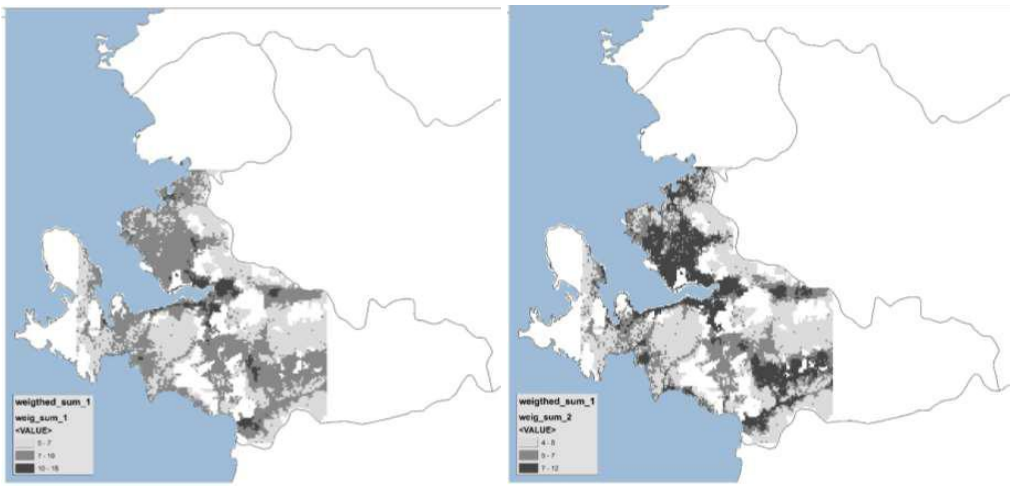
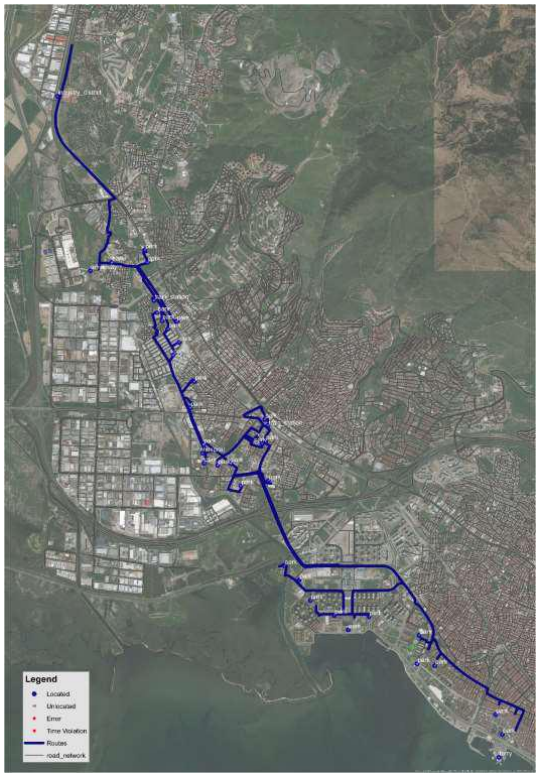


Figure 5 – Synthesis map 1 | Figure 6 – Synthesis map 2

Within the context of network analysis, road networks, work places, transportation hubs, stream networks and the parks have been used respectively for creating network dataset. While work places and road network are associated with the working age group based on transportation activity; the parks and stream networks are associated with the child and old age groups for mostly leisure activity. Therefore, the determinants of the different type bicycle usage have been defined and divided into two categories; the determinants for bicycle use for recreation, the determinants for bicycle use for mobility. Relatedly, analysis has been done according to this categorization.

As an outcome, two potential routes have been determined via network analysis that may serve for two different activity types (See; Figures 7, 8). The Figure 7 shows the route (1) passing through the few numbers of work places and parks starting from the ferry station targeting multi-modal transportation system. The other route (2) shown in the Figure 8 passes through the parks along the stream networks targeting the leisure activities.



This study aims to find out a methodology via GIS environment for detecting potential bicycle routes within the dense spatial contexts. While benefitting from digital visualizations and analyzes, we have used city scale big data to be able to determine the most suitable areas for bicycle route planning. Due to the limited data that is available about Turkish cities, this study has been limited in terms of some social characteristics of the population and the neighborhoods. Thus, crime statistics and travel demand data of the related neighborhoods have been lacked. Determining bicycle routes within the dense spatial context by using the geographical and physical data was another challenge of this study.

Figure 7 – Bicycle route (1) for mobility Figure 8 – Bicycle route (2) for recreation

6 CONCLUSION

The bicycle road infrastructure is gaining ground serving for healthy cities and well-being via non-carbonized, and sustainable mode of transportation. It has been taken as an important option both for physical activity and sustainable mobility. Therefore, the development bicycle road infrastructure becomes an important issue in urban planning agenda, especially in the era in which sustainability is a major goal for future development. As being one of the important metropolitan districts of Turkey, Izmir have also future targets on becoming bicycle-friendly city despite its dense and already-developed built environment with inadequate bicycle road infrastructure. This study aimed to contribute this target, while seeking for a methodology using digital analyzing techniques for new bicycle networks within dense built environments. While doing this, the study tries to integrate different digital analyzing techniques. The determination of bicycle route has been done by overlapping many different big data at GIS environment. As bicycle route planning requires dealing with many different spatial data at the same time, GIS provided an efficient environment to make this analysis. As a result, two different bicycle routes have been suggested serving for different purposes; namely for mobility (route 1) and recreation (route 2), furthermore we have proposed a comprehensive bicycle route planning method using GIS for promoting the bicycle-friendly city vision of the city of Izmir.

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ID 1714 | ENABLING YOUTH GEOGRAPHIES IN THE DIGITAL SMART CITY. AN ACTION-RESEARCH APPROACH

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1 INTRODUCTION

Some categories of citizens are excluded by most decisions about how to manage, transform and use urban space. Among these weak categories of citizens there are teenagers, who are the object of many specific urban policies, even if they are rarely involved as active subjects of the policy making process.

The understanding of the real urban geographies, through bottom-up perspectives, and the engagement of citizens, with participatory policy-making, are central in the smart cities narratives, often associated to the use of ICT technologies.

There is often a gap between the city for teenagers – formally planned and ruled by adults – and the city of teenagers, which is actually lived, transformed, occupied and represented by young people. Can the use of ICT fill this gap of knowledge to support participatory policymaking?

This contribution presents the methodologies and the results of an action-research project called Teencarto, carried out by the University of Turin and the City Council. The project involved more than 600 teenagers from 16 schools, in a massive process of community mapping aiming at producing a representation of their urban geography.

The mapping process has been based on First Life, a map-based social network, which aims at reconnecting digital and real spaces, using cartographic representations and crowdsourcing. The specific relational perspective allowed by the social networking functionalities of the application, specifically redesigned for this project on user-centered principles, favors a real shared representation of urban space.

2 TEENAGERS AND URBAN SPACES

Does something like a “teen geography” exist?

As it is known, the existence of adolescence or teenage, as the transition between childhood and adulthood, is a cultural construction, characterized historically and geographically (Aries, 1968; Levi, Schmitt 1994; Savage, 2009; Lesko, Talburt, 2011; Furlong, 2013; Cieslik, Simpson 2013; Kamp, Kelly 2014).

In this context, teenagers are acknowledged as a specific social group, characterized by psychological and behavioural specificities and playing a specific role in society (Avanzini, 2012).

Among the reasons for the "invention of adolescence" in Western society (Savage, 2009), we can identify historical factors, such as the abolishment of child labor and the extension of compulsory education; cultural factors, with the social acceptance of the increased length of the period of dependence of

teenagers by their parents (Berrini and Cambiaso, 1995); economic and market factors, in particular through the identification of teenagers as a consumer group particularly sensitive to marketing (Brooks, 2003).

Of course, despite some common traits, hardly teenagers can be treated as a unitary world, even within the cultures of the most economically advanced countries.The multiplicity of microcultures among teenagers is indeed one of the central themes of the sociological and cultural hub of studies on youth (Skelton and Valentine, 1998; Bennett, Kahn Harris 2004; Hodkinson, Deicke 2007; Istituto Giuseppe Toniolo 2014, 2016; The Subcultures Network 2014; Genova 2015; Blackman, Kempson 2016).

Adolescence is also associated with a specific spatial behavior, partly related to the affirmation of power relations, which define what are the acceptable spatial behaviors of different age groups (Massey 1998; Holloway, Valentine 2000; Holt 2011). The literature suggests though that the sociocultural and psychological characteristics of teenagers are actually translated into specific modes of attendance, use and perception of urban spaces, which form the basis of teen geography, distinct from the general youth geography (Weller, 2006).

Matthews et al (1997) have proposed a useful systematization of some characteristics of the micro-geographies of adolescents, according to which the spatiality of teenagers would be characterized by elements such as the need to create physical spaces of independence and exercise their recently gained and still limited autonomy; spaces in which each juvenile microculture can perform its peculiarities and is recognized through the creation of exclusive territoriality; ordinary and apparently marginal spaces, which are given value as part of everyday geographies.

Lieberg (1995) identified two main typologies of places in the teenager geography: a) “places of retreat” (e.g. backyards, basements, parking lots, etc.), where they can stay away from the adult gaze, which is always present at home an in “institutional” places and b) “places of interaction”, where they can perform their public character, seeing their peers and being seen by them (e.g. main streets, shopping malls, etc.).

The places of the individual and collective geographies of teenagers in the city, though, are planned and managed by adults, which perform their power of parents, educators, city planners, private players. The public space is an adult space (Collins and Kearns 2001), in which adults reproduce its authority in a hegemonic way and in which adolescents perform some sort of negotiation, or even resistance (Hil and Besant, 1999), eventually bringing to a separation between the city for teenagers - which is planned and thought for them - and the city of teenagers, which is actually used, performed and represented by adolescents.

A typical trait of the teenage relationship with space is the limited capacity that they have to formally intervene in transformations, since they are seldom involved in decision-making processes and lack the legal power to own and manage private property, thus becoming frequenters and producers of "landscapes of powerlessness" (ibid.), which can change without them having the power to intervene, following the action of adults or other groups of peers who can exercise more power.

If streets and outdoor public spaces were the typical space of action and interaction of teenagers in urban areas (Cahill, 2000), the progressive privatization of the public space in the contemporary neoliberal city and the emergence of public uses of private spaces (Mitchell, 1995; Ewins, 2002; Bottini, 2010; Nemeth and Schmidt, 2011) contributed to a growth of control of behaviors in urban spaces and to a “moral panic” toward some groups of people, among which teenagers (notably if non-white and male) (Evans, 2008). As a consequence of the progressively bigger control on behaviors in public spaces, of families’ increased perception of unsafety in urban streets and of commercial strategies of private actors, teenagers lost the habit to hangout and spend time in squares, parking lots and streets and more and more often moved to clearly stated private spaces that they use as public ones, typically shopping malls (Anthony, 1985; Matthews et al, 2000), not only in North American, British or Australian cities, where this trend firstly emerged, but also in Italy (Lazzari e Quarantino, 2010).

Even if some researches, showed the still existing importance of material meeting places in the daily geography of adolescents (Martino et al, 2015), the pervasive diffusion of personal digital technologies contribute to change the approach of youth with urban space.

The ability to decide in real time where to meet, with a phone call or message, has changed the way the meeting places traditional had for teenagers. Moreover, chat and social networks represent virtual meeting places unknown to those who were only teenagers a decade ago and that partly took the place of the “hanging around” places that characterize teen geographies (Vanderstede, 2011).

The research presented in this contribution aimed to explore teenagers’ geography in physical space starting from the creation of a virtual space, through a process of community participatory mapping, based on the idea of Volunteered Geographical Information (VGI), presented in the next paragraph.

3 PARTICIPATORY PRODUCTION OF GEOGRAPHIC KNOWLEDGE

In 2007, Michael Goodchild introduced the term Voluntereed Geographic Information (VGI), categorizing those geographic information systems through which information is collected directly by users (considered as human sensors) on a voluntary basis.

Since then, the term VGI has become representative of a phenomenon that is spreading more and more in the world of geoICT, particularly on the web, fully responding to the web 2.0 paradigm where interactivity plays a key role in the development choices of computer platforms. The willingness and the ability to enter geographic information by users entails different challenges and raises new research questions that require an increasingly interdisciplinary approach (Capineri, 2016)

The spread of systems for crowd mapping led to the emergence of a new figure, the neo-geographer (Haklay, 2013). The collection and dissemination of geographic information through contemporary cartography changes to the extent that the cartographer, in the age of geoWeb 2.0, no longer has to be "expert" in the construction of a digital card, but to be engaged in interacting with more and more user friendly platforms .

This passage, considered by Critical Cartography (Crampton et al 2005, Casti 2013), takes on the connotations of a substantial transformation of the very meaning of the maps, which become the result of a collective gathering of information.

The awareness of the added value that the involvement of citizens, who do not necessarily have mapping skills, can guarantee the processes of analysis and representation of territories and geo-referencing processes dates back to well before the advent of the contemporary digital mapping revolution, which is based on concepts like neogeography, crowdmapping and volunteered geographic information.

Although some methodologies have already been experimented with experiences such as the mental maps proposed by Kevin Lynch (2006; 1960) or the English Parish Maps, the first participatory mapping definitions, in the field of the analysis of the territorial processes, were produced by the FAO around the mid-1990s (Burini, 2004).

The field of application of the first structured participatory mapping experiences is the evaluation and management of local resources by rural communities, particularly in developing countries (Chambers, 2006). In this context, the co-production of cartographic knowledge, often carried out under international cooperation projects, allows the emergence of territorial values that are invisible in the eyes of external experts, increasing the degree of legitimacy and acceptance of development projects by local communities (Burini, 2004).

In Italy, participatory mapping is used in some of the most interesting participatory planning cases, for example in Piano Paesaggistico Regionale (landscape regional plans) of Apulia and Tuscany, using methodologies such as community maps, aimed “to foster the role of inhabitants in the construction of maps able to represent in a communicable and meaningful manner, through weak formalization techniques, their living space (territory of daily life), expressing the environmental, territorial, landscape and productive values recognized by the local community "(Magnaghi, 2010).

The diffusion of digital technologies and automatic geolocation and geo-referencing systems has radically altered the concept of participatory mapping directly involving maps users in the production of geographic knowledge. The most used concept to describe this new perspective, of almost total disappearance of the rigid boundary between those who produce cartographic knowledge and those who use it (Rana and

Joliveau, 2009) is the one of “crowdmapping” (Aitamurto, 2012), which transfers to the field of mapping the idea of information crowdsourcing, giving a role in the production of knowledge to large and diversified groups of people, not necessarily previously formed (Heipke, 2010). More and more each of us is subject to passive crowdmapping, and understanding how to become aware subjects of active crowdmapping essentially appears to be a project of political geography. The relationship between unintentional (data that users provide unintentionally) and voluntary (in a planned crowdmapping process) geographic information is a matter of great importance (Capineri, Rondinone, 2011).

The possibility to easily produce cartographic representations of the territorial complexity led the participatory digital cartography to gain a central role both in institutional participatory planning (through the so-called Public Participation GIS, PPGIS: Brown, 2013), and in many bottom-up and grassroots practices of active citizenship and community participation, as a tool of the so called “counter-cartography”, opposed to official cartography produced by experts and by the most influential actors (Parker, 2006, Schofield, 2014).

On the one hand, it seems undeniable the potential of participatory mapping in terms of information democratization, particularly with regard to the inclusion of the weaker actors, the transparency of information and the empowerment of population involved processes of self-reflection about themselves and their relationship with places, resources and other actors (Parker, 2006).

On the other hand, though, there are many critical voices on participatory mapping, which go far beyond doubts about the accuracy, quality and cleanliness of the data collected through the involvement of unskilled users without the application of appropriate filters (Flanagin And Metzger, 2008).

The main doubt raised in the field of the so-called critical GIS (Sheppard, 2005) is the actual increase in the involvement of the weaker population groups through participatory processes using GIS tools, whose technological character, especially in the early years of their dissemination, it is more likely to marginalize them less digitally literate citizens (Elwood, 2002).

The weakest groups of population continue to be excluded from certain processes: it is therefore essential to observe the relationships between digital participatory mapping and democratization processes with a sufficiently critical analytical gaze (Haklay, 2013).

A study of Tabusi and Dumont (2012) on the relationship between societies and virtual spaces shows that the articulation of society and power in cyberspace passes for many actors and for many positions, not always immediately evident and never only virtual. It is unhelpful and unrealistic then to talk about virtual space as other than traditional space. The two authors propose to use the concept of “increased space". Recalling this inspiration we can therefore speak of increased spatiality and territoriality, resuming the definition of territoriality proposed by Raffestin (2012), and highlighting how the whole of relationships with externality and alterity can be expanded through the use of ICTs (biometric sensors, satellite navigators, personal digital maps, etc.).

As a result of the incredible spread of geoICTs and the growing interest surrounding them, the new challenge is to exploit the multiple nature of the information, to reach a representation of space as a social product, focusing on those social phenomena that, even articulating in space, do not have with it an immediately apparent relationship. We can investigate the meaning that space assumes in a relational dimension between different social actors, thus focusing not so much on the "representation of space" but on the "space of representation". According to Lefevbre (1991), we can define the latter as the living space of sensations, imagination, emotions, and meaning that is part of our daily life practices.

The research described by this paper is based on a conceptual framework linked to the world of VGIs that is constantly evolving. Cases of use and technological development are increasingly characterized by mutual dependence. Taking this perspective into account, it is necessary to emphasize the function of off-line accompaniment of users. In particular, the digital engagement given by the usability of proposed technology and the definition of maps’ legendas and categories should be the results of participated debate and discussion.

The ability to process large amounts of geolocalized information is only possible through the use of new technologies. As a result, the challenges we face today seem to relate to balancing off-line methodologies of participation with digital activities. On the other hand, the increase in the quantity and quality of

computable information opens new perspectives in relation to the potential for processing and the creation of new information.

4 METHODOLOGY

The work in schools was structured in three two-hour classroom meetings for each of the 36 involved classes (for totally 620 teenagers involved).

The first meeting aimed to engage students and share with them the aims and the spirit of the project. The main goal of this phase was to convey to teenagers the idea not to be just objects of research, but rather actors in a wider process of participation and co-production of knowledge, aimed at dialogue with institutions. On the same day, students were introduced to concepts of co-production of knowledge, participatory mapping, crowdmapping and web narrative. The theoretical part of the lesson was followed by two practical activities aimed at increasing the confidence of pupils with the production of maps and with the role of knowledge producers that the project intended to attribute to them. The first activity consisted in the drawing of mental maps of their neighborhoods or towns, with the purpose of introducing them to the production of maps and to the self-reflection about spatial behaviors.

The second activity focused on a sort of digital “treasure hunt”, during which students, divided into groups, had to find the locations of some murals painted on the walls of Turin, of which only one photograph was provided.

In the second day of activity students were involved in the actual production of a map of the most significant locations in their daily geography.

Participatory mapping work has developed around three main themes.

At first, boys and girls were asked to reflect on the places in the city that they mostly frequented (the “frequented city”), putting them on the map and attributing to them names, formal or informal ones, thus creating an interesting teenagers’ toponymy map), a detailed description and keywords.

The same activity was carried out to map the “inaccessible city” asking them to indicate which places they avoid or which ones they can not attend for various reasons (economic, perceived insecurity, prohibitions).

Thirdly, particular attention was given to the city that the boys and girls imagine for the future, asking them to imagine a transformation project for the city (“the imagined city”). These imaginative projects could involve the creation of new places or the transformation of existing and perceived places as degraded or unsuitable to the needs of adolescents.

The third meeting was devoted to this, during which a discussion was held in each class about the interest and feasibility of the proposed projects.

5 RESULTS – YOUTH GEOGRAPHIES IN TORINO

5.1 SPATIAL DISTRIBUTION ANALYSIS

Activities which have been carried on during the project have leaded to the collection of 2465 points of interests (POI), whose 2069 are within Torino’s administrative boundaries. Figure 1 shows the neighborhood where the schools involved are located. It can been seen that we have covered both the center and the peripheries of the city.

Data has been mapped using First Life (Antonini et al., 2016) and they are described by the following metadata:

- Name: a text field where adding the formal or informal name of the spatial object;
- Category: a set of mutually excludable categories describing spatial objects (Art, Food, Education, Work, Nightlife, Meeting Spots, Shops, Sport, Services, I imagine);

- Evaluation: a set of mutually excludable categories describing the perceived quality of spatial objects, if they are considered as a resource or a criticality
- Transformation: a set of mutually excludable categories describing the perceived temporal like value of spatial objects, if they are considered as part of a positive or negative transformation of the city;
- Description: free text of at least 140 character
- Tags: recommended tags (frequent, suggest) and free tags.

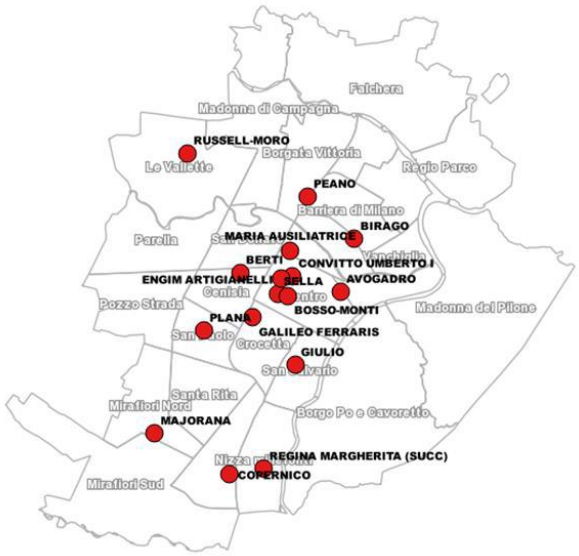
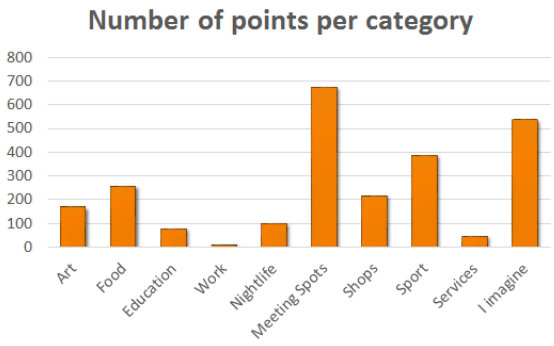


Figure 1 Schools involved in the project

In Diagram 1, the frequency of POI by each category is shown. Excluding the category “I imagine” which is a special one[1], the “Meeting spots” (MS) category is the most used, followed by “Sport” and “Food”.

POIs are distributed throughout the city as it is shown in Figure 2. It can be seen that POI are spread over the entire study area with evident concentrations in proximity of places of interest such as squares, commercial streets, parks, stadium and shopping mall. A similar pattern is shown in the distribution of POI collected into the category of “Meeting Spots”, with a major concentration in parks and squares (see Figure 3). Likewise, POI collected under the category “Sports” concentrates in noteworthy places such as the three stadium of Torino and parks (see Figure 4).



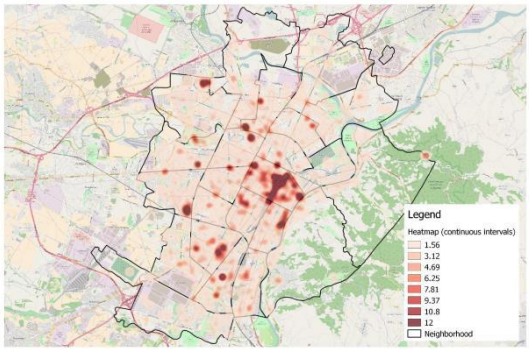
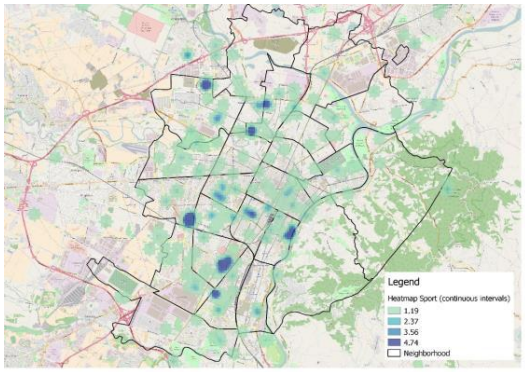


Diagram 1 | Figure 2

[1] The category I imagine collects all the proposals of change teenagers had added on the map. For the current work, since it has not been analysed yet, this category is not taken into account.



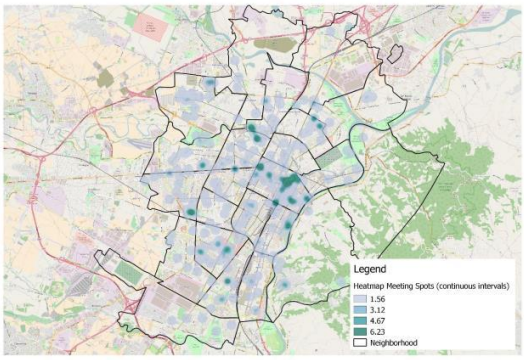


Figure 3 | Figure 4

5.2 TAGS ANALYSIS

Teenagers have added tags for each POI they have put on the map (see metadata description in section 2.1). The textual field has given us the opportunity to enrich, besides categories, the semantic behind POI. The most used tags are “divertimento” which is the italian world for “fun” and “amici”, which means “friends” (see Figure 2). These two tags are associated to almost all the categories but work and services. Table 1 shows the ranking of the five most used tags per category.

Figure 5 Tag cloud

Generally, tags refer to architectural types, activities and quality of spaces. A more accurate natural language analysis of the tags will be object of future works. Extracting a folksonomy from the collected data, indeed, will be useful to go beyond a simple categorization based on a predefined set of categories. However, crowdsourced data are particularly noisy and they need a long pre-processing phase, which we have already started.

Art	Food	Education	Work	Meeting Spots	Shops	Sport	Services
friends	eating	school	working	friends	shopping	fun	bus stop
cinema	restaurant	friends	looking for	fun	friends	playing	station
fun	friends	study	trains	park	fun	park	taking
film	fun	experts	going to	garden	clothes	football	passing
church	ice-cream	fun	…no fun!	square	city centre	swimming poll	…no fun!

Table 1

5.3 POPULAR NEIGHBORHOODS AND THEIR FUNCTIONS

Teenagers have been explicitly asked to use the tag “frequent” to pinpoint, among the places they have added, which of them are the ones where they generally go to. Places tagged as such are of particular interest for our analysis. We have analysed them considering how they distribute in the 23 neighborhoods of the city.

Particularly, we wanted to identify which are the most popular neighborhoods, how they are used and if there is a relation between the diversity of an area and its appeal for the young population.

The map in Figure 5 shows the most frequented neighborhoods. The city centre contains about 40% on the total, while the percentage of points within the other neighborhoods reaches a maximum of 10%. It appears clearly that the city centre is considered the most attractive neighborhood to young people; however, there are some peripheral areas, which are quite frequented as Santa Rita and Pozzo Strada.

To identify the specific character of each neighborhood the relative frequency of points by categories has been calculated (see Figure 6). The relative distribution of the POI classified as Sport and Meeting spots, which are the most used categories, is shown in Figures 7 and 8.

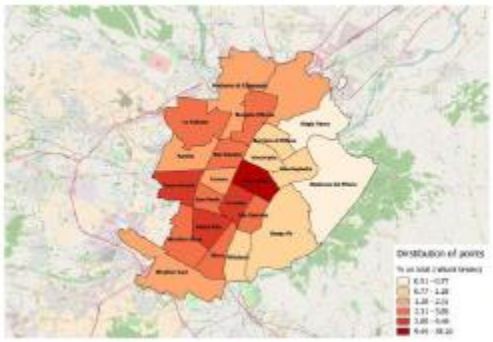
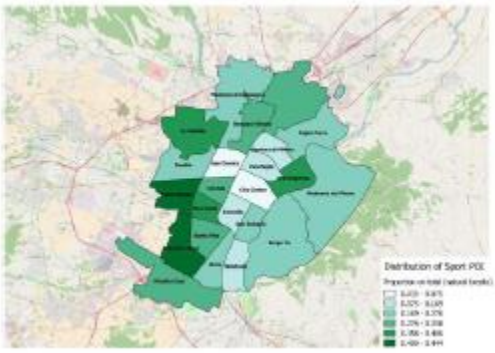


Figure 5 | Figure 6



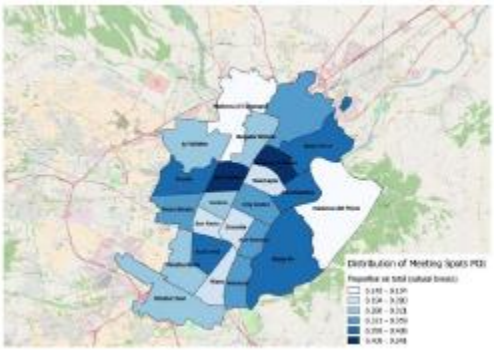


Figure 7 | Figure 8

Mirafiori Nord and Pozzo Strada have the highest proportion of Sport POI driven by a park and the Stadio Primo Nebiolo in the first case and the Juventus Stadium in the second; only about the 3% of the POIs are classified as sport places in the city center. Regarding the distribution of the most used category, we can see neighborhoods where the proportion of meeting places is particularly significant and it is interesting that they are not in the city center, such as Barriera di Milano, San Donato, Parella and Santa Rita.

Finally, we calculated an index to estimate the uncertainty in the identification of functions by neighborhood in order to take into consideration the diversity of uses by neighborhood.

Indexes of diversity are generally used to measure biodiversity in natural ecosystems; applying the same method to urban ecosystem we calculated the Shannon Index. The idea behind the index is that the more different categories there are, and the more equal their proportional abundances in the neighborhood, the

more difficult it is to correctly predict which category can be the attributed to that neighborhood. It has been calculated as follows:

$$H=\sum(loge)piCi=0$$

where pi is the proportion of characters belonging to the ith category in the neighborhood and C is the total of categories. Figure 9 shows the index value by neighborhood. As it can be seen, we can distinguish highly specialized neighborhood such as Barriera di Milano, Pozzo Strada, Mirafiori Nord and San Donato (respectively as being characterized by places where doing sports and places where meet, see Figures 7 and 8), from more diverse neighborhood such as the city centre and Vanchiglia. It is important to underline that the index has resulted independent from the distribution of POI by neighborhood (R=0,27). Therefore, we cannot say that highly specialized neighborhood are also the most frequented nor the contrary.

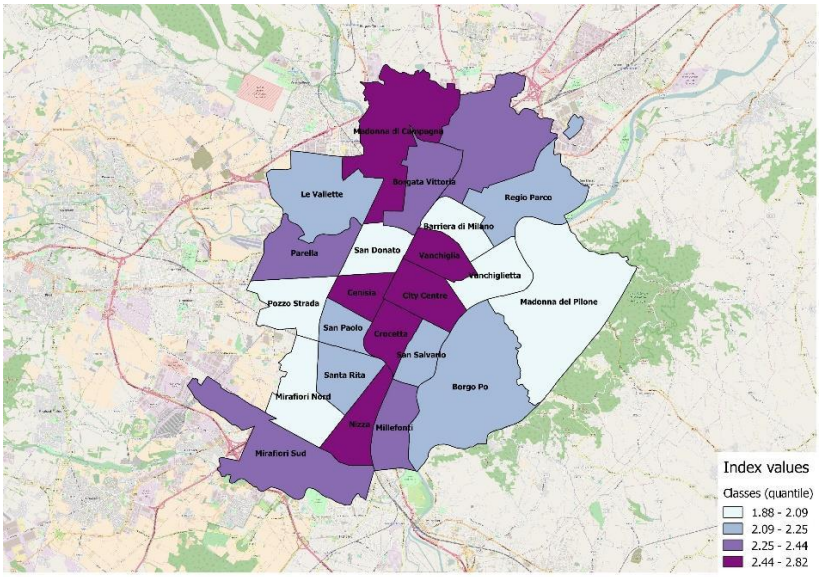


Figure 9

6 CONCLUSIONS

Youth geographies have shown the city as an archipelago of places where young people live following their own rules and needs. It has resulted the importance of open spaces for young people and their need to have places where gathering and playing. Institutional places (i.e. youth centers), planned to be for teenagers, have not been mapped by them. Therefore, the gap between the city for teenagers and the city of teenagers has emerged clearly.

Looking at their geographies we have seen that on the one hand, except for the city centre only which has almost the 40% on the POI total, POIs are rather evenly distributed over the city. They appear to be much more related to the presence of noteworthy places such as stadium, squares or park rather than on the centre-periphery relation. On the other hand we have classified neighborhood that have more diverse or highly specialized uses in the perspective of teenagers daily life in the city.

In conclusion, we strongly believe in the potential of using VGI in order to give voice to teenagers, enabling them to play an active role in supporting youth policies decision making.

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ID 1720 | DEMOCRATIC PLATAFORMS: FROM MUNICIPALIST APPROACH TO DEMO-CRATIC SPATIAL AGENCIES

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1 INTRODUCTION

Since 2008 financial and economical melt down that became a democratic and political crisis with repercussions all over the world due liberal management attempt to profit in a general crisis landscape, a new political context has reemerged. In Spain, for example, the reappearance of the Municipalist Movement due the 15M experience in Madrid`s occupied square remembered the municipalist Spanish heritage of the XIXth century, for example (Cf. OBSERVATORIO METROPOLITANO, 2014, CAVA, BELTRAN, 2015). In this 2008 context, new forms of experience politics and this return to the political emerged and are emerging in a world where virtual platforms are a media that is central to this insurrectional and social movements. The use of twitter and other social media platforms gained centrality to the democratic debate because real time is a possibility that was never envision in democratic processes. New forms of cartography processes with the help of internet allowed new visibilities to emerge, new people to appear and new forms of struggle to be (re)invented.

The use of a social media network (from twitter to crowdmaps) to organize the movement was the first step. Since the protests have a local and temporary effect, the next challenge was how to take such energy and knowledge and transfer it to a possibility of domination of politics, i.e., the state. The question appear as how to use the social media apparatus to mobilize a take over of the state, of political representations in order to exercise direct democracy in everyday life space.

Since 2015 cities elections in Spain and victories in Barcelona, Madrid and other cities, these municipalist movements are beginning to aim the potentiality of these media through the creation of their own virtual platforms. Creating sites that amplifies the voices of groups and people and mapping the city regarding the impacts of public policies, such platforms are experiments of make visible public policies, the people's power and help them to consider the state as a partner as well.

This presentation intends to discuss these virtual democratic plataforms build by the spanish cities administrations, in special Barcelona. Having as a critic parameter the idea of democracy and its paradox as portrayed by political scientist Chantal Mouffe, and Jacques Ranciere critique of Democracy as well, opposing it to the term demo-cracy (power to the demo, i.e., the people), the present text aims to point out the spatial limits of the plataforms in order to achieve power to intervene in planning operations in the city with or without the state.

2 POLITICS, POLITICAL AND 2008

The political scientist Chantal Mouffe in her book The Democratic Paradox analyses the main problem regarding modern democracies that is related to its lack (intentional or not) of understanding of what it means democracy, its modes of expression and exercise on the territory and its relation to politics.

To her, politics "(…) would be characterized by a set of practices and discourses that seek, on an institutional level, to establish a certain order and organize human coexistence"(MOUFFE 2005). So, politics is directly related to the idea of hegemony, a key concept created by Italian philosopher Antonio Gramsci and brought back to the center of discussion by her and Ernesto Laclau. Politics is the intense dispute over the hegemony of a certain political, social, economical and cultural status quo. Politics is related to preserve or change the state of things using the institutions of the State itself like schools, universities, cultural centers, media and others organizations that produce a unitary image of the nation, of people.

On the other hand, when Mouffe discusses the political, the subject is no longer how to maintain a certain design of relations and a certain organization, but how to disrupt them and create new forms of democracy, redimensioning even the central role of State. The political is a disruptive force that can be a creative one when used to think how to achieve another state of things.

In the financial and political crisis that emerged in 2008, politics and the political emerged and make extremely visible in bodies and streets such democratic paradox, turning it into a contradiction. Representation and direct action became two forces that collided on streets and institutions. Representants became simbols of a decaying form of politics, the place of the State as the only public or collective oriented institution was put in check due the emergence of social movements and associations that represented more thast the state itself.

The protests that irrupt in that financial crisis context are the emergence of the political and its objective is simply to destroy the usual manners of how politics are made through negotiations that are invisible to the majority of people and by representatives that represents no one, having as objective the profit of some despite the poor conditions of the many. Putting in the edge the idea of representation that modern and western democracy took for granted in a very specific manner during Modernity, associating it to freedom, was the first step to the political.

After the protests that begun 2008, what became more necessary was to rethink how this deconstitutional power of the streets could be turned to a constitutional one, in streets or in representatives spaces. But it does not mean to stop to occupy streets and representatives spaces as public squares and public buildings as Spanish social movements did. It means that from that moment on, it was necessary to dispute politics by inserting the political in it. And in Spain, among many others countries in Europe like Greece, it happened.

3 THE SPANISH CONTEXT

During XIXth century, when Spain was not a nation but a project of a unified nation, there were various attempts to transform a set of cities and municipalities into a country, a state nation. Against the municipalism, a project of nation. What is interesting to point out is that such nationalist project found political and local barriers to come to existence: every time that such unity was proposed, autonomous cities defy such objective in order to maintains its autonomous and decentralized mode of operate and live. Insurrections happened in the cities against attempts to build a nation; federalists pacts were made in order to give an alternative to the nation project. The communist spectrum in 1848 had as consequences in spain the formation of revolutionaries groups; independence uprisings were made due a class struggle in the 1870`s (OBSERVATORIO METROPOLITANO, 2015). Such history regarding autonomy, class struggle and decentralized organization is a memory lived in cities, in neighborhoods, in autonomous and local movements, it is a municipalist spectrum. Before the attempt to erase such past of struggles against the nation ideology known as Spanish civil war, the country nowadays known as Spain tried to invent other forms of political and economical organizations and that is a memory that arise in 2008: more autonomy regarding the planning and management of the city and the country.

The Spanish State response to the 2008 financial meltdown that occurred first in USA and then, in the rest of the world, was more austerity. Regardless the people`s desire to changes in the economic system, what the government did was maintain the current status quo: the profit to banks and the loss of homes to middle class citizens. So, the demand get insuflated and became a desire to a change in the political system. “They do not represent us” became a slogan in streets. In may 15th of 2011, camping in Puerta del Sol square, Spanish protested aginst politics through the political (CAVA, BELTRAN, 2015). Echoes from the insurrections and street ocuupy in XIXth century municipalism were heard.

After this disruptive force that emerged in public spaces in other cities in Spanish, many hackers recognized the necessity to go beyond what was proposed by occupiers. Despite the fact that through social network – facebook and twitter – many were called and participate of the occupation – from young ones to the older – and a long list of reinvindications were made, what was new in that moment was the perception that the revolution must be networked too. A protest called by the digital platform Democracia Real ya, The 15M or Indignados, produced a possibility of rethink social media not a global network of control and surveillance, but a kind more potent regarding democracy. From 15M to Ganemos – a successful attempt to take the energy and organizations that promoted the 15M and transform it in a politic movement – and then, to Barcelona en Comú and Ahora Madrid was a gigantic step and a certain one.

The history of that process is not the main objective of this paper, but what meant to pass from a popular and direct structure to a representative one, that happened after Ada Colau and Manuela Carmena were elected as Alcade of Barcelona and Madrid. The French philosopher Jacques Ranciére in his book dedicated to democracy entitled Hatred of Democracy (2006) discuss the model of democracy created in Greek society. The etymology of the word democracy is “government – cracy” of the “demon – people”. So, democracy was born by the desire of give freedom to the people and not to the elected by the people. The election is a lottery process which anyone can be chosen to be elected. That kind of voting mechanism had the objective to keep politics an activity performed by non-professionals, which it guaranteed that the elected would do what people command and not what they think is the best.

Despite this lottery methodology, what is at stake in demo-cracy is the possibility of the people rule the society through public assemblies and encounters. It is a democracy that is based in a very short institutional distance between the people and their representantive and the fact that the very own democratic exercise is made not just by representation, but by direct action either. This is the democratic paradox that Belgian writer Chantal Mouffe discussed in his book cited before. Democracy is not a contradiction which direct action or representation has to be erased from the formula. Democracy is a paradox because that contradiction is lived and the relationship between protests on streets and the necessity of occupy by agreements and arrengements prove that.

So, returning to the democratic platform and the virtual spaces created, once 15M unfold itself into a movement that arrived at the Town Hall of several Spanish cities, the Democracia Real Ya model had to be rediscussed. Even better, it had to be reimagined in a context where direct democracy was not status quo. And regarding urban planning, that is the democracy in an everyday life sphere, virtual platforms had to be consider more that just make visible protests and demands, but articulations of that democratic paradox through the empowerment of the demo.

4 DEMOCRATIC PLATFORMS AND DEMO-CRATIC PLATFORMS

The proposed discussion will take the site of the townhall of Barcelona, as an example of a Spanish city occupied by the municipalist movement: https://www.decidim.barcelona. It is analyzed the relation between the site as a virtual plataform to the institutional politics and the emergence of the political taking as a conceptual framework the idea of participation – from participation as vote to participation as direct action on space.

4.1 DEMOCRACY, VOTE AND OPTION(S)

The virtual plataform produced in Barcelona is a mix of open source matrixes: Democracy21, D-Cent, Demokratian, DemocracyOS and Loomio created in places like Argentina, Spain, England, New Zeland. The common feature among them is the fact they all are a matrix that can be used by any group to build

their own site and they base their understanding of democracy resumed to vote. The sites produced all try to think democracy as a question of deliberation.

The vote problem is a central problem because the site gives to people the possibility to choose, but to choose between options already given. In a political science context, it is very easy to comprehend why the deliberation option is celebrated. If others town hall sites and its relations with the politics and political are analysed, it is going to be perceived how a city that gives a possibility to choose is a novelty in terms of democratic approach. But it is limited because people cannot build their own option. And even if they have the desire to do it, the site itself does not give to the citizens tools to build it, specially if it is considered the complexity of create public policies. As Marques (2017) states, the site with options approach creates dissent and helps to build autonomous citizens because debate is fomented but, at the same time, it create a destructive and not a constructive critic.

The participatory budget (orçamento participativo), an participatory initiative demanded by people from a city in south of Brazil at the beginning of the 80`s and that was transformed in public policy, has the same questioning in its history (SOUZA, 2006). In a first moment, it was celebrated as a new form of make politics with the help of citizens and it was replicated in a various numbers of Brazilian cities and even in other countries as an example of democratic approach to urban planning. Through assemblies and public encounters with common people, representatives of associations and Non-governamental groups, it was given to people the possibility to chose where to apply the city budget. The central point is that the options of use of the city budget were previously given. Such assemblies and encounters were not moments of discussion and creation because the State already proposed solutions based in technical studies with the popular participation as an optional approach. Since 2000, in Belo Horizonte city for example, such public policy became virtual too at the same time that the town hall decreased the percentage of the city budget to be discussed and deliberated in the participatory budget.

The option issue is a problem because this platform should permit and potentialize the possibility of invent new forms of manage the city as happened in 2011, in Puerta el Sol in Madrid and in many others cities. The platform informs a lot, but it lacks the possibility of people create its own possibilities, ones that are not already designed by the State. So, the point here is that the site should be more permissible to the possibility of invent options that are not stated. The site should create interfaces to people discuss among themselves and create. Instead of a site that informs, a site that promotes games between citizens, government officials and others could be a interesting manner to make the site a platform and not just a window-shop. Doing so, the site is not just a representative space of policys created outside her, but being a creational tool, it would be a device to create political inventions.

Using here the concept of black box of philosopher Villem Flusser (2002) regarding the limited relationship among photographer, photography and the photographic machine due the fact that the last is impenetrable to the conscious use of its internal mechanisms by the first, the site could be more than a black box if it were designed to be opened and played like a game – another Flusser`s concept (ASSIS, 2015). It is not just a matter of the right design of a certain type of pre-structured organization, but the idea of pre-structured that bases the whole site scheme.

The manners that people interact to the site are not specific, but generally the same as with another sites. What is different is the content of the information that the citizen will look for or give to the platform. What they get from the site is either a space to vote in some subject that affects the city or news informing new manners to work to the city or a possibility to insert themselves into the initiatives that are taking place in Barcelona sectors sponsored by Barcelona en Comú. New possibilities of not just work with the municipality, but to create with it through the virtual platform could be very interesting and considered if it the demo-cratic question is raised. That could take information and make it not just visible and public, but specially designed, articulating people that could work together, or that share the same interests in places very near from each other.

If the platform were to be more demo-cratic, a large variety and diverse possibility of situations should be possible to be invented. The demo-cratic site should be a virtual space where the people invent new forms of associations in order to dislocate themselves from the pre-structured paths of the State. More demo-cracy means more possibility, even the ones that were not thought before the site was ready.

4.2 DEMOCRACY AND DEMOCRACIES

The Democratic paradox stated by Mouffe proposes an understanding of democracy as a continuous movement between the political and politics, between direct action and representation. But it does not mean that the only democracy is one or another. Between occupy streets and votes inside representative spaces, there are a myriad of possibilities If it is taken the municipalist heritage in consideration, the great urban planning advanced concept of such memory is that the planning activity is not an exclusivity of the State or of the nation

In an urban planning sphere, such citizenship movements and neighborhoods associations are autonomous cells that produce and discuss their own strategies and taticals regarding urban planning. As SOUZA (2006) states, urban planning is not an exclusive activity of any power, specially the State. Organized groups and social movements that occupy streets or empty buildings, for example, make their own urban planning. Urban planning is not a exclusive activity of the State, although the State has the power to make it in a more complex and broader scope. This means that this others social-spatial actors acts as urban planners, but they are not interested in constitute a central power. They battle for spaces, for representation, for inches in streets but they are not interested in replace the state, they are supplementary to the State. They add to the State possibilities of participation and planning that the State itself would never foresee.

The municipalist site should be more than just a space to present public policies created by the government, but a platform to launch initiatives with the aid of the State. If the site could be more a game than a reflex of a structure, like a platform it could be more decisive and more productive. State could help to invent and not to forbid the invention as it is seen all over the cities. New forms of exercise demo-cracy and not only democracy could reinsert in the State a new way of urban planning.

If the municipalist history is related to more autonomous forms of planning and manage the cities, using neighbourhoods as local cells of such decentralized organization, the site should be decentralized itself, giving to local people and collective associations possibilities to administrate the site, creating their own version for example. If the site can be used by associations and the people just as a place to get information, schedule, facebook addresses and pin local initiatives, it is limited.

5 CONCLUSION

A democratic platform is not enough to a municipalist approach to urban planning. If democracy is not a back and forth between direct action and representation, but between them invent new forms of act and plan the use and production of space; and if popular participation is not just a slogan or put all the information transparent to all but a program and objective to the municipalist project; any virtual platform have to be more than a representation of a space and an apparatus to act in space. Such platform should be either an agency of desires, actions and representations, which means that it should have as a central objective a demo-cratic project, making possible alliances between groups and citizens in order to produce new identities, new groups, new people. This demo-cratic approach should be aimed to the invention of new multiplicities.

The municipalists initiatives in Spanish cities are beginning to understand what means municipalism in XXIst century. Even if it is a preoccupation on how technologies and social media can help to build a more democratic virtual environment, it seems that they do not realized yet that this democratic project should be more open to the participation of everybody (including an every that does not exist), what means that the site is not only a reflex of a political project, but a tool to make it happen.

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T18 | UNRAVELLING COMPLEXITY FOR PLANNING

CO-CHAIRS: GERT DE ROO; WARD RAUWS; JORGE BATISTA E SILVA

This track explores how interactions between the complexity sciences and the planning discipline can result in better understandings of and productive strategies for urban planning in a world of change.

Cities and urban regions across the globe face a series of pressures and challenges. One can think of global warming, processes of globalization, migration flows, technological innovations, geopolitical shifts, etc. A key question for spatial planners and governance experts is how to support cities and regions in remaining vital places under these conditions. In other words, how to boost quality of life, reduce social inequalities, support urban developments and transformations, and balance environmental sustainability and economic development in a fuzzy, dynamic world that includes both foreseen and unforeseen changes.

Introducing concepts such as self-organization, coevolution and bifurcation, the complexity sciences can help to clarify the interdependent, recursive and adaptive nature of processes underlying spatial transformations. Therefore, this track is about exploring ways to unwrap / disentangle / decode the 'complexity' of spatial systems and networks. Not with the aim of simplifying complexity, but with the ambition to identify the opportunities and limitations of a complexity perspective for the discipline of urban planning. This can include:

- Alternative conceptualization of neighbourhoods, cities and regions that allow planners to gasp the dynamic patterns of change.
- Advanced models that strengthen our understanding of, for instance, spontaneous pattern formations, processes of path-dependency and transition trajectories.
- New institutional designs which are time-sensitive and allow actor-coalitions to deal with a plurality of perspectives and non-linear routes of development.

Hence, the track ‘Unravelling complexity for planning’ explores the conditions under which ‘spaces of dialogue’ and decision making emerge, alter and disperse. It invites academics and professionals to rethink their tools and strategies in order to promote better places, respecting the dignity of life, in a context of change, interdependency and uncertainty.

ID 1334 | PLANNING IN POST-COMMUNIST CITY: BY FLEXIBLE PLANNING TO NATURAL GROWTH AND DEVELOPMENT

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1 AGE AND STABILITY OF STRUCTURES

A city which has been through a long historical development and continuity in its planning resembles a naturally growing primeval forest in which it is possible to find and well distinguish old, solid and stable structures from those young ones which are still looking for their place in the world (Hrůza 2014).

The basic genetic code of all cities without distinction, much the same as the double-helix of DNA made up of combinations of 4 elements is typical of all that lives on the Earth, is a concentration process. Gravity, all the attractive forces, attractiveness, catchment and commuting, but also human desire and human interest are just different names for the same fundamental process inscribed in the innermost nature of our world (Clegg 2012, Hudeček 2010, Hudeček et al. 2011). And, on the other hand, the opposite of concentration - "thinning" in the sphere of the universe of expansion and cooling, in the places of prevailing gravity and curvature of space-time, as a result of the course of time the common duration in hours, days, years or even millennia. Two opposites, but at the same time eternal companions are the cause of all diversity as well as, on the other hand, the cause of the interesting similarity in the reality of the existing structures Chardin 2003, Veverka 2013).

From the mutual and never-ending tug of war between the two basic directions of development – concentration, thus from chaos to order by means of self-organization in the presence of coincidence (in social systems then through the expression of free will) and thinning, i.e. development from order to chaos and growing entropy – operating at the same time on various scale levels in our reality emerge all the structures that we are, after all, even as people able to perceive (Prigogin 1997, Wolfram 2002). Those, in the direction of development all the way to us, in our corner of the developmental fractal, gain on simplicity that also we are able to understand and pass on – straight streets, clean lines of houses, refrigerators or cars. The existence of fundamental physical constants, energy and matter, of carbonaceous living matter on the planet Earth, subsequently of man and his consciousness, these all are structures on whose existence cities stand as well, and without which no city would exist.

The key feature of from the eternal conflict of order and chaos emerging structures is their durability and stability. Each new structure is unstabilized and very unstable. Each old structure which on the day of observation still exists is, on the contrary, stable and stabilized. Structures become stable only by their subsequent existence, by their linking with existing structures and mainly by means of new, younger structures standing on their shoulders. Exposed topsoil is easy to slide, while soil covered with grass will survive even great natural disasters. Eeach new structure takes its roots in old structures, slightly upsets them but, at the same time, strengthens them.

These days, chaologists and especially catastrophologists swell with pride over their "predictions" of approaching revolutions and more or less great ends of our days (e.g. Tainter 1988). Partly justifiably because even each system of mutually interconnected structures built one upon the other will once sketch in its developmental fractal, economies of scale will find their limit and will meet with losses of scale. In these moments self-organization will reach its critical gradient (Bac et al. 1987) and, subsequently, the entire cascade of structures built one upon the other will collapse like a house of cards. Visions like that humankind also needs a bit (Harari 2011) because only our awareness of black swans (Taleb 2007) can prepare us for these events at least a little bit. And that their number will grow is not, as a result of human existence these days really all over the Earth, anything else but a proof of such a depicting of the developmental fractal. On the other hand, even though in the history of the development of e.g. animal species on the Earth, such great changes – the mass extinction of species – have already happened at least six times and in the history of the development of the concentration of population in settlements as well, we do not have, as people living on average about 80 or 85 years, many other options than to keep trying to solve the emerging problems and to create new structures. Not to allow the direction of

development from order to chaos, ubiquitous due to the ordinary flow of time measured by our clocks, is an eternal motivation for humankind.

2 STRUCTURES IN THE CITY – THE ASPECT OF SPACE

If we want to devote our attention to cities, their planning, management, and decision-making regarding their further development, we must be able to orient ourselves in the tangle in the history constructed and, above all, in up to now surviving structures (e.g. Hampl 2000, Jacobs 1970, or Hayek 1986). A certain selection of the basic direction of examination is needed – for example, the level of spatial localization of cities. From this point of view, the physical-geographical, i.e. terrain conditions are the oldest structure. Those precede or can be even one of the causes of the idea of the original inhabitants to settle down, again as a result of a conflict between concentration and thinning, an effort of people, in a larger number, to defend themselves against the outside environment over time (= thinning, cooling). However, that does not mean that there is only one single recipe, the only most suitable old structure that would guarantee to the city thousand years of existence and its harmonious development. Fertile soil, coast, good conditions for defense, suitable climate bound to the angle of slopes and many other factors are, from the viewpoint of currently existing cities, ancient structures, which could have played different roles at different times. In the years full of conflicts, fertility of the place, and therefore an easy way to earn one's living of local inhabitants, as a primary structure, did not have to be sufficient for the city to stand the competitive struggle with other cities. History is written only by survivors, and although we know much more about the past than decades ago, archaeologists are still able to find cities even larger and earlier than ancient Rome and by their inner structure cities even more primitive and in a way even stranger than we could even imagine a century ago.

The sixth layer of the more than 9000 year-old Turkish city Çatal Hüyük uncovered by archaeologists has no streets (Melaart 1967). Habitations composed of a system of dwellings dug into the ground lacked a good separation of the private from the public (Figure 1). The delimitation of the moments of shared time and private time, fundamental attribute of human life, an old bio-psychological structure, had to be reflected also in the nature of the city. Therefore apart from this so far rare historical exception, we have only to do with cities made up of streets, squares and houses and therefore it is possible to compare cities in accordance with their ground plans, shapes of streets and public spaces.

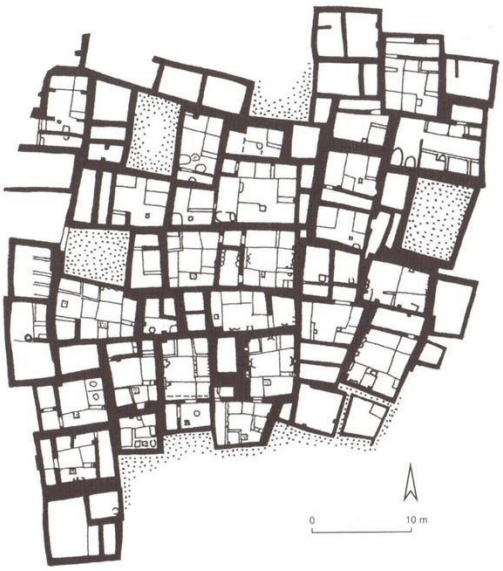

Figure 1 – Çatal Hüyük
Source: Hrůza 2014

The organically grown nuclei of historical cities and their intertwined and crooked network of streets and public spaces had been gaining their contours precisely according to the needs of the time, the demand for other crafts and activities that were missing in a small town at that time (Figure 2). By exceeding a certain level of wealth, each such city paid planners, and that is how a street grid came into existence, in fact the basic structure of the city. Sometimes simpler and altogether regular, sometimes more complex. Later founded cities, like virtually almost all cities in the New World, often start with this grid. Too great wealth of some of the most important centers of world empires led to the fact that these cities decided to rebuild their own nuclei in the historical Renaissance and Enlightenment eras. The industrial revolution provoked a similar pressure on the existing spatial structure of cities, which then resulted in the formation of the movement of preservationists.

Save for exceptions, in the existing cities their original structure has remained in existence even for thousands of years. Even major disasters like citywide fires, droughts, floods, or epidemics of diseases, which were always followed with an instruction in the form of new building regulations, better and more resistant infrastructure equipment and hygiene standards, rarely led to the reconstruction of the city grid. And even in situations more than appropriate for the overall transformation – for example, in the by the war heavily damaged London or totally destroyed Dresden – restoration of the original ground plan of the city eventually took place in quite a satisfactory degree. These cities, even despite the historic opportunity, chose the resuscitation of their former appearance. Nowadays, due to the large thinning in time (settling and consolidation of structures) neither city planners nor the majority of decision-makers have the strength and energy to rebuild cities. It is like when cooling (thinning) creates little crystals of solid matter in the fluid binding to themselves more and more substance until, gradually, all of the liquid solidifies.

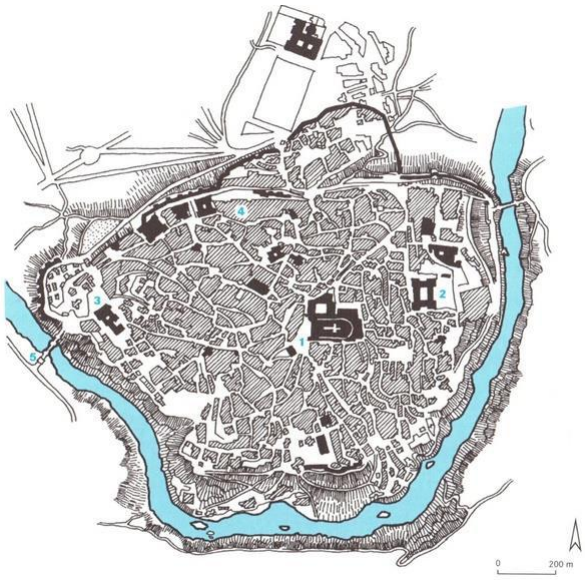

Figure 2 – Toledo
Source: Hrůza 2014

From the thousand years of existence, save for exceptions of the enormous stability of the city grid, we can proceed to the interior of the individual parts of this grid – to the blocks of houses filling the space between the public spaces of streets and squares. From the photographs of the historical center of, for example, Prague from the end of the 18th and 19th centuries, it is possible to make out that houses in the historical center grew a little taller, at the average by two floors (Bárta et al. 2006). However, not every city at that time led such a discussion on the preservation of its historical values, and immediately beyond the border of the historical core there was a similar situation as in other centers of the then world events. Factories and workers' quarters were growing and with the invention of the elevator also high-rise administrative and other buildings. The key to unraveling the durability of an already constructed building or block is to know the speeds and frequencies of changes at that time, especially the frequency of technological inventions, the development of quality of building materials and other factors. The character of the built-up area, the height of buildings, the appearance and exterior facade, the shape of the roof and other characteristics do not survive, save for exceptions, for thousands of years. In a sufficiently stabilized area, blocks of houses remain if not absolutely identical, then at least very similar even after many decades. Therefore, an appropriate time measure of the stability of this structure seems to be hundreds of years.

The interior of houses and apartments, the functional use of the floor area are subject to ever faster changes. The idea to establish a company and to start a business on some type of a digital device is now possible in one's apartment overnight. The times when industry or administration by their negative externalities drove people out far from factories and work for long periods of time, and thus fixed the internal functions of apartments and houses in the three categories set by the Athens Charter – housing, work, recreation – are already gone (e.g. Koolhaas 2014). A city of short distances, mixed types of functional use disrupting the typical transport scheme – in the morning, everybody in one direction and in the afternoon in the opposite direction, livable or, even more modernly, lovable projects of new neighborhoods that contain both real living – housing and preferably even recreation and work, these all are, among other things, consequences of the ever-accelerating and more unstable time into which our human society has entered. Change is becoming a common part of our life and consequences of each such change are, much the same as new structures, looking for their space in older structures. They grow through them with their roots, disrupt them, transform them partially according to their own need, and thus strengthen and confirm their existence in the future.

3 PLANNING, MANAGEMENT AND DECISION-MAKING REGARDING FURTHER DEVELOPMENT OF THE CITY

A plan is nothing else but regulation, control over the future. If I plan a meeting for the evening, I have refused, regulated, all other possibilities of spending the evening time. And including those possibly good and better than the arranged meeting could be. If in the meantime I thoroughly connect the meeting with other meetings or, for instance, with a place, changing it will become very difficult for me. I have exchanged flexibility and a possibility of a different choice for the expected benefit from the meeting.

I can “provide” planning – to create a plan – for a short period of time, or longer. In short-term planning – for example, if I intend to abstain from eating meat tomorrow – it is easy for my inner energy to overpower my long-standing habit of eating meat. However, in a long-term planning, after a certain period of time, our effort to achieve a slim figure, which we have resolved, for instance, on New Year's Day, slacks off, namely due to the effect and influence of strong, older and more stable structures (for example, "when I see food, I lose my self-control and I eat it"). In a medium-term planning, both the influences are then mixed in an extreme and impenetrable complexity.

However, is getting on long-standing, stable structures that like railway lines lead around us from a distant past to the far future, still planning? And what about that above-mentioned short-term effort to surpass oneself? Thus, is not the right planning rather the identification of those old structures worth caring for, which have been proven and have been carrying their fruit for years? Preserve them and thoroughly consider possible minor changes to each of them? Therefore, is not that, when managing the city in its entire complexity, rather about the management or, even better, about the decision-making on the basis of these old structures, and that based on a certain change of state in the surrounding, usually the local environment?

In our head, the above-mentioned planning is happening subconsciously and automatically when planning our own time. Our subconscious mind chooses, based on our experience, which is nothing else but old stabilized structures, what is good for us and known to us. In the form of emotions, "I want – I do not want", it subsequently informs our consciousness about the intention to, for example, reach out for pears or apricots on the table (e.g. Kahneman 2011, Lehrer 2009) . Our neurons, but also all the cells in our body, by means of mutual arguments, interconnections and power alliances by a complicated yet for us a subconscious way, make their way to the suggestion of a solution which naturally comes to our mind.

In planning evolutionary higher and further complexes, such as cities, the same process takes place among all people and more intensely among the involved participants in the city development – interested persons, companies, nonprofit organizations, etc. Thus, planning, as the initiation part of the whole process, in which the citywide emotion "I want" shows itself, does not make sense without a final goal. However, this final goal, if possible, should never be achieved. To plan without a plan at its end, on the other hand, does not quite make sense. The substitutes found so far and the solution to this "planning paradox" of the type of a continuous updating of the plan seems quite artificial in this respect.

Planning without a final creation of a plan people call a mistake but this is probably the only option we have and we have to reconcile with that for the future. Thus, it is much more about the process of planning itself than about the resulting plan, even though, as apparent from the above-written, it is at least appropriate to plot certain space-based structures on the map. That such a map is subsequently called a plan is just a matter of a perhaps a bit unfortunate agreement.

This all is a bit related to the partialization of planning as a type of activity. If, for example, in a city a few of its oldest structures are history (culture), associated with the thinking of in the city living and in the city concentrated people, then, as we have said, undoubtedly also natural conditions, but also the, on a long-term basis stabilized, structure of the street development, then the separation of city planning from other types of planning does not make any sense at all. From the spatial arrangement, the history and culture of the city unfolds, and vice versa. Even the common terms themselves – land-use and strategic planning – make the situation and its understanding quite difficult in this respect. Is not the word strategy a synonym for a plan, and is not then strategic planning just an empty collocation saying "planning planning"? Would not it be better to think of city planning rather from the viewpoint of more logical words of planning – pertaining to space and time? Or perhaps even better to space-time. Is not one planning face to face with

the above-said more than enough, and is not, after all, a land-use / spatial plan, enriched with long-term framework priorities, what should the current strategic plan be?

4 INTERRUPTED CONTINUITY AND CURRENT SITUATION IN A POSTCOMMUNIST CITY IN THE CZECH REPUBLIC

In Eastern European and Central European countries, with the socialist past, the issues described above are very clear. Due to the long-term influence of the totalitarian regime, in the Czech Republic, for example, 40 years of communist central directive planning, we cannot even speak of any continuum of old structures. Moreover, looking further into the past, the Czech Republic and other states before World War I were incorporated into the Austro-Hungarian Empire where they played a non-dominant role. Thus, unlike the centers of the monarchy – Vienna and Budapest – in Prague, save for exceptions, reconstruction of the central part of the city essentially did not take place. When we are looking for continuity from the present perspective, this can also play a positive role, which is completely in compliance with the developmental theory of systems and the role of a gauge in relation to order or chaos.

Therefore, if we stay, for the reason of both topicality and especially simplicity, only in the second half of the 20th century, it was the absence of private property and private business which played the title role in the development of cities and their planning. Thus, any form or even only a hint of "bottom-up" planning has become virtually unthinkable, and it is not surprising that through the Velvet Revolution the Czech Republic has entered a period when planning and a plan (those notions were not differentiated too much and are not differentiated up to now) are in essence considered to be dirty words.

It did not take long for the results to show because the rapid and unrestrained development of investment activity on the one hand, and, at the same time, the more and more awakening civil society on the other hand, could not exist parallelly, side by side, for a long period of time. The ambivalence of society, rapid oscillations of the social pendulum, the alternation of the "from one extreme to the other" critical states had to be subsequently reflected also in city planning in the form of the re-emergence of a certain analogy of the extreme centralization of decision-making. Land-use plans of villages and towns in the Czech Republic have been, roughly since the turn of the millennium, again formed in the directive way with an extreme emphasis on the strong, in particular functional regulation. Thus, land-use plans of Czech municipalities, instead of the initiating role in the development of the territory, determine what in each small piece of the given territory must be – instead of what in the given territory can be. Instead of limits of utilization of the territory from the viewpoint of the capacity of the environment, infrastructure, population density and movements throughout the day, a certain parallel to the communist-style decision-making on the territory was agreed upon, which was based on the obligatory use of the territory determined by the planner, and which was from the viewpoint of the then social development logical, yet very inappropriate for the whole society and especially for the cities.

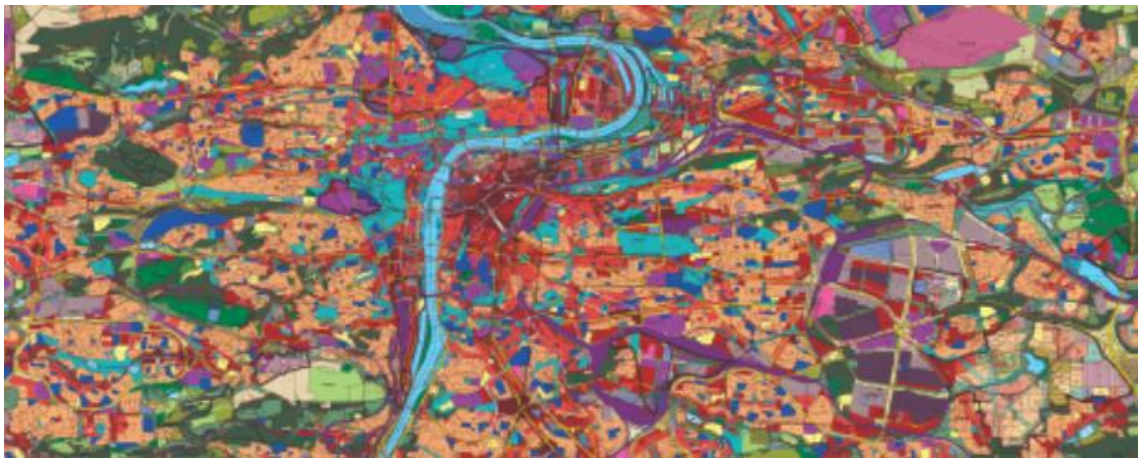

Figure 3 – A part of the present land-use plan of the City of Prague
Source: Koucký et al. 2014

In the present land-use plan of the Capital City of Prague (Figure 3) , there are more than 50 such types of the use of the territory and it is totally understandable that, in the long run, such a plan cannot succeed face to face with the ever-accelerating time generating new and new demands. During the first ten years of its existence (2000- 2010), this plan has been changed by the institute of the so-called changes of the land-use plan more than 3,000 times, which means roughly at a rate of 1 change per day. The city administration can carry out such a change to the land-use plan based on a request from owners or developers. These days, this process in the complicated legislation in the Czech Republic takes usually 2-4 years. In extreme cases, it can take even 7 or 10 years. Therefore, in the course of time, investments and development projects have completely stopped and these days, the capital of the Czech Republic, which has more than a million of inhabitants, is struggling with a lack of apartments and houses, a rocket rise in the prices of properties as well as rents, extreme suburbanization and urban sprawl in the wide surroundings, overloaded transportation, technical and social infrastructure. All this due to rigid and inflexible planning and an obvious lack of respect for older, stable and stabilized structures.

5 A LESSON FROM DEVELOPMENT AND OVERCOMING OF DISCONTINUITIES

As natural both in nature and in society, we perceive that which is sufficiently stabilized. By our biological nature, we are not and we don´t want to be reconciled to the fact that change is natural. But not equality, but hierarchy; not uniformity, but difference or self-resemblance are the fundamental characteristics of the world around us. Thus, to find the natural features in the development of the city, that which we could pick up the threads of by our further decisions, it is necessary to thoroughly focus on inequality and irregularities. To look for regularities in irregularities. While in a city that has been developing naturally over a long period of time, such as London, Vienna and many others, hierarchies and inequalities are long-established, and hence obvious, cities affected by the central directive planning are far from that.

The communist panel housing estates as a solution designed to solve the lack of apartments for the growing population and implemented by the national planning authority in the period between 1960 and 1990, then after the Velvet Revolution massive suburban construction of the so-called Business Baroque as a result of demand of people for their own houses dampened by communism for a long period of time, later, around the turn of the millennium, the rising fear of the continuation of uncontrollable growth without rules and, finally, the cessation of virtually any kind of construction nowadays – these all are only consequences and sediments of unstable structures on the surface of development. These are not deep, developmental and stable structures. These are essentially erroneous decisions and dead ends of development, which have to be partly inscribed into the overall development as historical epochs, too. However, with regard to the above-written, it is possible and also necessary to overcome them in the further decision-making about the development of the city. To incorporate their existence sensitively into the overall shape of the city.

In the city of Prague in 2012 development hierarchies were sought first. An unprecedentedly extensive and detailed field survey was conducted which focused on every detail of both public spaces and all urban buildings. All address locations, houses and buildings, numbers of floors, roof shapes, dimensions of roads, parks, technical networks and all other buildings in the city were mapped.

Therefore, it was possible to proceed to the mapping and consistent division of all urban structures according to their hierarchy. Fractal distribution of communications according to their importance, capacity and width, hierarchy of parks and recreational, residential and administrative sites were defined. The city was divided into about 800 historical sites, inside of which there are natural hierarchies again. On the map of the city, white and brown spots were identified – the so-called urban jungles – as priority areas for further construction and investment. Those were hierarchized and prioritized based on the multifactor analysis. The cultural history of the city, tourism, inspirational environment were identified in the hierarchy of importance of structures as key for the city, and possibilities for their further development or partial transformation were determined.

Apart from the spatial aspect of the city development, more than 1,500 experts, urban planners, geographers, architects, economists, as well as philosophers, theologians, lawyers, doctors, teachers, and many other representatives of professional chambers, as well as representatives of civic associations and major business corporations participated in more than 200 round table discussions and conferences with the aim to aggregate additional – even soft – data.

Subsequently, new building regulations, a new strategic plan, a new public spaces manual, a new document dealing with the development of the banks and the littoral areas of the Vltava River were created (Figure 4). And, of course, a creation of new city land-use plan was started (Hudeček et al. 2016, Koucký et al. 2014). The Institute of Planning and Development was established with an annual budget of over 15 million Euros and about 200 employees – as an organization able to face the complexity of the city and the creation of a new flexible land-use plan was initiated.

Figure 4 – Strategic and concept documents of the Institute of Planning and Development of Prague
Source: Institute of planning and Development

Thanks to this data collection, their aggregation and analysis, it was possible to approach all that happened in Prague in the past, even though the tendencies of these events were often contradictory, from the viewpoint – as I have suggested above – of a deeper perspective of long-term development structures. With its certain small part all that is past and has already been realized participates and will participate in the whole in the future. Duration in time (= thinning) gradually abrades the sharp edges of from the present view often illogical decisions and it was necessary to proceed on the basis of the deeper nature of the development of the city. The key characteristics of this process of ours were, and in the future also have to be, two fundamental courses: flexibility (of plans) and resilience (of newly built structures).

5.1 FLEXIBILITY OF THE PLAN AS A SOLUTION FOR OVERCOMING DISCONTINUITIES OF DEVELOPMENT

First of all, on flexibility as an essential feature of urban planning. The historical experience of a country which has been through extreme changes in the directions of development in the past and, unfortunately, still in the present is, in the case of the Czech Republic, obvious: Impossibility and blockage of change (due to, for example, totalitarian directive planning) sooner or later will necessitate a change of the whole system. The possibility of a change is a fundamental, the most substantial and a very deep structure, arising directly from the fundamental conflict of order and chaos in our reality.

From the viewpoint of flexibility of planning and of the plan (for example, a land-use plan), there must be a reasonable amount of order and chaos, i.e. the degree of regulation corresponding to the given place at a given time in the city (Figure 5). Thus, the new prepared city land-use plan of Prague divides the territory, among other things, also in accordance with their stabilization into 4 basic types:

- Protected preservation area
- Stabilized areas of existing buildings
- Transformation areas within the boundaries of the city and existing buildings
- Development areas outside the city boundaries and existing developments.

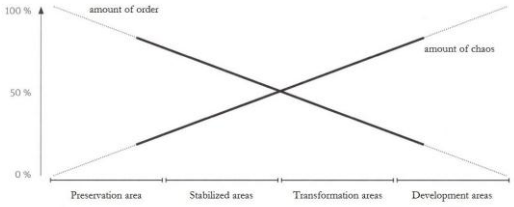

Figure 5 – Flexibility and stability – four degrees of regulation
Source: Koucký et al. 2014

The preservation area, in Prague moreover under the patronage of UNESCO, certainly does not allow much flexibility. Neither do stabilized areas with utilized high-quality buildings. Transformation territories, the above-mentioned city jungles – in the plan these need flexibility for dealing with investors very much. And, finally, the development areas, i.e. new premises for construction, apart from the areas built-up nowadays, except for general needs of the city, should be open to various other variants of development as much as possible. In practice, this different regulation means that these particular types of areas are in the city plan subject to a variety of directions or, in other words, to regulation of various intensity and limits of utilization and transformation of the territory.

Flexibility in the case of urban spatial planning means, for example, limits of utilization of the territory from the viewpoint of transportation, instead of a directive functional delimitation of what the territory must contain. In the case of the long-term intentions of the city, thus a kind of contemporary analogy to the strategic plan, flexibility then means the possibility of a slight stepping aside of development trends and a possible rapid adaptation to new trends.

Or, flexibility can also mean the greatest possible individualization and localization of the solutions of intentions of the development, with the existence of only a few important citywide framework rules. Hygienic limits, noise, limits of infrastructure, hierarchized street network, maximum height of buildings, or, for example, the need for social housing, these all are frameworks on whose foundation the current existence of the city stands. When negotiating individual projects among investors, cities and other participants, these can be discussed directly, over a common map, and there is no need to supplement them further with any other directives such as the aforementioned future functional uses.

It seems, that we are probably in a situation where, any minute now, only a common map and a few rules will be called a land-use plan – see the frames outlined above – which will be written down on a few pages of a supplementary handbook for city negotiators and approvers of projects. And perhaps the time is not far when even the words "limit" and "directive" will not be the right ones and the notion of information and informative, in the interlinked society, will be playing the same role in ensuring a rational development of cities in society built on the basis of democratic mechanisms. Especially at a time when we do not have the slightest idea of many future professions that will occupy a significant percentage of the population already in the following 10 or 15 years.

5.2 RESILIENCE OF NEW STRUCTURES

And now on the resilience of structures. Already from the introduction we know that an old and still existing structure is stable and a new structure is always unstable. But how can a city planner, hand in hand with a decision-maker, know that the new structures promoted by them will become stable in the future? That they will survive and endure the subsequent thinning over time and that they will succeed in competition with other structures? That, in consideration of the main purpose of work for the public sector – continuity of development – they will last longer than one electoral term or work period?

Resilience of structures needs to be estimated from structures from the past and trends in other, similar cities. For example, if a city center is filled with cars, we already know that walking is an older structure than driving a car, a given part of the city was built still at the time when there were no cars, only narrow roads for pedestrians, then preventing car access will undoubtedly be a stable structure in the future. Or, if in the vicinity of some brownfield there is a stabilized built-up area, which contains a complete hierarchy of public spaces, streets, parks and other, for example, social amenities, then it is possible, in this neighboring brownfield, to plan a distinct neighborhood only with respect to, for instance, the capacity of the surrounding transport infrastructure. However, if in the surrounding hierarchies there is some other significant deficit (Figure 6), the development of a new nearby area should primarily fill in these "holes". If this approach is violated, it will be subsequently necessary to bend and change the result of the bad decisions again and the instability of these and all the following structures will be immense.

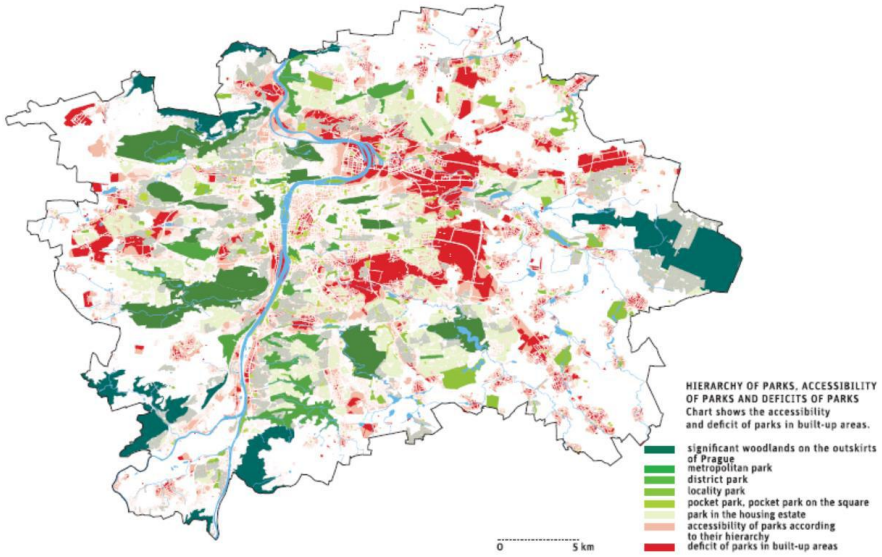

Figure 6 – Deficits of parks in the City of Prague
Source: Hudeček et al. 2016

What is also essential for the creation of stable structures is the fact that the oldest process in reality – concentration – will unstoppably continue until we reach a situation in which either we all end up in driving distance of one hour or we will be similarly close to each other, yet within walking distance. Humankind will seek and favor rather the other way of realizing concentration because we do not want to destroy the environment with extreme transportation. Extreme regulation, which is currently being implemented in the Czech Republic – and as a consequence of which even the number of new apartments required by a normal reproduction of population in the city (Prague) will not, after all, be built – does not seem to be a too resilient structure for the future.

Of course, it is possible to perceive resilience also as the resilience of the entire city system and ensuring its functioning and existence. Fires and deficiencies of infrastructure, blackouts or epidemics, these all are real threats in which the aforementioned catastrophologists see the truth and which we must also bear in mind when deciding, managing and planning the city.

5.3 SUMMARY AND CONCLUSION

Experience from a country which in the past 150 years has been through a development via many different political systems – a multinational monarchy, inter-war democracy, totalitarian regime, wild capitalism, anchorage in Western European supranational structures – is extraordinary when looking for answers to questions posed in the introduction.

Natural development built on long-term development trajectories was specific even in contemporary post-communist cities. However, despite this, if we look inside the urban structures thoroughly, especially at their inequalities and hierarchies, it is possible to overcome even the highly contradictory developmental tendencies and to find the naturalness for further urban development planning once again.

Rather than planning, it is a sequence of decisions, let's say merged into a certain succession – thus, management. Planning, especially strategic planning, in the mirror of the experience of post-communist countries seems to be at least a confusion of notions, but rather an activity of "planning for planning itself".

The solution for overcoming the developmental discrepancies of the post-communist city is the understanding of the deepest developmental processes – concentration and thinning – and subsequently the identification of their influence on the developmental structures existing in the city and further operating. By setting an appropriate degree of flexibility for different areas of the city, and by priority effort in resilience of newly built structures, it is possible to establish, after the era of a too much swinging pendulum of the social development, the much needed stability of further development and to avoid the developmental excesses that get repeated.

The example of Prague, a city well appreciated by tourists, but not so well perceived from the viewpoint of its own inhabitants in the current situation of a large increase of living costs, seems to be more than suitable in this respect.

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ID 1341 | THE USE OF BOUNDARY SPANNING IN SPATIAL PLANNING AND COMMUNITY PLANNING TO PROMOTE WELLBEING

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1 INTRODUCTION

This paper will discuss how the activity of boundary spanning in the context of spatial and community planning can be harnessed to promote wellbeing via advancing a networked approach to governance using six defined types of cross-boundary activity (buffering, reflecting, connecting, mobilising, weaving & transforming) in order to ameliorate against "wicked issues" (Rittel and Webber, 1973) through the realisation of 'The Nexus Effect' and the building of social capital through engagement and participatory mechanisms. The Nexus Effect primarily relates to collaborative gain and according to Ernst and Chrobot-Mason (2011:18) it occurs through understanding that, "organisational leadership is more than the sum of its parts; it is more than groups working in independent isolation, within their own boundaries – it is the nexus of groups working collaboratively across boundaries that produces direction, alignment and commitment".

Figure 1.0 – Boundary Spanning Schematic Leading to the Nexus Effect
Source: Ernst and Chrobot-Mason, 2011

Relatedly, social issues that cannot be resolved by one actor alone but require the collaborative action of multiple actors have been cited by Sorensen and Torfing (2009) as providing the rationale for boundary spanning e.g. tackling poverty and social exclusion. The author takes this normative agenda as a starting point for conducting this multidisciplinary investigation as it has been said that such connective capacity is highly significant in order to realise mutually supported and qualitatively good outcomes in networks surrounding complex governance issues (Koppenjan and Klijn, 2004; Healey, 2006; Edelenbos, Bressers and Scholten, 2013).

1.1 PLANNING FOR WELLBEING

Furthermore, the research is both relevant and timely as since the Stiglitz Report (2009) was released, there have been marked shifts in the metrics of social progress used by governments. Doran et al (2014) take this conversation forward by highlighting how the introduction of wellbeing as a policy goal in Northern Ireland could serve as a theory of change by offering alternative visions of the future via asking questions to develop a meta-narrative such as, "what price do we pay (in terms of wellbeing) for continuing divisions and segregation?". Further rationale in favour of a more outcomes focused policy direction has been presented by Easterlin (1974) and Matthews (2006), who respectively elucidate the shortcomings of GDP as a determinant of social progress in light of the Easterlin Paradox – findings that GDP and life satisfaction are not correlated in a linear way - and the less quantifiable social and environmental trade-offs that GDP inherently obscures. Figure 2.0 displays updated findings where the inverse relationship between increases in gross domestic product (GDP) per capita and decreases in the annual rate of change in life satisfaction (used as a measure of wellbeing) have been gleaned.

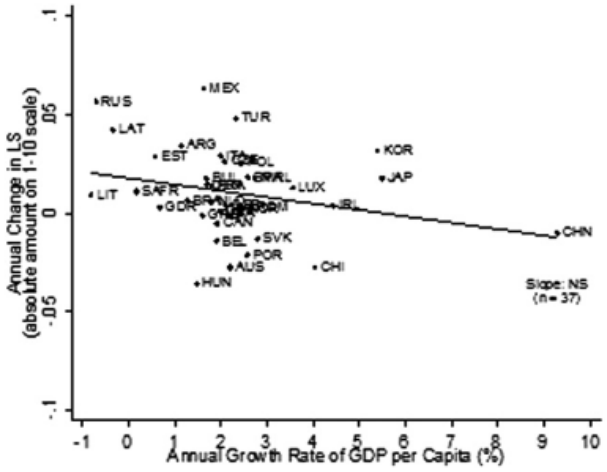

Figure 2.0 – Average Annual Rate of Change in Life Satisfaction and in GDP
Source: Easterlin, 2010

It is important to recognise that the increasing discourse on wellbeing is a growing global phenomenon and that its origins as an organising principle can be traced to the Kingdom of Bhutan and to indigenous cultures within Latin America (Frey and Stutzer, 2010). Planning practitioners as the democratic custodians of the public interest and the resulting conduits of social change (Forester, 1980) have a duty to seek the enhancement of the general populace's wellbeing equally as much as they strategise in shaping emergent futures. On the subject of collaborative planning Healey (1997a) goes on to remark that,

> *"We make structural forces as we are shaped by them. So we 'have power' and…can work to make changes by changing the rules, changing the flow of resources and, most significantly, by changing the way we think about things". (p.49)*

1.3 LINKAGES BETWEEN BOUNDARY SPANNING, SOCIAL CAPITAL AND WELLBEING

In connection, boundary spanners are actors involved in activity of the same name and there are two key types of boundary spanning agents. Firstly, there are those whose role is principally defined and determined by new cross-sectoral governance arrangements and secondly there are individuals who perform this role as part of a wider portfolio of activities (Williams, 2010). These individuals form a distinctive and valuable class of leader which can operate across the five dimensions of boundary as identified by Campbell et al (2009). These dimensions have been denoted in the literature as: vertical, horizontal, stakeholder, demographic and geographic. Although for this particular investigation, the author will focus on examining the stakeholder dimension in greater detail as it best enables for the exploration of related concepts e.g. collaboration, social capital and participation. All of which are prerequisites for the boundary spanning, spatial and community planning processes.

The stakeholder dimension refers to the collaboration and leadership necessary beyond an entity's boundaries, or conversely within its internal departments in order to successfully fulfil its exigencies and duties e.g. avoiding back-to-back planning issues and information sharing between the planning and environmental health departments. It predominately concerns the management of an entity's relationships with external partners (i.e. members of the public, polity & enterprise) where issues relating to current affairs, community, commerce and the environment may often arise. Boundary Spanners are innovators who utilise their competencies in diplomacy, mediation and negotiation together with their characteristic feature of a collaborative mindset to overcome aforementioned boundaries by preventing them from becoming borders. A border stifles human potential and restricts innovation plus creativity but by the same token, boundaries can also be converted into frontiers: "the location where the most advanced thinking and breakthrough possibilities reside" (2011:219).

Trust has been conceptualised as social capital within the literature and has been articulated by Putnam (2000:19) as pertaining to, "connections among individuals – social networks and the norms of reciprocity

and trustworthiness which arise from them". By harnessing the resource colloquially known as civic virtue, it is possible to socially engineer win-win scenarios rather than win-lose situations and incrementally recast society by, "developing the I" into "We" (Rohe, 2004). Consequently, this approach is facilitative in engendering the collective wellbeing of the many – "eudaimonia, often translated as individuals reaching their daimon or human flourishing" (Newton, 2007).

In Putnam's seminal text, "Making Democracy Work" (1993) his findings explain how the creation (and scrupulous use) of social capital can ameliorate against a miasma of intractable social issues. They have been non-exhaustively listed as; 'defection, distrust, shirking, exploitation, isolation and disorder' which work in pernicious circles to intensify one another. Social capital is believed to remedy these conditions by restoring social equilibrium through instilling individuals, communities and wider society with high levels of 'civic-ness'. Civic-ness is formed on the predicators of cooperation, trust and compromise, all of which are facets of the nebulous phenomenon of reciprocity which akin to dysfunction, occurs in mutually reinforcing and self-perpetuating ways (Ibid).

Social capital which is an intangible asset and has been described as 'critical resource for community wellbeing and resilience' (Assist Social Capital, 2017). Whereas participation mechanisms have been said to lead to empowerment as genuine engagement redistributes power, therefore changing the status quo (Arnstein, 1969).

The above observations are noteworthy contributions to dialogical debates in spatial planning as improving outcomes and narrowing inequalities cannot be achieved without multi-actor and multi-scalar responses to form integrative solutions adapted for the 21st century (Peel, 2013). The ensuing conversation uses the field of spatial and community planning to unpack the themes associated with promoting wellbeing via boundary spanning responses. It embraces the coterminous nature of these different themes and reconfigures them in a novel way by advocating that planners assume the mantle of reticulists and by so doing, emphasise the importance and value of boundary spanning agents and activities to address the shift brought about by changes in state-market-civil relations (decentralisation) together with its associated impacts on the local governance landscape.

The influence of boundary spanning actors has been said to be less well examined in the literature surrounding network governance in terms of the functioning and performance of networks, especially those existent around complex urban projects (van Meerkerk and Edelenbos, 2014). However, a strong correlation between the presence of boundary spanners and improved network performance, understood to consist of policy formulation, decision-taking and policy delivery, exists (2014:2). An identified challenge in terms of bridging between both the conventional land-use planning practitioner and the more contemporary community planning officer is that there's a dearth of boundary spanning actors operating from within the public sphere and instead are to be predominantly situated within private and voluntary sector environments.

Mediation, trust building and managing multiple accountabilities are core competencies and attributes of boundary spanners as successful collaborators who enable improvements in stakeholder network performance. This is brought about by the enhancement of social capital stocks to tackle crosscutting, pan-institutional and inter-jurisdictional issues e.g. designated communities experiencing persistent deprivation levels (Wagenaar, 2007; Williams, 2011). Interdependencies between various actors require reciprocity and common understandings as interactions must be sustained durably over time amongst diverse sets of stakeholders with often heterozygous or competing interests. In order to secure greater network and economic efficiencies, it's vital for boundary spanners to navigate the dilemmas associated with partnership working in the midst of multiple accountabilities, participants with higher autonomy and lower incentivisation towards network level goals (Provan and Kenis, 2008).

Likewise, each actor may harbour a different perception of policy problem definitions and the most appropriate responses and interventions depending on their chosen frame of reference (Teisman, 2000). However, in the words of Kooiman (2000:142), "no single actor, public or private, has the knowledge and information required to solve complex, dynamic and diversified problems…no single actor has sufficient action potential to dominate unilaterally". This reality represents the proverbial 'carrot' for collaboration towards the formation of a constructive interface between societal quandaries such as improving wellbeing, reducing health inequalities and the ensuing approach to governance employed (Grint, 2005).

The aforestated approaches comprise issue-specific networks, which ‘emerge around concrete complex urban problems dealing with specific urban development’ (2014:6) where networks established are temporally sensitive and goals desired finite and readily quantified e.g. the reclamation of a vacant brownfield site to be used as an open recreational space for leisure purposes. The realisation of optimal network performance in the context of closed-loop problem definitions has been said to necessitate a sizeable connective capacity resource (Edelenbos et al, 2013). To assuage silo mentalities and mindsets formal (first order) and informal (second order) boundary spanners must play active roles in governance processes occurring in the fresh spaces between public, private and societal organisation although empirical research relating to this contemporary phenomenon is rather scarce (Van Hulst et al, 2012).

The determiner of an agent's boundary status has been said by Levina and Vaast (2005) to be their ability to, "gather and transfer information from outside of their sub-units". A sub-unit is understood to be either their home institution, organisation or primary contractor and thus is internal; or it can refer to foreign institutions, organisations and stakeholders and hence be external. It's the combination of these different linkages which form the effectiveness and competencies of boundary spanners by enabling them to achieve 'The Nexus Effect' and improve multidimensional wellbeing outcomes. These outcomes across a remit of health, education, economy, safety and environment are vitally important because it’s at this part of the results-chain at which positive change has been said to occur for the citizen (Friedman, 2005).

2 SPATIAL AND COMMUNITY PLANNING INNOVATIONS

The author has chosen to investigate how the innovation of boundary spanning leadership can be utilised within a planning context as the art of reticulism has been shown to remain integral to both the person and community-centred enterprises of spatial and community planning (Peel, 2013; Farnan, 2016). Furthermore, such reticulism in urban planning is not a new phenomenon as it can be traced back to early 20th century Geddesian principles as embodied by the planning visionary's triad of "Folk – Work – Place" which served as a precursor to modern understandings of sustainability as illustrated by Figure 3.0 below.

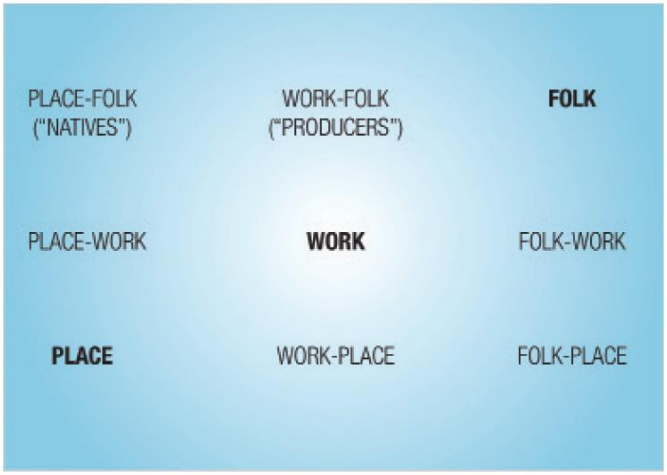

Figure 3.0 – Geddes’ Triad of Place-Work-Folk
Source: Welter, 2002

Along these lines, research conducted by Kent and Thompson (2014) highlights the capability of planning to better connect the built and natural environments in order to improve the quality of life of individuals and also to strengthen communities. Public participation and the effective engagement of citizens surrounding land-use decisions and the delivery of public services which affect them engender community empowerment via ascribing them with the power to decide and control. Such initiatives foster a sense of community and belonging within places where people, live, work, learn and travel. Consequently, a supportive context of community connection has to be an influential determinant of positive mental and physical health (Ibid).

3 THE USE OF BOUNDARY SPANNING IN PLANNING TO PROMOTE WELLBEING

At the crux of this think-piece is what the application of boundary spanning to improve wellbeing across the “stakeholder dimension” of boundary might look like from a spatial and community planning perspective. From an island of Ireland context, both planning enterprises share an obligation to conduct public engagement exercises and have built this necessary phase into the formulation of their respective plans

(Department of Environment NI, 2015; Department of Environment NI, 2014; Government of Ireland, 2007; Department of the Environment, Community and Local Government, 2015).

The engagement method of 'Focus Groups' has been selected to outwork the practice-oriented example as they are utilised widely but, "can be specifically geared towards prioritisation…concentrate on a single issue or a programme of topics to obtain ideas and innovative thinking" (Chambers, 2002) thereby clearly accommodating the notion of wellbeing.

The tabulation below is a summary outlining the six different practices of boundary spanning leadership as itemised previously via Figure 1.0. Each column represents one of the five different types of boundary, however in this instance we will be focusing on the stakeholder dimension in particular. It's important to acknowledge that the various phases of boundary spanning are non-linear and iterative e.g. if one element of the model has already taken place such as, 'Transforming' it doesn't necessarily mean that this won't have to be re-worked or updated later on in the collaborative process or engagement initiative (Center for Creative Leadership, 2013). Before going into further detail, I will provide clarification of the three key strategic goals of boundary spanning practice.

Firstly, "Managing Boundaries" as shown below in Table 1.0 relates to the first step of spanning boundaries which is ironically to create or strengthen them e.g. defining roles and areas of specialisation. And in so doing, taps into the power of differentiation in order to build safety and respect across boundaries (Yip et al, 2009).

Secondly, "Forging Common Ground" seeks to identify what is universal and shared. This strategy is about finding common ground and bringing individuals and groups together to achieve shared goals. Fundamentally it is about integration through adoption of a collaborative mindset in order to build trust, engagement and shared ownership across boundaries (Ibid).

Penultimately, "Discovering New Frontiers" as figured below relates to the discovery of new possibilities and potential within the intersections and fresh spaces existent between boundaries. These intermediate zones characterise frontiers which involve the harmonisation of differentiation and integration by way of simultaneously unifying novel groupings of difference and specialisation. In such scenarios, the whole is demonstrably greater than the sum of its parts due to the amalgamation of expertise, experience and resources in a complex system driven by a shared vision. In essence, the synergies reaped through the realisation of The Nexus Effect (collaborative gain) support breakthrough innovation, transformation and reinvention.

Managing Boundaries					
	Vertical Boundaries (Hierarchical Levels and Ranks)	Horizontal Boundaries (Functions, Units, and Disciplines)	Stakeholder Boundaries (Partners, Suppliers, Customers, Communities)	Demographic Boundaries (Gender, Religion, Age, Culture, Ethnicity, Education, Ideology)	Geographic Boundaries (Locations, Regions, Languages, and Markets)
Buffering—monitor and protect the flow of information and resources across groups to define boundaries and build intergroup safety.	During times of organizational crisis, remind people of proper communication channels to ensure critical information flows across levels effectively and accurately.	Prepare a team "charter" of roles and responsibilities. Share it with others in the organization so they understand the amount of work your group can effectively manage.	Specify "nonnegotiables" or "rules of engagement" that specify how your team and an external team will interact during a joint venture.	Sponsor affinity groups within your organization (women, Hispanics, etc.) so that nondominant groups have an opportunity to network and share experiences with their own group members.	Build a "buffer" between your team and headquarters if agendas are competing. Create a document that summarizes your team deliverables and get written buy-in and agreement from HQ.
Reflecting—represent distinct perspectives and encourage knowledge exchange across groups to understand boundaries and foster intergroup respect.	Initiate a meeting with senior management so that you can advocate upward the innovative ideas generated by your employees.	Invite leaders from other units to your team meetings so they can discuss how each unit can help the other to solve pressing organizational problems.	Arrange "field trips" for your team to visit client sites or customer markets. Ask them to take photos and document what they observe as it relates to an organizational initiative or strategy.	When an issue comes up that involves race, gender, or religion, consider making it a "teachable moment." Let everyone have a chance to share and learn about their differences and unique perspectives.	Encourage international business travelers to add an extra day to their trip to hit the streets, experience the culture, and learn about the local market. Ask them to share their observations at a team meeting upon return.

Table 1.0 Part (a) – Boundary Spanning Leadership Summary

Forging Common Ground					
Connecting—link people and bridge divided groups to *suspend boundaries* and build intergroup trust.	Host an outdoor lunch picnic to bring people together from different levels of the organization. Ask everyone to "share a blanket" with people they don't get to spend time with regularly.	Set up some comfortable chairs and a whiteboard in the connector wing between two departments to encourage informal, collaborative conversations across functions.	Rotate meetings with a key vendor between your site and theirs. When visiting their site, request time for "putting names with faces" by having your team walk around and meet people in their organization.	Mix it up outside the office. Get people of different generations, races, or nationalities together for a sporting event.	Reserve the first 15 minutes of your bimonthly global videoconference for relationship building. Spend time sharing personal milestones, news, or updates of interest.
Mobilizing—craft common purpose and shared identity across groups to *reframe boundaries* and develop intergroup community.	Establish "skip level" meetings for your staff to have conversations with your manager about higher organizational goals and strategy.	Following an organizational merger, get people from the same functions in the two organizations together—have them craft a compelling mission about a new business opportunity that everyone can rally behind.	Articulate a goal that your organization and another organization can partner around in order to beat a common competitor in the marketplace.	Identify a core set of organizational values that are inclusive and motivating for all demographic groups.	Install common organizational symbols, wall hangings, and icons in all your offices that build community and represent "your organization at its best" anywhere in the world.

Table 1.0 Part (b) – Boundary Spanning Leadership Summary

Discovering New Frontiers					
	Vertical Boundaries	Horizontal Boundaries	Stakeholder Boundaries	Demographic Boundaries	Geographic Boundaries
Weaving—draw out and integrate group differences within a larger whole to interface *boundaries* and advance intergroup interdependence.	Debrief a successful organizational accomplishment by bringing groups together across levels to discuss what factors created the "win" from their unique vantage points.	When divisions are in conflict over an issue, help them articulate the source of their differences and then explore ways to creatively reconcile them for the overall good of the organization.	Integrate the unique strengths of your organization and an organization in a different sector (e.g., nonprofit, government agency) to solve a shared problem in your community.	Bring different demographic groups together to talk about market needs and trends within their respective groups, and how the organization could create new products to serve them.	Develop "glocal" solutions—draw and integrate ***global*** best practices within your company and ***local*** market knowledge to envision new products, services, or internal processes.
Transforming—bring multiple groups together in emergent, new directions to *cross-cut boundaries* and enable intergroup reinvention.	Bring members of your network together who represent vastly different levels from top to bottom. Facilitate a dialogue about "how they see things in the business" and explore an unconventional idea that arises from the conversation.	Host "alternative future conversations." Invite anyone in the organization to attend; provide no agenda other than to imagine the ideal, transformed organization five years from now.	Strike a small-scale partnership with your no. 1 competitor. Explore new, collaborative frontiers that could be discovered together.	Create action learning teams with "maximum diversity" (e.g., age, gender, race, culture, education, personality differences) to develop business plans of entirely new markets or services that your organization currently offers.	Get the whole system in the room. Bring together a large cross-section of key leaders from around the world once a year to envision "game-changing" opportunities.

Table 1.0 Part (c) – Boundary Spanning Leadership Summary
Source: Ernst and Chrobot-Mason, 2011

Additionally, as a precursory note before providing more detailed explanations of each of the six boundary spanning steps. The framework above has been co-opted from the corporate world for management consulting. It has been repurposed in the context of innovations in planning in order to principally derive more social benefit from it:

i. Buffering All sets of stakeholders (spatial/ community planning professionals and members of the public) must initially agree upon the timing of the engagement process e.g. frontloaded, and for how many and how long each focus group session on improving health and wellbeing outcomes ought to last. Moreover, what the desired level of participation is e.g. to inform, consult, involve, collaborate or empower must also be decided (IAP2 International Federation, 2014). Being open and transparent about the level of resources available at the outset of the engagement exercise is vitally important in order to manage expectations alongside acknowledging related limitations. Moving forward participants need to be made aware of how their input will be used and where appropriate, feedback on contributions received should be given and made publicly available. Likewise, the provision of information on proposals, plans or services is part of any communication plan to support engagement but does not in itself constitute community engagement. One of the first collective endeavours at this stage will be to develop a

shared understanding of wellbeing encompassing its hedonic, eudaemonic and quality of life dimensions to provide a reference point to work from.

ii. Reflecting This boundary spanning practice is about fostering respect of difference and this is a vital factor for forming consensus in participatory planning processes. Through immersion, or having experience in an alternate environment on the other side of a boundary divide it is possible for individuals and groups to enhance mutual respect and understanding. A focus group made up of spatial/ community planners in concert with members of the public is likely to consist of a wide demographic range of individuals with different needs, values, beliefs and wellbeing preferences. In addition to "field trips" to different neighbourhoods to appraise which the most appropriate spatial and service delivery interventions would be in order to promote health and wellbeing e.g. provision of more active transport routes and the establishment of healthy food producing community gardens; the social learning that takes place as part of formal engagement activity enables groups to build social capital, learn about one another and develop respect for differences as well as commonalities. Furthermore, shared engagement processes create an opportunity for spatial planners and community planners to gain a better understanding of one another's roles, professional cultures and jargon to facilitate the integration of services and generate new innovative ideas. With both explicit, tacit and procedural knowledge exchange taking place in such instances, the probability of planning practitioners to make sense of the complexity inherent within 'planning for wellbeing' is increased. What's more, as leaders of the Reflecting process charged with building respect amongst various actors by moving beyond an "us versus them" outlook e.g. not dedicating all resources solely on addressing a single wellbeing matter such as the creation of mixed income, mixed tenure housing developments. But instead looking at the non-material aspects of societal prosperity as well (Aller and Seligman, 2016).

iii. Connecting The Connecting boundary spanning tactic is about building trust within and between multiple stakeholder groups and builds upon the previous step of Reflecting which garnered respect between assortments of individuals. As mentioned earlier in the paper, trust and social capital enhance the effectiveness of collaborative projects which rely upon networked nodes of governance – thus, having a greater capacity to bring about positive social change (2014:4). Striving to find where mutual interests and win-win scenarios lie to bridge divergences between individuals and groups is a key tenet of successful boundary spanning Connecting practice. Often the answers to moving beyond the labels of "Planner" and "Local Resident" lie in the construction of strong personal relationships by allowing focus group participants time to get to know one another on an individual basis. To instigate this process, focus group meetings could be held at community centres located across a local government authority's administrative area on a rotational basis. These act as introductions to the identities of respective members of the public involved in the participation exercise and provide credence for their unique perspectives and a broader level of trust to overcome any disagreements or difficulties in decision-making, nullifying them as creative tensions. More than merely bringing groups together, the leadership activity of Connecting over time leads to the development of mutual confidence and integrity in stakeholders' words and actions (2011:134). From a professional angle, it means breaking down silos between planning functions and in this instance engagement processes and timelines. Subsequent data, feedback and observations received through engagement should also be pooled and shared in the same vain the appropriate institutional arrangements and trust being sustained on a long-term basis. With this step secured, a shared direction is established toward the Nexus Effect as individuals' personal interests have been divested in favour of commitment to the interests and wellbeing of others.

iv. Mobilising Boundary spannings 'Mobilising' phase refers to the act of developing community and when looked through the stakeholder dimension perspex, an entirely new set of power relations and deliberative approaches to planning for societal betterment are spawned. The mobilisation transcends the former status-quo and is embodied for instance by spatial/ service delivery initiatives like the "Community Right to Buy" and/ or the "Community Right to Control" which empower communities to take over buildings, land or the running of services if they have the resources or can prove they've the ability to run it better. Forging common ground by bringing together spatial and community planning is symbolised by the proliferation of intergroup community. The mobilisation of people to envision a more inspiring future where the value of health and wellbeing serves to improve peoples' daily lives can be enshrined by becoming a dedicated topic in the public participation in planning process. A key challenge for mobilising around the wellbeing agenda is to ensure that it is inclusive and meets the needs of a diverse

range of groups. Moreover, mobilising creates a new common shared identity across all individuals by encouraging groups to move outside their smaller group identity and move inside a wider collective identity which caters for all and simultaneously provides a new frame for finding productive solutions to problem definitions. To elaborate further on the rather ambiguous term of identity, it can be conceived either as a vision i.e. a place without childhood obesity, a goal i.e. to reduce greenhouse gas emissions by 50% by 2020 or a task i.e. decide upon how wellbeing outcomes are to be measured and monitored. The resultant state is "intergroup community" and is described by Ernst and Chrobot-Mason (2011) as, "a state of mutual belonging and ownership that develops when boundaries are reframed and collective action is taken".

v. Weaving - The "weaving" tactic in spanning boundaries relates to advancing the interdependence of individuals and/ or groups. It involves integration of the two aforementioned strategies of "managing boundaries" and "forging common ground" illustrated in Figure 1. In combination, these form two fundamental human needs – differentiation and integration which when explored unleash synergies yielding transformative results. Weaving is a paradoxical action where differences are drawn out among the group or organisation mobilised previously during step 4 and then creatively brought together or reconciled to advance intergroup interdependence. For example, a stakeholder engagement technique predominantly designed for land-use planning would be the use of charrettes whereas a more archetypal community planning technique would be to conduct community surveys. Post data collection, if these two bodies of knowledge could be overlaid or shared, then new insights can be produced as explicit and tacit knowledge are required to understand the concept of wellbeing holistically for the development of more targeted approaches to achieving outcomes. Translating weaving from barriers to frontiers is the key to tapping into the transformative potential of differences to uncover the most pioneering and innovative opportunities. Accurately encapsulated as a "journey of change" (2011:173) weaving occurs over a series of time and can involve interjurisdictional, cross-regional and cross-boundary activities and dialogues which are often related to wider strategic change initiatives. Some of the wellbeing barriers boundary spanners would grapple with to effect positive change are along the thematic spectrum of health, education, economy, environment and society. By situating them in place e.g. the London neighbourhood of Tottenham, then citizens and planners can work in partnership to look at the scripts that people have written for them and how these can actually change. The link between the engagement mechanism and the conduits of spatial and community planning to generate responses for wellbeing remains place and context dependent as there are no generic answers to issues with multiple path dependencies and in fact, within such a dynamic environment of antagonism, this observation is likely one of the few things to remain static. Hence, it's essential to take a variegated approach to decision-taking on highly similar data gleaned during focus groups regarding health and wellbeing in unison with the public. This is due to demographic, geographic, cultural and class-based differences in communities who may present with a common problem e.g. fear of crime but taking steps to remedy this could be vastly different for instance, high-level police-led CCTV surveillance interventions or the simple installation of some more street lighting and Neighbourhood Watch signage in less hostile and challenging environments.

vi. Transforming The final step of the boundary spanning process is "Transforming" and is about enabling reinvention and realising the states of renewal, alternative futures and emergent possibilities once the preceding "Weaving" phase has made the ground febrile for advancing intergroup interdependence on conceptual, procedural and operational levels. When this occurs, groups form a new identity and the author proposes that such a paradigm shift has already taken place in the field of health via integration of both the medical and social models of health into jointly delivered, "health and social care" by public health authorities. This denotes the cross-cutting approach necessary for spatial planning and community planning to model in order to maximise the value of the symbiotic relationship inherent between both planning enterprises with a key aspect of that being public participation and stakeholder engagement. Redefining the conventional structure and agency relationship between the planning systems, planning professionals and the communities and people they serve is a hallmark of the transformative change sought for by boundary spanning initiatives, which ultimately forge alternative futures which are as exciting as they are necessary. What we are witnessing above is the powerful strike up effect of intergroup reinvention which is the last requirement before entering the Nexus Effect – "in it groups are empowered to co-create emergent direction, align collaborative action and renew, re-envision and reimagine themselves and their environment in ways that enable them to

thrive in a dynamic world" (2011:202). Significantly, all five practices described previously can also be used during the transforming process and as such it represents the boundary spanning approach in its totality (synthesising ideas from the fields of organisational development and social psychology).

4 CLOSING REMARKS

In summary, the vision of spatial and community planning responses conducive to promoting health and wellbeing, like reinvention is an unfolding process without a definitive start or end as there's no single agreement, intervention or incidence to unravel the intractable issues that Rittel and Webber (1973) spoke about as cited at the beginning of the paper.

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ID 1364 | REACHING FOR SIMPLICITY; CITIZEN PARTICIPATION, COMPLEXITY THEORY AND THE TRANSPORT MEGAPROJECT

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1 INTRODUCTION; COMPLEXITY THEORY AND LANDSCAPE RESEARCH

> *"I would not give a fig for the simplicity on this side of complexity; I would give my right arm for the simplicity on the far side of complexity" Oliver Wendell-Holmes Jr.*

At every stage in a research project an academic is faced with the problem of acknowledging complexity, attempting to process its implications and reaching for the elusive simplicity that we hope exists on the far side. For a researcher in the field of landscape architecture this is a particularly pressing problem, due to the nature of the landscape itself as a complex emergent system. My PhD is a participatory research project, which aspires to acknowledge the role of all participants in this system as "researchers, as agents of change, and as co-constructors of landscape knowledge" (Deming and Swaffield, 2011: 202). So, in studying the implications of complexity theory for public engagement with a transport megaproject, what glimpses might there be of simple solutions?

Complexity theory can help us to comprehend the nature of landscape, its problems and their possible solutions, because it offers a way of understanding how landscape works. It gives us the perspective of 'emergence', from which we can aspire to conceptualise the landscape in a pragmatic way. The term 'emergence', in the technical sense used by complexity theorists, was coined by English philosopher G.H.

Lewes (Goldstein, 1999: 53). Lewes' definition is pithy: "The emergent is unlike its components insofar as these are incommensurable, and it cannot be reduced to their sum or their difference" (1875). Steven Johnson's illustration of the concept expands upon this. He describes a number of different emergent systems in animals, humans and computing. He uses the example of studies of slime mould (Dictyostelium discoideum), beginning with the work of microbiologist Evelyn Keller from 1968 onwards (Johnson, 2001). He describes the apparent simplicity of slime moulds, which are, during the winter, independent single-celled amoeba-like organisms. However, under the conditions of a temperate summer the individuals "coalesce in to a single, larger organism which begins its leisurely crawl across the garden floor, consuming rotting wood and leaves as it moves about" (Johnson, 2001:13). For thirty years this phenomenon was not understood, as scientists believed the behaviour must be instigated and controlled by 'pacemaker' cells, but such cells could not be found. Only in recent years has there been an agreement that "slime mould aggregation is now recognized as a classic study in bottom-up behaviour"(Johnson, 2001:16). In other words, it is self-organizing, a complex adaptive system that illustrates the nature of emergence: "the movement from low-level rules to higher-level sophistication is what we call emergence."(Johnson, 2001:18).

In the slime mould therefore, its aggregated manifestation is far more than the sum of its individual cells and as such its form and behaviour could not be predicted from knowledge of the initial circumstances, the constituent cells and the basic known laws, for example of physics and chemistry, that apply to them. Substitute the word 'components' for 'cells' and you have a description of how landscape works. Goldstein's definition of emergence supports this understanding, as he says that it is: "the arising of novel and coherent structures, patterns, and properties during the process of self-organization in complex systems. Emergent phenomena are conceptualized as occurring on the macro level, in contrast to the micro-level components and processes out of which they arise."(Goldstein, 1999 :40).

This is arguably an accurate description of any landscape, rural or urban, in any part of the world. Some, such as a river delta, may be more apparently emergent, from the point of view of the human observer. The basic components of the delta are known and understood in that scientific knowledge informs us as to the nature and behaviour of water molecules, as well as about the nature and processes of the soils of the delta. However, it is not possible to accurately predict the branching of the river and overall form of the delta landscape from this knowledge.

For Goldstein, then, emergent phenomena are 'coherent'. This view is one shared by British landscape architect and author Simon Bell. In his influential book 'Landscape, Pattern, Perception and Process' Bell states he is influenced by chaos theory and emergence but states that "the changing world is neither chaotic nor unpredictable"(Bell, 1999: 5). He wishes to see "the fundamental natural order in the world"(Bell, 1999: 8) and claims that "irregular effects on process and pattern can be mistaken for randomness, but belie a deep order" (Bell, 1999: 35). Emergence is not a theory of randomness, and it operates in an essentially coherent manner, in that emergent phenomena arise out of the normal operation of known rules or scientific 'laws'. An acceptance of the unpredictability of the resulting landscape forms and processes is, however, central. Many examples could be cited of unpredictable landscape events, such as erupting volcanoes, landslides, floods, forest fires or sudden rapid growth of shanty towns, which arise from the nature of the component systems of those landscapes.

In recent years landscape architecture has arguably begun to draw on emergence theory through its links with the field of ecology. Ecologist William Holland Drury Jr. wrote of the problems associated with "clinging to romantic notions of nature's grand design" (Drury, 1998: 1-2) and the misguided rhetoric of "nature's balance" (Drury, 1998: 5). In contrast to Bell, he emphasises that the "first principle is that chance and change are the rule" (Drury, 1998: 6). Drury traces back some of the influences over our tendency to look for 'balance' and equilibrium in ecosystems to Linnaeus' essay of 1749; "The Economy of Nature". Linnaeus' system of classifying living things and allocating to them a standard globally applicable scientific name using 'genus' and 'species' is common to many specialisms today, and pertinent in this case as landscape architects will have gained their understanding of plant and animal species from ecologists and horticulturalists who depend on the Linnaean taxonomy of Kingdom, Phylum, Class, Order, Family, Genus and Species. For Drury, "Linnaeus's system carries a profound subliminal message: that each species was created as it is." (Drury, 1998: 16). Drury's lifetime of experience and observation, however, suggest that species cannot be so easily distinguished; "I remember my botany professor searching over a hillside covered with individual plants of a particular species until he found a "perfect" representative of the variety he had in mind. His comment when he finally found the right specimen was that this individual was

"typical"." (Drury, 1998: 17). This anecdote reminds us of exactly the problem/opportunity of emergence; that as we can never truly state what the precise characteristics of any species are, it is untenable to subscribe to an essentially fixed view of nature. This observation directly addresses a key proposition of emergence theory, summarised as follows by leading thinker in the landscape field, landscape architect Rod Barnett: "the real processes, objects and relations that comprise the world and which landscape architecture undertakes to design, organize and manage, are continually unfolding, producing further relations and making new connections." (Barnett, 2013: 4-5). Thus, as a species of wildflower evolves so do its pollinators, these changes in turn influence the wider ecological systems of insect predation, soil and vegetation patterns. All of these systems are open to each other and ultimately to every other system in the landscape, be it climate, hydrology or human society.

In 2008 ecologist and landscape architect Frederick Steiner offered this definition of landscape: "A landscape is more than a picturesque view; it is the sum of the parts that can be seen, the layers and intersections of time and culture that comprise a place – a natural and cultural palimpsest." (Steiner, 2008: 4).

This description of the structural qualities of landscape and acknowledgement of the interplay of layers of physical objects, human systems, natural processes and the passing of time, is true to the landscape architect's view of landscape that persists for the most part to the present moment, but the publication in 2013 of Barnett's 'Emergence in Landscape Architecture' marks a significant move by the academic establishment away from Steiner's definition and towards a qualitatively different understanding, which has real and potentially revolutionary implications for practice. Barnett repeatedly reminds us that "Open systems are complex...their components are connected by networks of feedback loops operating at different levels, different scales and different rhythms. Landscapes work like this." (Barnett, 2013:49-50). In accordance with Barnett, this paper takes landscape to be an emergent, non-linear and open system. In order to illustrate this position, emergence theory will be applied to a brief description of the rural parish of Ashley, near Manchester, England, which is due to be the site of construction of high speed rail infrastructure in approximately 2030.

2 UNDERSTANDING THE PROBLEM

HS2 is the UK's proposed high speed rail network. Due to begin on site in the south of England in 2017, it has much in common with transport megaprojects the world over. It has a long linear site, the boundaries of which are subjective and indefinite. It poses questions about how the identity of the infrastructure at a local scale nests within the national scale. There are problems of compulsory purchase, very substantial land take and large numbers of residents affected by proposals. Running the project are hundreds of people from different disciplines, including designers, planners, engineers, ecologists, archaeologists, politicians and public engagement professionals, who are led by changing governments (for HS2, four prime ministers within five different governments to date). Multiple cascading effects begin before work starts on site, within a landscape that is already complex and emergent, with its own flood events, road building programmes, imminent housing developments and so on. A new railway line, therefore, has impacts apart from its physical presence, as it traverses the countryside between major cities it has significant effects on human psychology, social networks and economies as well as on views, road networks, hydrology and all other ecological systems. There is, arguably, nothing along the proposed alignment of such projects that remains unaffected during the phases of anticipation, construction and post-completion.

For local landscapes, the risk is that the result will be "universal low-density mess." (Nairn,1955: 363). Nairn was writing in a special edition of the Archtitectural Review, in which he describes a journey from Southampton to Carlisle. His concern is the sameness that he encounters at different locations on the journey, and the likelihood that, by the end of the twentieth century "there will be no real distinction between town and country" (Nairn, 1955: 365). Such erosion of distinctive local character is at least as pressing an issue now as it was in 1955, and it is not clear that HS2 will make any positive impact on the problem.

The above considerations suggest why complexity theory is relevant here. This body of thought leads us to begin to understand landscape at every scale as an emergent entity, in that the continuously evolving whole is greater than the sum of its parts and comprised of a limitless number of interacting open systems.

It is “a continuum of multiplicities continually self-differentiating” (Barnett, 2013:44). Compare the fluidity of this landscape condition with the operation of many public engagement exercises, which attempt to operate within a complex emergent field and yet themselves are inflexible, top-down ‘snapshots’ of public opinion. Such processes tend to start too late, finish too early and be determined by adherence to statutory requirements rather than motivated by a desire to access the expertise held by citizens about their local landscapes. HS2 Ltd plan to “engage with communities over the life of the project” (HS2 Ltd, 2015: 9), such that “national pride in the system is matched by a sense of local ownership” (HS2 Ltd, 2015: 11), yet an examination of HS2 Ltd’s public engagement processes as enacted on the ground in rural English parishes illustrates some of the inherent problems.

2.1 ASHLEY, COMPLEXITY AND HS2

Ashley is a small parish in rural Cheshire, with Ashley village at its centre. It lies immediately south of Greater Manchester, and the border with the city is formed by the river Bollin. It covers an area of approximately 8.5 square kilometres and has around 325 residents, living in a predominantly agricultural landscape with scattered farmhouses and other dwellings. It has a railway station, The Greyhound pub, St Elizabeth’s church (built 1880) and a cricket club (1888). In the past there have been a village shop, post office, primary school and filling station. These facilities used to contribute to a stronger sense of a village centre, but their continued operation has not been sustainable.

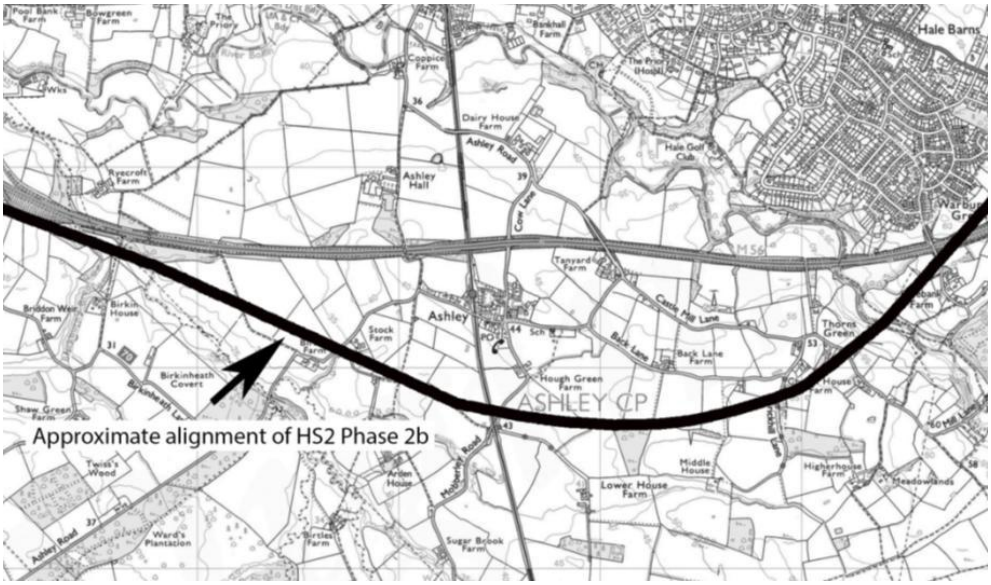

Figure 1. Ashley, Cheshire (author’s own image, base map from digimap.edina.ac.uk)

Ashley was chosen for study because it is already the site of significant linear transport infrastructure projects (see Error! Reference source not found.). The railway line of 1863 bisects the village, running on a north-south alignment. The M56 motorway divides the parish west to east. Runway two of Manchester Airport is a significant presence in the landscape, lying very close to the Parish’s southeastern boundary, and the proposed HS2 alignment isolates Ashley village between the new line and the M56. This research is concerned with the potential cumulative effects of these infrastructures. The motorway is a significant presence in Ashley, through noise and air pollution from vehicles, visual impact of the structure and associated gantries, and traffic flow to and from junctions. In winter, motorway traffic is clearly visible and audible from places in the village, for example the churchyard. The Victorian railway line has less impact both visually and in terms of noise, but still presents a physical landscape barrier. Large-scale transport infrastructures therefore contribute to an erosion of the clarity of Ashley’s rural character, whilst research data shows that residents still feel strongly that theirs is a rural place that is rich in wildlife and natural beauty.

Central to conceiving of the landscape of Ashley is recognition that, like all landscapes, it is undergoing a constant process of change and development, and will continue to do so. There are obvious changes marked on the landscape itself, visible to the eye and in later years recorded by cartographers; the building

of roads, the demolition of houses and enclosures of agricultural land, for example. Less visible but still identifiable are changes in occupation patterns by plant species, demographic changes and climatic shifts. Impossible to comprehensively observe and quantify, further changes continually occur; rhizomatic fungal growth in the topsoil at Stock Farm, fluvial deposition from the River Bollin, changes in the emotional states of drinkers at the bar of The Greyhound. Thus, the place has never 'become', it is simply always 'becoming'. This way of seeing stands in contrast to careless perceptions of timeless, unchanging rural landscapes. In the case of Ashley, we are alerted to the fact that conditions at any given moment are never fixed so must not be idealised; likewise its future is not mappable in the sense of factual prediction, but only as an imaginative projection of the future.

Essential to accepting that landscape is emergent is the concomitant notion that it is an open system. The loops and branches of its constituent processes are not separable and always open to being affected by other systems. Within the boundaries (real only to people) of the Civil Parish of Ashley it is possible to make measurements of air quality, but it is not meaningful to study this in isolation from the air quality of Manchester, or the northwest region. Likewise one could study aquatic species in the Bollin, but never in isolation from the effects of conditions upstream, in the wider catchment and in the entirety of the hydrological cycle. Barnett explains the effects of this view on our thinking as landscape architects; "A landscape has no outside, for its connectivity to other multiplicities is always complete." (Barnett, 2013: 52). This is an essential acknowledgement that site boundaries, or in this case the entirely arbitrary parish boundary, absolutely cannot be considered to be the true 'edge' of a site; "A landscape is only and always an ecotone, an edge, a continuous immanent spatiality." (Barnett, 2013: 52).

In Ashley, then, landscape architects (and, for that matter, planners or civil engineers) can in no way consider themselves to be external to the site or in control of its future. Each person is indivisible from the site; "In my capacity as an effect, an event, a component of the assemblage that is arranging around me, I am inseparable from the hour, the season, the air, the street, the 'weeds' in the cracks of the paving. I am always in composition with the landscape I am connecting to." (Barnett, 2013: 52).

Such concepts of landscape are not new. In his poem of 1731, 'Epistle IV, To Richard Boyle' Alexander Pope gives his advice to a landscape designer about the role of the 'genius of place', which we would also call 'spirit of place' or 'Genius Loci';

> *"Consult the Genius of the place in all;*
> *That tells the waters or to rise, or fall;*
> *Or helps th'ambitious hill the heav'ns to scale,*
> *Or scoops in circling theatres the vale...*
> *Now breaks, or now directs, th'intending lines;*
> *Paints as you plant, and, as you work, designs."*

Here, Pope casts the 'Genius' as the power of the landscape itself, which exerts its agency through controlling rising and falling waters, the making of mountains and valleys. In this verse, it very much has intentionality, as it directs visual elements or 'lines' in the landscape, and as 'you' toil away in your humble role of planting, it paints the wider scene and designs the world around you. In this particular poem, the designer is incidental to the wider system or network of the landscape, which never ceases to design itself.

2.2 PHASE TRANSITION AND CASCADING LAND DEVELOPMENT

To inhabitants of Ashley, a landscape meshed in the protections of green belt policy, the constant change inherent in the landscape may seem incremental, continuous and not especially momentous. Things do develop, but the scene is much the same and the various actors broadly similar. However, complexity theory illustrates the nature of change such that we can understand how, in apparently stable and constant conditions, revolutionary developments can occur. Roger Lewin calls such an event a 'phase transition' and uses the example of the point at which life on Earth changed from being contained entirely in single-celled organisms, to the advent of multi-cellular organisms. He says that for 3 billion years on this planet, "the highest form of life was the single cell...it was aeon upon aeon of mind-numbing sameness. Then suddenly, and with spectacular effect, the trick of cellular differentiation and aggregation in to multi-cellular organisms evolved. An explosion of new forms occurred" (Lewin, 1993: 17-18).

Other writers use different terminology to describe the phase transition in a complex system. Per Bak, also writing in the 1990s, cites landscapes as exemplary complex systems (Bak, 1997) and describes how "minor disturbances may lead to events called avalanches, of all sizes. Most of the changes take place through catastrophic events rather than by following a smooth gradual path." (Bak, 1997: 1). Bak's use of 'catastrophic' here denotes a sudden large change rather than a disaster, but it is worth recalling that such 'avalanche' phase transitions can indeed lead to landscape disasters, as for example in multiple flooding events across the world as our climate continues to change.

Rod Barnett uses the term 'bifurcation' as synonymous with 'phase transition'. He points out that, in landscapes, they are not especially unusual, and that, in the normal course of events, "A bifurcation can lead a single system into a distribution that none could have foreseen." (Barnett, 2013: 45). It is this quality that gives landscape the capability "to generate new patterns of organisation"(Barnett, 2013: 28). A very localised example of this would be when a river, such as the Bollin, running through sandy soils, breaks through the banks of a deep meander and forms an ox-bow lake, with the river itself taking a new course, and forming a new boundary between local authority areas, parishes and neighbouring farms. Over the border in to Derbyshire, in a limestone karst landscape, a river might suddenly disappear underground or emerge in a new location as the action of the water exploits gaps in the bedrock, changing the course of the flow. On a larger scale, whole new land masses can be created at sea by deposition of material during storms (reference here), or as a result of volcanic activity. These land forms can and do appear within a matter of hours. Whether the process and its results are perceived by humans to be destructive or constructive, the landscape has the capability to self organise afresh, generating new ecosystems. Such phase transitions could be triggered by the interactions of any number of the many open systems which combine to make up the landscape, for example in the case of a bush-fire in the Australian outback, which could be triggered by a combination of several factors such as a lengthy drought, long-term land management policies and the act of discarding a single cigarette butt.

Consider then, the landscape of Ashley. Its many physical and social systems are intimately connected to each other and influence each other in countless ways. It may seem to the present generation of Ashley residents that, despite the previous construction of transport infrastructures, the essential rural character of the place has not changed much for hundreds of years. This might make it difficult for inhabitants to conceive that it could ever change in any very significant way, and hard to accept that a proposed transport megaproject could soon be built. Many of the ongoing changes to the place have emerged gradually over time and have been prompted by change agents perceived to be from within the parish itself. The Vicar leaves to take up a new post, a farm tenancy ends, a tree blows over in a gale. A potential revolution in the quality of everyday life, caused by political decisions made in Westminster, seems perhaps overly dramatic and unlikely. However, Ashley is a complex adaptive system like any landscape, and the possibility of a phase transition is inherent. A significant flood event, for example, would not be out of the question, given the parish's river boundaries, high water table and existing minor flooding problems. The coming of the HS2 line seems, at the time of writing in spring 2017, to be very likely, albeit in changeable political times. The increased level of complexity brought about by this event, or even just the anticipation of this event, has the potential to tip this landscape in to phase transition, from a rural to an urban condition, as changes in the various open systems of the parish culminate in the removal of its green belt status. This paper, in common with my PhD thesis, uses the term 'cascading development' to describe an emergent process of exponential development of land in a local area where a landscape intervention, such as HS2, makes a change so disruptive that a cascading effect is produced.

Crucially, it is not just the actual construction of the infrastructure that could cause such a phase transition, but a number of other, earlier, related events, for example the first announcement of the alignment of the route, or a visit by HS2 officials to the local area. Even a ten-minute talk given by an academic researcher one evening at St Elizabeth's Church, or an hour's walk through the countryside for research purposes, could likewise tip the balance of the system in to a new phase through the butterfly effect, as described by Lewin (1993) and now in common use.

Figure 2 indicates just one possible scenario for cascading development in Ashley and its immediate surroundings. There is no way of knowing for certain what the post-HS2 outcomes for the landscape will be, and there will also be no way of identifying with any certainty what will have triggered any phase transition that does occur. The ongoing economic growth of Greater Manchester and the airport, for example, could trigger a phase transition in adjacent landscapes, but it would probably not be possible to separate the effects of this growth from the effects of the commencement of operation of HS2 services, or

from the construction of the line itself. This is an imagined future which indicates one possibility over a thirty year period from 2018, and is not a forecast. It is reasonable, however, to propose that a scenario like this is possible for many rural places along the length of the HS2 line.

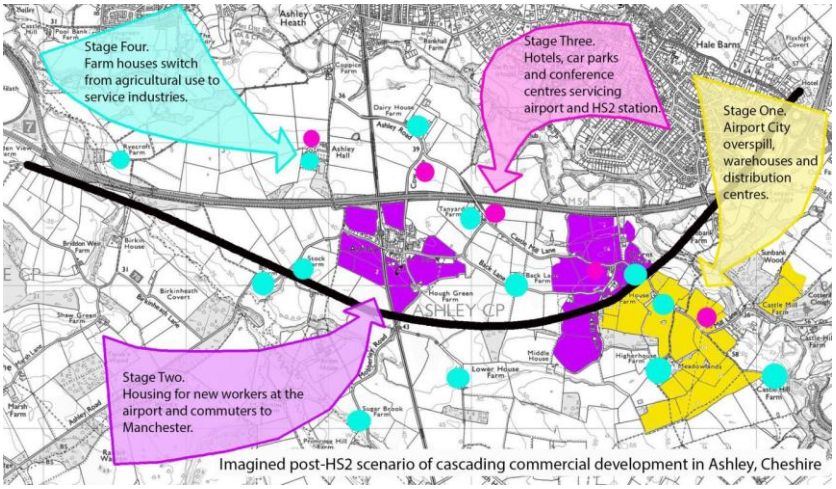

Figure 2. Author's own image, base map as figure 1.

Error! Reference source not found. shows the growth of Manchester airport and airport city such that, when the HS2 station opens at the airport, this tips the balance and causes Ashley to be removed from the green belt. A phase transition to exponential economic growth occurs, and Ashley becomes a hotspot for science parks, distribution centres and service industries such as hotels, conference centres and car parking, which service the demands of this growth. London is now only a one-hour train journey away, and Birmingham can be reached in just over 30 minutes, so commuting long distances is less of a barrier to growth. New housing is required locally to accommodate new workers. Planning permission for this will be easier to get as the rural character is lost to light-industrial development. The local landowner is keen to develop and so the village, bounded now on all sides by motorway and railway, quickly trebles in size. Farm land severed by HS2 and land contaminated by use over four years as a construction compound becomes available for development. Eventually, the island of farm land now trapped between Ashley village and Greater Manchester, succumbs to continued demand for new homes and opportunities for huge profits for developers. Existing domestic and farm buildings in Ashley become divorced from the agricultural functions of the land as farm land is developed and remaining land is drawn back under the control of the landowner and farmed by contractors rather than tenant farmers.

This scenario may sound extreme, but illustrates exactly the kind of growth desired by the UK government when they published 'Rebalancing Britain, from HS2 Towards a National Transport Strategy' (Department for Transport, 2014). This document suggests that the very first priority for the government is to reduce the pressure on Londoners of the capital city's high house prices, a congested public transport system and high costs of office space (£110 per square foot), by developing land in the North and Midlands.

By contrast, it points out that "commercial property prices in the North are nearer £28 per square foot. And yet businesses are more reluctant to move there" (Department for Transport, 2014: 12). HS2's promised short journey times, then, are presented as an opportunity to shift the pressure for development elsewhere:

> *"In London it will ease the pressure on commuters by adding 18 new train paths per hour into the capital. In the Midlands and the North it will make cities more competitive by connecting them better to the global market ...Put simply, cutting the journey time ... makes it more likely that more businesses will base themselves in the North and that existing firms will prosper...The effect should be transformational." (Department for Transport, 2014: 13)*

It seems reasonable to conclude, therefore, that phase transitions to cascading development of housing and business premises in the North and Midlands, far from being the unintended consequences of HS2, represent the aspirations which have driven the project from its early stages. Furthermore, rural locations

such as Ashley, with existing transport infrastructure and in close proximity to both a growing city and a high speed station, will be the landscapes most likely to experience such transitions.

Complexity theory, then, can help landscape professionals and researchers to understand what may happen to a landscape, and why it could occur. This paper proposes that the most important issue arising from this understanding is the likelihood that the future of such places will probably be determined by the commercial interests of big business, in particular property developers such as the major house building companies. As pockets of land severed by the new railway become available, it is therefore timely to ask what will stand between local rural landscapes, each with their own distinctive identity and history, and exponential profit-making land development? And in studying the implications of complexity theory for public engagement with a transport megaproject, what glimpses might there be of simple solutions?

3 UNDERSTANDING SOME ANSWERS

Complexity theory leads us to begin to understand landscape at every scale as a continuously evolving whole, greater than the sum of its parts and comprised of a limitless number of interacting open systems. Compare the fluidity of this landscape condition with the operation of most public consultation exercises, which attempt to operate within a complex emergent field and yet themselves are inflexible, top-down 'snapshots' of public opinion. Such processes tend to start too late, finish too early and be determined by adherence to statutory requirements rather than motivated by a true desire to access the expertise held by citizens about their local landscapes.

3.1 WHY STATUTORY ENGAGEMENT PROCESSES ARE NOT THE ANSWER

Since the announcement in January 2012 of the Government's decision to go ahead with phase 1 of High Speed 2, an enormous amount of literature has been generated that communicates various aspects of the scheme to a number of different audiences. The document that communicates intentions to members of the public who live along the proposed route is the Environmental Statement (ES) for Phase 1. This is the main source of information through which the public are consulted about their landscapes and responses to it have supported members of parliament in considering the effects of the proposals. The complete 50,000 page ES includes written and mapped information about the impacts of the proposals on places along the route and also presents digital visualisations of changes to landscapes. It is the only collated source of accurate information regarding the future of those landscapes and indeed constitutes almost the whole of the Hybrid Bill that enshrines HS2 in law.

Individuals and groups had 23 days to respond to the contents of the ES by submitting a petition to parliament. If the petition was judged valid then petitioners presented their evidence in person, in parliament, to the Commons select committee. 1,925 petitions were received. A similar petitioning process occurred in the House of Lords in April 2016, during the second Lords reading of the Bill, when 820 petitions were accepted. None of these petitions to the Commons or the Lords had the potential to stop HS2 entirely or to substantially affect the route or stations, as this is beyond the power of the select committees.

The petitioning system is an adversarial one. When you speak in front of the select committee; "The Promoters [Department of Transport] have a similar opportunity to present counter arguments against your case." (House of Lords, 2016: 2).This means that some of the most senior barristers in the country, representing the power and weight of Parliament, are set against the petitioner, who presents to several officials, including the Chair, members of the House of Lords or Commons, at least one Queen's Counsel (an eminent lawyer) for the Department of Transport and various other HS2 officials. The Lords' own final report on the process stated that "Time and again during our proceedings, we encountered difficulties with the current procedure. It became abundantly clear to us that petitioners found it cryptic and complex to understand, and labyrinthine to navigate." (House of Lords Select Committee on the High Speed Rail (London - West Midlands) Bill, Special Report of Session 2016–17: 8). There have been detailed criticisms of this combative and inflexible top-down consultation system, dependent as it is on a document of vast scope and impenetrable structure (Bynoe, 2016, Phillips, 2017). It is also based on a model which attempts to meet statutory requirements for consultation by disseminating information to inhabitants in such a way as to create the least possible public resistance to proposals.

Much has been learnt about such consultation in the field of innovative technologies. Initiatives towards engaging the public 'upstream' of developments in science and technology, rather than later on in the process, can be understood as a reaction to the 'Public Understanding of Science' (PUS) model, launched by the British Royal Society in 1985 (Bauer, 2009, Joly and Kaufman, 2008, Demos, 2004). This model has been widely criticised for addressing an "undifferentiated entity called 'the public', which was to be educated and informed in order to secure support for innovation and reduce social resistance to technology." (Joly and Kaufman, 2008: 2). The assumption that the public are a single unit of people with a coherent experience, and furthermore that they can be designated as 'uneducated' for the purposes of the consultation clearly does not stand up to scrutiny, and neither does the assumption that increased education on a particular topic will in fact lead to greater support for that issue. The PUS model "assumed that if people had all the information, and were able to understand probabilities, they would be more supportive of science" (Bauer, 2009: 4). Bauer, of the London School of Economics, finds that, on the contrary "on controversial issues there is no correlation at all" (Bauer, 2009: 4) between degree of knowledge about a scientific topic and inclination to support that technology.

This model, "in which lay people are conceived as passive and empty recipients of information" (Joly and Kaufman, 2008:2) still has powerful influence over the thinking and policy of all kinds of organisations, public and private. In the case of high speed rail, any public engagement based on such a deficit model would be highly unlikely to increase popular support for infrastructure proposals. On the contrary, it is possible that the more people learn about the probability of cascading development proposals in the wake of core infrastructure development, the greater the likelihood of objections being raised.

In these circumstances, to deliberately draw the attention of citizens to likely future developments would not be in the commercial and/or political interests of powerful stakeholders. An example of this might be the construction of a high speed station at Manchester Airport, adjacent to Ashley. HS2 Ltd confirmed that this is their intention on the 15th of November 2016 (HS2 Phase 2b Command Paper: 39). Land development pressure and increase in values as a consequence of this decision will be significant: such stations require public transport links, car parking, increased road traffic capacity and hotel accommodation for example. These will be built largely on green field sites within Greater Manchester; immediately to the east of Ashley's parish boundary. None of these developments will gain popular support from residents in Ashley, many of whom are tenants and not property owners, so have nothing to gain from knock-on effects on land values, and a great deal to lose in terms of agricultural livelihoods, landscape character and tranquillity. The temptation for a government department to minimise 'education' about such likely developments must be significant. Sherry Arnstein's influential Ladder of Participation (Arnstein, 1969) places 'manipulation' on the lowest and least desirable rung of the ladder, with 'therapy' just above it. The function of both is to educate people in to a view that the proposed plan is best. Arnstein's ladder does not extend below ground in to the cellars of public consultation, where it is possible to imagine that an additional rung, perhaps called 'obfuscation', would denote a desire to avoid educating a public about matters that will affect them. Efforts towards genuine public engagement may also be hampered by "the pro-technology belief system, the inertia of administrative power, the intense industry lobbying" (Wang, 2016: 16). In such circumstances, it seems reasonable to assume that the Department for Transport's own engagement strategy will not be sufficient to secure a meaningful voice for inhabitants in the futures of their own, emergent, landscapes.

3.2 INTERIM CONCLUSIONS: CASCADING ENGAGEMENT WITH LANDSCAPE

If the public engagement strategy of a central government department is, in its present form, too top-down, unwieldy and unresponsive, then perhaps local planning procedures might offer a framework for engagement with landscapes on the massive scale required by such revolutionary changes. The possibilities offered at the Parish level by Neighbourhood Planning legislation in the UK form an ongoing element of this research in Ashley. Initial findings, however, indicate that there is a likelihood that land ownership patterns and the business interests of developers will have very significant influence over this outwardly democratic exercise (Phillips, forthcoming).

In contexts such as those described here, it can be difficult to imagine a strategy for public engagement that could possibly hope to respond to complex challenges with any hope of having positive outcomes for the landscape. It could seem that the scale of resources and advance preparation needed to answer these problems render the goal of citizen-led participation in a transport megaproject entirely unrealistic.

However, just as the landscape emerges from very simple low-level interactions between systems, it might be possible for effective public engagement to do the same. As this PhD research develops it will investigate how public engagement with landscape could be encouraged to cascade just as development does. This idea seems to offer the possibility of a fluidity of response that could have a power commensurate with that of the challenges in prospect. It also raises a number of questions that I would be very happy to discuss with conference delegates. An important consideration, for example, is whether a landscape phase transition could, theoretically, be 'steered' in any way. I am also interested in whether citizens could/should routinely initiate their own landscape proposals. I will consider what the role of the landscape professions should be, and what might constitute the rules of engagement for professionals, inhabitants and government. I want to know how citizens could participate in a process that begins with simple interactions but embraces evolving complexity, setting the agenda from the beginning and iteratively rewriting that agenda to respond to emerging circumstances. Work in Ashley suggests that prioritising an embodied experience of the landscape is crucial as a means of understanding the requirements of that landscape, so how should this finding be applied? In all of this the aim will be to achieve fuller understanding of complexity, and a 'reflective capacity' rather than simplistic consensus about the long-term future of local landscapes.

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ID 1424 | HOW TO APPROACH URBAN COMPLEXITY, DIVERSITY AND UNCERTAINTY WHEN INVOLVING STAKEHOLDERS INTO THE PLANNING PROCESS

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1 CHARACTERISTICS OF CONTEMPORARY CITIES

Complexity, diversity and uncertainty are three key attributes of contemporary cities which mark their recent evolution and strongly condition the task of urban planners and public officials (Fernández Güell et al., 2016; Fernández Güell, 2006; Camagni, 2003).

The first common feature of all large and medium-sized cities is the high level of complexity of the operational processes that take place within the city and in its hinterland. Complex systems such as the climate and the economy are characterized by being spontaneously self-organizing and adaptive to changes that happen in their context (Holland, 1995; Stacey, 1995). Just as well, it is widely accepted that cities are one of the best examples of complex systems (Portugali et al., 2012; Allen, 1997). As a rule, complex cities experience unpredictable non-linear dynamics and they are capable of self-transformation in order to adapt to changing contexts. Therefore, urban problems are multidimensional and complex since they emerge in an intricate dynamic network of relationships from societal, economic, environmental and political issues.

The operational complexity of cities has been a recurrent handicap for urban planners because it complicates urban analysis and policy making. In the past, planners have tried to deal with complexity with either sophisticated mathematical models or just plain narratives, in both cases without much success. Despite its challenges to analysts, the phenomenon of urban complexity should not be obviated or simplified in excess; on the contrary, it should be conceptually understood as much as possible. The understanding of complexity can facilitate a more informed and evolutionary vision of cities than the standard reductionist and static approaches of many planning processes.

The second feature inherent to any big and medium-sized city is social diversity. This important, but elusive feature has been analyzed by well-known authors from different perspectives such as architectural design (Alexander, 1965), neighbourhood fabric (Jacobs, 1961) or participatory process (Innes and Booher, 1999). As a matter of fact, diversity is not just about ethnic or geographic origin. It is also about social diversity, different cultural expressions and multiple economic interests. Basically, urban diversity is generated by the disparity and heterogeneity of local and supra local agents who intervene in the socioeconomic activities of a city. In addition, cities are diverse because they are inhabited by a wide spectrum of citizens who are not as well organized as large stakeholders, but who have the right to be involved in city affairs.

Diversity and governance are intrinsically linked. In a democratic urban community, political decisions are the outcome of diverse interest groups with different levels of power, with the elected politician as the

catalyst for local consensus. On the one hand, a high level of diversity complicates the governance system for concealing multiple interests, but on the other hand, urban diversity may have positive effects on social cohesion, economic performance and social mobility. In brief, diversity is an important asset of cities in so far as conflicting interests of urban stakeholders are accommodated by mutually satisfactory negotiations.

The third attribute of the urban realm is contextual uncertainty, which influences most decisions regarding city development. All kinds of changes constantly affect cities, generating growth, stagnation or decline. Changes obviously bring a large dose of uncertainty to planners' forecasts (Klosterman, 2013; Abott, 2005). All those responsible for foreseeing the long-term evolution of a city are limited by current forecasting tools. Most of these difficulties are due to the highly complex and dynamic nature of contemporary cities, which prevents the precise and reliable foresight of events. This situation is aggravated when the city operates in a turbulent and changing context such as economic recessions or natural catastrophes.

Faced with the difficulty of foreseeing the future, many planners simply give up long-range planning and focus on contingency planning, which means an unconditional surrender to unexpected changes in the urban context. Although the future remains unpredictable, urban development can be foreseen and alternatives can be designed. Without the ability to anticipate the future and interpret alternative scenarios, cities are in a weak position to face coming challenges. Therefore, by learning to manage uncertainty we might be able to prepare for the future and try to shape it actively.

Finally, it is important to note that the three above mentioned urban features retrofit each other. For instance, a city with a high level of diversity augments its operational complexity while the accelerating rate of socioeconomic change intensifies the degree of uncertainty and complexity of cities.

2 NEED FOR A FRIENDLIER APPROACH TO URBAN COMPLEXITY

2.1 PREVIOUS ATTEMPTS TO APPROACH URBAN COMPLEXITY

Since the 1960s, a traditional approach to deal with urban complexity has been systems theory. The pioneer work of Ludwig von Bertalanffy on General Systems Theory (1968), Jay W. Forrester on Systems Dynamics (1961) and Charles West Churchman on Systems Approach (1968) opened the door to specific contributions toward a systemic understanding of the city. In that respect, the works of John McLoughlin on the application of systems approach to urban and regional planning (McLoughlin, 1969), Jay Forrester on urban dynamics (Forrester, 1969) and Ira Lowry on transportation modelling (Lowry, 1964) are well known. These innovative contributions to the understanding of urban systems produced the first generation of "large-scale urban models" in the 1960s and 70s.

These early attempts to understand urban systems raised great expectations in the planning field, but they had dubious practical results. In fact, the planning literature has recorded recurrently how the application of sophisticated quantitative models during the 1960s in urban renewal programs of large American cities was a resounding failure (Lee, 1973; Brewer, 1973). At that time, large scale urban models emerged as part of an effort to modernize planning and make the field more scientific; however, they were severely criticized. In short, they demanded large volumes of data and offered little detail, they did not behave reasonably with respect to variables for which no data were available, they reinforced command-and-control planning, and indeed they were very expensive (Batty, 1994; Lee, 1994). And above all from our present perspective, early large scale urban models were unable to interpret and simulate complex urban functions.

Three decades after the failure of those early experiences, the Institute of Santa Fe, in New Mexico, began to work with the concept of complex adaptive systems (Gell-Mann, 1994; Kauffman, 1995; Waldrop, 1992). Soon the Santa Fe scientists realized that the city was one of the most complex adaptive ecosystems because it encompassed a multitude of different agents interacting among themselves and the environment. Researcher Geoffrey West considered that the city exhibited capabilities for creating emergent structures and for self-organization (West, 2010). This new concept certainly enriched the original systems approach, but it further complicated urban analysis, making very difficult to predict the evolution of the city.

More recently, the science of complexity driven by smart city initiatives has embraced an integrated systemic approach that brings together a broad spectrum of powerful techniques and concepts that may be applied to the urban context. These include agent-based modelling, cellular automata, network theory, multi-scale thinking, field theory, statistical physics, and scaling theory. The new integrated approach intends to address transdisciplinary issues such as adaptability, robustness, resilience, regulation, and conflict in the urban realm. Nonetheless, little progress has been done in developing real integrated smart projects as some researchers admit (Mattoni et al., 2015; Lombardi et al., 2012).

In brief, after the early models of the 1960s, urban planners have dealt with complexity using narratives, conceptual models and sectoral simulation models, but most of the time they have carefully avoided large integrated quantitative models (Roo and Silva, 2010). Nevertheless, as cities evolve, an understanding of urban dynamics, networks and complexity is becoming increasingly important for planners to successfully guide their visions and policies.

2.2 TOWARDS A NEW APPROACH TO URBAN COMPLEXITY

Most quantitative approaches based on systems theory, while academically interesting, are not always easy to implement in a collaborative process with stakeholders from multiple professional backgrounds due to the high level of technical skills required as to their limited capacity to sketch out complex issues (Carlisle et al, 2016). Confronted with these circumstances, planners should be capable to develop more qualitative and friendlier conceptual frameworks in order to interpret city's complexity in a more holistic way and, at the same time, facilitate effective involvement of local stakeholders along the planning process. Accordingly, the new conceptual framework should fulfil four basic requirements.

Firstly, planners should be able to display the complex nature of cities by depicting all major sectoral systems, local stakeholders and functional relationships in a comprehensive and holistic manner. Conceptual maps and process diagrams could help to structure complex phenomena by displaying graphically all the variables of a problem and the role of diverse stakeholders.

Secondly, planners should develop new communication tools that facilitate the involvement of local stakeholders in the process of collaborative planning when analyzing complex urban issues. These tools should enable the search of consensus among urban stakeholders as well as the management of conflicts and dissent among them.

Thirdly, planners should incorporate foresight tools into the planning process to produce holistic future visions of the city. These tools would enable them to act in co-evolution with the ever-changing urban context. By co-evolution we understand the continuous reconfiguration of actor-networks and city systems as a consequence of continuous societal, economic, technological and environmental changes.

Fourthly, planners should develop innovative research approaches capable of handling fuzzy inter-connected problems with the aid of collective intelligence and qualitative tools, instead of trying to solve clearly defined problems through standard quantitative tools. These approaches should respond creatively to fuzzy agendas based on a process of evolving collective intelligence.

In brief, a new model framework based on the former premises could provide conceptual support for spatial planners who are currently struggling to gain a holistic understanding of a city's structure and operations, while it evolves in an uncertain context.

2.3 A NOVEL CONCEPTUAL FRAMEWORK

One way to deal jointly with the complexity, diversity and uncertainty that are intrinsic to contemporary cities is to conceptualize the city as an evolving functional ecosystem, capable of adaptation and self-organization in response to context changes (Fernández Güell et al, 2016). Additionally, the systemic approach should be reinforced by foresight tools as part of the planning process, thus helping planners and stakeholders to look beyond their short-term problems.

Thus, a city may be regarded as a complex ecosystem of connected elements or parts with common purposes, in which human activities, linked by communications, interact as the system evolves dynamically in a given socioeconomic and physical context (Berry, 1964; McLoughlin, 1969). In other words, a city is built from multiple singular initiatives taken through time by a great number of players who are tightly interconnected among themselves. In this ecosystem, any spatial or structural alteration to one of the elements can modify the other parts of the system.

The technique of concept mapping (UN-Habitat, 2007) was used to explain the complex operation of a contemporary city. A schematic model was designed in which the urban ecosystem was synthesized and visualized as a set of different interrelated subsystems (see Figure 1).

Urban demand subsystem. This subsystem, composed of citizens, economic stakeholders, societal institutions and visitors, is placed in the centre of the model. All the demand segments place a number of requirements on the resources, services and infrastructures provided by the urban subsystems so that they can live and work in a city under good conditions.

Urban supply-side subsystems. From the supply side, the societal, economic, environmental and political subsystems of the city strive to interpret and satisfy requirements from demand segments. Each subsystem is described by its resources, operating agents, the services that are provided and the technology that is used.

Figure 1 – A city's functional system (Author's elaboration)

Spatial subsystem. The societal, economic, environmental and political subsystems request specific physical conditions from the spatial subsystem in order to operate properly. Thus, the so-called spatial subsystem, regulated by urban planning, is responsible for providing basic infrastructures, transport systems and a wide range of community facilities and housing units.

Technological subsystem. All the previous functional subsystems and demand segments are serviced by a technological subsystem made up of multiple platforms, which ideally should be horizontal in nature, although they may only operate for a single sector.

External trends. Finally, the overall urban system is subject to external change factors such as demographic transformations, economic cycles, technological innovations or environmental impacts, which affect its functional balance. Foresight studies provide a wide range of techniques for identifying and assessing all kind of trends.

Although it may be perceived as reductionist, this systemic conceptualization of the city has several advantages: it displays a simplified, intelligible abstraction of the inherent complexity of our urban reality; it emphasizes functions and processes rather than spatial patterns; it expresses schematically the dynamic evolution that a city may undergo over a given period of time; it critically analyzes the diverse relationships

between urban components; it provides the bases for decision-making processes; and it exposes the dominance or dependence of stakeholders over functional subsystems.

This systemic approach can help to achieve a better understanding of the underpinnings of the urbanization process and establish a common ground for collaboration among local stakeholders.

2.4 RESEARCH METHODOLOGY

A new systemic approach to cities was developed and validated with various Spanish experts in city sciences and stakeholders over a four-year period. Research was based on a mix of consulting and academic activities which progressively added value to the final research product. The chronological sequence of the validation process was roughly as follows.

The author's personal experience for many years in university teaching and leading consulting projects showed the need for a comprehensive user friendly systemic approach to cities which could be useful not only for professional urban planners but also for a wide range of urban stakeholders. A preliminary systemic model began to take shape during 2013 as the result of desk analysis.

In 2014, a foresight exercise financed by a multi-national consulting firm was undertaken to envision how Spanish cities should desirably evolve towards the horizon 2030 in order to avoid urban development malpractices that generated a real estate bubble during the 2000-2008 period (Fernández Güell & Collado, 2014). This exercise involved four stages. First, a systemic conceptual model was developed to understand the city in a holistic way. Second, a foresight exercise was undertaken using scenario design and visioning. Third, the resulting desired vision for Spanish cities and its foreseeable impact in the urban functional system was discussed with diverse urban stakeholders around Spain.

In 2015, the systemic conceptual model was submitted to the judgement of academics and urban professionals at presentations in two international conferences and subsequent publications in scientific journals. As a result of those external assessments and fruitful discussions, additional refinements were incorporated into the urban functional system.

By the beginning of 2016, the usefulness of the systemic model was validated in the city of Madrid. Preliminary research outcomes –functional system and vision's implications-- were shared with and validated by various Madrid urban stakeholders and planning officials through personal interviews. By mid 2016, confidence was gained about the usefulness of combining a systemic and foresight approach to make the foreseeable evolution of cities more intelligible to wider audiences.

3 IMPLEMENTING THE CONCEPTUAL FRAMEWORK TO DISPLAY THE RECENT AND FUTURE EVOLUTION OF SPANISH CITIES

In order to check its operational feasibility, the proposed urban functional system is implemented to characterize the recent evolution of Spanish cities. Firstly, the model is used to explain the real estate bubble experienced during the 2000-2008 period; secondly, it displays the crisis experienced by most Spanish cities during the 2009-2014 period; thirdly, it envisions the desired future urban development model in the 2030 horizon. The above mentioned retrospective and prospective exercises are supported by secondary sources and specific contributions made by experts in the last three years of continuous research projects.

3.1 THE REAL ESTATE BUBBLE (2000-2008)

The urban functional system shown in the conceptual framework was used to characterize the development model followed by most Spanish cities during the 2000-2008 period, when the country enjoyed a long economic bonanza that nurtured a huge real estate speculative bubble. The successes and excesses made at that time constitute an interesting experience to study before formulating the future

model. The following retrospective analyses are synthesized from secondary sources (Gaja I Díaz, 2015; Naredo and Montiel, 2011; Jiménez, 2009) and contributions made by experts.

In those years Spanish cities were operating as follows (see Figure 2).

Urban demand: Its major segments were fragmented and scarcely connected among themselves. Businessmen behaved opportunistically with short-term actions, contemplating the city just as a chess board in which they could easily make multiple speculative and profitable deals. Regarding citizens, most of them were self-satisfied with the socio-economic context, so they were unconcerned with urban issues. Tourists would arrive at city destinations expecting all kind of facilities and services to fulfil their highest aspirations, regardless of the environmental or social impacts they might cause.

Economic subsystem: It showed good performance indicators in growth and employment, but it also suffered from low productivity levels and excessive financial leverage. Except in big metropolises, like Madrid and Barcelona, most municipal economic bases were dominated by small and medium enterprises in mature industries which had low technological intensity and were mainly oriented to the national market.

Societal subsystem: The social fabric of many Spanish cities revealed the tensions generated by the progressive ageing of urban populations, the wave of scarcely qualified immigrants from developing countries, and the emergence of new family structures. As a result of the previous tensions, social capital was not significantly strengthened in the cities.

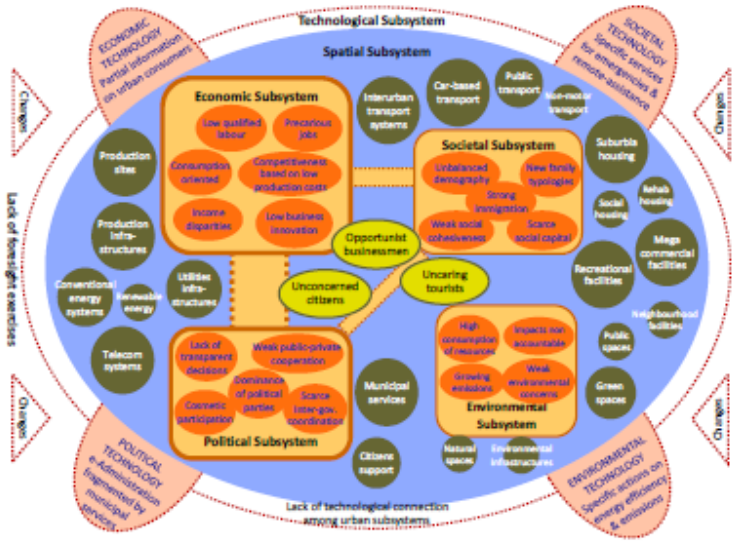

Figure 2 - Spanish cities functional system in the pre-crisis period (2000-2008) (Author's elaboration)

Environmental subsystem: It was relegated to a secondary position within urban priorities during this period. The prevailing economic dynamism gave impulse to the aggressive urbanization of urban outskirts as well as to the construction of large transport infrastructures and commercial facilities. Due to rapid urban growth, numerous environmental impacts occurred in the environs of cities.

Political subsystem: At that time, local governments held positions very closed to the economic subsystem. There was an evident collusion of interests between economic stakeholders and local politicians in big real estate operations, favoured by the lack of transparency in the municipal decision making process. This state of things gave place to numerous episodes of corruption.

Spatial subsystem: Cities were overbuilt increasing their ecological footprint. Large areas were urbanized in the city fringes, big transport infrastructures were built in most metropolitan areas, costly commercial mega facilities were developed in the suburbs and more houses were built than needed.

Technological subsystem: During those years, Spanish municipalities made a significant effort to improve their management systems by incorporating new information and communication technologies (ICTs) to satisfy sectoral needs of specific municipal services.

External trends: Few foresight exercises were drawn during this period. Scattered initiatives, mostly sponsored by sectoral stakeholders, were undertaken to foresee the future evolution of the Spanish society. Some municipalities carried out vision and scenarios exercises as part of their strategic plans.

Not all the city functional subsystems were effectively interconnected during this period. A strong relationship was developed between the economic and political subsystems due to their shared common interests. The societal subsystem had weaker connections with the economic and political realms; in fact, connections were activated on intermittent bases according to pressing needs such as political elections or labour unrest. Regarding the environmental subsystem, it operated in a rather isolated mode because other sectoral policies did not show much concern for environmental issues.

3.2 THE URBAN CRISIS (2009-2014)

By 2009, macroeconomic indicators showed that the economic crisis was in full swing, producing a tough shock to most Spanish municipalities. At that point, it was clear that previous urban practices have aggravated the intensity and scope of the recession, generating a huge real estate bubble.

Urban demand: It was strongly hit by the economic recession. Citizens, faced with long-term unemployment and diminishing social protection, blamed politicians and speculators for their economic misfortunes. Angered citizens turned into social activism, giving strong support to new social movements, which in turn created new political parties. Most businessmen were stranded by the depth of the crisis and the changing economic global context. Despite an initial decline in tourist arrivals, visitors kept choosing Spanish destinations because of their competitive prices, good facilities and lack of safety problems. Though demand segments suffered severely during this period, they were not able to establish links to develop joint actions.

Economic subsystem: The crisis evidenced the fragility of the Spanish economic fabric. Small and medium sized enterprises were particularly affected, generating a huge volume of unemployed people. Those businesses with export opportunities in foreign markets had a chance to survive, while the rest were forced to foreclose or undercut their operations to a minimum. Most local economies faced a profound reengineering process of their economic activities in order to improve their low level of productivity and lack of innovation.

Societal subsystem: Against all odds, the social fabric of Spanish cities resisted the crisis thanks to the strength of the family unit. Family regrouping took place to help the unemployed. Immigration flows reversed and young Spaniards began to leave the country in search of job opportunities abroad. Fertility rates hit records low, aggravating the ageing of urban populations. To counterbalance spending cuts in public services, self-organized citizens began to take grass roots initiatives to provide social coverage to the needy. Social capital seemed to strengthen in cities with big social problems.

Environmental subsystem: As a result of the crisis, the health of the environment became one of the first priorities of politicians and citizens. As a counter reaction to the former real estate speculation spree, a general consciousness emerged in favour of diminishing environmental impacts, caring about emissions and recovering natural spaces. Due to the economic recession, the ecological footprint growth was slowed.

Political subsystem: Widespread economic scandals and political corruption hit hard traditional political parties, opening the door to the emergence of new political groups. Citizens expressed their discontent with traditional power structures by organizing sit-ups in public squares and by supporting social movements. Local governments were blamed by their lack of transparency and accountability in their decision-making processes. Citizens demanded more empowerment and open participation.

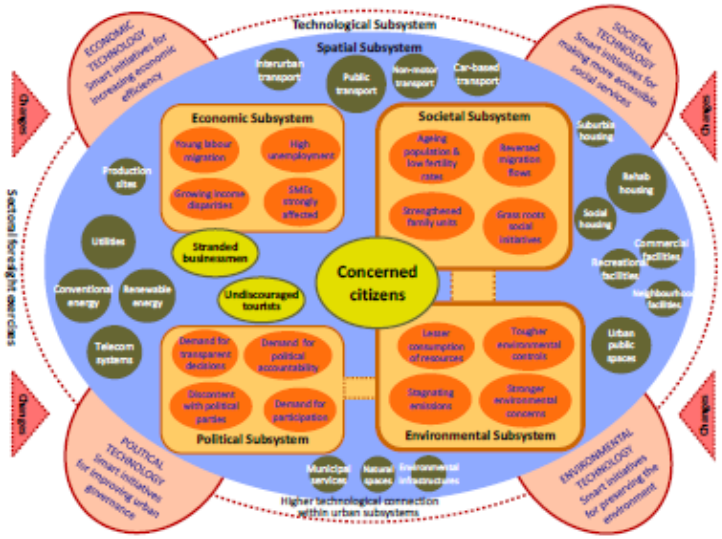

Figure 3 – Spanish cities functional system in the crisis period (2009-2014) (Author's elaboration)

Spatial subsystem: The excesses of the previous period left numerous scars in the Spanish cities. It was common to observe unfinished building skeletons, undeveloped urbanized lots, empty toll highways, oversized airport terminals, underused high-speed trains, and plenty of flats for sale. Traffic congestion diminished and large commercial projects were abandoned. Rehabilitation appeared as a reasonable alternative to new residential development, but the lack of public support slowed down many projects. All kind of large infrastructure projects were revised and many were either delayed or dismissed.

Technological subsystem: Limited by cut spending and diminishing revenues, local politicians found in the so-called smart city initiatives an alternative path for modernizing their cities by reducing emissions, improving energy efficiency and facilitating public participation. These initiatives were promoted by high-tech corporate business and by the European Union through its Smart Cities and Communities Programme. Nevertheless, most smart projects operated under the format of technological silos without much interaction among government departments and other city systems.

External trends: Multiple forecasts, dominated by pessimistic visions, were drawn during the crisis years as a reflection of the Society's awareness about the present problems and the coming challenges. Mostly private organizations developed future scenarios for anticipating the evolution of sectors such as energy, transport, industrial production or environment. Nevertheless, few municipalities were interested in carrying out foresight exercises to foresee their development alternatives.

An overview of the urban functional system unveils that abrupt changes happened in regard to subsystems interconnections. The economic and political subsystems no longer enjoyed privileged links among themselves and gained some sort of isolation respect the other urban subsystems. Instead, the societal subsystem gained momentum and tried to establish stronger links with the environmental subsystem as well as with the concerned citizens. Nevertheless, radical changes were taking place among citizens and local stakeholders that would certainly determine future patterns of power relationships within the urban realm.

3.3 THE FUTURE VISION (2030)

If Spanish cities had to recover in a near future, despite amending past mistakes, they should be able to anticipate and assess the foreseeable impact of forthcoming change factors. Thus, a foresight exercise was due to envision the model of the future city in the 2030 horizon.

After successive discussions with stakeholders and experts, it was agreed that the future desired vision was to be guided by five driving principles (Fernández Güell & Collado, 2014): (1) create an equitable and cohesive social fabric; (2) develop an innovative, competitive and resilient economic base; (3) preserve a healthy and sustainable environment; (4) establish a collaborative and transparent governance system; (5)

build a compact and sustainable urban structure. Those five principles support the urban functional system which displays the desired future vision for Spanish cities (see Figure 4).

All the functional subsystems will be tightly interconnected among themselves and they will take into account the needs, demands and aspirations of the diverse urban demand segments in pursuit of a more integrated model. City managers will avoid dominant positions among the subsystems by establishing relatively well-balanced positions among demands and urban functions. This will compel urban planners to maintain fluid communications and negotiations with different stakeholders.

Vision of urban demand: In the year 2030, Spanish cities will be inhabited by citizens, businesses and public organizations capable of facing problems and challenges in a creative and innovative way. Business will be very demanding on location requirements, but at the same time they will show a collaborative attitude with public officials for improving the city. Citizens will be empowered to exercise their rights and they will be very much involved in public debates. Tourists will show high expectations regarding the environmental quality and social cohesiveness of city destinations.

Vision of the economic subsystem: In 2030 will be more balanced than in prior times. Economic development will be intelligent (based on knowledge, innovation and creativity), sustainable (efficient use of resources and concern for the environment) and cohesive (high level of employment and social

responsibility). Sectors with well articulated clusters of business, technology centres, advanced services and entrepreneurs will flourish and will be more resilient to economic downturns.

Figure 4 – Future vision of Spanish cities functional system (2030) (Author's elaboration)

Vision of the societal subsystem: In the future, it will handle significant challenges such as the ageing of population, the emergence of new exclusionary pathologies, and a growing multicultural society. Cities will establish a new social pact among generations and genders so as to provide adequate assistance to the most needed and handicapped. Resources will be redistributed in an equitable and efficient way to attend social needs and minimize social gaps.

Vision of the environmental subsystem: In 2030, Spanish cities will prosper in economic and social terms, but at the same time they will reduce their ecological footprint by diminishing the consumption of energy, water, soil and other natural resources. Success will be due to technological innovations which will minimize environmental impacts, but also to the growing environmental consciousness of citizens who will have significantly reduced their consumption levels.

Vision of the political subsystem: Advanced governance will be a must in the cities of the future. Local administrations will be more intelligent, innovative, transparent, accountable, participative and inclusive because citizens will be more empowered and socially active as ever before. The increasing involvement of citizens in city matters will give rise to an improved and responsible political class, capable of responding to social demands with adequate policies.

Vision of the spatial subsystem: In 2030, cities will shape their physical elements according to strict sustainability criteria. Spanish cities will opt for compact and complex urban models over sprawl models.

Urban mobility will be dominated by public transport and non-motorized modes. Carefully designed public spaces and community facilities will foster the social encounter of citizens.

Vision of the technological subsystem: The effective development of truly Smart Cities will require the coordination of numerous agents and technologies as well as the long-term involvement of local stakeholders. In this visionary model, the relations among demand segments and functional subsystems will be supported by complex technology platforms which will supply fluid communications in real.

External trends: Cities will scan constantly the context in which they are operating. Scanning will mean to monitor and anticipate all the geopolitical, societal, economic, technological and environmental change factors that may affect the city's development. Those foreseeable changes will be analyzed not only by advanced quantitative models but will be contrasted by experts who will give qualitative opinions.

In brief, the forthcoming challenges will impel cities to interconnect and coordinate their functional subsystems. Consequently, the city of the future will have to be planned and managed under a holistic approach, making sure that all urban functions and city agents operate in an integrated and related way.

4 CONCLUSIONS

4.1 IMPLICATIONS OF THE PROPOSED APPROACH

Implications for comprehensive policy making. The proposed systemic model can be used as a transversal tool to coordinate strategies and actions among the different public bodies --either intra-municipal or supra-municipal-- involved in the urban planning process. On the one hand, coordination is necessary among multiple sectoral units within a single municipality when formulating comprehensive urban policies. On the other hand, complex cities require intense and continuous efforts to coordinate public actions, whether be vertical (national, regional and local levels) or horizontal coordination (various municipalities within a metropolitan area). Just as well, this model can provide useful insights to urban analysts before gathering data and running sophisticated mathematical models that tend to oversimplify complex realities.

Implications for collaborative planning with local stakeholders. An intelligible systemic approach can be of great help for facilitating stakeholders' involvement into the planning process. In fact, participant stakeholders along the research process expressed their support for the systemic model. Firstly, they welcomed the graphical display of the structure and functionality of complex urban systems to which they could easily refer to and understand. Secondly, participants gained an improved insight into the relational complexities of cities. Thirdly, the conceptual model eased the collaboration among diverse stakeholders and public officials. Fourthly, the proposed approach appeared to be user friendly for decision makers and stakeholders, and quite manageable for technicians.

Implications for foresight studies. Both the systemic and foresight approaches used along the research process worked well together to envision the dynamic evolution that a city may undergo over a given period of time. Confronted with the display of the city functional subsystems and their evolution over time, consulted experts were capable to assess the accuracy of past and present situations as well as the plausibility of the projected future vision. In brief, the conceptual framework provided systematic guidance on the foreseeable evolution of the urban functional system by mapping intelligible future visions.

Implications for innovative educational processes. Jay Forrester (1995) suggests that systems thinking should be introduced in planning schools so that students can familiarize themselves with integrative approaches to urban complexity. Systems thinking could provide a unifying basis to connect mathematics, environmental, economic, social and urban studies, which will help students to break down boundaries between disciplines. Nevertheless, explaining to university students the concept of urban complexity is not an easy task for any professor. Therefore, the proposed conceptual framework is a useful first step for students to grasp urban complexity, before analysing in-depth the functional relationships among urban subsystems.

4.2 LIMITATIONS OF THE PROPOSED APPROACH

However, in its present state of development, the proposed model has several limitations. First and foremost, it is just a generic and conceptual framework that needs to be applied to real cities in order to test rigorously its feasibility. This test will enable researchers to check the plausibility of the approach and will provide planners with a road map for improving urban analysis.

Second, more exploratory work should be done with stakeholders' involvement in interpreting the functional system to guarantee that they can add value into the planning process. Further work needs to be done in identifying appropriate methods of enquiry to better understand network interrelations among stakeholders. Likewise, the degree to which this kind of foresight exercise facilitates capacity building among key urban stakeholders remains to be checked.

Third, the conceptual framework, as it is right now, does not contemplate the possibility of plugging in quantitative models that would certainly enrich the whole approach. A concurrent use of quantitative and qualitative tools would improve the accuracy of the method. Thus, quantitative tools could be employed to support and lend coherence to the process, but they should never drive it because the method would lose its eminently qualitative nature and would discourage stakeholders' involvement.

The above mentioned limitations expose clear opportunities for further lines of enquiry that bring together academicians and professionals working in urban planning. Execution of further research will enhance the potential for incorporating a systemic approach and foresight tools as an undisputed work package in the urban planning process.

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ID 1447 | STUDY ON SUITABLE MODE OF URBAN SPATIAL FORM IN NORTHERN SHAANXI COUPLING WITH FRACTAL LANDFORM OF LOESS PLATEAU

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1 PREFACE

The self-similarity (fractal characteristics) of the unique gully landform of Loess Plateau has been demonstrated adequately. Urban spatial distribution rooted in the landform also has an obvious feature of self-similarity, to forms a relatively stable and harmonious relationship between human being and nature over the past thousands of years. With the rapid development of energy industries and urbanization in Northern Shaanxi, the soil erosion and other ecological problems are getting intense. The contradiction between loess gully landforms, which is a regional and critical ecological factor, and urban spatial development becomes sharper. It brings a tremendous impact on existing relationship between human being and nature. With the help of fractal theory, this research made a coupled correlation study between the topography,which in Northern Shaanxi energy-rich region with fractal characters, and the urban spatial form, so as to explore a realistic way for urban spatial development adapted to landscape environment in Northern Shaanxi . Hopefully, this paper will provide a reference for other research about urban spaces in ecologically sensitive areas.

2 FRACTAL FEATURES OF LANDFORM OF LOESS PLATEAU AND URBAN SPATIAL FORM IN NORTHERN SHAANXI

Loess Plateau in Northern Shaanxi is a typical area of the Loess Plateau in China which located at latitude 34°10 '~ 39°35', longitude 107°30 '~ 111°15', including area among north of Guanzhong Plain, south of the Ordos Plateau, east of Ziwuling, and west of the Yellow River in Northern Shaanxi. Its plateau elevation is about 600 to 1900 meters, its northwest terrain is high and southeast terrain is low. Its total area is about 89,327 square kilometers, accounting for 43.2% of the province's land area and 18.4% of the total area of the Loess Plateau[1].

From the perspective of administrative divisions, Northern Shaanxi includes 1 district and 11 counties of Yulin and 1 district and 12 counties of Yan'an (Table 1). The total population of Yulin City in 2014 was about 3.75 million people, and the total area was about 44,000 square kilometers[2].

city	center city	county
Yulin	Yuyang district	Shenmu, Fugu, Hengshan,Jingbian, Dingbian, Mizhi, Wubu, Qingjian, Zizhou, Jiaxian, Suide
Yan'an	Baota district	Yanchang, Yanchuan, Zichang, Ansai, Zhidan, Fuxian, Ganquan, Luochuan, Yichuan, Huanglong, Huangling, Wuqi

Table 1 -The Scope of Administrative Division in Northern Shaanxi

2.1 FRACTAL FEATURES OF LANDFORM OF LOESS PLATEAU IN NORTHERN SHAANXI

The terrain of Loess Plateau in Northern Shaanxi gradually reduced from northwest to southeast. The forms of the surface are plateau, beam, hilly and ditch, so the features of Loess Plateau in Northern Shaanxi is fractal. Based on literatures of hydrogeology and geography and surface matter composition, the form of Loess Plateau in Northern Shaanxi was divided into six categories which were sand-loess

transition area,loess beam and hilly area, loess hilly area, loess long beam area, loess plateau and broken loess plateau (Figure 1). From the intuitive form of view, the form of Loess Plateau in Northern Shaanxi shows self-similar structure which repeated by valley and plateau and valley[3](Figure 2).

Figure 1 -Six categories of the form of Loess Plateau in Northern Shaanxi

Figure 2 -Luohe in Huangling county of Yan'an, Shaanxi (Image source: http://www.taiwan.cn/taiwan/roll/201409/t20140920_7400890_5.htm)

By using grid algorithm, this paper measured six types of the form of Loess Plateau in Northern Shaanxi which has been characterized by trench lines, and the results are as followings(Table 2) : 1) fractal dimensions of different areas in same type of landform were not exactly the same but pretty close which were in a digital interval. 2) fractal dimensions of different types of landform were with a large difference and the landform can be sorted based on FD from small to large as following: sand-loess transition area＜loess beam and hilly area＜loess hilly area＜loess plateau＜loess long beam area＜broken loess plateau. The reason that caused result above is that different types of landform have different surface roughness. The slope of sand-loess transition area was slow, so the contours were sparse and the fractal dimension was the lowest compared with fractal dimensions of five other types of landform. Loess beam and hilly area and loess long beam area usually have both beam and hilly, so the surfaces are complex and different and the fractal dimension was high. Compared with loess plateau, broken loess has both beam and plateau which are under the erosion at the same time, so the geomorphic fragmentation was greater, fractal dimension was higher.

categories of the form	FD of the landform	Interval of FD
sand-loess transition area	1.0019	1.0-1.2
	1.0241	
	1.0571	
	1.0803	
	1.1847	
loess beam and hilly area	1.3553	1.3-1.7
	1.6153	
	1.6435	
	1.6694	
	1.6977	
loess hilly area	1.4301	1.4-1.6
	1.4458	
	1.451	
	1.4694	
	1.5634	
	1.5831	
	1.6475	
	1.6184	
	1.6335	1.6-1.7

loess platean	1.616	
	1.6519	
loess long beam area	1.6341	1.6-1.7
broken loess platean	1.7787	1.7-1.8

Table 2 -Fractal dimensions of six categories of the form of Loess Plateau in Northern Shaanxi

2.2 FRACTAL FEATURES OF URBAN FORM OF CITIES IN NORTHERN SHAANXI

By using grid algorithm, this paper measured fractal dimensions of urban boundary and urban land of 25 cities in Northern Shaanxi.

First of all, based on the form of urban boundary, these 25 cities were divided into five types which were narrow stripes city, branching band city, curved strip city, broken strip city and lumpy city. By using grid algorithm, this paper measured fractal dimensions of urban boundary(Table 3) and sorted the results by ascending sequence(Figure 3).The results showed that with the ever-increasing dimension of fractal dimension, there were corresponding regular changes in the form of urban form. In the lower part of the fractal dimension, the corresponding boundary morphology were mostly long strip and curved strip which indicated that the boundary shape of these two types of towns was relatively simple. In the higher part of the fractal dimension, the corresponding boundary morphology were mostly branched and stripped which indicated that the boundary shape of these two types of towns was more complicated. The fractal dimension of the bunker town was uneven and the rule was weak.

City	Wuqi	Yulin	Huanglong	Hengsha n	Yichuan	Shenmu	Zhidan	Wubu	Ansai
FD of urban boundary	1.2	1.216	1.268	1.355	1.362	1.378	1.379	1.387	1.387
City	Luochuan	Qingjian	Yan'an	Zichang	Fuxian	Jingbian	Dingbian	Jiaxian	Fugu
FD of urban boundary	1.399	1.441	1.441	1.445	1.445	1.452	1.462	1.463	1.471
City	Ganquan	Yanchuan	Huangling	Mizhi	Suide	Zizhou	Yanchang	——	——
FD of urban boundary	1.491	1.494	1.501	1.511	1.52	1.576	1.59	——	——

Table 3 -Fractal dimensions of urban boundary of 25 counties

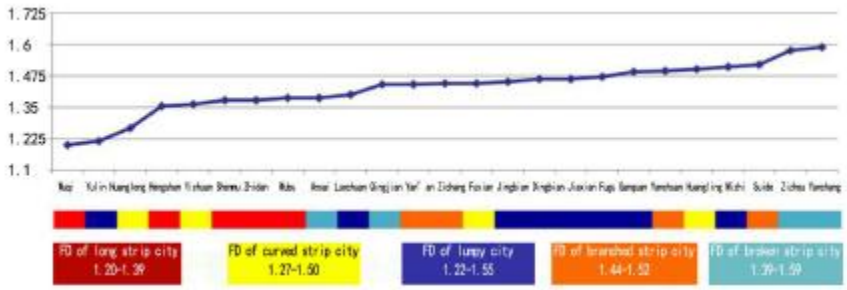

Figure 3 -Correspongding relationship between FD of urban boundary and form type

Secondly, filled the town boundary and measured fractal dimension of urban land. The result showed that the fractal dimensions of the urban land were basically between [1.3-1.6], and a small number of fractal dimensions of the urban land were basically between [1.6-1.85](Table 4). The incremental order of fractal dimensions were as followings: fractal dimensions of long strip city＜branched strip city＜curved strip city ＜broken strip city＜lumpy city(Figure 4).

City	Wuqi	Yulin	Huanglong	Hengshan	Yichuan	Shenmu	Zhidan	Wubu	Ansai
FD of urban land	1.3	1.701	1.339	1.398	1.535	1.492	1.425	1.365	1.669
City	Jingbian	Dingbian	Jiaxian	Fugu	Ganquan	Yanchuan	Huangling	Mizhi	——
FD of urban land	1.614	1.847	1.56	1.49	1.618	1.51	1.603	1.605	——
City	Luochuan	Qingjian	Yan'an	Zichang	Zizhou	Yanchang	Fuxian	Suide	——
FD of urban land	1.489	1.68	1.42	1.471	1.685	1.713	1.449	1.46	——

Table 4 -Fractal dimensions of urban land of 25 counties

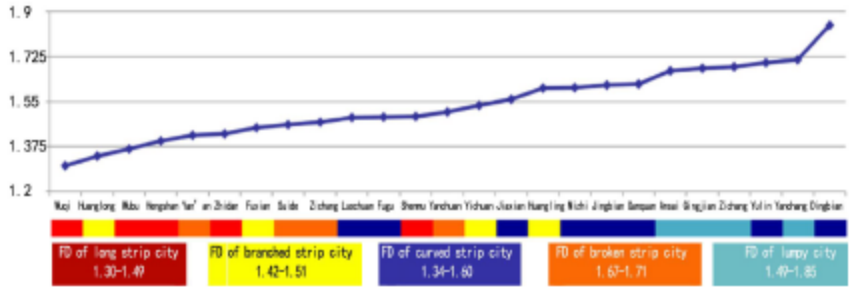

Figure 4 -Comparison between FD of urban land and form type

At last, based on the fractal dimension increment, arrange the fractal dimension of urban land and urban boundary of 25 cites (Figure 5).Increase of fractal dimension of urban boundary(0.39) was slightly smaller than the one of urban land(0.55) which indicated that fractal dimensions of urban land fluctuated greatly. The reason might be that fractal dimension of urban boundary only represented the complexity of the form of boundary, and fractal dimension of urban land represented the complexity not only of the form of boundary but also of the filling with internal land. Thus fractal dimensions of urban boundary may be close, but fractal dimensions of urban land are usually different given that different cities have different layouts of land.

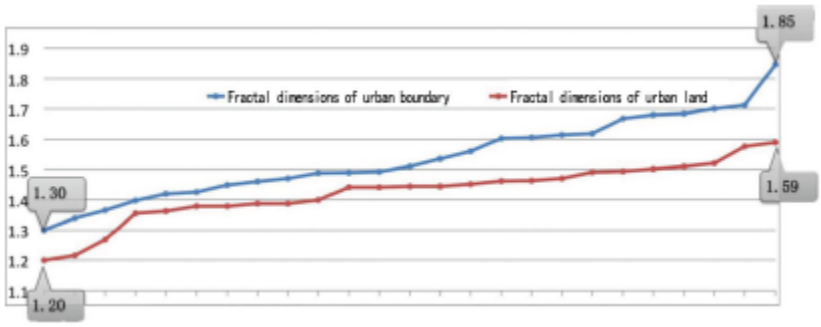

Figure 5 -Comparison between FD of urban land and urban boundary

3 FRACTAL COUPLING RELATIONSHIP BETWEEN URBAN SPATIAL FORM AND LANDFORM

Different from city in the plains, the development of city in gully area is always limited by the ups and downs of the mountain, geomorphic structure and other external space environment.The typical fractal features of the loess plateau in Northern Shaanxi determine the narrow and long characteristics of the landform, valley and the mountain undoubtedly have obvious binding and guidance on the form of urban spatial form. In the typical gully region of the Loess Plateau in Northern Shaanxi, the valley is often very narrow, cities in this area often appear band shape and grow with the river bend or extend along the river valley, so they highly coincide with the characteristics of landform(Figure 6).The urban spatial forms in Northern Shaanxi inherit the morphological characteristics of valley, thus they also form dendritic system with different scales, and the form of urban land and landform have coupling similarity on different scales.

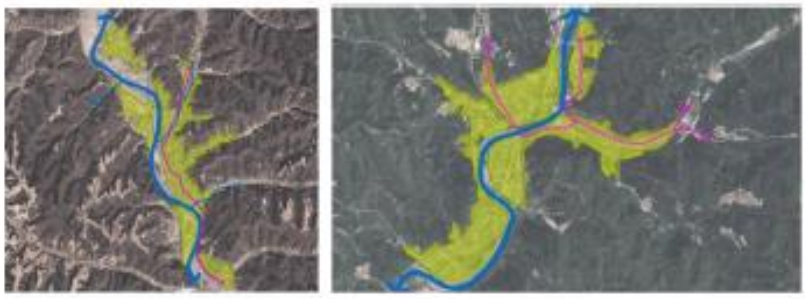

Figure 6 -Coupling relationship between urban land and landform of Ganquan county (left)and Fuxian county (right)

3.1 FRACTAL COUPLING RELATIONSHIP BETWEEN FORM OF URBAN BOUNDARY AND LANDFORM

Land boundary is one of the important characterization elements of urban spatial form, also is an important interface between urban and natural landform. Forms of urban boundary are different because of different types of landform where the cities located. The coupling relationship between boundaries and landform of cities in different sizes is different, even the cities are located in the same type of landform.

Perform a linear fit of fractal dimensions of urban boundary and corresponding landform of the 25 towns(Figure 7). The result showed that correlation trend between fractal dimensions of urban boundary and landform in sand-loess transition area was negative(except Yulin). Correlation trend between fractal dimensions of urban boundary and landformin in three types of hilly areas was discontinuous and in general the former moved up and down around the latter. Correlation trend between those two in loess plateau was basically proportional.

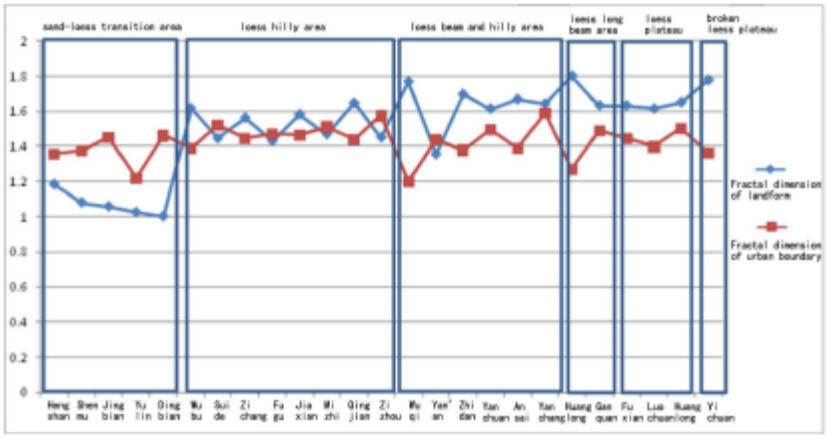

Figure 7 -Comparison between FD of landform and urban boundary

Based on the fractal dimension increment, arrange the fractal dimension of urban boundary and landform. The result showed that when fractal dimensions of urban boundary became larger, distribution of fractal dimensions of landform had no obvious rule(Figure 8). When fractal dimensions of landform became larger, distribution of fractal dimensions of urban boundary showed a downward trend(Figure 9). Judging from those tow results, fractal dimension of urban boundary was influenced by fractal dimension of landform, and the former changed in the subsequent changes.

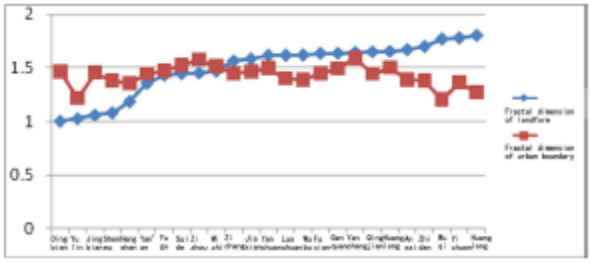

Figure 8 -Comparison between FD of landform and urban boundary based on the former

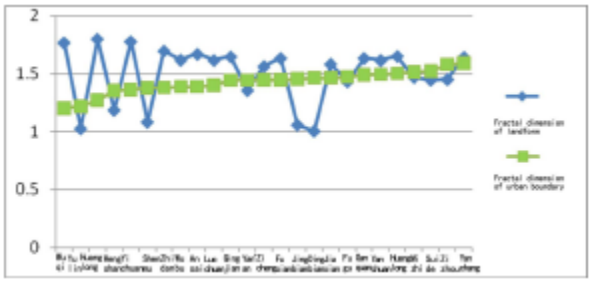

Figure 9 -Comparison between FD of landform and urban boundary based on the latter

Combined with the chart and the actual situation analysis, there are four points in the relationship between the form of urban boundary and landform in Northern Shaanxi: 1)the original construction of the town and the landform were the most closely related. In a certain watershed, the urban boundary along the ditch line showed the fractal characteristics. 2) urban construction land tended to select the water system developed flat valley which showed that water system had restrictions on urban boundary. 3) when the social factors such as traffic weakened, the coupling between urban boundary and landform increased. 4) the relationships between landform and urban boundary of Yan'an and Yulin were relatively weak, mainly due to the influence of various factors such as economy, society and traffic, and the urban boundary gradually deviated from the original form determined by natural factors such as landform in the process of urban development.

3.2 FRACTAL COUPLING RELATIONSHIP BETWEEN FORM OF URBAN LAND AND LANDFORM

Fill urban boundaries of 25 cities and the resulting patterns were the forms of urban land. Measured those forms of urban land by using grid fractal algorithm and compared with fractal dimensions of corresponding landform (Figure 10).

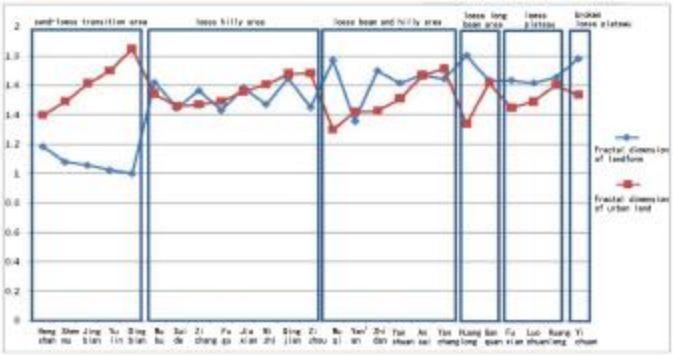

Figure 10 -Comparison between FD of landform and urban land

It can be seen from the figure that there was no obvious linear relationship between fractal dimensions of landform and urban land of 25 cities, whereas corresponding relationship in same type of landforms was obvious: 1) there was a negative correlation between those two in sand-loess transition area. 2) correlation trend between fractal dimensions of urban boundary and landformin in three types of hilly areas was discontinuous and in general the former moved up and down around the latter. 3) correlation trend between those two in loess plateau was basically proportional.

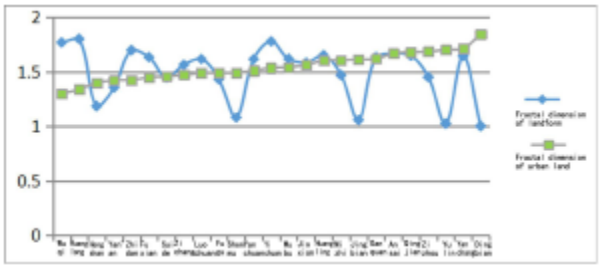

Figure 11 -Comparison between FD of landform and urban land based on the latter

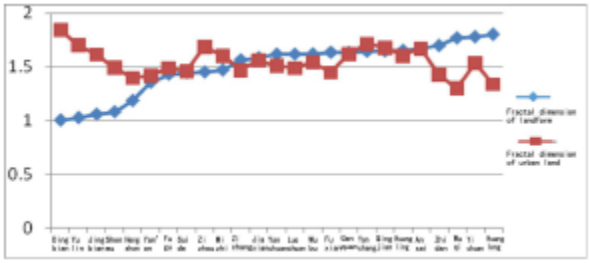

Figure 12 -Comparison between FD of landform and urban land based on the former

Figure 11and 12 can be obtained by increasing the order of urban land fractal dimension and landform fractal dimension respectively. When fractal dimensions of urban boundary became larger, distribution of fractal dimensions of landform had no obvious rule. When fractal dimensions of landform became larger, distribution of fractal dimensions of urban boundary showed a downward trend.

3.3 SUMMARY

In general, most of the towns, except for individual towns, have similar fractal characteristics in land form and boundary morphology, and are negatively correlated with topography in fractal dimension. In addition, there are corresponding relationships between the scale of urban land form and the complexity of landform, that is, the more complex landform broken, the smaller the scale of urban land use, the greater the contrary, which in the sand -loess transition zone and other hilly areas of the performance was very obvious.

4 "GROUP + NETWORK -LIKE" FRACTAL -MIZHI URBAN LAND SUITABLE SHAPE MODEL

4.1 OVERVIEW OF MIZHI COUNTY AND STUDY REGION

Mizhi County is located in the eastern part of Yulin City, Shaanxi Province, the middle reaches of Wuding River, longitude 109o49′-110o29′, latitude 37o39′. East-west length of administrative area is 59km, north-south width is 47km, and the total land area is 1212km2.

The landform of Mizhi county is the area of the transition from sandy beach to loess landform, and it has the characteristics of typical loess hilly and gully landscape.Gully and beam and hilly staggered in this area

and the surface fragmented. The area of central Wuding River valley is flat and its agricultural production conditions are better.

Affected by economic development and traffic and other external factors, urban boundary began to break through the original fractal state. River traffic and land conditions and other leading factors became obstacles to growth of urban boundary inheriting fractal landform.

Focusing on the area of Mizhi county as the main study region, and extending the area of 20km square as the "fractal characteristics and performance evaluation of urban and rural spatial form"(Figure 13). The study area extends north to Zhenchuan town of Mizhi county, extending southward to Shilipu township, extending eastward and westward by about 10 km to the end of the subsurface watershed.

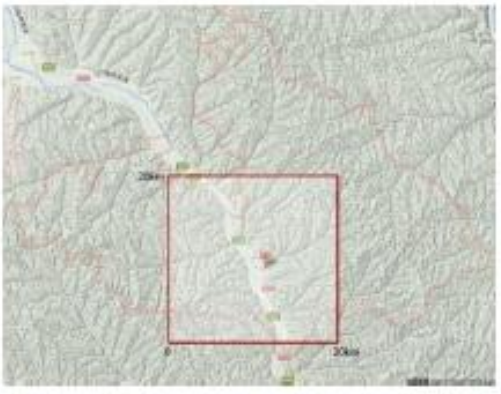

Figure 13 -Study region of Mizhi county

Figure 14 -Urban and rural land use status of study region Table 5 -Fractal dimensions of urban land of 25 counties

4.2 FRACTAL CHARACTERISTICS OF CURRENT SITUATION

The land of the study area is composed of the three trenches of valley, sub-ditch and the tributary ditch. This system can be analogous to the tree:valley is the main trunk, sub-ditch for the branch, branch ditch for the tip, thus forming three levels of “trunk -branches -shoot”(Figure 14). The total construction land use situation in the study area is shown in Table 5.

According to the results of radius fractal dimension calculation (Figure 15), the fractal fit degree R2 of the study area was 0.992, and the fractal characteristics were not obvious. The radius dimension D = 0.941, which was much smaller than 2, showed that the density of land use circle in the study area was decreasing from the center to the periphery, which was consistent with the current situation of development along with valley (i.e. "strong backbone and weak branches" form). In addition, the radius dimension 0.941 was low (less than 1), indicating that the construction area of the study area was still concentrated in the county center (i.e. Yinzhou town), the surrounding township construction land proportion was low, therefore the spatial utilization and integration of the outer area of Mizhi county (including sub-ditch and The use of land within the trench) should be strengthened.

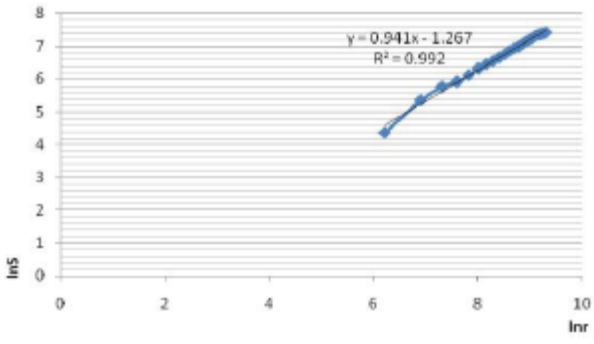

Figure 15 -Radius FD of study region

According to the results of grid fractal dimension, the fractal fit degree R2 of the study area was 0.991, and the fractal characteristics were not obvious. The grid dimension D = 1.501, which was between 1 and 2, belongs to the normal range, but the dimension was low, which indicated that the spatial development in the study area was immature, and the land form did not reach the stable saturation state (Figure 16).

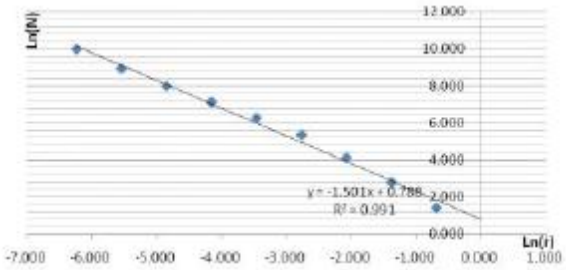

Figure 16 -Grid FD of study region

In summary, due to constraints of the slope, water and a large number of unavailable land, Mizhi urban and rural land tended to spread along the large and loose strip, resulting in the overall land of small scale, discrete layout and weak fractal characteristics of urban and rural space. Therefore, it is necessary to combine the spatial potential and actual situation of the study area, to rationally expand and guide distribution of urban and rural land, and to improve the fractal dimension of urban land, so as to optimize and enhance the overall form of land use .

4.3 SUITABLE FRACTAL PATTERNS OF MIZHI

Based on the research on literature and cases of urban and rural development in the Loess Plateau of Northern Shaanxi, the future development of urban and rural spatial form in the study area should be based on three basic structures: shape and scale of valley, shape and scale of sub -groove, shape and scale of branch ditch. Based on the organization of these three types of structures, this paper summarized eight developmental forms of urban and rural spatial patterns for the study area(Table 6).

Spatial configuration	①monopodial structure	②linear and crumby structure	③fish-bone structure	④point-axis structure
Land layout				
Spatial configuration	⑤cluster agglomeration structure	⑥linear and leaf-like structure	⑦feathery structure	⑧uniform net-like structure
Land layout				

Table 6 -Spatial configuration of urban and rural land of Mizhi county

Although the above configurations can not cover all the land forms, they represented the main spatial development paths for cities in the loess plateau gully area and had a guiding significance. By comparing the fractal dimensions, three kinds of relatively good spatial configurations ware obtained.

First, the divergent structure of the group presented a better balance and filling because of its high grid fractal dimension: the cluster of patches in the channel ensured the balance of the whole structure and was easy to form a multi-core group pattern. The radius fractal dimension of the configuration did not meet the fractal standard, indicating that the concentration of the center and the periphery of the city was poor: the dilution of the land in the subsurface was not enough, so that the land use efficiency in the small watershed was low and the synergistic effect was insufficient(Figure 17).

Secondly, the branch-like structure exhibited a superior central agglomeration and peripheral diffusivity due to its high radius dimension. The full development of urban space in the subsurface formed a relatively independent dendritic or pinnate small watershed unit, which was organized as a central green axis to ensure the protection of the ecological environment and cultivated land. The end-like dendritic or pinnate space structure was not conducive to the small watershed between the traffic links and functional layout, and was not conducive to building agglomeration centers of urban and rural land. In addition, the point-like configuration and the uniform mesh configuration had similar problems and were more prominent: excessive expansion of the space skeleton and decentralized land layout led to higher infrastructure costs and made it difficult to gather the formation of urban centers (Figure 18).

Thirdly, The zonal vein shape had the advantages of grid fractal dimension and radius fractal dimension, and had more comprehensive spatial occupying effect. The segmental layout in the channel ensured the balance of urban space, and the layout of the network in the limited area was more easily integrated with the gully terrain, thus forming a multi-level space system. This structure not only protected the efficiency of urban space development, but also alleviated the pressure of urban and rural development on the ecological environment of the valley (Figure 19).

Figure 17 -Cluster and divergence structure

Figure 18 -Feathery structure

Figure 19 -Linear and leaf-like structure

Based on those three kinds of urban and rural fractal space development strategy, the suitable model and optimal configuration of urban and rural land in Mizhi research area can be outlined. The spatial form of the configuration is "group + veins"(Figure 20), that is, based on the expansion of both the valley and the channel, the urban form continuously expands as the self-similar veins and its scale grows from small to large. Its scale of land can be up to 40km2 and its fractal dimension is 1.673 which is relatively suitable judging form perspective of fractal cities. Besides, this form of urban and rural land will have good spatial filling and equalization and high land use rate.

Figure 20 -Cluster + net-like structure 5

CONCLUSION

With 25 counties as samples, this paper made a coupled correlation study between topography and urban spatial form based on GIS and fractal dimension calculation.The main conclusions are as follows: (1)The higher fractal dimension of land form goes, the lower fractal dimensions of urban spatial boundary and urban land become.Hence the urban spatial form inversely coupled with land form under fractal perspective, which means they are spatially complementary. (2)Based on sample study of Mizhi county, this paper had come up with the suitable urban spatial mode “leaf-like network mode” which requested territory of county and city growing along with main valley and then extending along with sub-valley and finally becoming continuous and dense and netty land use.

The exploration above showed that many ideas and methods in fractal theory have wide application prospect in urban and rural planning and design, and can provide feasible means and ideas for studying the order logic of complex objects. At the same time, fractal planning and design should be guided and supported by the theory and method of urban planning, thus expanding the application and practice of fractal theory in urban and rural planning.

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ID 1475 | DESIGNING WITH UNCERTAINTY: A FORM BEHAVIOUR APPROACH TO BEHAVIOURAL SCIENTIFIC STUDIES

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1 INTRODUCTION: BEHAVIOURAL SCIENCES AS AN EMERGING DESIGN PHILOSOPHY

The expeditious rise of the Modernism discourse -and its contributions on the architecture and urban design theory and practice at the beginning of the 20th century -has given much of its place to harsh criticisms and brand-new questions in the following years. According to Lang (1987), major developments arising from the Modern Movement such as unprecedented growth in human knowledge, major social changes, and increase in the standard of living made design praxis difficult rather than making it easier. Lang legitimizes this speculative and critical point of view with the assertion of having the technological ability to construct buildings, neighbourhoods, and cities in a wide variety of ways without fully understanding the ramifications of designing for human behaviour. Within this critical approach, after mid-1900s a new field of environmental studies – generalized as behavioural sciences -has emerged in the context of man and environment relationship which deals with the complex systematic interactions between the people and built environment.

Behavioural sciences which is dealing with the subject of human actions is a generic term that includes anthropology, sociology and psychology and even sometimes politics and economics (Bashiri, 2015). It is a comprehensive design philosophy which takes the human needs, preferences and values as the basis to satisfy the human needs and to eliminate environmental restraints and stresses. According to Carl Jung (1958), “people are as much a product of the physical environment as that of the social environment". Moreover, according to Lang (1987), “the physical world, of which the built environment is a part, is locked in an evolving relationship with the social and cultural worlds of people. […] Architects and urban designers are primarily concerned with changing the physical world so that it better fits a set of human needs”. For the fields of urban design and architecture, it is a crucial need to use the behavioural sciences and environmental psychology as a methodological tool. Architecture and urban design -as disciplines dealing basically with enhancing the quality of human life – are concerned fundamentally with understanding what lies behind the nature of environment. While questioning the mutual interaction between man and environment, according to Rapoport (1977) there are three general questions which constitutes the main specifications of behavioural sciences and its concerns over man and environment relationship:

> *“1. How do people shape their environment – which characteristics of people […] are relevant to the shaping of particular environments?*
> *2.How and to what extent does the physical environment affect people, i.e., how important is the designed environment and in which contexts?*
> *3.What are the mechanisms which link people and environments in this two-way interaction?” (Rapoport, 1977)*

In the light of all these fundamental questions, behavioural scientific approaches develop an understanding about the impact of designers’ work on people’s lives especially when they design environment for people whose behaviour patterns and values are different than their own. This situation represents the complex nature of man and environment relationship and the natural issue of uncertainty. The fact that while the design professions have much in the way of normative theory, they are weak in positive theory or explanatory theory results in the erroneous conclusions about the impact of designers’ work on people’s lives. Indeed, the failure and problems of contemporary urban spaces are caused by the fact that design research and theory is not sufficiently empirical – which means we as designers need a comprehensive positive theory to be value-free, to avoid bias, to look for alternative explanations and to apply the rules of scientific method to observation and explanation. Therefore, according to Lang (1987), search for a positivistic approach is a crucial need and behavioural sciences offer the design professions much to help us develop both positive theory and an understanding of our normative theories. This issue leads

architects and urban designers to the abandonment of 'absolutist positions' on what constitutes good design and the adoption of a 'relativist position'. This means that the design professions require a broader and more explicit understanding that they currently have of both the person environment relationship and the process of design.

Considering that the fundamental purpose of behavioural sciences is to develop positive theories, it is clear that these sciences have an important role in the development of theoretical foundations of design in various ways. If the position of behavioural sciences in architecture be considered as a model for professional architects and urban designers, it will lead to the success of the design. If designers use the help of environmental psychologists and direct their design towards creating environments that meet human needs, then the built environment can satisfy aspects of human needs such as survival, safety, belonging, esteem, learning and beauty and so on. In general terms, using the behavioural sciences in the design process increases the quality of the final product and process' itself.

2 COMPLEXITY AT THE ROOTS OF MAN-ENVIRONMENT RELATIONSHIP

It is still certainly valid in architecture and urban design theories that built environment is most crucial determinant for human behaviour patterns and life quality of the space. According to Lang (1994), while the quality of the built environment is certainly a major attribute of environmental quality, it is also tempting to go beyond this level of thought to consider the built environment, as the Modernists did, as the independent variable in the relationship between physical and social worlds – social behaviour being the dependent variable. However, via the help of developed literature on 'complex nature of human behaviour and also complexity of the urban space', it can be easily stated that the interaction -or the relationship ¬between man and environment is not simple as that. In other words, human behaviour is not a direct result of the effects of the urban space; or the urban space is not a direct outcome from the behaviours of its users. Interrelationships between these two phenomena do not represent a simple linear process. Indeed, man and environment relationship is much more complex and consists of intricate, dynamic and nonlinear processes.

As extraordinarily complex beings, humans and their individual and collective behaviour patterns can only be understood via the relational model which is more complex than the organismic and role models. According to this behavioural scientific model, "the human being is seen as both a subject and an object, as a succorer as well as a succorent". People are individuals who are the sum of their roles in society and need to be seen in relationship to others. To fully understand the implications of this complex model of people for urban designers, we need to understand how human beings experience the environment, and what motivates the way they experience it (Lang, 1987).

In addition to the complexity of human beings, all human settlements have complex patterns within which other meta-patterns-or micro patterns-exist. Moreover, all these patterns emerge under the dynamic process of urban change. At this point, Lang's criticism over "the Modernists' failure to understand the richness of human needs, the richness of the environment, and the complexity of the relationship between people and environment" is mentionable to open up a discussion about how recently developed complexity theories can help us to understand the complex interaction between man and environment as the main research question of this paper. This criticism takes its roots from the criticism of four basic theoretical positions (a free-will approach, a possibilistic approach, a probabilistic approach and a deterministic approach) about man-environment relationship. According to Barlas (1994), with the advent of ecological and environmental psychology, architectural determinism and simple behaviourist approaches was seriously questioned and challenged. The current approaches to the analysis of man-environment relations are probabilistic – which means it is based on an understanding of the dynamic interplays between human and spatial behaviour -in nature (Lang 1987, Lang et al. 1974). "Accepting the probabilistic approach would mean to acknowledge the 'uncertainty' concerning man's motivations, knowledge and decision making modes" (Barlas, 1994).

While Jon Lang's and more recent behavioural scientists' strong emphasis over the complexity issue related with man-environment relationship is seminal and very influential in that times, their approach to the concept of uncertainty in complex systems is substantially 'naïve' due to the lack of comprehensive literature about the complexity theories. According to Lang (1987), designers will always be making decision with uncertainty and so, behavioural sciences may reduce this uncertainty but will not eliminate it.

While Lang's point of view about his acceptance of the uncertainty as a concept which cannot be eliminate totally is worthy to note, a critical perspective should be developed to the issue of reducing uncertainty in order to raise a discussion. With the development of complexity science and its effects on architecture and urban design, concept of uncertainty cannot be seen as a drawback for design process or product. The fact that cities are complex systems which essentially contains various uncertainties, reducing the uncertainty seems unreasonable. Instead, designers should learn how to deal with uncertainty by using it as a design input: which means they should learn to 'design with uncertainty'. Within this context, complexity theories will help designers to develop better behavioural scientific approach to the fields of architecture and urban design.

3 EMERGING PARADIGM OF COMPLEXITY

Complexity science is a field that grew from chaos theory and the study of fractals in the 1980s. After 1990s, theory of complexity has led to the different scientific studies for urbanism, geography and architecture, and theorists studying in this field have increasingly directed their attention toward the dynamic processes and global patterns that emerge from the collective interactions of a system's individual components (e.g., Cowan, Pines, & Meltzer, 1994; Holland, 1995). Pierre Frankhauser who is a French geographer studied the urban complexity by conducting multiple studies of urban built surfaces, that there was a real geometric structure to them, and that it is possible to extract the fractal dimension of an urban area by analysing the built and unbuilt zones. According to Helie (2007), he thus proved that the city is a complex structure with a geometric order, and not simply a mathematical anomaly. Michael Batty studied complexity simulation methods, such as cellular automata, agent-based models, and catastrophe models. With his overarching work, Cities and Complexity, he showed the output of cellular automata as morphologically similar to cities. Last but not the least, Nikos Salingaros has taken a more material and less analytical approach to urban complexity. He explained the concept of 'urban web' as a set of connections between physical spaces that are differentiated and complementary and which cannot be subdivided in sub-sets.

Although most of the principles of complexity theory have originated in the physical and natural sciences, Gell-Mann (1995) states that "even more exciting is the possibility of useful contributions to the life sciences, the social and behavioural sciences, and even matters of policy for human society". According to Eidelson (1997), "many areas of the behavioural and social sciences have already attracted the attention of complexity investigators; among these fields are social networks, organizational development, economic instabilities, urban development, political transitions, international relations, social movements". As a transdisciplinary collection of concepts from different scientific fields of studies such as physics, economics, sociology and ecology; complexity theories and complex systems has prepared a background for urban design and architectural theories. According to Eidelson (1997),

> *"it has taken time for planning to adopt complexity thinking beyond metaphor or common usage of the term, but we now appear to be at a tipping point where complexity planning is exploring methods of engagement with bottom-up phenomena, structural and functional co-evolution and resultant adaptable and self-organisational systems, rather than the question of whether cities are complex". (Eidelson, 1977)*

In the context of all this theoretical background, complex systems are basically considered as the aggregates involving many components generating a recognisable global (collective) behaviour and large-scale order which are not controlled centrally, but generated by many local interactions (Caliskan, 2013). In addition to this definition, they are adaptive, unpredictable and generative systems including continuous information processing and adaptive feedback loops. In order to challenge the conventional views on urban planning and design, to understand the complex and nonlinear nature of man-environment relationship and to develop better approaches in terms of the behavioural sciences, searching for models of complexity and the various kinds of complex systems is a crucial necessity.

3.1 COMPLEX ADAPTIVE SYSTEMS

As a general term, 'complex adaptive system (CAS)' derived from the complexity theories and it means "a 'complex macroscopic collection' of relatively 'similar and partially connected micro-structures' formed in

order to adapt to the changing environment and increase its survivability as a macro-structure" (MacLennan, 2012). CAS is a large collection of diverse parts interconnected in a hierarchical manner such that organization persists or grows over time without centralized control. The brain (e.g., Haken, 1996; Kelso, 1995), the immune system (e.g., Bremermann, 1994; Holland, 1995; Varela, Sanchez-Leighton, & Coutinho, 1992), an ant colony (e.g., Kelly, 1994; Sole, Miramontes, & Goodwin, 1993), and human society (e.g., Mainzer, 1993; Weidlich & Haag, 1983) are often presented as examples.

As the most fundamental principle of the CAS, individual micro-units in the system gather information from the surrounding – neighbouring – units and from the external environment through a continuous and dynamic process. The collected information and system's responses to this information are formulated according to the system's local rules and codes. Thus, an interesting competition and a selection process is observed to make some properties stronger and to constrain others. At the end of the process, entirely new and unexpected properties can also emerge spontaneously. According to Eidelson (1997), "the complex adaptive system is poised for potential change and adaptation either through alteration of its rules, connections, and responses or through modification of the external environment".

From this point on, it is a vital necessity to analyse complex adaptive systems and their attributes briefly in order to find out their overlapping features with the behavioural scientific approaches. While doing this, the most valid assumptions about the nature of man-environment relationship via the help of Proshansky (1974)'s "The Influence of the Physical Environment on Behaviour: Some Basic Assumptions" will be used to compare them according to the basic attributes of CAS.

Firstly, the features of "hierarchical arrangements with distributed control" and "self-organization" is vital for complex adaptive systems. The numerous and diverse interacting units that constitute a complex adaptive system are typically arranged in a hierarchical structure. Simon (1995) has noted that some aggregations, such as human society, involve an especially complex network structure because each agent may belong within a number of different structures at the same hierarchical level (e.g., an individual may simultaneously be a member of a family, a professional organization, and a therapy group). Social systems also demonstrate decentralized control in a variety of ways. In animals, for example, the "intelligent" behaviour of a swarm of bees selecting a new hive site or a colony of ants locating a food source unfolds despite the absence of an executive agent (Kelly, 1994). Moreover, Barton (1994) describes self-organization as "a process by which a structure or pattern emerges in an open system without specifications from the outside environment".

Secondly, Proshansky (1974) asserts that the physical setting that defines and structures any concrete situation is not a closed system; its boundaries are not fixed either in space or in time. This assumption implies that human behaviour and its interaction with the space is not static and linear but dynamic. As the same, according to Eidelson (1997), the course of self-organization in complex adaptive systems is often influenced by feedback controls using the nonlinear interactions among its parts to generate snowballing effects. By means of dynamic – nonlinear – feedback loops the adaptation and learning can be achieved ultimately in the context of human and spatial behaviour.

Thirdly, according to Proshansky (1997), "every component of the environment interacts or has defined relationships with every other component in two ways: (a) it acts on all other aspects, and (b) it is acted upon by all other aspects and in particular, receives the consequences of its own action". Similarly, another important structural feature of a complex adaptive system is the nature of the connections among its components. Simon (1981) described that intra-component linkages tend to be stronger than inter-component linkages, and neighbouring components tend to have stronger connections than distant components.

Fourthly, Proshansky et al. (1997) states that behaviour in relation to a physical setting is dynamically organized: a change in any component of the setting has varying degrees of effects on all other components in that setting, thereby changing the characteristic behaviour pattern of the setting as a whole. Similar dynamic organization can be observed in CAS as well. The self-organization process does not inevitably lead the CAS to a single fixed or static state. Indeed, many theorists and investigators have concluded that complex adaptive systems often exhibit internally generated fluctuations – which means dynamism -beneath their macroscopic stability.

Lastly, an overlapping feature in the context of environmental adaptation of human behaviour can be observed in CAS. Several investigators have found the concept of fitness landscapes useful in analysing the adaptation and coevolution of complex adaptive systems (e.g., Gell-Mann, 1994b; Kauffman, 1993; Wright, 1986). Heylighen and Campbell (1995) have used a fitness landscape approach in describing how systems evolve through the twin processes of variation and selection.

While the behavioural or social scientist faces many challenges in translating complexity theory principles into their own domain, a considerable value in simply uncovering similarities between specific aspects of dynamical systems and human social behaviour can be expressed according to the assertions above. As a result of the greater complexity of human behaviour and accordingly spatial organization, it can appear as if deterministic causal laws do not govern social phenomena. Instead, the complexity perspective also illuminates the interplay between the fragility and stability that characterizes many of the phenomena explored by behavioural and social scientists (Eidelson, 1997). Within this perspective, it can be trustfully stated that complexity theory would generate some important theoretical insights and research findings in the agenda of urban design and architecture.

4 DESIGNING WITH THE UNCERTAINTY: A SPECULATIVE APPROACH TO COMPLEXITY

After giving all the related theoretical literature for behavioural sciences, complexity of human and spatial behaviour, complexity theories and overlapping attributes of behavioural sciences and complex adaptive systems, a critical question of 'can design process be managed under the uncertain conditions which are natural results of complexity' can be raised. At this point, remembering the Lang's and other important behavioural scientists' approach to uncertainty would be appropriate to enlarge the discussion. According to Lang (1987), "designers will always be making decision with uncertainty and so, behavioural sciences may reduce this uncertainty but will not eliminate it".

If there are some certain key words that seems to fit perfectly our ever-changing and dynamic urban space, these would be complexity and uncertainty. Indeed, the concept of complexity's itself is "a state of uncertainty within collective action" (Caliskan, 2013). As our world changes dramatically and unexpectedly, societies have started to experience uncertainties in all fields of their social life. According to Murray (1961), a fundamental definition of uncertainty is "liability to chance or accident", "doubtfulness or vagueness", "want of assurance or confidence; hesitation, irresolution", and "something not definitely known or knowable". With the rapid growth of understanding of complex adaptive systems in recent years, it is realized that ecological, human and urban systems having dynamic and ever-changing behaviour and structure cannot be understood fully by means of conventional approaches and theories. As a conventional approach to the problem, according to Pahl-Wostl (1995), uncertainty and lack of predictive capabilities equal ignorance. Such a point of view is very inadequate to deal with the complex environmental problems. As Wilson (2002) stated that if we conceptualize complex urban systems from the complex systems perspective, we are likely to approach the uncertainty problem in a way very different from the conventional.

In a Newtonian world, the stability of cause-and-effect relationships makes it possible to pursue reductionist science and makes us to intervene in the system with predictable outcomes. However, what is problematical about complex systems in this regard are their pervasive nonlinear, causal relationship (Holling, 1987). According to Levin (1992), "at any time a large number of factors may influence the outcome of a particular event, each one to a greater or lesser extent; at another time, the strength of those same causative factors on the same event may be very different". The result is a decline in predictability which means a system which is dynamic, changing and full of uncertainties. The idea of working with uncertainty is not new in the planning context. Rittel (1973) introduced the challenging concept of 'wicked' problems to the planning debate. "Contrary to 'tame' (manageable) problems which could be defined clearly, wicked problems have no clear start, end or ultimate solution because they are intrinsically uncertain, non-linear and complex". The complexity sciences, rediscovered Rittel and embraced his 'wicked' problems fully (Conklin, 2005) as wickedness represents precisely the fundamental uncertainties observed by the complexity sciences in the real world. Moreover, Christensen (1985)'s work referred to a type of complexity allowing variation in types of planning issues, a variation which depended on uncertainty.

In order to bridge with concepts from the complexity sciences such as non-linearity, emergence, path-dependency, transitions, co-evolution, adaptivity and self-organisation, uncertainties should be used as a design input rather than seen as obstacles for design process. By allowing uncertainties, designers can avoid from the static, fixed and linear thinking mechanisms which are not useful to manage complex systems. Instead, they can achieve more incremental, adaptive, dynamic and complex solutions to the complex problems of our age. As it is known from the related literature, complexity concepts from evolutionary biology, social sciences, psychology and ecology have played a significant role in demonstrating cities are evolving open systems due to the influence of biological cognitive agents – human beings with their dynamic behavioural nature -on multiple urban processes (Allen, 1997; Batty and Marshall, 2012; Holling, 2001; Portugali, 2016). According to De Roo and Silva (2010), “temporal dynamics and ‘wicked’ problems posit the fundamental issues of uncertainty and unknown unknowns”. Uncertainties are a product of the interactions and interdependencies between elements and dynamic environments and as such are an intrinsic part of how urban systems and networks function. In the context of complex systems’ natural capability of adaptation and co-evolution through the processes of variation and selection, designers should benefit from errors, random behaviours or most importantly uncertainties. In fact, Kelly (1994) views "honour your errors" as a guiding commandment for effective adaptation. He advises that by nurturing small failures, a system can make large failures less probable. That is, small cracks can prevent larger fractures. Indeed, errors and uncertainties are often renamed innovations when they lead to a better problem solution or a more adaptive path. “Furthermore, tolerating minor mistakes and allowing uncertainties for variabilities instead of trying to correct or eliminate them also frees a system to focus on more important and more urgent functions” (Kelly, 1994). For urban designers, architects, social and behavioural scientists and theorists, issue of complexity and uncertainty seems exciting to experience new paths and methods of design and to develop novel strategies for more diverse and complex systems. However, at this point, what remains unclear, is how can we cope with – or rule -the uncertainties to meet the needs of human beings by developing behaviour sensitive approaches?

The answer to this vital question is actually lying deep down in the well-known theory of urban design and architecture.

4.1 RECURSIVE PATTERNS: PERCEPTIBLE ORDER OF UNCERTAINTIES

The fundamental characteristics of complex systems leads difficult questions to answer: How can designers cope with the uncertainties while they are trying to sustain human needs in the environment without predicting the consequences of their actions? If we are living in the world of complexity, would accepting the uncertainties as undefeatable mean that we have no rational basis for design?

Even if complex systems contain uncertainties and emergent behaviours, there is ‘perceptible order’ in these systems. This understandable order refers to dynamic, characteristic and recursive patterns in architecture and urban design theory. Holling (1987) states that “I would describe this order as recurring similar patterns, never quite the same, sometimes startlingly novel because of the changing and adapting elements of the system, but also usually distinguishable from patterns in other systems”. According to Christen (2009), “pattern is the repetitive configuration of the physical entities in space or that of the events in time. Moreover, Holland (1992) suggests that learning in this kind of environment is based on the identification of recurring system patterns. The checker board game that he uses as an example of pattern learning is a relatively simple example of a complex adaptive system. It presents a limited and stable set of possible system states and patterns; the criteria for successful intervention in the system are fairly clear and the time and resource costs of learning are relatively low (Wilson, 2002).

For the behavioural scientist, Nowak et. all (1994) have recommended looking for regularities or patterns rather than focusing solely on uncovering one-way causal links between variables; bidirectional causality, in which each variable is simultaneously both a cause and an effect, is commonplace in complex systems. Within these observed patterns of behaviour, it may be possible to detect signs of nonlinearity and dynamism. From the behavioural scientific point of view, according to Rapoport (1977),

> *“the environment is a series of relationships among elements and people and these relationships are orderly – they have pattern. The environment has a structure and is not a random assemblage of things. It both reflects and facilitates relations and transactions between people and the physical elements of the world. These relationships in the*

physical environment are primarily spatial – basically objects and people are related through separation in and by space". (Rapoport, 1977)

Therefore, concerning with the behaviour of the form and recursive patterns on the space would lead us understanding nature of complexity and dealing with the uncertainties at the roots of human behaviour and space's itself. From this point of view, recursive urban patterns can be considered as the vital systematic relationships in a complex system. This idea of systematic relationship refers to the idea of Jacobs (1961) – city as an organised complexity. Jacobs (1961) presents the multiplicity of choice experienced with the emergent diversity of the urban elements (i.e. street, block and building) as the source of urban complexity. Within all this perspective, urban patterns can be considered as the key factor for learning to deal with complexity and designing with the uncertainty as a natural result of the state of being complex.

4.2 ON PATTERNS AS 'THE ATOMS OF ENVIRONMENTAL STRUCTURE'

In order to evaluate environmental design as a rational process and develop a scientific approach to the man-environment relationship positive design models and methodologies must be specified. According to Lang (1987), one of the most influential model has been proposed by Christopher Alexander (1964). His approach consists of decomposing a problem into components that are as independent of each other as possible, establishing a hierarchy among them, and then finding patterns of the environment that meet the requirement of each component of the problem.

In 1966, Alexander and Poyner – in their extraordinary work: "The Atoms of Environmental Structure" - argue that the critical aspect of environmental problem-solving is the satisfaction of basic behavioural tendencies and that the nature of the design process is the determination of tendencies and of possible conflicts between tendencies in different environment-behaviour settings. The work of Alexander and his colleagues on the understanding of the structure of design problems, the translation of behavioural findings into form statements, and the development of a pattern language for the description and cataloguing of environment-behaviour patterns continues to advance at a rapid rate (Moore, 1970). These continuous and dedicated studies created 'the form-behaviour approach' – which relates behaviour to form - to the environmental design studies; and later on, they are modified into 'a pattern language' approach. The form behaviour approach has focused on ways to identify form-behaviour problems and to translate behavioural understandings and behavioural research into testable form 'patterns'. Alexander and colleagues (1977) stated that urban space is mostly generated by the recursive patterns and these perceptible patterns are organized in an interconnected and hierarchical system that allows for infinite combination – which points out the complexity and unknowability of certain ends. Ulrich (2006) describes patterns as:

"It is important to realize, according to Alexander, that patterns are not arbitrary design ideas but can and need to be identified and verified through careful observation. Furthermore, patterns become meaningful only within a hierarchy of interdependent patterns, in which each pattern helps to complete larger patterns within which it is contained, and in turn is further completed by smaller patterns that it contains. Each pattern has a well-defined place in the overall network of patterns; together, they constitute a pattern language, a vocabulary of design that consists not just of words but of mental design images". (Ulrich, 2006)

In general terms, pattern languages address to two different needs; firstly, a way of controlling a complex system – which is urban space and its relationship with the human behaviour, and secondly a design tool which helps the designer to build a coherency. Moreover, as a generative system, pattern language has the ability to generate unlimited number of combinations to deal with the complexity at the roots of manenvironment relationship. According to Nguyen (2015), "pattern languages help us to tackle the complexity of a wide variety of systems. Each "pattern" represents a rule governing one working piece of a complex system, and the application of pattern languages can be done systematically".

When the form behaviour approach and the concept of patterns are evaluated in the context of behavioural scientific studies and the complexity sciences, they offer seminal and overarching point of views. According to Salingaros and Mehaffy (2006), "the pattern language contains rules for how human beings interact with built forms, codifies the interaction of human beings with their environment, and determines

how and where we naturally prefer to walk, sit, sleep, enter and move through a building, enjoy a room or open space, and feel at ease or not in our garden". The pattern language is a set of inherited tried-and-true solutions – containing the concept of 'uncertainty' - that optimize how the built environment promotes human life and sense of well-being. It combines geometry and social behaviour patterns into a set of useful relationships, summarizing how built form can accommodate human activities. Besides, pattern languages which genuine and defines an adaptive design method have evolved, and, as with all evolved systems, they have developed an extraordinary degree of organized complexity (Salingaros and Mehaffy, 2006).

In short, revisiting the form-behaviour approach as a methodological tool to cope with uncertainties arising from the complexity and emphasizing the contribution of patterns in this context leads to introduction of behavioural data into the design and planning process. Moreover, this approach creates a basis for a shift from linear and static methods of behavioural sciences to the dynamic, adaptive and complex ones. According to Marshall (2009), "we no longer see the universe as an entirely predictable, deterministic place. We now see it more as a complex; sometimes chaotic place, but one where we can still find patterns in the complexity".

Modern urban planning has succeeded in eliminating complexity with its reductionist approaches, running away from the uncertainties and leaving it's behind the empty and disastrous urban environments for us to live with. Therefore, the pursuit of complexity models to cope with uncertainties and developing the form-behaviour approaches to apply them should be the main concern for the fields of urban design and architecture.

5 CONCLUSION

After mid-1900s, the expeditious rise of the Modernism discourse has led to the harsh criticisms and brand-new questions. In the way of searching for new answers to these vital questions, behavioural sciences - a comprehensive design philosophy which takes the human needs, preferences and values as the basis to satisfy the human needs and to eliminate environmental restraints and stresses - has emerged in the context of man and environment relationship. However, behavioural sciences' deficient and limited point of view about the issue of man and environment relationship should be questioned in the context of emerging new paradigms. Contrary to the very first approaches in behavioural sciences, human behaviour is not a direct result of the effects of the urban space; or the urban space is not a direct outcome from the behaviours of its users. Interrelationships between these two phenomena do not represent a simple linear process. Indeed, man and environment relationship is much more complex and consists of intricate, dynamic and nonlinear process which is full of uncertainties.

Within the general context of this paper, a critical perspective is developed to the issue of reducing uncertainty – which is a general approach of 'conventional' urban planning and design - in order to raise a discussion. With the development of complexity science and its effects on architecture and urban design, concept of uncertainty cannot be seen as a drawback for design process or product. The fact that cities are complex systems which essentially contains various uncertainties, reducing the uncertainty seems unreasonable. Instead, designers should learn how to deal with uncertainty by using it as a design input: which means they should learn to 'design with uncertainty'. In that sense, complexity theories and complex systems – which are basically considered as the "aggregates involving many components generating a recognisable global (collective) behaviour and large-scale order which are not controlled centrally, but generated by many local interactions" - will help designers to develop better behavioural scientific approach to the fields of architecture and urban design (Caliskan, 2013). In order to challenge the conventional views on urban planning and design, to understand the complex and nonlinear nature of man-environment relationship and to develop better approaches in terms of the behavioural sciences, searching for models of complexity and the various kinds of complex systems is a crucial necessity. With this fundamental aim, the question of 'can design process be managed under the uncertain conditions which are natural results of complexity' has been raised.

In order to bridge with concepts from the complexity sciences such as non-linearity, emergence, path-dependency, transitions, co-evolution, adaptivity and self-organisation, uncertainties should be used as a design input rather than seen as obstacles for design process. By allowing uncertainties, designers can avoid from the static, fixed and linear thinking mechanisms which are not useful to manage complex

systems. Instead, they can achieve more incremental, adaptive, dynamic and complex solutions to the complex problems of our age. For urban designers, architects, social and behavioural scientists and theorists, issue of complexity and uncertainty seems exciting to experience new paths and methods of design and to develop novel strategies for more diverse and complex systems. However, at this point, what remains unclear, is how can we cope with – or rule - the uncertainties to meet the needs of human beings by developing behaviour sensitive approaches? The answer to this vital question is actually lying deep down in the well-known theory of urban design and architecture.

Even if complex systems contain uncertainties and emergent behaviours, there is 'perceptible order' in these systems. This understandable order refers to dynamic, characteristic and recursive patterns in architecture and urban design theory. When the form behaviour approach and the concept of patterns are evaluated in the context of behavioural scientific studies and the complexity sciences, they offer seminal and overarching point of views. The pattern language is a set of inherited tried-and-true solutions – containing the concept of 'uncertainty' - that optimize how the built environment promotes human life and sense of wellbeing. It combines geometry and social behaviour patterns into a set of useful relationships, summarizing how built form can accommodate human activities. Besides, pattern languages which genuine and defines an adaptive design method have evolved, and, as with all evolved systems, they have developed an extraordinary degree of organized complexity (Salingaros and Mehaffy, 2006).

In short, revisiting the form-behaviour approach as a methodological tool to cope with uncertainties arising from the complexity and emphasizing the contribution of patterns in this context leads to introduction of behavioural data into the design and planning process. Moreover, this approach creates a basis for a shift from linear and static methods of behavioural sciences to the dynamic, adaptive and complex ones. Therefore, the pursuit of complexity models to cope with uncertainties and developing the formbehaviour approaches to apply them should be the main concern for the fields of urban design and architecture. Within these vital concerns, this concise research opens up a discussion about how recently developed complexity theories can help us to understand the complex interaction between man and environment and to cope with uncertainty as an inevitable attribute of this interaction.

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ID 1524 | WHAT IF LARGE INFRASTRUCTURE PROJECT PROCESSES ADOPTED A COEVOLUTIONARY CHARACTER? DISCUSSING THE MERITS AND CONSEQUENCES FOR THE OOSTERWEEL LINK PROJECT, ANTWERP

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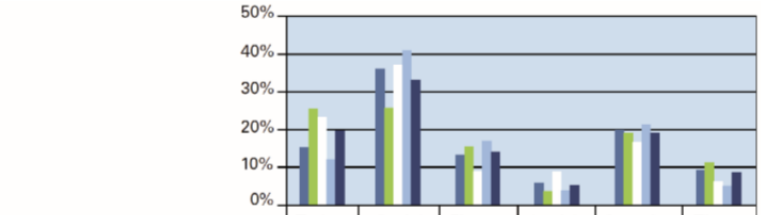
1 INTRODUCTION

In the quest for a more sustainable mobility, present mobility planning approaches do not prove effective. In particular in the case of large infrastructure projects (LIPs) this becomes manifest; realising LIPs has become tremendously difficult these days, resulting in many stranded projects. Previous LIP-research has shown that complexity is behind these struggles, in all its facets. Although decision makers often still focus merely on financial, technical and legal issues of complexity (Flyvbjerg, 2007; Priemus, 2007), it becomes increasingly clear that the influence of social and organizational complexity is heavily underestimated with respect to planning processes and procedures, see Figure 1 (Hertogh & Westerveld, 2010).



	Techn.	Social	Financ.	Legisl.	Organis.	Time
Betuweroute	15%	36%	13%	6%	20%	9%
Gotthard and Lötschberg	26%	26%	15%	3%	19%	11%
A73-South	23%	37%	9%	9%	17%	6%
HSL-South	12%	41%	17%	3%	22%	5%
Average	20%	33%	14%	5%	19%	8%

Figure 1. Views of complexity from multiple LIPs: Betuweroute, Gotthard, Lötschberg, A73-South and HSL-South. Source: Hertogh and Westerveld (2010, p. 175, figure 4.8)

The social component of complexity relates to the number and representation of the actors and the alignment of their (conflicting) demands. Often, the decision making process is still in the hands of vested planning actors favouring backroom politics. The organisational aspect of complexity, that is closely connected to the social component, focuses on the (power) relation between the stakeholders, the responsibilities, the appropriate scale levels, etc. The fact that up till now – with respect to LIPs – the focus stays on the financial costs, the risks and opportunities relating to the progress in time, and the technical aspects (Flyvbjerg, 2007; Priemus, 2007) points towards the prevailing technocratic planning approach, towards the notion of the (mobility) planner as engineer. While this planning perspective used to pay off, more recently however, other mobility planning approaches have been sought for, since “complexity strikes back if it is neglected” (Salet, Bertolini, & Giezen, 2013, p. 1989). Hence, the central question here is: (1) What can such new complexity embracing mobility planning approach add to LIP planning processes? , and (2) What does this mean for the actors and their roles? We hereby also consider recent attempts to work with complexity in the policy fields of mobility and spatial planning, and what they have obtained so far.

The paper is structured as follows. Chapter 2 gives a brief overview of why we need to grasp complexity in the planning process and to which extent these ideas are already implemented. In chapter 3 we test these ideas and planning approach with vested planning actors in the case study of the Oosterweel Link. But first we have to take you through the project history of this case. Chapter 4 presents the discussion and final conclusions on what coevolution can add to LIP-planning processes.

2 EMBRACING COMPLEXITY IN MOBILITY PLANNING

Many mobility planning strategies, and LIP strategies in particular, still focus too much on the implementation or the input-output story. Furthermore, too often LIPs are handled within the sole field of infrastructure and public works, while the interests and implications reach most other policy fields and even plans as well (finance, economy, environment, spatial planning, labour, etc.). Hence, a lot more stakeholders (government bodies, civil movements and other societal stakeholders) enter the planning scene, making alignment more difficult in the planning process.

Apart from the various interests and claims during the project, also knowledge is quickly accumulating through the years, so the processes (or throughput) themselves should have more autonomy in such LIPs. (G. R. Teisman, 2008). Nowadays, planning strategies often still remind us too much of an stepwise action plan. Based on linear think patterns a somewhat naive and reductionist trajectory is defined towards a clearly and a-priori defined goal: the implementation (Paredis & Block, 2015; Priemus, 2007; Salet et al., 2013; Swyngedouw, Moulaert, & Rodriguez, 2002). In many cases, however, planning strategies are not just standard formulas, they have to fit the specificity of the situation (time, place, actor constellations, environment, etc.).

In dealing with this complex reality the concept of complex adaptive system (CASs) increasingly gains attention in several fields: public administration (Hertogh & Westerveld, 2010; Pel & Teisman, 2009; G. Teisman, van Buuren, & Gerrits, 2009; G. R. Teisman, 2008), spatial planning (Boonstra & Boelens, 2011; Van Assche, Beunen, & Duineveld, 2013; Van Assche, Beunen, Jacobs, & Teampau, 2011), and on the interplay between spatial planning and mobility in LIPs (Hertogh & Westerveld, 2010; Salet et al., 2013). Processes of self-organisation and coevolution are at the heart of CASs (Boelens & De Roo, 2014; G. R. Teisman, 2008; Van Brussel, Boelens, & Lauwers, 2016), pointing out the delusion of a complete steering. We particularly built on the work on LIPs of Hertogh and Westerveld (2010) and their 'dynamic management'[1] approach to deal with the encountered complexity. But what can such a coevolution framework add to the LIP planning processes? Therefore we turned towards one of the largest and most complex LIP cases in Belgium and confronted some of the key stakeholders with these concepts and approaches in a round table discussion.

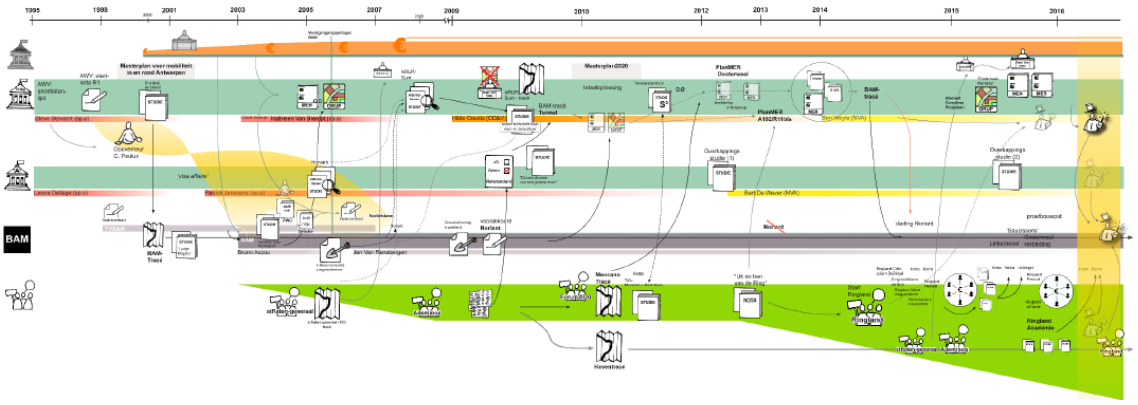


Figure 2. The Oosterweel LIP process distinguishing the different actor groups and their interconnections (own elaboration)

3 CASE LIP OOSTERWEEL LINK

The Oosterweel Link LIP (Antwerp, Belgium) is the research object of this case study for several reasons. The project process is already long lasting, the project is controversial and the process can be characterised by various rounds of opposition resulting in change. Furthermore, there is a sense of urgency as the congested mobility situation necessitates action. Describing the project process we focus on the different actor groups and there interactions, see Figure 2. The big project tracks or actor groups

[1] We do not like the 'management' word in 'dynamic management', as in our opinion a complete steering can never be reached. But we see in the approach however the elements of or parallels with a certain manoeuvring for coevolution: the search for alignment, the changing actor field, changing conditions, etc. (Hertogh & Westerveld, 2010)

involved are the Flemish government, the Flemish parliament, the City of Antwerp, the project management team appointed by the Flemish Government (i.e. BAM), and the activist groups or citizen movements. We also shed light on other protagonists in the story that took the role of game changers: the governor of the Antwerp province and the intendant (respectively in beginning of the project and in most recent project years).

3.1 THE OOSTERWEEL LINK STORY

3.1.1 ONCE UPON A TIME AN OPTIMISTIC AND FUTURISTIC INFRASTRUCTURE STORY STARTS… (1995-2005)

In 1995 the Flemish Agency for Roads and Traffic launched the start of a new masterplan to counter the structural congestion in and around Antwerp. The completion of the Antwerp ring road with the Oosterweel Link (Figure 3) was perceived the crown jewel of the masterplan that would solve all problems. The Oosterweel Link was conceived as a combination of a tunnel with a double deck viaduct called 'Lange Wapper'. The governor of the Antwerp province, Camille Paulus, was in favour of these infrastructure designs. To define the precise route of the LIP a study was carried out by ABM (Atenco, Belgroma – Grontmij, and Maunsell). This study came up with 6 plausible routes, but in the end a 7th possibility was added, a combination of parts of the previous options. The City of Antwerp, the Port of Antwerp, the province of Antwerp, the Flemish administration and some other institutions approved this 'optimised medium route', which later became notorious as the 'BAM-route'. Only this route would be further studied and elaborated (Verhoeven & Ysebaert, 2008).

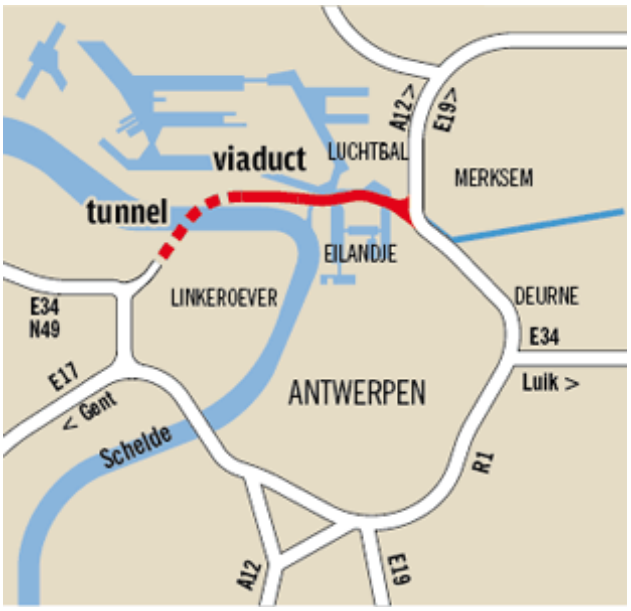


Figure 3. The Oosterweel Link section (red). Source: Het Nieuwsblad, March 4, 2009, http://www.nieuwsblad.be/cnt/dmf04032009_049)

In 2001 a consultancy consortium (TV SAM) was commissioned by the Flemish Government to elaborate that route. To promote the masterplan and to acquire the necessary support base a States-General was organised by the governor, bringing most vested institutions and agencies together, but only little publicity was given to it. By 2003, a management company was established (BAM, Beheermaatschappij Antwerpen Mobiel) to take over the project management and to replace the role of the Flemish administration in fulfilling the framework agreement with TV SAM, as a private company that functions independent of political interference. A close collaboration between the consultants of TVSAM and BAM started. When determining and securing the route of the LIP in a regional implementation plan (GRUP), they preferred to follow the (at that moment still optional) environmental impact assessment procedures.

3.1.2 THE AWAKENING – AFTER HAVING SEEN THE MODEL AND THE COST INCREASE… (2005-2009)

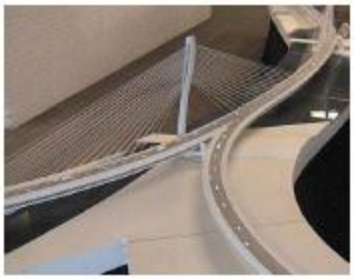


Figure 4. Model of the Lange Wapper dubble deck viaduct skimming over the City of Antwerp without and with underlying urban fabric. Source: (right) http://4.bp.blogspot.com; and (left)http://www.bavo.biz/img/images/langewapper%2012.jpg.

When the BAM, in 2005, eventually showed the model of the Oosterweel Link to the press and the Flemish parliament, it caused a lot of commotion and reactions were almost unanimous enthusiastic. But it was met with great resistance afterwards, during the public inquiry of that procedure where the model was shown for the general public for the first time. stRaten-generaal, an activist group, came with its own alternative route suggesting to alleviate the city from transit traffic and complete the ring road much further away. The City of Antwerp was alarmed and wanted to buy time before making a decision. An extra study of the alternatives was launched: the Horvat study (carried out by Horvat). In addition to the BAM-route with the Lange Wapper viaduct, this study also took into account the tunnel variant of the BAM-route (called Horvat-route) and the alternative of stRaten-generaal. The research took only two months after which one concluded that a tunnel option was more expensive than a viaduct. Hence the approval was given for the viaduct landmark and the tunnel option was abandoned. Building consortia were notified for designing, elaborating and implementing the BAM-route.

Figure 5. Tunnel variant of the Oosterweel Link on the BAM-route (Horvat). Source: http://www.nieuwsblad.be/cnt/dmf04032009_049

Finally four consortia were retained for submitting their 'best and final offer'. An independent quality division ('kwaliteitskamer'), existing of national and international experts in the field and chaired by the governor, was established to examine and criticize these BAFO's and advise the management company BAM on their final decision. Soon preference was given to the offer of the Noriant consortium and the other consortia were excluded, though their final offer was criticized by the quality division for not being the most economical, nor most qualitative one. It appeared that the governor had an eye to the architectural beauty of the Lange Wapper viaduct for his province (Penris & Peumans, 2007).

In parliament they had difficulty to accept that alternative routes were still taken into account during the environmental impact assessment (EIA, MER), while the building consortia had to finalise their BAFO's according to the BAM-route. In addition, by absence of valid competitors, the total cost of the Oosterweel Link proposal could increase from 0.6 to 1.3 billion euros. This raised many questions about the communication and the transparency of the BAM and the opposition towards the deal with Noriant grew from then on. The precise roles and relations between TV SAM and BAM remained vague and the budgetary resources for the conducted research were repeatedly questioned. In response, BAM commissioned PWC and Deloitte for an external audit of TV SAM. The commission decided to follow the dossier more closely from then on. From 2005, regular progress reports were to be presented by BAM in

the parliamentary commission and also the Court of Audit of Belgium monitored the made progress (Peumans & Penris, 2005). Nonetheless, due to the accumulated delays and compensation measures, the total cost estimates continued rising. Therefore, at the end of 2007 the Flemish Government established a price cap for the project of 1.8 billion euros (Penris & Peumans, 2007, p. 7).

3.1.3 FROM LANDMARK TO … SCRATCH? (2008-2012)

In 2008, Ademloos ('Breathless') a new civil movement stood up to put the harmful environmental health impact of such an infrastructure project on the Antwerp citizen on the agenda. Ademloos came up with the aspect of health and air quality and was experienced with communication strategies, whereas stRaten-generaal mainly focused on the technical aspects (e.g. alternative route), and quality of life issues in general. A fruitful collaboration between the two civil movements had started, whereby each organisation remained faithful to its own specialty.

Under the pressure of an increasing opposition against the Oosterweel Link project, the Flemish government decides to have all alternative routes for the project studied once more (L.B., 2010). In July 2008, when Arup/Sum starts the investigation of which the stakes are high. However, when in March 2008 the results of this study are presented, none of the proposed routes excels the others regarding all measured aspects. Consequently Arup/Sum proposes to elaborate an alternative route itself, whereby the third crossing of the river Scheldt is located more northerly, similar to the proposal of stRaten-generaal. The Flemish government approves this additional work, but does not want to wait for the conclusions and has instructed BAM to continue on the chosen path. While Arup/Sum is elaborating its alternative route (Arup/Sum-route), according to their decision of March 28, 2009, the Flemish government instructs the BAM to file the building permission for the implementation of the Lange Wapper. But due to the Arup/Sum study the final agreement on the routing of the project was postponed for the next legislature.

Soon after the decision, the civil movements launched a petition against the BAM-route of the Oosterweel Link project and together they managed to enforce a referendum. Their support base grew steadily (Moolenaar, 2008; Verelst, 2011, pp. 163-165,185). On October 18 (2009) on their first public event they victoriously terminated the Lange Wapper chapter in the Oosterweel Link story as the majority of the citizens voted against the viaduct in the referendum (Vandenbergh, 2009). The civil movements criticized that their proposed route was not taken into account properly in the EIA (projectMER), which they could only consult much later when the damage was done. Besides, the building consortia were already notified to elaborate an infrastructure design for the Lange Wapper viaduct on the BAM-route while the environmental impact assessment, comparing the different alternatives, was not yet concluded.

In July 2009, completely unexpectedly, the further research of Arup/Sum concludes that the studied Arup/Sum-route tunnel alternative is technically feasible and economically viable. But more important, that at all levels their alternative performs better than the Lange Wapper viaduct on the BAM-route. Swayed by the growing civil opposition the City of Antwerp organises a referendum at October 18 (2009) that results in the rejection of the Lange Wapper viaduct (Brinckman, 2010). Consequently as the permits and plans were delivered precisely for the viaduct structure, the procedures of the regional spatial implementation plan and the associated EIAs (and their public inquiries) had to be redone for the tunnel-variant on the same route. Because of the referendum the project had changed substantially and a new full-rebidding was unavoidable. This compromised the financial agreement that was already made with the building consortium Noriant for the Lange Wapper (Dendooven, 2010; Verstraete, 2010).

In 2010 the Flemish government promised to take a final decision in the Oosterweel case running through the alternatives once more and include them in the environmental impact assessments. This fits within the launch of a new Masterplan 2020, that has a broadened scope and looks for a total and multimodal solution for mobility and includes mitigating measures compensating for quality of life aspects.

In the meantime, the civil movements elaborate their alternative the 'Meccano-route', an optimization of the Arup/Sum-route (that in turn was based on the previous stRaten-generaal-route). Together with Forum

2020, a group of influential experts and managers in Antwerp, they have their Meccano-route studied by an independent research institute (TML). The results of the TML study comparing Meccano-route with the BAM-route are favourable to the Meccano-route (Yperman & De Ceuster, 2010). In response, the Flemish

administration instructed the Flemish Traffic Agency to investigate the TML-study (Grispen, 2011). It seemed like a cat-and mouse game with high stakes.

Figure 6. The alternatives investigated in the environmental impact assessment. Source: De Standaard

In 2012 a new research institute (Anteagroup) is entrusted to carry out the environmental impact assessment, in which in addition to the BAM-route (tunnel variant) and the Meccano-route, five other alternatives are included (one of which is the Oosterweel North-route), see Figure 6. The implementation of the tangents A102 and R11bis is already incorporated in the Masterplan 2020 at that moment.

3.1.4 A NEW BREATH FOR THE ANTWERP CITIZEN (2012-2015)

Since air quality and environmental health has entered the debate in 2008, the theme of (partially) capping or tunnelling some major roads would never disappear. Through research by design, the City of Antwerp looks into the feasibility and impact of capping (parts) of the city road network. In November 2012, Ringland, a new civil movement in Antwerp stands up and launches the idea of capping the southern ring road. It is the dawn of a new era of civil opposition.

In 2014 Anteagroup finalises the EIA (planMER Oosterweel) on the basis of which the Flemish government decides on February 14 to follow the chosen path of the BAM-route (stated policy, 'beslist beleid'). To refrain from further legal actions Noriant received a settlement of 37.19 million euros (Moens, 2014), a measure that was met with dismay in parliament.

On the same day of the Valentine's decision of the government, the Ringland initiative officially arose, proclaiming the capping of the ring to ameliorate the liveability and health of the citizens, in combination with a new concept for the ring road structure. This implementation alternative to the southern part of the ring road was partly inspired by the capped M30 in Madrid and suggested earlier by stRaten-generaal. Beyond problem solving, Ringland (the land on the ring road) was especially well-developed and presented as an opportunity for enhancing and managing a qualitative and liveable urban growth. First the concept was elaborated within the urban planning and architecture office Stramien. Using appealing representations of this concept (Figure 7), Peter Vermeulen, the leading urbanist of this office, and his Ringland entourage steadily gained ground. The civil support base reached even further than the Antwerp city. The other activist groups joined the new spirit and collaborated with Ringland. The opposition to the BAM project gained a more positive public image.

Figure 7. Ringland, the concept. Source: Ringland

In three months' time, by the end of 2014, Ringland had collected more than 100 000 euro, by symbolically selling the land on the surface of the ring (4m² for €20). Ringland spent this crowd funding money on extra

research: a mobility study, a cost benefit study and a liveability study (E.D.M., 2015). StRaten-generaal and Ademloos launched an online call to publicly vote for Ringland and, thus, against the spatial implementation plan of Oosterweel (GRUP Oosterweel) (Ademloos, 2015). Embracing social media, finally over 15.000 statements of objections were obtained. This gave the opposition groups the right to speak in the Flemish Parliament on July 2 (De Standaard, 2015).

In the field however, the preparatory works already started in the end of 2015 (B.B.R., 2015). As the opposition parties and many citizens support Ringland, the government decided to establish an 'intendant' (an idea prompted by Ringland itself); this external person should harmonise the Ringland and the BAM project, bring all actors together and look for opportunities to pursue a maximal capping of the ring road within the project margins as negotiated with the BAM. For the latter reason opposition groups were sceptical and expected little room for manoeuvre for the intendant, thus little outcome.

In the end of 2015 and the beginning of 2016, Ringland starts a new campaign and launches the the Ringland Academy, bringing together a wider group of experts and professionals beyond the core Ringland team. They offer ad-hoc inputs into Ringland's activities, contribute to ongoing study work, and develop projects related to one of the core-themes of Ringland. The CurieuzeNeuzen air quality citizen science project has been one of the main outputs of the Ringland Academy up to now. Aside from its objective to better understand air quality problems in Antwerp, CurieuzeNeuzen was created to sensitize and trigger Antwerp citizens (and politicians) about their living environment and the urgency for action with respect to traffic-related air pollution. As such, Ringland manages to increase its support base by inventing themselves over and over again.

3.1.5 WORKING WITH THE INTENDANT – LANDING OR STRANDING? (2016-…)

In the end of 2015 after public tendering, Alexander D'Hooghe is selected as 'intendant' or mediator; he is a professor at the MIT and experienced with participatory processes, e.g. in the 'Rebuild by design' initiative in the aftermath of the passage of hurricane Sandy in New York. In January 2016, he starts inviting all stakeholders to hear and discuss their ambitions and values in the story. Within six months he should deliver an ambition paper, in which the outlines for a maximal capping of the ring road are formulated and supported by all stakeholders. Some find his mandate too limited, as the BAM and the Flemish Government only commissioned the investigation of the capping options, leaving an inquiry of the mobility system underneath out of discussion. During his mandate he gained the trust of all stakeholders and the privately and confined or 'safe' atmosphere in which the 'super workshops' took place to elaborate opportunities, collaborate and discuss a possible compromise payed off quite well already. For the southern part a political compromise was reached and supported by all stakeholders (City of Antwerp, the civil movements, the Flemish administration and the Minister) (Huyse, 2016; Van Ginneken, 2016). For the northern part the debates and private meetings are still ongoing at the time of writing. Stakes are high, as the three civil movements already collected enough signatures to enforce a second referendum in Antwerp, in case the government would not postpone the submission of the building permit for the Oosterweel Link till after the intendant finishes his work within the different workshops (Huyse, 2016; Vermeulen & BELGA, 2016). It seems that a compromise is in the making, the intendant and the major stakeholders still elaborate a new option – a combination of the BAM-proposal (Oosterweel Link but 'light' version) and that of the citizen movements (a capping of the whole ring road and the completion of the ring further north of the city)(see Figure 8), but it is not sure if the project will land or strand in the coming weeks (Brinckman, 2017).

Figure 8. Compromise proposed by intendant. Source: Brinckman (2017)

3.2 ROUNDTABLE OUTCOMES – THE OOSTERWEEL LINK PROCESS FROM THE STAKEHOLDERS' PERSPECTIVE

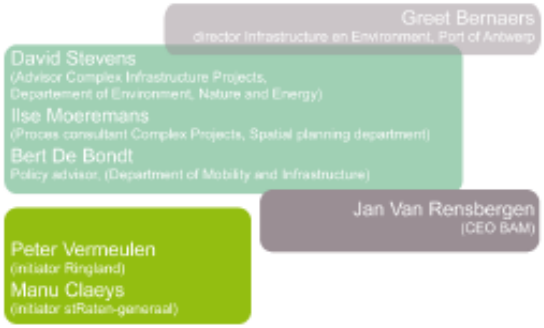


Figure 9. Participants roundtable Complex Infrastructure projects – Universiteitsclub UA, Thursday May, 26 2016

3.2.1 COEVOLUTION? IDENTIFYING CLICK-MOMENTS

In the roundtable we confronted the participants with the whole project history again, just like we took you through the project in the previous section. The challenge was to bring the key-stakeholders[1] in the process together (Figure 9), to hear about how they perceived the encountered complexities, and to see if they could sympathize with each other's perspectives and decisions at several crucial moments in the project process. To cope with the encountered complexity, we focused on a coevolutionary approach, incorporating elements of the 'dynamic management' as proposed by Hertogh and Westerveld (2010), in which sufficient flexibility is guaranteed, but in which the omnipresent urgency to act can also be responded to (focus on control on several moments). The various stakeholders could see the merits of such approach and were asked about how they perceived the coevolution in the process. They ended up with identifying key-moments or 'click'-moments (as some proposed) that were decisive for the rest of the (coevolutionary) process. However according to the civil movements some of these click-moments were ambiguous as they seemed to leave some possibilities open for alternative options.

As a first click-moment all participants identified the moment in the 2nd round, in 2008, in which the results of the Arup/Sum alternatives assessment were presented and the moment had potential. The alternatives were assessed and compared based on various criteria. When the bureau proposed to conduct a follow-up study because it was concluded that none of the proposed routes excelled all the others, the Flemish government made the 'fatal mistake' to make of this moment an ambiguous click-moment according to the roundtable participants: the government commissioned Arup/Sum to carry out this further research (i.e. non-click but open), while at the same time the BAM was commissioned to prepare the building permission (i.e. click). The roundtable argued that the government should have taken a break and set the Oosterweel Link procedures 'on hold'. By the made decision trust was compromised and polarisation increased. Everyone agreed that a pause was not sufficient, one should have switched to a co-creative approach already back then.

A second click-moment, in particular concerning the civil movements was the decision of the Flemish government in 2011 to assess all alternatives once and for all in a final environmental impact assessment. At that moment, the civil movements cherished hopes that all their suggestions and supplied ideas would be taken into account seriously. However, after a while this feeling of trust disappeared by lack of sustained communication, which is – according to the administration – inherent to the formal procedures. Also the transparency with which the alternative options were adopted and modelled in the assessment was criticized. Not all alternatives were taken into account on the same grounds. This prompted the civil movements to file a legal complaint as their last hope.

[1] Also the Alderman for Mobility of the city of Antwerp (K. Kennis), the governor of the Antwerp province (C. Berx), and a representative from VOKA (the Chamber of Commerce, representing the Flemish entrepreneurial sector) were invited and willing to join, but were eliminated after a doodle round of checking agendas.

For some roundtable participants the exact click might have happened a bit earlier: on the moment that the Flemish government decides on the 'optimised medium-route' (the later BAM-route) already in round 1. Some argue that once the political choice is made, one should respect that decision and one cannot call that into question over and over again. Otherwise the project stagnates and opposition increases. But not all participants agree with that, as they argue that the process was not transparent enough, not well-communicated, there was no participation at all and thus no broad support base as the project was steered completely internally. Besides, on various moments unfair treatment of alternatives or decision made with conflicts of interest, made these decisions unstable. Furthermore, the enduring protest against the project has broadened the project scope: quality of life aspects, a redesign of the mobility system, the aspect of air quality and the concept of capping, etc. were initially not on the agenda.

The civil movements argue that it is only logical that the process has to be redone, since the project scope has more than doubled. But the participants representing the administrations replied that the question is rather 'how long can the government as client last without a solution?' They point out the risks of taking more than you can actually handle, of overcharging the project. Because that would make the project fail. As such they are in favour of not questioning previous decisions. But there is no lacking sense of urgency, but according to some, although the problem is clear, the problem solution(s) and precise objectives are not (!) and are still frequently questioned. Is a third crossing of the river Scheldt actually necessary and solve the problem? Even that is questioned, so, how can we decide already?

A final indicated click-moment is the decision of the Flemish government to definitively choose for the BAM-route (see round 4). However this felt for all roundtable participants also as a quite ambiguous click as the government had just appointed an intendant (this idea was prompted by Ringland) to align all actors and build a broad support base for the capping (cf. idea of civil movements) of the Oosterweel Link project (on the BAM-route). Most participants had at the moment of the round table just started an intensive and private cooperation process guided by this intendant, the mandate of which was according to the civil movements and most experts in the debate too limited. Wasn't this also a moment for a pause to alleviate the ongoing processes of this intendant?

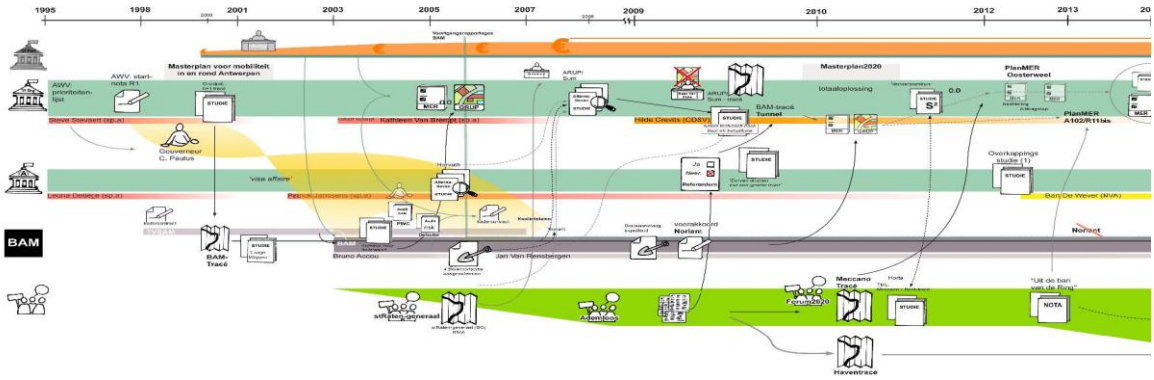
4 DISCUSSION AND CONCLUSIONS

Realising large infrastructure projects (LIPs) has become tremendously difficult nowadays and many projects strand. Although decision makers often still focus merely on financial, technical and legal issues of complexity it becomes increasingly clear that the influence of social and organizational complexity is heavily underestimated with respect to planning processes and procedures, also in the case of the LIP Oosterweel Link. Since complexity in its many aspects seems behind all those LIP-struggles, we need to switch from the prevailing and often linear technocratic planning approach to an approach that holds in the encounter with complexity. That is why we wanted to explore the coevolutionary character of the whole process. We hosted both vested and civic actors of the Oosterweel Link case in a round table discussion and confronted them with the project history again. The discussion proved successful with respect to (1) acknowledging the encountered complexity and the utility of a coevolutionary perspective in this respect and (2) understanding the made choices and identifying the crucial moments that made or broke this coevolutionary process. What did coevolution add to the LIP Oosterweel Link? What did it imply for the actors' roles?

The participants argued that the key for working with complexity is to release the process and to shift focus from project output or implementation towards the process of co-creation. They identified click-moments where coevolution flourished or got stuck in the case. Furthermore, they agreed on the necessity of a more integrated way of working, implying a less fragmented government. There should be a balance of interaction from the beginning on and control (decisions or 'clicks' should also be made in case of a broad support base). The importance of a mediator or intendant was acknowledged in this case to balance between interaction and control. It seemed more difficult for the participants to decide on the best moments and powers for control: what the click-moment includes and who finally decides.

From a coevolutionary perspective, observing all (inter)actors and agendas at stake (Figure 2), we could oversee the merits of the various rounds of opposition and delay. Thanks to the first citizen movements and their opposition, the project's scope incorporated the liveability aspects, environmental (and) health aspects. Though there were some moments of convergence, the conflict model prevailed in those rounds.

When Ringland came into the debate, this steadily changed. The three citizen movements closely collaborated, but kept their own ‘specialties’. Ringland actively addressed the government and project management team BAM with its capping ideas, and had in the meantime built a substantial support base. By carrying out studies and establishing the Ringland Academy, it also gained the support of many academics and experts in the field. Ringland prompted the need for a mediator (or intendant) to align all stakeholders, herewith inviting themselves and the citizen movements to the decision making process, mediated by the intendant. Since then a cocreated or coevolutionary model dominated, based on trust, transparency and interaction. A first compromise was signed between all involved parties and the concrete elaboration, engagements and planning procedures are currently seriously being discussed. Soon we will see if the project finally lands…



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ID 1585 | DECODING AND MANAGING CITIES: TOWARD A COMPLEX AND DYNAMIC SYSTEM APPROACH

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1 INTRODUCTION

Due to the rapid growth of cities and their social, cultural, economic and technological evolution, the policies and legislative instruments need to adapt to this change. By 2050, United-Nations estimate 6.4 billion people[1] are expected to be living in cities (Riffat et al., 2016), with relevant consequences on resources, emissions and services[2]. In spite of this, the development of Europe"s cities and the relations among them constitute one of the most important driving force for the future of Europe (Rotmans and Van Asselt, 2000).

The complexity of the urban phenomena needs to be investigated in an integrated manner, through the management of the systems and processes making up the city. Indeed, the city is recognised in literature as a complex, open and adaptive system, that evolves in time and space (Portugali et al., 2012), (Healy,

[1] The recent report by the United-Nations (2014) estimate 3.9 billion urban population in 2014 itself.
[2]http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban_Europe_%E2%80%94_statistics_on_cities,_towns_and_suburbs

2006). Its components (i.e. buildings, infrastructures, human agents etc.), with own lifecycle, interact among them and are not predictable linearly, not even separable, but are based on the principle, attributed to Aristotle, that "the whole is greater than the sum of the parts". Furthermore, the cities, as "systems within systems of cities", should take into account the interdependencies with their territories. Each city should study both the relationships within itself but also with the urban boundaries, urban region, in an inter-scalar vision.

Facing the complexity of above mentioned urban challenges, traditional methods and planning techniques appear obsolete and static, ever more characterised by the highly diverse and intertwined ways of how the community actually uses the urban space (Zhong et al., 2015), (Faludi and van der Valk, 2013), (Healey, 2006), (Hartman and De Roo, 2013), not contemplating the dynamic and complex behaviour of the city , as recommended by the main United Nations conferences on the development issues of the cities in the world (i.e. Rio Earth Summit in 1992, Habitat at Istanbul in 1998 or at Quito in 2016).

In order to obtain a resilient city, adaptive to urban dynamics, defining new strategies of urban governance are required to support cities to manage the continuous change and the interrelation between city systems (spatial and human), trying to "unravel" urban complexity.

For the authors, an opportunity for a paradigm shift could reside in through the interoperable platform as methodological conceptualization, enabled by the Information Technologies. In this work the methodological and technological framework BIM-based (Eastman et al., 2011) is described as an opportunity to decode and manage the urban dynamics complexity. The innovative use of the Urban declination of the Building Information Modeling (BIM) methodology, already consolidated for building application, and other interdisciplinary approach to cover technological gap (like Product Lifecycle Management – PLM or Geographic Information System - GIS) (Terzi et al., 2010)(Maguire, 1991), could assist to better understand the planning issues, that are in the most case complex "not only because the problems themselves are ambiguous and difficult to define, but also because they involve multiple stakeholders with multi-attribute preferences" (Lai and Huang, 2016).

Starting from the analysis of a case study based on the absence of an integrated management, that represents as the complexity of an urban transformation reflects its impact on the urban system, the objective of this research is to propose a methodological framework able to model and to simulate the interrelations between the main “actors” and components involved (i.e. stakeholders, officials, business people and citizens), by digitalizing and by making clear the processes. In fact, usually, a urban transformation/construction project “involve complex sets of relationships between parties under different professional background in order to achieve complex goal. The complexity of these projects are resulting from a thousand of documents and drawings that being used manually, that could lead to mistakes in construction process, drawings are not updated, delays, cost overrun, etc.” (Latiffi et al., 2014).

Moreover, the systematized and integrated management of these relationships produce data, which are processed into information and then knowledge (historical, present and future) (Innes and Booher, 1999), enabling predictive analyses or different simulation for the best and participate solution. Moreover, this study shows how the proposed interdisciplinary approach referring to the organizational and dynamical aspects of a city sub-system and network as a whole, may improve the management of the “city-system”, by arguing that there is the necessity to change the way we think, by integrating "system thinking" (De Roo, 2012).

The present paper is structured as follows: Section 2 gives a brief review of the state of the art and of the literature for decoding and managing cities. In Section 3, it is presented the research aim and methodology. Section4 is based on the description of the criticalities of an actual urban process: the student housing in Bari, useful for highlight the actual process problem that are overcame by the description of the efficient solution framework in Section 5 “toward a complex approach: preliminary result on the innovative model for complex urban management”. Finally, in Section 6 it is provided conclusions and discussions about possible extensions of the current formulation.

2 DECODING AND MANAGING CITIES

“The processes that drive spatial and economic urban change are increasingly interconnected and interact with multiple levels of scales” (Hartman and De Roo, 2013) and it is impossible to predict all the criticalities. As a complex system, the city is dynamic (Batty, 2008), in contrast with the static vision of the urban plans and it is an open system (White et al., 2015) because of the continuous interactions with multi external agents. In an ideal vision, the future urban system should be so resilient to adapt to potential disturbances, by learning from the past experiences to better plan and simulate the future action. Furthermore, the improvement of a single sub-system that composes a city not significantly increases the resilience and sustainability of the urban system. A “system-of-systems” approach is necessary that at the same time strengthens individual sub-systems as well as the overall system of a city. The “management of complex systems such as cities requires the use of innovative, sophisticated planning tools that can assist in monitoring current conditions and projecting future developments. It also requires a well-structured participatory process of creating social support by stakeholders for long-term city visions” (Rotmans and Van Asselt, 2000).

Moreover, cross-disciplinary research approach for analysing complex dynamics of cities are needed. In detail, the know-how in the industrial engineering sector, characterized by integrated approaches[1] with great experience in complex processes and actors management, may be useful to decode and systematize the urban processes, by leading to a „smart city“ with a global vision and a local action. For example, in the manufacturing industry, for decades collaborative 3D modelling, visualization and simulation of complex products have been used to anticipate and test the behaviour of complex systems before prototypes pass into production, taking into account the interaction between stakeholders, by finding bottlenecks system and optimizing processes, time and costs.

By carrying this knowledge to the urban phenomena could be strategic, even though cities are not a complex product but are composed of integrated and interrelated systems like a complex system. Nowadays, the tendency is to customise product complex lifecycle management platform, or building lifecycle management tools, oriented toward the city understanding and management, by providing the foundation for the virtual technology used to create urban environments and objects, such as buildings, utility, mobility systems and infrastructures.

An example is "Virtual Singapore: A Platform to Solve Emerging and Complex Challenges"[2]. The National Research Foundation (NRF), Prime Minister”s Office of Singapore, and Dassault Systèmes are cooperating to find solutions that give Advanced information and modelling technologies through a

collaborative platform based on a realistic and integrated 3D model with semantics and attributes in the virtual space. The tools and services development address the emerging and complex challenges Singapore faces thanks to a rich data environment and visualisation techniques that will be used in a collaborative manner by Singapore”s citizens, enterprises, local administrator and research community.

Another study of Xu et al. (2014) explains the potential benefits of CIM, City Information Modeling, a framework of integrating BIM technology into GIS with the goal of bringing great benefits to the urban construction and city management.

So, there is the need for a perspective system and strategic approach, by integrating the cross-disciplinary academic insights and the latest practical innovations, to enable resilient and sustainable urban system, looking towards the industry 4.0 technologies and focusing on the asset management.

The following paragraphs, starting from a case study, aims at providing an integrated approach for future planning and management within the urban complex system through the design of an innovative framework based on the integration of collaborative and technological approaches.

1 PLM - Product Lifecycle Management as holistic approach for complex product in manufacturing industry
2 https://thebimhub.com/city-management/

3 RESERCH AIM AND METHODOLY

The current approach used for the management of urban transformation process is not considered sufficient to decode the complexity. Starting from this consideration, this research aims to propose a customized BIM based methodology for the urban management. The work is based on a case study analysis, wicked example of management of an urban transformation, to demonstrate how “systems thinking approach” can improve the management and planning processes. In particular reference to an urban subsystem case study, the research highlights the necessity to insert and integrate the subsystem in a greater complex system (in an inter-scalar vision), by avoiding the compartmentalised action, by reaching resilient and sustainable actions.

The first phase illustrates the weaknesses of actual process and how an innovative framework can improve the understanding of system components and complexity. It consists in an empirical inquiry based on a qualitative method that investigates phenomenon within a real context: the interrupted construction site of a student housing in Bari, South Italy.

This research deepens the urban transformation conflicts, and how they arise in the context of cities development. The survey is done strategically for understanding sociological and planning processes and interactions within actors at different levels and with environmental, economic and political domains.

A qualitative research on project management processes is carried out. Data collection, which began in September 2016 and finished in March 2017, involved analysis of project history, the documents (project plans, contract documents, reports) and semi-structured interviews with stakeholders. Face-to-face interviews with the principle actors of the process involved unstructured and open-ended questions, by covering a range of topics related to the multiple reasons for the site construction interruption, the involved actors and interactions with external actors, the information exchange method, documents management, and used technologies. In this way, the researcher had the possibility to record a lot of information for rebuild the long period of the project, started in 1996, by analysing the criticalities, bottlenecks and responsibilities. From the data collected, a process workflow and information management were mapped, and the set of information was systemized of the whole period.

The second phase shows the proposed innovative and integrated framework BIM-based in order to "unravel" the urban complexity by the systematization all the process, by identifying the urban subsystem, the involved actors. Strong emphasis was put on the interaction among different domains involved in a planning transformation, to exceed the sectionalizes approach. The new vision proposed for an urban transformation is scalable at the whole urban system.

4 DESCRIPTION OF A CURRENT URBAN PROCESS: THE STUDENT HOUSING IN BARI

The analysed project is a university residence, which construction was interrupted. The building is located in the south-west of the Mungivacca district of the Municipality of Bari, Puglia Region, South Italy, and it is part of a larger "Integrated Urban Renewal and Recovery Program" aimed at promoting a functional and social mix. (Figure 1). The project process started in 1996.

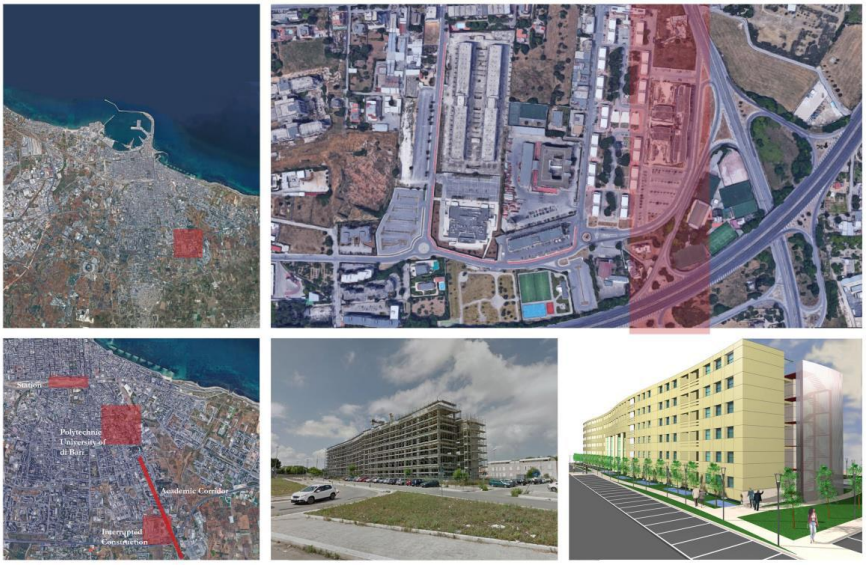

Figure 1 – The Student Housing, Mungivacca District, Bari, Puglia Region, South Italy[1]

The case study includes all the requirements for a complete and complex reflection: lack of a clear and programmed management, multiple strategies change, planning and constructive mistakes, until the possibility of rethinking the project for respond to new urban needs, by including the social and economic analysis. The general project of urban renewal, nowadays recognised as a successful intervention, was addressed by the municipal administration to strengthen the student vocation of the district, through an organic urban regeneration characterized by the use of available areas for services, green and university facilities for the creation of an integrated system for leisure and social exchanges.

The construction started in 2011, envisaged the realization of an extensive building for 100 student apartment, with university facilities. The project started about twenty years ago, promoted by the Autonomous Institute of Public Housing - IACP (nowadays named ARCA[2]). The work had to be completed by September 2012, but due to different unforeseen developments ("persistent obstacles to a rational and rapid execution"), they have been prolonged over time, until the construction site blocked in 2015. Due to the construction stopped, the ARCA requests confirmation from ADISU, the Regional Agency for the University Study Right, in mid-2016, of the actual need for the approximately 300 bed places for non-resident students. At the end of September 2016, the ADISU denied this need due to the "declared" full coverage of the current student bed places demand.

This change of plans, in addition to the problems connected with the abandonment, has an influence on the other systems of the city: the hypothesized formation of an Academic Corridor (Wivel and Perry, 2013) is compromised, structured on the theme of old and new university residences in this urban quadrant (Martinelli et al., 2016), along the strategic axis of Bari – Taranto; waste of public money; impairment of the quality of public space; a sense of urban deprivation and insecurity.

The described case is a clear example of public and/or private "absence of management" and due to the high number of stakeholders involved, the complex process has slowed down until the construction site blocked, by producing misalignment between "demand and supply", but also misalignment with urban regeneration policies. This case would have required a dynamic approaches and project feedbacks, which in our institutional contexts and in our traditional process are completely absent.

In this regard, in recent months the involved authorities, including the Puglia Region, the ARCA, the Municipality of Bari and other stakeholders, have been forced to rethink these student housing by

[1] Source: Rielaboration of the authors from Google Maps and http://www.arcapugliacentrale.gov.it/a-p-c/patrimonio-immobiliare/progetti-e-interventi/1-nuove-costruzioni/3-mungivacca (on April 2017).
[2] The new name of the Authority for public housing of the Apulia Region "Regional Agency for the house and for living" http://www.arcapugliacentrale.gov.it/a-p-c/patrimonio-immobiliare/progetti-e-interventi/1-nuove-costruzioni/3-mungivacca

changing their original destination, targeting their social housing, in response to the new housing and urban needs (ie young couples, separated parents, elderly people, immigrants, etc.)[1]. But despite this, there aren't the appropriate methodologies and tools to take on this changes as rapidly as possible and in an efficient manner, by optimising time and costs.

It emerges, therefore, the need to analyse these changes through the lens of complexity, arguing on the integrated analysis (Schwaninger and Koerner, 2004) of the urban systems and the phenomena dynamic, on the integration of new needs, new targets, and the involvement of various public and private actors who will inclusively have an active part in the process, from the initial planning phases to the management. The authors believe that an alternative hypothesis is now made possible by the use of new models that provide new technological infrastructures to support urban complexity and the continuous evolution of the city , as described in the following paragraph.

5 TOWARD A COMPLEX APPROACH: PRELIMINARY RESULT OF THE INNOVATIVE MODEL FOR URBAN MANAGEMENT

Starting from "interrupted" example for misalignment between urban policies, action and socio-economic changes, in the current context of public policy uncertainties under the effects of the global crisis, the proposal is to trace models backed by ICT tools, which can help the decision makers to formulate strategies that respond to new economic and social urban needs based on clear public-private management processes and active community engagement. The research intends to contribute methodologically to reinventing the process, making it dynamic, optimizing the resources employed, and operating urban regeneration actions that will produce benefit both for the community and the private. The framework, named Urban Common Data Environment, scalable to other urban transformation intervention and in general to the management of urban subsystems, is based on the use of a BIM/PLM/GIS as Methodology, Technological Platform and tools, deployed on the urban scale, in an interoperable and inter-scalar vision.

In detail, Building Information Modeling (BIM) is “a set of interacting policies, processes and technologies generating a methodology to manage the essential building design data in digital format throughout the building‟s lifecycle”, according to Succar (2009). It is centred around an Information Model, which is the virtual representation of the physical characteristics, that in the present research is extended to other urban subsystems. The enabling technologies of BIM methodology are not yet mature enough to handle maintenance phases.

Product Life-cycle Management (PLM) is a strategic business approach for the effective creation, management and use of corporate intellectual capital, from a product‟s initial conception to its retirement (Amann, 2002). It is useful for the methodology because offer a robust base for the standardization of the whole process, with particular attention to the maintenance phase, technologically weak in BIM methodology.

The Geographic Information System (GIS) (Maliene et al., 2011) is a system designed to capture, store, manipulate, analyse, manage, and present spatial or geographic data, that enables the scalability to the BIM methodology to the urban scale, creating a standard for the data exchange.

The main platform objectives are the complex urban action process management, the interaction between the actors involved, the creation of a cognitive/informational knowledge base that will cover the various phases over time, overcoming the sectorial vision. It is hypothesized, as exemplification, its application at the integrated management of the whole conversion process of student accommodation.

At the center of the process there is the structure digitization, according to a three-dimensional information model that allows the definition of spaces according to the technical-functional requirements, by guaranteeing the storage of all the necessary data and by enabling participation thanks to the strong communicative capacity of the 3D model, via feedback systems.

[1]http://ricerca.repubblica.it/repubblica/archivio/repubblica/2017/04/06/le-case-per-studenti-in-totale-abbandono-socialeBari04.html http://www.lagazzettadelmezzogiorno.it/news/home/409870/appartamenti-per-studenti-in-realizzazione-a-bari-gestiti-dal-costruttore.html

The platform will allow all phases project tracking by enabling active involvement of all public-private actors for conversion/management, through the requirements collection, digitization, and maintenance. The benefits are numerous:

- a single referential system to ensure management;
- improved business and resident participation, the interoperability between the actors involved (managing body, PA, administrators, associations, resident, etc.) and used technologies;
- the ability to make transparent every action and every economic investment by simulating the various solutions and interactions with other systems (infrastructure, mobility, utilities, services, etc.) and dimensions (economic, environmental, social);
- the ensuring compliance with the legislative framework and time limits and the ability to identify the "bottlenecks" of the process in a clear and univocal way;
- archiving information and facilitating maintenance phases;
- increased transparency, reliability, scalability and sustainability of services.

The innovative framework is based on a collaborative model for managing urban complexity in a System of System approach. The integrated platform will link the stakeholders from all city domains in a urban common data environment and will enable access to a single informative DB linked to the 3D urban model, which constantly and dynamically will update with new process data. This framework will be managed by the strategic figure of the city manager (Sancino, 2008) for the urban management and as a Decision Support System for city administration. In addition, the authors consider the management as central phase in the whole process for the important investment and the complexity of action. It will follow the PAS methodology of Asset Management. Figure 2 explains all the process, actors, level, and city subsystem.

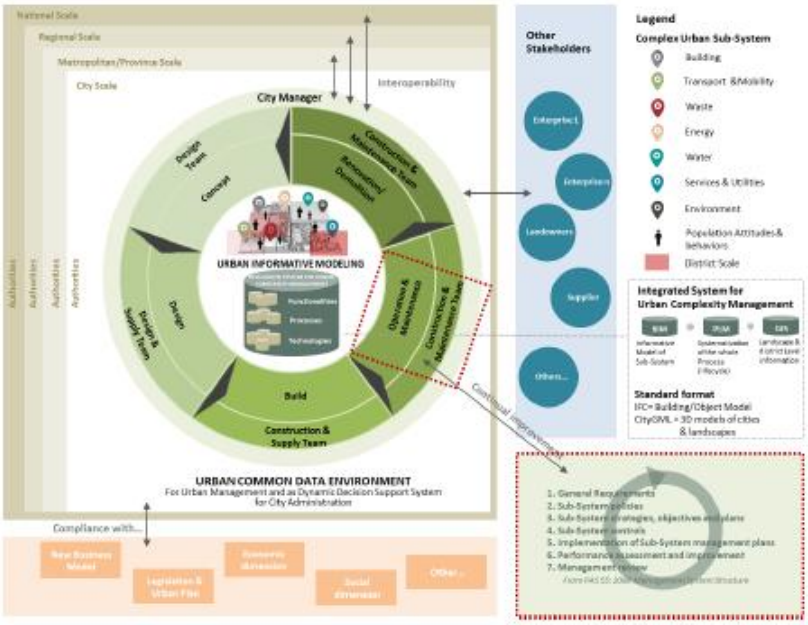

Figure 2 – The Integrated Framework: the Urban Common Data Environment

6 CONCLUSION

The research highlights as innovative and integrated approaches are needed to improve the quality of urban planning and consequently of the urban space and services, shifting the attention to the management of cities, by adopting the complexity lens.

Thanks to the specific case described, at the district level, it was possible to understand the importance of the relations among different levels, like the national level (for the possible financing), regional level (strategic vision) and local authority (operative vision).

Moreover, it is emerged the necessity to rethink the management of the public action for optimize the process, through innovative technologies, today used or for the Building level (as the Building Information

Modeling, rarely used for the urban scale) or deriving from another discipline like the PLM (that focalizes the attention to all lifecycle, really important for the city maintenance)

Using innovative and integrated platform for decoding the complexity (characterized by human and physical dimension) and manage the city could generate the new virtuous shape of urban regeneration. In addition, the authors believe that a new figure in the city manager is strategic to handle the whole process, with urban, managerial and technical skills.

This proposed methodology is intended as a preliminary phase of a broader study that wants to overcome technological and/or methodological gaps that prevent a full adoption of BIM base technology to the city management.

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ID 1647 | AN INFRASTRUCTURE-BASED PLANNING AS A MODEL FOR ADDRESSING COMPLEXITY AND UNCERTAINTY

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1 INTRODUCTION

The conception of the Territory, or in other case of the city or the urban as a part of the previous one, as a Complex Evolutionary System, full of diversity and uncertainty due to its continuous transformation, it is clear that it has important implications for Planning. So, if Planning is considered as a way of thinking and future-oriented action based on decisions of a spatial nature taken in the present on a complex and constantly changing system. The main consequence is the impossibility of formulating an all-encompassing and finalist Planning, since it is not possible to intervene on all the elements of the system, which are also in continuous evolution and transformation. Then, in a spatial context of strong uncertainty, due to the non-linear combination of different coevolutionary changes, it is not feasible to formulate a finalist image of the territory, or city, for a future time horizon. Therefore, Planning has to change its traditional budgets and accept that in a complex, diverse, evolutionary and uncertain environment its role will be very different. For that reason, Planning must accept that its fundamental objective will be the formulation of alternative solutions for each spatial problem posed, evaluating different evolutionary trajectories of the territory, in order to facilitate and improve collective decision making.

Thereby, given the impossibility of acting on all the elements of the complex, diverse and uncertain system that is the territory, Planning as a mode of action for collective spatial decision-making has to select on which variables to act or intervene. In this sense, and in order to maintain a certain global vision, Planning has to act on its Spatial Structure, that is to say on the smaller number of elements that allows to obtain the greater knowledge and understanding about the performance and morphology of the territory. Therefore, Planning will intervene in the territory, and in urban space, by transforming the elements of its Spatial Structure, which at the same time and in a coevolutionary way is conditioning and transforming the rest of the elements of the system.

Within the Spatial Structure, a priority object of Planning, Infrastructures are key elements, since they are the framework or skeleton that articulates the Urban System, supporting the relations between the urban and land-use elements. In addition, Infrastructures through their spatial effects condition the location and evolution of Urban Systems components. Therefore, a new model of Planning based on intervention on infrastructures, as the key elements of the Spatial Structure of the Territory, is proposed. The action on the Infrastructures of the Spatial Structure implies a selective model of Planning, in order to transfer series of collective values and interests by acting on key elements of great transcendence and influence on the global set, at the same time as it allows a certain margin of freedom and self-organization for the rest of individual space decisions. Therefore, an infrastructure-based Planning model arises, resulting from the action on the key infrastructure of the Spatial Structure through a process of collective decision-making.

Thus, different Territorial Scenarios are formulated from the spatial effects of infrastructures on land uses and the Urban System in a flexible framework, in order to evaluate the impact on collective values of different solutions in a dynamic context.

2 INFRASTRUCTURES AS KEY ELEMENTS OF THE SPATIAL STRUCTURE OF THE TERRITORY

A simple observation of the Territory, or in its case of the city, shows the existence of a remarkable amount of interrelated physical and biotic elements, which interact with each other, giving rise to phenomena and processes that involve the generation of flows of energy and materials. In a certain sense, this simple observation of the Territory leads directly to its conceptualization as an ecosystem, in which there are a large number of elements, which generate multiple and diverse relations and which, in turn, imply a great number of phenomena and effects of their interaction. That is, it is a Complex System.

The Territory as a Complex System has, among many others, three characteristic parameters such as complexity, diversity and uncertainty. A fourth parameter must be added, spatiality, since all its elements and the relations between them maintain a clear spatial component. Therefore, the Territory is a Complex Space System, which has a great dynamism, diversity and uncertainty. Thus, the Territory as a Complex Space System has a large number of elements, very diverse, and generate multiple relationships, which is a problem for their understanding and intervention on it. For this reason, it is frequent, and it is an intrinsic property of the systems, to distinguish different subsystems, in order to define and particularize both the constituent elements and the relations generated. On the other hand, the elements and relations belonging to the Territory are located in space in a certain way. An own and characteristic space arrangement of the system, very different according to the considered areas, and that can be considered as one, but the greater, of the configurating and defining elements of the system. In fact, much of the relationships established between the elements of the system are conditioned and influenced by this spatial arrangement and by the existence of connection between them. This aspect of the systems leads directly to the idea of Spatial Structure, that is, of the distribution of the parts or components of a system in space.

However, the concept of Space Structure applied to the Territory has a slightly different and nuanced meaning, since in a way it is a simplification of the real complexity and diversity. Thus, in a strict perspective of the term, the Spatial Structure would make reference to all the physical elements of the Territory and its functional relations. Obviously, under this approach it would be almost impossible to both understand and intervene on the Territory. Therefore, it is necessary to make simplifications and abstractions that allow a global understanding of both their physical configuration and their operation, thus emerging the concept of Spatial Structure. Thus, the concept of Spatial Structure is defined as the spatial arrangement adopted by the smallest number of elements that explain the overall configuration and functioning of the Territory as a unitary set within its intrinsic complexity and diversity. In this sense, as formulated, the Spatial Structure is a schematic model of the Territory, and whose elements have been selected based on the scope of work, its spatial dimension and the analyzes that will allow to understand and characterize it (Fig. 1).

Figure 1 – Spatial Structure of Milton Keynes. Source: Bosma and Hellinga, 1997)

Infrastructures play an important role in the configuration and formation of the Spatial Structure of the Territory, being both one of its main elements and the support that links the different elements of the Urban System and Activities, on the one hand, and the relations established between these, on the other hand. Hence, if the Spatial Structure is the representation of the spatial arrangement of the main elements that shape the Territory and the relations established between them, the Infrastructures are the ones that provide the interlocking of the Territory and the interrelations between the elements of the system. Therefore, if the Spatial Structure is observed from a broad perspective, beyond the simple arrangement of elements in space, as a set of physical and virtual interrelations between them, Infrastructures would be one of the main elements, either as a union of physical relationships, either as the support of virtual and physical relationships.

Therefore, there is a clear relationship between Territory, Spatial Structure and Infrastructures. However, a couple of issues should be specified in this relationship. On the one hand, the need to carry out simplifications, generalizations and abstractions in order to reduce complexity and uncertainty in the understanding of the Territory, both the Spatial Structure and, in particular, the Infrastructures. On the other hand, it is obvious that changes and modifications occurring in any of the three elements modify the remaining two. Thus, in this sense, a trinomial is formed between Territory, broadly understood, Spatial Structure and Infrastructures. A relationship of bidirectional nature two to two and circulate between the three, in which the modifications in one of them affect the next one and this one to the rest, that again resets to the first one.

Hence, the Trinomio Territory, Infrastructures and Spatial Structure is a clear example of the nature of the first as a Complex System, in which are present the properties, or rather characteristics, of connectivity and interdependence of its elements. Thus, in Complex Systems, such as the Territory, there is an important interconnection between its elements, with a significant degree of connectivity, which varies with different properties such as diversity, intensity, density and quality of interactions (Mitleton-Kelly, 2003) and which gives it a remarkable interdependence between the different elements. This connectivity and interdependence means that a change in one element implies the affection over other related elements, assuming its transformation to a greater or less degree and intensity (Fig. 2).

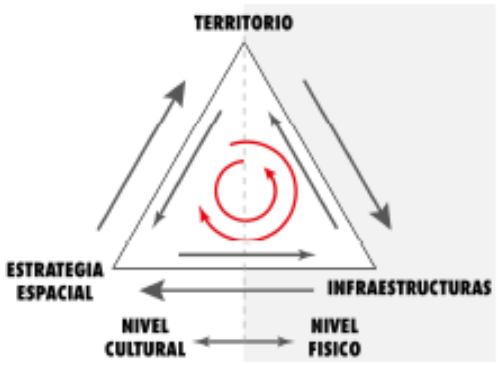

Figure 2 – Trinomio Territory, Spatial Infrastructure and Infrastructure (Source: Sánchez-Rivas, 2016)

On the other hand, it is also necessary to clarify that a Complex System such as the Territory has a high multidimensionality. Hence, it has very different dimensions such as physical, socioeconomic or cultural, that interact and affect each other. In this sense, if one considers from a perspective related to the understanding of that which at a certain scale represents the essential elements of the Territory, the Spatial Structure is rather a cultural approximation. Thus the relations between the elements of the Trinomial are deployed in at least two dimensional levels: a purely physical one, related to the physical elements of the System, and a cultural one, in a certain way, related to the simplified and abstract understanding Of the functioning of the System through its Spatial Structure.

Infrastructures, particularly those of transport, are one of the fundamental elements that shape the Spatial Structure of the Territory and, as such, it is obvious that their transformations and evolutions must involve both global changes and in the different subsystems of the Territory (Settlements, Environmental System, ...). Consequently, the variations in the Infrastructure System generate a series of effects that imply changes in the Spatial Structure and its components. However, this relationship is bidirectional and the Infrastructures themselves are modified by the existing transformations in the other elements that shape the Spatial Structure of the Territory and, above all, by the evolution of land uses. In the background, this is a circular relationship, more than bidirectional, in which land uses determine the location of activities, which require transport infrastructure, and then, in turn, create opportunities for locating activities through the differences of accessibility, in such a way that changes in the land uses are generated (Wegener and

Fürst, 1999). The vast majority of the spatial effects of infrastructures have in common, in addition to the attraction and expulsion of activities, two underlying processes of great importance in the current configuration of the Territory: the rupture of the friction of distance, on the one hand, and the increase and multiplicity of connections between elements of the Spatial Structure (Fig. 3).

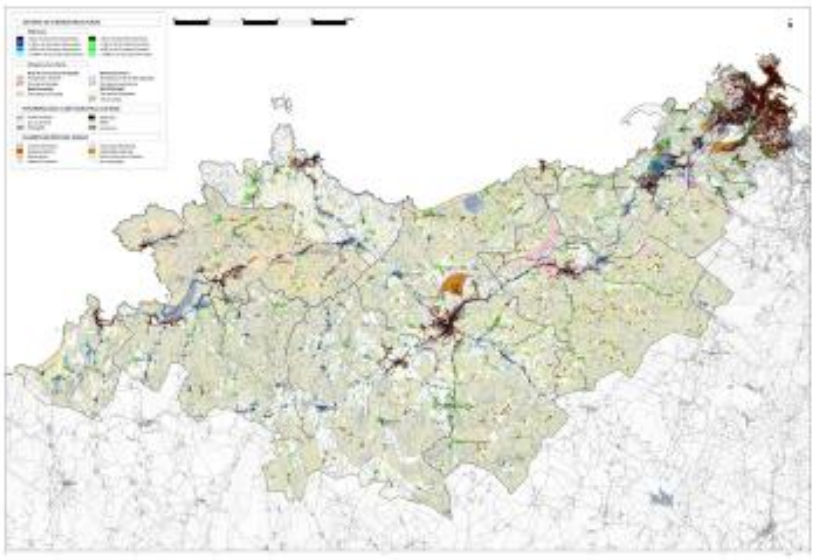

Figure 3 – Spatial effects of a road in Galicia (Source: Sánchez-Rivas, 2016)

Considering these spatial effects, in particular their connectivity and their attractiveness, it is possible to distinguish four major conceptual visions about Infrastructures within the Spatial Structure and, by extension, the Territory. These four conceptual visions are: articulation, axes, poles or nodes as centralities and barriers as limits. In this way, the articulation refers to its spatial arrangement and how Infrastructure link with each other and with the rest of elements. The axis refers to the generation of linear patterns of spatial arrangement. Meanwhile, polo as centrality refers to the concentration of other elements, for example land uses, around an Infrastructure. Finally, the barrier as a limit refers to the impossibility on the part of the organizational patterns of other elements to cross or continue after an Infrastructure.

Therefore, the Infrastructures are one of the main elements of the Spatial Structure of the Territory. Thus, they are configured as the main support of both the communication and union between the rest of elements and their relationships, providing their cohesion. At the same time, Infrastructures, through their configuration and their characteristics, are what give the Territory much of its structure, its morphology and its properties, particularly those related to connectivity and accessibility. From this point of view, the Infrastructures are raised as the central element, or at least to the highest level, of the Spatial Structure of the Territory.

3 PLANNING AND INFRASTRUCTURES. COMPLEXITY, UNCERTAINTY AND EVOLUTION E INFRAESTRUCTURAS.

If Infrastructures have a vital importance in the configuration of the Spatial Structure of the Territory and, above all, to generate processes and spatial dynamics of urban development, it is undoubted that this importance must also be transferred to the elaboration of Planning. However, capturing or incorporating the dynamic processes of change and transformation that generate and catalyze Infrastructures is not easy for Planning (Dupuy, 1998). This difficulty has arisen, to a great extent, in the very conceptualization and practice of Planning. In particular, due to the difficulties that the instruments and tools of the Planning have found difficulties to incorporate the dynamism of the existing space processes in the reality (Sánchez-Rivas, 2014a).

Then, these difficulties have been related to the disregard of the spatial effects of the Infrastructures in the Structural Models proposed by the Planning (Graham and Marvin, 2001; Sánchez-Rivas, 2016). Due to this, the reality of the planning practice has shown the existence of important discrepancies between the Planning, mainly between its future final image formulated through the intervention on the Spatial Structure, and the final trajectory of development and real evolution of the Territory, especially in terms of the impacts that the spatial effects of the Infrastructures have had on it. This situation can evidently lead to the bankruptcy of Planning and its delegitimization as a useful and effective instrument to formulate a Territory more in line with the vision and interests of society. Therefore, Planning seems to be unable to integrate Infrastructures and their spatial effects and, therefore, is doomed to failure.

Truly, there are two major reasons for Planning to integrate from the outset Infrastructures as a central element of its future Spatial Structure. First, and obviously because of its importance within the configuration of the Spatial Structure and as support of the relations between the different elements of the Territory. Second, and less evident, the need to incorporate Infrastructures as elements that generate spatial dynamics of great importance for the configuration and operation of the Territory based on their spatial effects and their impact and influence on the rest of the elements. In this sense, the disconnection between Infrastructures and Planning results in the first failure of the determinations of the second and, obviously, a clear discrepancy between the reality of the Territory and the Structural Model formulated by the second.

Indeed, the utility of Planning is linked to the greater convergence with the real evolution of the Territory, or at least with the Structural Model formulated as a future aspiration of its Spatial Structure. And for this, Planning must be able to model in some way the spatial dynamics of change and transformation that occur in the Territory. In this sense, it is necessary that Planning considers in its Structural Models, and consequently in its proposed future Spatial Structure, both the Infrastructures and their spatial effects. Therefore, it is essential and necessary the integration of Infrastructures and their spatial effects in Planning, in order to respond to the dynamism and continuous transformation of the Territory.

However, considering the dynamism of the Territory, in particular through the spatial effects of Infrastructures, involves increasing both the complexity and the uncertainty. Therefore, the opening of important questions about the nature and the capacity of Planning to intervene in the Territory. In this sense, if a fourth element is added to the Trinomio Territory, Infrastructures and Spatial Structure, Planning, forming a Tetrahedron, can be more easily understood the difficulties of the latter to establish finalist determinations. Thus, if the transformation of one of the elements of the previous Trinomio implies the modification of the others, the introduction of Planning also implies its transformation. A relation that is not unidirectional, but it is bidirectional with each of the elements, since the modifications in one change the others and, therefore, the starting point of the Planning, leading to its revisión (Fig. 4).

Figure 4 – Tetrahedron Territory, Spatial Structure, Infrastructure and Planning (Source: Sánchez-Rivas, 2016)

In this way, if the complexity and uncertainty of the Territory, due to its continuous transformation, implies the impossibility of an all-encompassing and finalist model, capable of intervening on all its elements, Planning must evolve in its forms, objects and instruments. In this sense, and taking into account the complexity and diversity of the Territory and existing interdependencies, and without questioning the need to formulate some form of future-oriented intervention, logic indicates the need to establish a certain selectivity about what allows to reduce the uncertainty within a joint and global vision, that is to say on the Spatial Structure. At the same time, considering the key role of Infrastructures within the Space Structure, mainly due to its capacity to generate effects on the rest of elements, implies the centrality of the first in Planning processes. Therefore, Planning has to intervene in the Territory by transforming the elements of its Spatial Structure and in particular on its Infrastructures.

Consequently, faced with the complexity and uncertainty present in the Territory, the hope of an all-encompassing Planning seems to be just that, a hope broken by reality. In addition, such Planning would imply transferring to the Territory dichotomies in some sense moral and ethical between freedom and authoritarianism in spatial decision making, which could not be consistent with the view of Planning as a community collective action that expresses spatially a series of values and interests from consensus.

If from a position linked to political ethics is intended to maintain a series of values related to freedom in making spatial decisions, both collective and individual in a multi-actor environment such as the Territory, the possibilities of Planning really pass through a sort of selectivity of the elements on which to intervene and by a certain abstraction. In a certain way, this approaches a relative, if not complete, incrementalist vision of Planning, by developing small strategies focused on specific issues or elements in order to reduce uncertainty. However, this is not a pure and hard incrementalism based fundamentally on small interventions and strategies on concrete elements, but when performing on the Spatial Structure exists a certain global intentionality. Above all, if this action is posed with relatively holistic pretensions of understanding and global intervention through the spatial effects generated by the elements of the Spatial Structure, which allows, and implies, the possibility of using macro strategies that can be reached by disaggregating them micro-strategies on concrete elements.

Therefore, Planning has to be linked to a structural vision of the Territory, in which it acts in a way that combines a macro strategy in which microstrategies are integrated around the elements of the Spatial Structure, as real physical essence and as an abstract model, based on the spatial effects generated by Infrastructures and their capacity to catalyze and condition urban development. In this sense, Infrastructures are an element whose appearance, use and management is usually collective, with which the priority object of Planning as a mode of collective action on the Territory, while in urban development, especially land uses, there is a greater individual component, although also in some cases collective, that responds to a spatial decision making that experience shows that it does not usually come from a previous planning process. Therefore, Planning has to move towards a model based on the intervention on the elements of the Spatial Structure, in which Infrastructures and their spatial effects play a central role as a collective expression of the values and interests of a given society or community. At the same time, the continuous transformations of the Territory require that Planning to be transformed continuously, that is, to evolve towards different states or situations.

At the same time, accepting that Planning has to focus its action on the elements of the Spatial Structure implies that the achievement of a collective desired future for the Territory is the result of the spatial effects that the elements of the previous one generate on others. In this way, to a large extent, Planning has to be based on establishing Structural Models in which the intervention on the elements of the Spatial Structure allows to lead the development and the transformation of the rest through the spatial effects generated mainly by Infrastructures.

Then, this model of Planning involves considering the existence of dynamic processes of adaptation to the conditions generated by the spatial effects of the Infrastructures that shape the Spatial Structure. In addition, it involves considering, as in the reality of the Territory, the existence of elements that come from Planning processes along with others that could be described as spontaneous, which in a certain way do not stop being a sample of the freedom of individual decision and self -organization carried out by different actors present in a multi -actor context.

In this sense, as opposed to other paradigms of understanding of the Territory, incapable of integrating the processes of transformation and change existing in it, the paradigm that interprets the Territory as a Complex Evolutionary System allows to consider both issues. In a context of complexity of the Territory and of continuous transformation and fragmentation in spatial decision making, the application, or rather extension, of the concepts of Evolution Theory has been shown as a model of useful and adequate understanding, being able to incorporate both the existing dynamism and the presence of elements from different origins (Marshall, 2009), whether these are the result of local spatial decisions or a more or less centralized planning. Thus, it influences the need to consider Planning as an evolutionary cultural construct, which adapts to the changes that have occurred in the Territory, whether these are the result of its determinations or not. In a way, it is a coevolutionary paradigm, in which two or more elements evolve adapting to the transformations of the other or others. In this sense, there is a Coevolution on two levels. One at the level of the Territory, physical, where the different elements that comprise it coevolve, for example Infrastructures and land uses, on the one hand, and another on a cultural and abstract level,

between the Territory, understood as a complex system, and Planning understood as a mode of action, in which both co-evolve from the transformations of the other. Therefore, a new paradigm opens in the relationship between Infrastructures and other elements of the Territory, on the one hand, and Territory and Planning, on the other hand, Coevolution.

Thus, at a physical level, there is a Coevolution between the different elements that shape the Territory, using the term in a generic way to refer to the different subsystems, and Infrastructures. A Coevolution that in particular occurs between the urban development and the Infrastructures based on the spatial effects that they generate and the "evolution with" of both, through different processes of mutual adaptation over time. Along with this physical Coevolution, there is also a coevolution at the cultural level between the Territory and Planning in which both condition the paths taken by their temporal changes in a given period of time. Therefore, there is no doubt that between the Territory, Infrastructures, by extension Spatial Structure, and Planning there is a Coevolution, which is complex and which not only concerns these two dimensions but is deployed in multiple elements already two levels. In the background this is a consequence of the multidimensionality of Complex Systems and the absence of a single solution, due to the interaction of multiple connected and interdependent causes. This situation implies a great uncertainty and the inability to univocally design, predict and control a Complex System such as the Territory, in which different coevolutionary processes are taking place.

Therefore, the Infrastructures take an important role as central elements of the Spatial Structure of the Territory, which, to a great extent, is the object of action of Planning. Thus, fundamentally through the action on Infrastructures and through their spatial effects, Planning intervenes on the rest of the Territory, in particular on those of its Spatial Structure, transforming it and thus catalyzing the change in the rest of the elements in a coevolutive way. Due to this, Planning has to incorporate new tools, instruments and concepts that allow to consider and to consolidate this mode of intervention on the Territory through the coevolutive effects of the Infrastructures with the rest.

The conception of the Territory as a Complex System full of diversity and uncertainty, in which it is not possible to intervene on all the elements present in the same, it is evident that it has to have important consequences for Planning as a mode of future-oriented action and intervention and towards the transfer to the Territory of a series of values and interests. The main consequence is the impossibility of proposing an all-encompassing and finalist Planning, since it is not possible to intervene on all the elements that shape the Territory, due to its continuous transformation, which adopts a coevolutionary approach in which elements influence on others, generating spatial dynamics of change according to different mechanisms. In this context, two issues seem to be fundamental to Planning. First, the translation of a series of values and collective interests into the Territory is a consequence of the action on a few essential elements, which generate adaptive and coevolutionary changes in others, in such a way that the whole is transformed in a certain direction. Second, in a context of strong uncertainty due to the non-linear combination of different evolutionary changes, which are also continued over time, it is not feasible to formulate a finalist image of the Territory for a given time horizon and much less an optimal solution, because there will be multiple paths and solutions resulting from different possible alternatives (Batty, 2013). For this reason, Planning must accept that its fundamental objective is the elaboration of alternative solutions for each spatial problem posed, evaluating the different trajectories that the resulting changes generate in the Territory in order to facilitate and improve the collective decision making , while allowing a certain margin for individual locational decisions, which will obviously be conditioned by the interventions on the Spatial Structure and its spatial effects formulated by each proposed solution.

Therefore, the evolutionary paradigm of Planning and in particular its coevolutionary approach poses a Territory in continuous transformation, in which coherence is neither possible nor intervention on all its elements nor the formulation of finalist images. In a certain way, this is a Planning in continuous elaboration and revision, which explores different trajectories of its evolution, both due to the different interventions proposed collectively on the Spatial Structure of the Territory, and by the emergence of self ¬organizing patterns resulting from the individual decisions of location of activities. Thus, within the context of the revision of the forms of Planning, the evolutionary paradigm is linked to a nonlinear model, circular in some way, in continuous process of elaboration and based on the future scenarios resulting from the different solutions and interventions, in order to allow a collective decision making that is much more participatory, open and integrating of the different values and interests of the agents in a multi -actor context. A Planning model whose intervention on the Territory has to focus on the Spatial Structure, and in particular on Infrastructures from a coevolutionary perspective with the land uses, to which the former

condition through their spatial effects, through microstrategies projects inserted in a global macro-strategy framework. Obviously, this centrality of the interventions of Planning on the Infrastructures supposes the opening of new perspectives for these, mainly as far as the formulation of alternative scenarios of evolution of the Territory based on them and their spatial effects.

4 TOWARDS A NEW INFRASTRUCTURE-BASED PLANNING MODEL

The emergence of new forms of Planning, in particular from the evolutionary paradigm and its coevolutionary approach, opens new perspectives for the consideration of Infrastructures in this matter. In this way, the opportunities presented by multiscalarity, the multi-layered division that intersect, the simulation and the formulation of future scenarios allow to contemplate Infrastructure from a dynamic approach through the concept of network and its spatial effects, surpassing the static approach as structural elements. All this makes it possible to respond to the new demands derived from the network - territory and from the new complex spatial structures present today such as Metropolitan Areas and Urban Regions, characterized by the existence of relational geographies (Healey, 2007) due to the connection to Transport Infrastructures and of multiple spatio -temporal trajectories. Thus, through the analysis and continuous cross-linking of different scales of Infrastructure with each other and with other different territorial subsystems, considering the compatibility of their spatial effects in different future scenarios, it is possible to provide a flexible, strategic, structural and project response to enable taking collective decisions on the Territory. At the same time, the use of future scenarios makes it possible to overcome biased and unidimensional visions of Transport Infrastructures as channels of communication to cover their multiple natures and uses, in particular as structuring elements of the Territory and as a collective space. In this sense, Planning can consider the different alternative roles that Infrastructures adopt in terms of their multidimensionality and with that to evaluate the incidence that their spatial effects generate on the Territory, adapting, coordinating and compatibilizing of several territorial systems. This new approach to Infrastructure-based Planning must consider the different roles an Infrastructure can play and the impact its spatial effects have on the Territory from a coevolutionary perspective with the rest of the subsystems. In this way, Infrastructures regain a leading role in the elaboration of Planning. Therefore, a new approach to Infrastructure-based Planning emerges.

Thus, taking into account the main spatial and physical effects, such as the attraction and expulsion of activities, the rupture of the friction of distance and the establishment of multiple relationships between the elements of the Territory, Infrastructures may take on different roles regarding the configuration of the Spatial Structure, whether this perspective refers to the understanding as to the intervention on it. In this sense, from a conceptual point of view of the Structural Models oriented towards Planning, these roles are four: articulation, linearity, centrality and limit. Each of them has different effects and implications at different scales. At the same time, Infrastructures can take various roles based on its multidimensionality.

The capacity of the Infrastructures to communicate and organize the different elements of the Spatial Structure to achieve a coherent and efficient set is behind the role of articulation. Thus, Transport Infrastructures are those that through their organization provide the physical support to structure the rest of the Territory. So, one of the main roles that Transport Infrastructure can adopt is the articulation of the future Spatial Structure proposed by Planning. In a way, by articulation is meant the different structural morphological models that can be adopted by the Transport Infrastructures, generating different effects in terms of the spatial distribution of accessibility and connectivity, which affects the organization of the Urban System, global and regional scale, and in the implementation and management of land use and activities, on a metropolitan and urban scale (Fig. 5). Each of these structural models of articulation provides different spatial configurations and distribution of accessibility and connectivity, privileging some points on others when establishing relationships and implement activities, ranking the Territory. These structural models can adopt different morphologies and typologies, from star configurations, radioconcentric, squares, crosses, directional meshes, etc., which have been experimented by Planning on several occasions, such as in the Director Scheme of Paris of 1965, the Greater London Plan, the Plans for Copenhagen and Stockholm.

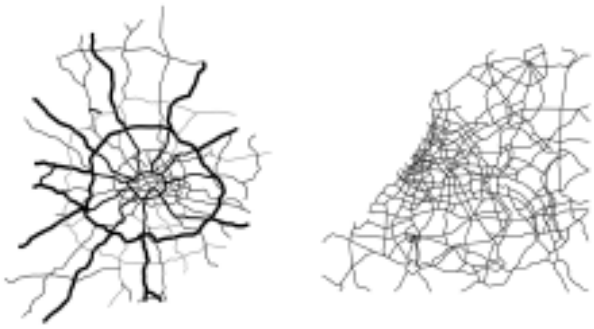

Figure 5 – Two differents morphology as articulation rol of transport infrastructure (Sánchez-Rivas, 2016)

The capacity of Transport Infrastructures to extend accessibility and connectivity through the Territory, radiating the urban condition through certain directions, is behind its role as linearity, as Axis or Corridor. Transport Infrastructures characterized by their linearity provide, throughout their guideline, accessibility and connectivity in a continuous way, in the case of roads, or in a discontinuous way, in the case of railway systems and motorways. An accessibility that generates the attraction of diverse activities and uses of the land, in such a way that being supported in the infrastructure they are located of continuous way, or with a certain discontinuity (Fig. 6). The use of the linearity of the Transport Infrastructures as the driving axis of the urbanization has been a resource very used by Planning, from the pioneering proposal of Linear City of A. Soria to the most sophisticated elaborations of the “Finger Plan” of Copenhagen of 1947 or the system of transverse tangent axes of the Director Scheme of Paris of 1965 or the most recent ones of Curitiba. In these linearities, public transport systems tend to become very important throughout their directive, since they have a greater efficiency, by minimizing their travel and maximizing the population served, and also by matching accessibility throughout the route. The notion of Axis refers fundamentally to a single guideline; however, on the other hand, in recent times, there has been a complexation of the morphological model of this linearity with the juxtaposition of different Transport Infrastructures and their effects towards the concept of Corridor. This is configured as a tape of variable width that encompasses different typologies and functionality of the Urban, Environmental and Infrastructure Systems over a large extent, forming or forming part of notable territorial areas of Metropolitan Areas and Urban Regions. Planning must try to order and structure these Transport Infrastructures in an integrated way with the land uses, due to its advantages in the efficiency and effectiveness of the collective transports and the provision of infrastructures of urban services, in order to maximize the population served and minimize construction costs avoiding an indiscriminate extension in all directions.

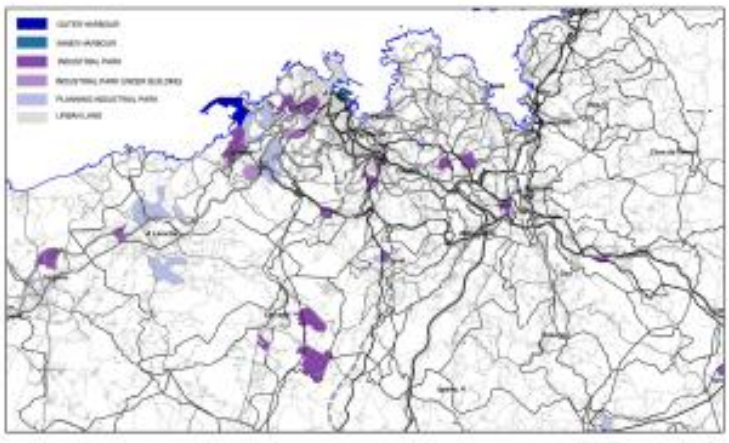

Figure 6 – Corridor and Centralities structure by the effect of Port and motorways in Metropolitan Area of A Coruña (Sánchez-Rivas, 2014b)

The capacity of Transport Infrastructure to generate privileged points of the Territory, due to its high accessibility and connectivity, implies the establishment of important territorial centralities (Fig. 6). Thus, nodal Transport Infrastructures such as an Airport, a Port or a Railway Station, in which access to both the

same and the service developed therein is performed in a specific and determined node of the network, are configured as Centralities of high connectivity and accessibility, attracting and concentrating activities and uses of the soil, and making possible the establishment of multiple relationships.These nodal centralities are the points in which the dynamism of the current network originates and must be considered from this perspective as such by Planning. In a way, it is not anything new, since current experiences such as Transport -Oriented Development (TOD) or older ones such as the Stockholm Plan of 1952 consider these nodal centralities as the key points of their management, both at the regional or metropolitan level as well as local scale in terms of land use and activities.

The capacity of Transport Infrastructures to separate different realities in terms of their model of urbanization in the Territory from the barrier effect is behind its role as Limit. A Limit role under which two main objectives lie: the containment of urban growth and decentralization to avoid an ungovernable extension of the city, on the one hand, and the monumental and symbolic closure of the city, on the other hand. Alongside both reasons are other functional reasons linked to the distribution of cross-border traffic flows. Thus, certain Transport Infrastructures, especially roads such as Rings, Bypass and Orbital, structure and generate attractive effects on land uses, while also acting as boundaries between different forms of urbanization, preventing an indiscriminate extension of the urbanization and emerging from them a network articulation of the Urban System. The clearest example of the use of a Transport Infrastructure as an element of closure and containment of the city is represented by the orbital highway of the Greater London Plan of 1944, also associated with another tradition of great importance as the green belts.

Therefore, this new model of Infrastructure – based Planning of a structural and co-evolutionary nature tries to intervene on the Spatial Structure, that is to say on the Territory, through the different roles that Infrastructures can adopt, generating different spatial effects on the other elements, in particular on urban development. This model opens new perspectives and opportunities for Infrastructures, where the consideration of their multiple natures and uses, especially as configurators of the Spatial Structure, is key to the creation of great projects for the planning of the Territory.

5 CONCLUSIONS

Undoubtedly, the emergence of new forms of Planning such as the one based on the evolutionary paradigm and its coevolutionary approach, implies the opening of new and very interesting perspectives for Infrastructures in the elaboration of the previous one, especially as regards its integration and the consideration of the dynamism conferred on the Territory through its spatial effects. In this sense, the conceptual visions of Infrastructures based on their spatial effects, in particular, and in a co-evolutionary way with the land uses, seem to be adequate tools for proposing alternative Structural Model of great potential In this sense, these Structural Models will be able to intervene on the Territory in a context of complexity, fragmentation and multiple actors, that continuously evolves in a non linear way, through the exploration of different future paths for an appropriate collective spatial decision making.

Planning within the framework of the evolutionary paradigm is not an all-encompassing instrument, which seeks to define and completely design and to the last detail of the Territory, allowing the existence of other processes of change and transformation of the same that could be described as spontaneous or emerging. At the same time, Planning from an evolutionary perspective internalizes that the change and transformation of both the elements that make it and the global set is produced by adaptive changes, largely coevolutive, to the transformations that occur in other elements, whose influence is established through the spatial effects generated. In this sense, the spatial effects generated by Infrastructures are of great importance because of their capacity to condition urban development, in particular land uses.

Hence, against a traditional static Planning, this new model based on Infrastructures, in particular through four major roles that can adopt (articulation, axis and corridor, pole or node as centrality and limit), along with the consideration of its spatial effects, it would be possible to intervene in the territory by defining a global macro strategy as a spatial framework resulting from selective microstrategies on key elements of the Spatial Structure. Thus, at the same time that collective decisions are transferred to the Territory, a certain margin is allowed for local decision-making, conditioned indirectly through the spatial effects of Infrastructures in coherence with the global framework, being possible to integrate those emerging dynamics resulting from processes of self-organization.

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ID 1661 | CONCEPTUALIZING SELF-ORGANIZATION IN URBAN PLANNING: TURNING DIVERGING PATHS INTO CONSISTENCY

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ABSTRACT: Within the realm of urban studies and spatial planning, the concept of self-organization receives increasing attention in understanding spatial transformations and related planning interventions (De Roo et al, 2012; Portugali, 2011). In exploring the potential of self-organization, various scholars however introduce diverging interpretations of the concept, consequentially leading to different understandings of what the concept can offer to planners. In the first part of the paper, we show that the different interpretations have their foundation in two distinct epistemic positions: One is a critical-realist interpretation of complex adaptive systems (Byrne, 2005), resulting in a planning focused on pattern recognition and formulating guiding conditions (Portugali, 2011; Rauws, 2015). The other includes a post-structuralist interpretation of emerging assemblages (Cilliers, 1998; DeLanda, 2006), leading to a planning focused on personal style and situational behavior (Boonstra, 2015). The potential synergies between the two epistemic positions has so far remained unexplored, while aspects of both perspectives simultaneously are at work in spatial transformations. Therefore, the second part of the paper explores their complementarity and discusses how to turn the two positions into consistency with one another – meaning how they can mutually reinforce each other without losing their individual epistemic strengths. Based on this exploration we suggest planners to act adaptively and differentiate in style in response to the situation at stake, among others by means of pattern recognition. On a conceptual level the paper shows how planning scholars can make sense of the diversity of ongoing processes of self-organization in the context of spatial transformations.

1 SELF-ORGANIZATION IN URBAN STUDIES, SPATIAL PLANNING AND GOVERNANCE

In attempts to better address some of the multiplicity, fuzziness, fluidity, fragmentation and resource interdependency contemporary spatial planners face today, and to move beyond command-and¬control governance or the pursuit of consensus, planning scholars are increasingly turning their attention towards the complexity sciences (Portugali, 2011; Boelens & De Roo, 2014; e.gDuit & Galaz, 2008; Byrne, Geyer, Gerrits, Batty, Bettencourt, De Roo, Teisman, Hillier, Van Wezemael). What complexity sciences bring to planning is the research on the evolution of phenomena. Instead of a Newtonian conception of the world based on reductionism, determinism and predictability, complexity sciences portray a world view of non-linearity and spontaneity as a consequence of the interconnectedness and changeable nature of a countless number of interacting elements (Waldrop, 1992; Cilliers, 1998; Heylighen, 2008; Rauws, 2015). As such, notions from the complexity sciences can assist planners to conceptualize their role in a world which is in continuous change and perform more situation-specifically and adaptive to these ongoing non-linear processes (De Roo, 2016).

In the debate on complexity and planning, especially the concept of self-organization has increased in popularity over recent years (De Roo, 2016; Boonstra, 2015; Rauws, 2015, Zhang, 2016). In general, self-organization is defined as the spontaneous emergence of order out of disorder (Prigogine and Stengers, 1984; Cilliers, 1998). Due to rich interactions between elements within a system and with the system's environment, self-organization processes fuel the emergence of new systems states from within a system itself. As such, self-organization is a spontaneous, autonomous, and locally driven process (Cilliers, 1998; Heylighen, 2001; Teisman et al., 2009; Prigogine and Stengers, 1984). Urban studies and planning scholars consider self-organization a helpful concept in for instance understanding underlying mechanisms of urban dynamics and spatial transformations (Allen, 1997; Batty 2005; Portugali, 2000). It been applied to slum and informal urban development [Barros & Sobreira, 2008; Silva & Farrall, 2016), spontaneous emergence of patterns in traffic flows (Kerner,1998), pedestrian movements (Helbing et al., 2001), or the emergence of civic initiatives in spatial development (Boonstra, 2015; Rauws, 2015).

The understanding and application of the concept of self-organization has however been far from uniform. To begin with, at least two schools of thought can be distinguished, respectively building on the 'hard/natural' sciences and the 'soft/social' sciences. Originally, self-organization has been well defined within the hard and natural sciences (Zhang, 2016). Starting with the work of Ashby on cybernetics and investigators entangled in their own systems of observation (Ashby, 1947), this scholarship has been expanded by amongst others the mathematical work of Hermann Haken on synergetics (1977), the study of thermodynamic systems in states of becoming by the Prigogine Group (Prigogine et al., 1977), and the work of biologists Maturana and Verela (1974) on the reproduction and self-maintenance of ecological systems. The perspectives on self-organization offered in these studies, have been translated into research on, for instance, infrastructure systems and urban networks (Batty & Longley, 1994; ADD), evolution of cities (e.g. Allen, 1997; Portugali, 2000; Batty, 2005), and urban planning and design (e.g. Engelen et al., 1993; Batty, 2007; Yamu & Frankhauser, 2015). Many of these studies build on quantitative, analytical models, addressing power laws, fractals and the like in simulating urban dynamics. Reflecting on the development of Complexity Theories of Cities, Portugali (2011) distinguishes at least four achievements: a theoretical basis for understanding the emergence of networks out of local interactions, acknowledgement of circular causality and non¬linear effects, attention for the self-maintaining and self-renewing capacity of cities, and the importance of diversity and variability for urban vitality.

At the same time, serious efforts have been made in addressing self-organization from a soft and social science perspective, as such contributing to a more profound understanding of 'social complexity'. In various contributions, self-organization is seen as an explanation of the spontaneous emergence of a collective social result, for instance social norms, a new dominant discourse, a social organization, out of the interactions by and communication between individual agents. Examples are the work of the sociologist Luhmann (1984; 1997) on society as a self-referential system consisting of several 'structurally coupled' subsystems, Giddens' structuration theory on the dialectical relationship between self-organization and institutional rules, individual actions and institutions (Giddens, 1984) and the work of Fuchs (2003) on the emergence of social movements. These studies have inspired planning scholars in the role of frontrunners in the transition towards renewable energy (Frantzeskaki et al, 2013), rethinking interactive planning approaches (Van Assche, 2007) and analyzing dilemmas in heterarchic governance processes (Jessop, 1997). These and similar studies often have a qualitative and often explorative nature, focusing on narratives, discourses and power-games, addressing the qualitative issues of complex agents (Portugali, 2011), but according to Byrne (1998) and Byrne & Gallaghan (2014) can have a quantitative dimension as well. WIDE RANGE OF METHODS in VARIOUS DOMAINS (Byrne & Gallaghan, 2014; Byrne, 1998).

The two views on self-organization originating from the 'hard/natural' and the 'soft/social' sciences are often considered fundamentally different. Whereas 'hard/natural' self-organization is understood to result in the spontaneous emergences of (often physical) patterns in space, 'soft/social' self-organization is understood to result in the emergence of forms of human organization or coherent groups of people without central coordination. We argue however, that this this divide between the human (social) versus non-human (natural) world is problematic to planners. Because human settlements – the main concern of spatial planners – are not mere natural phenomena, nor only physical and materialist entities. Human settlements, including cities, are artifacts with agents – and their actions and behavior are products of intentions, plans, social and cultural norms, political pressure etc. (Portugali, 2011). As such, cities require a hybrid understanding. Moreover, a divide between the natural and the social ignores the holistic perspective that is offered by the complexity sciences. As advocated by Urry (2003; 2005a; 2005b; 2006), complexity sciences stress the importance of objects and nature as part of our social worlds, making an analytical division between nature, objects, people, social systems undesirable. Complexity sciences intrinsically address processes of spatial ordering (Thrift, 1999), but also related to the dynamics of a rapidly changing environment, urban life, and changing societal opinions (Van Wezemael, 2012: 93-94; De Roo et al., 2012: 2). Hence, a complexity perspective can assist planner in reuniting the material world and the social world, offering an integral and rich account of the issues they deal with.

Therefore, we do no longer wish to continue on the distinction between hard/natural and soft/social sciences. We do however acknowledge that the interpretations and the subsequent use of complexity – and more specifically self-organization – can differ significantly among scholars. The aim of this paper is therefore analyses the interpretations self-organization at a deeper level, looking at the epistemic traditions in complexity and their ontological bases. In the first part of the paper, we explore the different interpretations of complexity by elaborating on the two major epistemic traditions that have emerged within

the theories of complexity since the 1970s (Hillier, 2010), one from a Critical-Realist ontology and one from a Post-Structuralist ontology. We identify the key characteristics of self-organization mechanisms in accordance to these epistemic positions, and discuss their implications for understanding spatial transformations and related planning interventions. We illustrate these differences along the example of a regenerated shopping street in the city of Rotterdam, the Netherlands. In the second part of the paper, we once again exemplify the differences between the two epistemic positions, but we also start to explore their complementarity. We speculate on how to turn the two positions into consistency with one another – meaning how they can mutually reinforce each other without losing their individual epistemic strengths. Based on this exploration we suggest planners to act adaptively and differentiate in style in response to the situation at stake, among others by means of pattern recognition. On a conceptual level the paper shows how planning scholars can make sense of the diversity of ongoing processes of self-organization in the context of spatial transformations.

2 THE CRITICAL-REALIST EPISTEMIC TRADITION

2.1 A CRITICAL-REALIST PERSPECTIVE ON COMPLEXITY

The first ontology that stand behind a specific understanding and application of self-organization is critical-realism. To elaborate on this ontology, we draw on the work of Roy Bhaskar and scholars that further expand his proposal (Sayer, 1992; Collier, 1994). Critical realism embraces the idea that reality has an objective existence outside human construction and cognition (Layder, 1990; Danermark et al., 2002). Critical realists, however, also postulate that knowledge about reality is not directly available to us, but is produced by knowable actors in the social world (Pratt, 1995). For this reason they oppose a view on 'knowledge' as something fixed and pre-determined. Instead knowledge is considered to be subject to revision and modification, mediated by filters of language, sense making and social conventions. Descriptions of reality are affected by both the conceptualizations, values and interests of the observer (i.e. the researcher) and those that are observed (i.e. actors that are part of processes of self-organization) (Danermark et al., 2002). According to Bhaskar, system boundaries drawn by observers are always artificial and limit the possibility to gain a comprehensive understanding of how the system functions. As such, explanations of reality are considered partial at best.

But despite the mediating role of human interpretations, the understanding of reality can still be enhanced through research. Considering the complex social world critical realists take the position that an intersubjective account of reality can disclose some of its real complexity (Alvesson & Sköldberg, 2009). Critical realists aim to confront explanations of reality with human perceptions and experience in order specify, adjust, reject ideas on the structures and mechanisms that give shape to reality (Danermark et al., 2002). Bhaskar distinguishes three layers in how one can understand the world; the empirical, the actual and the real (Sayer, 2000). The first concerns personal experiences, the second is about the events, processes and behaviours that are subject to observation. The third level is the domain of the underlying mechanisms that produce these events, processes and behaviours. It is especially this third layer that is of scientific interest to critical realism: the observation, research and analysis of the mechanisms underlying the occurrence of reality (Gerrits, 2012). But in contrast to universals truths, critical realists regard generalisations of causes and mechanisms to have a limited scope in space and time. Any generated knowledge is local, and explanations are understood to be contingent, meaning they are temporal in time and local in place (Byrne, 2005; Gerrits, 2012). Temporal cause and effect relations do exist and can sometimes even be known, but the potential conjunction between local conditions and recurring patterns does not necessarily imply any general laws (Gerrits, 2012).

To conclude, critical realists depart from the position that reality exists outside human construction, but that this reality can only partially and temporarily known. The subjective interpretations of reality, the impossibility of comprehensively mapping a system, and the changeability of relations, imply that knowledge includes provisional explanations of what generates, produces or enables certain events (Sayer, 1992). This critical realist ontology fits well the complexity theorists attempts to search for causal relations between events and elements, while acknowledging that complexity is a real, non-constructed, property of the social world, and since it is emergent through interaction, as such non-decomposable. Reality and complexity cannot be compressed without losing some of its aspects (Gerrits, 2012; Morcol, 2001).

2.2 CHARACTERISTICS OF SELF-ORGANIZATION FROM A CRITICAL-REALIST PERSPECTIVE

A critical realist perspective on self-organization is offered by theories on complex adaptive systems (CAS). CAS theories have been developed within the hard sciences, such as physics, chemistry and mathematics, which traditionally embrace a positivist view. However, moving beyond linear causality and full determinism means that the positivistic ontology does not provide a sound basis for CAS theories. The ambitions of positivists to identify universal laws and mechanisms, to produce universal frameworks of understanding and to assume a high degree of predictability, are considered unrealistic in complex world. In contrast, complexity science emphasizes the changeability of relations and configurations, complex causality and a high degree of unpredictability. Therefore, Archer et al. (1998) and Danermark et al. (2002) argue that CAS theories require a critical realist stance, or what some refer to as a complex realist stance, as a synthesis of critical realism and complexity science (Reed & Harvey,1992; Byrne,1998; Gerrits, 2012).

In CAS theories self-organization processes have a prominent role. They are considered to be a key mechanism in the system's adaptive capacity. It involves the spontaneous transformation of a system due to the uncoordinated interactions between system's elements or actors. This means that through their behavior, actors or elements unintentionally contribute to a change of structure or function on system level. Self-organisation from a CAS perspective includes the spontaneous formation of patterns or structures at a global level out of the interactions between agents at the local level (Heylighen, 2008). Hence, the 'self' of self-organisation refers to the 'unplanned' emergence of organisation 'by itself' or 'spontaneously' (Rauws, 2016). In this process of spontaneous organisation various phases can be distinguished: 1) the occurrence of a symmetry break, (2) reaching a critical point, (3) followed by a non-linear process of adjusting behavior by independent agents, resulting in (4) spontaneous patterns emerging at specific times, revealing the complementary actions of all agents together (De Roo, 2016; Rauws et al. 2016).

Complex adaptive systems are considered as open systems, being sensitive to changes in their environment, that evolve through feedback and feed-forwards loops with sub-systems and supra-systems (Holland, 1995; Wolfram, 2002). This means that these systems are dynamic as they continuously adapt to their environment, resulting in non-linear trajectories of development. Self-organize happens through feedback loops that either stabilize or disrupt the system. Feedback loops can be positive, when they reinforce and amplify initial changes, and lead to dynamism (also called feed-forward loops (De Roo, 2012)). Feedback loops can also be negative, when the reaction of the system is opposite and suppresses the initiated change. Such feedback loops lead to stability (Teisman et al., 2009: 12; Heylighen, 2001: 8-9).

Whereas critical realism allows for the acknowledgement of subjective interpretations of reality, the impossibility of comprehensively mapping a system, the changeability of relations, and the contingency of knowledge, it does study these feedback loops and emerging patterns, and searches for contextual conditions that explain this emergent behaviour.

2.3 A CRITICAL-REALIST PERSPECTIVE ON SELF-ORGANIZATION IN CITIES AND PLANNING

With the aim to better understand the volatility and interconnectedness of urban systems, also planning scholars have adopted CAS theories in analyzing the development of neighborhoods, cities and regions, as examples of such self-organizing complex adaptive systems. The critical-realist perspective is evident in the way CAS theories are used to explain the emergence of urban form (Thrift, 1999: 32). Well-known examples can be found in the work of Peter Allen (1997; 2012), Paul Krugman (1996), Michael Batty (Batty, 2005; Batty, 2013; Batty & Marshall, 2012), Bill Hillier (2012), and Juval Portugali (2000; 2006; 2011; 2012a; Alfasi & Portugali 2007). What is common to the various applications is that they connect to the epistemology of the Santa Fe-tradition. All concern the emergence of large-scale, macro-structures from the interactions between individuals and collective entities. For instance according to Allen (who was, for a time, part of the Prigogine group in Brussels (Thrift, 1999: 32)): "Spatial structures of cities, regions, and urban networks emerge from the continuous interaction between individuals, their goals, their aspirations and the macrostructure that they have allowed to emerge" (Buijs et al., 2009: 97). According to Portugali (2000), the city is a reciprocal product of the initiatives of actors, influenced by personal/individual motives (caused by their environment) versus spatial developments that are in their turn the product of

collective actions. The outcomes of such self-organizing processes manifest themselves in specific urban forms and patterns (morphological or functional), physical growth, the emergence of new socio-spatial groups as a result of geographical settings or characteristics such as houses, lots, and housing blocks (Portugali, 2000), or the spontaneous emergence of economically specialized districts (Krugman, 1996). Other examples are the spontaneous emergence of patterns in traffic flows (Kerner, 1998, Chowdhury & Schadschneider, 1999), pedestrian movements (Helbing et al., 2001), urban land transformation (Webster & Lai, 2003, Barros, 2005), and informal settlements (Silva & Farrall, 2016). (Wagenaar, Gerrits, Rauws, Bettencourt; Weidlich, Helbin; Pumain; Batty, 2013).

In this understanding of complex adaptive systems, both the physical aspects (e.g. infrastructure, buildings or transport vehicles) and social aspects (e.g. organisations, actor-networks or institutional codes) of self-organizing processes, are considered as properties of a real world. Sense making by actors greatly enriches the dynamics of these urban systems (Portugali, 2011). There is no collective ambition amongst actors to establish a transformative change though. Instead, the emergence of new spatial and/or institutional configurations is a result of actors that act on the basis of individual ambitions, but nevertheless produce a collective output. The nonlinear aspect of self-organization relates to the uncertainty to what extend a spontaneous pattern will emerge: will there be a minimal response, or will the pattern be massive, or will it be something in between. No one can tell.

The incentives for feedback and feed-forward loops are seen as part of the system, and can come from both individual citizens and professional planners. Professional planners, and their predictions and plans, can make the plan and reality bend toward each other (Portugali, 2012b: 231), and intervene when self-organizing processes head in an undesired direction (Krugman, 1996; Rauws, 2015). This leads to a planning in which pattern recognition and condition planning are crucial. The recognition of emergent patterns at a system level should reveal any underlying structures, which can then be influenced by changing conditions to such an extent that the outcomes of the self-organizing processes can be steered towards a socially desired direction (Rauws, 2015).

3 THE POST-STRUCTURALIST EPISTEMIC TRADITION

3.1 A POST-STRUCTURALIST PERSPECTIVE ON COMPLEXITY

The second ontology that leaves its marks upon the understanding and application of self-organization is post-structuralism. Post-structuralism is a philosophical and sociological thinking that is not necessarily a coherent whole to be captured under one denominator, but much more a complex web of thoughts and mutual influences. The work of several, predominantly French thinkers in the second half of the twentieth century can be considered as its' core: Gilles Deleuze, Michel Serres, Jacques Derrida and Jean-François Lyotard (Ieven et al., 2011; Belsey, 2010). An important threat that runs through the work of these thinkers is the explicit rejection of representation. Representation is simply impossible, according to Deleuze, due to the complexity and heterogeneity of relationships (Romein et al., 2009: 60). It is therefore not the thing or its representation that deserves attention, but rather its becoming, individuation, and differentiation. The only way in which representation is interesting, is when it is performative, when the representation is a becoming in itself that affects and encounters (Posman, 2009; Huyghens, 2009; Oosterling, 2009). This also resonates with Lyotard's notion of presence and representation. According to Lyotard, representation of the real is impossible due to the heterogeneity of meaning: Of what is meant, who means it, and to what the meaning is assigned. According to Lyotard, looking for representation is nothing more than an attempt to achieve the impossible, namely to bridge all these irreconcilable elements (Parret, 2011). In the world, becomings are happenings, and it is these happenings that people communicate about and seek representations of, in order to transform this elusive happening in the here and now into a conceivable presence that can last. However, these representations themselves are also happenings that become and affect. For instance, an artwork is interesting not so much for what it represents, as for what affects it induces by being present at a certain time and place. This is what both Lyotard and Deleuze regard as post¬representational (Parret, 2011). In other words, for the post-structuralists, truth in society is not so much an issue, but the appearance of it is (Belsey, 2010).

Between post-structuralism and complexity theory strong resonances exist, especially between the works of Ilya Prigogine, Gilles Deleuze, Michel Serres, Jacques Derrida, Jean-François Lyotard, Bruno Latour

and Isabelle Stengers (Cilliers 1998, Thrift 1999, DeLanda 2002, 2006, Morçöl 2005, Hillier 2007, Van Wezemael 2012). Although Deleuze has been criticized for not fully understanding the terms from the natural sciences he was making use of, the natural sciences – including the work of Ilya Prigogine and Isabelle Stengers – have been a major sources of inspiration for his work (Thrift, 1999; Prigogine & Stengers, 1979; Christiaens & De Ronde, 2009). Deleuze's notion of the "fold," for instance, has linkages to the "refiguring of 'internal' and 'external' processes" that complexity theory makes use of (Thrift, 1999: 56). Complexity notions are also apparent in the work of Jacques Derrida (Cilliers, 1998). Notions of difference, becoming, and order not as a law but as exception and emergent property, are crucial elements in these post-structuralist works (Thrift, 1999).

3.2 CHARACTERISTICS OF SELF-ORGANIZATION FROM A POST-STRUCTURALIST PERSPECTIVE

Even though the notion of self-organization is not so explicitly used within post-structuralist thinking, the shared ontologies between complexity and post-structuralism (Van Wezemael, 2012; Hillier, 2007: 54) allow the development of a post-structuralist understanding of self-organization as well.

Self-organization from the post-structuralist perspective would then refer to what could be called the emergence of a relational "self". According to Deleuze, individuals and their identity are historically constituted entities, which are not a given but are defined progressively (DeLanda, 2002, 10, 26). The emerging self thus never stands alone, but exists and co-evolves within a network of relationships and interactions, 'always playfully changing in an unpredictable way' (Cilliers, 1998). Moreover, according to Lyotard, individuals and their identity, the selves, are constructed in a web of meaning and relationships: "A self does not amount to much, but no self is an island; each exists in a fabric of relations that is now more complex and mobile than ever before." (Lyotard, 1984). Also Derrida elaborates on how we distinguish ourselves and our surroundings: by describing what it is not (difference), by remembering the absences and that which has been excluded (trace) and by relating to what it resembles (la meme) (Berns, 2011). The self thus never stands alone, but exists and co¬evolves within a network of relationships and interactions.

One way of describing the emergence of such relational selves is by actor-network theory (Callon and Latour, 1981; Callon, 1986; Law, 1986; 1992; Latour, 2004; 2005), as this theory describes how actor-networks evolve from fairly unstructured beginnings (comparable to the lack of central agency, distributed control, and dynamic boundaries from the complex adaptive systems) into organizational closure, placing emphasis on the relationships that constitute the network (Cilliers, 1998: 112). Actor-network theory can be considered as post-structuralist as it does not take the system as a starting or an end point. Instead, processes are understood as ever-evolving and performative, in a constant process of making and remaking, without clearly identifiable beginnings, delineations, final ends, or outcomes. Instead of seeking an underlying truth or structure of systems, the post-structuralists rather focus on relationships that constitute systems – or preferably: actor-networks. Systems or actor¬networks are performative, and meanings and actions proliferate in unexpected ways, depending on the relations being established (Murdoch, 2006).

An actor-network is formed along a process of translation. This process happens in four sequential steps, described by Callon (1986) as problematization, interessement, enrolment, and mobilization, and by Latour (2004) as perplexity, consultation, hierarchization, and institution. The problematization phase refers to the first phase in the emergence of an actor-network. An actor delineates a problem, and aims at making others see this problem too, and convincing them this problem needs to be addressed by new ways of doing, or a new type of knowledge or organization – a new self becomes visible and renders identity. The next phase is interessement, a phase in which the initiating actor looks for allies, and tries to establish connections between them and the network. By this, validity is given to the problematization and the alliance it implies – the new self acquires credibility. The third phase is that of enrolment, in which the specific roles of the interested actors are negotiated, consolidated, and defined. A common identity is determined and set – the new self acquires stability. During the subsequent fourth phase, the end result of translation, mobilization, the actor-network has proven to be strong enough to remain together and can now exercise the power to follow through. A new type of order has emerged, one in which certain entities within the network control the others – the self is being recognized and acknowledged, and is no longer

questioned. The actor-network has become a black box, whose content is taken for granted (Latour, 2004; Callon, 1986). From here, new translations will start again, either when the black box starts becomes an actor in itself, or when the black box is opened due to changed circumstances. Then, a new problematization phase will emerge. The focus of these actor-networks is therefore not on stability, nor on the individual elements within an actor-network, but on the action of actors in the associations they form. Boundaries of an actor-network are emergent and performed, and impossible to specify, as inside and outside continuously shift along the various phases of translation (Cilliers, 2002: 82; Hillier, 2012: 58-59).

The perspective of self-organization adds a dimension to the translation in actor-networks is that emphasizes the "self" of an actor-network. Instead of merely following and tracing ever evolving actor-networks with all their fluidity, openness and transformability, and without clearly delineating any boundaries of the actor-network. The emphasis on the self enables to see some of the internal drivers, the matters of concern and the intentionalities of the actors that operate within, or work on constituting an actor-network. Self-organization as a process of expanding a self, and appropriating an environment in favor of the establishment and maintenance of the self.

3.3 A POST-STRUCTURALIST PERSPECTIVE ON SELF-ORGANIZATION IN CITIES AND PLANNING

From the post-structuralist perspective, the study of self-organization is not concerned with emergent patterns or conditions, but rather by the interactions among people, things, places, goals, etc. and the materialities, consolidations and affects created by these interactions. This wide-open process of self-organization leads to frequently changing structures, dependencies, and interactions, which are often only temporary, set up for a particular reason. Lack of centralized control then refers to the multiple actors involved in projects, developments or initiatives, of which each one has some degree of power to act, invest or withdraw, and to appreciate and enjoy the benefits of any results (cf. De Roo, 2012: 159). Self-organization is not a property of the system as a delineated entity, but the expression of the interactions and relationships between individual actors and non-human factors that over time form networks around specific situated issues.

In a post-structuralist view, spatial planning and governance are seen as performances of representation – and not seeking representations or underlying structures per se. The performer and the context of performance are entangled in heterogeneous processes of spatial becoming, performance of social practice and space go hand in hand (Murdoch, 2006). Self-organizing actors are actively engaged in producing representations and becoming of representations as attempts to understand and influence spatial becomings. Translations happen when an initiative, project or actor aims at achieving or changing something in the environment, adding new activities, new uses and new physical objects to an existing spatial configuration. And as the actor-network perspective includes human and non-human elements, both the people who were important in the materialization of an initiative as planning-related factors, such as a site, architecture, planning documents, procedures, legal settings etc are addressed. Spatial planning itself can be seen as a process of network-building, in which entities of various kinds are assembled in ways that allow the network to undertake certain functions (Boelens, 2009; 2010).

The perspective of self-organization as emergent actor-networks for spatial initiatives opens up to an understanding of various networks which are planning simultaneously. When translated to planning, this post-structuralist view on self-organization can be used to explain ongoing struggles to establish meaning, identity and over whose reading of space should take priority. The focus lies on transformations, and the identification of actor-networks and trajectories through which various actors are forming relational space – and relational selves. From there, collective creations emerge over time, influenced by power laden and relational stakeholder networks (Innes & Booher, 2002; 2010), politics that intersect in improvised practices and performances, and affect (such as emotions, desires, imaginations) and – following Deleuze & Guattari's notion of the way in which any conceptualization comes with its creators' unique signature – with the specific style brought in by individual and collective actors (Hillier, 2007: 223; Deleuze and Guattari, 1991). As such, the post-structuralist perspective on self-organization as the establishment and emergence of relational selves in the context of spatial becoming and spatial planning, also opens up awareness of spatial actors and interventionists to the individual level and role of the individual – including

the individuals styles and affects felled and performed among and between actors. It opens up an awareness of the situational context, felled and experienced in the here and now.

4 ILLUSTRATION: THE TRANSFORMATION OF THE NIEUWE BINNENWEG, ROTTERDAM

We can further clarify the two epistemic perspectives with the empirical illustration of a urban transformation in the city of Rotterdam in the Netherlands. In the center of the city, we find the Nieuwe Binnenweg. The best days of the Nieuwe Binnenweg directly followed after the Second World War. Whereas bombings had devastated the city center of Rotterdam, major shopping facilities settled on this street which connecting the devastated city center with neighborhoods that had survived the bombings. When in the decades that followed the city center was step by step rebuilt, the Nieuwe Binnenweg gradually lost its function as central shopping destination. At the beginning of the 2000s, this street had become strongly deprived (Naafs, 2012). The main economic activities that took place in the street were sex and drugs related, and the street had turned into a hot spot for criminal activities. Most of the real estate located on the street was privately owned, and occupied by entrepreneurs who solely focused on their own (short term) profits. Many buildings were vacant and the public space was badly maintained. The public authorities mainly targeted their interventions and investments toward the surrounding streets and residential buildings (social housing). The street itself had turned into an area which residents and visitors of Rotterdam avoided.

Today, however, the Nieuwe Binnenweg stands as an attractive shopping and business street again. Economic activity on the street has a hybrid contemporary character: entrepreneurs mix shopping, business, hospitality and community activities, are specialized in sustainability, local production, design and lifestyle, vintage and re-use. The entrepreneurs in the street share a strong collective identity, which radiates to its surrounding area and has made the neighborhood much more attractive, not only for entrepreneurs and visitors, but also for residents. Analyzing this transformation process helps to further clarify the different readings that critical realism and post-structuralism offer, as well as the practical implications these two different readings bring to planners.

4.1 THE TRANSFORMATION OF THE NIEUWE BINNENWEG FROM A CRITICAL-REALIST POSITION

What happened in between halfway 2000s and today, can be described according to the critical-realist understanding of self-organisation from a CAS perspective as follows. What happened in between halfway 2000s and today, can be described according to the critical-realist understanding of self-organisation from a CAS perspective as follows. After the deterioration that set in when the newly build city center of Rotterdam became completed, several conditions started to trigger its regeneration. A new policy was instated in Rotterdam with a zero-tolerance attitude towards (street) crime and drugs related nuisances. Major spatial interventions in the city (including the rebuilding of the city center and the transformations of major former harbour areas) were declared finished and the attention of the city drifted elsewhere. Just before the financial crisis hit in, economically the city center of Rotterdam started to do really well, and the Nieuwe Binnenweg cautiously started to profit from this developed as well. And when the financial crisis did hit in, the Nieuwe Binnenweg had enough empty buildings to accommodate new and experimental economic activities (sharing economy, coorperative work spaces, pop-up shops etc.) against low rent or no rent at all. One of the major characteristics of the Nieuwe Binnenweg was the dispersed private land ownership – in contrast to the surrounding streets that mostly accommodate social housing – giving the local authorities limited space for manoeuvre to invest and intervene in a way that tackles deterioration.

The street appeared to regenerate itself through a series of uncoordinated and relatively independent actions by the public authorities, by various, individual shop-owners and by local community groups. Some decorated the public space, others transformed the function of their shops from retail to food and beverage, and again others organized social events to attract new visitors to the street. These activities and investments were trigged by a symmetry break (e.g. the rise of online shopping/changing in rental legislation/economic crisis). Over time, these actions result in changing spatial patterns on a wider scale,

resulting in a structural change of the function and structure of the street (e.g. the shopping street becomes a public 'living room'/ street in decline to hipster hang-out). Typically, structural change is unpredictable in the sense that it cannot be deduced from the sum of all actions. Also, the activities and investments were not centrally coordinated, let along that they a part of a blueprint plan for the revitalisation of the street. Hence, a CAS perspective on self-organisation emphasises the spontaneous and emergent character of structural change of urban systems by analysing processes of pattern formation.

In the context of urban development, the critical-realist CAS perspective on self-organization thus implies the absence of a collective ambition amongst actors collectively to realise a particular urban transformation. Instead, the emergence of new spatial configurations is mainly driven by actors' actions that are based on individual ambitions. Therefore, this type of self-organisation covers the emergence of urban developments out of uncoordinated and relatively independent actions (e.g. transformation of a shop into a bar or café) by multiple actors (e.g. shop owners). These actions are a response to a trigger for change (e.g. the rise of online shopping). Over time, these actions result in changing spatial patterns on a wider scale (e.g. the shopping street becomes a public 'living room'). Typically, these patterns are unpredictable in the sense that they cannot be deduced from the sum of all actions. Thus a complexity-inspired understanding of self-organisation, from here on simply referred to as self-organisation, emphasises the spontaneous and emergent character of urban developments.

Conditions were created to attract new businesses. Businesses with a creative or hybrid profile were given start-up funding, and real estate owners were encouraged to lower their rents – arguing that vacancies would be more costly than low-rent use. Also conditions were created that would stimulate real estate owners to renovate their buildings, by giving them a choice: either renovate your building, or sell it to a collective trust. In both cases, the real estate owners would be financially compensated with municipal funding (Interview Frank Belderbos, 2014).

Slowly, a new mix of craft industries, design shops, hubs for creative entrepreneurs, bars and lunchrooms and other hybrid economic activities, often in combination with on-line businesses, and highly attractive to young urban residents emerged (Interview Frank Belderbos, 2014).

4.2 THE TRANSFORMATION OF THE NIEUWE BINNENWEG FROM A POST-STRUCTURALIST POSITION

What happened in between halfway 2000s and today, can also be read from a post-structuralist perspective of self-organization. Then, the transformation of the Nieuwe Binnenweg would foremost be described as a matter of relationships being established in order to establish a sense of a collective self among actors and factors in and around the street.

Actors actively engaged in making representations started in the early 2000s, when several businesses who identified themselves as the "remaining decent businesses" (in furniture and quality food) in the western part of the street started to address the deterioration of the street to the municipality, while pleading for policy to improve the connectivity of the street to the city center (Interview Frank Belderbos, 2014). Meanwhile, in the eastern part of the street (closer to the city center), several businesses started to address the same concerns. However, instead of addressing the municipality directly, they first made attempts to establish networks among themselves. The owner of a shoe store wanted to renovate her building, and managed to get the neighboring shop owners on the same line, and enrolled a well-known architect to draft a renovation-plan. Based on this plan, the municipality was asked to co-finance the renovation, to which the municipality surprised but happily applied with a funding mechanism for civil initiatives. From there, other interactions between the municipality and the local businesses emerged as well: a local hairdresser learned that the transport-agency planned a renovation of the tram-line, a year before the municipality planned the renovation of the street and pavement. He managed to organize a simultaneous renovation, and knew how to engage the restaurants and bars in this part of the street to take the opportunity to expand their terraces, bringing increased activity to the street. Other networks established between the local businesses, the city authorities and other shopping areas in and around the city center emerged as well – both in the form of city-wide events as in the form of structural deliberations. In 2011 the local businesses in the eastern part voted in favor of a Business Improvement District (Naafs, 2012).

In the western part of the street the local businesses were less organized (the local business association was run by the sex-industry and showcased little concern on the quality of the street itself), and the problems of deterioration were much more significant. Here, the municipality became an active stakeholder in establishing networks with and among businesses, helping them to bring forward their ideas and to develop a sense of collective identity. First, in 2002, a “safety-agent” was posted in the street. His main job was to establish networks among businesses, residents and diverse departments within the municipality in order to organize projects that would increase the safety, sense of ownership and livability in the neighborhood. In an empty building on the Nieuwe Binnenweg he established a meeting-center for businesses, he gathered ideas and opinions about the street and tried to stimulate both residents and businesses to take initiatives that would improve the neighborhood (Interview Marcel Dela Haije, 2013). In 2008, a “regeneration-agent” was posted in the street as well. His main job was to interest the local businesses to participate in a collective regeneration-program – targeting both the renovation of the individual buildings as the refurbishment of the street and its public space. For this, not only networks had to be established among businesses and residents, but also with the transport agency and the local housing associations, and with European funds that would complement the financial resources the municipality could offer (Interview Frank Belderbos, 2014). Efforts were also made to strengthen the – at first hardly active – business association in this part of the street (Interview Frank Belderbos, 2014; Interview Marcel Dela Haije, 2013).

During this period, both actors from the western and the eastern part of the street actively engaged in making representations of the street, in attempts to create a sense of a common identity that would also generate a new image of the street to outsiders: the ragged, messy, rough but at the same time cultural, stylish and diverse character of the street – highlighting the authenticity of the street in comparison to the more mainstream and commercial city center. In the eastern part, the businesses engaged in art projects, organizing events, advertisement and marketing – all to give extra exposure to the street and its businesses (Naafs, 2012; Interview Frank Belderbos, 2014). In the western part, the safety-agent, the regeneration-agent and a retail-manager – together with and sometimes even on the initiatives of local businesses and residents – engaged in attracting additional creative businesses, bars and restaurants to the street, but also facilitated art-projects such as poetry on buildings, the production of books about the street and the neighborhood, and the organization of events (Interview Frank Belderbos, 2014; Interview Marcel Dela Haije, 2013). From a post-structuralist perspective, these representations also account as performances and happenings through which new affects are created among actors.

Today, the Nieuwe Binnenweg has a much more solid image to outsiders, and the street and its economy have become more nested in the surrounding neighborhood – no longer being a nuisance to the neighborhood, but its main attraction instead. Moreover, among the businesses a sense of collective identity has emerged that is performed though two solid and active business association that work in close cooperation with the city authorities (Interview Frank Belderbos, 2014; Ondernemersvereniging Binnenweg, 2010). However, this identity is not something given, but something that needs to be maintained and continuously developed further. Today, the focus still lies on establishing relationships. Not only in maintaining the business associations and their relationships with the city authorities, but also on improving the interactions and relationships between the eastern and the western part of the street – that somehow got to share the same collective identity but are not necessarily well-connected in their governance (Interview Frank Belderbos, 2014; Interview Marcel Dela Haije, 2013)

In addition to this account largely focused on the process of establishing relationships and a sense of a collective self through the creation of representations, this post-structuralist narrative on the transformation of the Nieuwe Binnenweg also illustrates the before mentioned ongoing struggles over whose reading of space takes priority, and the importance of style. The struggle over whose reading of space takes priority is for instance evident in the western part of the street, where local businesses had to be convinced from stretch on the benefits of a collective approach to the street – as opposed to their usual way of pursuing mere individual interests. It is also evident in the attempts undertaken by several actors to transform the image of the street from sex-industry, drugs and criminality towards creativity, culture, style and urban activity – by forcing out businesses who did not fit to that latter image. A third struggle over reading of space takes place in the eastern part of the street. Here, the initial positive cooperation between the local businesses and the municipality was damaged when the local businesses started to develop a different vision on the future of the street than the municipality. Whereas the municipality blamed the local businesses for not taking into consideration the entire neighborhood and accused them of a lack of professionalism, the local businesses blamed the municipality for taking its hand and responsibility away

from the street now that the established Business Improvement District was generating its own financial resources – and thus damaging the still very fragile economic profile of the street (Naafs, 2012).

The importance of style becomes evident as the actors involved in the transformation of the Nieuwe Binnenweg describe their own activities and attitudes. They all describe their work as a continuous pushing, pulling, networking and communicating, trying to establish connections. But perhaps even more importantly, all emphasize the importance of encouraging ownership, intrinsic motivations and initiative among others than themselves, stating that their role should eventually be no longer necessary (Interview Frank Belderbos, 2014; Interview Marcel Dela Haije, 2013; Naafs, 2012).

5 COMPARING THE TWO APPROACHES

Following these descriptions of a critical-realist and a post-structuralist understanding of self-organization would be, and what it would mean for planning, at first hand the understandings indeed seem to be fundamentally different and therefore perhaps also incompatible (see table below).

Critical-realism / CAS	Post-structuralism / STS (ANT)
Reality has an objective existence outside human construction & cognition	Rejection of transcendence, the social is constructed
CAS – Complex Adaptive Systems	STS – Science and Technology Studies (Actor-Network Theory)
The "self" of self-organization refers to "by itself"; spontaneous emergences within a system	The "self" of self-organization refers to the emergence of a relational and networked self
Individual uncoordinated actions lead to unintended unforeseen collective outcomes; the planned versus the unplanned	Multiple actor-networks are planning simultaneously, struggling over whose reading of space takes priority

Indeed, the literature claiming that the critical-realist and post-structuralist understandings of complexity are incompatible, is redundant. To put it more bluntly, accusations fly back and forth between the two ontologies. Whereas critical-realist do call into question the claim of value-free observations, they distance themselves from – in their words – postmodern view that denies a coherent, unified real world (Alvesson & Sköldberg, 2009). By some, the post-structuralist understanding of complexity is even called "fashionable nonsense" and "an abuse of science" (Sokal & Bricmont, 1999), accusing the post-structuralists of abusing strict mathematical entities, or physical and brain processes such as chaos, entropy, order, disorder as mere loose metaphors, in city planning leading to nothing more than architectonical kitsch (Portugali, 2011). Another accusation made at post-structuralists is that in a post-structuralist perspective on cities nothing is stable, true or that nothing matters for more than a second (Portugali, 2011). On the other hand, protagonists of the science and technology studies are caustic against any sciences who speak of the "world" or "nature" independent of relationships, and accuse them of "pretentious arrogance" and "narrowmindedness" (Stengers, 2003: XX). Such scientists, according to Stengers (2003), refuse to see themselves as part of the 'event' of science. Bruno Latour adds to this his AFKEER of researchers who either take social aggregates (which system definitions essentially are…) as a given and that subsequently look for underlying structures or contextual conditions that explain its emergent behavior. According to Latour, such conditions and structures explain nothing, and the only thing they do is that they abstain actors and make them irrelevant: actors only fulfill a function, they simply realize a potential that was already there as any agent in the same position would be forced to do the same. As such, research based on such pre-assumptions tends to put a veil over what is actually happening, and will thus only come with pretentious, false or at best impartial explanations. Such research is considered by Latour as completely incompatible with his science and technology studies (Latour, 2005).

Based on the theoretical elaboration on the concept of self-organization and the subsequent empirical illustration of self-organization in urban transformation processes earlier in this paper, we can now even further deepen the divide between the two positions, and bring the divide down to five major points of difference:

Difference 1: Dynamic Systems versus (emerging) Actor-networks
Difference 2: Planner is observer of emergences versus Planner is actor in emergences
Difference 3: Unintentional non-linearity versus Non-linear intentionality

Difference 4: Patterns are recognized versus Representations are made
Difference 5: Consequential self-organization versus Existential self-organization

While even deepening the divide between the two ontologies and subsequent epistemologies, the attentive reader will however notice that by further scrutinizing the differences between the two epistemic views on self-organization, potential overlaps and synergies eventually start to emerge. Earlier criticism on either an abuse of science or pretentious or at least impartial explanations, seems to step over the shared philosophical and mathematical backgrounds of complexity in critical realism and complexity in post-structuralism. For both the Prigogine Group, the Sante Fae institute as well as the post-structuralists Gilles Deleuze, Michel Serres and Bruno Latour found the inspirations in the work of Von Leibniz, Whitehead and Henri Bergson.

As such, perhaps the two positions are not necessarily mutually exclusive. Indeed, we perceive several bridges between the two positions:

Bridge 1: Beyond positivism and cause-and-effect-relations
Bridge 2: Linking the(“natural”) non-human and the (“social”)l human world
Bridge 3: Knowledge is produced by actors
Bridge 4: Room for stability and dynamism
Bridge 5: Focus on experiments and the experimental
Bridge 6: Define a planning that is adaptive to unforeseen circumstances and emerging conditions

6 TURNING DIVERGENT PATHS INTO CONSISTENCY

6.1 SOME DIFFERENCES ONCE AGAIN

When just emphasising the differences and the incompatibilities of the two ontologies and their respective epistemologies, the complementarities between a CR-perspective and a PS-perspective on urban transformation processes and self-organization remain largely overlooked. We however aimed to illustrate with the example of the transformation of the Nieuwe Binnenweg, that both positions offer distinctive, but also very complementary readings of self-organization. Therefore, in the remaining part of this paper, we would like to argue that, despite their fundamental differences, or perhaps thanks to their differences, the two positions are rather complementary to each other, especially in the context of spatial planning and urban governance. We argue that acknowledging and combining the strengths of both approaches will allow planners to comprehensively grasp the complex processes they are part of and have to operate in. Our argument is that planners need both the systemic, pattern-oriented view of the CRP and the performative, relational-oriented view of the PSP in order to design and implement interventions that support the vitality and liveability of neighbourhoods, cities and regions. Rather than seeing the two positions as each other’s’ opposite, we would prefer to see them as each other’s reverse, and thus offering a complementary view and approach where either one of the single positions falls short.

CRP on self-organization contributes to an understanding of an urban system’s evolutionary path. A system is defined and the object of study. Planners put their attention to changes in the configuration of this system. The spontaneous (trans)formations of patterns on system level out of uncoordinated interaction at local level are analysed, and so are the conditions that enable and constrain this process, and the implications for related systems. Hence, a CRP on self-organization concentrates on a ‘bigger picture’ – the systemic level.

The focus on this bigger picture is important for planning for at least three reasons. Firstly, planning is concerned with aggregated effects of spatial developments. This can included undesired externalities, such as the impact of urban sprawl on the eco-diversity of an urban region. It can also be about potential synergies between various developments within the same area. For instance, the economic benefits for a city of car industry clustering. A critical realist position on self-organization supports planners in understanding how such system configurations emerge, alter and dissolve as a consequence of the dynamics on local level. This helps in mapping possible externalities and effects of interventions in dynamic, non-linear systems (Refs: e.g. modelling papers on urban sprawl). Secondly, a critical realist position enables planners to compare. Being concerned with the dynamic trajectories of individual systems, critical realism also enables to deal with ensembles of systems. As such, cases and situations

and the configurations they represent can can be compared and thus help to understand the various ways in which things have come to be as they are, the various ways in which they might be different, and – with luck and the wind in the right quarter – how any intervention or changed condition might produce one possible future rather than another (Byrne, 2005). Thirdly, collective needs and desires underlie many planning interventions. One can think of cities that want to fight the consequences of climate change or which have a societal ambition to reduce urban inequalities. Thus the system level is of importance as is it at this level that some consequences of spatial developments manifest themselves and because some needs and desires are collective ones. A critical realist position on self-organization aids planners to identify possibilities to influence systems dynamics by creating conditions for development that can enable or constrain reconfiguration processes (Alfasi & Portugali, 2007; Moroni, 2015; Rauws, 2015).

However, with its focus on patterns and conditions CPR has a blind spot for the motivations underlying the behaviour of individual actors. Although CR acknowledges the importance of local interactions by agents, and the role of sense-making and perceptions, the wheeling and dealing of individual actors is easily overlooked. Emphasis is place on the emergence of spatial form, the spatial outcome of urban development processes, and less on the actual doing and acting within these processes (cf. Portugali, 2011). Moreover, in the critical realist perspective of cities as complex adaptive systems, it is almost obvious to claim that self-organizing processes – which are often market or civic-led -especially take place in cities that do not have planning or zoning entities (Krugman, 1996). As such, the critical realist position allows – or even strengthens – a dichotomy between planned versus unplanned development, placing the planner or planning scholar at a safe distance from the actual happenings that take place (Boonstra, 2015). Lastly, a real pitfall for researchers who take a critical realist position on self-organization, is to pick social aggregates (the systems they observe) or the collective (on whose behalf they apparently act) too carelessly and without reflection. Only when – beside the study of underlying structures – sufficient attention is paid to personal experiences and events, processes and behaviours (cf. Bashar – see section 2), and thus the critical realist ontology is applied thoroughly, this pitfall can be avoided. Because as urban transformations that are fuelled by self-organization processes are a product of the interactions between individual actors, a comprehensive understanding of what drives these individual actors and how they relate to each other is crucial. To avoid the mentioned pitfall, PSP can offer a complementarity and crucial position to the analysis of urban self-organization processes.

PSP on self-organization focuses on the perceptions, associations and relations individual actors and how these feed into the emergence of actor networks. It analyses how dominant readings of reality emerge out of the interactions between actors, in turn affecting the meaning of these interactions to these actors and their consequences for their actions. PSP put emphasis on associations, actor-networks and controversies ‘in the making’.

The performative, relational-oriented view of PSP is relevant to planning in two ways. Firstly, planning is an act of intervention. The post-structuralist position takes this act of intervention seriously as it places emphasis on the actors: anyone who changes anything for anyone is perceived as an actor, and thus regarded as relevant while studying urban development processes. It is thus also open for unexpected actors, and provides insights on the interpretations and motivations of actor in relation to a specific situation. A PSP on self-organisation offers methods to identify these and trace them over time. As such it enables us to understanding how particular readings of reality are emphasised, gain influence, direct action, and are overtaken by other reading again. Secondly, PSP sees action as performative, and thus opens up to the acknowledgement of style and affect. Awareness of this enables planners to not only map the interpretations and motivations of other actors in an emergent actor-network, but also enables planners to adjust their style of operating in this actor-network. This way, the professional planner can more closely align with the involved actors and might be more effective in influencing which reading of ready will dominate over others. Moreover, in order to connect, align, and respond, one first needs to know one’s own perspective and position, and the frames through which the world is observed. Only then is one able to see others, and only then can the empathy with other planning actors grow. Frames that follow from this self-consciousness, can give actors clear and stable ambitions, and consistency to their actions, without losing the capacity to affect, to be inspiring, manifold, and flexible (Loepfe 2014; Van der Stoep 2014). Awareness of such selves and frames is especially needed in moments of uncertainty, as these selves and frames can provide a feeling of consistency. Without that feeling, “quick closures” become very probable (Loepfe, 2014: 209-210). Thirdly, PSP opens up the perspective of planners as actors within an (emergent) actor-network. Planners are not mere observers of spatial transformation processes, or

instigators of general conditions that stand far away from the individual agents within a spatial system, but become actively engaged themselves.

However, with its focus on stylist and relational performances, building only on a PSP on self¬organisation would mean that the aggregated effects and collective needs and desires are largely ignored. The same can be said about the opportunities to influence these by generating enabling and constraining conditions. A PSP standpoint easily becomes relativist. And an easy pitfall is that system definitions or any form of representation or aggregations is made, even though actors in the cases continuously make these. Only when PSP is applied thoroughly, and frames, references, representations etc. are regarded as actors too, this pitfall is not taken.

6.2 SOME CONSISTENCY AT LAST

It is the complementarity of both perspectives on self-organization that motivate us to explore how diverging paths in the debate on self-organization and planning can be turned into consistency. We believe that acknowledging and utilizing this complementarity will allow scholars to more comprehensively grasp the complexities of urban self-organization processes. At the same time it offers planning practitioners a wider set of action perspectives on how they can relate to self-organization processes.

While looking again at the case descriptions of the transformation of the Nieuwe Binnenweg from the two positions, can distinguish various moves planners can take. First, the CRP enables planners to identify emerging socio-spatial patterns by recognizing early warning signals identify global trends that can function as amplifiers (Rauws, 2016). Through pattern recognition, and by looking at emerging patterns, planners can also identity global or local trends that can have a potential influence on the area of their concern. Or they can recognize and identify purely emerging trends within the area itself. Next, pattern recognition in combination with PSP enables planners to identify emerging actor coalitions that co-evolve with these patterns and map the consistencies and inconsistencies in the representations actors produce in the ongoing development process. In the light of supporting vitality and liveability of places, planners could, for instance, be concerned about the influence of particular initiatives on socially and environmentally “just” urban landscapes (Hillier, 2011). They could also be concerned about inconsistencies that emerge out of a fragmented development within a certain territorial environment (Rauws & De Roo, 2011). The way in which both global and local economic and political processes triggered the deterioration and the revival of the Nieuwe Binnenweg are illustrative.

Second, planners can anticipate the impact of these trends through condition planning, and respond to the developments by implementing rules and regulations that enable positive effects and mitigate negative ones. While such a response can be seen as reactive, planners can also proactively trigger self-organizing development processes guided by various conditions. But with help of PSP, planners do not only influence such processes from a safe distance (either from town hall or the desk in a university building), but as active agents within the local area itself. The case of the Nieuwe Binnenweg shows how important the role of those matchmaking agents can be in the actual regenerations. The case of the Nieuwe Binnenweg also shows how condition planning (financial tools to trigger individual landlords, subsidy programs for civic initiatives) and the active networking of individual agents (the safety-agent and regeneration-agent and several individual shop owners) can (or perhaps should) go hand in hand.

Thirdly, PSP makes visible how patterns become recognized and how people start behaving accordingly – the new emergent pattern becomes an actor itself. The emergent collective identity becomes acted upon – whether called enslaving principle or black box, it is no longer put into question. What PSP additionally brings into perspective is the style with which such representations are performed, or the style with which active agency within the emerging actor-networks is performed. Being open to such stylist performances, enables planners to look for more consistency in an area – consistency in the sense of moving in the same direction and a mutual strengthening of (individual or autonomous) actions and initiatives. Not because frameworks or conditions dictate such direction, but by actively empathizing with the emerging selves (be it individuals, actor-networks, projects, initiatives, collective identities, discourses etc.), and without forgetting about others’ and one’s own perceptions, intentions, representations.

Together, these perspectives for action can foster a process of continuous adaptation. After all, self-organization processes and planning rules and regulations are co-constitutive, and therefore the

development of monitoring, evaluation and learning activities is essential. By emphasizing the complementarities between the CRP on self-organization and the PSP on self-organization we do however not suggest that both perspectives should be merged. This would not only be unrealistic, as they build on different epistemological and ontological standpoints, it is also unnecessary. Planners have a strong tradition of pragmatism (cf. Dewey), focusing on 'what works', and we argue that depending on the situation at stake one perspective can be more informative that the other (cq De Roo, 2012?). Combining the two positions of CR and PS allows and perhaps enables planners to become adaptive in their ontological preferences according to the situations and challenges they face. Then, stylist performances and pattern recognition, planners as individual agents and as the ones who create conditions can go hand in hand. And moreover, planners can start become aware of the style with which patterns are recognized, and the patterns in style that are created. This requires that planner scholars and practitioners become aware of the differences and complementarities. This paper offers a framework to boost this awareness.

However, we fully realize that propagating a combination of post-structuralism and critical realism in planning practice has quite some consequences, and it more easily said than done. Therefore we propose to continue research on the combination of the two ontologies in two ways. The first way is by including pragmatism to the combination and diversification of styles, the second way is to go deeper into the issue of representation and pattern recognition in a way that relates to both post¬structuralism and critical realism. Such can for instance be found in the topic of embedded cognition.

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ID 1676 | ANALYSING RETAIL LOCATION AND URBAN DYNAMICS IN LISBOA

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1 INTRODUCTION

What drives people into a city? Some cities seem able to attract workers and residents, sometimes tourists, eventually all of these. Some are commuter towns. And some are, to some extent, in between those. Christaller (1933) considered the city to be the centre of a market area, and Lösch (1954) further elaborated on that theory. Location theories date back to von Thünen (1826), but close to the 21st century, Krugman (1991) posed a relevant question: why is it that in such a large, fertile country like the U.S.A. "the bulk of the population resides in a few clusters of metropolitan areas?". The question was later emphasized, with Clarke (2003) and Jayne (2006) assuming postmodern cities as places of consumption.

Jacobs (1961) had long hinted at why people live in cities: "Not only do public characters spread the news and learn the news at retail, so to speak. They connect with each other and thus spread word wholesale, in effect.". The city was presented as more than just a market centre – it was an organic system, whose complexity couldn't be modelled at the time.

But modelling complex systems has evolved significantly, with the focus, in some cases, having shifted from "how to" to "how well", as more data becomes available and models become more sophisticated. "What scientists really need to know is exactly how well (or how poorly) their models perform over a broad range of conditions and criteria" (Costanza, 1989). Even though results still can't provide absolute certainties, they can prove to be relevant for research.

Therefore, this paper aims at contributing to research on modelling a complex system, by identifying factors that might explain retail spatial distribution, and analysing its effects on a city, with Lisboa being used as a case study.

Relevant insight on the subject has been provided by a number of authors, but the works of Mullins (Mullins et al., 1999) in relating households' location and consumption spaces, Borck (2007) in linking city size and measures of consumption and social interaction, Porta (Porta et al., 2009) in modelling the relationship between street centrality and commercial density, and Sevtsuk (2014) in identifying location patterns in retail and food establishments, were essential to this paper in the way they approached data and presented results. Using density surfaces to represent data relied heavily on the work of Thurstain-Goodwin and Unwin (2000) and Batty (Batty et al., 2004), as will be seen.

The paper starts with an overview of retail spatial distribution in Lisboa, but eventually focus on neighbourhood-scale retail: amongst retail, neighbourhood-scale promotes a relevant role in aiming for more sustainable communities – it encourages interaction between neighbours, walking instead of driving, and can help generating local employment (Sevtsuk, 2014). It's a key element of neighbourhood liveability and thus fundamental in the context of the contemporary – postmodern – city. Its resilience helps maintain a neighbourhood's vitality (Barata-Salgueiro and Erkip, 2014).

The location of retail establishments in the city of Lisboa, in two different periods (1995-2002 and 2002-2010) is analysed, and quantitative relationships with demographic factors are therefore established. Spatial analysis is used to uncover spatial patterns, and spatial regression analysis for correlating data.

1.1 CASE STUDY

An opportunity to analyse the evolution of the retail structure in Lisboa was presented when a geo-referenced database pertaining commercial establishments, and referring to several years between 1995 and 2010, was made available by the City Council. Considering that, around that period, the National Institute of Statistics ("INE") had conducted 3 national population and housing censuses ("Censos"), trying

to establish a relationship between commercial activity and demographic data also became feasible. Therefore, the demographic data used on the analyses refers to the censuses of 1991, 2001 and 2011 (INE, 2014, 2014a and 2014b), while for commercial data, 1995, 2002 and 2010 were used (CML, 2016).

1.2 SPATIAL ANALYSIS

A geo-referenced database of establishments containing 14.673 locations in 1995, 16.092 locations in 2002 and 17.035 location in 2010 was used to analyse spatial distribution of establishments. Establishments were compared both globally, disaggregated into "sectors" ("retail" and "restaurant") and into 10 types of activities: Foods (non-prepared: includes groceries and similar establishments, excludes restaurants, cafes, bars and similar establishments); Personal Use Items (mainly clothing and clothing accessories); Household Articles;

Health and Hygiene items; Leisure items (sporting goods, bookshops, music stores, etc.); Repairs (all sorts of repairs); Other items (all other items non-included in the remaining types); Restaurants and similar establishments; Cafes and similar establishments; Bars and similar establishments". The first seven types were considered the "retail sector", while the remaining three were considered, globally, the "restaurant sector".

A zoning system was defined considering the following:

1. Commercial locations were available as point features. Point density was used to create continuous surfaces, by calculating "a magnitude-per-unit area from point features that falls within a neighborhood around each cell" (ESRI, 2016);
2. Demographic data was available as polygon features. INE uses a zoning system of statistical subsections ("subsecção estatística"), with each polygon corresponding to a block in urban areas (INE, 2014c). Since their limits varied between 1991, 2001 and 2011, the polygon features were converted into points, and then into continuous surfaces, by using the process previously described for commercial locations;
3. Finally, a grid of 150m x 150m polygons was created (meaning an area of 22 500m2, similar to the average size area of INE's statistical subsections), to which all data was then related, allowing for an OLS-type regression to be modelled.

1.2.1 POINT DENSITY

Since data with this level of disaggregation has an "intrinsic granularity" with variables presenting "extremely high variances, with a pre-dominance of zero values and hence extremely non-normal frequency distributions" (Thurstain-Goodwin and Unwin, 2000), and considering the final purpose of modelling a regression, using continuous density surfaces presented itself as a way to both go around this problem and better identify patterns "by smoothing the data to iron out the inevitable discontinuities that take place from data that are originally represented by land parcels and/or the fine scale postal geography" (Batty et al., 2004).

Density surfaces were produced for establishments and a set of demographic indicators. In commercial establishments, density represents the number of point features found at a fixed distance (radius) around each cell, per unit area (km2). For demographic factors, the value of the variable being analysed served as the weight for each point feature.

1.2.2 COMMERCIAL DIVERSITY

To examine the diversity of commercial activity within each grid cell, an index based on Shannon's entropy was used (Song and Knaap, 2004).

$$\text{Entropy} = -\sum \frac{[Pj \times \ln (Pj)]}{\ln (J)}$$

with Pj being the proportion of establishments of type j, and J the total number of establishment types, for each grid cell. This index varies between 1 and 0, with 1 representing a perfect balance between all J types found at cell level.

Entropy was calculated using the disaggregated data for the 10 establishment types.

1.3 SPATIAL REGRESSION ANALYSIS

Regression analysis was used to test if the location of one type of establishment relies on the presence of other specific types. For this purpose, ordinary least squares regression was used.

The purpose of linear regression analysis is, as known, to find a (linear) relationship between a dependent variable and a set of explanatory variables:

$$y = X\beta + \varepsilon$$

with data consisting of n observations, and y being vector of n×1 scalar responses, X an n×p matrix of predictors (with p being the number of predictors), and ε a n×1 vector of unobserved scalar random variables (errors).

One establishment type was considered the dependent variable (Foods), with the remaining used as dependent variables (predictors). Variables accounting for demographic factors (population, ratio of younger residents (under 13yo) and older residents (over 65)) and economic activity (with primarily non-residential buildings posing as a possible source of information for job location) were also included in the model. An additional variable, “Activity within Malls”, was calculated by dividing the density of establishments located within malls by total establishment density. All variables represent densities (as explained in Point Density) or ratios of densities.

A classical OLS regression was performed, with a considerable number of variables being significant at the 99 percent level. But diagnostics for spatial dependence (Lagrange Multiplier) signalled for significant spatial autocorrelation, making the OLS results unreliable (Anselin, 2005; Sevtsuk, 2014).

To overturn the bias, a spatial lag model was used. Having set a weights matrix, the model runs an implementation of the previously mentioned function:

$$y = \rho W y + X\beta + \varepsilon$$

where y is an n×1 vector of observed dependent variables, W is a n×n spatial weights matrix that describes adjacency relationships, and ρ is the spatial autoregressive parameter (lag).

The general model fit was improved when compared to classical OLS, as was indicated by a higher value of R-squared, and analyses was made possible.

2 RESULTS

2.1 SPATIAL ANALYSYS

2.1.1 POINT DENSITY

“Eventually, a range of resolutions is necessary to adequately describe the fit of models with reality” (Costanza, 1989). Transforming points to surfaces by using point density required the choice of a radius. Smaller radii added to the resolution (but increased the difficulty in discerning patterns), and larger radii implied significant data loss (though revealing patterns that could be relevant at regional scale), as shown on Figure 1. Finally, a radius of 300m was considered appropriate, and density surfaces for commercial activity were created. Figure 2 present total establishments variation between analysed periods.

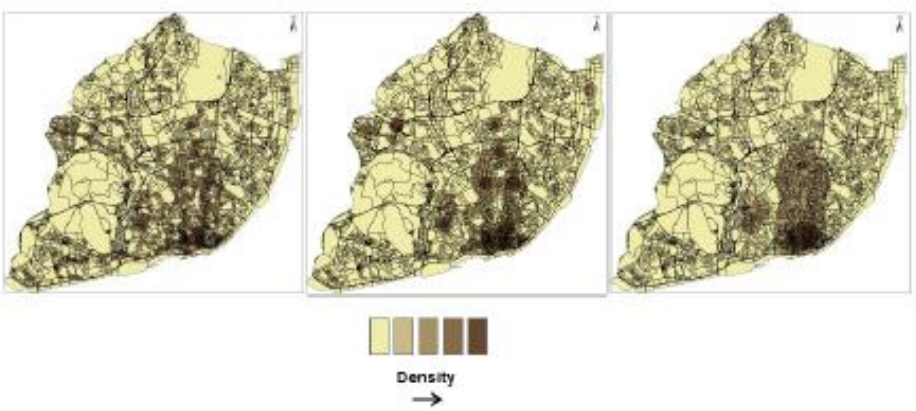

Figure 1 – Total Establishment Density (2010) using 100m, 300m and 600m radii (left to right)

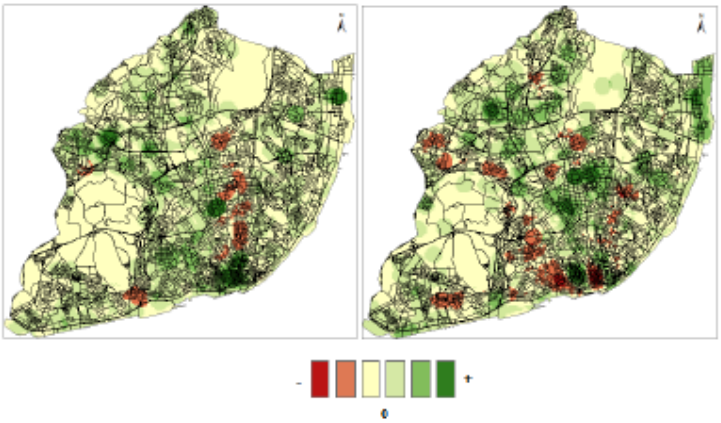

Figure 2 – Total Establishments Variation: 1995 to 2002, and 2002 to 2010 (left to right)

The period between 1995 and 2002 can be directly related to a stage in the evolution of shopping malls (Cachinho, 2002) characterized by the opening of few but (much) larger units when compared with previous decades (before 1990). Apart from Baixa-Martim Moniz (the dark green irregular area, south in the left image), they amount for all other significant, positive variation in establishment density: Colombo (opened 1997) is the dark green circle northwest, Vasco da Gama (opened 1999) the one northeast, and closer to the centre, in the Saldanha neighborhood, Atrium Saldanha (1998) Saldanha Residence (1998), and Picoas Plaza (2001), with slightly different characteristics, amount for a significant commercial area when considered as a whole (especially when including the renovated Monumental cinema, inaugurated just before, turned from a cinema into a multiplex cinema with a commercial area).

The impact of the shopping malls is evident on Avenida Almirante Reis, Avenida de Roma and Alvalade, traditionally associated with commercial activity at street level (these areas form the axis shown in orange, east of Saldanha). This period thus represents (roughly) a decade where commercial activity was still growing, even though malls were already capturing a significant part of what had previously existed at street level. In the following period, the effects were extended to the remaining traditional commercial areas, including Baixa, but also Madragoa-Estrela-Campo de Ourique (the axis shown in orange, west of Baixa) and Estrada de Benfica (the orange patches southeast and southwest of Colombo). Two additional shopping malls opened (and are visible) in more central areas: Campo Pequeno, less than 1 mile north of Saldanha, and Acqua Roma, east of it, in the heart of yet another traditional commercial area, Avenida de Roma.

In this second period, Vasco da Gama became central in a new neighborhood: Parque das Nações (the former Expo98 grounds, which transitioned into a new neighborhood of Lisboa). Up north, the residential areas of Telheiras and Lumiar /Alta de Lisboa also revealed some growth dynamics.

Figures 3 and 4 present the variation for the restaurant and retail sectors, as previously defined.

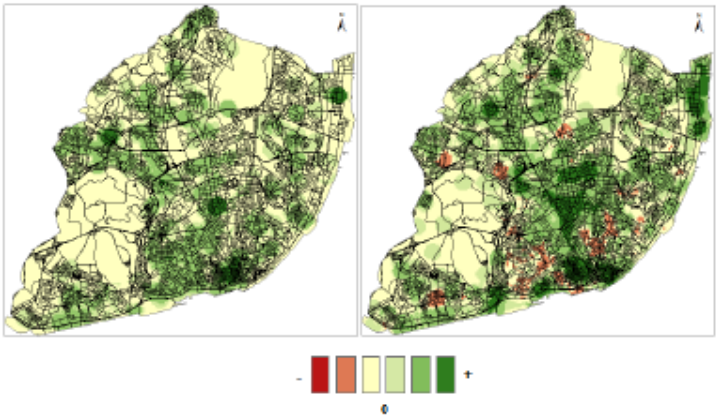

Figure 3 – Restaurant Sector – Density Variation: 1995 to 2002, and 2002 to 2010 (left to right)

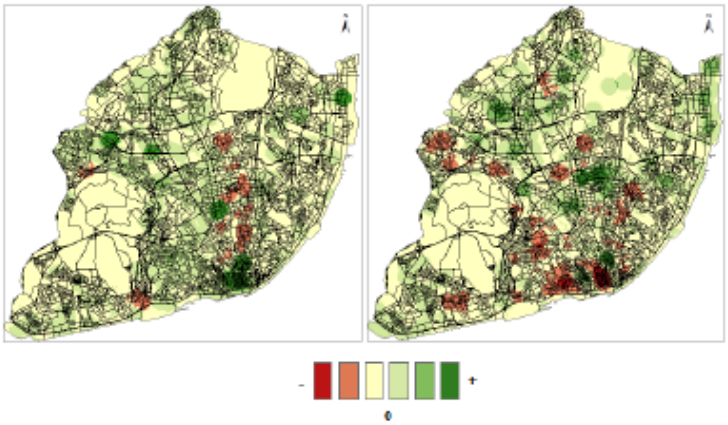

Figure 4 – Retail Sector – Density Variation: 1995 to 2002, and 2002 to 2010 (left to right)

Analysed separately, the two sectors show different trajectories: while on the period between 1995 and 2002, the impact of the shopping malls is noticeable in both sectors, the restaurant sector is, in general, growing steadily, while retail, outside shopping malls, shows significant growth only in Baixa-Martim Moniz, and therefore contributes for most of the losses in total commercial activity observed in Figure 2 in this period.

As for the following period, the restaurant sector shows significant growth mostly all over the city, while in retail, the traditional street-level commercial areas that hadn't been affected between 1995 and 2002 suffered losses in this period. Alvalade showed persistent loss throughout both periods. As for Baixa, it gained almost 60 personal use items stores between 1995 and 2002; and lost roughly the same number in the following period, along with several other types of retail. They also explain for the losses in Figure 2, only for this period.

Personal use items was indeed the most affected commercial type at street level: from 6.2% of total stores located at malls in 1995 it went to 27.8% in 2010 – 712 stores, amounting to 45% of retail located in malls in 2010, and explaining in part of what happened in Baixa and Alvalade.

Tables 1 and 2 contains a summary of the 10 types of commercial activity, both total and located in shopping malls, thus presenting a general overview of the studied period.

Year/Variation		1995	2002	Variation 2002-1995	2010	Variation 2010-2002
Type	Description	Total Number	Total Number		Total Number	
1	Foods	2259	2166	-4.12%	1868	-13.76%
2	Personal Use Items	2387	2678	12.19%	2566	-4.18%
3	Household Articles	1356	1503	10.84%	1265	-15.83%
4	Health and Hygiene	586	642	9.56%	740	15.26%
5	Leisure	1519	1657	9.08%	1616	-2.47%
6	Repairs	598	683	14.21%	944	38.21%
7	Other Items	2129	2306	8.31%	2386	3.47%
Total (Retail Sector)		10834	11635	--	11385	--
8	Restaurants (and similar)	2139	2515	17.58%	3202	27.32%
9	Cafes (and similar)	1597	1833	14.78%	2212	20.68%
10	Bars (and similar)	103	109	5.83%	236	116.51%
Total (Restaurant Sector)		3839	4457	--	5650	--
Total		14673	16092	--	17035	--

Table 1 – Total Number of Establishments and Variation 1995-2002 and 2002-2010

Year/Variation		1995		2002		Var. 2002-1995	2010		Var. 2010-2002
Type	Description	Number	% of Total	Number	% of Total		Number	% of Total	
1	Foods	19	0.84%	69	3.19%	263.16%	98	5.25%	42.03%
2	Pers. Use It.	148	6.20%	465	17.36%	214.19%	712	27.75%	53.12%
3	House. Art.	42	3.10%	141	9.38%	235.71%	119	9.41%	-15.60%
4	Health &Hyg.	23	3.92%	73	11.37%	217.39%	119	16.08%	63.01%
5	Leisure It.	78	5.13%	205	12.37%	162.82%	215	13.30%	4.88%
6	Repairs	5	0.84%	18	2.64%	260.00%	81	8.58%	350.00%
7	Other Items	45	2.11%	169	7.33%	275.56%	234	9.81%	38.46%
Total (Retail Sec.)		360	3.32%	1140	9.80%	--	1578	13.86%	--
8	Restaurants	38	1.78%	167	6.64%	339.47%	316	9.87%	89.22%
9	Cafes	34	2.13%	105	5.73%	208.82%	147	6.65%	40.00%
10	Bars	0	0.00%	0	0.00%	--	0	0.00%	--
Total (Rest.Sector)		72	1.88%	272	6.10%	--	463	8.19%	--

Table 2 – Establishments located in Malls - Total Number and Percentage, 1995, 2002 and 2010

Foods present both a persistent decrease (Table 1), and a very low percentage of activity inside malls (Table 2). This may indicate not only the direct competition from malls, but also a lack of characteristics that would allow these establishments to locate inside malls, which is consistent with the activities within this type (groceries, butchers and bakeries, amongst others), that are important at neighbourhood level but don't have the scale to compete directly with the supermarkets that serve as anchors in Colombo and Vasco da Gama. Visually, the effect is as displayed on Figure 5.

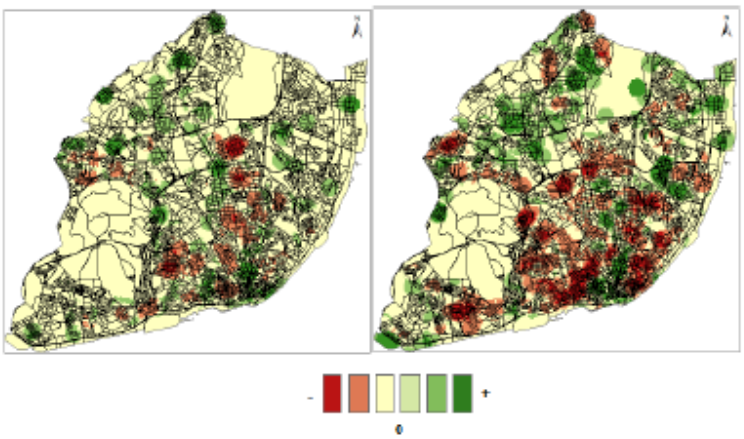

Figure 5 – Foods – Density Variation: 1995 to 2002, and 2002 to 2010 (left to right)

Vasco da Gama and Colombo are visible on the first period (the malls in Saldanha don't rely on supermarkets as anchors). Another phenomenon, though, becomes noticeable in the second period: "old Lisboa" losing this type of activity while "new Lisboa" gains it. Marked in tones of red and orange are the older neighbourhoods in town, with Bairro Alto-Baixa-Martim Moniz appearing as the exceptions (south in green). Upper north, Lumiar /Alta de Lisboa and northeast, Parque das Nações, show positive variation. A preliminary conclusion about Foods can be made: they are needed, to some extent, in residential areas that are still developing, since they provide for daily necessities. Figure 6 compares variation in Foods and Population in this period, with the correlation being obvious.

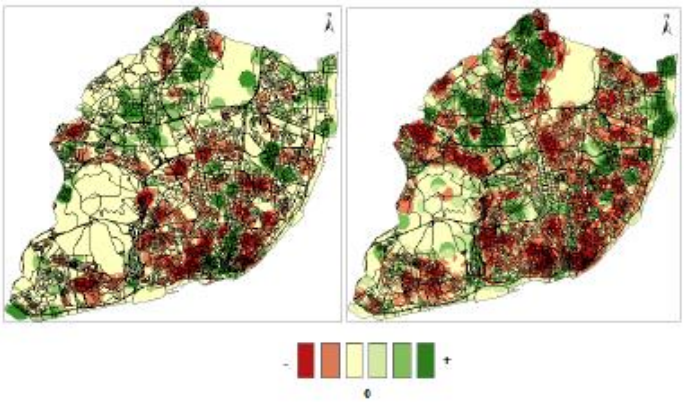

Figure 6 – Foods (left) and Population (right) – Density Variation: 2002 to 2010 (Foods) and 2001 to 2011 (Population)

2.1.2 COMMERCIAL DIVERSITY

Commercial diversity, here measured by entropy, is high at cell-size level, with some small variations between 1995, 2002 and 2010. This doesn't necessarily indicate a good balance of commercial types in Lisboa, but an overall good mix of establishment types at cell-size, for the types taken into consideration. Since cell-size was based on the average area of a statistical subsection, which corresponds to a city block, one preliminary conclusion would be that at block size, activities tend to mix. The analyses on diversity produced the results shown of Figure 7.

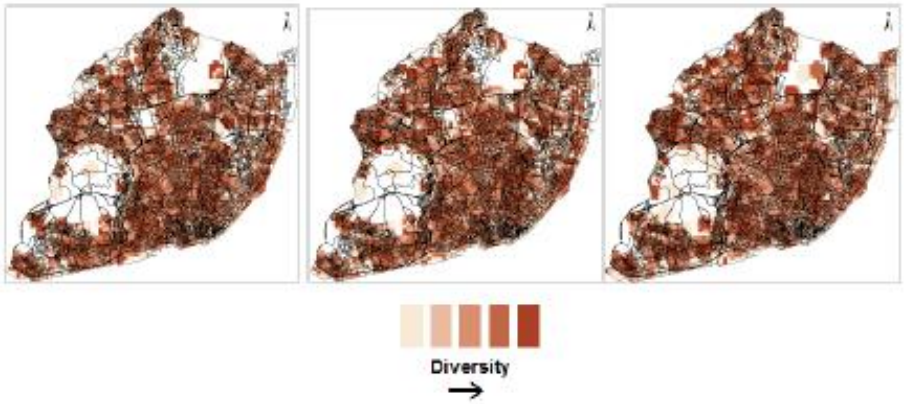

Figure 7 – Commercial Diversity: 1995, 2002 and 2010 (left to right)

Figure 8 presents Commercial Diversity in 2010 and Establishment Density for that same year.

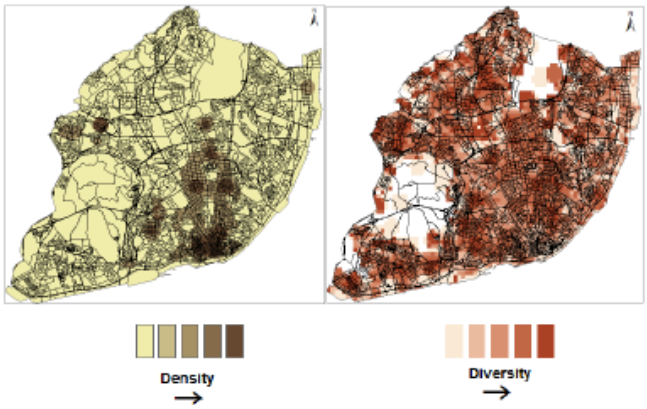

Figure 8 – Establishment Density and Commercial Diversity, 2010 (left to right)

Adding to the previous conclusion, Colombo presents high density but lower diversity. To a lesser degree, the same happens with Vasco da Gama and the smaller malls at Saldanha. Malls offer high density at block size; street level commercial activity, a more balanced distribution.

2.2 SPATIAL REGRESSION ANALYSIS

Regression was focused on Foods, considering the analyses that had been made to this point. The results are presented in Table 3.

Variable	OLS			Spatial Lag		
	coefficient	t-statistic	p-value	coefficient	z- statistic	p-value
ρ (lag)	--	--	--	0.876	142.93	0.000
Constant	-1.521	-1.27	0.203	-2.728	-4.91	0.000
Personal Use Items	0.013	1.87	0.062	0.011	3.23	0.001
Household Articles	0.051	3.89	0.000	-0.004	-0.59	0.553
Health and Hygiene	-0.340	-9.85	0.000	-0.075	-4.67	0.000
Leisure	-0.037	-1.90	0.058	0.004	0.40	0.686
Repairs	0.204	10.69	0.000	0.039	4.39	0.000
Other Items	0.233	20.57	0.000	0.026	4.74	0.000
Restaurants (and similar)	0.067	7.09	0.000	0.024	5.41	0.000
Cafes (and similar)	0.280	14.85	0.000	0.075	8.24	0.000
Bars (and similar)	0.169	5.75	0.000	0.010	0.74	0.457
% Activity within Malls	-13.773	-9.64	0.000	-3.23	-4.83	0.000
Population	0.002	27.38	0.000	0.0003	10.52	0.000
% older than age 65	10.41	4.21	0.003	1.987	1.73	0.084
% younger than age 14	-25.64	-4.61	0.000	1.065	0.41	0.680
Primarily Non-Residential Building	-0.13	-12.19	0.000	-0.062	-11.79	0.000
R-squared	0.852*			0.968*		
LM (lag)	2580.965*		0.000	--	--	--
Robust LM (lag)	3.877*		0.049	--	--	--
LM (error)	3996.75*		0.000	--	--	--
Robust LM (error)	1419.66*		0.000	--	--	--
Likelihood Ratio Test	--		--	4340.779*		0.000

Note: OLS: Ordinary Least Squares. LM (Lagrange Multiplier).
*Entries presented are Values.

Table 3 – OLS Model – Classic OLS Regression and Spatial Autocorrelation (lag) for Foods, 2010-11

The lag model presents a variable for the spatial lag term of Foods, ρ (lag). Its coefficient parameter (Rho) reflects the spatial dependence inherent in sample data, measuring the average influence on observations by their neighbouring observations. It has a positive effect and it is highly significant, which must be taken into consideration when examining the results. Still, controlling for spatial dependence allows for an analysis, focused on the lag model results.

Personal Use items, Repairs, Other items, Restaurants (and similar) and Cafes (and similar) present a positive and significant relation ($p<0.001$). A negative and significant relation is found with Health and Hygiene.

With the % Activity within Malls also being significant and negative, and considering both the values on Table 2 and the preliminary conclusions about Foods, and commercial diversity, one might establish a relation between these types: except for Personal Use items, these are the types of activity one might find at street level, and block size. This relation, though, requires a similar analysis to be done on the other types. It's a finding pending further investigation and opened for discussion.

As for the relation with Personal Use items, the part of that activity still occurring outside malls is so relevant at neighbourhoods like Alvalade, Campo de Ourique, and the areas surrounding Avenida de Roma and Avenida Almirante Reis, that it might be sufficient to establish a significant relationship with Foods.

Foods is significantly related with Population, but with a very small coefficient. This might be explained by a bigger density of establishments being found in older, less dense areas. The relation with % older than age 65 (and the lack of it with % younger than age 14) also point to that conclusion.

Relation with Primarily Non-Residential Building is significant and negative, which is consistent with Foods being necessity type goods and thus, more related with residential type occupation.

Regression analysis, as said, was used to test if the location of one type of establishment relies on the presence of other specific types. Having made that point, to some extent, the spatial lag model was run using the same variables, but with data from 1991 (demographic) and 1995 (commercial). Table 4 displays the results (along with those displayed on the previous table, for spatial lag in 2010-11).

Variable	1991-1995			2010-2011		
	coefficient	t-statistic	p-value	coefficient	t-statistic	p-value
ϱ (lag)	0.868	133.46	0.000	0.876	142.93	0.000
Constant	-0.929	-1.23	0.215	-2.728	-4.91	0.000
Personal Use Items	0.004	0.76	0.446	0.011	3.23	0.001
Household Articles	-0.002	-0.28	0.776	-0.004	-0.59	0.553
Health and Hygiene	0.058	2.52	0.012	-0.075	-4.67	0.000
Leisure	-0.035	-3.24	0.012	0.004	0.40	0.686
Repairs	0.045	3.16	0.002	0.039	4.39	0.000
Other Items	-0.008	-1.04	0.297	0.026	4.74	0.000
Restaurants (and similar)	0.046	7.17	0.000	0.024	5.41	0.000
Cafes (and similar)	0.151	11.60	0.000	0.075	8.24	0.000
Bars (and similar)	-0.015	-0.45	0.651	0.010	0.74	0.457
% Activity within Malls	-1.024	-0.44	0.663	-3.23	-4.83	0.000
Population	0.0003	10.84	0.000	0.0003	10.52	0.000
% older than age 65	-6.517	-3.17	0.001	1.987	1.73	0.084
% younger than age 14	-1.437	-0.50	0.618	1.065	0.41	0.680
Primarily Non-Residential Building	-0.049	-8.92	0.000	-0.062	-11.79	0.000
R-squared	0.970*			0.968*		
Likelihood Ratio Test	3721.152*		0.000	4340.779*		0.000

Note: OLS: Ordinary Least Squares. LM (Lagrange Multiplier).
*Entries presented are Values.

Table 4 – Regression results with Spatial Autocorrelation for Foods, 1991-95 and 2010-11

Table 4 allows for yet another approach to change in Foods in a period of 15 years (before and after the shopping malls from the late 90's). Foods maintains a positive and significant relation ($p<0.001$) with Restaurants (and similar), Cafes (and similar) and Repairs. Personal Use items weren't relevant in 1995, nor were Other items. As for Personal Use items, one might risk concluding it was a clustered activity, with that cluster having been displaced to shopping malls, and the remaining activity resisting in traditional, street level commercial neighbourhoods. The relation with Other items is very interesting: this type was created to include

all types that couldn't be included in the other 9 categories. It includes, for example, "Bazars", which in 1995 were just 69 (out of 2129) and in 2010 were already 311 (out of 2383). These are stores selling

miscellaneous goods, from clothes to household articles, to souvenirs and snacks (the smaller ones), usually managed by immigrants, with a large community settled Intendente-Martim Moniz-Mouraria (these amount for the biggest part of the positive variation on retail that can be observed east of Baixa in Figure 5, in the 2002-2010 period). It's a street level activity that almost didn't exist in 1995, but since then, was able to present itself as relevant at block size and eventually contributing to neighborhood liveability.

The relation between Foods and demographic data shows an aging population, as demonstrated by % older than age 65 in 1991: it was significant, but negative.

Shopping malls weren't relevant, and Relation with Primarily Non-Residential Building was significant and negative, although with a smaller coefficient (which might show increasing detachment between commercial activity and other economic activity).

3 CONCLUSIONS

This paper originally intended to present an overview over retail on a period that encompasses 3 decades: a longitudinal analysis on patterns that would visually reveal some expected changes (like the emergence of malls) but also some that weren't quite so obvious. Being able to visually identify the importance of an immigrant community on the resurgence of a neighborhood was unexpected.

A general conclusion is that retail maintained its relevance (10.834 establishments in 1995, 11.385 in 2010), but with a significant part of the activity being transferred to malls (almost 14% of total in 2010). In sum, it went from 10.474 establishments at street level to 9.807 – a loss of 667 units.

As for the restaurant sector, it showed persistent growth, both inside and outside malls: from 3.893 establishments in 1995 to 5.650 in 2010. From 14.241 at street level to 14.994 – a gain of 753 units.

The first conclusion, though, is that between 1995 and 2010 there was a transference of activity, from streel level to malls, and a transference of importance, with the growth in restaurants amounting for the losses in retail.

Now, considering that Foods and Personal Use items amounted for the largest part of retail in 1995 (more than 40%), if Foods had displayed the same behaviour of Personal Use items (which, as said, changed from approximately 6% located in malls in 1995 to almost 28% in 2010), the effect of malls on retail at street level would have been even more impressive. One can't say that Foods served as an anchor for retail at street level, but they had a relevant part in maintaining traditional commercial activity. An unexpected contribution came from Other items: Bazars became relevant (from 69 to 311) and presented themselves as a viable, street level commercial activity (only 10 located inside malls in 2010).

A second conclusion is that Foods and Other items held a significant part in holding retail at street level. Since Restaurants and Cafes presented themselves as parts of the "mix" of street-level activity, directly related with Foods and Personal Use items (along with Repairs), it's reasonable to state that, at block level, these types amount for a significant part of the commercial diversity in Lisboa. But with the restaurant sector growing steadily, what's the risk of losing retail activity to restaurants? And at what point will it pose a threat to neighborhood liveability? With developing neighbourhoods accounting for the bigger part of positive variation in the retail sector, and this "mix" being positively correlated with population older than 65, what are, specifically, the risks for neighborhood liveability in the old parts of Lisboa?

The third conclusion is that there might be a risk for sustainable retail systems at street level, especially in the older neighbourhoods of Lisboa, where traditional street retail still persists.

Further analysis, with recent, more disaggregated data, would be important in determining the extension of the described phenomena. The availability of other types of data (e.g. space syntax or actual employment) would also help in building a more robust model, even if considering that "as far as the laws of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality" (Einstein, 1923).

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ID 1687 | DIMENSIONING OF MATRIX OF URBAN STRUCTURES COMPLEXITY – FUNCTIONAL PARADIGM

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1 INTRODUCTION

By its content, the article is an integral part of a more comprehensive research on the complexity and sustainability of urban structures and systems. It is focused on identifying the forms of activity and possible procedures of operationalisation and transformation of the urban functions acting in the everyday life of the inhabitants in the observed space.

In studying the complexity, for the purpose of this article, it was necessary to define the basic notions that are applied in the process of analysis and generating the manifest dimensions of this phenomenon. As a starting point, a precondition is set according to which the identity of the notion can be identified identically in social and technical sciences.

Accordingly, the basics are urban fabrics, generically followed by urban structures and constructs, and then finally spatial systems and configurations. In our considerations of complexity phenomenon, we use the following definitions of notions.

Urban fabrics is a set of natural and artificial elements of components in the form of built and unbuilt parts of the observed space. It covers structures with elements of substructure and suprastructure, and all forms and types of ecostructures and infrastructures that connect them functionally and spatially.

Urban structure (city) is a set of urban fabrics of the observed part of area that makes an administrative, functional and spatially connected entity.

When in the consideration of urban structure (city) the people are included, their public and private needs, which are realized in the appropriate types of functions (institutions of public and private sector) and executed by appropriate processes, urban constructs appear. Urban construct is an urban structure connected with people, functions and processes in the observed area.

Spatial system is a set of urban structures connected with the hierarchy of functions and roles in the observed area (conurbation, region).

When in the spatial system the processes are included, which are generated by the people with their public and private needs realized in the appropriate functions (public and private sector institutions), then configurations arise.

Therefore, in our considerations, the urban structure is not only seen as a group of interconnected components of settlements made up of artificial fabrics and natural elements, but as urban constructs created by the complex acting of economic, social, functional and spatial relations. These connections arise as a result of the needs realized inside and outside the components of the observed space by urban fabrics.

The urban system is not only considered as a sum of inhabited spaces of different sizes and characteristics (Vresk, 1984; Grgurević, 1990), but as a spatial configuration. The realisation of these connections, relations and features is observed vertically, hierarchically - according to the rule of the "size order" of the inhabited area, horizontally - towards distance between them, and co-evolutionally towards the functional relations and transformations that urban systems turn into a spatial configuration.

The functions analysis in urban planning and spatial planning refer to their dual role role in space. Once is a facility of the components with features of attractors in the space (relational paradigm), and in next case it is a subject of complexity research within the components of urban structure or systems by the function flow diagram.

As an attractor, the function affects the size, intensity and frequency of relations between spatial entities, and as a paradigm, the function is interpreted by algorithms that simulate activities in the process of realisation of functions in the observed area. The function paradigm has the role to link the parameters obtained at the level of the relational paradigm and the processes being explored at the next level of research.

The purpose of this paper is to clarify the role of urban functions in the observed space and to point out the contribution of the functional paradigm to the possibility of operationalisation of complexity and sustainability of urban constructs and spatial configurations.

For the relational paradigm of complexity, a thesis was set up that in the geographic administrative area, included in the research of urban structure and system, there are not two inhabited spaces of the same characteristics. Therefore, the relation matrix must give a greater number of combinations without repeating than the observed area has functionally and administratively organized independent populated places at regional level.

For the functional paradigm, the axioms were set, that the function paradigm of complexity at a higher level - region depends on:

- sum of the categories of settlements hierarchy located in the observed space,
- the category in which the considered inhabited area belongs according to the concept of nodality and centrality,
- the number of functions that take place in the inhabited area for their own needs and the needs of people in other inhabited environments,
- the number of inhabited places of lower rank in the surroundings of the observed inhabited space that supports functionally and institutionally, defining the gravitational space and the intensity degree,
- distribution of functions in a space that plays a significant role in analysing and generating processes in the observed space.

2 STARTING POINTS FOR THE ANALYSIS OF FUNCTIONAL PARADIGM

The assumption is that the purpose and aim of this work can be achieved by the application of different scientific (logical and mathematical) methods.

From the previous research, the purposefulness of the application of the inductive method in the generative procedure has been confirmed, and for the analytical processes, it is appropriate to use logical deduction. By one component it expresses axioms that can be used to calculate the scalar value of the functional paradigm, and the other component (control) determines the way in which the deduction is applied in the axioms. Because of this, any changes in the axioms are followed by well-defined changes in the algorithm.

The implementation of the research in this paper should contribute to the illumination of the complexity of the different origins of causes and consequences resulted from the activities in the observed space for the purpose of defining the condition in this area. Operationalisation of functions can be accomplished by linking and deducing to a common denominator of the influence of economic and social connections and relations that realize in the space through the artificial and natural structures of the observed space.

For the purpose of this research, the following axioms were set:

- all components of particular urban structures and systems do not have the same capacities to meet the living and other functions in their immediate environment;
- all components of structures and systems do not have the same functional facilities for everyday and occasional needs of their inhabitants;
- The diversity of social, cultural, sports, administrative and other functions of inhabited areas depend on their size / population and the structure disposition of inhabited places in the observed space.

In the elaboration of the relational paradigm, there is a common statement for the relational, functional and structural (organisational) paradigm, but it should be repeated here: Criteria, indicators and benchmarks of complexity and sustainability in urban planning and spatial planning are determinable. For their determination, in the analysis it is necessary to include a larger number of variables and relations depending on the size and components of complex urban structures and systems (Petrović et al., 2014).

3 ANALYSIS OF ELEMENTS OF FUNCTIONAL PARADIGM

Functional paradigm elements are the parameters obtained by parameterisation of component relations and algorithms compiled of flow diagram of components functions of urban structures and systems. The relational paradigm shows the size of the interaction between components of urban structures and systems for a particular observed function.

In order to carry out the operationalisation of functions of urban structures and systems, their algorithmisation is carried out by using the results of relations parametrisation of urban structures and systems. By this process, conditions for quantitative and qualitative operationalisation of functions are achieved.

In order to carry out algorithmisation of urban functions, their features are considered to establish an analogy between the occurrence, by which some function or phenomenon is manifested in the space, and the flow diagram of the observed function in the algorithmisation process.

3.1 CHARACTERISTICS OF URBAN STRUCTURES AND SYSTEMS FUNCTIONS

The functional paradigm expresses the forms in which the parameters of each observed functions are manifested, as well as their effects in the observed space. In simple urban systems, the functions can be manifested autonomously, and can also act interactively in the space. In both cases, the effects of functions are summative.

In interactive functions, interaction mechanisms can be conductional and correlational. In the first case, a co-occurrence event causes linear changes in execution of the function. In the second case, the change (covariance) that is the result of joint action should be observed with more attention because it produces additional effects that are a consequence of joint action, but are not interactive actions. Relating to time the functions from the aspect of duration can be discrete and continuous, and from the aspect of metric, they can be deterministic and unpredictable (random).

Functional paradigm shows the operator actions and effects on changes in the input sizes of some functions processed by operand of the observed component of the urban structure or system.

3.2 FLOW DIAGRAM OF THE URBAN FUNCTIONS SIMULATION

The flow diagram of the simulation of urban functions should encompass as many information as possible about the way of realisation of the function or process. But at the same time for the purpose of operationalisation, it is necessary to reduce it to a limited number of parameters by the "reduction of information".

Through the abstraction, diagram should visualize the manifest dimension of the observed phenomenon, and by graphic interpretation, it should, as much is possible, simulate the dynamism of function relations in the space. Although the function flow diagrams are interpreted in reduced form, they can in its essence simulate complex relations. The most important is to set up correctly and exploit the operational nature of a diagram that simulates the material reality of possible events expressed by scalars.

3.3 ALGORITHM CHARACTERISTICS OF THE URBAN FUNCTION SIMULATION

In the process of functions algorithmisation, urban fabrics are treated as function operands in the observed component of structure or systems. Operands are manageable values and they have inert characteristics. In the functions processing, users and service providers are treated as operators of functions. Function operators perform the transmission or transformation of input value, and may have stochastic characteristics and have changeable characteristics. These transformations, as a consequence of functions processing, may have linear or complex characteristics.

In this kind of research, the diagram has two roles: one is to edit, record, transmit and process information and another is a creative role by which model of actions and processes is abstractly generated, that are manifested in space in real physical dimensions and scales.

To make an algorithm, as a means of recording procedures for solving problems of functions operationalisation, appropriate for computer processing and simulation of urban functions, with the generally accepted algorithm characteristics (discreteness, finality, determination, and massiveness), it should also have the characteristics of sequencing, graphical interpretation and compatibility with computer software languages.

3.4 METHODS USED IN URBAN FUNCTIONS SIMULATION

Since in the research, starting from the ideation, through the definition and interpretation comes the operationalisation of the state of space - as the ultimate aim of the study of the complexity of urban constructs and spatial configurations, it is necessary to apply various methods appropriate for the multidimensionality of this phenomenon.

The simulation of the functions is performed by the methods of abstraction, analogy and reduction, and is interpreted by the function flow diagrams that show the operationalisation of the appearance (manifest dimensions) of the function using the method of algorithmisation.

Complexity, as an occurrence, is composed of latent and manifest dimensions. These characteristics of phenomenon determines on the mental level - the ontological status of the constituent elements, on the level of definition - the epistemological aspects, on the level of interpretation - the hermeneutical aspects, and on the level of operationalisation of physical - mathematical aspects in the form of quantitative and qualitative indicators (Greco & Sosa, 1999; Portugali et al., 2012; Batty, 2005, 2009;)

The abstraction method, that meets the necessary and sufficient conditions for studying the complexity of phenomena in space, is appropriate to these criteria. According to I. Kant, abstraction is preceded by reflection, and for G. W. Hegel abstraction is "placing a formal identity in which actual differences are abolished in manifolds" i.e. between latent and manifest dimensions. Traditional philosophy distinguishes three degrees of abstraction. In the first stage, the notion, as result of abstraction, is abstracted from individual sensory characteristics. In the second stage, it is abstracted from substance (mathematical terms), and in the third stage notions (result of abstraction) are abstracted from the quantity (Kutleša, 2012, p. 46). At these three levels, knowledge from metaphysics, mathematics and physics is also appropriate as a supplement to urban planning and spatial planning.

By the axiomatisation of the above statements, in the relational paradigm the method of parameterisation of relations was applied, and at this level of research of the functional paradigm of complexity, the method of analogy and algorithmisation of functions was applied. The method of analogy has consistently been applied in the process of interpretation of the flow diagram of the function of urban structures and systems according to the aforementioned their characteristics and the characteristics of the algorithm in the simulation of urban functions[1].

[1] In order to interpret different function flow diagrams by analogy method, for the purpose of this research, works of Howard (2007) and Erdi (2008) were used as a model for analogy.

4 REVIEW OF STUDY RESULTS

Realisation of urban functions in a given area may have different effects on the occurrence of events that characterize the condition in the observed area. They are represented by various types of flow diagrams of function realisation as a tool for application of functions algorithmisation in urban structures and systems.

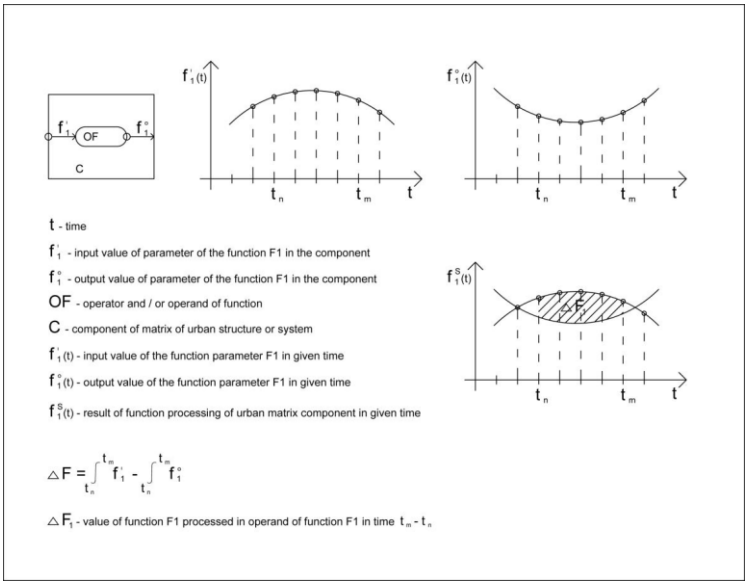

Figure 1 - Scheme of a monofunctional flow diagram of urban functions

Figure 1 shows a scheme of a monofunctional flow diagram of urban functions with arbitrary inputs and outputs, expressed in numbers that can have a positive and / or negative value on the positive part of the abscissa. These function values at this level are viewed as scalar value functions, which can happen discreetly and/or continuously.

Linear multifunctional algorithm is characterized by superposition property. The superposition of the input value of the function (cause) results in upgrading the output value of the function (consequence). This rule is valid for the input values of all components functions of urban structures and systems. From there follows a bifunctional or polyfunctional algorithm with parallel processing characteristics of two or more functions that are processed simultaneously according to the co-existence law.

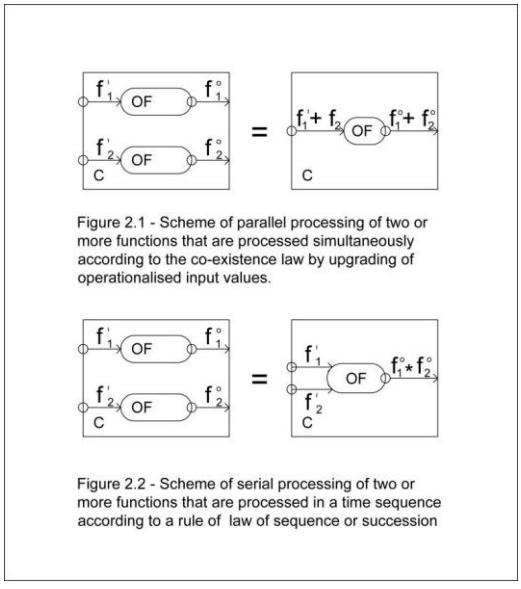

Figure 2 - Scheme of the bifunctional flow diagram of urban functions

Figure 2 shows the scheme of the bifunctional flow diagram of the urban functions in which output values are of different values depending on the subject of the recipient and the service provider of the function - function operator and the urban fabrics as the object of the function operand. They can be constant, but also variable values in space and time of activity of some urban function. A special form of multifunctional flow diagrams of functions in space is an example of serial processing of functions. It takes place in a time sequence according to the rules of law of sequence or succession.

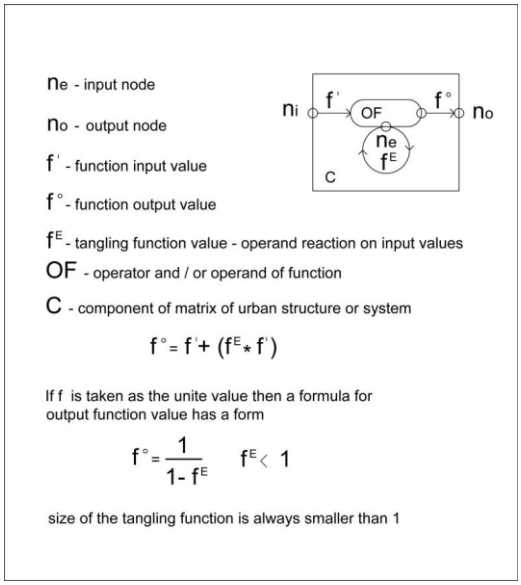

Figure 3 - Scheme of flow diagram of circular causality of urban functions

Figure 3 shows the scheme of flow diagram of circular causality or tangling of urban functions. The third form of functions processing in the components of urban structures and systems results in consequence of acting of the input value of the observed function and the addition resulting from the tangling (Howard, 2007, p 100) of the input value in the observed component. Causes of tangling can be autocorrelative characteristics of the identity of the fabrics component of urban structure or system.

Figure 4 shows the scheme of flow diagram of the reverse effect of urban function. In the flow diagram of reverse effect of the function processing there is not a clear border of the cause and effect because output influences the input. This reverse mechanism[1] affects the dynamics of functions operationalisation, because it can have a positive and negative sign. The negative reverse effect reduces the difference between input and output values and thus stabilizes the effects of function processing.

A positive reverse effect increases the difference from the initial state and thus destabilizes the effects of function processing. (Erdi, 2008, p. 8)

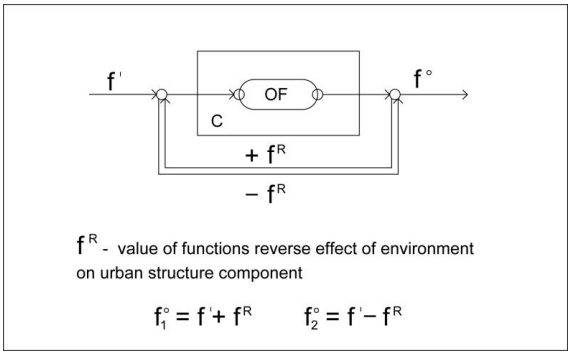

Figure 4 - Scheme of flow diagram of the reverse effect of urban functions

[1] Natural and social systems abound with reverse mechanisms, so there are inevitable in complexity studying.

The output vector from the linear system is obtained by tangling the input vector with the response vector of component to the effects of the input vector. These effects can be precisely determined in linear systems, and in complex systems, they are determined by the probability account, based on the previous state of the system.

The total effect of tangling can be defined either by integral tangling or summative tangling. In this process, the tangling may occur during function processing so that two (or more) output values of functions processing produce a third (or new) value under the influence of the function operator within the component of the urban structure or system. The feedback effect affects the properties of the system so that in the operationalisation of n components of the system, the system generates n + m output components. (M> 0). (Erdi, 2008)

Both reverse connections (the negative - dumping and the positive – amplifying) are always found in complex systems. The effect of the behaviour of an element of a structure or system is such that it always changes itself under the influence of the environment. Unlike the linear system where the superposition principle is applicable, complex systems cannot be expressed as the sum of the behaviour of its parts, because even the components of complex systems can be complex systems.

In linear systems, the effect is always directly proportional to the cause, and in complex systems it can be significantly larger, proportional or none. If the growth of the effect manifests exponentially, and with a small increase of the exponent in the finite time, an infinite increase in appearance may occur.

From above mentioned, it can be concluded about the possibilities of operationalisation of the parallel, serial and feedback connections of the component functions of a structure or system, and thus it is feasible for the complex multifunctional system through the reduction process of flow diagram of the function. Reduction is feasible in many ways, and the same methods of operationalisation can be applied at the level of operationalisation of the functional matrix of complexity.

5 CONCLUSIONS

The article identifies the basic notions used in the process of analysing and generating the manifest dimensions of the complexity of urban structures and systems. The dual role of function and the axioms was determined; the possibility of operationalizing the functions of urban structures and systems by their algorithmisation using relation parametrisation is pointed out; the basic starting points of the functional paradigm of urban structures and systems, their components and their interconnectedness, the dynamics of realisation and the possibility of operationalizing the functions of the urban matrix components are presented.

The analysis and generation of components functions of urban structures and systems, their algorithmisation and conducted analogy as well as the simulation of the movement of urban functions in the flow diagram pointed out the role of urban functions in the observed space and the contribution of the functional paradigm to the possibility of operationalisation of complexity and sustainability of urban constructions and spatial configurations.

Urban fabrics as functions operands in the component of structure or system are manageable in size and have inert characteristics. Functions operators (users and service providers, natural conditions and data) perform transmission or transformation of input value and may have stochastic and variable characteristics. These transformations can be linear or complex, which can be concluded from the presented schemes of functions flow diagrams.

If all components of urban structures and systems would be processed just by parallel and serial algorithmisation processes (regardless of their number) all these algorithms could be reduce to one algorithm by sequential addition for parallel and consecutive tangling of output values for serial algorithms of function.

In the process of algorithmisation of functions, beside the parallel connection of the functions operationalisation it is possible to connect them in series. In this case, the output value of

the first function is the input value of the second function in the function flow diagram, and the result of the operationalisation of these two functions is not the sum but the product of multiplication of the two outputs of the function tangling in the observed space.

The basic characteristic of time-invariant linear construct is the transparency of the function process operator and its influence on the output value of a particular function from the observed component of the urban structure or system.

It is important to emphasize that the operator of the tangling of components function of urban structures or systems is commutative, associative and distributive, and the operand is changeable by transforming and intervening into the components constituent elements of the urban structure or system. Since urban fabrics at the observed moment are fixed and invariable in size, limited capacity, linearity manifests itself to a certain load of fabrics by processing all functions at the observed moment.

The phase of their linear characteristics finishes by optimal load of the functional capacity of the components constituent elements of the urban structure and system in the processing of functions. Increasing the functional load of the constituent elements of the urban structures and system components causes the appearance of tangling in the functions processing.

Therewith starts the phase of transformation of urban structures and systems into complex constructs and configurations. Although constructs and configurations have complexity characteristics, their features have not yet ceased to be deterministic. After that limit, by further increasing the function load, the results of the functions processing assume the characteristics of complexity. This firstly results in the variability of the effects of functions processing, and then also in the variability of time needed for function processing. Therewith a possible border between the linearity and complexity of the characteristics of the components of the urban structures and systems caused by the activities of the function operator and the capacity of the operand at the observed moment and time flow, is determined.

Finally, it can be concluded that based on conducted mathematical induction and synthesis, the features of function flow diagram shown in Figures 1 to 4, and the axioms as well as the above conclusions the characteristics of a complex functional paradigm can be defined. The complex functional paradigm has characteristics of parallel, serial, circular and backward processing of functions in discrete and continuous form. This paradigm fully reflects the algorithmisation of the functions of complex urban constructs and configurations.

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ID 1727 | EMBRACING UNCERTAINTY WITHOUT ABANDONING PLANNING

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ABSTRACT: The uncertainties that are part of the development trajectories of cities challenge spatial planners in designing productive interventions. This paper explores how complexity theory can support planners in dealing with these uncertainties intelligently. It presents a dynamic, time-sensitive understanding of spatial transformations that helps to clarify the interconnected and changeable nature of the underlying processes. The paper continues by proposing an adaptive planning approach that strengthens the responsiveness of urban areas to both expected and unexpected changes. The argument is made that adaptive planning first and foremost implies a focus on influencing and creating conditions for development, followed by attention to content and process. Based on an imaginary case of inner-city transformation, the paper distinguishes key conditions for guiding spatiofunctional configurations and supporting capacity building of local actor coalitions.

KEYWORDS: uncertainty, complexity, adaptive capacity, conditions, urban transformation, responsiveness

1 HOW PLANNERS ARE CHALLENGED BY UNCERTAINTIES[1]

The certainties we humans so appreciate appear to be illusions more often than we would like. Transformations induced by climate change, technological innovation and social upheavals are well-known drivers of the wicked problems and deep uncertainties we are confronted with (Haasnoot et al., 2012; Van Bueren et al., 2003; Rittel & Webber, 1973). They affect society as a whole and, in particular, policy and decision-makers when designing interventions to guide future developments. Uncertainties are not limited to these examples. Unexpected natural, political and economic events, coincidental confluences of gradual change processes feeding larger transformations and unforeseen societal responses to policy programmes illustrate how the reproduction of uncertainties occurs in many domains and at multiple levels of scale, driving towards a future which is difficult if not impossible to predict (e.g. Pawson et al., 2011; Scheffer, 2009; Walker et al., 2003). People address such uncertainties heterogeneously (Chow & Sarin, 2002). Moreover, social views on which possible future should be aimed for are often unstable (Van Buenen et al., 2003). Accordingly, in trying to engage with the positive and mitigate as much as possible the negative, policy and decisionmakers are continuously challenged by the uncertain conditions in which they operate (Duit &Galaz, 2008; Teisman, 2008).

Spatial planners in urban development processes also wrestle with how to deal with uncertainties in their daily practices. Urban areas, including cities and neighbourhoods, are dynamic, changeable environments that sometimes follow unexpected routes (Batty, 2013). Meanwhile, planners aim to improve the sustainability and liveability of these places through rationally designed interventions. As early as 1969, Friend and Jessop pointed out a set of uncertainties defying planners: regarding knowledge about present and future environments, regarding actor intentions, and regarding value judgement on planning interventions (see also Christensen, 1985). In today's highly connected and information-driven world, the omnipresence and potential impact of uncertainties receive increasing attention in literature on planning (e.g. Albrechts, 2010; Bertonili, 2010; De Roo & Rauws, 2012; Salet et al., 2013; Van Woerkum et al., 2011). The limitations of traditional planning strategies and instruments in dealing with unforeseen developments are also exposed, as these are often based on prediction, stability and risk reduction (e.g. Abbott, 2005; Gunn & Hillier, 2014; Rauws et al. 2014). Therefore, the question that becomes increasingly urgent is how planners can strengthen the responsiveness of urban areas to both foreseen and

[1] This paper includes sections from the author's PhD thesis 'Why planning needs complexity', freely available at: 10.17418/PHD.2015.9789036778

unforeseen change, while at the same time making societally preferred development trajectories more likely.

This paper aims to contribute to this quest by exploring an adaptive planning approach. The approach is based on the idea that planning operates in a world of 'becoming', in which processes of evolution and transformation are ever-present (Tsoukas & Chia, 2002; Byrne, 2005). It aims to strengthen the responsiveness of urban areas to a variety of possible futures by setting conditions for development. As such, it resonates with the debate on strategic spatial planning. Following Albrechts and Balducci, strategic spatial planning offers complementary means to operate in today's complex and dynamic societies, as traditional planning instruments are merely designed for situations of stability (Albrechts, 2010; Albrechts & Balducci 2013). It is presented as an inclusive, action-oriented method for transformative practices that open up new routes of development, including analytical and normative dimensions (Albrechts, 2010). Some of its key elements are: identifying placespecific problems and opportunities in a global context; mapping possibility spaces by analysing spatio-temporal conditions and constraints; creating new arenas for policy articulation by identifying and/or mobilizing actor coalitions across scales and sectors; and shaping places by selective actions on strategic issues that are embedded in and justified by a long-term vision.

The adaptive approach proposed here builds on the strategic spatial planning agenda and offers three main contributions. Starting from a complexity perspective, it exposes some of the mechanisms underlying a world of becoming, such as non-linearity, self-organization and fundamental uncertainty. An adaptive planning approach also stresses the need for places to have sufficient capacity to cope, respond and adapt to change in order to secure their vitality. This is to say that strengthening adaptive capacity itself becomes a main objective of planning interventions. Finally, adaptive planning introduces an additional level of intervention. While the strategic spatial planning repertoire is mainly oriented at fostering desired change given certain conditions, the adaptive planning approach targets exactly these conditions as object of intervention. Put differently, adaptive planning is about influencing the possibility spaces for urban transformation with the aim to support an area in keeping its fit with the dynamic environment. Innovation, the central theme of this special issue, is considered an essential mechanism in this process.

The structure of the paper is as follows. Section 2 introduces a complexity perspective to rethink the nature and character of contemporary urban development processes. Complexity theory helps to clarify the interconnected and changeable nature of the processes underlying urban transformation. Section 3 explores the potential of a condition-based, adaptive planning approach in guiding such transformations. Section 4 discusses what these conditions may comprise. These are illustrated by an imaginary case of an inner-city transformation in Section 5. The paper concludes with a reflection on the role of public planners and an agenda for future research.

2 A COMPLEXITY PERSPECTIVE ON URBAN DYNAMICS

Supporting planners in developing an enhanced understanding of urban dynamics and related uncertainties, several scholars find inspiration in the world of complexity (e.g. Gerrits, 2008; De Roo et al., 2012; Portugali, 2011; Batty, 2013; Loepfe, 2014). Complexity theory is concerned with the evolution of phenomena, rejecting the Newtonian conception of the world based on reductionism, determinism and predictability (Cilliers, 1998; Wolfram, 2002; Heylighen, 2008). These phenomena are often defined as systems or networks of which the components 'are to some degree independent, and thus autonomous in their behaviour, while undergoing various direct and indirect interactions' (Heylighen et al., 2007: 125). Wellknown examples are insect colonies (Bonabeau et al., 1997) and the World Wide Web (Scharnhorst, 2003). Complex phenomena are dynamic, nonlinear – a small change can have a big effect and vice versa – and include interdependencies across various aggregation levels. This implies that they evolve without central coordination and are very difficult to predict and to fully manage.

A key characteristic of these so-called 'complex adaptive systems' (CAS) is their continual evolution towards an optimal 'fit' with their dynamic environment. They are open systems, exchanging information and energy with their environment. For this reason, they are sensitive to changes in this environment, and respond by adapting their configuration. Cities also express this behaviour, responding to various contextual changes, such as demographic pressures, economic trends, and technological innovations (Portugali, 2006). Others argue that this is also the case for other urban units such as neighbourhoods

(Wagenaar, 2007) and metropolitan regions (Innes et al., 2010), in more or less similar ways. As such, portraying urban areas as CAS invites planners to consider ongoing adjustments of an area's configuration as both a source of and a coping strategy to address uncertainties in its development trajectory.

The adaptive behaviour of cities cannot be reduced to a set of clearly distinguishable causeeffect relations when following a complexity perspective. Instead, processes of adjustments are considered to emerge from the interaction between multiple drivers for change at various levels. We already discussed the influence of contextual changes, but cities are assumed to adjust, transform and innovate from within. These local changes include, for example, initiatives by citizens, entrepreneurs, local authorities, and coalitions between these three. One could think of redevelopment projects, grassroots initiatives or start-ups. Unsurprisingly, both contextual changes and local initiatives trigger interventions at system level by city planning authorities. Changes are stimulated, linked, regulated, mitigated, etc., depending on how they relate to the general ambitions of the city, the policies frameworks and dominant power structures. In turn, interventions at system level influence again the impact of contextual trends and the opportunities for local initiatives. Hence, casting cities as CAS emphasises the interrelatedness of changes on various levels, of which some are planned – being initiated by public planners – and others are unplanned. As a consequence, the possibilities for planners to predict and control a city's development trajectory are believed to be limited. Developments emerge partly 'autonomously', beyond the scope of planners, and the way a city's trajectory unfolds is considered to be time-specific and place-specific.

A key concept of complexity theory that helps in understanding the potentially autonomous character of transformations is self-organization. Processes of self-organization can result in a structural change of a system, such as a neighbourhood, emerging out of a number of local initiatives without these initiatives being centrally coordinated (Rauws, 2016). An example could be the transformation of a mixed residential neighbourhood into a 'student town', changing both its function and structure. Triggered, for example, by a growing student population in a city, individual homeowners can decide to rent rooms to students. Meanwhile, private investors might decide to acquire single-family homes and transform them into dormitories. Such uncoordinated, relatively independent actions can, over time, result in changing spatial patterns on a wider scale; shop-owners adjust their range of products and opening hours to meet the demands of the students, bars are opened, and parking lots are transformed in open-air hang-outs and bike sheds. The result is a full transformation of the role and structure of the neighbourhood, embracing its new identity as 'student town'.

Planning is not necessarily absent in such transformations as homeowners and shopkeepers often have to meet certain regulations. However, the transformation at the neighbourhood level is not centrally coordinated nor designed in advance. Instead, it emerges spontaneously and the patterns it gives rise to at system level are unpredictable in the sense that they could not be deduced from the sum of all individual actions.

The (partly) spontaneous character of some urban transformations challenges planners to rethink their strategies in guiding these transformations. From this section we can learn that there are at least three reasons why a complexity perspective can contribute to such a rethinking process:

- A complexity perspective draws our attention to the multiple, interdependent drivers for change on various levels that shape development trajectories. Some of these drivers are the result of planning interventions, while others emerge beyond the range of influence of planners. As the way these drivers feed into each other and in interact amplifies some change processes and dampen others cannot be controlled, uncertainties are partly fundamental. It is important that planners be able to deal with both foreseen and unforeseen change.
- It challenges planners to consider the transformation of urban configurations as ongoing processes. Taking a complexity perspective, urban areas are seen as places that are continuously shaped and reshaped by internal and external forces, always on their way to become. To be able to fully take into account these dynamics in planning interventions, planners should develop a situational understanding of planning challenges. This includes the idea that what should be aimed for and with whom to reach consensus depends on the when and where of a planning issue.
- As change is believed to be continuous, multi-level and situation-specific, a complexity perspective urges planners to focus their efforts on strengthening the adaptive capacity of cities

and neighbourhoods. This would enable urban areas to function well under different circumstances, being responsive to both foreseen and unforeseen opportunities and threats.

3 TOWARDS AN ADAPTIVE APPROACH FOR GUIDING URBAN TRANSFORMATIONS

If we indeed embrace the idea that planners deal with processes of becoming, then how can planning contribute to responsive cities? In other words, how can planners strengthen an area's capacity to react, incorporate and adapt to change, and stimulate those futures that are considered to be more sustainable and liveable? Aiming to do so, the logic of designing an 'optimal' plan and endeavouring to control urban development towards the achievement of this predefined future should be considered undesirable. After all, this would bring us back to an understanding of cities as stable entities in which transformations can be shaped by a series of successive events that can be devised in advance. Alternatively, plans and strategies which allow for continual reflection and adaptation are required in order to support a range of possible emerging trajectories. They should be able to 'seize' opportunities for socially preferred development directions and prevent problematic issues from aggravating (see also Lessard, 1998; Van Assche & Verschraegen, 2008; Van Woerkum et al., 2011). We thus take the position that the focus of planning strategies on reducing or avoiding uncertainties needs to be redirected towards accepting these uncertainties and exploit the opportunities they give rise to.

This poses a series of challenges to planners. For example, how to be ready to exploit opportunities that are yet unknown? How can planners connect their policies and interventions to the on-going interactions at various levels of the urban system concerned? And how to design plans and strategies that effectively support a range of possible future development trajectories? These are complicated challenges, and we certainly do not aim to present an overarching new approach in which all these challenges are tackled. However, in making cities more responsive to change, we argue that first and crucial step can be taken by redirecting the focus of planning to influencing and generating conditions under which development trajectories unfold. We call this an adaptive approach to planning (see also Rauws & De Roo, 2016; Yamu et al., 2016).

A condition-based, adaptive planning approach is about offering a general framework for urban transformation without defining a particular future spatio-functional configuration or configuration of actor relations. The argument is that influencing the conditions under which urban areas transform, rather than defining a specifically desired configuration, generates possibility spaces that allow an area to respond to and profit from a range of possible directions of development. It opens up development frameworks for the 'unplanned', spontaneous ways in which cities and neighbourhoods adjust to and co-evolve with changes at various levels of society (e.g. technological innovations, grassroots movements or demographic trends). We argue that an adaptive planning approach enables planners to strengthen the responsiveness of an area to foreseen and unforeseen change, while securing important societal values.

This adaptive approach is not meant to replace more traditional planning approaches. Instead it can be considered as a valuable addition to the existing repertoire of planning approaches, especially for planning interventions in dynamic urban areas and with a longer timeframe. In line with our argument that planning problems require a situational understanding, the planning approach or mix of approaches that fits best also varies over time and space (Alexander, 2012; De Roo, 2012). Situations can, for example, be differentiated on the volatility of their context, the urgency to act or the level of diversity in the ambitions, interests and commitment of actors involved. An adaptive planning approach is in particular suitable for issues situated in highly dynamic context with variable and overlapping actor coalitions, while for instance an instrumental approach can work well in situations with a high level of urgency, a relatively stable context and rather crystallised networks of actor relations.

Positioning adaptive planning within a repertoire of planning approaches, we touch upon adaptive capacity at meta-level, namely in the governance landscape itself. A further exploration of such a meta-framework is beyond the scope of this article, but more can be found in De Roo (2012) and Zuidema (2014). In the remainder of this contribution, we concentrate on what kind of conditions planners need to focus on when guiding urban developments in an adaptive way, and reflect on the role(s) public planners can have in these development processes.

4 IDENTIFYING CONDITIONS FOR ADAPTIVE URBAN ENVIRONMENTS

The adaptive capacity of urban developments is fostered and constrained by a variety of conditions. These conditions include governmental rules and regulations, the qualities of the existing urban fabric, motivation and capacities of involved actors, economic climate and technological possibilities, political aims and societal desires, and many more. All are conditional to the kind of urban developments that have potential in a particular situation. Unsurprisingly, only a part of these conditions can be influenced or generated by planners. The adaptive planning approach that is proposed here focuses on two categories of conditions on which planners can have a substantial influence: conditions on spatio-functional configurations and conditions for the capacity building of local actor coalitions. The former concerns formal rules and regulations that have to be met when realising an urban development project, such as accessibility to public space or the spatial relations between built structures. They influence on the spatial quality of projects as well as the impact of these projects on the wider urban fabric. We will argue that, when formulated in a particular manner, they can also help in keeping an area open for a range of potential trajectories. The latter includes conditions that increase the possibilities for a diverse range of actor coalitions, traditional and innovative, to establish themselves and contribute to urban transformations. One can think of measures that foster information exchange or increase connectivity between actors. Local coalitions are important if planners want to embrace self-organization mechanisms in urban development and foster a continuous exploration of alternatives directions of development in response to ongoing dynamics.

4.1 CONDITIONS FOR GUIDING SPATIO-FUNCTIONAL TRANSFORMATIONS

In this section, we will explore how generating conditions on spatio-functional configurations can be part of an adaptive planning approach. We start by analysing the contributions of Stefano Moroni, Nurit Alfasi & Juval Portugali, and a paper by the author himself coauthored with Matthew Cook & Terry Van Dijk. These three studies were selected as they are among the few that explicitly define conditions for urban development in the limelight of complexity thinking. At an conceptual level, Moroni (2015) explores regulatory instruments that are less reliant on explanation and prediction. Alfasi & Portugali (2007) discuss an alternative for the Israeli planning system by incorporating the idea of the self-planned city.

Finally, Rauws et al. (2014) analyse how Dutch urban development plans can become more responsive to change. A review of their communalities and their differences (Table 1) allows us to construct a preliminary foundation for an adaptive planning approach.

All three approaches share the assumption that urban development is a continual process rather than a sequential one, as in none of them end-states are defined. They also have in common that the complexity and the limited predictability of urban development processes are presented as aspects that should simply be accepted by planners. As such, the conditions introduced in the articles are not prescriptive but mainly have a relational character, offering developmental frameworks that can guide a wide range of possible future development trajectories. Based on the three articles, we analyse the types of conditions that can be distinguished.

From Moroni's nomocratic planning approach, the most generic and liberal of the three, we can derive the importance of securing the quality of life in areas under transformation. Operating in dynamic situations that sometimes follow unexpected trajectories, Moroni argues that planners are responsible for setting conditions that reduce possible negative effects and leave all other possible outcomes open. He refers to these conditions as 'framework instruments' merely meant 'to prohibit individuals from interfering with the private domain of other individuals rather than imposing some active duty or action' (2015: 257) (e.g. avoid producing externalities of type A, B, and C to neighbouring plots). As such, flexibility in urban development process is provided while undesired consequences are mitigated. This is not to say that prescriptive tools, which he calls patterning-instruments, should be fully abandoned. According to Moroni 'framework instruments must be used to regulate private activities, patterning instruments to guide public actions' (2015: 262). All in all, the first type of conditions that we distinguish for an adaptive planning approach is about securing the quality of life under a variety of potential development trajectories.

Introducing urban codes for the 'self-planned city', Alfasi & Portugali also look for ways to increase the flexibility in urban development processes. With their codes on physical qualities (e.g. land coverage),

design (e.g. material), and usage qualities (e.g. accessibility), amongst others, they propose to guide urban change regardless of specific plans. With these codes they aim to increase opportunities for more incremental urban development. However, they add the importance of context-sensitivity in the application of these codes. While Moroni argues that conditions should be as uniform as possible, Alfasi & Portugali introduce the idea of the planning judge. It allows for a more situation-specific guidance of urban areas in transformation, as these judges decide, based on generic-relational rules, whether developments are appropriate in the particular context.

We follow Alfasi & Portugali in their call for context-sensitive flexibility. Some potential positive or negative development opportunities in the short-term are closely related to the particular situation in the 'here and now'. Conditions tailored to this situation may therefore more accurately trigger or mitigate these development opportunities. Of course, the tailoring of conditions for development can limit the adaptive capacity of an area in the long-term as the virtual and actual potentials of situations yet to come are difficult to identify. However, in line with Alexander (2012), we argue that spatially and locally qualified conditions can still have general-relational character. For example, in an area with a growing local economy due to some attractive historical landmarks for tourists, conditions can be tailored in order to utilise the economic and place-making potentials of these landmarks. Meanwhile, these conditions can still be formulated in such a way that they can productively guide a range of potential development trajectories. In this particular situation, a condition for development can, for instance, be that new projects have to contribute to the identity the landmarks provide to the area and that the sightlines to these landmarks have to be respected. This way, the unique potentials of an area are acknowledged and future development trajectories are left open a much as possible as well. In sum, the second type of conditions for our adaptive planning approach is about generating context-sensitive flexibility in the pace and direction of development.

In earlier work, we added a third dimension to the debate by arguing that adaptive planning is as much about triggering societally preferred development directions as about strengthening the responsiveness of urban areas to change (Rauws et al., 2014). The proposal is to combine the implementation of conditions with visionary elements of planning that create a sense of urgency among stakeholders, trigger new initiatives and legitimise public investments. As such, societal ideals can be integrated in an adaptive development framework.

Advancing the argument further, we embrace the idea that adaptive planning includes a normative dimension. In any other way, adaptive planning would be limited to triggering a kind of social Darwinism; strengthening the self-reliance of urban systems to 'survive' in dynamic environments (see also Davoudi, 2012). Setting conditions cannot and should not be done in isolation from societal values, norms and agreements (including political agreements), for example on poverty reduction or protection of vulnerable ecosystems. Collective ambitions on creating a better future – one which is, for instance, believed to more socially just, economical viable or climate change proof – should also be part of planning frameworks (Rauws & De Roo, 2016). However, a risk of looking ahead is that the produced images and persuasive stories on potential futures are again translated into plans that project a particular future urban configuration. This would undermine the openness of actors to alternative, nonenvisioned trajectories of development. As an alternative, we suggest integrating societal preferences regarding future trajectories in the defined conditions for development. For example, if a city aims to reduce its impact on the environment, energy neutrality can be conditional for new developments or transformation projects. Translating societal preferences into such a qualitatively formulated condition instead of detailed quantitative norms, improves the area's responsiveness to changing demand and unexpected events as well as to unforeseen innovations. In the case of energy-neutral building construction, the latter can, for example, include a new solar energy technique. Hence, the third type of conditions we identify is about stimulating the emergence of societally desired development trajectories.

To conclude, discussing the selected works helped us formulate three types of conditions that we argue to be key for guiding urban transformation in an adaptive way:

- Securing the quality of life under a variety of potential development trajectories
- Generating context-sensitive flexibility in the pace and direction of development
- Stimulating the emergence of societally-desired development trajectories

In combination, these conditions can strengthen the adaptability of an urban area to a variety of possible future spatio-functional configurations, while offering opportunities to foster the emergence of those development trajectories that are preferred over others.

In concluding this section we briefly discuss how conditions on spatio-functional configurations can be established and applied. Who defines these conditions? Is there a hierarchy among them? And how can the 'fit' of a proposed development be evaluated? As the types of conditions that have been identified closely relate to the central values, ideals and ambitions of communities (defined in the widest sense; citizens, entrepreneurs, policy makers, decision makers, etc,), we argue that defining these conditions should be embedded in an open and democratic process involving a diversity of actors. While we acknowledge the extreme difficulty of undertaking such a process (Brand & Gaffikin, 2007), we also believe it is crucial step in establishing a development framework that is inclusive and cross-sectoral, and that receives public support.

We distinguish two aspects that can help in the operationalisation of this process. First, differentiating the degree of generality in the formulation of conditions, and in those who decided on them, based on the spatial scale that is addressed. Conditions that apply to a city as whole can and should be formulated in a more generic way. They can, after being explored and discussed publicly, be determined by representatives of stakeholder groups, following the principles of a representative democracy. Building on Marshall (2009), we suggest that moving towards the more local scale of, for instance, a neighbourhood, communities can decide to further tailor some of the conditions that were established at a higher scale, or set additional ones. This allows them to address the place-specific qualities, problems and opportunities they perceive. The smaller the geographical unit, the more representative democracy principles can be replaced by those of participatory democracy, contributing to a sense of ownership of the process and the place, and unlocking the tacit knowledge of its everyday users. At all scales, the three types of spatio-functional conditions are key, but conditions that are meant to secure the quality of life are often rather universal while those related to generating context-sensitive flexibility and stimulating desired directions of development can expected to be more place-specific. In sum, the proposed multi-stage way to formulate and decide on conditions for development can help in finding a workable balance between the generic and the specific.

The second aspect is about the enforcement of conditions in urban projects. In general, we consider most systems of building permits and development approval that have been developed for traditional land-use planning also applicable to the adaptive planning framework proposed here. A pre-condition for the successful functioning of such enforcement systems is that conditions are formulated and explained in clear and unambiguous ways. For instance by using images, infographics and digital planning-support tools instead of guidelines using technical jargon. However, how to proceed when the open and partly qualitatively-defined conditions result in confusion, or even a dispute between the project proposers and those evaluating its permissibility? For these situations, the proposal by Alfasi & Portugali (2007) to establish some sort of planning judge can offer a solution. In our view, such a judgement can be given by a committee of independent experts, for example consisting of public planners and urban designers from another city. They can weigh the arguments of both parties and decide on which interpretation of the conditions is most appropriated given the situation at stake, and considering the original intentions of the defined conditions. Setting up such an evaluation system offers a way to work with the complexities of urban transformation instead trying to reduce these complexities.

4.2 CONDITIONS FOR CAPACITY BUILDING OF LOCAL COALITIONS

Strengthening the responsiveness of urban areas to change requires more than opening up development frameworks for a variety of possible spatio-functional configurations. The generated possibility spaces also have to be utilised in order to indeed improve an area's fit with its dynamic environment. Therefore, planners have to open up their practices for selforganisation mechanisms in urban development (Boonstra, 2015). As self-organisation processes are unpredictable and not guided by collective intent, planners have to reach out to the diverse range of local actor coalitions which all take part in reshaping the urban fabric.

These coalitions emerge from the temporary, changing and multiple interactions in cities, in which public planners are not necessarily leading. Nevertheless, we argue that enabling these coalitions is crucial in supporting an area's capacity to adapt to changing circumstances. Property owners, citizens, and

entrepreneurs have often valuable (tacit) knowledge on how a place functions and not seldom initiate innovations in response to a shifting context. In other words, contributing to self-organisation mechanisms, these coalitions not only optimise existing urban configurations, but also generate novel ways to use, develop and brand urban areas.

We suggest that planners can support the involvement of actor coalitions in urban development by means of capacity building. Drawing on community engagement and community initiative literature, this concerns influencing the available means, motivation, and social capital of local coalitions, processes of mobilisation, and the responsiveness of formal institutions (Lowdnes et al, 2006; Bakker et al, 2012; Denters, 2016). It is beyond the scope of this article to comprehensively discuss the enabling conditions for these five aspects. Limiting ourselves to a few examples, one can think of providing relevant data on the area and its context, improving the connectivity between actors, and offering support in making the steps from idea to implementation. But supporting the initiatives of various actor coalitions should not result in high levels of inequality and social exclusion. Particular groups may easily organise themselves to defend their interests while others may have less capacity to do so or are quietly excluded (Uitermark, 2015). Such effects might be partly mitigated by including a condition on peer learning, which stipulates that those receiving public support are required to share their knowledge and skills with other emerging coalitions. The challenge for planners is to facilitate local coalitions in developing their initiatives and as such trigger the selfinnovating and self-stabilizing capacity of urban systems, without fostering socio-spatial segregation.

5 CONDITION-BASED DEVELOPMENT: AN IMAGINARY CASE OF INNER-CITY TRANSFORMATION

Based on the types of conditions identified above, this section offers an illustration on how an adaptive planning approach might look like in practice. An imaginary inner-city transformation project is taken as example because of the high level of complexity these projects typically show. Inner-city transformation projects for instance often include fragmented ownership positions, historical functions and structures that one wants to preserve, and a broad range of directly and indirectly involved actors (Healey, 2007; Bosselman, 2012). Taking an inner-city transformation project as an example is also relevant as this kind of projects are increasingly dominant over greenfield development in most Western European cities (Thomsen, 2011). We run a thought experiment to identify what kind of conditions can guide such a transformation project and discuss to what extent these conditions contribute to the adaptive capacity of the area.

Let us assume that our imaginary project concerns a former industrial harbour site. The storyline is that the harbour has lost its functionality as a result of newer and more modern harbour areas elsewhere. Due to its location in the centre of the city, next to the historical heart and the shopping district, the area has the potential to make the transition to a multifunctional, high dense urban neighbourhood. Aiming to increase the attractiveness of the city and to renew its economic profile, the municipality is eager to develop the site. However, the context is far from stable. Next to the long-term uncertainties about how technological, ecological and demographic trends will affect the area, planners also face short-term uncertainties: the various landowners differ in their capacity and willingness to contribute to the transformation, citizens and politicians argue about which projects have priority, and due to a period of economic decline investors are hard to find. How, in such a situation, with multiple uncertainties, would an adaptive approach be of help?

Ideally, urban development projects start be considering how the project can contribute to the central values of the city (e.g. inclusiveness, economic vitality, and sustainability) and its related ambitions (e.g. poverty reduction, boosting innovative businesses or reducing the city's consumption of fossil fuels). To identify potential paths of development, influential contextual trends are identified, actor networks are mapped and distinctive qualities of the area are traced (see Boelens, 2009; Hartman et al., 2011). Traditionally, the next step would be to design an integral plan for the area for the next 10 to 20 years, including a fully developed real estate programme, an estimation of land rates, and a detailed zoning plan.

However, as an adaptive approach to planning aims to increase the responsiveness of urban systems to changing circumstances, demands, and opportunities, a different route is taken.

The starting point for development is the existing urban fabric and the actual and virtual potentials that are seen by actors involved. With actual potentials, we refer to niche developments that already take place in the area. With regard to our former harbour area this can for example include fishing boats converted into houseboats or the transformation of a former warehouse into a fish restaurant. Virtual potentials are about the opportunities, ideas and dreams actors associated with the area or specific spots within this area. For instance, realising heat exchange systems by linking the heat grid of buildings to the harbour water reservoirs, or a coalition of actors who want to turn a shipyard into a music club or theme park. The aim is not to define how these potential developments can be fit into an area's configuration that is envisioned for the longer term. Rather, the objective is to turn these potentials into a first step of an incremental development process. This process is about connecting the current dynamics of the area and its distinctive qualities with the ambitions for the long run, while securing the area's capacity to adjust its pace and direction of development over time.

5.1 SPATIO-FUNCTIONAL CONDITIONS FOR ADAPTIVE INNER-CITY TRANSFORMATION

Discussing a regulatory framework that can guide the incremental transformation of our imaginary case in an adaptive way, we apply the conditions on spatio-functional configurations introduced earlier: conditions that secure quality of life under a variety of potential development trajectories, conditions that increase the context-sensitive flexibility of the development process, and conditions that stimulate the emergence of societally desired development trajectories.

For the first category, the precautionary principle can, for example be a condition for development in relation to safety and environmental issues (Rijswick & Salet, 2012).

Additionally, conditions can be defined for the accessibility of public space, the degree of alienation between buildings, and the financial safeguarding of and spatial reservations for primary infrastructure and services. As we believe that quality of life also includes 'the right to the city' for all socio-economic classes of society, a minimum percentage of social housing per hectare can be another condition. With regard to the second category, generating contextsensitive flexibility, the redevelopment of the former harbour area can for instance be guided by a global land use plan, in which only broad categories of functions are defined. One can also think of allowing the temporary use of existing spaces or pop-up structures for creating temporary new spaces. These temporal developments can stimulate the exploration of alternative configurations, to reduce start-up costs, and to support place-making activities (Silva, 2016). Another option is the implementation of zoning-independent development rights, in which landowners can trade development rights (type of function, density and height). This allows planners to roughly set the programme for the area, without defining the urban configuration.

The third and final category includes conditions that foster the emergence of preferred developments trajectories. These preferred trajectories can be related general societal ambitions, for instance to enable the transition to climate-proof cities, or area-specific preferences, for example strengthening the water-urban interactions. Considering the ambitions for the transformation of the harbour site, a more general ambition to reduce the environmental impact of the city can be translated into the condition that new developments have to be energy-neutral. Area specific ambitions can be reflected in, for example, the condition that all buildings should have a public function on the first floor in order to stimulate that the area becomes a multifunctional extension of the centre area of the city. Another condition can be that building transformations should result in a physical orientation to the water, including a publicly accessible space between the building and the waterside.

This way, the harbour feel of the area is strengthened. In sum, the conditions included in the regulatory framework set the general boundaries for the spatio-functional configurations that may emerge over time, both with regard to quality of life standards and desired identity and qualities. At the same time, a specific configuration is not prescribed, nor is the pace of development. This allows the actors involved to respond in a flexible manner to changing demands, new opportunities or arising threats. 5.2. Enabling adaptive inner-city transformation through capacity building As argued in Section 4, an additional set of conditions is essential for an adaptive development of the harbour site. These conditions concern the capacity of local actor coalitions to contribute to urban transformations and fuel self-organization. In the context of the harbour site, self-organisation mechanisms may trigger a shift of the area's focus towards leisure development, for example. When various actor coalitions see the area as a potentially attractive place for

bars, shops and recreation activities, such as cooking workshops, an openair cinema or a waterbike rental, their initiatives can collectively result in a spontaneous transformation of the economic profile of the area towards the leisure economy.

To utilize the potential of diverse actor coalitions, conditions are required that support the emergence of surprising collaborations of, for instance, local entrepreneurs and retired fishermen, next to or partnering with traditional coalitions between project developers, municipalities and construction companies. Discussing these conditions, we limit ourselves to the three examples introduced in Section 4: improving the availability of relevant information on the area and its context, fostering the step from idea to realisation, and supporting the connectivity between actors.

The first condition can include the provision of open source data on the history of the harbour area, trend reports on demographics, technological developments and economic pressures on various scales, or an interactive digital map showing the initiatives that have already been launched. This enables a wider range of (potential) local actor coalitions to explore development opportunities for the area. The second condition concerns fostering the transition from idea to realisation. Here one can think of providing analyses of best practices in harbour redevelopment. This can inspire actors and help them to identify successful transformation strategies. Another possibility is to create experimental zones where prototypes can be tested. The third and final condition concerns increasing the connectivity among actors, as this can, among other things, boost the emergence of new (innovative) actor coalitions. Implementing an online platform where supply and demand of space or services can be matched during the transformation of the harbour site can increase actor connectivity. Also, the appointment of 'matchmakers' who are responsible for coaching local coalitions and updating them on other initiatives and networks in the harbour area can be of help. Finally, alternative forms of financing projects can increase connectivity. In the harbour case, crowdfunding, for example, can be used for the creation of a temporary, manmade beach on one of the empty industrial plots in the area. Or a business development zone can generate collective financial resources to upgrade the public space. Hence, we argue that a combination of conditions can enable the emergence local coalitions that play a role in urban development, contributing to the selfinnovating and self-stabilising capacity of the harbour area.

To conclude, urban development trajectories, such as the transformation of a former, innercity harbour area, often involve many uncertainties. In this section, we illustrated how a condition-based, adaptive planning approach may improve the responsiveness of the area in dealing with these uncertainties. The main principle behind the approach is that the conditions generated for development, increase the area's capacity to deal with and benefit from a variety of potential spatio-functional configurations, as well as actor coalitions and their initiatives. The specific way in which the conditions have been operationalised for the presented case indicates that they are situation-dependent to a certain degree, despite their generic and relational nature. This teaches us that conditions for adaptive urban development should be embedded in processes of structural monitoring and learning. Only in this a way can the balance between the generic and the specific be recalibrated from time to time, allowing for development frameworks that support an area's adaptive capacity in the long run.

6 EPILOGUE: IMPLICATIONS FOR THE ROLE PLANNERS AND A FUTURE RESEARCH AGENDA

In response to the uncertainties that challenge planners in guiding urban transformations, this paper explored an adaptive planning approach. Starting from a complexity perspective, emphasis was laid on how the changeable nature of the multiple and interdependent processes underlying urban transformation give rise to non-linear development trajectories. In such a dynamic context, keeping a fit with their environment is key for urban areas in securing their vitality over time. Therefore, an adaptive planning approach is focused on strengthening the responsiveness of urban areas to both foreseen and unforeseen change, and aims to enable urban areas to function well under different circumstances. We argue that this approach requires a shift in the focus of planning strategies; from content (i.e what) and process (i.e. with whom) towards conditions for development.

We discussed conditions for spatio-functional configurations and for capacity building of local coalitions which allow planners to develop frameworks for adaptive urban transformation. But what does conditions-

based guidance of urban change imply for the role of public planners? We argue that an adaptive planning approach invites planners to adopt the roles of trend-watchers, matchmakers and facilitators alongside their more traditional roles as experts or mediators. As trend-watchers, planners are required to keep an eye on contextual trends, as well as on emerging local initiatives, and to develop proposals for adjusting conditions for development when necessary. As matchmakers, planners are expected to link emerging projects and local coalitions, and to point out opportunities, synergizing new projects with existing urban functions and structures. As facilitators of urban change, planners are requested to promote innovation and experimentation, and to coach the local coalitions that propose them. Planners, by taking up these roles, can co-create the city with traditional and non-traditional actors in urban development.

Exploring an adaptive approach to planning also brings forward issues that require further research. For instance, to what extent and in what way can powerful actors be moved to cooperate to the opening-up planning systems, when they run the risk of weakening their own positions? A better understanding is also needed of how an adaptive planning approach works out for actors less well-organised or skilled: with the open development framework, planners face the risk of primarily serving the interests of well-informed elite. Furthermore, a recent study by Savini (2016) on urban development projects in the Dutch city of Amsterdam showed how actors tend to undermine the adaptive capacity generated in development frameworks by signing contracts under private law, with an aim to increase their legal security. How to overcome these barriers when moving towards a more adaptive approach to planning? We invite practitioners and academics to further research these issues, with an aim to developing a comprehensive theory on adaptive planning, its opportunities and its practical limitations.

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ID 1730 | REGIONAL RESILIENCY: EXPLORING THE EMERGENCE AND RESILIENCY OF TWO REGIONAL INITIATIVES IN THE NETHERLANDS

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ABSTRACT: In the past few decades we have observed a proliferation of regional initiatives labelled in various ways. Some refer to city-regions, appealing to some kind of territorial coherence of adjacent cities, others to learning -, creative -, or competitive regions, ascribing to the region human abilities to learn and create. Even though such regional initiatives are very distinct from each other in their appearance and process of development, most of these initiatives are results of actor networks with some kind of common interest crossing the administrative boundaries of cities. As such, from an actor-network perspective, it can be argued that regions emerge through network activities between various actors who in first place prioritise meaningful (economic) relations above spatial scale and fixed demarcations. In the same line, regions are thought as a landscape of perpetual overlapping processes of becoming. Such regional processes develop at a certain grade of complexity and uncertainty of how relations (re)assemble and how do they become resilient. Consequently the dynamic context of changing relations also implies a different role for planners in regional initiatives. Even though it seems impossible to plan for such complex and volatile regional processes, planning activities occur and regional concepts emerge in co-evolution with other socioeconomic processes. In this paper we will explore the emergence of two regional initiatives in the Netherlands and their resiliency. More specific we want to address the meaning of the regional concepts in relation to the resiliency of regional initiatives. One, Brabantstad, is a governmental initiative concerning five middlesized cities in the province of Brabant. The other, Eindhoven-Leuven-Aachen-Triangle, is a cross-border regional network including Flemish and German cities Leuven and Aachen. With the help of Assemblage Theory and Actor Network Theory we will investigate which conditions lead to more (or less) resilient and robust regional initiatives and their capacity to transform their context.

1 INTRODUCTION

Contemporary regionalization processes, which involve various stakeholders with different economical interests, political differences, and cultural challenges, encompass much more complexity than the mere material and administrative construction of clearly defined regional territories. Such intertwined territorial and social formations influencing each other leads us to the debates about post-structural space conceptions and linkages between the social and the material constellations (Amin & Thrift, 2002; Massey, 2005; Murdoch, 2006; Urry, 2002). The post-structural conceptualization of space is based on the idea that space is produced within heterogeneous networks and that different conceptualizations and meanings of space can exist next to each in a constant process of becoming (Boelens, 2009; Murdoch, 2006; Rydin & Tate, 2016). This means that the post-structural concept of space prefers agency and the act of constant (re)assembly of networked space above predefined structures (Boelens & de Roo, 2014; Farias & Bender, 2010; Van Wezemael & Silberberger, 2016).

From the perspective of post-structural concept of space and organization, resilience is linked to the agency of the actors, which is the main instrument to increase the resiliency of an emerging regional initiative (Brown & Westaway, 2011).

In this paper we want to address the conditions of regional resilience by investigating two case studies in the Netherlands; a cross-border regional initiative Eindhoven-Leuven-Aachen-Triangle (ELAT) and a governmental collaboration of representatives of the province and five middle-sized cities in the province of North-Brabant (Eindhoven, 's Hertogenbosch, Tilburg, Breda, and Helmond). Using the translation process from Actor Network Theory we can describe and analyze the process of emergence of the two regions. We will then relate the case studies to the theories of resilience in order to research the real meaning of the regional concepts and conceptualizations emerging during the process itself.

2 RESILIENCE OF REGIONAL ASSEMBLAGES

In resilience thinking there is a difference made between equilibrist (engineering) (Holling, 1973), ecological and evolutionary interpretations (Boschma, 2015) of the term. According to the equilibrist approach, resilience is defined as the ability of a system to quickly return to its original state after a shock or disaster (Peterson, Allen, & Holling, 1998). The main focus of such approach is to define the desired functional equilibrium and to develop a mechanism, which allows the parts of the system to find their way back to the original state after unforeseen event(s).

From this perspective and in relation to regions, the focus mainly lies on economic resilience and the capacity of regions to address problems generating longterm success and how regions recover from external shocks reestablishing former states of equilibrium (Christopherson, Michie, & Tyler, 2010). The ecological interpretation of resilience emphasizes the existence of multiple equilibriums and a system moving from one to another (Holling, 1973, 1996). Even though different from each other, both engineering and ecological concepts of resilience acknowledge the existence of equilibriums to which systems bounce back or forward. Contrary to such linear processes regional initiatives develop in seemingly chaotic and volatile trajectories with characteristics such as emergence, self-organization, co-evolution, and uncertainty (Van Wezemael & Silberberger, 2016). Due to its linear and normative approach, both engeneering and ecological approach are insufficient to describe resilience in heterogeneous and highly dynamic processes such as emerging regions. Such regions are in the continuous complex processes of becoming, transforming, and confronted with highly uncertain outcomes (Allen, 2011; Anderson & McFarlane, 2011; Farías, 2011; Farias & Bender; McFarlane, 2009; Van Wezemael, 2008). From the perspective of perceiving regions as complex, relational and heterogeneous, its resilience cannot be conceptualized as the ability to return to the 'normal' state of affairs. Resilience should rather be conceptualized as the capacity of the region "as the ability (…) to change, adapt, and, crucially, transform in response to stresses and strains" 302 (Carpenter, Walker, Anderies, & Abel, 2001; Davoudi et al., 2012, p.: 302) without slipping into a new regime or identity (Walker, Salt, & Reid, 2006). From that perspective regional resilience is not a static and fixed quality but 'a dynamic capacity to move between a range of adaptive states without crossing a threshold of no return' (Dovey, 2017; p. 486). However governmental policy and therefore also spatial planning, as one of the main instruments to put political concepts into practice, emphasize the equilibrist resilience and the absorption of shocks and maintaining functions of the system and less on the ability to transform and adapt (Davoudi, 2016; Davoudi et al., 2012).

From the perspective of co-evolving regional processes, resilience thinking is related to various aspects of social organization and in particular the role of humans as integral elements that give shape to processes through which social and spatial structures are transformed, adapted or maintained (Dwiartama & Rosin, 2014). Hence ideas of regional resilience can be linked to the concepts of learning-, creative-, selforganizing regions in which the need for partnerships, alliances, collaboration and shared concerns are perceived as crucial in order to achieve resilience through combined actions (Cole & Marzell, 2010; Ross & Berkes, 2013). Here Actor Network Theory Theory (ANT) offers a distinctive approach to the study of regional processes aimed at achieving resilience (Dwiartama & Rosin, 2014). ANT goes beyond the dichotomy of social natural actors and proposes that both human and non-human actors are capable to influence the development of regional systems represented as actor-networks by forming relations and enrolling other actors (Dwiartama & Rosin, 2014). According to ANT, agency is not only attributed to humans but also to non-human actors such as objects (buildings, vehicles), nature (animals, rivers, or weather). As such, the concept of agency, extended beyond the human intentionality, in ANT offers several advantages in to studying resilience in regional initiatives (Dwiartama & Rosin, 2014).

Instead of focusing on demarcated sites of action (e.g., neighborhood, city, region, state) or specific aspects of social interaction (e.g., legislation, spatial planning), ANT focuses on the relationships between actors and the way these relationships shape, transform, and/or influence the network of related actornetworks. As such it allows us to think the region as a 'global entity -a highly connected one- which remains nevertheless continuously local' (Latour, 1990; p.6).

ANT proposes that agency only exists when actors are related to each other not in the mere sense of its existence, per se, but that there is an evident amount of energy and time poured into the relationship. Additionally an actor is distinguished as "any thing that does modify a state of affairs by making a difference" (Latour, 2005, p. 71).

Resilience from the point of view from ANT is seen as an ongoing process, generated by associations between actors within actor-networks and their efforts to remain indispensable, change or transform the actor-network according to their interests. Hence when we talk about a region with resilience and its capacity to act and respond rapidly to the unexpected (Innes & Booher, 2003), in reality we are talking about actor-networks with capacity to connect, act, and respond to the unexpected events. We propose to research the adaptive capacities within regional processes making use of the translation process from ANT.

Additionally, and based on existing research, adaptive regional resilience can be defined on the characteristics of: 'stability', 'self- organization', and 'innovation' (Peng, Yuan, Gu, Peng, & Ming, 2016), 'robustness', 'redundancy', 'rapidity' (Tempels, 2016), 'diversity' and 'redundancy' (Dovey, 2017). In the following we discuss the characteristics of resilience through the translation process of ANT. To be more specific, in the translation process and as part of the problematisation phase (Callon, 1986), the capacities of actors are described as the capacity of the lead actor to recognize and precisely describe an emerging controversy as well as to propose an innovative solution (Venturini, 2009). In addition, such actors could also be capable of mobilizing existing in order to convince them to accept the proposed solution and forming new (regional) external relations in order to solve the problem (self-organization). External relations are crucial because the emergence of a controversy (problem) is actually proof that existing actor-network relations have not prevented its emergence and that a solution must be searched elsewhere (Boonstra & Boelens, 2011; DeLanda, 2006). In the emerging regional process an Obligatory Passage Point (OPP) can emerge (Rydin, 2013). During the interesement phase negotiation and consultation with other actors occurs whose identities and roles are translated and enrolled through the OPP (Callon, 1986). Translations of identities is crucial in order to make sure that all actors pursue the same regional idea and behave accordingly to the terms of enrolment in order to achieve stability. An OPP is an important mechanism to direct self-organization corresponding with reproduction, confirmation, creation, re-creation of self, and self-maintenance (Boonstra, 2015). During the enrolment phase the amount of actors increases while the relations are further stabilized. To successfully enroll actors beyond the initial problem definition and solution, the lead actors must be capable of adapting and transforming the regional idea and concept in order to align interests of not only increasing amount of actors but also diverse set of actors (A. A. Alagic, L. Boelens, & M. Glaudemans, 2017). Through enrolment of as much as possible actors thinking and behaving in accordance with, by the lead actors, proposed concept of the region, the region in fact gains robustness. However, the characteristics that can increase regional resilience are also linked to diversity and redundancy (Dovey, 2017). The diversity of enrolling actors increases the capacity of the regional network to adapt because its parts are able to react to stress in various ways. As such diversity is linked to redundancy as the capacity of the actors to 'perform in different ways by moving forms and functions around so that actors can perform a multiplicity of functions' (Dovey, 2017). In fact this would mean that not only the region gains resiliency by heterogeneous set of actors but also that the process of enrolment must allow for actors' identities and roles to stay or become heterogeneous in order to increase their modes and radius of agency (A. Alagic, L. Boelens, & M. Glaudemans, 2017; Van Wezemael & Silberberger, 2016). In other words hybrid identities of the actors in which they can perform different roles in different setting are desired condition for achieving resilience. For spatial planning in relation to resilience, the existence of heterogeneous identities and interests is in fact a stumble block for its insufficient ability to include and accommodate different sets of knowledge (Innes & Booher, 2010; Rydin & Tate, 2016) due to the tendency of formal planning to develop methods and models in order to optimize the efficiency of the systems (Dovey, 2017). According to ANT and during the enrolement phase, the lead actors are rendered invisible through spokespersons speaking on behalf of the whole regional network and a set of inscriptions (Rydin, 2013). The inscriptions in the form of statistical data, contracts, policy and strategy documents, or laws 'allow the lead actors to execute power through space and time without their

continuous effort and labour' (Rydin, 2013), in order to maintain achieved and further induce stability and robustness of the region. Maximal robustness is achieved during the mobilization phase the regional relations become institutionalized and taken for granted, while focal actors govern from a distance.

3 INTRODUCTION CASE STUDIES AND METHODOLOGY

For this research and for two case studies we have conducted a total of twenty six (26) in-depth interviews. Both cases include actors from Eindhoven and some of them were aware of both regional initiatives and were asked to reflect on both. We have focused on emerging controversies, research questions and solution propositions conceptualized by the lead actors (Venturini, 2009). Additionally we have looked at developed strategies on how and which actors are enrolled during the process and what effect they provoke within the regional actor-networks and further regionalization. Our goal was to find what kind of conditions contribute to the regional resilience and how these conditions emerged or how the participating actors created these particular conditions. During the interviews the actors were asked to reflect on their role and activities within the actor-network and how the relations between them and other actors started, evolved, and which materials/objects played a role in the assembly process. This way we were able to retrospectively 'follow the actors' (Latour, 2005, p. 12) as the actors revealed the traces "in their weaving through things they have added to social skills so as to render more durable the constantly shifting interactions" (Latour, 2005, p. 68).

4 CASE STUDIES ANALYSIS

4.1 EINDHOVEN – LEUVEN – AACHEN – TRIANGLE (ELAT)

During the 1980's Philips, based in Eindhoven, encountered a major controversy. It was loosing its leading global position in microelectronics due to a changing context in which technological innovations were generated more in open actor-networks of inter-firm alliances (Chesbrough, 2003). Due to Philips' dispersal in the previous years it has set up factories and laboratories in among others also Louvain (BE) and Aachen (GER). Philips' external relations in these two cities would proof to be crucial for the emergence of ELAt, a cross-border high-tech region including actors from three cities and three different countries. The solution for Philips' controversy of 'how to implement open innovation' included consultation and enrolment of representatives from Interuniversity Microelectronics Centre (IMEC) from Louvain. IMEC already accomplished to set up and implement an open innovation environment in its laboratory and Philips' representatives saw the opportunity for learning and exchanging identities.

However Philips during the knowledge exchange process with IMEC, Philips also learned that in order to achieve an open innovation environment a broader set of divers actors and tacit knowledge was needed. At the same time leading actors from the region of Eindhoven were confronted with controversies of declining local economy due to declining power of Philips and shifting central government's policy to focus on the its major cities in stead of equal distribution funding (Ministry of Economic Affairs, 2004). As solution for these issues regional reorganizations was proposed and resulted into the set up of a regional development agency Brainport Development. Lead actor the mayor of Eindhoven consulted the local educational institutes (Fontys Hogeschool and Technical University Eindhoven) resulting into an advisory board (for the municipality) advocating the Triple Helix idea in which is proposed to set up networks between academia, government, and business actors to foster technological innovation. To facilitate the emergence of such networks, Brainport Development organized round tables around the idea of Business and Technology Communities (BTC). The BTC meetings became the Obligatory Passage Point of a divers actor-network pursuing relational intensification among technological firms and between local government and technological firms in order to achieve technological innovation and thus first step towards an open innovation environment (A. A. Alagic et al., 2017). During these meetings the representatives of Philips advocated and promoted the idea of an open innovation environment to other participants[1] through their successful collaboration with IMEC in Leuven and thus an already existing regional axis of technological innovation between the two cities (R. Harwig, 2012). Additionally during these BTC meetings Philips

[1] (technological firms, academia, municipality, SRE, Brainport development)

representatives also achieved to convince others of the importance to enroll actors from Aachen where Philips had facilities. Specifically this idea was presented as a regional concept of regionally interconnected high tech campuses in the three cities. During the negotiation process of such ideas, roles were discussed and developed resulting into a set of actors intensively travelling to the other two cities (Louvain and Aachen) in order to convince eligible actors of the value of an open innovation environment through intensification of relations between the three campuses (R. Harwig, 2012). The regional concept and goal transformed once again portraying a regional triangle between the three cities. With this newly translated regional idea the lead actors applied for Interreg IIIB funding allowing further assembly of the regional concept (T. v. Lier, 2012). During this phase, the role of focal actors transferred to the three mayors of each city who appointed spokespersons and strategies were developed to further intensify the relations (R. Harwig, 2012). This resulted into an array of divers effects, newly emerging actor-networks, influencing the existing relations and reassembling existing relations into new actornetworks.

For example, two KIC locations were assigned to consortia formed as part of ELAt regionalization process (T. d. Bruijn, 2012). Spatial effects include the emergence of high-tech campuses in the three cities with aligned developmental strategies. On the high-tech campus in Eindhoven, a jointventure action between various actors resulted into Holst Centre, in which the identity of IMEC was translated into an open innovation environment for the development of sensor technologies (R. Cuyvers, 2012). Eventually, cross-border regional network ELAt merged with the governmental cross-border initiative Top Technology Region (TTR)[1] (T. v. Lier, 2012). The main reasons were that the Interreg IIIB funding for ELAt stopped and that the Dutch central government saw the opportunity to implement the success of ELAt into the more bureaucratic provincial initiative TTR (T. Hommels, 2012). Dutch central government supported the peripheral Dutch province of Limburg to initiate the TTR network with its direct cross-border neighbors in first place to reverse its economic decline (D. Plees, 2012; T. Hommels, 2012). Left without (European) funding, focal actors of ELAt, the mayor of Eindhoven supported by other two mayors, merged ELAt with TTR against strong resistance of the spokespersons (P. Scholmeesters, 2012).

4.2 BRABANTSTAD

Around the same period (1990's) on the territory of the Dutch province North Brabant a new governmental network emerged including the representatives (mayors) of the five middle-sized cities[2] and the province of North Brabant. As such this regional network functions as some kind of a middle layer between the official administrative entities (province and municipalities). However the regional network Brabantstad does not strive to judicially institutionalize the relations, meaning that the network does not have any juridical powers over certain territories as the focal actors have over the province or the cities. The main controversy that triggered this kind of regional thinking and reorganization of existing actors into a newly formed regional initiative was a combined set of issues raised in that particular period.

The first one was the policy shift of the national government from equal distribution of central government's funds to one supporting the big cities (Janssen-Jansen, 2004). With the central government's intention to focus on support of the country's major cities the middle-sized cities began to fear to be left out of funding and support (P. v. Ree, 2014).

Secondly, this change of context in which the emphasis of national policy is directed towards the main urban nodes and their performance, perceiving the cities as the central places of socio-economic dynamic, also challenged the relation between the province and its main five cities. Unlike the provinces of North-, South Holland, and Utrecht, the province of Brabant is traditionally seen as the province of the farmers (Janssen-Jansen, 2004). At that point the Province of North-Brabant faced a reality of lacking strong and reliable relations with its major cities and therefore a lack of effective alignment and coordination of interests (J. Janssen, 2013).

1 Cross-border initiative of six adjacent provinces with their deputies as representatives: Limburg (NL), North-Brabant (NL), Limburg (BE), Flemish-Brabant (BE), Liege (BE), Northrhine Westfalia (GER)

2 3 Brabantstad: an alliance between the mayors of Tilburg, Eindhoven, 's Hertogenbosch, Breda, and Helmond and the Deputy of the province North Brabant

Thirdly, the formation of a parallel regional initiative City Region Eindhoven (SRE) in 1993, as technological core of the province and the country, formed a serious candidate to become an official province (Haran, 2010). From that perspective, SRE formed a challenging threat to the institutional power and territory of the province of North Brabant in line of the ongoing discussion about the role of the provinces. Every now and then, it is proposed to reassemble the provinces into greater territories or to decentralize their power to smaller regional units (Haran, 2010; Janssen-Jansen, 2004). Additionally, the Ministry of the Economic Affairs adopted a view that North Brabant consists of two different socioeconomic urban networks, namely the west and the east wing (Haran, 2010). According to this conception, the east wing of Brabant with the city of Breda is perceived as an economic entity oriented towards economic activity around the harbors of Rotterdam and Antwerp, while east wing's forces tend to concentrate around the technological innovation hub of Eindhoven supported by a strong manufacturing industry in the surrounding (Haran, 2010).

Concluding, the Province of North Brabant faced a possibility that it could loose its magnitude of influence on its whole territory, especially the cities.

Faced with the challenges and the threats outlined, the Royal Commissioner Frank Houben consulted scientists, urban planners, architects, and policy experts who he commissioned to write a manifesto on the future of North-Brabant. Various interviewees mention this manifesto as a turning point for the set up of the regional network Brabantstad. The main conclusion of "Manifesto North-Brabant" was that "the future is knowledge and the cities; not just agriculture" (Broess & Grijzen, 1997) having in mind that the province of Brabant has a centuries old farmers identity. To act in line of an urban future, Brabant and its people, therefore, must first deal with their traditional conception of romantic countryside as basis of their identity.

The manifest further notes that the policy of EU is focused on regions while at the same time large parts of the Dutch sovereignty are transferred to the EU-agencies, that it is inevitable that the future socioeconomic developments will mostly benefit city-regions (Broess & Grijzen, 1997). It is pointed out that form this European perspective on cities and city-regions, that the future of Brabant depends on the relations between the Brabant cities. Armed with such arguments to rethink 'Brabant's rural areas as a mold of the big city' (p.32) and combined with claims that an alliance between the cities would prevent unnecessary competition towards third parties such as the central government and the European Union the Royal Commissioner Frank Houben started to regularly meet with the mayors of the five cities.

From various inter-consultation between the chairman of the province and the five mayors, the idea was born to create a city-network (A. v. d. Broek, 2013). It was assumed that this network could solve the controversies of provincial territorial instability of the province, lack of funding for the individual cities and prevent unnecessary competition between the cities by aligning their strategies towards third parties. On one hand the province was building a relation with the cities and gaining their trust and loyalty in order to prevent possible assembly of new regions on its territory and therefore keeping Brabant whole. On the other hand the main motive of the actors to collaborate seems to be an opportunity to form a strong lobby towards the central government and European Union, which would increase their chances for more financial means. As part of the translation process (interesement), the focal actor delegated its role to a spokesperson establishing a Programme Bureau Brabantstad at the province of Brabant. Additionally, through the work of the Programme Bureau representatives, lower layers of the municipal and provincial lead actors (administrative officers, planners, strategic advisors, etc.) got enrolled and take part in formalized consultations and meetings. The consultation between the participating actors is formalized through a fixed annual agenda of multilateral meetings called Brabantstad Tuesdays. These meetings function as OPP through which the enrolled administrative officers are informed immediately of the ideas and agenda of the lead actors for which they possess the tools to implement in the individual cities. Also Brabantstad is represented by a lobby delegate at the headquarters of the EU in Brussels.

Regional conceptualization of Brabantstad is based on the metaphor in which the territory of the province is represented as a tapestry mosaic in the shape of green landscape patches in-between a patchwork of dense five urban cores and smaller patches of villages with their own sociospatial characteristics. This metaphor is also part of the spatial development strategy in which is stated that the existing patchwork of separate zones should me maintained and further reinforced meaning that the cities should become more densified and the green patches should keep and develop their green, agricultural and leisure characteristics. Regional patchwork concept is emphasized, reinforced and maintained through various strategic documents and regional studies and designs commissioned by the Programme Bureau. Another

regional concept and developmental model of Brabantstad focuses on the three corridors: Rotterdam - Antwerp axis, Amsterdam - Den Bosch - Eindhoven axis and Rotterdam - Breda - Tilburg – Venlo corridor. Further the spatial strategy involves improving connections to the three corridors and the cities in order to improve Brabantstad as a daily urban system (Noordanus, 2014).

Even though Brabantstad was acknowledged as strategic urban network in the Fifth National Policy Document on Spatial Planning, still one of the controversies was not yet settled and not all ministries perceived it as a whole urban network resulting into contrasting policy and funding towards the participating cities (Haran, 2010). In ANT term it can also be stated that the network insufficiently developed enrolling strategies in order to convince the external relations of its existence and relevance. However, it can be argued that Brabantstad achieved the mobilization phase in ANT terms based on two initiatives undertaken by the actor-network. In 2007, the actants managed to formulate and execute a concerted agenda of projects in Brabantstad. The agenda was backed up with financial means put together by the cities and the province resulting into an investment plan named Meerjaren Programma (1 billion euros). Secondly, in 2008 and part of the same concerted agenda, the regional network of five cities decided to apply for the title of European Capital of Culture in 2018. Even though, the jury decided to award Leeuwaarden with the title and subsidy to represent the EU in 2018, the application alone is seen as an achievement for Brabantstad. The process of application is conceived by its actants as a positive development of the network mainly due to the fact that the divers actants showed the ability and will to align various interests of the different cities into one common strategy and plan, presented in the bid book Brabantstad 2018.

5 ANALYSIS RESILIENCE STABILITY

"Formation of Brabantstad is seen as a solution to the emerging controversies (territorial, power and funding at stake) of the lead actor Province of North Brabant. The solution for the controversy is sought in ways to return to the previous state: coherency and integrity at provincial level. From that perspective the actor-network Brabantstad is focusing on the equilibrist resilience. Internal stability is further enforced through exclusion of other actors (smaller municipalities and non-governmental actors). Main mechanism for this exclusion is the formation of a strong OPP (Programme Bureau + formalised meeting structure) where identities of the actors are constructed and controlled.

Also by focusing on the development on physical infrastructure, Brabantstad is in fact striving to increase its internal stability. Spatial planning is playing a crucial role in this element of self-organisation and consultation among planners from different cities increases the knowledge and interest alignment in the plans. However the planners stay within their traditional professional boundaries following the ideas and policies from above by executing the central state, provincial and municipal agendas. Consultation among the planners has not resulted into new regional concepts or enrolment of other than by the OPP selected actors.

Formation of ELAt occurred in a much more rhizomatic way. The solution for the controversy on how to create an environment of open innovation did not start with a pre-defined regional concept but developed through building relation with eligible actors.

5.1 SELF-ORGANISATION

Self-organization is best understood as a relational process in which the actors search for more order. In relation to adaptability in a changing context self-organization must be dynamic to handle the change. Changing context provokes action in organized systems as we observe that provincial lead actors are forced to transform their relation to the actors from the cities.

From the perspective of the characteristics of self-organization (reproduction, confirmation, creation, recreation of self, and self-maintenance) the idea of Brabantstad is reproduced in the governmental networks through meetings of lead actors. Created regional concepts are further reproduced through concerted agenda and execution of local building projects. However these building projects are result of local agenda's, which were bundled under the name of Brabantstad. As such the projects served local leading actors and not specifically regional concept Brabantstad. Recreation and self-maintenance are

achieved through publication of regional concepts, commissions of design projects as well as a fixed annual agenda of meetings and consultation with each other.

ELAt actors on the other hand show capability to involve different and distant actors through creation of enrolment strategies, which include alternating regional concepts. As the actor-network grows, the actors learn from each other and recreate each other's identities in their own environment. As example, Philips resettled a whole research department to IMEC in order for their employees to collaborate and learn.

IMEC's (Louvain) open innovation identity is recreated in Eindhoven by the set up of Holst Centre on the high tech campus. DSP Valley, a networking platform originated in Louvain, is recreated in Eindhoven as well. This all has contributed in the intensification of the relations and creation of a distinctive region on the axis of the two cities.

5.2 INNOVATION

Brabantstad actors focus on predefined regional strategies and developmental models (daily urban system, corridors, zoning). Such models prioritize certain actors above others and do not allow different knowledge to enter the network, which in fact is crucial for innovation. The political landscape of the region is not transformed. The distribution hierarchy of administrative power stays the same in which the roles of participating actors and their distribution of power is locked in the centuries old model and procedures. The leading actors can translate the ideas of Brabantstad through the usual provincial and municipal procedures but do not develop strategies to involve the inhabitants, the ones that in fact evaluate them through democratic voting, into the decision making process of Brabantstad. The conceptualization of Brabantstad as a patchwork of divided green and red zones is bounded by administrative borders and as such serves as a representation (from above) of the territory of the province of Brabant. In other words it is as a spatial metaphor used to seduce actors in certain direction of spatial development without addressing their functional relations and interests.

Focal actors of ELAt show capabilities to develop innovative strategies in order to enroll other actors. Innovative and alternating regional conceptualizations are crucial part of such strategies. It is evident that for successful enrolement process regional concepts must co-evolve with the transforming actor-network. In addition, entering actors (through OPP) with their specific knowledge alternate the context and in relation to other actors generate innovation (technological, policy, spatial concepts, etc.) further stabilizing the network. However the leading actors fail to develop innovative strategies to enroll financial means after the Interreg funding stopped.

5.3 ROBUSTNESS

A complex actor-network is robust if it keeps its basic functionality under failure of some components. In Callon's words robustness is accomplished through successful translation or when as many actors are enrolled as possible.

One of the main controversies to be solved by the province of Brabant could in fact be interpreted as to increase the robustness and coherence of relations on its own administrative territory. The translation strategy to enroll the leading actors (mayors) of its subordinate cities involved the concept of a region (the province) perceived not by its administrative borders but various regional concepts such as a patchwork of green and red zones, daily urban system, metropole, and corridors. It could be argued that such regional planning concepts were presented as proof of an existing common shared region as strategy in order to seduce the mayors to align their interests and begin to act as a unified and coherent region. Additionally this would increase the magnitude of influence of the province as well as prevent the possible break-up of the province into a west - and east flank or the formation of a new administrative region surrounding Eindhoven. This has worked as so far as the lead actors have aligned their lobby strategies towards the central government. It has been argued that the alliance has not achieved anything substantial for the region as a whole except an effective network of city representatives who successively lobbied for each other's individual projects subtracting financial means from the national state and the European Union ((Janssen-Jansen, 2004) ELAt achieved a certain level of robustness through translation phases, which enrolled more and more diverse and spatially dispersed actors. The main condition for increasing its

robustness was the successful enrolment of Interreg IIIB subsidy. The financial support allowed the leading actors to further assemble the external actors, contract a full time project leader, increase the mobility of spokespersons, develop common strategies, documents, and a website. However, once the funding stopped after four years ELAt was merged with another initiative, which in fact meant the end of ELAt. This means that the lead actors failed to develop strategies to increase robustness by enrolling eligible actors to continue the funding in some way.

6 CONCLUSIONS

In this paper we aimed to research how resilience is built in emerging regional initiatives by researching the conditions which contribute or obstruct resiliency. More specifically our goal was investigate what role the spatial planning plays or could play in this process. From our analysis we observe that resiliency is not only a matter of sum of all parts but that it includes a form of collective agency which becomes from "... interactive, co-ordinative and synergistic dynamics of their transactions" (Bandura 2001:75–76, Ross and Berkes 2013:26).

This collective agency is an actor-network property and emerges through the relations between its members. With ANT we were able not only to research the relations between the human participants but also their relations to emerging technology, regional concepts, administrative borders, built environment, policy documents, etc.

By analyzing the process of becoming of the two regional initiatives we have discovered that the leading actors focus on different interpretation of resilience and that spatial planning plays a crucial role in both. Challenged by a controversy including the competition of a newly formed city-region Eindhoven and the central government perceiving the province as consisting of two separate economic zones, the province of Brabant initiated Brabantstad in order to increase its internal stability and coherence. As such the main goal of the lead actor seems to be to return to the original state of a unified province. From that perspective, Brabantstad is building on the equilibrist resiliency, which is aimed at developing strategies to maintain and/or return to the 'desired' equilibrium. In that process lead actors use the already existing regional concepts (daily urban system, corridor development) and conceptualizations coming forth out of the process (Brabantstad Mosaic Metropole) to underpin and reinforce the territorial unity of the province and its borders. The type of strategies that are developed and the fact that only governmental actors are enrolled reveals that the eventual goal of Brabantstad is to keep things together and prevent new regional actor-networks to affect the existence of the province. The translation process develops in a strict and linear process directed through the Program Bureau Brabantstad. Identities and roles are defined by the six leading actors and translated to the lower levels of administration.

In the case of ELAt, we observe a much more rhizomatic and heterogeneous regionalization process in which regional concepts co-evolve within the assembly process and serve as a strategy to bring regionalization further, induce emergent actor-networks, and enroll distant actors. Here we observe that roles and identities also emerge as result of the regionalization process and that they are not predefined and imposed by the lead actors. During the assembly process certain borders emerge such as the triangle of the three cities revealing the desired spatial location of the actors and the enrolment of actors connected to the technological innovation. After ELAt merged with the provincial TTR regional initiative, we observe similar regionalization process as Brabantstad. The leading actors of the provinces emphasize their territorial administrative borders and focus on reproduction and reinforcement of these borders through internal organization of relations.

From this perspective, the pursuance of resiliency in regional planning depends upon how resilience is conceptualized and promoted by the leading actors. However in the case of ELAt we see that the regional concepts contribute to the pursuance of different interpretations of resilience and could perhaps be more studied and applied as instruments in achieving regional resilience.

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T19 | RESILIENT AND SUSTAINABLE TERRITORIES

CO-CHAIRS: RICHARD SLIUZAS; ADRIANA GALDERISI; TERESA CÁLIX

The increasing frequency and severity of natural and human-induced disasters, often linked to extreme weather events, causes considerable losses and damages in cities and regions worldwide. Urbanization trends and planning processes oriented to the development and management of human settlement systems of various sizes and forms generate multiple environmental concerns - from the degradation and fragmentation of natural ecosystems to the more and more frequent climate-related hazards – and may drive increased exposure of human settlements to a local mix of hazard factors within a short time span. Moreover, cities all over the world are more and more often threatened by significant social pressures related to poverty, conflicts or to increased migration flows and temporary human settlements, such as refugee camps. Disaster risk reduction (DRR) and the building of resilient communities and settlement systems feature strongly in international fora such as Rio+20, the Sustainable Development Goals and UN-Habitat's New Urban Agenda. The on-going process towards the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 clearly identifies the decisive importance and role of land use and spatial planning in making resilient and less vulnerable territories and communities in combatting current and future natural, technological, na-tech, socio-economic and socio-technical hazards.

But how can planning contribute to realization of these agendas, particularly at sub-national level?

Land use and urban planning are more and more frequently identified as key non-structural risk mitigation measures to avoid exposure in most hazardous zones and to reduce exposure and vulnerability in already built areas. Even so, risk reduction, climate adaptation are often still addressed through sectoral approaches and tools, with limited integration into land use and urban planning processes. Moreover, in many countries the response to the more frequent disasters is still mostly reactive rather than proactive.

This track addresses ways and means to more effectively integrate DRR and Climate Adaptation through urban and territorial planning and to promote urban regeneration strategies contributing to fairer policies of welfare and hospitality. In line with the conference theme, we encourage contributions that engage with collaborative and proactive approaches as well as with adaptive planning practices, capable to reduce and manage current and emerging risks, through multi-stakeholder engagement and dialogue. We welcome papers of a theoretical, methodological or an applied nature focused on the multidimensional concepts of the resilience and sustainability of territories in the face of environmental and social challenges focusing, above all, on natural and technological risks. Moreover, as the dissemination of risk information through education is a crucial issue in the implementation of the Sendai Framework, we also are seeking contributions that discuss innovations in planning education related to DRR and/or sustainability. Deliberations around social justice in planning, which includes the topics of integration and social cohesion, for improving cities' resilience in the face of current and future environmental and social challenges, are also encouraged.

ID 1315 | A MODEL FOR THE PURSUIT OF ROBUST URBAN FORM

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1 INTRODUCTION

The starting point of the argument to be presented here is that the physical structure of urban areas lasts from many decades to several centuries. Without rebuilding, it can constrain, or even prohibit, specific urban activities that are thought desirable and being planned for. In contrast, economic and social forces will change markedly over the same time period and it is desirable that the physical structure should be designed to cope with these changes.

Growth of settlements is the norm rather than the exception and, at the very least, there is no basis for assuming that a city will never expand beyond its existing limits. As urban areas expand, it becomes necessary to retrofit them by inserting new, and adapting existing, buildings and by renewing and extending the infrastructure. Increases in residential density will result and will require similar retrofitting. If, therefore, a city is to be planned it must be robust: it should be designed to accommodate change, particularly the expansion of infrastructure, on a continual basis.

Although, at first sight, very long-term physical planning of robust form may seem like a tall order, it will be argued that it is feasible. A theoretical and normative model of robust urban form can be derived, or deduced, from two sets of planning goals - pursuit of quality of life and pursuit of sustainability (Hall, 2015) - and it will be shown that it has some remarkable properties.

2 DERIVATION OF THE PED-SHED

A sustainable goal of minimising use of energy leads to the planning criterion that activities should be located such as to minimise the need to travel. This then leads on to a sequence of further locational criteria, arranged in order of priority. A first priority would be no travel. In practice, this would imply no more movement than would be expected within a building or between adjacent buildings. In other words, mixed land uses would be immediately adjacent to each other in two dimensions or overlay each other in three dimensions.

Obviously, not all activities could, or should, be located so close together. Parks and playing fields would not fit and an attempt to combine retail, commercial and residential activities within an excessive extension of three-dimensional megastructures would militate against a high degree of quality of life. As a second priority, therefore, urban form should permit uses to be located within walking distance of each other. A walking distance can vary between 300 and 700 metres in length, and a typical length is 400m. However, we will wish to talk about an absolute maximum for the extent of development, and to explore its consequences for urban form in general, and so we need a robust figure that would not normally be exceed. Urban design guidelines commonly suggest an average of 400 metres and maximum of 800 metres radius (Llewelyn Davies et al, 2000).

The resulting form is not a new idea and is referred to in the technical literature as a ped-shed. (Unfortunately, there appears to be no suitable alternative that is problem free.) The structure of a typical 800m radius ped-shed is illustrated diagrammatically by Figure 1. There is some, but not complete, equivalence here with the work of Calthorpe (1993) and many other proponents of the neighbourhood principle (Walters, 2007).

Because of the of both the desire to minimise the need to travel and likely economic pressures on the supply and value of land, the residential density can be expected to decrease with distance from the centre. The absolute density levels within each ped-shed would be determined by the distance of the pedshed as a whole from other urban centres and the socio-economic pressures resulting from this. Nonresidential uses permitted in the settlement would be expected to be concentrated in the mixed-use core.

3 LINKING UP PED-SHEDS

There are clearly limits to what facilities could be contained within one 800m-radius settlement. Adoption of a maximum distance implies that, once such a settlement has been constructed, further development would require additional ped-sheds. The pursuit of sustainable travel now requires, as the third level of priority, that walking gives way to travel between the ped-sheds not dependent on the private motor vehicle. They should be linked by a high-grade public transport corridor, ideally a frequent-service fixed-track facility, each stop at the centre of the mixed-use core. This creates what is often known as a beads-on-string form. If a facility is not within walking distance, then it ca be reached by walking combined with public transport. Although travel in total is not minimised, the form adopted means that it can still take place in the most energy efficient manner. The form does not necessarily compel the use of walking and public transport but that it does ensure that anyone without private motor transport is not disadvantaged.

Open land would surround each ped-shed and would thus be within the walking distance of all dwellings. This would not only minimise travel to outdoor recreation but also make it available to those without access to a car, especially children. The green areas between the strings could be substantial and would not only allow ample room for recreation. Such land could also have a significant role to play in urban agriculture and the management of storm drainage.

As with the ped-shed, the beads-on-string idea is not in itself new. Similar ideas have been set out by Peter Hall (Hall and Ward, 1998), Hildebrand Frey (1999) and the Urban Task Force (1999), amongst others. However, the following proposals previously set out by this author (Hall, 2015), have not been commonly advocated elsewhere.

3.1 THE DESIGN OF ROAD PROVISION

Within the ped-sheds, motor vehicle access would be permitted but a low speed environment would favour safe and pleasant movement by foot and bicycle. All the roads, therefore, should have frontage access and speed limited to a maximum of 50 kph or, in some neighbourhoods, 30 kph. Local buses within 50 kph roads could supplement the public transport provision. Higher-speed roads, with no frontage access, would be located outside the ped-sheds and would permit vehicle speeds up to, or even in excess of, 100 kph. They would link the ped-sheds and could carry higher-speed long-distance buses in addition to private cars.

Some may be motorways but others may just be two-lane roads. The point is the access restriction. This implies a two-level road hierarchy for motor vehicles:

- urban streets with low speeds, limitations on heavy vehicles, active frontages and enclosure of space;
- motor roads with higher speeds, surfaces supporting heavy vehicles, no necessary building frontage and restricted access.

3.2 NON-RESIDENTIAL PED-SHEDS

Park-and-ride facilities around public transport stops pose a particular problem. The space taken up by the parking of cars is in conflict with the principle of bringing other uses closer together with pedestrian access. The solution is to locate park-and-ride facilities around dedicated public transport stops away from residential ped-sheds. This would have the further advantage of allowing direct access by the higher-speed roads.

Warehouse and distribution centres and park-and-ride facilities should be located outside of residential ped-sheds. The same would go for all other space-hungry, low-intensity commercial and manufacturing uses, such as very large hospital and educational complexes. They, like park-and-ride facilities, should have their own stop on the quality public transport network. This leads to a non-residential ped-shed containing a combination of such uses, as illustrated diagrammatically by Figure 2. It would also be possible to have a ped-shed that was, say, half non-residential and half residential, or similar proportions.

3.3 DEALING WITH RESIDENTIAL DENSITY

What will be the number of people living in a residential ped-shed? The threshold of population needed to support specific facilities is a perennially difficult one because it is subject to change over time. For example, variations in the economics of retailing affect the support for different types of shops. The catchment areas of schools may be affected by changing educational theories and economics. Moreover, there can be different threshold populations for different types of facility.

The robust solution is that it is the area that is fixed and the density that should vary according to the number of people required to support the facility provided. This contrasts with the more usual approach of density being regarded as fixed and uniform and the number of people required for the catchment area generating the area of the settlement. Different densities in different beads (i.e. ped-sheds) would support a different mixture of facilities. The variation would not just be between ped-sheds but could change over time through the process of redevelopment. Services not found within one ped-shed could be reached by easy travel to another nearby or to a city centre.

4 A THEORETICAL CITY MODEL

Supposing we were to base an entire city on the beads-on-string form, what would the result be? Such a whole-city model would be an idealised form, not an actual city plan, but it would create a theoretical model whose properties could be examined (Hall, 2015). For our model, a radial structure will be adopted, with arms or fingers radiating out from a central point. This is not, in itself, novel and similar suggestions have been made by other authors and for particular cities. The innovation proposed, and pursued, here will be to insert additional radial “arms” between others where space allows, with these arms being served by branches from the public transport lines, as shown in Figure 3.

It is possible to explore different spacing of station stops and separation of the radial arms. The author has examined these (Hall, 2015) but space precludes a full discussion here. The optimum solution was found to be a line of 800m radius ped-sheds with a minimum separation of at least 200m between them and at least 200m between the radial forms. This produces the city shown by Figure 3, extending to a maximum radius of approximately 10 km. Note the emergence of circular or orbital public transport routes at 3.6 km and 9 km radii from the city centre.

There is green space within walking distance of all residents. Outside of the city centre, substantial non-built-up areas between the beads-on-string are created. As the extent of the city grows so these areas become largely enclosed on all sides with only narrow connecting strips between them. As such, they are not really green wedges in conventional planning parlance, as these normally remain open-ended as the city grows.

The term that will be used here for the non-built-up areas will be green enclaves. Starting 4 km out from the centre, each one is approximately 5.5 km long and varies in width from 0.5 km to over 2 km, with a total area of approximately 560 ha. These are areas that can accommodate a wide range of uses (other than continuous built-up areas). This has the great advantage of accommodating roads for motor traffic and railway lines for high-speed passenger and heavy freight movements, in addition to the recreational facilities and urban agriculture.

At first glance, the diagram may appear very uniform, as though all the ped-sheds would be the same, but this would not necessarily be the case. What is being presented is a long-term physical structure. Residential density would vary over the city in both space and time, as could the quantity and scale of nonresidential uses. Many of the ped-sheds could be at a much higher residential density than adjacent ones and could incorporate local centres with significant shopping, commercial and social facilities. Furthermore, a number of the ped-sheds would not be predominantly residential but might have all, or a major part of, their area devoted to manufacturing or distribution activities, or to large-scale health or educational provision or to park-and-ride facilities. These spatial variations would be subject to change over long time periods. What of the city centre in Figure 3? It is not a continuous built-up area, as in most cities.

However, the central ped-shed could reach very high densities and contain a very wide range of uses, as could the ped-sheds adjacent to it. The central ped-sheds could be brought closer together than the outer

ones but, whether they are or not, the prospect is of a larger central area composed of higher-density urban neighbourhoods, or quarters, separated by parkland while still constituting an integrated whole. Note also that an intercity railway line passing through the city could be accommodated within the green enclaves, with a main station within the central ped-shed.

Figure 3 also shows the roads for motor vehicles where they are outside the ped-sheds. There would be the two-level road hierarchy already proposed: slow speed with active frontage within ped-sheds and higher speed with restricted frontage outside. The separation of 200m between the ped-sheds offers major advantages. Major roads can pass between the ped-sheds permitting circular routes around and throughout the city. We are immediately presented with a most remarkable result. It is possible to drive over the entire city at a reasonable speed on roads designed for the motor vehicle even though the city has been laid out to facilitate walking and use of public transport. A possible objection that readers may now raise, though, is that these roads are severing the green enclaves and creating barriers to the movement of their users. One response is that this is certainly going to be no worse that the situation in existing cities.

However, there is the more important point that, although these roads may be subject to access restrictions, not all of them will be the same. Some may, indeed, be motorways with several lanes in each direction. On the other hand, and at the other extreme, many may have just one lane in each direction carrying mainly local traffic. This will, as with the population density, vary both within the city and over time. In large parts of the city, especially at the extremities, the severance will be very minor. Moreover, the large size of the green enclaves must be taken into account. They are not types of local park but areas up to 2 km wide.

Another important property of the theoretical model is that it is extendable while retaining access to public transport and green space. There is no fixed outer boundary. The land that cannot be built on is within the city rather than around it. Figure 4 shows the city expanded to a radius of approximately 20 km.

We now have another set of green enclaves. These larger enclaves, starting 9 km out from the centre, are approximately 10 km long and also vary in width from 0.5 km to over 2 km, each having a total area of approximately 1800 ha. What can now be seen is how the inner ring of green enclaves can now accommodate express rail lines providing faster services from the city centre from the outer areas and retrofitted as the city expands. There is now another orbital public transport route at a radius of 18 km from the centre.

5 CITY EXPANSION AND NETWORKS OF CITIES

Although the theoretical city model appears to be able to expand indefinitely while retaining its sustainable characteristics, allowing for retrofitting of infrastructure as it expands, this is, of course, a theoretical concept. In reality, the city would encounter other settlements as it expands and would eventually meet other large cities. Cities could be strung along the transport corridor to create a higher level of beads on string form. Notwithstanding the ability of each theoretical city model to expand sustainably in a radial direction, would indefinite expansion be a good idea in reality? Figure 5 shows two 20 km radius cities with their centres approximately 40 km apart. As they merge into each other a higher concentration of ped-sheds results such that another city could be said to emerge, but in an unplanned way. In particular, there would be no new radial public transport routes to a new centre unless retrofitted on a massive scale. This is not in line with the intention of designing the planned robust city.

Figure 6 shows 20 km radius cities with a gap of approximately 10 km between them. Additional ped-sheds are allowed along the line of the inter-city route but not otherwise. Radial expansion is restricted in favour of the building or expansion of other cities. The Figure shows how the cities could possibly be arranged on a regular lattice that could be extended. What is happening here is the use of the theoretical model to explore the properties and consequences of a developing megalopolis i.e. an arrangement of a considerable number closely packed and interacting cities. Merged cities already exist in North-western Europe and North-eastern America. In rapidly developing countries, such as China on the Yangtse and Pearl River estuaries, at the time of writing, ever more extensive megalopolises are emerging. A method for making this process of agglomeration a planned one could have considerable practical potential.

6 IMPLICATIONS FOR PLANNING PRACTICE

Implementation of the proposals made in here does not necessarily require the construction of complete cities, and complexes of cities, on the lines of the theoretical model. There are much more prosaic applications of the ideas that could be readily absorbed into day-to-day planning practice. Urban extensions can be designed using the beads-on-string form proposed and, indeed, it can lead to a useful step-by-step method is available leading down from the strategic to local design criteria (Hall, 2015).

There are significant implications for the preparation of development plans in that the emphasis on physical form does not necessarily require the preparation of detailed master plans a long time in advance of development. Detailed two-dimensional maps and three-dimensional perspectives are essential for short-term planning but they are not required for the long term. Long term plans could be based on a formula, or criteria-based approach, as used in our theoretical model, for both for the location of development and the expression of design qualities, with physical detail shown only where and when required. These criteria could then be carried over from one plan period to another to achieve the long-term physical consistency.

The same locational principles could also be used to manage and plan for expansion “upwards” or, more properly, urban intensification. Levels of residential density could be related to walking distance from public transport nodes (Hall, 2015). The idea of high-density development around major stations is, of course, nothing new and is a policy that is widely implemented. What would be different here is to have a policy for the location of low and intermediate densities, and identification of areas where there would be no increase. This is not to say that these lower levels would not change over time but that the change would be put on a rational basis. Increases in density would be related to improvements in accessibility.~

7 CONCLUSIONS

Taking stock of the theoretical city model, it can be seen to have some remarkable, and to a certain extent counter-intuitive, properties.

- The robust city does not require limits to growth placed around its periphery. It could, in theory, continue to expand without limit while still successfully pursuing quality of life and sustainability.
- This does not mean, however, that there are no limits on the extent of urban areas - far from it. What it means is that non-built up areas or green enclaves would lie between the radial routes rather than being in the shape of green belts around the city. They would be similar to green wedges but would not necessarily be spatially open ended, as a green wedge concept would normally be. What is important is that the shape and size of the green enclaves would not be arbitrary but a necessary and systematic consequence of the locational principles of development.
- The green enclaves would provide the space for the retrofitting of infrastructure.
- Although the locational principles are based completely, and explicitly, on facilitating walking and the use of public transport, the resulting city form would also permit, rather unexpectedly, almost unrestricted access by motor vehicles across the city. Their speed would be limited within predominantly residential ped-sheds but this would not be the case when travelling between them through the green enclaves. They would be able to access park and ride facilities and commercial warehousing, distribution and manufacturing centres with little restriction.
- The same principles guiding the expanding structure of the city could also be applied to growing complexes of adjoining cities. They would be linked by transport corridors but separated by extensive green areas.

The planned robust city appears to work perfectly. Why then do we not find it in practice? Even where a planning regime is very interventionist and has proper regard to the design of physical form in the long term, the argument of this book presents two significant challenges at the local political level.

- The protection of the green enclaves.
- The cost of providing quality public transport corridors contemporaneous with new development.

Overcoming these obstacles is, in effect, a necessary consequence of having a city that is genuinely planned. The choice before us is between a city with a planning system and processes but which is not

actually planned in any strategic sense and the planned and robust city as argued here. What is remarkable about the model is the advantageous implications of restricting development to within walking distance of public transport nodes. It results in quality movement about the city for motor vehicles as well, although such vehicles would have to accept significant speed restrictions within built-up areas. It permits the city to expand in a planned manner with room for the retrofitting of infrastructure within the existing boundary as the city grows. In more common parlance it allows the city “live and breathe” as it grows.

8 PICTURES

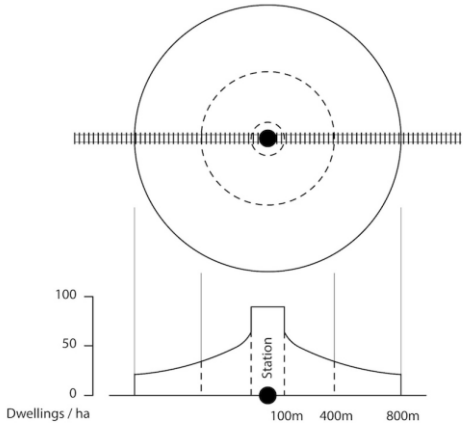

Figure 1 The 800m ped-shed showing a possible gradient of residential density from a mixed-use core around a centrally-located station.

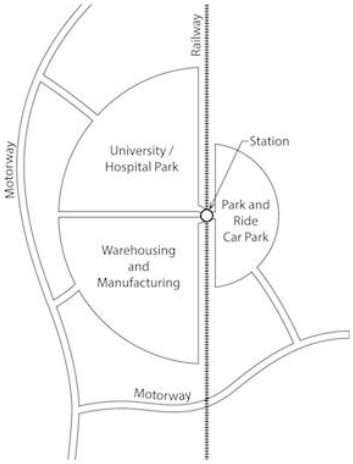

Figure 2 A diagrammatic representation of a ped-shed devoted to non-residential uses with a high level of use of, and access for, motor vehicles. In practice, all of three of the land-uses shown would not necessarily be present together and there may be other possible uses that are not shown.

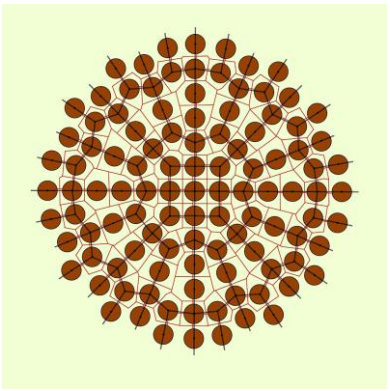

Figure 3 A city model with 800m radius ped-sheds and 200m separation, station stops every 1800m. City radius is approximately 10 km. The network of restricted-frontage motor roads is shown.

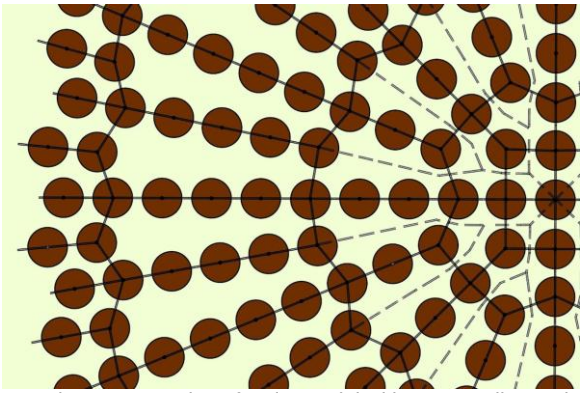

Figure 4 A section of a city model with 800m radius ped-sheds and 200m separation, station stops every 1800m. The city radius is approximately 20 km. The provision of express rail links is shown. (The road network is omitted for clarity.)

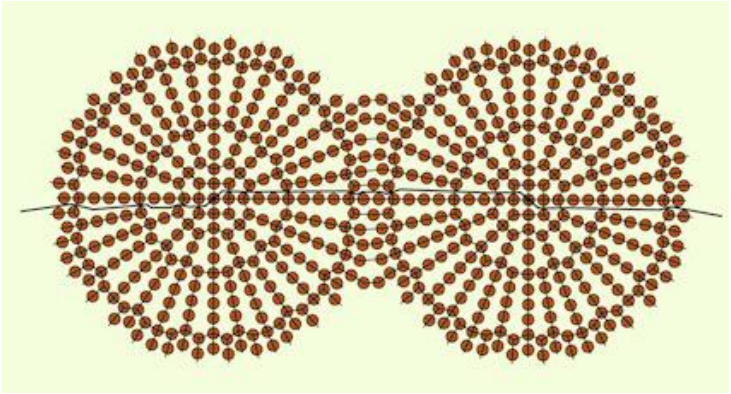

Figure 5 The effect of merging two 20 km radius cities

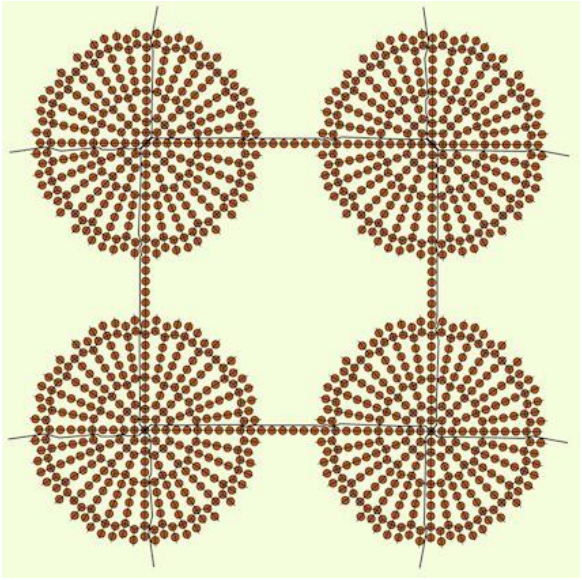

Figure 6 A lattice of 20 km radius cities separated by 10 km.

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ID 1317 | VISUAL INTERACTIVE SUPPORT FOR CROSS-DOMAIN SIMULATION AND NEW INFORMATION FLOWS IN EARLY STAGE PLANNING PROCESSES

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ABSTRACT: For the development of urban areas within existing urban systems, which concentrate on sustainable ways of energy supply and therefore essential cooperative planning processes, interactive software systems holding digital city models can enable visual driven support. The offered visual support provides a communication basis for the interdisciplinary actors within these complex planning processes. Within an interdisciplinary research project a visual planning and decision support system, named the 'URBEM-Visualization', has been developed. This system allows to geographically pinpoint information of urban systems within a multi-dimensional city model. Thus, it offers multi-scale and cross-domain handling of information within different calculation scenarios regarding energy supply. Based on a development area in Vienna, located at the train station "railway station Vienna West", which offers high potential for a sustainable agglomeration and the use of built grid infrastructures, a "planning test run" is evolved. Within this planning test run, new designs of housing developments and different possibilities for the electrical and thermal energy supply related to building energy demands are evaluated, analyzed and visualized. Based on this planning test run the paper exposes how visual interactive decision support strengthens the cooperation of the interdisciplinary planning team as well as the planning process. Furthermore, this interdisciplinary consolidation facilitates a rethinking process, changing historical driven top-down planning processes. It shows how visual output of simulation data regarding energy supply networks allows the design of new feedback-loops of information flows and how this can supply decision makers in early stage planning processes.

KEYWORDS: decision support tool, visualization, cooperative planning process, cross-domain grid simulation

1 INTRODUCTION

1.1 MOTIVATION

The United Nations forecast of 2014 shows a population of 8.5 billion people up to 2030 (United Nations, 2014) on the earth. The forecasts also report about 60% of the population in 2030 (Statista, 2017) will live in cities worldwide. Due to this rapid growth of urban agglomerations worldwide, planners are facing complex tasks for setting up plans, measures and actions to gain sustainable development within urban settlements in a resource-conserving manner. Against this background, urban development within defined city limits is a constructive approach to reduce soil sealing, arising damages of the soil function as well as the possibility to use existing supply infrastructures in the fields of mobility and energy. This can cause a reduction of CO2 emissions due to energy savings in construction, maintenance and usage. The formula 'Inner development before external development' by Bernd Scholl proclaims to reduce further settlement spread and declares to improve the quality of the built stock (Scholl, 2007: 3).

In practice, this ambition means a big challenge for planners and complex planning processes. Within these processes, the cooperation of interdisciplinary domain experts, the connection of domain specific calculation and simulation models as well as the spatial visualization of their outcomes has to be structured and handled. For the support of planners facing the mentioned needs, a digital spatial visualization provides a communication base.

Furthermore, the visualization allows to create multi-scale system overviews as well as long-term simulation and analysis of the impacts based on performed actions. If the visualization is embedded in a digital environment, it enables decision and planning support.

Within the doctoral college URBEM (Urban Energy and Mobility systems) conducted from 2013 to 2016 at TU Wien (cf. Bednar et al., 2016) the URBEM-Visualization prototype has been developed. The URBEM Visualization constitutes a web-based planning support system. This approach focuses on a test run, the 'URBEM-Planning and Development Run' (UPDR), using the URBEM-visualization as a decision and planning support tool for a sample region located in Vienna which holds high potential for redensification. Within the UPDR interdisciplinary domain experts simulated outcomes for the technical infrastructure grids within this region and focused on following questions for the energy supply: Which short- and long-term effects do occur regarding the analyzed thermal and electrical supply systems? How can knowledge, which evolves through this calculations influence early spatial planning processes and help to endeavor sustainable urban developments?

1.2 STATE OF THE ART

Inward development means an interdisciplinary analysis and the participation of cross-domain expert planners. In turn, this interdisciplinary planning process needs a definite frame. Scholl promotes a planning method called "test planning" which features a flexible framework and forces progress in complex planning processes (cf. Scholl, 2011: 336). A test planning process is structured in multiple levels and offers a practical application for the communication of sketched and refused decisions with various stakeholders (cf. Scholl, 2011: 340ff). Thus it allows to handle and structure the key tasks within a planning process.

Beside structuring planning and decision processes, visual multi-dimensional and quantitative foundations enable feasible support. Especially for cross-domain collaboration, a visual format with spatial pinpointed information outputs allows interdisciplinary overlay for analysis, clarification and verification of calculation models. CAD based software developments (GIS, BIM) for planning and decision support, game engines with CAD model implementations (cf. Forster et al., 2015a) or web based interactive multi-dimensional visualization formats (cf. Forster et al. 2015b) depict a feasible basis for spatial planning purposes and support. Beyond the visual interpretation of information, the mentioned systems interlink different databases and data structures to become simulation tools. To assure efficient progress during planning processes, the visual support must depict dynamic data flows between database, calculation model and spatial interpretation environment. Schleicher describes an operating system representing a flexible work-platform, which structures data and initializes data flows between calculation models and visualization (cf. Schleicher et al., 2016a). Based on this the URBEM Smart City Application (USCA) can be set up and enables holistic calculation flows between domain specific models on various spatial scales (cf. Schleicher et al., 2016b).

1.3 OVERVIEW

Within the interdisciplinary expert team URBEM a holistic application, the USCA (cf. Schleicher et al. 2016) was developed. This embeds domain and scenario specific simulation models and a strategic visualization tool, the 'URBEM-Visualization' (cf. Forster, 2016: 93-114). The URBEM-Visualization depicts an interactive 3D city model and allows interlinking the generated and implemented spatial objects with simulation outcomes from domain models within the USCA. Therefore, the 'URBEM-visualization' allows to geographically pinpoint information, the simulation of planning actions as well as their analysis and validation. This enables decision and planning support for detailed analysis of complex planning problems within an interdisciplinary context.

With this approach, we demonstrate a strategy for analysing energy supply options in early design stages within a cross-domain context. Thereby it targets to exchange linear top-down planning processes towards effective cyclical planning processes. This aspired cyclical planning routine is driven by the interdependency within a problem solving process. Precisely this means, that the development of solutions for a problem in planning is giving birth to new ideas by analyzing their resulting impacts. Simultaneously it means to analyze the root cause of the base problem.

In planning practice a holistic sustainable development in urban regions regarding energy supply and associated climate protection results in the need of interactive data links between domain experts. Analytical data visualization is one possibility to deal with the challenging gaps between these involved agents. Furthermore, it facilitates the explanation of pure numerical information. We assume that data visualization can lead to break linear processes and generates feedback loops dynamically within modern problem solving processes in planning. The UPDR is verifying this assumption.

The paper gives a short insight in two domain specific simulation models for electrical and thermal energy grid infrastructures as well as presents the web based visualization technology developed within the PhD course URBEM. It shows the data flows between these models and a strategic set up for an exemplary test run based on a specific development region with high potential in Vienna. The test run allows to show the necessity of loosening top-down planning processes for the raising challenges of the future energy supply of buildings, which is coherent with ambitious climate protection policies, mostly coming along with infrastructural investments and demand for long-term decisions.

This paper was already published within a chapter of the doctoral thesis “Strategic spatial visualization in the context of the inward development of urban settlements, energy and mobility systems” (cf. Forster, 2016: 115-134).

1.4 CASE STUDY REGION

In Vienna, the sites at the main train stations of the city (North, South and West) and alongside their esodic and near rails have an inherent potential for new urban developments. Due to the renewal of the station buildingand the infrastructure policy of the Austrian Railway Association (ÖBB), Vienna’s western train station “Wien Westbahnhof” and the belonging region has changed since 2014 after Vienna’s main train station was developed at the former southern train station areal. Thereby necessary tracks for the movement of travelers and freights as well as many buildings used for infrastructure and administration purposes did become unused at the western train station. Thus, these areas hold new potential for inner developments.

The area is located centrally within the city and is well accessible with public transport. New ‘inward developments’ which target to create sustainable and worth living space are strongly connected to secure supply of thermal and electrical energy. In this area the UPDR simulates prototypic housing designs regarding different approaches for long-term supply of thermal and electrical energy.

2 METHODOLOGY

2.1 METHODOLOGICAL FRAMEWORK

The first methodological step within the UPDR was the analysis of spatial constructional possibilities within the area beside the rails. A master plan for the research area, placed alongside the north and south sides of the rails, has been elaborated (see Figure 1).

The master plan in Figure 1 represents a base for the extrapolation of gross floor spaces and the definition of the utilization of these spaces. Thereby following assumptions (cf. Ziegler, 2016) for thermal and electrical energy demands for the building supply in 2015 are made:

	Residential use	Office use
thermal	47,26 kWh/m²a	3,67 kWh/m²a
electrical	33,07 kWh/m²a	38,84 kWh/m²a

Table 1: Assumptions for thermal and electrical building energy demand

Beside the underlying definitions for potential building developments and floor space utilizations, the existing supply networks set the main input for the cross-domain simulations.

Figure 1: Elaborated master plan for the research area “Wien Westbahnhof”; Source: own illustration.

Depending on the available grid infrastructures within the focus area, five electrical and thermal supply alternatives (including combinations) have been identified:

	Electrical energy supply	Thermal energy supply
Alternative 1	Electrical energy	Electrical energy
Alternative 2	Electrical energy	District heating
Alternative 3	Electrical energy	Gas
Alternative 4	Electrical energy	Photovoltaic
Alternative 5	Electrical energy	Photovoltaic combined with thermal storage

Table 2: Analyzed building energy supply alternatives within this approach

The cited supply alternatives are simulated for the time period 2015-2045. Therefore, a “business as usual” (BAU) scenario with the assumption of decreasing thermal energy demand (space heating and domestic hot water) is defined with 28% up to 2045 in comparison to the initial year 2015 (cf. Fritz, 2016: 77). This assumption considers impacts of investment decisions on Vienna’s building stock (base year 2008) caused by building owners. It includes efficiency actions (thermal renovation / heating system exchange) concerning energy demand as well as the rising population. In terms of electrical energy an assumption of a rising demand of 1,26% up to 2025 in comparison to the base year 2015 has been taken. Additionally the scenario considers additional decentralized power supply (Photovoltaic) by 100 Megawats up to 2045 in comparison to 2015. This assumption is based on the sustainability strategy (cf. Wiener Stadtwerke, 2016) of the Wiener Stadtwerke Holding, Vienna’s biggest energy supplier.

The mentioned scenario assumptions are fundamental elements. They allow long-term effect analysis to verify the supply safety and the evaluation of necessary reinvestments in future. Thereby especially necessary grid upgrades based on rising degrees of capacity utilizations determine additional accruing costs.

In addition and assembling on the housing development assumptions for the focus area, the existing electrical, thermal and gas grid infrastructure needs to be extended. Therefore, realistic new configurations of pipelines and cables are determined. Figure 2 shows a scheme of the necessary new grids, which depict the spatial fundaments for the thermal and electrical grid simulation models.

Figure 2: Assumptions for the extension of existing energy grid infrastructures; Source: own illustration.

2.2 SYSTEM STRUCTURE AND SETUP

The main setup for the UPDR are the simulation models for the determining capacities within the electrical, thermal and gas grid as well as the visualization environment. These models are embedded in the USCA. The models are the 'processing units' for forecast and visual outcome presentation. They are interlinked which do in turn enable dynamic flows of data for interactive visual requests operated in a planning process by various stakeholders. Figure 3 gives a diagrammatic view of the technical setup and linkage of models to obtain mutual data exchange for the cross-domain simulation outcomes. It illustrates a sub set of implemented simulation models within the whole USCA, which explicitly describe the active components for the treated problem within this approach.

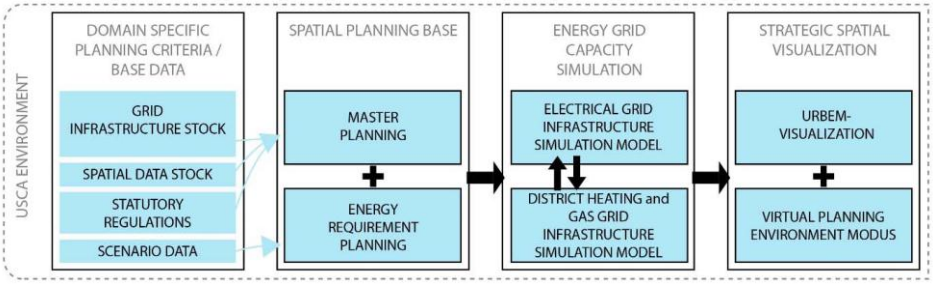

Figure 3: Technical setup of the USCA for energy supply simulation within the test run; Source: own illustration.

2.3 THERMAL ENERGY CALCULATION MODEL

Current developments of the European energy markets are influencing the operation strategy of heat suppliers. Especially providers of district heating systems fed by conventional heat production (i.e. CHP) have to react with appropriate measures to these changes. The integration of thermal storages, decentralization of the heat production, changing heating technologies or adjusting the temperature of district heating networks make it necessary to be able to simulate and analyze existing and future designs of district heating systems. Therefore, a simulating tool for flow networks is developed in Matlab®.

In order to achieve comparable conclusions about operating behavior of district heating systems, it´s essential to create a corresponding model including all its main components like pipes, pumps, storages and valves. The basic idea of the created numerical model is the combination of a steady state hydraulic and a transient thermal calculation of the district heating network (see Figure 4). The results of the iterative hydraulic calculation are the pressure and velocity distribution of the pipe network. These pressures and

velocities are serving as Input-parameter of the thermal calculation. To simulate the thermal behavior of the district heating network a discretized one dimensional pipe model is used. The discretization is done by the Finite-Volume-Method and the resulting equation system can be solved explicitly or implicitly. In case of gas networks, only the steady state hydraulic calculation is applied. A common way to define the topology of networks is the usage of a node-edge matrix. This so called incidence matrix is generated automatically from given GIS data.

The result of the combined thermo-hydraulic calculation is the distribution of pressure, velocity and temperature of the flowing water in the entire district heating network. Furthermore it´s possible to calculate the heat and pressure losses of each pipe and subsequently doing exergy analysis. The introduced simulation tool serves as basis for analyzing and optimizing different designs of heating networks, which can be used to support economic analysis from a technical point of view.

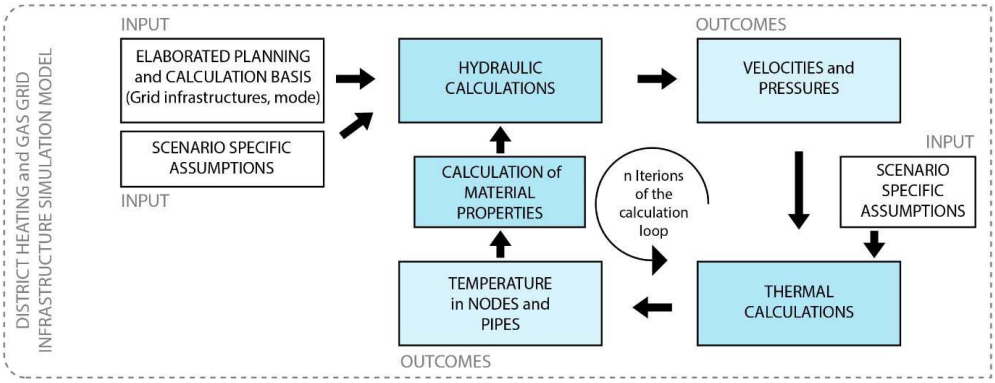

Figure 4: Setup for the district heating and gas infrastructure simulation model; Source: own illustration.

2.4 ELECTRICAL ENERGY CALCULATION MODEL

Power grid models are able to provide statements about reliability, network utilization, and possible overloads considering operational limits within the network. Increasing decentralized generation (e.g., photovoltaic systems), decentralized storage systems and combined energy networks are some of the reasons for defining new operation requirements in future power grids.

In this approach, the model (see Figure 5) describes a medium-voltage power grid with characteristics of an urban area. Short electric line lengths and high load densities are some properties of urban power systems. The input data for the model consist of geographic positions for electric operational equipment used within a specific service area. Handling this large amount of network data needs a powerful data processing platform, in this case Python®. Power flow simulations using the model are implemented in a modified version of the package pypower[1]. The Newton-Raphson algorithm used in pypower for power flow calculations is altered by building the Jacobian matrix only for the first iteration. Therefore, simulation time within the model reduces to a minimum compared to other power calculations approaches. The reason for this is the characteristic of an urban power grid where voltage drops or rises can be neglected due to the short electric line lengths combined with the high load density. In addition, optimized network calculations considering results obtained by the simulation model for thermal energy infrastructures are performed to minimize equipment utilizations inside the energy supply network.

The obtained results show future line utilizations comparing base year calculations with scenarios considering increasing integration of renewables, demographic change and changes in cooling and heating demand served by electric energy. Hence, the developed simulation tool allows network utilities to make future investment decision regarding changing requirements within the power grid.

[1] https://pypi.python.org/pypi/PYPOWER

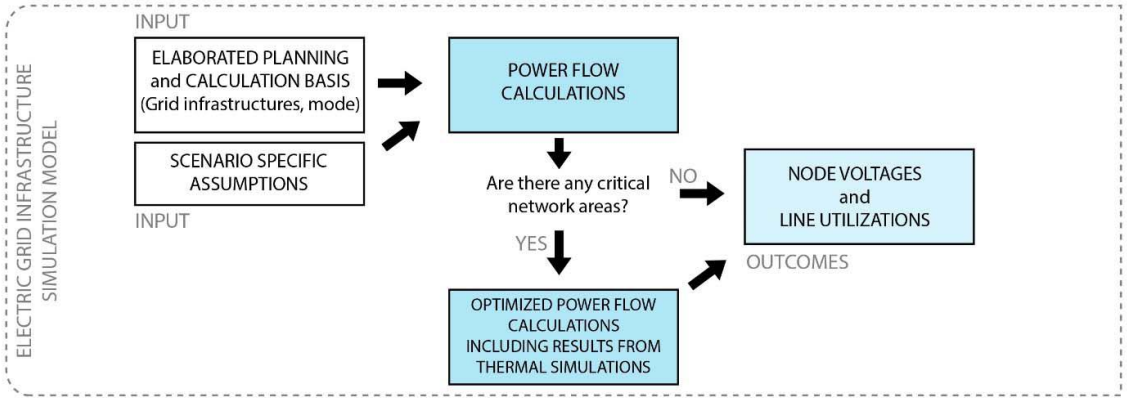

Figure 5: Setup for the electrical grid infrastructure simulation model; Source: own illustration.

2.5 SPATIAL VISUALIZATION OF THE CALCULATION OUTCOMES

The virtual visualization environment of the USCA depicts a user interface for future developments and for assumed scenarios. It holds the 3D model and triggers the calculation outcomes to gain cross-domain views. Figure 6 shows the web-based spatial visualization environment, the “URBEM –Visualization”, which embeds a planning environment for the elaboration and testing of possible construction works within an urban space.

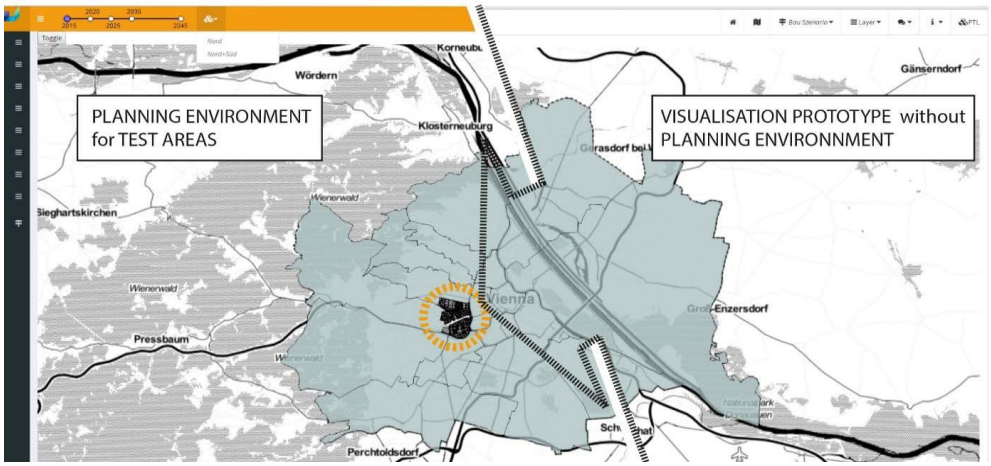

Figure 6: Visual web-based appearance of the interdisciplinary decision and planning support tool, the ‘URBEM-Visualization’; Source: own illustration.

The URBEM-Visualization enables the dynamic generation of multi-dimensional objects and interlinks them with outcomes from domain expert models via identification numbers. Thus, the calculation outcomes are geographically pinpointed and map overviews are designed. These overviews provide the basis for orientation, analysis and communication for input parameters and assist to locate, control and set the ‘regulation screws’ within complex spatial systems. Long-term trends for various frame conditions can become iteratively deliberated.

3 RESULTS

For the determined energy supply alternatives the simulation outcomes are represented in Table 3. Table 3 shows the simulated electrical and thermal supply alternatives to cover the predicted building energy supply within the development area up to 2045. Based on the simulation models for electrical, gas and district heating grid capacities the UPDR shows the need for combined supply technologies to cover electrical and thermal energy supply.

Supply Alternative	2015	2030	2045
Alternative 1	X	X	X
Alternative 2	✓	✓	X
Alternative 3	✓	✓	X
Alternative 4	-	X	X
Alternative 5	-	✓	✓

Table 3: Results for the simulated energy supply alternatives

The calculated numeric outcomes of the grid infrastructure models are processed and visualized within the 'URBEM-Visualization'. Figure 7 - Figure 9 present the visual calculation outcomes. Figure 7 shows an alternative when the predicted building energy demand within the analyzed area is covered only by electrical energy (without the usage of energy storage technologies). Furthermore the figure points out that no area-wide service is available. Due to this fact some transformer stations are colored red which means that the utilization exceeds their limits.

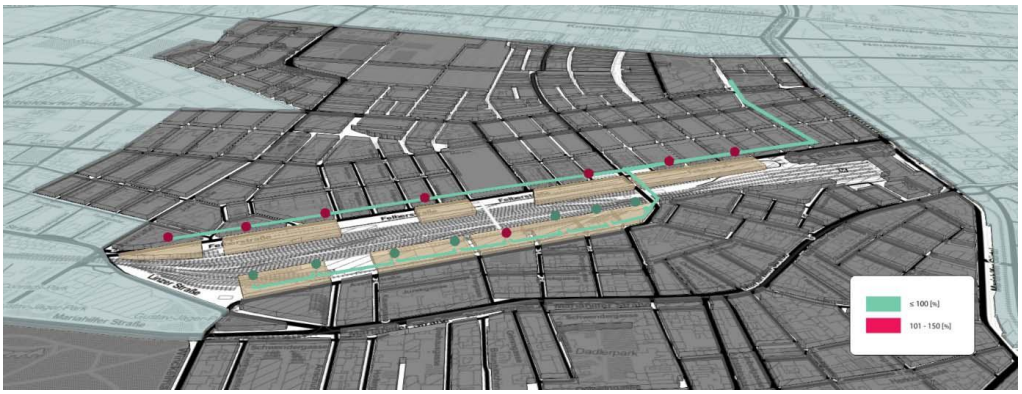

Figure 7: Visualization of capacity loads based on the electrical grid infrastructure simulations for 2030; Source: own illustration.

The extension of the gas or district heating grid infrastructure in addition to the electrical grid infrastructure provides two more energy supply alternatives. Figure 7 shows the energy supply within the urban development area with electrical energy and district heating. All capacities used therefore are in a valid scope up to 2045. All capacity loads in pipes and knots are lower than 100%. The legend for the electrical grid infrastructure is the same like in Figure 8.

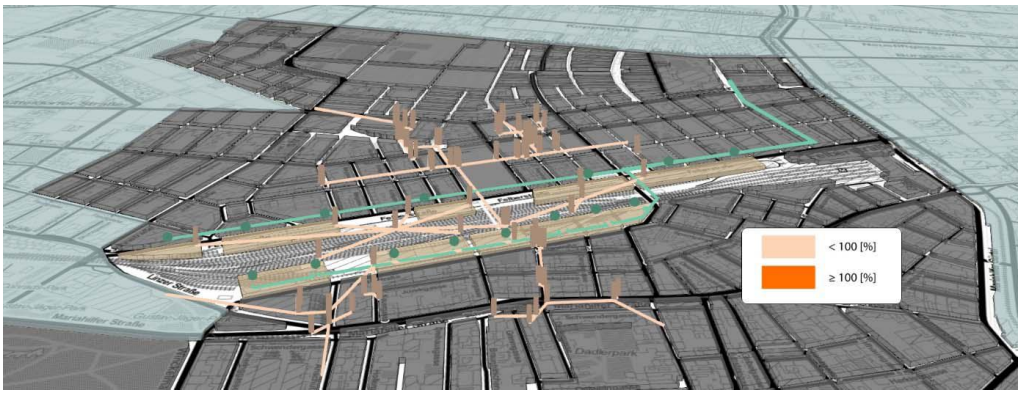

Figure 8: Visualization of capacity loads of the electrical and district heating grid infrastructure based on simulations for 2030; Source: own illustration.

One further valid supply strategy for the building energy supply offers the combination of photovoltaic technologies and thermal storage technologies. This combination causes a pure electrical supply for the development zone. Figure 9 shows this supply alternative.

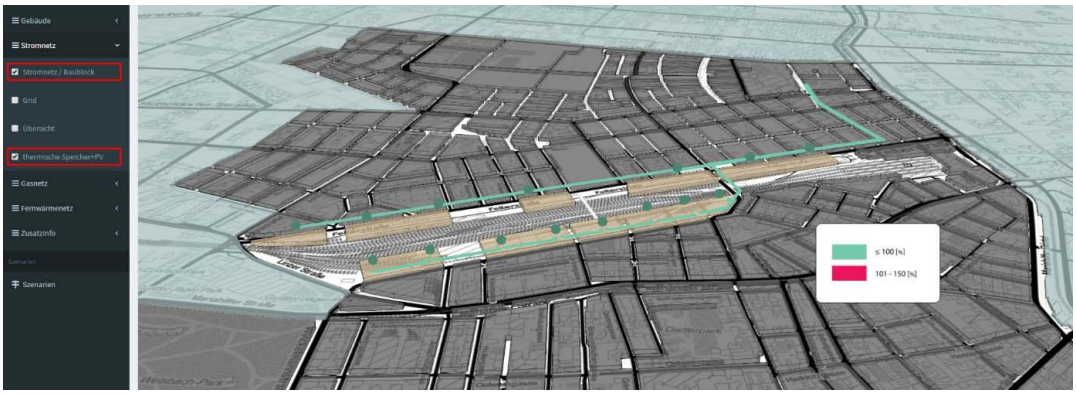

Figure 9: Visualization of the capacity loads of the electrical grid infrastructure based on simulations including photovoltaic and thermal storage technologies for 2030; Source: own illustration.

Based on the presented holistic knowledge for electrical and thermal long-term area-wide energy supply within the development area 'Wien Westbahnhof' new input is available for the early design stages. The decision of an energy supply technology, especially the decision for the thermal energy supply is an essential parameter besides caused constructional necessities. The commitment about the used energy supply option allows to establish the necessary agents of the planning world as well as to define and include chronological impacts and imperatives. Furthermore it enables the analysis of caused impacts spatially. Thus, it depicts an initialization for further iterative design on larger and smaller scales. The approach shows a method to fit the design of grid infrastructures within early design phases. The dynamic incorporation influences the entire planning process and initiates further iterative feedback loops between both, the planning process phases and the involved stakeholders. Figure 10 presents a showcase for initiated feedback loops involving the infrastructure grid development.

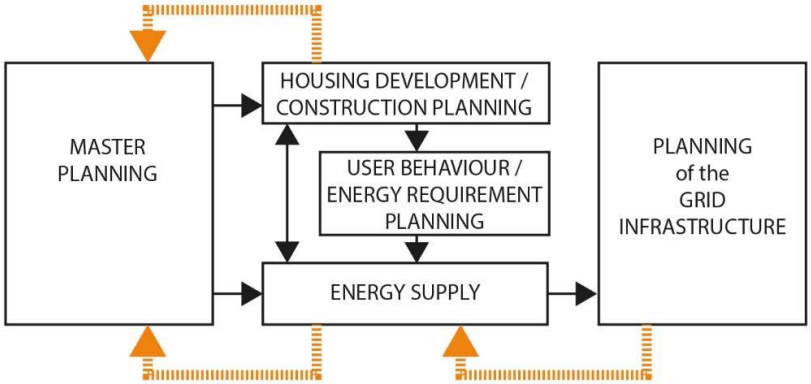

Figure 10: Possible feedback loops within planning process phase sequences; Source: own illustration.

It visualizes a practical multi-phase planning process for multi-scale urban developments. The black arrows show the historical mainstream links and information flows between the individual planning phases. The orange ones present new initiated information feedbacks, which enable impact control and active influence on various planning levels (scales) supporting decisions made by interest representatives.

4 CONCLUSIONS

The interdisciplinary URBEM-Planning and Development Run (UPDR) points out that the URBEM Smart City Application (USCA) concept is a convenient environment and tool to trigger, guide and handle complex planning processes. Thereby the participating agents from the various domains depict the most important parts within the process. The respective domain knowledge is essential for the analysis and interpretation of the implemented information. Furthermore, the explanation and interpretation of the visual outcomes allow setting and testing of new actions. So the URBEM-Visualization within the USCA provides a useful administration environment.

The UPDR shows the need of knowledge about input and outcomes for the decision process to gain and understand interactions within the cross-domain planning purposes. In general, communication is the central topic within the UPDR and the URBEM-Visualization provides a visual base unit concerning this matter.

The survey of energy supply alternatives within the UPDR demonstrate increasing flexibility in planning for future urban developments based on the provision of combined spatial overviews. Thus, new adjusted views provide the finding of comprehensive domains “Hubs”, based on the understanding of interdisciplinary connections. These hubs boost more and more importance to gain sustainable strategies of land use and to combine cross-domain possibilities for energy and mobility subsystems as structures for an urban overall system.

In praxis, supply technologies influence architectural arrangements. The predefinition of an energy carrier technology for a development region in early planning phases can become a general condition within architectural competitions. Housing developers and planners have to cogitate about useable storage technologies. This opens new ways for decentralized energy supply in the building sector.

ACKNOWLEDGMENT

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ID 1331 | REGIONAL PLANNING RESPONDING TO CLIMATE CHANGE

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ABSTRACT: Climate change, although defined with global and long-term scales, has currently caused substantial impacts to many local places. Even though wide efforts are being made to ameliorate the future environment, increasingly frequent extreme events due to the changing climate have been rather unbearable to many places and population. The integration of mitigation and adaptation efforts becomes a critical issue, so that improvement is available to both current and future, both local and global conditions. Spatial planning for urban regions demonstrates unique potential of promoting this integration. With the review of existing studies, we lead the mitigation-adaptation integration to the topics of regional planning and policy mobilities, for which regional governance is proposed as the appealing innovation in climate governance.

KEYWORDS: Climate change, Mitigation, Adaptation, Regional planning, Policy mobilities

1 INTRODUCTION

Climate change is essentially defined as the potential long-term increase of the global average temperature, which, along with the many associated issues, has gained prodigious international attention and controversy (IPCC, 2014). The social response to climate change is usually conceptualised as either mitigation or adaptation, which has formed a dichotomy (Biesbroek et al., 2009; Bulkeley, 2013). This dichotomy indicates that the two parallel lines of practice addressing climate change have no need to heed each other. However, the implicit (hard-to-recognise, yet sometimes fundamental) conflicts between these two types of efforts may hint total failures of the overall effort (Laukkonen et al., 2009).

Although the different characteristics of mitigation and adaptation would necessitate a certain degree of division, the integration of them is to ensure the total effect, which is the efficacy of our general response to climate change, because, after all, it is climate change that sits at the core where either mitigation or adaptation is born (McEvoy et al., 2006; Wilbanks and Sathaye, 2007). We propose this integration as a specific point to joint climate change concern with spatial planning which is striving to justify its role in addressing climate change (Campbell, 2006; Davoudi et al., 2009). The finding of researching in the literature on spatial planning narrows down to a scale-sensitive conceptual model which embeds mitigation and adaptation in a cross-scale framework (Howard, 2009). The key potential of integrating mitigation and adaptation is to take into account a full range of spatial scales. This conceptual model suggests a mode of mitigation-oriented adaptation as the most desirable integration of mitigation and adaptation, which would also be the most effective response to climate change. Moreover, compact urban form and green open space are recognised as important elements constituting the spatial planning approach towards mitigation-oriented adaptation, for which we propose further research on regional planning. At last, policy mobilities is briefly reviewed to demonstrate its relevance and competence in searching for effective form of regional planning responding to climate change. The expectant contribution is not only an advocacy of planning in the multi-disciplinary context, but also a proposal of some very effective tactics. The following three sections before conclusion will thus unfold the dichotomy between mitigation and adaptation, a scale-sensitive model integrating mitigation and adaptation, and policy mobilities.

2 THE DICHOTOMY: MITIGATION AND ADAPTATION

The dichotomy between mitigation and adaptation has been observed in policies concerning climate change, which means mitigation and adaptation are traditionally and perhaps still often conceived of as two fundamentally different strategies of responding to climate change (Cohen et al., 1998; Wilbanks and Sathaye, 2007). Mitigation means to prevent or decelerate the increase of global mean temperature, while adaptation means to accept and live with the environmental conditions under the warmer climate. Since climate change is considered largely caused by the human-induced emission of greenhouse gases, mitigation aims at reducing this emissionby limiting anthropogenic causes. In contrast, adaptation focuses more on the consequences of climate change than the causes. For example, more frequent extreme precipitation, heat waves and rising sea level (Bulkeley, 2013).

For a long time, mitigation has dominated the political discourse which thus overlooked adaptation (Schipper, 2006; Klein et al., 2007). The quantitative features of mitigation match very well with the evidence-based policy making and international negotiation (Biesbroek et al., 2009). However, mitigation is a long-term strategy whose time lapse between actions and impacts is large (McEvoy et al., 2006). Moreover, the issues of environmental justice and international competition that complicate the global negotiation generate more difficulties in implementing mitigation programmes (Bulkeley, 2013). Even though current mitigation effort successfully proceeds, the extent of the climate change consequences will continue to intensify in the short-term future, which would very likely exceed the response capacity of many countries and cities (e.g. comparing Bangladesh to the Netherlands regarding flooding, and Bangkok to London regarding heat waves). Therefore, adaptation gains budding attention for complementing mitigation to form a more comprehensive response to climate change (Wilson and Piper, 2010). Adaptation is relatively (compared to mitigation) short-term and highly case-specific, because, for instance, major issues facing coastal cities are disparate from those for inland areas (e.g. flooding and drought, both of which prove to be the consequences of climate change, Bulkeley, 2013). These issues fluctuate frequently over time along with different kinds of extreme weather events which affect the cognitive intensity of associated risks (Matthews, 2014). Therefore, adaptation often becomes concrete only at the local scale where particularities are taken into account, which causes great challenges for making adaptation policies concerning wider geographical area. In practice, adaptation strategies tend to match the local scale, while decision-making regarding mitigation often takes place at the national level (Wilbanks and Sathaye, 2007).

The dichotomy between mitigation and adaptation conceptualises the fact that mitigation and adaptation are understood and practiced largely separately (Cohen et al., 1998; Howard, 2009). Because mitigation and adaptation are different in many respects including chief goals, evidence bases, temporal and spatial scales, some policies only consider mitigation while some others only adaptation (Swart and Raes, 2007; Biesbroek et al., 2009). However, mitigation and adaptation are complementary to each other in forming the overall response to climate change (Wilbanks and Sathaye, 2007; Howard, 2009). The dichotomy of them may detract from the efficacy of either, which may further lead to failures of the overall response (Biesbroek et al., 2009). The danger of this dichotomy is firstly the potential of indicating substitution between them. Adaptation maybe used by some parties to avoid taking mitigation responsibilities, since mitigation often means to compromise on economic growth. Similarly, mitigation may be taken as the excuse of making no adapting plans. Secondly, the lack of informative integrating analyses of mitigation and adaptation would foment conflicts between them. One approach could be adaptive at one scale while generating negative impact to mitigation at another scale. For example, in the cities hit by frequent heat waves (e.g. cases from Latin America, Pizarro, 2009), installing air conditioners and increasing distance among buildings would be helpful to decrease the temperature, for which supporting air conditioning and encouraging urban extension could be the adaptive strategies adopted by the local government. However, these adaptive actions will certainly increase emission and eventually increase the heat level at the global and long-term scales, which is undermining to mitigation (also termed mal-adaptation as simply transferring adverse impacts to other time, places or policy sectors, Wilson and Piper, 2010). Therefore, research for synergy is called for to prevent the efforts at one end of the dichotomy from cancelling the efforts at the other.

Studies with an economics perspective offer cost-efficient analysis to integrate mitigation and adaptation (Wilbanks, 2005; Goklany, 2007; Wilbanks et al., 2007). The cost-benefit analysis calculating the cost and benefit of both mitigation and adaptation approaches helps policy-makers to divide fiscal resources between them (Dowlatabadi, 2007; Klein et al., 2007). For example, the adaptation strategy of building

dikes bears the cost of constructing the dikes and generates benefit through the value of the protected land (Tol, 2007). At the same time, the cost spent on mitigation programmes (e.g. energy research) may reduce the cost for adaptation, in this case through lowering the construction cost of building dikes, because the slower rate of sea level rise due to mitigation would require a lower height of the dikes. Concerning the above scenarios, modelling with more sophisticated details would be able to inform policy makers whether a proportion of fiscal resources should be used for mitigation or adaptation, through which decision-making for mitigation and adaptation is integrated (Tol, 2007). Compared to the dichotomist view which suggests the competition between mitigation and adaptation over resources, the cost-benefit integrating model demonstrates why these two could actually share the cost and collectively make better use of the resources. The central merit of this cost-benefit integration of mitigation and adaptation is to make the overall response to climate change the most cost-efficient. However, cost-efficiency may be only one of the desirable scenarios. Moreover, the quantification of mitigation and adaptation may imply that one could be the substitute of the other, which is more about trade-offs than integration (Tol, 2005). Modelling provides calculating tools to measure the integration of mitigation and adaptation, which must be based on an integrating framework that informs the model what factors need to be included. Modelling itself as one way of expressing the integration would require the integration to have been done through an integrating framework beforehand. Such a framework varies greatly across cases among many of which substantial research is still needed before it is ready for quantification. Risk governance is proposed to integrate mitigation and adaptation into the concept of response capacity (Grothmann and Patt, 2005). Mitigation endeavours to reduce the risks of possible adverse impacts, and adaptation builds the capacity with which the impacts would be coped (Jones et al., 2007). For this reason, managing risks and developing capacities would resolve the dichotomy between mitigation and adaptation. Compared to the focus on the inter-relationships between mitigation and adaptation, some alternative proposals argue that trade-offs between investing technological innovation and encouraging social response are more pertinent (Tompkins and Adger, 2005). This suggests policy makers to think about how much to invest technology innovation (e.g. clean energy vehicles) and how much to invest social behaviours (e.g. campaigning for public transiting over driving private cars), rather than how much on mitigation and how much on adaptation. Resilience building proves to be suitable for the current situation which is replete with uncertainties (Saavedra and Budd, 2009). Risk governance transfers the focus on the future (mitigation) into the focus on the current capacity building, the latter of which is more concrete and thus more attractive to local communities (Laukkonen et al., 2009). For policy makers, however, there have been several other dichotomies, for instance, mitigation-adaptation, innovation-behaviour, long and short term, and public-private, one of which could not solve the others. For example, technology innovation could still be divided into mitigation ones (e.g. energy-efficient light bulbs) and adaptation ones (e.g. smart ventilation schemes). The struggle between mitigation and adaptation still exists and may come forward sooner or later.

Sustainable development is taken as another framework to integrate mitigation and adaptation, which warns the discussion between mitigation and adaptation of the potential of overlooking the ultimate goal that both of them are after. For instance, in the cases where air quality is harmed by the emission of polluting gases many of which are also counted as greenhouse gases, a common goal of adaptation (improving air quality) and mitigation (reducing emission) is to protect public health from respiratory disorders (Dowlatabadi, 2007). The focus on the dichotomy between mitigation and adaptation may preclude policy makers from realising that their mitigation policies, which are supposed to aim at sustainability in the long run, actually end up with unsustainable situations (Urwin and Jordan, 2008). The list of the gases harmful for health is different from the list of greenhouse gases, for which policies limiting greenhouse gases emission (e.g. taxing tailpipe emission of cars) may increase the alternative sources that emit less greenhouse gases but more harmful gases (e.g. switching from gasoline cars to diesel cars) (Dowlatabadi, 2007). Therefore, to prevent mitigation policies from disturbing adaptation, or to prevent the enthusiasm for climate change response from harming the quality of environment, the prerequisite is to clearly set sustainable development as the ultimate goal of both mitigation and adaptation (Katarina and Ulrika, 2009). Sustainable development becomes the common criteria to scrutinise mitigation and adaptation policies. The critique to this approach lies in the contentious discussion about sustainability itself. Compared to the author who cherishes the quality of environment at any time (both the future and the current), some author may argue that a certain extent of compromise on the current condition is for the long-term betterment (Dowlatabadi, 2007; Howard, 2009). It is difficult to decide whether a harmful environment now or an even more harmful environment in the future is more unsustainable. In these cases, the integration of mitigation and adaptation still depends on the debatable topic about what integration is considered desirable. In summary of this section, the problematic dichotomy between mitigation and adaptation is difficult to eliminate. The complexity of climate change issues requests

response in various forms and at various levels, which underlies the conceptualisation of mitigation and adaptation that have helped policy makers understand and manage collective actions. However, like a two-edged sword, the separation of mitigation and adaptation efforts may generate redundant cost or significant conflicts. Much research is striving to offer useful frameworks for the integration, although the difficulty of this has not been completely overcome. Therefore, the exploration of the integration of mitigation and adaptation remains a critical research question. The next section will unfold how spatial planning research has prepared for further study on this question.

3 A SPATIAL PERSPECTIVE: REGIONAL PLANNING

Spatial planning policies concern the impact of oft-anthropogenic spatial arrangements as well as the spatial impact resulted from other kinds of natural processes and human activities. For example, planning cities in compact forms may reduce the greenhouse gases emission by limiting the total amount of cmmuting traffic (McEvoy et al., 2006; Hamin & Gurran, 2009; Pizarro, 2009). Moreover, transformation of the current form of built environment is urged by the need of spatial adaptation to the risks of sea level rise and increasing extreme precipitation (e.g. programmes about “space for water”) (Davoudi et al., 2009). Furthermore, modern economy continues to encourage population to spatially concentrate at climate-risky locations (e.g. large coastal cities encountering sea level rise) (Bulkeley, 2013). Altogether, planning is interested in the spatial dimension that is seen in many issues and cases, including climate change. Some evidence proves that spatial planning plays a significant role in addressing climate change, for example, compact urban form as mentioned above (Davoudi et al., 2009; Hunt & Watkiss, 2011). However, there also exist doubts about whether spatial planning is thoroughly entitled to deal with climate change, especially considering the predominance of natural science (e.g. meteorology) in climate research (Campbell, 2006). What‟s more, there also exists suspicion that climate change is rather a political invention than scientific fact. Against this background, spatial planning policies have to articulate the very contribution of their own in addressing climate change, through which planning approaches solicit political and public support (Wilson, 2006a; 2006b). Spatial planning is keen on managing spatial scales, which are recognised as a key of the integration of mitigation and adaptation (Howard, 2009). The multiplicity of impacts depending on spatial and temporal scales results in the transformation of mitigation and adaptation across scales (i.e. mitigation at one scale simultaneously becomes adaptation at another scale). Therefore, actions should be contemplated in several, instead of single, spatial scales including global, national, regional and local, as well as temporal scales including short, medium and long terms. Conceptual models embedding climate change response into scale-sensitive frameworks provide opportunities for this scale-concerned integration of mitigation and adaptation (Howard, 2009). Howard (2009) offers an integrating conceptualisation whose essential key is the concern on the multiplicity of spatial scales. For example, air conditioning is a local adaptive tactic for the places that are hit by high temperature, but its cost of energy and its emission transform this local adaptation into an action hindering mitigation at the global scale. Another example is urban extension. Encouraging people to live in the sub-urban areas could be an adaptive strategy that may solve the problems of urban heat island and air pollution in the local city centres, but urban sprawl which would generate more emission from transportation also hinders mitigation at the global level.

Howard (2009) developed the diagrame shown in Figure 1 to demonstrate the conceptualisation of the inter-relationshipsbetween mitigation and adaptation. The efforts helpful for both mitigation and adaptation fit in the area of A. In the area of D and E, approaches are helpful for one but problematic for the other. Moreover, in the area of B and C, approaches are supportive to one and neutral to the other. The two examples mentioned above (air conditioning and urban extension) belong to the area of E. Planting more trees in the urban regions is an example for the area A, because trees and green parks can absorb emission, function as temporary floodplain, adjust temparature, as well as improve the quality of local environment. Renewable energy research which mainly aims at mitigation with little immediate impact on adaptation could fit in the area B. For the cases where the shortage of water supply is recognised as a climate change issue, harvesting rainwater could be taken as a tactic adapting to the drier micro-climate although it has few impact on the overall climate, which matches the area C. Finally in the area D, compact urban form, as opposed to urban sprawl, could be an example of compromising on the local environment for the purpose of global mitigation. Some of the examples here will be discussed again in more details later.

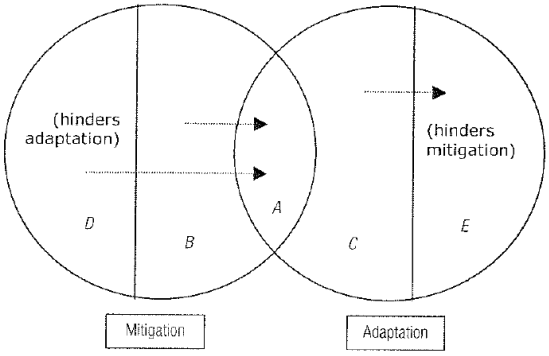

Figure 1. Conceptualisation of the inter-relationship between mitigation and adaptation (source: Howard, 2009)

So far this conceptual model resembles some other authors‟ matrices categorising the relationships between mitigation and adaptation (Klein et al., 2007; Wilson and Piper, 2010). These matrices offer four categories including approaches focusing on mitigation while having impact on adaptation, approaches focusing on adaptation while having impact on mitigation, approaches concerning the trade-offs between mitigation and adaptation, and approaches aiming at a win-win situation. Table 1 presents a brief summary of the examples offered by these matrices.

Inter-relationships	Examples
Win-win (Mitigation and adaptation are mutually enhanced.)	Planning for suitable urban form (reducing emission and supporting livelihood) Offshore wind energy farms (providing clean energy with little compromising on other land use, compared to hydro power) Bio-energy crops (providing clean energy and enhancing rural economy) Urban agriculture and local food markets (reducing energy consumption and supporting well-being)
Trade-off (An optimal balance between mitigation and adaptation is to be identified.)	Dikes and surge-barriers (adaptive infrastructure which causes emission and requires energy to operate) Hydro power plants (providing clean energy but may impede emission reduction by permanently inundating large areas of forests) Roads connection to promote rural economy (adaptive infrastructure which causes emission)
Mitigation-centric	Tax on vehicle tailpipe emission Hybrid or complete electric vehicles

Table 1 Categorising inter-relationships between mitigation and adaptation
(source: adapted from Klein et al., 2007; Wilson & Pieper, 2010)

Connecting the resource-competing relationship between mitigation and adaptation, any approach of one kind would have at least some cost (negative impact) to the other, since resources being spent on either would mean less resources available for the other. Therefore, it becomes more difficult to evaluate the inter-relationships which would require some exact cost-benefit calculation. Moreover, it becomes thus more difficult to find a truly neutral relationship in which the cost happens to evenly equate the benefit. For this reason, in the qualitative domain, Howard (2009) assumes that adaptive approaches would to a larger or smaller degree hinder mitigation (completing for limited resources), if they have no obviously significant facilitation to mitigation. Furthermore, he considers the mitigation approaches always fundamentally beneficial to adaptation in larger spatial and longer time scales, because any mitigation approach as stabilising changes would make the future situation easier for adaptation. Therefore, back to the diagram in Figure 1, Howard (2009) proposes the trends of approaches in the areas of B and D moving towards A, and those in C moving towards E. The first trend represents the conceptualisation that all the mitigation approaches would ultimately enhance both mitigation and adaptation. The second trend argues against those adaptive tactics which have inadequate concern on mitigation, for which reason short-term passive adaptation mismatches the long-term holistic considerations of climate change response. The essential conclusion of Howard (2009) is two-fold. Firstly, mitigation is a primary form of adaptation. Mitigation is

fundamentally adaptive, in the long run if not immediately, for which mitigation strategies could be treated as adaptation strategies. Secondly, mitigation strategies without significant benefit to adaptation are better than adaptation strategies without significant benefit to mitigation. Any local actions should bear in mind that climate change is essentially a global issue, so avoiding the global responsibility (e.g. free-riding or mal-adaptation) is impeding the long-term progress. Therefore, the integration of mitigation and adaptation in this model is to promote mitigation-oriented adaptation. Even though these mitigation-oriented adaptation tactics might be more expensive, complex or culturally inconvenient than the straightforward approaches, they are worth investment (Howard, 2009).

Among the many examples considered by the integrating conceptualisation, compact urban form (or compact cities) is intensively concerned by spatial planning. Within the planning field, compact city was campaigned for the stabilisation of climate and sustainability, but this strategy has become controversial regarding its two-edged characteristics (Pizarro, 2009). A compact urban form endorses the high concentration of sites, buildings and population, urban fabric with small blocks and many intersections, and the mixed-use of space, so that people have less needs of moving by private cars (Hamin and Gurran, 2009). The high density of population that intensifies mobility needs would support mass-transit system which is at least energy-efficient if not emission-free (Pizarro, 2009). This becomes the most obvious strength of compact cities regarding climate change mitigation, since modern transportation is recognised as one of the most significant sources of emission. Moreover, mixing spatial functions which may encourage social interactions is conceived of positive to social and economic sustainability. However, the very compact forms of many cities also generate problems to climate change. First of all, the compact (i.e. crowded) environment may intensify air pollution and thus public health problems, even if the total amount of emission is reduced (Howard, 2009). Secondly, in the cities with hot-humid summers, a compact form underling the urban heat island effect may encourage air conditioning which then probably cancel the reduction of emission from transportation (Pizarro, 2009). Thirdly, the high density of built environment is likely to sacrifice permeable surfaces, which increases the chance of flooding due to storms (Hamin and Gurran, 2009). Moreover, some case study considers the proximity of sites a risk of exacerbating unfortunate accidents (e.g. explosion and fire, De Roo, 2003).

Bearing the paradoxical issue of urban form in mind, a related planning concern is green open space. More space for planting trees is suggested by many urban planning scholars as a win-win solution contributing to both mitigation and adaptation (Hamin and Gurran, 2009; Howard, 2009). Green space (and ideally forest) can serve as a carbon sink area (Klein et al., 2007; Ravindranath, 2007). Green parks provide natural surfaces to absorb storm water (Stone, 2005). Photosynthesis of plants consume solar heat (Nyong et al., 2007). Open space is helpful for wind circulation which may cool the environment and improve air quality at the same time. In a word, green space seems a key to solve the many problems associated with the compact urban form, but it also seems to add another paradox: planning more green (open) space means a less compact urban form. As a result, Hamin and Gurran (2009) conclude that the most effective form contains a moderate density with adequate green infrastructure. Pizarro (2009) concludes with a multi-angular framework assessing a suitable urban form for a particular case. Moreover, McEvoy et al. (2006) suggest developing regional parks near urban areas as one alternative to increase the proportion of green space in urban regions. The suggestions above about compact cities and green space could be connected to the studies about green infrastructure, eco-cities, and urban ecology, over which what we observe as an overarching issue is the potential advantages of spatial planning at the regional scale. Regional planning has the potential to internalise the paradox between compact urban form and green open space, through which the advantages of both could be delivered. Planning urban regions with the regard to this concern would set up significant spatial foundation of the integration of mitigation and adaptation, and provide fundamental bases for mitigation-oriented adaptive urban societies. While spatial planning is striving to justify its role in addressing climate change, the potential of regional planning in integrating climate change mitigation and adaptation is considered a relevant answer and promising proposal. This section argues about how the call for the integration of mitigation and adaptation leads to the proposal of regional planning. The next section will further introduce policy mobilities as the channel to explore the insights in both practice and research.

4 GOVERNANCE INNOVATION: POLICY MOBILITIES

The integration of climate change mitigation and adaptation becomes a window to deepen the understanding of cross-scale effect, especially between the regional and global. Research on multi-level

governance and supranational networks suggest a way of cross-scale transformation that is beyond the vertical summing-up mode assisted by the hierarchical administrative systems. We consider international policy mobilities one of these channels through which the efforts of climate change mitigation and adaptation are interwoven and transformed through scales. Policy mobilities conceptualises the processes and outcomes associated with the fact that policies for shared issues at various places the world over become increasingly convergent (Temenos and McCann, 2013). The increase of policy mobilities is significantly supported by the extensive flow of information and intensive networks of agents at the current age (McCann and Ward, 2011). Compared to policy mobilities, a highly related concept is policy transfer (Benson and Jordan, 2011; McCann and Ward, 2011; 2013; Marsh and Evans, 2012). Research on policy transfer has focused on transfer-agents and the role of nation states, which matched the situation decades ago when most transfer relations were at the nation scale and the transfer relied heavily on particular agents including both individuals and institutions. At that time, power relation was the backbone issue which was why policy transfer was firstly concerned in political studies. Geographers argued later that geography should be taken into account as time had changed (McCann and Ward, 2013), and researchers in political science also acknowledged that the concept of policy transfer was rather evolving than static (Marsh and Evans, 2012). Both the conceptualisation of transfer and mobilities concern the movement of policies, but the literature about policy mobilities conspicuously intends to bring in new meanings that more accurately match the reality of the current age.

The concern from geography raises the awareness that understanding of policy transfer should go beyond the nation-centred view (Benson and Jordan, 2011; McCann and Ward, 2013). There have been more cases where policy mobilities is inter-urban, and many more actors and venues are involved, which is why some authors deliberately pluralised the word mobility to connote the multiplicity of processes and outcomes involved (Temenos and McCann, 2013; Stone, 2004; Cook and Ward, 2011). Moreover, policy mobilities also has influential impacts on the construction of geographical scales and the assemblage of cities and regions (Allen and Cochrane, 2007; Anderson and McFarlane, 2011). Study on policy mobilities matters not only for the policies and their movement, but also for the physical outcomes of how global geography is drawn and how local places are shaped. Moreover, urban regions are privileged sites of innovation, for which research appeals analyses about the inter-scalar conditioning of governance and policy (Temenos and McCann, 2013). In fact, the popularity of many policy models is based on the popularity of particular cities and the successful implementation of the policy models there (Ward, 2006). Global cities have gained more attention and thus attract more research (McCann, 2004). On the other way, policy mobilities helps cities for their ambition of becoming global. Policy innovation in previous research was conceptualised similarly as policy mobilities (Graham et al., 2013; Berry and Berry, 2007). Policy innovation is distinguished from policy invention while referring to the meaning of „new" (Berry and Berry, 2007). Policy innovation in literature refers to the adoption of such a government programme which is new to the government adopting it. In contrast, policy invention as the process through which original policy ideas are conceived is much less studied than innovation as adopting policies having existed or implemented somewhere else (Berry and Berry, 2007). Therefore, policy innovation and policy mobilities to a large degree mirror each other. Although a policy may not be entirely new, the adoption of it may be very new to a particular place. Policies are context and geography sensitive, for which adopting a policy from some other context or place can be quite innovative and result in „new" impacts at the place where it is adopted. Therefore, policy mobilities become the way of innovation by policy-makers who introduce some strategy feels new and may even disrupt the previous condition of a particular place.

5 CONCLUSIONS

The social response to climate change is seen in the dichotomy between mitigation and adaptation, for which there may be conflicts between them impeding the overall efforts of intervening in climate change. The integration of mitigation and adaptation is calling for comprehensive consideration on the multiplicity of scales. Spatial planning approaches can fit in the conceptual model where mitigation and adaptation are well integrated over multiple scales. Compact urban form has the ability to mitigate emission, although it may be unsuitable for adaptation for some geographical areas. Green open space is then suggested to complement the approach of compact cities so as to make progress towards both mitigation and adaptation. The conclusion of this literature study is to propose further research on regional study to demonstrate the role played by spatial planning in dealing with climate change. Moreover, policy mobilities matches the methodological concern on inter-scalar impacts of geography and spatial forms. The transfer

of policy knowledge is also considered useful for governance innovation which is appreciated as a key of successful climate response.

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ID 1354 | FLOOD RISK MITIGATION: FROM ENGINEERING TO ECOSYSTEM-BASED MEASURES. THE BENEVENTO CASE STUDY

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1 THE INCREASE OF FLOOD RISK IN EUROPE

In the last two decades Europe has faced a strong increase of flooding events. Out of 325 flood events recorded from 1980 to 2012, indeed, more than 200 occurred in the 2000s (EEA, 2012). Among all natural hazards, more than 64% of the damages are due to hydro-meteorological events, namely to floods and landslides, with costs higher than 13 billion euros since 2000 (EEA, 2013a). If on the one hand the increase of heavy downpours can be ascribed to climate change, on the other hand the amount of damage has to be imputed to the significant, and sometimes uncontrolled, urbanization processes (EEA, 2017). Therefore, both of these matters have to be addressed in order to prevent future flood disasters.

Climate change, intended as "a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period", is caused by "internal processes" or by "persistent anthropogenic changes in the composition of the atmosphere or in land use" (IPCC, 2001). The subversion of natural patterns has led not only to the increase of the sea level and of the mean temperatures but also to "changes in the frequency and magnitude of heavy precipitations" (EEA, 2017) that are expected to become even more frequent over the 21st century. Meanwhile, the population's strong migration toward cities has enhanced the growth of urban areas with the consequent processes of land take and soil sealing (EC, 2012). In Europe, since the 1950s, the amount of impervious surfaces has registered an increase equal to 78%, with an increase of only 33% of the population (EC, 2012).

Furthermore, numerous European cities are located close to rivers or along the coast, and are continuing to spread into areas potentially prone to river floods (EEA, 2017), with a consequent increase in the number of inhabitants and assets exposed to fluvial flood risk. The latter, that occurs when the "river run-off volume exceeds local flow capacities" (EEA, 2012b), is only one of the risks connected to heavy downpours.

Extreme rainfalls may put at risk, indeed, also areas located far from water bodies. The increasing levels of land take and soil sealing consequent to the sprawling of urban land uses, often combined with the widespread inadequacy of existing sewage systems, are leading to a significant increase in pluvial flood phenomena that are only optionally considered by the Flood Directive. These phenomena are related to the "excessive superficial run-off and ponding" (EEA, 2016a) that occurs when the rainwater's load exceeds the city's sewer system capacity. Furthermore, it is worth noting that pluvial and fluvial flooding risks are strictly connected. As a matter of fact, sewage systems discharge water into the closest water bodies: therefore, their overload due to an excessive amount of impervious surfaces (pluvial flood), may cause the raise of water levels above normal ranges that can culminate with the river's overflow (fluvial flood).

2 COPING WITH FLOODS: EUROPEAN STRATEGIES

In the face of the significant increase of flooding events throughout Europe, numerous tools and initiatives have been put in place in the last decade. First of all, in 2007, the European Flood Directive has been issued. This document clearly highlights the importance to develop effective flood management plans, outlining both protection and prevention strategies able to "prevent and reduce damage to human health, the environment, cultural heritage and economic activity" (Directive 2007/60/EC). Prevention and protection, as later on explained by the European Commission's Note "Towards Better Environmental Options for Flood Risk Management" issued in 2011, can also be achieved by implementing environmentally friendly solutions, such as "natural, ecosystem-based water retention measures" (EC, 2011). These solutions, besides requiring less expenses and maintenance compared to the traditional engineering measures, allow to produce numerous indirect benefits, such as promoting tourism, creating

new job opportunities and providing new recreational areas (EC, 2011). Moreover, the increasing awareness that changes in climate conditions are likely to further increase flood risk in Europe and that cities represent not only the major contributors to climate change but also the most vulnerable targets to its impacts, in the April 2014, the European Union launched the Mayors' Adapt Initiative, addressed to support Local Authorities in carrying out comprehensive local adaptation strategies or integrating adaptation issues into relevant existing plans, in order to increase city's resilience in the face of climate impacts.

In order to drive cities towards the development and implementation of effective adaptation strategies in the face of climate impacts, the European Union provided guidelines and platforms aimed at guiding adaptation processes and favouring the sharing of information and best practices. In detail, provided guidelines distinguish adaptation actions into three main categories: grey infrastructure, including physical interventions aimed at improving the capacity of the built environment to withstand extreme events; green infrastructure aimed at using "functions and services provided by the ecosystems to achieve a more cost effective and sometimes more feasible adaptation solution than grey infrastructure" (EEA, 2012b); and soft measures, which include land use planning and control, monitoring and warning systems as well as information campaigns and devoted programs to raise citizens' awareness, to promote adaptive behaviours and to favour stakeholders' engagement. Furthermore, the EEA also underlines how the integration of the two approaches, "soft" and "green", helps achieving better performances. Indeed, the involvement of stakeholders and the growth of awareness among the population strengthen the "inter-connections between natural and social systems" by building up acceptance and accelerating the adaptation process (EEA, 2013b).

In respect to floods, numerous studies (Foster et al. 2011, EEA, 2016a) have recently emphasized how the so far most widespread grey infrastructure, that include retentions or protection structures (e.g. dams, dikes, embankments), show high construction and maintenance costs, create a false sense of safety, pushes further urban developments, and provide a limited flexibility in the face of the uncertainty of long-term climate conditions. Based on these assumptions, current European approach to flood adaptation is progressively shifting from an "engineering-based" perspective, largely based on grey measures, toward an environmental-based perspective, mostly relying on green and soft measures, characterized by lower costs, higher flexibility and multiple benefits. The latter would enable cities to turn climate threat into an opportunity to create a safer urban environment and a better quality of life for citizens. Such a shift is clearly remarked by the French National Strategy for Flood Management, issued in 2014, which consider the creation of new grey infrastructure as the last option, to be put into play only when all other possibilities are insufficient (EEA, 2016a).

Hence, in the last years numerous cities are developing and experiencing "green" adaptation strategies, involving the increase and the enhancement of urban green areas, the integration of Sustainable Drainage Systems (SUDSs) in areas characterized by a predominance of impervious surfaces and the restoration of natural environments such as floodplains. Moreover, an increasing number of cities are promoting community based adaptation processes, in order to improve local awareness as well as to prepare local communities (decision makers and citizens) to make informed decisions about adaptation in a constantly changing scenario (Keys et al., 2016).

Summing up, starting from the second half of the 2000s, European Union has undertaken a path toward the reduction of different typologies of fluvial and pluvial floods that is fully in line with the hints provided, on a global scale, by the Sendai Framework for Disaster Risk Reduction 2015-2030, issued in 2015, that represents a milestone towards more effective risk reduction strategies. The Framework has indeed clearly stressed the linkages among risks, climate change and sustainability, emphasizing the need for strengthening "the sustainable use and management of ecosystems" and implementing "integrated environmental and natural resource management approaches that incorporate disaster risk reduction". Furthermore, the Document has put large emphasis both on the need for "mainstreaming of disaster risk assessments into land-use policy development and implementation, including urban planning" and for promoting "a culture of disaster prevention, resilience and responsible citizenship" by encouraging an active engagement of public and private stakeholders (UN, 2015).

3 CITIES DEALING WITH FLOOD RISK: EUROPEAN BEST PRACTICES

Cities represent the economic, cultural and political core of today's society. In Europe almost 73% of the population lives in cities and this percentage is expected to grow up to 80% before 2050 (EEA, 2015). This high concentration of inhabitants increases on the one hand the exposure to natural disasters and, on the other, the opportunity to spread new prevention strategies.

For this instance, cities represent the best place to encourage the promotion of ecosystem-based strategies. Many have already developed pioneer projects in this line, by adhering to global and/or European initiatives, so that today they can be looked at as best practices. Likewise, cities also offer the opportunity to introduce and successfully employ "soft measures". The latter are conceived to raise awareness and increase citizens' involvement in outlining prevention strategies. This approach, if accurately applied, would not only promote the acceptance of new policies but also positively influence their final outcomes.

Hereunder two European best practices are briefly described: the first one refers to the city of Sheffield that introduced green infrastructures to reduce flood risk; the second one refers to the city of Ghent that successfully promoted citizens' engagement in the implementation of green measures.

The city of Sheffield, located in South Yorkshire (England), rises along two main rivers, the Don and the Sheaf. This city has suffered a devastating flood in 2007 and almost repeated this experience 2012. Thus, in 2015 the "Flood and Water Management Capital Investment Programme" was issued to develop projects able to prevent these events from happening again. Sheffield's flood protection scheme is based on three main goals: "slowing the flow", "containing the flow" and "building resilience" (Sheffield City Council, 2017).

Sheffield aims at achieving the first goal, slowing the flow, by implementing green measures, capable to intercept rainwater preventing it from increasing river's flow. As a matter of fact, the realization of both storage areas and SUDSs would allow capturing rainfall and soaking it before it reaches the river. More precisely, this goal is expected to be achieved by: managing rural land, resorting to "tree planting, moorland restoration and creation of landscape features" to collect rainwater; managing existing reservoirs, that have to be transformed in order to better contribute to flood prevention; creating new storage areas, designed and conceived for storing rainwater; and urban water management, introducing the SUDSs to reduce the superficial run-off. In respect to the second goal, containing the flood, the city aims at improving existing flood defence measures. For instance, by raising the level of existing embankments and reducing possible obstacles along the river. Finally, the third goal, "building resilience", the city aims not only at improving warning systems and emergency policies but also at ensuring a better maintenance of the rivers and at increasing the capability of urban environment to recover after the flood.

In brief, Sheffield integrates green measures into two of its three main flood prevention goals, in "slowing the flow" and in the "building resilience". For both of these purposes green infrastructures are conceived as long-term solutions with multiple benefits, since they would be useful not only for prevention issues, but also to create new recreational areas and improve the overall quality of the urban environment.

The city of Ghent, located in Belgium, rises at the confluence of the Lys and upper Scheldt rivers and therefore has to deal with both pluvial and fluvial floods. However, considering that during heavy downpours fluvial flooding "is more likely to take place in areas intended for flooding or where flooding causes less damage" (Gent Klimaatstad, 2016), the main concern of Local Authorities is to protect inhabitants from pluvial flooding. For this matter, Ghent's strategy addresses the following goals:

- Prevention of more sealed soil due to hardening of surfaces, that involves both the integration of new green areas and the improvement of existing ones;
- 'Greening' the city, to be achieved through a Green Structural Plan, designed both for water retention and for cooling (addressing the heat island effect as well as the flood risk);
- Maximum focus on the green-blue network that calls for major safeguard of the watercourses, by preserving the enclosed areas and greening the banks;
- Creation of space for water, by realizing new floodable areas;
- Maximization of the city's sponge effect that will decrease the water load toward the rivers through "local catchment, retention, reusage, infiltration or buffering and delay" (Gent Klimaatstad, 2016) of rainwater thank to the introduction of SUDSs;

- Provision of cooling infrastructure, finalized to decrease the heat island effect, by introducing such as trees, water elements and light buildings' coverings.

In brief Ghent, analogously to Sheffield, entrusted green infrastructures to ensure flood protection. Furthermore, this city's prevention strategy deserves credit not only for promoting "green" measures, but also for successfully combining them with "soft" measures. Indeed, in 2015, Ghent launched a crowd-funding platform to ensure the economic feasibility of adaptation actions that are proposed and financed by citizens (EEA, 2016c). This platform, by favouring bottom-up adaptation initiatives, guarantees a large public engagement in improving city's wellbeing. So far, two adaptation projects have been successfully promoted through this platform (EEA, 2016c) and will be soon implemented.

4 RECOVERING FROM AND ADAPTING TO FLOODS: THE BENEVENTO CASE STUDY

Italy, alongside with most of the European countries, is battling with hydro-meteorological events. Floods and landslides caused 1.989 deaths and injured 2.561 inhabitants in the time span 1964-2013 (ISPRA, 2015), becoming a key priority for local and national institutions. One of the most recent flooding events has affected the city of Benevento, located in Southern Italy and characterized by high flood risk levels due to its geographical location. As a matter of fact, this city rises along the banks of the Calore River and more specifically at the confluence of this river with its two main tributaries, Tammaro and Sabato (Figure 1). The confluence with the tributaries, most importantly with the Tammaro River, represents a weak spot due to abrupt shift of the hydrological regime caused by the overload of gravel and sand (Soreca, 2013). This condition has already caused flooding disasters in the past; the most disruptive one dates back to 1949, when the river's overflow wrecked many residences, agricultural and industrial activities leaving hundreds of inhabitant homeless and jobless (Calò, 2015). In response to this event, massive concrete protection walls were erected along the river in correspondence to the most inhabited area (Comune di Benevento, 2015).

The latest floods occurred the nights between the 14th and 15th and the 19th and 20th October 2015, causing damages to public and private buildings, to flood defence measures, to infrastructures, to the primary services network, to the productive activities. Furthermore, the events caused strong inconveniences to the population, leading to the death of two persons (Provincia di Benevento, 2015). Overall, 33 cities of the Province of Benevento were affected by the hazardous events with costs equal to 120 million Euros for the reinstatement of public buildings and infrastructures[1] and further 24 million Euros for the compensation of damages and production losses of the agricultural activities (Giunta Regionale della Campania, 2015).

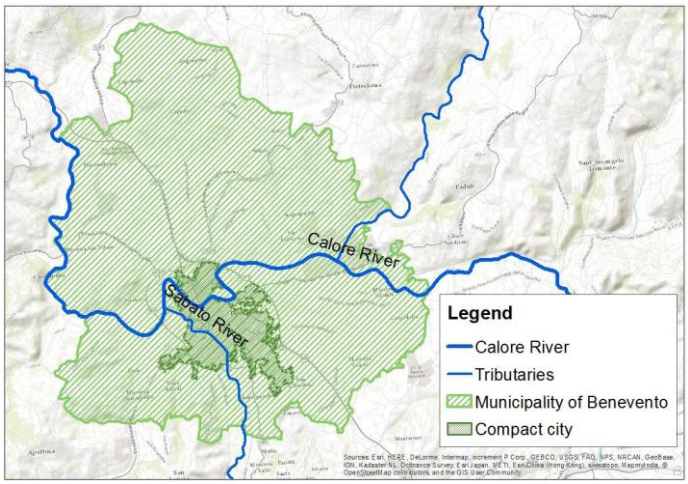

Figure 1: City of Benevento and main Rivers. Source: own elaboration.

[1] Data source: Nota della Regione Capania prot. 0698789 of the 18/10/2015. Available at: http://provincia.benevento.it/

Therefore, these events proved not only the inadequacy of the defence system conceived after the 1949 flood, but also the deficiencies of the "Extract Plan for Flood Defence: the Volturno Basin" published in 1999 and still in force in the October 2015. As a matter of fact, the concrete barriers built along the course of the Calore River present many discontinuities, especially in low population density areas (Comune di Benevento, 2015). This condition, combined with the lack of maintenance interventions and the consistent increase of population and of impervious surfaces over the past 60 years, made these barriers obsolete and inadequate to protect the urban area. Furthermore, the flooded areas exceeded the hazardous areas identified by the "Extract Plan for Flood Defence: the Volturno Basin", highlighting the necessity to review current Plan.

In brief, the event of 2015 highlighted the need for reconsidering and strengthening current strategies against floods in order to guarantee the population's safety and avoid the likely future flooding events from being disruptive.

4.1 BENEVENTO: ONE YEAR AFTER THE FLOOD

A year after, Benevento is still struggling to recover from the impacts of the 2015 floods. So far, despite most of the implemented measures have been addressed to repair the damage caused by the hazardous events, not all the damages have been repaired; moreover effective risk reduction strategies, aimed at preventing future disasters, are still at a very early stage.

An in depth analysis of the event, its consequences and the measures adopted starting from the immediate aftermath, allows to identify which actions have been implemented and what is still missing. More specifically, the considered actions refer to: the emergency management, the recovery phase, the prevention phase, which is crucial to turn the disaster into an opportunity for enhancing city's capacities to deal with likely future events.

The flooding events of October 2015 inundated numerous roads and buildings causing many families to be evacuated and many others to be confined on highest floors[1]. The management of the emergency phase was entrusted to the "Civil Protection Plan" (Comune di Benevento, 2015). The Municipality adopted the Plan in 2006 and its most recent update, before the 2015 events, dated back to 2010 (Città di Benevento, 2016). The Plan was sized according to the risk scenarios outlined by the "Extract Plan for Flood Defence" issued in 1999 by the Basin Authority of the Liri-Garigliano and Volturno Rivers[2]. Unfortunately, the 2015 events were significantly beyond the expected; hence, in 2016, the new "Civil Protection Plan: Hydrological Risk and Intervention Model" (Comune di Benevento, 2015) has been issued. The Plan includes new detailed cartographic support concerning the most exposed areas of the city, a reviewed list of both the facilities adequate to offer shelter and support in case of emergency and of the human and technological resources to employ in order to manage likely future crises (Città di Benevento, 2016). Furthermore, the plan comes with cartographic attachments representing, the critical points, the fastest escape routes and the areas inundated in the 2015 event.

However, further improvements of the Plan are expected: current risk scenarios should be updated, indeed, according to the on-going revision of the "Extract Plan for Flood Defence: the Volturno Basin", following the directions provided in December 2015 by the Hydrographic District of the Southern Apennines[3] regarding the delimitation and classification of the hazardous and risk areas (Città di Benevento, 2016).

In respect to the recovery phase, it has to be noticed that the Report published in October 2016 and titled "Flood events from the 15th to the 20th October 2016: Interventions implemented by the Province of Benevento" summarizes the actions so far undertaken or still underway to repair physical damages suffered by public facilities and infrastructures (Provincia di Benevento, 2016). The comparison of these data with those listed in the damage reports, released after the event and analysed in-depth by the

[1] http://www.comune.benevento.it/
[2] A detailed description of this Plan is provided in the paragraph 4.1
[3] The "Extract Plan for Flood Defence: the Volturno Basin" published by the Basin Authority of the Liri-Garigliano and Volturno Rivers is subordinated to the Hydrographic District of the Southern Apennines. The latter, responsible for all Basin Authorities that fall within its jurisdiction area, provides key criteria and instructions to improve and update the Basin Authorities' Plans.

Authors in a previous research work (Galderisi and Treccozzi, 2017), highlights that many damages involving schools, streets, bridges and flood defence measures for the Tammaro River, haven't been repaired yet. Furthermore, damages involving bike lanes and flood defence measures for the Sabato River haven't been mentioned in any intervention report so far (Figure 2).

Figure 2: Physical Damage to public facilities in the city of Benevento after the October 2015 event (left) and their recovery status in October 2016 (right). Source: own elaboration.

Although the comparison proves that many damages have been repaired, it is important to outline that these interventions were mainly intended to recover the pre-event, and largely inadequate, state (Provincia di Benevento, 2016). Furthermore, even though the biggest challenge is still related to the recovery of the hit industrial and agricultural activities, the provided comparison refers only to physical damages to public buildings, facilities and infrastructures (schools, administrative buildings, bank defence measures, road network, etc.), since no official data and reports regarding the recovery of private buildings and economic activities have been made accessible to the public, impeding to evaluate the progress.

As for the prevention phase, it has to be outlined that the Plan in charge for flood prevention when the 2015 flood occurred was the "Extract Plan for Flood Defence: Volturno Basin", issued in 1999 by the Basin Authority of the Liri-Garigliano and Volturno Rivers and still in force. Nevertheless, as mentioned above, the surface actually flooded in 2015, revealed itself to be way more extensive than the one portrayed in the Plan. Figure 3 gives a closer look to the difference between the areas actually flooded and the ones expected to be flooded in the confluence area of the Calore with its two main tributaries, in other words in the city's most exposed area. Therefore, on December 2015 the "Management Plan for Flood Risk" was published from the Hydrographic District of the Southern Apennines, acknowledging the need to improve existing flood protection plans for the regions that fall within its jurisdiction area. These modifications had to be started in 2016, and further enhanced in 2019. Hence, starting from 2016, Basin Authorities were required to reconsider the boundaries of hazard and risk areas and their classification, considering historic flood data, such as the ones owed to the 2015 events. The Management Plan for Flood Risk states that in 2019 all flood protection plans have to introduce new prevention, preparation and recovery measures. For the Calore River, the prevention measures should include: the development of a river bank monitoring service, the improvement of ecological corridors along the river and a management policy for the vegetation surrounding the river, the recognition of green areas to drain the river's overflow (Distretto Idrografico dell'Appennino Meridionale, 2015).

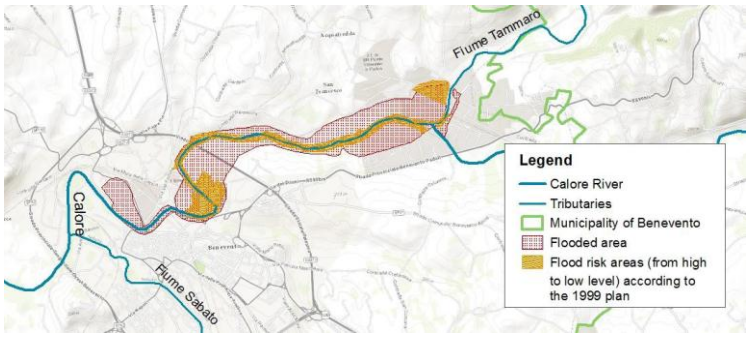

Figure 3: Comparison between the area flooded during the 2015 event and the area considered at flooding risk by the 1999 "Extract Plan for Flood Defence: Volturno Basin". Source: own elaboration.

Furthermore, the areas along the Calore River, are safeguarded by the "Territorial Plan for Provincial Coordination" approved in 2012, as part of the foreseen provincial ecological network (Provincia di Benevento, 2012). In line with the Territorial Plan for Provincial Coordination, the Municipal Master Plan, approved in 2012, envisaged for the areas included in the provincial ecological network, the creation of naturalistic or thematic parks (Comune di Benevento, 2011b). Although both the mentioned Plans were already in force, none of the planned interventions had been implemented when the 2015 floods occurred. As a matter of fact, only on January 2017, the city has announced that an Agreement between the Municipality and the Liri-Garigliano Basin Authority for the preparation of a work program to implement the City Fluvial/Territorial Park had been signed[1].

Finally, it is worth mentioning that so far Benevento has not adhered to any European initiative aimed to develop adaptation plans.

Summing up, more than one year after the 2015 flooding events, more effective prevention strategies have been only envisaged both at Basin and at the Municipal scale and, although they seem to outline a green strategy for preventing future fluvial floods, they are at a very early stage, hindering an assessment of their effectiveness.

4.2 HINTS TO SHIFT FROM A "COPING" TOWARD A "TRANSFORMATIVE" APPROACH FOR FLOOD ADAPTATION

Learning from the adaptation strategies that numerous cities, within and outside Europe, are developing to face the increased frequency and severity of flood events, in the following we will provide some hints of how to shift from the "coping" approach, that has guided so far the Benevento' response to flood events, towards a "transformative" approach that, overcoming current sectorial strategies and grounding on a systemic perspective, "seeks to integrate adaptation with other aspects of urban development and turns the challenge into an opportunity, capitalising on many additional, non-climatic benefits" ().

Bearing in mind that current urban vulnerability to flood impacts is ascribable not only to the current urban development patterns but also to the limited awareness among local decision-makers, citizens and economic stakeholders toward climate related challenges, the key pillars for developing an effective local adaptation strategy, capable of turning current challenge into an opportunity for a sustainable urban development by combining green and soft measures, can be synthesized as follows:

- Reducing the river's load, by reducing superficial run-off through SUDSs;
- Preventing the river's load from increasing, by controlling the loss of permeable soils in future urban developments;
- Enhancing the river's capacity, by creating a fluvial park;
- Raising local awareness, by promoting an active engagement of citizens and local business.

The first pillar, reducing the river's load, entails the control and reduction of the risk of pluvial flood that occurs when large amounts of superficial run-off are produced. This phenomenon is usually due to the prevailing of impervious surfaces that characterize urban areas and to the consequent overload of the sewer system, often inadequate even to the ordinary load, in case of heavy rains. An effective response to this phenomenon can been sought not only in the improvement of the existing sewer system, a measure that has been recently approved by the Municipality of Benevento in 2017[2], but also in enhancing city's ability to absorb superficial run off through the widespread implementation of SUDSs.

The most critical area within the Benevento Municipality is represented by the compact historical city that, according to the data provided by the Corine Land Cover programme, is characterized by 88% of artificial surfaces and only 12% of permeable surfaces (Figure 4). In this area the main opportunities to reduce superficial run-off, and consequently the amount of water channelled toward the surrounding water bodies, can be sought through the redesign of public open spaces and namely from the redesign of public streets,

[1] http://www.comune.benevento.it/bn2_pagine/notizie/comunicato.php?id=5775&allComunicati=1

[2] The intention to improve the sewer system has been notified on Benevento's website: http://www.comune.benevento.it/bn2_pagine/notizie/comunicato.php?id=5775&allComunicati=1

squares and parking lots through permeable pavements, trapping rainfall underground and directing it to bioswales and rain gardens.

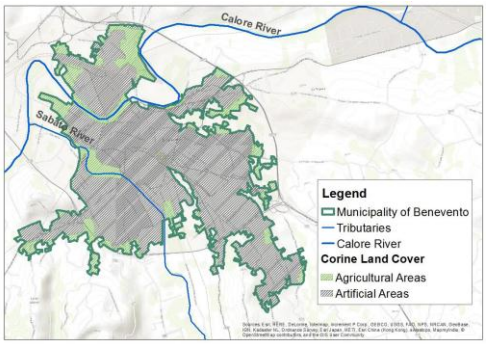

Figure 4: Types of land uses in Benevento's compact city, according to the Corine Land Cover programme.
Source: own elaboration.

The development of SUDSs would allow restricting water flowing into the sewage systems, by enhancing meanwhile the environmental quality of the historical city. The second pillar refers to the need for preventing the river's load from increasing. To this aim the loss of permeable soils in future urban developments should be significantly reduced. Current Masterplan allows new residential development areas within the Municipal area, comprising in the Compact City (Figure 5). As a matter of fact, these areas would further increase the percentage of impervious surfaces. However, the introduction of the principle of "hydraulic invariance" for future urban developments would allow to keep the superficial run off unchanged. This principle – already introduced by the flood management plans in Emilia Romagna in the early 2000s and forcing new urban developments "to preserve peak discharges from urbanized areas to the values corresponding to pre-existing agricultural conditions through adequate flood detention" (Pistocchi et al., 2015) – could be easily adopted by the basin plans, currently under preparation, as well as by current Master Plan.

The third pillar, referred to the enhancement of the river's capacity, could be achieved by realizing a green flood storage area along the Calore River. This solution, which has already been implemented in the Sheffield case-study, would constitute a temporary water storage area in case of heavy rainfall and, during dry periods, an important recreational asset both at Municipal and at wider scale. As mentioned above, both the Territorial Provincial Plan and the Municipal Master Plan envisaged the proposal of a Fluvial Park along the Calore River. Nevertheless, only after the 2015 flood events an Agreement between the Municipality and the Liri-Garigliano Basin Authority had been signed: the Agreement establishes the need for developing a work program addressed to implement the City Fluvial/Territorial Park. However, in order to define such a work programme in a shared and participatory way, the opportunities arising from the development of a River

Contract, intended as a participative management structure capable to bring together multiple different stakeholders and already tested in numerous European countries, should be explored.

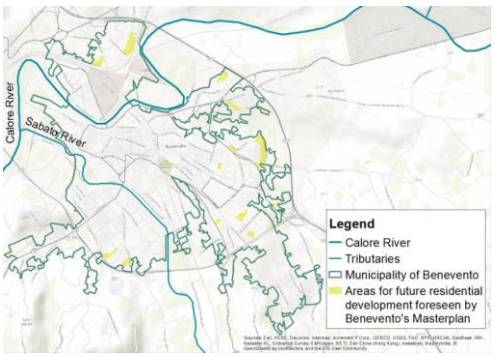

Figure 5: Foreseen new residential developments in the Compact City.
Source: own elaboration based on the Benevento's Master Plan.

The last pillar refers to the need for raising local awareness: according to the Sendai Framework, indeed, effective disaster risk governance requires not only “clear vision, plans, competence, guidance and coordination within and across sectors” but also the effective engagement of all relevant stakeholders to decision-making processes. Thus, the involvement of citizens, local businesses and other stakeholders in developing shared visions for a climate-proof urban development has to be considered as a crucial element to guarantee the effectiveness of a flood adaptation urban strategy. So far, although numerous local news websites handled by activists prove a significant population’s concern for these issues, no effective public initiatives aimed at raising local awareness on occurred flood events or at involving local stakeholders in developing a shared vision for the future, have been undertaken. The introduction of “soft measures”, such as the creation of an open knowledge platform capable to combine and integrate different sources and types of available information (e.g. on historical and recent flood events and related damage, implemented recovery actions and on-going initiatives, current regulations, etc.) as well as to facilitate the interaction among different stakeholders, including civil society, could allow to increase local awareness and address flood risk in a more effective and participatory way. Moreover, the establishment of the Calore River Contract as well as the implementation of a crowdfunding platform, as in the Ghent case study, could allow local stakeholders, including citizens, to be actively engaged in decision-making processes and could stimulate bottom up initiatives capable to complement public action, opposite to the currently prevailing top-down approach to flood management.

5 CONCLUDING REMARKS

Over the past years, in the face of the significant increase of flooding events and their costs, European institutions have largely contributed to raise National and Local Authorities’ awareness and promoted numerous initiatives that are being successfully acknowledged and implemented by most State Members as well as by numerous cities. Up to date more than 600 European cities have undertaken an adaptation process in the frame of European or international initiatives (EEA, 2016b), and many of these chose to rely on green infrastructure, capable to guarantee multiple benefits and proving a successful overall progress toward Europe’s climate-proof goal.

However, some State Members are still straining to implement adaptation strategies and their progress status is delayed. In Italy, for example, very few cities have put into action adaptation strategies – with a predominance of grey measures (technological, infrastructural, etc.) compared to green ones (Giordano et al., 2014) – while most of them haven’t even addressed the issue. Among these, the city of Benevento that, even though it has been struggling with flood risk for decades, is still far from embracing a “transformative” perspective, by starting an adaptation processes effectively integrated into city’s development issues and capable to turn the climate challenge into an opportunity for improving the overall quality of the urban environment. The response of the city to the latest flood events has been, indeed, mainly based on a “coping” approach, by implementing actions aimed to repair and reinstate the pre-event conditions, whereas the potential of green infrastructures to improve Benevento’s resilience against flood has been so far only envisaged.

As a matter of fact, the best practices of Sheffield and Ghent proved how green strategies for flood prevention strategies offer the opportunity to improve not only inhabitants’ safety but also cities’ landscape and availability of recreational facilities, providing cities with numerous environmental, social and economic benefits. Moreover, Ghent’s experience of involving stakeholders and citizens through the implementation of soft measures, suggests a cue to enhance people engagement in public decisions and to strengthen the ownership of the implemented actions.

Therefore, grounding on the experiences so far developed by European cities, Benevento should reverse its current “coping” approach to flood disaster – largely emergency-driven, fragmented and discontinuous – leading the way to a transformative adaptation strategy, based on the discussed pillars and effectively integrated in sectorial and spatial planning processes. Moreover, citizens’ participation and activism emerged in the aftermath of the recent flooding events point out the potential to actively engage local communities in decision-making processes as well as to encourage bottom-up adaptation initiatives complementing institutional ones, which could represent key issues for a successful adaptation process.

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ID 1368 | RESILIENCE THROUGH A METHODOLOGY TO PLAN GREEN INFRASTRUCTURES

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OVERVIEW: The increasing use in recent years of the word resilience when considering sustainable development, linking relief to development, adaptation to climate change and the need to give greater priority to addressing vulnerability has been much discussed. It has proved attractive because it appears to offer a way to bring different disciplines and perspectives under a single conceptual umbrella. The impacts of urban sprawl on peri-urban landscapes include, among other things: loss of natural habitats for species; lack of natural water retention areas; negative impacts on water quality; negative impacts on human health, mental/physical wellbeing, recreation, social interaction; impacts in terms of climate adaptation. The climate crisis is hitting a territory in which the hydrogeological instability has made the mountain slopes unstable and fragile and where the lowland areas improperly exploited, particularly in the vicinity of rivers, have become spaces of devastation due to floods and landslides. The territory has suffered profound and disfiguring changes in terms of structure, function and, consequently, of resilience capacity to these extreme events (Fasolino, 2017). Green Infrastructures (GI) can mitigate the effects of climate change and extreme events that they pose, managing, for example, the devastating power of floods or landslides, re-establishing spaces and functions (Austin, 2014; Benedict and McMahon, 2006; Lafortezza et al., 2013). The main elements of GI include parks, private gardens, agricultural fields, hedges, trees, woodland, green roofs, green walls, rivers and ponds. The theme of GI is closely related to Ecosystem Services (ES), which are fundamental to maintaining the resilience of a territory. We propose a methodology for the effective planning of a GI network that will help achieve numerous benefits, including: reducing risks to people and property, improving psychological health & well-being, boosting local economic regeneration and providing a habitat for wildlife. There are currently any tools available and many more emerging. The challenge is to ensure that well planned GI, providing functions which will meet numerous planning objectives, can go beyond the purely scientific and environmental framework and become an integral part of public policies; but this requires thorough planning, design and management. This paper shows how to develop a GI network using existing European data. Most input data for the Geographic Information System (GIS) was taken from published and reclassified sources for analysis purposes. The choices made during the data processing and analysis are based on expert opinions and are open to public control. In conclusion, to achieve the resilience of a territory, it is very important to promote the mainstreaming of risk assessments into land-use policy development and implementation, including into urban planning.

1 FIELD OF INTEREST AND ANALYSIS ABOUT THAT

1.1 EUROPEAN POLICIES ABOUT GREEN INFRASTRUCTURE AND ECOSYSTEM SERVICES

Human-induced climate change, combined with other man-made pressures such as the conversion of soil uses, has altered the functions of ecological systems and has consequently altered the flow of ES in terms of scale, timing and position. Future climate change will probably aggravate these effects.

The European Union (EU) strategy for adapting to climate change aims to make Europe more resilient to climate change by ensuring ecosystem-based approaches. The importance of GI is identified by the European policies in the following documents:

Exploring Nature-based Solution of European Environment Agency (EEA) - EU, which shows the need for GI to mitigate vulnerability to atmospheric agents, climate change and, in particular, landslide risk.

The Seventh Environment Action Programme - 7EAP (Decision No 1386/2013/EU) proposes to increase ecological and climatic resilience, so that the restoration of ecosystems and GI can have important socio-economic benefits, including public health.

The EU Biodiversity Strategy (COM/2011/244 final) requires the restoration of at least 15% of the degraded ecosystems in Europe and aims to expand the use of GI.

The 2013 European Commission Strategy on Green Infrastructure (COM/2013/0249 final) stresses that GI can make a significant contribution to the effective implementation of all policies where some or all of the desired goals can be achieved at least in part through natural solutions.

The Regional Policy 2014-2020 continues to support nature and GI through financial instruments such as the European Regional Development Fund and the Cohesion Fund, which contribute to providing multiple benefits, in particular economic development.

The Water Frame Directive (2000/60/CE), Nitrates Directive (91/676/EEC) and the Floods Directive (COM(2006)15) offer GI related opportunities; for example, supporting actions to improve soil conservation through GI.

The aim of this study is to develop a methodology that allows, from a multi-scalar point of view, to detail the procedure outlined in the European document by highlighting its limits and translating them into actions onto a more detailed scale in the territorial and urban planning.

1.2 LANDSLIDES

Landslides are harmful events that seem to be repeated more frequently and, after earthquakes, are the events that cause the greatest number of victims and damage to inhabited towns, infrastructures, environmental and cultural assets. Eroding soil erosion can cause significant losses in agricultural and forest productivity. Soil erosion depends mainly on precipitation as well as more superficial properties of the soils (Crozier, 2010). Plant cover plays an important role in soil conservation and in the prevention of landslides (Stokes et al., 2013).

According to a study prepared by the EEA, there are many tests that determine how rising landslides are due to climate change. In particular forests, along with other vegetation, are able to reduce the presence of surface landslides. Their global increase is due to the excessive use of natural resources and deforestation, as well as increasing urbanization and uncontrolled land use.

In a recent analysis, we recognize the importance of different types of vegetation to mitigate the risk of landslides. Although a large part of European literature has recognized the link between plant cover and slope stability, the ability of GI to mitigate the risk of landslides is poorly evaluated locally. The potential methods to be applied include the evaluation of the replacement or avoided costs.

Studies show the ability of ecosystems to mitigate the risk of landslides based on the presence of protective forests and the potential danger of landslides. The integration of both maps involves delineating a potential GI network to mitigate vulnerability from landslides.

The regions with good coverage of potential GI elements are areas with dense forests. Overlaying the GI network with settlements and road infrastructure, we can know the application for the GI protection function. The result shows that most settlements and high mountain roads have effective protection from landslides, while the risk increases moderately in hilly areas with a lower percentage of forest protection.

The potential landslide hazard is based on the European Landslide Susceptibility Map (ELSUS1000) by European Soil Data Centre (ESDAC).

1.3 GREEN INFRASTRUCTURE AND ECOSYSTEM SERVICES

Green Infrastructure (GI) consist of a network of natural and semi-natural areas strategically planned with other environmental features, designed and administered to provide a wide range of ES. The importance is

given to the ES provided as well as the use and management of the soil, with the aim of delivering a set of environmental benefits while maintaining and improving the ecological functions (Lennon and Scott, 2014).

Eco-systemic functions are defined as: the ability of processes and natural components to provide goods and services that directly or indirectly meet the needs of man and guarantee the life of all species.

In order to prevent the impacts of uncontrolled urban development and fragmentation, connections are made in ecological networks and green spaces are promoted in the urban context. Potential GI are identified by the combination of an existing hazard in a given region and the presence of ecosystems with ES that mitigate the impact of the hazard.

Ecosystem Services (ES). The ecosystems of a territory, through chemical-physical, biological and more generally ecological processes, provide irreplaceable support to the quality of life of its inhabitants and are the basic factors for sustainable economic development. These processes are recognized as ES, that is, a set of functions naturally provided by ecosystems (Costanza et al., 1997; Burkhard, B. et al., 2010).

Territories able to preserve or restore their natural capital will have greater opportunities for lasting prosperity. If ecosystems are healthy or functional, they will be, for example, more resilient and less vulnerable to extreme natural events (e.g. heavy rains, heat waves) that can absorb atmospheric pollutants (air quality) , to self-purify water (water quality), to replenish the foothills and to regulate the hydrological cycle (water availability), to offer recreational spaces and the possibility of psychological well-being.

The Millennium Ecosystem Assessment (MEA) (2005), the widest and in-depth systematization of the knowledge acquired so far on the status of ecosystems in the world has provided a useful classification by dividing ecosystem functions into four main categories:

- Ecological Integrity (EI) (or Supporting): these functions collect all the services needed to produce all other ESs and contribute to the (in situ) conservation of biological and genetic diversity and evolutionary processes.
- Regulating (SR): In addition to maintaining the health and functioning of ecosystems, regulatory functions collect many other services that have direct and indirect human benefits (such as climate stabilization, waste recycling), which are usually unrecognized until they are lost or degraded;
- Provisioning (SA): These functions collect all those resources supplying services that natural and semi-natural ecosystems produce (oxygen, water, food, etc.).
- Cultural (SC): Natural ecosystems provide an essential consultation function and contribute to the maintenance of human health by providing opportunities for reflection, spiritual enrichment, cognitive development, recreational and aesthetic experiences.

The regulation falls under the protection from the hydrogeological disasters: ecosystems contribute to containing the hydrogeological disaster due to rains and wind. This allows, among other things, to maintain agricultural productivity by reducing the loss of fertile soil.

It has been estimated that over the last 50 years, 60% of ES on the planet have been compromised. Therefore, it has become crucial to integrate the concept of functions and ES into land management and planning decisions so that local administrators can control the pressures that threaten the ecosystem and their functionality, improve their effectiveness and build a model of Governance that is based on tools such as payments for ES.

1.4 EVALUATION OF ECOSYSTEM SERVICES

Since ES have never been fully quantified in monetary terms, they have always had little or no weight in policy decisions.

The potential assessment of the soils to provide ES is considered as an important tool to address the current difficulty of systematically considering ES in land planning.

Several tables found in current literature (Müller et al. 2011; Fisher and Turner, 2008) containing ES, defined by MEA, values for each soil class of Corine Land Cover (CLC) have been compared.

To evaluate the capabilities of the different types of land cover to provide ES, a matrix has been created. The assigned values are based on expert evaluations, both conceptual and derived from different case studies. These values can be seen as research hypotheses that need to be tested in further applications.

The matrix shows the high capacity to provide a wide range of ES for different soil coverings (forests, peat bogs, marshes and moors). The types of soil cover deeply modified by humans, such as urban fabric, industrial or commercial areas, mining and landfill extraction, have a very low capacity.

The different values found in literature for each ES, relative to the four macro-classes, according to the type of soil cover were homogenized by performing an arithmetic average operation, In a single table that follows the same type of assessment of the previous approaches based on the ability of the different types of soil cover to provide individual service: 0 = no capacity, 1 = low capacity, 2 = relevant capacity, 3 = average Capacity, 4 = high capacity, 5 = very high capacity.

1.5 EVALUATION OF HYDROGEOLOGICAL DISRUPTION

Agro-forestry activities, through sustainable management practices, may have a positive impact on the countryside's defences and prevention of disaster, given that much of the countryside is still rural.

The Guidelines for the Evaluation of Hydrogeological Disruption written by Higher Institute for Environmental Protection and Research (ISPRA) propose guidelines and methodologies that, based on the integration of territorial databases of the environment and agriculture sectors, enable the identification of priority areas of intervention throughout the national territory and the most appropriate mitigation measures, both in active and abandoned agri-forest areas.

Agro-silvo-forest interventions are included in the maintenance of the territory.

These interventions can only be used effectively for some types of disruption, such as accelerated erosion and surface landslides, while deafening phenomenon with deeper sliding surface can only be stabilized with traditional engineering interventions such as tunnels and drainage wells, supporting walls, etc.

2 METHODOLOGICAL PROPOSAL AND APPLICATION

2.1 METHODOLOGICAL PROPOSAL

The proposed methodology is based on a spatial analysis implemented in the GIS environment (Foresman, 1998) and consists of three macro-phases: 1) Identification of soil uses that maximize the ecosystemic erosion control (Sr6) service at high and very high danger areas; 2) Construction of networks that maximize ecological integrity and multifunctionality of GI; 3) Identifying strategic priorities.

The macro-phase 1) consists of the following steps:

- assigning value scores associated with each land use according to the CLC classification;
- Identifying the combination of levels of danger with the patches that maximize the Sr6 service.

The macro-phase 2) involves the construction of networks by using cost-distance, using as the resistance values the corresponding scores for soil utilization related to the ES defined ecological integrity (IE), the combination of the latter with SR6 and the combination of Sr6 with the other ES values.

The macro-phase 3), in turn, is articulated in:

- network measurement using network analysis through appropriate indices;
- comparison between the different networks in order to define their maximization;
- definition of strategic priorities.

2.2 TECHNIQUES AND INSTRUMENTS TO SUPPORT THE MODEL

The analysis implemented in the GIS environment, upon which the methodology is based, refer in detail to the following techniques: cost distance, network analysis and map algebra.

Cost-distance analyses were carried out using algorithms (Eastman, 1989) and implemented in the Idrisi 32 (Clark Labs, Clark University) software. Two different algorithms were used for the analyses: for Sitta europaea, connectivity was evaluated using an isotropic model (Eastman 1989); In the case of Triturus carnifex, an anisotropic model was applied (Eastman 1999).

The network analysis is based on the theory of graphs. Local metrics are important for the Node degree (measures the importance of a node in the network based on node connections), the Betweenness Centrality Index (measures the frequency with which a node appears on the shortest path between nodes of the network) and Proximity (measures the average distance from a given node to all the other nodes in the network).

The algebra map consists of map processes (spatial data layers) as variables in algebraic equations.

The GIS overlay procedure generates a new layer (output level) depending on two or more input layers, the attribute value assigned to each position (such as raster or polygon) on the output layer is a function of the independent values associated with that position on the input levels. There are two commonly used classes for combining overlays in GIS: Boolean overlay (such as AND and OR); Linear Weighted Combination (WLC).

The Graphab software is dedicated to the modelling of ecological networks based on graph theory. It allows for the creation of connections between the same patch types based on the cost-distance, taking into account the type of patches to be crossed or based on the minimum distance between patches, with it being compatible with GIS through which maps can be modelled to create ecological networks.

Once a graph has been created, several reference metrics can be applied.

2.3 APPLYING THE METHODOLOGY TO THE CASE STUDY

Campania has a high lithological and geological-structural variability that makes the territory susceptible to different types of landslides. It is in second place among the Italian regions for the number of victims due to hydrogeological phenomena: almost all of these were due to the rapid castings of loose pyroclastic covered by the carbonate masses of the Campanian Apennine and the stone sequences present in the volcanic areas of the Vesuvius and the Phlegrean Fields.

The distribution of the danger from landslides, identified by the Hydrogeological Basin Authorities falling within the territory of Campania, is highlighted according to the territorialization and use of the soil expressed as the second level of the CLC legend. There are 135,800 hectares with high danger (P3) and 131,500 hectares with very high danger (P4). Regarding the P3 and P4 hazardous areas, the wooded areas constitute the most significant land use type (126,279 hectares), equal to 20,5% of the total landslide areas.

2.4 GREEN INFRASTRUCTURES AND HYDROGEOLOGICAL RISK IN THE CAMPANIA REGION

The Rural Development Program 2014-2020 (PSR) of the Campania Region depicts the regional territory as a territory affected by worrying symptoms of abandonment, partly caused by the decline in agricultural land and demographic impoverishment, with three quarters of it being characterized by mountainous and hilly areas where soil conservation policies with relevant erosive dynamics. Current climate change increases the danger and risk of landslides and floods, the potential risk of erosion and more generally degradation of the soil.

Hydraulic, agricultural and hydraulic-forestry interventions, as well as the persistence of agricultural and forestry activities, particularly in mountainous and/or disadvantaged areas, can significantly prevent and

reduce the issues highlighted. It is therefore necessary to ensure the permanence of agricultural and forestry activities in such areas, by compensating for the disadvantages, encouraging the active management of the forest, promoting, also through training and information actions, farming methods that ensure the maintenance of a protective cover and the recovery of traditional techniques.

Agricultural and forestry interventions cover the maintenance of the territory and contribute to the regional strategy in continuity with the PSR 2007-2013, extending the range of actions to improve soil quality, aimed at reducing soil loss from erosion and hydrogeological disruption in particular in the most at risk and hazardous areas through: the persistence of agricultural and forestry activities in disadvantaged and mountainous areas; hydraulic-agricultural and hydraulic-forestry facilities including maintenance/restoration of agricultural terraces; maintenance/restoration of the surface drainage network in agriculture; crop management systems that mitigate risk (e.g. no and minimum tillage, cover crop); forestation and active management of the forest; protection from forest fires.

It is worth noting the measure 8.2.4.3.9. 4.4.2 Creation and/or restoration and/or expansion of green infrastructure and agri-rural landscape elements and sub-tenure 4.4 - Support for non-productive investments related to the fulfillment of agro-environmental objectives. This measure aims to achieve the sustainable development objective of Campania agro-food business, foreseeing it necessary to improve the environmental conditions of the territory from an agro-climate point of view, pursuing a satisfactory state of conservation of the biodiversity. It should also be pointed out that an environment with a low degree of biological diversity, i.e. less ecologically less diversified, and therefore disorganized, reacts less actively to sudden atmospheric and climatic changes.

Consequently, a specific type of intervention should be provided for the support, restoration and conservation of natural and semi-natural habitats, flora and fauna of EU interest, as well as specific elements of the agrarian landscape through the realization of interventions for the creation and/or restoration and/or expansion of green infrastructures and specific landscape elements in degraded and/or cultivated areas.

Eligible interventions to subsidy are identified in the restoration and/or creation and/or extension of: a) terraces and brickwork; b) buffer bands; c) hedges, rows, groves.

For this purpose, the type of intervention is addressed, in particular, in terms of public utility to areas of the Natura 2000 Network or other areas of great natural value defined by the PSR.

Moreover, the abandonment of agricultural activities also favours the spontaneous dynamics of ecological mosaic evolution, with the loss of ecosystems due to the progressive advancement of the forest of neo-formation. Therefore, the role of farms as a defence has positive effects both on the territory for the economic and productive implications it entails, on the environment in terms of soil protection as well as the protection of complex ecosystems.

In the PSR, the principles guiding the definition of selection criteria include, inter alia, the following rewards: location of the intervention: a) sites of the Natura 2000 Network; b) areas of great natural value defined by the PSR 2014-2020; c) Regional Parks and Regional Nature Reserves; d) vulnerable agricultural zones to nitrates; e) high or very high altitude hazardous areas for terracing and burial operations.

2.5 APPLICATION

With reference to macro-phase 1), we identify the soil uses that maximize the ES erosion control (Sr6) in correspondence of high and very high hazardous areas, the geodatabase is made up of information from the Agricultural Utilization Soil Map (CUAS) of Campania Region, dated 2009.

From the quantification, it has been found that the incidences of the different eco-systemic values in terms of surface are differently distributed. Reference was made to the PSAI for the Central Campania Authority, which has been in force since 2015. From the intersection, the patches that maximize the Sr6 service in combination with the P3 and P4 areas have been identified. Thus, the distribution of land uses in high and very high hazard areas has been reported.

With reference to macro-phase 2), the networks were built to maximize ecological integrity and multi-functionality, and the Graphab software was used to design the networks.

The network that maximizes ES IE was built for the entire regional territory, with it being the one that relates the combination of all ESs, i.e, IE-SA-SC-Sr6 and finally IE-Sr6. (figure 1)

With reference to macro-phase 3), the software was used to generate the graph and calculate the different metrics at local and global levels. The calculation was made in relation to the insistent area encompassing the territory of the Central Campania Authority.

Then, a comparison was carried out between the different networks in order to define their maximization as well as define the mitigation strategy. (figure 2)

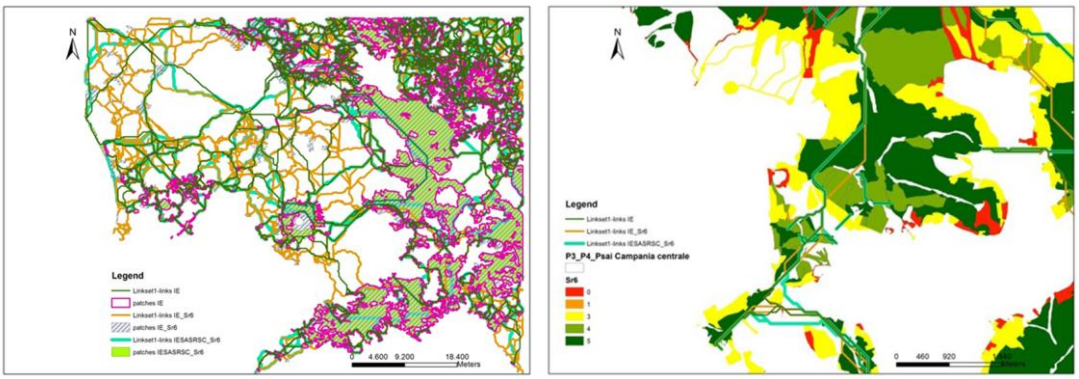

Figure 1 - Overlay network map | Figure 2 - Multifunctional network

3 DISCUSSIONS AND CONCLUSIONS

The application of the methodology to the case of the Campania region, and in particular to the territory included within the Hydrogeological Structure Excerpt Plan (PSAI) of Central Campania Authority, has highlighted how it is possible to identify the contact points between the protection of ecological integrity and the mitigation of landslide risk, in line with EU strategies, thus highlighting the boundaries of the study that should be carefully taken care of.

From the overlay map reading of the Sr6 distribution factor map and the mapping map of the landslide hazard distribution, the concomitant use of high-value Sr6 soil uses with P3 and P4 hazard levels emerges. This information indicates that, on the one hand, the use of the soil performs a protective action, while on the other it alone does not contribute to the resolution of the problem due mainly to geological and geotechnical conditions.

Therefore, the primary consideration is that, as defined in the EU document, the choice of the construction of the ecological network will have to prioritize both strategies in an order of priority: firstly it must be given to the axes that maximize the Sr6 network in order to build ecological network that intersects the high and very high hazard areas; secondarily those in which the IE-SR6 network is maximized intersecting the P3 and P4 areas. finally, consider the P3 and P4 areas intersecting the IE network.

In these areas, it is possible to implement the actions proposed by the ISPRA Guidelines in order to contribute to the maintenance and hydrogeological protection of the area.

The areas selected in the previously seen order must be subject to appropriate detail analysis in order to determine the use of the soil which maximizes the protective action, possibly subject to the prevision of structural mitigation against landslide hazard.

The present work, however, could be used to provide for pricing mechanisms for areas with high risk of land-sliding and erosion, given the great importance of the resources allocated to the environmental issue.

The methodology therefore provides a new way of drawing the GI, which is generally based on the specific ability to favour biotic and abiotic flows. In this case, we try to optimize this pattern by also maintaining and raising other ES, starting from the regulation of the soil disruption.

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ID 1409 | LIVING THE CLIMATE RESILIENT CITY—HANGZHOU'S 'FIVE WATER CO-LEAD' STRATEGY

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1 INTRODUCTION

Climate awareness in urban planning has increased from 2011 due to more frequent occurrences of extreme-weather disturbances in Chinese cities. To deal with climate-related disturbances, the notions of urban resilience and resilient planning have gained increasing attention and interest over recent years in the field of water management and urban planning. A simple definition of resilience is the ability of a city to

absorb disturbance while maintaining its functions and structures (Holling, 1987, 2001; White, 2010). With the challenges of climate change, planners and decision-makers in China realize that it is possible that resilient strategies provide more adaptive and flexible approaches in decision-making. In planning practice, however the concept of resilience features in many policy documents, the implications for planning policy officials remain unclear in the case of Hangzhou, China.

Drawing on information from a review of policy documents supplemented by interviews with policy officials, this paper aims to understand key issues in transitioning to climate resilience in Chinese cities through a study of Hangzhou. The main body of the paper is structured in three parts. The first section presents a review of the notion of resilience and examines its relevance for urban planning and climate change. The second part provided the assessment of planning strategies related to climate change in the city. Specific attention is paid to how planning processes in the city consider or deal with the climate risks that it presents. The third part explored the challenging areas – spatial data infrastructures, climate planning, green infrastructure planning, limiting urban sprawl –as viable facets for sustaining urban transition strategies.

2 RESILIENCE THINKING AS THE BASIS OF A NEW PARADIGM IN PLANNING PRACTICE

The amount of literature on resilience and uncertain disturbances in urban systems has increased greatly over the last decade. Broadly speaking, a resilient system is defined by its two main features: its ability to absorb change and disturbance, and the persistence of systems while retaining its basic functions and structure (Walker et al. 2006); together with the ability to survive, adapt and transform itself (Ludwig et al. 1997).

2.1 REFRAMING THE NOTION OF RESILIENCE

The simple understanding of resilience is the capacity of a system to undergo change and still retain its basic function and structure after facing an external disturbance (Holling, 1973, 1987, 2001; Tasan-Ko and, Stead et al., 2013; White, 2010). Some of the early resilience literature originates from studies of ecological equilibrium in the 1970s (e.g., Holling, 1973).The studies of ecological resilience around this time focused on self-(re)organising ability and the speed of return to a new stable or fully functional state(Ludwig et al., 1978; Pimm, 1991). In the social sciences, the growing interest in the notion of resilience can be seen as a consequence of increasing complexity, uncertainty and insecurity in the search for new approaches for adaptation and transformation (Christopherson and Michie et al., 2010). The notion of social resilience is often associated with the ability to learn, primarily in order to become more robust to change (Newman, 2009; Newman et al., 2009).

The notion of resilience appeared in urban systems and urban planning in the 1990s (Mileti, 1999). In particular, resilience has emerged as an attractive perspective with respect to urban systems, often theorized as highly complex, adaptive systems. Urban resilience refers to the ability of an urban system-and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales-to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity.

The literature on resilience in planning has often put the emphasis on preparation, mitigation and adaptation actions. It is widely acknowledged that spatial planning has an important role in promoting urban resilience. There is widespread recognition that the spatial configuration of cities and towns, and the way in which land is used and developed, has significant implications for both adaptation to the adverse impacts of climate change and the reduction of emissions that cause the change (i.e. mitigation).

2.2 THE ATTRIBUTES OF CLIMATE RESILIENT CITY

Climate change is an increasingly important issue for urban planning. Scholars highlight that, from a resilience perspective, climate change is not only associated with disruptive events (e.g., storms or

heatwaves) but also with gradual trends (e.g. rises in sea level or average global temperatures) that can still give rise to large disturbances if left unchecked (Wardekker and de Jong et al., 2010).

In addition to robustness (or mitigation) and rapidity (or flexibility or adaptation), scholars have also discussed the notion of resilience in terms of characteristics such as redundancy, diversity, efficiency, autonomy, strength, interdependence, adaptability and collaboration (Godschalk, 2003), or attributes of decision-making processes such as fluidity, reflexivity, contingency, connectivity, multiplicity and polyvocality (Davoudi and Strange, 2009).

Some studies of resilience also highlight the importance of Robustness, Social capital, Reflexivity ,Contingency, Connectivity, Multiplicity, Learning capacity and so on (Linnenluecke and Griffiths, 2010 , Wardekker et al., 2010, Walker and Salt, 2006, Davoudi and Strange, 2009, van den Brink et al., 2011 and Gupta et al., 2010).

Table 1 provides a summary of resilience characteristics from a range of different studies. On the basis of existing studies of resilience attributes, we identify six characteristics of resilience in relation to planning for climate disturbances and flood risks: (i) Recovery; (ii) Connectivity; (iii) Social capital; (iv) Adaptability; (v) Robustness; and (vi) Transformability (Tables 2 and 3).

Literature debates	Characterising the notion of resilience
Linnenluecke and Griffiths, 2010 and Wardekker et al., 2010	– Robustness (or strengths, mitigation) – Rapidity (or flexibility)
Walker and Salt, 2006	– Diversity – Ecological variability – Modularity – Acknowledging slow variables – Tight feedbacks – Social capital – Innovation – Overlap in governance and ecosystem services
Godschalk, 2003	– Redundancy – Diversity – Efficiency – Autonomy – Strength – Interdependence – Adaptability – Collaboration
Davoudi and Strange, 2009	– Fluidity – Reflexivity – Contingency – Connectivity – Multiplicity – Polyvocality
van den Brink et al., 2011 and Gupta et al., 2010	– Variety – Learning capacity – Room for autonomous change – Leadership – Resources – Fair governance

Table 1 -Summary of studies characterising the notion of resilience.

Resilience characteristics addressed by planning system						
Proposed characteristic in this paper	Recovery	Connectivity	Social capital	Adaptability	Robustness	Transformability
Linnenluecke and Griffiths, 2010 and Wardekker et al., 2010				-Rapidity; -Flexibility	-Robustness; -strengths; -mitigation	
Walker and Salt, 2006	-Tight feedbacks		-Social capital	-Diversity; -Ecological ; -Variability; -Modularity		-Innovation

Godschalk, 2003	-Strength	- Interdependence	-Antonomy; - Collaboration	Diversity; Adaptability; -Efficiency	- Redundancy	
Davoudi and Strange, 2009	- Reflexivity	-Connectivity	-Polyvocality	- Multiplicity; -Fluidity		
van den Brink et al., 2011 and Gupta et al., 2010			-Learning capacity; -Leadership; -Resources; -Fair governance	-Variety; -Room for autonomous change		

Table 2 - Summary of characteristics describing the notion of resilience.

Characteristic	Description
Recovery	the ability of the system to recover from a disturbance and refers to the ability of a system to respond to an event
Connectivity	the degree to which the nodes of a network are directly linked with each other. In terms of resilience, connectivity embraces more than just the physical dimension, as it includes also the relationships between people and organisations
Social capital	the quality and quantity of a society's social interactions that are shaped by institutions, relationships, and societal norms
Adaptability	the ability of society in a social-ecological system to cope and respond to novel situations and change without losing options for the future
Robustness	the ability to withstand a given level of stress without suffering degradation or loss of function
Transformability	the capacity to learn and create a fundamentally new and different socio-ecological system , one that hopefully would possess the attributes of adaptability and resilience

Table 3 - Six characteristics of urban resilience.

2.3 A FRAMEWORK FOR ASSESSING RESILIENCE

The issue of change is a central dimension of resilience, both in terms of resistance to change and recovery from it. Resilience is therefore related to both preparations to minimize disturbances (or change) and actions to deal with disturbances once they have occurred. As such, resilience represents an on-going process, a time-scale of reshaping, reorganizing and developing new strategies (Lu and Stead, 2013).

The empirical analysis of Hangzhou is based on a review of policy literature from 2010 on-wards (summarized in Table 5 and discussed later in the paper), supplemented by interviews with policy officials from the city of Hangzhou. All the planning policies and documents analyzed in this paper address urban planning and climate change issues.

Resilience characteristics addressed by planning system	Overarching question	Measures/indicators: (the capacity to)
Recovery	Are the policies, programmes, plans and projects promoting capacity in the territory to respond to and recover from distrubance?	A1:Evalnate and maintain the conditions of urban lifeline A2:Establish the system for preventing and reducing flood disasters.
Connectivity	Are the policies, programmes, plans and projects enabling an interrelated territory, in which the nodes of the network are effectively linked?	A3:Develop ecological network A4:Develop soft mobility (pedestrian and bicycle routes) and public transportation networks A5:Coordinate readiness actions
Capital building	Are the policies, programmes, plans and projects under analysis contributing to the build-up of capital (stock), reinforcing in this way the stability and cohesion of the territory?	A6:Collaborate decision-making between different levels of governance A7:Communicate findings (concepts, skills, actions) about water management A8:Raise public awareness and preparation education

Adaptability	Are the policies, programmes, plans and projects enhancing the adaptability of the territory and its capacity to adjust to change in a reactive way?	A9:Identify and assess the probability of risks and disturbances A10: Forecast A11:Promote Low Impact Development technology
Robustness	Are the policies, programmes, plans and projects increasing the robustness of the territory to unforeseen shocks and disturbances?	A12:Evaluate and maintain the conditions of flood-protective facilities
Transformability	Are the policies, programmes, plans and projects contributing to the transformability of the territory and to its ability to innovate and create a new system should the previous become no longer viable?	A13: Setting goals and propose new standards A14:Innovate and propose actions

Table 4 - An assessable framework of resilience in planning decision-making.
Source: based on Eraydin and Tasan-Kok (2013).

3 EMPIRICAL STUDY: RESILIENCE ASSESSMENT OF HANGZHOU

Although water-related spatial strategies for flood risk management have been embedded in the planning system in east China's Zhejiang province throughout history, climate change is a relatively new issue for urban planning. In 2013 two events occurred which affected the city of Hangzhou. Both events led to institutional changes and a reframing of the system of decision-making.

The first event was that some directors of the Municipal Environmental Protection Bureau in Zhejiang province were "invited" to swim in rivers in the beginning of 2013, which showed Public dissatisfaction with water pollution. Then the second event was that Typhoon Fitow triggered heavy rain in Zhejiang province in October, inundating roads and houses, and causing river breaches and power failures. Figs. 1 and 2 indicate the vulnerable position of the city of Hangzhou.

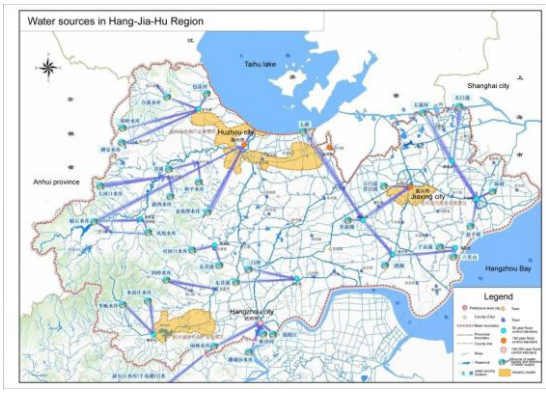

Figure 1 - Water sources in Hang-Jia-Hu Region. Source: Water resources planning for Hang-jia-hu Region (2015).

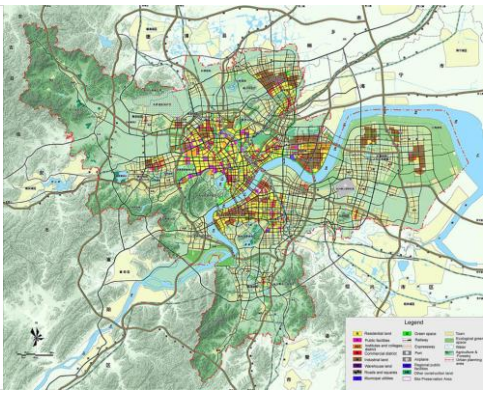

Figure 2 - Water sources in Hang-Jia-Hu Region. Source: Water resources planning for Hang-jia-hu Region (2015).

The shock of the events prompted heated debates about urban planning, climate change and the traditional water management. Decision-makers proposed new strategies such as ‘Sponge city’ and ‘Five water co-lead’. A ‘Sponge city’ refers to a city where its urban underground water system operates like a sponge to absorb, store, leak and purify rainwater, and release it for reuse when necessary. ‘Five water co-lead’ integrate these strategies addressing to polluted water, water-logging, flood, water supply and water saving. Briefly, these planning strategies were established to offer better water environment by changing current river conditions, engineering infrastructure and land-use strategies.

3.1 NEW DEMANDS OF PLANNING TO COPE WITH CLIMATE-RELATED FLOODS

Planning documents in Hangzhou began to demonstrate an awareness of the impacts of climate-related floods from 2010, including the national, regional and local levels. Based on policy reviews and semi-structured interviews with planning officials, the analysis below assesses the use and significance of the notion of resilience in a wide variety of planning documents from the national, regional and local levels (Table 5). The analytical framework presented in Table 3 was used to structure the analysis.

Year	Title	Level of governance	Focus on	Produced by	In collaboration with
2016	Action plan for urban adaptation to climate change	National	Proposing practices for climate change	the National Development and Reform Commission (NDRC)	-Urban-Rural Development of the People's Republic of China
2014	China's National Climate Change Program	National	Establishing a comprehensive framework for climate adaptive strategy-making	The National Development and Reform Commission (NDRC)	-Ministry of Finance of P.R. China; -Ministry of Urban-Rural Development; -Ministry of Transport ; -Ministry of Water; -Ministry of Agriculture; -State Forestry Administration -State Meteorological Administration; -State Oceanic Administration
2013	National Strategy of Climate Change Adaptation	National	Proposing strategies for climate change	the National Development and Reform Commission (NDRC)	- Ministry of Finance of the People's Republic of China; -Ministry of Urban-Rural Development; -Ministry of Transport ; -Ministry of Water; -Ministry of Agriculture; -State Forestry Administration -State Meteorological Administration; -State Oceanic Administration
2015	Water resources planning for Hang-jia-hu Region	Regional	Spatial plan for the Hang-Jia-Hu region	The Development and Reform Commission of Zhejiang Province	-Department of Water Resources of Zhejiang Province;
2010	Zhejiang province's programme to address climate change	Regional	Proposing climate-adaptive strategies for the Zhejiang province	Province of Zhejiang	
2016	The master plan for Hangzhou city 2001-2020 (2016)	local		City of Hangzhou	-Hangzhou Planning Bureau
2016	The subject plan of sponge	local	Proposing new strategies for water management	City of Hangzhou	-Hangzhou municipal leading group office for sponge city

Table 5 - List of documents reviewed.

3.2 CHARACTERISTIC 1: RECOVERY

Various planning documents indicate that the ability of recovery has been addressed in planning policies in Hangzhou (A1 and A2 Table 4). At the national level, Action plan for urban adaptation to climate change 2016 and China's National Climate Change Program 2014-2020 both mention new requirements for improve after-disaster reconstruction speed, and reduce the negative influences to the lowest level. Recovery issues in Zhejiang province's programme to address climate change 2010 focus on establish the system for preventing and reducing flood disasters. Attention to the ability of recovery is addressed in local documents like the master plan for Hangzhou city 2001-2020 (2016) and Urban drainage plan for Hangzhou city 2014 at different aspects. For instance, the master plan for Hangzhou city 2001-2020 (2016) focuses on evaluate and maintain the conditions of urban lifeline, while Urban drainage plan for Hangzhou city 2014 and Action plan of 'five water co-lead' for Hangzhou city 2014-2016 emphasises the establishment of the system for preventing and reducing flood disasters.

3.3 CHARACTERISTIC 2: CONNECTIVITY

Three indicators (A3, A4, A5) address the connectivity of ecological network, transportation networks and social network respectively. Regarding the connectivity of ecological network (A3), national, regional and local documents are mainly focused on optimizing ecological network to achieve a better quality of life in the city. Examples are actions for a robust and resilient water system (e.g., Action plan for urban adaptation to climate change 2016, the subject plan of sponge city for Hangzhou 2016, Action plan of 'five water co-lead' for Hangzhou city 2014-2016), water environment and quality (e.g., Water resources planning for Hang-jia-hu Region 2015, Action plan of 'five water co-lead' for Hangzhou city 2014-2016), and water landscapes in the spatial framework (e.g., the master plan for Hangzhou city 2001-2020, Action plan of 'five water co-lead' for Hangzhou city 2014-2016).

In addition, national documents address two different aspects of transportation networks: China's National Climate Change Program 2014-2020 emphasise soft mobility (pedestrian and bicycle routes) and Action plan for urban adaptation to climate change 2016 consider public transportation networks.

Coordinative capacity (A5) is another indicator of the connectivity. In Action plan for urban adaptation to climate change 2016 and Action plan of 'five water co-lead' for Hangzhou city 2014-2016, the importance of inter-sectoral collaboration between politicians and scientists is highlighted.

3.4 CHARACTERISTIC 3: SOCIAL CAPITAL

In regard to the capacity of multi-level collaborative decision-making (A6), national documents in many cases give the directions for provincial and local policies to follow, especially in relation to water (flooding) issues which have been the primary task. Local policies indicate the active attitudes of multi-level collaborations with national policy-making for managing climate disturbances and relevant floods. Zhejiang province's programme to address climate change 2010, Water resources planning for Hang-jia-hu Region 2015, the master plan for Hangzhou city 2001-2020 (2016), Urban drainage plan for Hangzhou city 2014 and Action plan of 'five water co-lead' for Hangzhou city 2014-2016 are all influenced by Action plan for urban adaptation to climate change 2016, China's National Climate Change Program 2014-2020 and National Strategy of Climate Change Adaptation 2013.

The second social capital characteristic relates to the capacity to communicate, build public awareness and educate. Regarding the capacity to communicate findings (concepts, skills, actions) about water management (A7), various national, provincial and local documents (e.g., Action plan for urban adaptation to climate change 2016; Zhejiang province's programme to address climate change 2010; the subject plan of sponge city for Hangzhou 2016; and Action plan of 'five water co-lead' for Hangzhou city 2014-2016) refer to public education about climate risk, Sponge City and five water co-lead Strategy.

Evidence of public awareness and preparation education (A8), can be seen in the online citizens' panel in Action plan of 'five water co-lead' for Hangzhou city 2014-2016, climate-related flood knowledge promotion in Action plan for urban adaptation to climate change 2016.

3.5 CHARACTERISTIC 4: ADAPTABILITY

In relation to the capacity to identify and assess the probability of risk and disturbances (A9), Action plan for urban adaptation to climate change 2016, China's National Climate Change Program 2014-2020, National Strategy of Climate Change Adaptation 2013, Zhejiang province's programme to address climate change 2010, and Urban drainage plan for Hangzhou city 2014 all have relevant strategies to define and assess climate risk probability and potential disturbances. Action plan of 'five water co-lead' for Hangzhou city 2014-2016 proposes practical strategies for rivers (water and flooding issues) which have been implemented since 2014 to ensure enough space for water discharge by 2016.

Regarding the capacity to forecast (A10), national documents like Action plan for urban adaptation to climate change 2016, China's National Climate Change Program 2014-2020, and National Strategy of Climate Change Adaptation 2013 mention strategies for risk forecasting, mainly in relation to flood risks.

Low Impact Development technology (A11) are emphasised in local policies. The subject plan of sponge city for Hangzhou 2016 identify and propose relevant studies that focus on the topic of sponge city, including rain garden, low elevation greenbelt, green roof, permeable pavement and so on.

3.6 CHARACTERISTIC 5: ROBUSTNESS

Regarding the capacity to evaluate and maintain flood-protective facilities (A12), national documents like Action plan for urban adaptation to climate change 2016, China's National Climate Change Program 2014-2020, and National Strategy of Climate Change Adaptation 2013 all implement strategies to maintain and improve flood-protective facilities closely related to the requirements of setting new goals of water safety.

At the provincial and local level, Zhejiang province's programme to address climate change 2010 and Action plan of 'five water co-lead' for Hangzhou city 2014-2016 address the 'integrated' approach of creating a safe environment.

3.7 CHARACTERISTIC 6: TRANSFORMABILITY

The policy documents reviewed indicate a wide range of approaches regarding setting goals and creating new standards (A13). National documents highlight priorities and new standards in terms of resilience capacity and sustainability for comprehensive developments between water safety and quality of life.

Local policies, such as the subject plan of sponge city for Hangzhou 2016 and Action plan of 'five water co-lead' for Hangzhou city 2014-2016 focuses on technical strategies (new required standards) not only for flood risk management (such as water safety, a robust and resilient water system) but also for issues like fresh water supply and water landscapes.

Regarding the capacity to propose and elaborate innovational actions (A14), local documents like the subject plan of sponge city for Hangzhou 2016 and Action plan of 'five water co-lead' for Hangzhou city 2014-2016 propose practical strategies for spatial implementation. Interviews suggest that various innovative proposals for 'five water co-lead' strategy were developed and seen as an opportunity for the city's resilient development.

Overall, the review suggests, firstly, that recent planning initiatives show that the main focus of urban planning has shifted from promoting hard infrastructure to green infrastructure (in terms of sponge city). Secondly, the uncertainty of climate change has increased the importance of scientific studies in planning decision-making. Thirdly, the case study of Hangzhou indicates that the city itself is a key driver in developing an integrated adaptive strategy for climate change and water manage. Planners and decision-makers in the municipality are keen to transform climate threats into opportunities for urban resilient transformation.

4 TRANSITIONING TO CLIMATE RESILIENT CITY

Hangzhou's vulnerability to floods and climate uncertainty has motivated the city to become a pioneer in the fields of urban planning and climate change. Interviews suggest that various challenging areas for transitioning to climate resilient city should be explored, such as spatial data infrastructures, climate planning, green infrastructure planning, limiting urban sprawl.

4.1 SPATIAL DATA INFRASTRUCTURES

The demand to plan for urban resilience presents additional infrastructural and technological requirements, especially spatial data infrastructures. Geographic information systems (GIS) technology, in particular, offers a wide range of analytic tools and methods such as feature, grid and network analyses, as well as change, impact and decision modelling (Nyerges and Jankowski, 2009). These additional functionalities also carry the potential to enhance the visualisation of planning issues and solutions. Interactive GIS-based scenario analysis tools, Geoweb tools and 3D visualizations can present spatial characteristics and help demonstrate consequences of environmental and urban change (Sheppard, 2005). A geospatial database at urban level can both enable e-planning and enhance the planning process. Hangzhou 'five water co-lead' Integrated information management platform is established through the Infrastructure for Spatial Information. Though still in its implementation phase, this development has been motivated by the need to harmonize data for environmental planning and management across Hangzhou Region, and clearly carries some relevance for urban sustainability and resilience.

4.2 CLIMATE PLANNING

Planning for climate resilient cities faces challenges in terms of water management. Adaptation measures may lower the probability of flooding, reduce the potential damage; or transfer risks (Treby and Clark et al., 2006). However, water-related infrastructure measures need to be implemented through urban planning and land use management. These measures involve a different use of space, which is often limited in urban environments. Hence, requirements for flood protection, water storage, green areas or different building strategies are competing, and priorities for the use of space have to be made. To support Climate planning, improved methods for linking urban land use modelling and assessment of urban functions are required.

4.3 GREEN INFRASTRUCTURE PLANNINGLIMATE PLANNING

Urban green space policy is increasingly being used as a tool to build sponge city in china. Augmenting the economic models, novel field-based research trials and landscape-scale case studies may consolidate an understanding of the potential of green infrastructure. For example, innovation in green roof technology may show that green infrastructure can be designed to maximise the biodiversity, ecosystem services and carbon storage value of green spaces, if designed towards specific goals (Simmons et al., 2008). Next to green roofs, other ways of enhancing green infrastructure in the urban context should be considered such as the role of rain gardens, and urban agriculture and innovative urban landscape design in conserving regionally important biodiversity and providing food security (Collier et al., 2013). Green infrastructure can be optimized by combining new technologies, public and private initiatives in a coherent 'five water co-lead' strategy.

4.4 LIMITING URBAN SPRAWL

The urban dimension of climate challenges faced by Chinese cities is highlighted in the need to promote a smarter, more sustainable and socially inclusive urban development. This call for a new urbanisation, striving for complexity, compactness, functional diversity plurality and social integration, recognizes wide geographical and contextual diversity across Chinese cities and towns, and rejects the application of 'one-size-fits-all' solutions in integrated urban regeneration plans and programmes, but points towards a more resilient urban destiny.

5 CONCLUSIONS

This paper has examined the awareness and understanding of the concept of resilience in the planning policy arena in Hangzhou. Planning strategies address the notion of resilience not only in relation to tackling external changes and shocks but also in responding actively and positively to risks.

Local authorities have been taking measures as preparation for climate change and flood risks since 2010. As one of Hangzhou's areas of expertise, Sponge city and 'five water co-lead' strategies are communicated widely. Local resilience actions are crucial for developing new, more adaptive approaches to coping with the uncertainty of flood risks. In addition, various challenging areas, such as spatial data infrastructures, climate planning, green infrastructure planning, limiting urban sprawl, should be explored for transitioning to climate resilient city.

The study of Hangzhou illustrates that the assessment framework for resilience is applicable for examining planning strategy-making. What is clear is that urban resilience is a broad concept that can easily become blurred and abstracted. From this study it is clear that the notion can be helpful from a planning perspective in the understanding and analysis of contemporary urban systems, defining a new approach and setting new principles (or priorities) in policy-making. It also suggests that the concept of resilience in

Hangzhou is frequently used as a synonym for adaptation, whereas in more water-specific documents it is understood as a soft form of resistance. And for many stakeholders remains quite abstract.

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ID 1411 | SOCIAL RESILIENCE AND NATURAL HAZARDS - ANALZYING MULTIPLE SOCIAL LEVELS OF RESILIENCE IN THE CONTEXT OF PLANNING AND RISK GOVERNANCE

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ABSTRACT: The paper conceptualizes resilience as a matrix of social levels (intra-organizational, organizational-, and inter-organizational) and social capacities (coping, participative, adaptive, and transformative). The paper reflects on some advantages and limitations of this resilience conceptualization. The concept is, for instance, strong in considering processes of interpretation and social change. However, it has only limited usefulness in simple quantitative attempts to measure and assess resilience in "the real world". Furthermore, some implications for future research and practice are discussed.

KEYWORDS: Adaptation, capacity, coping, inclusion, organization, participation, transformation

1 INTRODUCTION

The word 'resilience' is used in most diverse research areas and policy fields of modern societies. To name only a few examples: psychologists ask under which conditions and through which processes those children that face adverse risk situations may still build and display "normal" development competencies in specific social and/or cultural settings (e.g., Masten 2014). Social psychologists and management scholars like Karl Weick ask through which social processes teams may be able to deal with surprises and sudden dangers in the context of firefighting (e.g., see the seminal paper on the Mann Gulch Disaster by Weick 1993). Organizational scholars are concerned with organizational performance in the face of increasing levels of complexity, uncertainty, and ambiguity (e.g., Kayes 2015). Resilience is especially prominent in research on so-called "socio-ecological systems" (e.g., Boyd & Folke 2012) and on the prospects of understanding, analyzing, and promoting disaster resilience in the context of natural hazards, climate change, and the possibility of cascading disastrous events (e.g., Tierney 2014, Coaffee & Lee 2016). Given this diversity of research streams and policy contexts and communication across streams and contexts, no wonder that there is also a high diversity of definitions, theories, and methods to use "resilience" in planning research and practice (e.g., Davoudi 2012, Deppisch 2017).

Fortunately, there are useful book-length publications that review resilience definitions in various scientific disciplines and related theoretical approaches as well as their methodological and practical implications for planning research and practice (e.g., Comfort et al. 2010, Tierney 2014, Coaffee & Lee 2016). We do not seek, therefore, to provide another overview of social resilience research that discusses the advantages and disadvantages of diverse perspectives. We are more interested in promoting a specific organizational-institutional and sociological perspective on resilience (e.g., Ansell et al. 2017). Based on an extensive review of the resilience literatures[1], we conceptualize social resilience as a matrix of (1) social levels (intra-organizational, organizational, and inter-organizational level) and (2) as a set of capacities (coping and participative capacity as well as adaptive and transformative capacity). The aim of this paper is to outline and justify social resilience as matrix in the context of planning (Allmendinger 2009, Davoudi 2012, Coaffee & Lee 2016) and governance (Hutter 2016, Ansell et al. 2017), especially from the viewpoint of "human agency" (Emirbayer & Mische 1998). Future work will show in more detail how this conceptualization may be used in theoretical as well as empirical planning research.

[1] See Hutter & Lorenz (2017) for a more detailed account of the literature review. The literature review will be published by Cambridge University Press (CUP) at the end of the year 2017 or the first half of the year 2018. We are thankful to the editors of the CUP-book, Sven Fuchs and Thomas Thaler (both of BOKU in Vienna), for helpful comments on the review.

For us, the following wide definition of social resilience (based on Boin et al. 2010, 9) serves as a starting point of our argumentation:

Social resilience is the capacity of a social entity (social order of actions) to proactively adapt to and recover from disturbances that are perceived within the social entity to fall outside the range of "normal" and "expected" disturbances.

This definition of resilience provides an anchor in the expanding "landscape" of resilience research in the natural sciences, civil engineering, and the social sciences. Therefore, some remarks on the definition are in order: Firstly, resilience is understood as a capacity of social entities. Questions of how and why actors address "resilience" in ideological processes are certainly important (e.g., "resilience" as manifestation of the politics of neoliberalism, Coaffee & Lee 2016). However, the following cannot elaborate on this in detail (for a more detailed account see Hutter & Lorenz 2017). Secondly, the definition highlights social entities understood as social order of actions. Without doubt, ecological systems and individual persons influence social action. Though, from our conceptual viewpoint, they are placed in the context of social resilience. Thirdly, the definition may be characterized as a wide definition because efforts to proactively and reactively manage disturbances are addressed (see Weick & Sutcliffe 2015 for an alternative of understanding resilience mainly as the capacity to react to the unexpected). Fourthly, the definition explicitly refers to perceptions and interpretations. In line with principles of qualitative social research (e.g., Strübing 2013), social resilience is seen as a capacity to manage the unusual and unexpected from the viewpoint of the focal social order of actions. We are interested in understanding social action that shapes perceptions, expectations, interpretations and learning processes based on context conditions that are characterized by power relations, networks, and institutions.

The paper is structured as follows: Chapter 2 introduces the aforementioned matrix and explains how resilience may vary with regard to social levels (intra-organizational, organizational, and inter-organizational) and social capacities that make up resilience in relation to unexpected disturbances. Chapter 3 provides the opportunity to reflect on some advantages and limitations of conceptualizing resilience as matrix of social levels and capacities. Chapter 4 concludes our paper and gives a brief outlook.

2 SOCIAL RESILIENCE AS MATRIX OF LEVELS AND CAPACITIES

Planning and risk governance are both evolving context conditions for conceptualizing social resilience (e.g., Allmendinger 2009, Hutter 2016, Lamker 2016). To simplify our argument with regard to context, we adopt the notion of a "planning project in the twenty-first century" as summarized by Patsy Healey:

• An orientation to the future and a belief that action now can shape future potentialities
• An emphasis on liveability and sustainability for the many, not the few
• An emphasis on interdependences and interconnectivities between one phenomenon and another, across time and space
• An emphasis on expanding the knowledgeability of public action, expanding the 'intelligence' of a polity
• A commitment to open, transparent government processes, to open processes of reasoning in and about the public realm

Table 1: Attributes of a twenty-first century planning project (Source: Healey 2010, 19)

All five attributes point to the challenge of developing an inclusive approach to public problem solving. There is wide agreement in the resilience literatures that dealing with unexpected disturbances potentially involves and affects actors from various societal spheres and organizational fields. Researchers and practitioners alike often mention public leaders (elected politicians and public officials), market-oriented business organizations, organizations of the "third sector", and, last but not least, citizens and self-organized community forms (e.g., Tierney 2014). An inclusive perspective on resilience is not surprising, because the call for resilience materializes especially with regard to non-routine events, crisis, disasters, as well as catastrophes. In such situations, the institutions and social differentiation of everyday life are no

longer functioning by definition and the limitations of state-centered approaches like anticipation-based "command and control" or plan-based disaster management are often salient which paves the way for discussions about policy reform and social change (Wildavsky 1988, Clarke 1999, Boin & McDonnell 2007, Weick & Sutcliffe 2015, Coaffee & Lee 2016).

We do agree that social resilience encourages researchers and practitioners to follow an inclusive approach to public problem solving. In line with a pragmatic understanding of "human agency" (Emirbayer & Mische 1998, for resilience and agency see also Hutter & Lorenz 2017) – instead of prevalent focus on social structures in resilience research –, we are somehow optimistic that actors in modern societies are – to some extent – able to proactively adapt to unexpected future disturbances even in the face of barriers to such resilience organizing.

Furthermore, we are interested in understanding people, tools, and tasks as well as organizational goals, technical systems, and relations between organizations, and how all this fits together to organize for resilience in modern society (Comfort et al. 2010). Hence, social resilience in the context of planning and risk governance requires both an inclusive approach and a multi-level approach to distinguish between social levels of organizing that encompass, for instance, collective resilience efforts of teams, organizations, and networks of organizations.

In a first step, the following elaborates on the dimension of social levels of resilience from an organizational-institutional perspective on planning and risk governance (see Ansell et al. 2017). Then, in a second step, we develop a sociologically informed understanding of how the overall notion of resilience can be disaggregated into more specific social capacities to deal with unexpected disturbances. And in a third step, we combine the social levels of resilience and the capacities of resilience in a "matrix" for analyzing social resilience.

2.1 SOCIAL LEVELS OF RESILIENCE

To understand social resilience in modern societies we need to take into account its constituents in terms of different social levels. In the following, we suggest focusing on three different levels, being the intra-organizational, the organizational, and the inter-organizational level, as resilience may emerge in very diverse forms on the levels as our examples will show.

Proactively adapting to future disturbances that fall outside the perceived range of "normal" events requires that people are able to imagine "strange futures" while simultaneously dealing with the demands of an evolving present. In particular, organizational scholars (e.g., March 1991) have long pointed out that organizations have difficulties in maintaining both learning processes termed exploration to deal with possible, distant, and perhaps strange futures and exploitation to reap the benefits from knowledge accumulation based on experience. Organizations tend to prefer exploitation while neglecting to sustain exploration. However, some researchers also show that face-to-face communication between organizational members may facilitate intra-organizational processes of developing formal or informal social groups that are eager to prepare for rare and even "strange" events in the future. Furthermore, resilience at this social level is also characterized by the collective capacity to discuss the specific implications of imagination for how an organization runs right now.

From the viewpoint of the whole organization, results of efforts to imagine possible, but strange disturbances are rather "useless", if they do not connect to organizational strategy, structure, incentives, and routines. In modern society, organizations responsible for planning and natural hazard management are often to some extent bureaucratic organizations that display a significant degree of formalization (e.g., formalized responsibilities, authority, standardized processes of communication, and routines like "Standard Operating Procedures (SOPs)"). Social resilience at this level may require that people "at the top" of the hierarchy are willing and able to provide resources and intra-organizational arrangements to facilitate and exploit processes of team-based learning for dealing with future imagined disturbances and for handling current emergencies through mindful process management (Weick & Sutcliffe 2015).

Increasingly, there is research that focuses on inter-organizational relations in the context of risk governance and planning (e.g., Comfort et al. 2010, Boyd & Folke 2012, Goldstein 2012, Thaler et al. 2016). With regard to social resilience, we highlight the following points: A wide preliminary definition

requires that actors interested in proactively adapting to futures disturbances are eager and able to combine diverse domains and types of knowledge in processes of inter-organizational collaboration that are often resource-demanding and far from risk-free in terms of realizing the intended collaborative advantage (e.g., Huxham & Vangen 2005,

Zimmermann 2010). For instance, the flood disaster in Dresden in August of the year 2002 triggered collaboration of organizations from research and practice at the spatial level of the whole catchment of the river Weisseritz (a tributary of the river Elbe). This inter-organizational collaboration included state authorities, municipalities, and organizations from civil society. Collaborators were able to jointly produce some innovative products for dealing with future flood events (Wirth et al. 2010), but showed only rather limited capacity to facilitate collaborative pro-active adaptation to future disturbances among the participating organizations (Vulturius 2013). Collaboration among organizations from diverse societal realms may be especially difficult when it comes to collective efforts that address future disturbances and even strange events that are difficult to interpret based on the diversity of the existing strategies, structures, and routines of the participating organizations.

2.2 SOCIAL RESILIENCE AS SET OF CAPACITIES

When it comes to disaggregate the overall concept of resilience into components in order to understand how “a social entity […] proactively adapt[s] to and recover[s] from disturbances that are perceived within the social entity to fall outside the range of ‘normal’ and ‘expected’ disturbances” (Boin et al. 2010, 9), discussions usually focus on separate, though interlinked capacities (e.g., Tierney 2014). As the discourse on resilience is nowadays situated in various scientific disciplines and research streams, not only a high diversity of definitions of social resilience is to be found, but also of the capacities that constitute resilience.

Some authors argue that resilience encompasses coping capacity, adaptive capacity and transformative capacity (e.g., Davies et al. 2013, Keck & Sakdadolrak 2013, Béné et al. 2016). This influential threefold division is useful to understand various degrees of re- and pro-active efforts of resilience. While some authors, for instance, Pelling (2011, 78), distinguish a “conservative” notion of resilience being the “contained” persistence of functions and practices from fundamentally different transformations meaning the “deepest form of adaptation indicated by reform in over-arching political-economy regimes and associated cultural discourses”, successive authors incorporated the idea of transformation into their resilience conceptualization. Hence, the triad of coping capacity, adaptive capacity and transformative capacity reflects the stepwise evolvement of the resilience concept starting with the mere “conservative” persistence of a system, over adaptations of systems ending so far with “evolutionary” transformations of systems in the face of global challenges.

In order to fully grasp social resilience and its distinct social features, the following introduces an alternative set of capacities with a broader sociological informed understanding of the underlying social matrix enabling resilience and human agency. The rationale behind this alternative set is not a critique of the aforementioned three capacities, but rather their limited scope, when it comes to the social sphere and its specific characteristics. This alternative set is rather a broadening from a sociological point of view due to the fact that most important social features of social resilience have been neglected (Voss 2008); without their consideration, the specific social aspects of adaptation and recovery as mentioned by Boin et al. (2010) in our preliminary wide definition of social resilience in the introduction cannot be grasped and understood.

By distinguishing coping capacity and participative capacity as well as adaptive and transformative capacity (e.g., Voss 2008, Lorenz 2013) not only the aforementioned aspects of dealings with risks and natural hazards can be understood, but also the specific social aspects of resilience being in particular social processes of perception, interpretation and meaning as well as power relations and ideological processes that influence social resilience and human agency substantially.

Coping capacity: Sociological as well as anthropological studies (e.g., Erikson 1994) teach us that social actors do not just restore a former status quo after extreme and unexpected events, but show a much more complex and interpretative dealing with such events. A symbolic dimension of meaning (Lorenz 2013) and social processes of remembering, perception, interpretation, imagination and expectation building come into play and need to be considered to understand resilience. Taking into account these

notions, coping capacity is understood as the cultural and social “dealing” with collective stress (Voss 2008, Norris et al. 2008). As a result, coping especially comes to bear in the midst of or after a disaster. Especially endowment with meaning, i.e. attribute meaning to otherwise meaningless disasters, proves to be a significant precondition for the overcoming of disastrous occurrences (Norris & Stevens 2007). Looking at the community level, Dittmer et al. (2016), for instance, show how a local rural community coped with the disaster of the Elbe river flood in the year 2013, both in psychological and physical terms. By establishing their own patterns of interpretation and communal narratives about the disaster, the community displayed significant efforts of human agency in terms of organizing themselves for weeks autonomously in the inundated area – while still experiencing the situation as meaningful and a situation of community-building.

Participative capacity: Whether teams, organizations, networks, communities, and societies can actually cope with threats and disasters depends not only on the coping capacities of actors, but quite often to a greater degree also on the societal factors that enable or constrain these actors to do so. Actual social action is the function of complex social context conditions and processes, for instance, power relations, networks of different types and size, as well as institutional conditions. Especially the underlying dimension of power has been neglected in resilience discussions. But more recently, a significant number of scholars (e.g., Voss 2008, Bohle et al. 2009, Lorenz 2013, Voss & Funk 2015) have addressed this aspect of social resilience. The concept of participative capacity enters the discussion of social resilience to acknowledge different ‘radii of agency’ (Lorenz & Dittmer 2016, 36) and to direct attention to the interpretive power and influential prospects of actors regarding those local, regional, and global processes which affect them. “[P]articipative capacity becomes a key category in the circle of disasters: the lower the participative capacity, the lower the resonance for critical developments, the lower the prevention activities, the lower the capacity to respond and to adapt and so on” (Voss 2008, 52). Arguing for an inclusive perspective on ways to organize for resilience, the concept of participative capacity is most relevant across and on all social levels. It is to be found in intra-organizational processes, for instance, team efforts to balance exploration and exploitation as introduced earlier. In the context of “High-Reliability Organizations (HRO)”, rigid structures of power and formal hierarchies are seen as amplifying errors while flat and more participative hierarchies may contribute to stronger collective mindfulness and this is then translated into more social resilience in the context of technological as well as natural hazards (Weick & Sutcliffe 2015).

Adaptive and transformative capacity: Adaptive capacity is not just – as, for instance, in the ecological discourse on resilience (e.g., Folke 2006) – the ability to adjust in the face of natural hazards or unknown future threats. If we take the contribution of sociology seriously, adaptation as well as transformation need to be seen as deeply entangled with the respective social processes of perception, interpretation and meaning (coping capacity) and existing structures of power (participative capacity). Adaptive capacity, therefore, describes the ability to adjust and adapt in the face of natural hazards or other known as well as unknown threats under the conditions of coping capacity and participative capacity. The dependence on and the available resources for adaptive capacity are in most cases not issues of choice, but rather distributed by all those factors that make up participative capacity. In the discussion on adaptive capacity the significance of social capital is discussed at length (Adger 2000, Hagan & Maguire 2007, Tierney 2014). What is often missing and what is brought to the fore by participative capacity is that the distribution of social capital is never natural, but always the result of social actors struggling for more social capital and that there is always a so-called “dark side of social capital” (van Deth & Zmerli 2010, Aldrich 2012) in terms of social exclusion, marginalization etc. Given the often normative actions and goals, esp. of transformation, for instance in terms of “individual welfare” (Keck & Sakdadolrak 2013, 5) or “good governance” (Béné et al. 2015, 10), the entanglement of transformative capacity with socially build expectations, fundamental norms and values, normative judgements, ethical conceptions of the “good life”, but also power structures becomes even more apparent.

2.3 SUMMARY

Table 2 suggests a quasi-formal depiction of our social resilience (SR) conceptualization as matrix of levels and capacities. Table 2 disaggregates the overall wide definition of resilience (see Chapter 1) into 12 types of resilience propositions2 in a “matrix” of social levels and a set of capacities as suggested in this paper.

2 A “proposition is a declarative sentence expressing a relationship among some terms.” (Van de Ven 2007, 117). A proposition and a hypothesis differ by levels of abstraction. Propositions “are relationships among theoretical concepts or construct, while hypotheses are relationships among concrete observable variables or events.” (Van de Ven 2007, 118) This understanding of propositions and hypotheses is in line with the philosophy of science called realism (in contrast to, for instance, relativism, Van de Ven 2007).

	Coping capacity	Participative capacity	Adaptive capacity	Transformative capacity
Level 1: intra-organizational	SR_{1c}	SR_{1p}	SR_{1a}	SR_{1t}
Level 2: organizational	SR_{2c}	SR_{2p}	SR_{2a}	SR_{2t}
Level 3: inter-organizational	SR_{3c}	SR_{3p}	SR_{3a}	SR_{3t}

Table 2 – Analyzing levels of social resilience: 12 types of resilience propositions

Some comments may clarify the purpose of this quasi-formal resilience conceptualization. Firstly, resilience statements are arranged primarily with regard to social levels. This reflects our organizational-institutional approach to social resilience with the emphasis on micro- and meso-dynamics for understanding collective action. Level-specific propositions are then differentiated with regard to social capacities. Secondly, we assume that propositions that refer to transformative capacities are – regardless of the level – the most ambitious analytical statements (see the growing literature on processes of transition and transformation in general, in cities and regions in particular, e.g., Egermann & Hutter 2014). Thirdly, as introduced above, issues of coping, participation, adaptation, and transformation may show relations characterized by tensions on multiple temporal as well as spatial scales. Hence, Table 1 does not emphasize 1-to-1 relations of specific propositions with “the real world”. In contrast, Table 1 may be used in research and perhaps also in practice heuristically to conceptualize the questions that need answering to promote social resilience in the context of planning and risk governance. Questions may emerge out of combining multiple resilience statements (e.g., SR1p - SR2c - SR3a, see Hutter & Lorenz 2017 for this example). Chapter 3 elaborates further on the advantages of our resilience conceptualization, but also on limits to its usefulness.

3 REFLECTIONS ON SOCIAL RESILIENCE AS MATRIX OF LEVELS AND CAPACITIES

Chapter 2 conceptualized social resilience as a “matrix” of social levels (intra-organizational, organizational, and inter-organizational) and as a set of capacities (coping and participative capacity as well as adaptive and transformative capacity). We summarized some social resilience research with regard to these levels and capacities. Overall, resilience research in general, social resilience research in particular, seems to be highly dynamic. Furthermore, policy makers in natural hazard and disaster management as well as in collective efforts for spatial planning and sustainable development increasingly use the notion of resilience to suggest ways to improve policies and practices in the face of the manifold pressing problems of our time (e.g., Tierney 2014). For instance, Jon Coaffee and Peter Lee (2016) outline policies and practices to enhance resilience in the context of climate change, security concerns in urban regions, and large-scale disasters.

Given these dynamics of resilience research and the request of policy makers and practitioners for valid as well as user-friendly and context-specific results of scientific analysis, a widely acknowledged research paradigm about resilience could be helpful to facilitate joint qualitative as well as quantitative analysis and to provide standards and research contents for the assessment of resilience with regard to various temporal and spatial scales. However, as it is now, no such unifying resilience paradigm exists in research and practice (e.g., Coaffee & Lee 2016). Quite the contrary, we observe an increasingly diverse “landscape” of research approaches and frameworks for analyzing and assessing resilience.

Conceptualizing social resilience as “matrix” of levels and capacities adds to this diversity through combining an inclusive approach with the analysis of multiple social levels and through reworking the set of resilience capacities. We encourage scholars of resilience to consider this complexity. Chapter 3

clarifies why they should try to do so. We also point to some limitations of understanding social resilience as matrix of levels and capacities.

Overall, this chapter uses two criteria to reflect on social resilience as matrix (Corley & Gioia 2011): (1) the criterion of originality that refers to the question to what extent a research contribution provides new insights into the phenomenon in question; (2) the criterion of usefulness that refers to the question whether researchers as well as practitioners may benefit from using the research contribution in the face of their own complex, dynamic, and uncertain context conditions.

The following argues that the concept of resilience as matrix provides new insights in the context of planning and risk governance. Furthermore, we are confident that the concept may prove useful in empirical resilience research. However, policy makers and planning practitioners who are eager to analyze, measure, and assess resilience with regard to spatial planning as well as cities and regions may ask about the usefulness of the concept in "the real world".

3.1 WHY CONSIDER RESILIENCE AS MATRIX?

The concept of resilience as matrix does not claim to be comprehensive in relation to the "social world" in its given complexity. But, we see the concept is in line with an organizational-institutional approach to "governance in turbulent times" (Ansell et al. 2017). This has implications for how we answer the question why students (in a broad sense) should use the concept in their own research. The following highlights three reasons:

Seeing resilience through the sociological eye: The expression "sociological eye" is attributed to Everett Hughes (e.g., Whittington 2007). Of course, seeing resilience through the sociological eye may take on many forms, because sociology is characterized by diverse theories and methods (e.g., see Joas & Knöbl 2013 on social theory). However, it seems justified to state that current sociologies have some commonalities. For instance, they enhance at least two abilities of observers in and of the social world: Firstly, they consider the limits of rationality of actors even if these actors try to show a strong sense of human agency. Secondly, they emphasize differences in perception, interpretation, and learning of actors also in the face of similar context conditions. Our resilience as matrix pays especially attention to differences related to formal and informal organization (Scott 2014). Students of resilience that are interested in planning by organizations are encouraged to use the given resilience conceptualization.

Facilitating strategic research decisions: Discussions about processes of social differentiation and integration have a long tradition in sociology and social psychology (e.g., Weick 2001, Joas & Knöbl 2013). Resilience as matrix supports both researchers that are motivated to focus on specific features of a selected level (e.g., resilience of small social groups in the context of wider organizational forces) and researchers that are ambitious to study multiple social levels and their relations ("cross-level analysis"). Resilience as matrix may also help to focus the scope of dealing with disturbances in specific policy fields. Studies that encompass the whole spectrum of capacities may highlight a selected level. Studies that consider multiple levels may place a specific capacity in the foreground of investigation. We hypothesize that empirical studies will often be characterized – more or less explicitly – by a selective focus, because comprehensive studies are difficult to do (e.g., due to resource constraints). Hence, the concept of resilience as matrix may facilitate strategic research decisions: it allows focusing on specific research questions without neglecting other levels or relations.

Understanding interactions, especially tensions, between levels and capacities: Resilience research and particularly quantitative conceptualizations of resilience often suggest that capacities function in an additive manner, but neglect the interactions or interferences of capacities and different social levels. These interferences might be constructive, i.e. amplifying each other and contributing to an overall increase in resilience. But, and this is most important for us, there are also non-additive interferences to be found, which can also lead to diminished resilience, if such tensions, trade-offs and side effects cross levels and capacities are not considered. Studies that focus on multiple capacities of social resilience have the opportunity to consider such tensions inherent in collective efforts of pro- and reactively dealing with unexpected disturbances. Such studies are especially challenging with regard to the interpretation of tensions based on empirical data. For instance, teams with members from multiple organizations and with the task to analyze future unexpected disturbances need to consider the challenge of communicating team

results in the context of how the participating organizations run right now. Issues of coping, adaptation, and transformation tend to show multiple tensions that may be characterized as trade-offs, dilemmas or even paradoxes[1]. The choice of interpretation of tensions is important for how team efforts are perceived by the participating organizations. We hypothesize that understanding tensions between capacities is especially fruitful from the viewpoint of research (e.g., see Wiechmann 2008 on tensions in strategy development in cities and regions, Healey 2009 on tensions of strategic spatial planning). However, emphasizing tensions may be risky or at least unfavorable (even though often needed) in the context of policy making and planning practice for resilience which brings us to the task of considering the limitations of resilience as matrix.

3.2 LIMITATIONS OF RESILIENCE AS MATRIX

Conceptualizing social resilience as matrix of levels and capacities has some limitations which should nevertheless be emphasized. This is not surprising, because "true" research, whether engaged or not, always has limitations (e.g., see Van de Ven 2007 on "engaged scholarship"). To clarify the usefulness of our concept of social resilience, it is therefore worthwhile to think about the limits of our argumentation. From a research perspective, the following briefly reflects on limitations in theory and empirical research, the assessment of resilience, and, last but not least, policy and practice (see Hutter & Lorenz 2017 for more details).

Limitations of theorizing and empirical research: In general, theorizing and empirical research on resilience as matrix is challenging and resource-intensive work. Given some strategic decisions about the selective focus of a study and appropriate research design and resource decisions to implement the intended work, we expect that limitations will especially arise due to the challenge of grasping the processual character of social resilience capacities. Researching social capacities as processes implies making some "tough" research decisions (e.g., defining the notion of "process", Van de Ven 2007). Social capacities are not just there and easily detectable through, for instance, document analysis and qualitative interviews. Social capacities emerge (or vanish) through complex and dynamic processes that may be characterized by high uncertainty and dynamic conflict. How organizational resilience, for instance, emerges out of specific processes has been studied intensively for "High-Reliability Organizations (HRO)" (Weick & Sutcliffe 2015). HRO-inspired research needs careful adoption in the context of planning and risk governance (e.g., Hutter 2016).

Does the concept help to measure and assess resilience? If the reader expects some direct input or blueprint into efforts to analyze and assess social resilience at multiple levels in cities and regions, the tentative answer would be at best "Yes, but…". Resilience as matrix may help as a simple classification schema to define indicators or sets of indicators for the measurement and assessment of social resilience. The set of 12 resilience propositions could serve as guidelines for defining and operationalizing a specific assessment approach to resilience. However, currently there is no shortage in resilience assessment efforts (for an overview see, again, Coaffee & Lee 2016). Limitations arise out of the high diversity in basic assumptions, in theoretical considerations underlying assessment attempts, and in empirical approaches to measure and assess resilience. Due to this situation there are, as in social science in general, limitations for integrating approaches to measurement and assessment in line with basic principles of qualitative and quantitative research. We assume that resilience as matrix is more in line with qualitative social resilience research. However, we hope that future research efforts will lead not only to comprehensive social resilience studies based on our conceptualization, but also to more integrative qualitative as well as quantitative research (see van de Ven et al. 1999 for an example in innovation research).

Limitations with regard to policy and planning practice: Obviously, this paper is targeted towards a resilience research audience and less so towards policy makers and planning practitioners. Social resilience, at least in our understanding, arises out of the synthesis of diverse capacities at specific levels

[1] Hence, tension on the one hand and trade-off, dilemma, and paradox on the other differ in levels of abstraction. Tension is the more abstract term. In "the real world", actors may interpret tensions as, for instance, trade-offs, dilemmas, or paradoxes with significant consequences for planning and risk governance (e.g., Wiechmann 2008, Healey 2009).

of social order. Social processes of synthesizing issues of interpretation, power, and participation, as well as issues of learning, adaptation, and transformation cannot be addressed through checklists, recipes that resemble recipes in cookbooks, and simple causal models. Implementing social resilience in practice requires continuous efforts of agents that desire to enhance social resilience and that are able to consider such diverse issues as constructing and communicating meaning as well as playing power games in risky settings. Resilience as matrix summarizes some social resilience research findings that may serve as a springboard to future research activities with high policy impact. It is our hope that the conceptual arguments proposed here may support future research work that gives policy makers and planning practitioners the opportunity to facilitate social processes of resilience making.

4 CONCLUSION AND OUTLOOK

It is now widely acknowledged that discussions about resilience in research and practice have led to an abundance of concepts, theories, methods, empirical findings, assessments and ideas how to improve policy and practice. This abundance may be interpreted as a threat to the usefulness of resilience for research and practice (e.g., Brand & Jax 2007). But this abundance may also be interpreted as sign of the liveliness of debate and of the importance of resilience in an uncertain, complex, and dynamic world. This paper clearly follows the pathway of the latter rather than the former. However, resilience researchers on this pathway face further challenges of strategic choice.

For instance, Pelling describes a “conservative” notion of resilience within an overall framework to analyze climate change adaptation through resilience, transition, and transformation (2011, 51). In contrast, some planning researchers see resilience as the overall guiding concept to analyze policies and practices for more climate change adaptation, security, and better disaster management in urban regions. We follow Coaffee and Lee (2016) in transcending a conservative concept of resilience by taking issues of coping, participation, and adaptation as well as transformation into account.

To avoid inappropriate fuzziness in resilience analysis, we argue to specify the spectrum of relevant research propositions through identifying the social levels of organizing for resilience in urban and rural regions (Hutter & Lorenz 2017). This is in line with recent attempts to promote an organizational-institutional approach to “governance in turbulent times” (Ansell et al. 2017). Therefore, capacities of resilience may vary with regard to specific social dynamics on intra-, organizational, and inter-organizational levels of organizing to deal with unexpected disturbances. And what is even more important: cross-level social dynamics may be crucial for how successful collective efforts of dealing with unexpected disturbances are.

Of course, there are further dimensions and related variations that could be taken into account (e.g., see Van Wijk et al. 2003 on knowledge and networks and Zimmermann 2010 on knowledge and planning). However, we are confident that our conceptualization may serve as one analytical and heuristic concept among others in future theoretical and empirical research on resilience, planning, and governance. Like in the case of innovation and strategy research, we expect significant research progress from medium-sized to large projects that seek to integrate theoretical discussions, empirical work through qualitative as well as quantitative methods, and practical considerations (e.g., Van de Ven et al. 1999, Van de Ven 2007). It is unlikely that discussions about resilience as hype or hope will vanish. However, resilience in planning research may display similar pathways like the ones that can be observed in psychology that has been analyzing resilience now for decades (e.g., Masten 2014).

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ID 1482 | CHINESE EXPERIENCE IN DELTA CITIES: TO WHAT EXTENT DOES GUANGZHOU CITY`S SPATIAL PLANNING SYSTEM FACILITATE THE INITIATIVES IN RESOLVING FLOOD RISK?

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ABSTRACT: Spatial planning is supposed to denote innovations in resolving flood risk. However, taking spatial action is never an easy task. This study aims to explicate the reasons for this difficulty by illustrating why the urban flood risk mitigation is struggling to be tackled of locally despite the growing flood risk in delta cities. It does so by investigating the recognition of flood risk in the spatial planning system. Specifically, Guangzhou, a city located in the Pearl River Delta and vulnerable to fluvial, pluvial and coastal flooding, is taken as an example in this research. By using the method framing analysis, the paper finds that the road to face the flood risk in Guangzhou is still at an emerging process from informal activities to formal legislation. With a pace changing from a dedicated to an integral issue, there is an appeal for a combination between nature-based options and engineering options. In spit of these progress, there is still a mismatch between this policy intent and real practitioners. Due to the weak sense of identity in flood-proof initiatives among practitioners, the road toward a more resilient city is challenging.

KEYWORDS: Climate change, flood risk, urbanisation, spatial planning, framing analysis, Pearl River Delta, Guangzhou

1 INTRODUCTION

Flood risk, greatly increased by climate change, is remarkably affecting global cities. It poses a considerable threat to the safety and social-economic development by causing considerable losses. Against this background, spatial planning is increasingly recognised as an essential tool and process to mitigate flood risk and raise the cities` ability to face climate change (Gersonius et al. 2008; Roggema 2009, 2014). On one hand, it works through multiple routines by locating suitable types of land use, arranging activities, regulating scales of development and designing physical environment to avoid or decrease the impact of the potential flood (White et al. 2007). By this, many spatial policies, strategies, plans and projects (in this study, they are collectively named as spatial development) are formulated. On the other hand, water sees no boundaries. Flooding is increasingly regarded as a cross-cutting issue which requires the contribution from different professions. Spatial planning, supported by other relevant fields such as water management, is regarded as a decision-making process which provides the opportunities for mutual learning. Thus, the role of spatial planning in enhancing negotiation stands out.

However, incorporating flood risk into spatial planning is still challenging in many delta cities. Even in the pioneer cities, such as Rotterdam in the Netherlands, applying spatial efforts to resolving flood risk is never an easy task. The situation seems worse in new urbanising flood-prone areas equipped with limited experience in dealing with water, for example, Guangzhou city. It is one of the most vulnerable delta cities

around the world, located in the Pearl River Delta (China). In some initial research, it is indicated the local spatial development has not done a good job in mitigating flood risk. This underlying difficulty can be partly attributed by the priority to the economic development in spatial development rather than water issues (Francesch-Huidobro et al. 2016, Meng & Dabrowski 2016).

The other side of this unsuccessful job might closely be related to the weak recognition of flood risk in the spatial planning system. Here, recognition refers to the way how flood is understood, framed and closely linked with spatial planning practice. Weak recognition can happen in the context of the insufficient understanding of the uncertainties and opportunities brought by flooding and climate change among spatial planners, and reflected by the reluctance in changing the traditional planning approaches to face the new natural hazards on account of potential extra efforts and costs (Gersonius et al. 2008; Roggema 2009; Næss et al. 2005).

In order to mark the significance of recognition and clarify its impact on planning practice, we briefly discuss the responses to flood risk in Guangzhou`s case. This article examines whether and how the local spatial planning system acknowledge the flood risk, and, in turn, how this acknowledge facilitates or hinder dealing with the flooding hazard. It contributes to the literature on the explaination why promoting urban flood risk mitigation is so difficult despite the growing flood risk in delta cities and the clarify the interaction between dicourse and practice. The discussion draws on fieldwork conducted in Guangzhou city following the emerging trend toward a more resilient habitat inspired by the Sponge City Programme. This special programme is launched by the central government in 2014 and highly promoted at 30 pioneer cities during the last two years, which aims to deal with the loss from frequent flooding and scarce water resources (Ministry of Housing and Urban-rural Development 2014). Although Guangzhou has not been appointed as one of the pioneer cities, the local authorities have set their minds to catch up this new trend.

Though frame analysis of planning documents, and a series of semi-structure interviews, this article argues that the current spatial planning system is living through a transition from an informal planning process, with flood risk embedded in flagship projects, to a formal planning process, with flooding compulsory considered in normal activities. This article begins by illustrating the pace of urbanisation related to flood risk in Guangzhou`s case, before setting out the methodology and theoretical concepts. Results are explained in the sections spatial policy making and practise before the implications are discussed.

2 URBAN DEVELOPMENT AND FLOOD RISK

Guangzhou, the largest city in Pearl River Delta, is located on the Pearl River. It is one of the best examples of rapid urbanisation process in this delta while increasing number of inhabitants exposed to flooding. As the capital of the Guangdong province, it is close to Hong Kong with 120 km distance at the north-west and 145 km apart to the north of Macau. The old ancient town of Guangzhou was near Baiyun Mountain on the east bank of the Pearl River. It has a diverse topography, ranging from urban centre area with Pear River passing through and flowing into a south floodplain area, to a mainly agricultural and rural area with natural canals and streams in the north and east. The elevation of the prefecture generally increases from south-west to northeast, with mountains forming the backbone of the city and the ocean comprising the front.

Due to the convenient condition for transportation and maritime trade, it developed into the most important port city in southern China, with the exchange of economy and culture. This city sees an explosive economic growth from 365 billion in 1978 to approximately 7400 billion in 2016, after the launch of the reform and open policy. Correspondingly, the population in this period climbs from 3 million to 14 million. Now it becomes the third heavily settled city in mainland China, with a population of 13,501,100, behind Beijing (2nd) and Shanghai (1st).

The increasing population and economic development result in the dramatic transformation of the urban landscape. During the period from1980`s to 2010`s, economic rise led to rapid urbanisation and high-density development, which brought about too much paving in the built area and insufficient capacity of water discharging system (Li et al. 2015). This scenario contributes to the increasingly severe pluvial flooding after 2010`s. One of the local authorities showed his concerns in the early time (interview 1),

"The location of waterlogging are mainly distributed in the city centre and the number of those is increasing every year. The sad is it is never easy to handle it in a decent way. This situation has been made worse recently, considering frequent rains and thunderstorms caused by the climate change".

The latest Sponge City Plan launched in 2017 reconfirms this trend (Figure 1-left), in which the city centre area is regarded as the most vulnerable area threatened by pluvial flooding. As Li (2015) put out in his research, the data of the events of pluvial flooding in the city centre from 1980 to 2012 indicates the density of waterlogging is closely correlated with the percentage of the impervious area. The distribution of these pots stretched by the pace of urban sprawl.

Moreover, Guangzhou is facing a new dilemma as well: the threat of coastal flooding. In a series of literature launched recently (Hanson et al. 2011, Hallegatte et al. 2013), Guangzhou is recognised as one of the most vulnerable cities considering the loss from populations and assets exposed to coastal flooding. According to the latest Sponge City Plan, the southern part of Guangzhou is the worst-hit area (Figure 1-right). Two driving forces could intensify the potential loss from coastal flooding. On one hand, the fluctuation of 30cm higher of mean sea-level in the PRD was speculated between 1990 and 2030 with a 5cm increase annually due to climate change, which brings an external pressure to this area (Chinese Academy of Science, 2002). On the other hand, the unstoppable trend of urbanisation and industrialisation might increase the exposure of people and property to potential coastal flooding. Nansha District, a district in southern Guangzhou, was officially acknowledged as a State-approved Special Economic Zone in 2012, competing and cooperating with Shenzhen and Zhuhai. In the near future, the development based on transportation and maritime trade will definitely bring a new trend of urbanisation and land reclaim. Given the uncertainties of climate change and potential urbanisation on coastal areas, the flooding risk stands out.

In contrast to increasing pluvial and coastal flooding, the fluvial flooding is not so dazzling of light in 2000`s (Carmona et al. 2014). Although Guangzhou is also historically threatened by the fluvial flooding, the continuous construction of water infrastructures like dykes, dams and reservoirs from the 1950s` to 1980`s has built the basic safeguard for Guangzhou city. "The related construction pays more attention to the reinforcement of existing engineering infrastructure". By this, in the research of Guangzhou, we paid our attention to pluvial and coastal flooding.

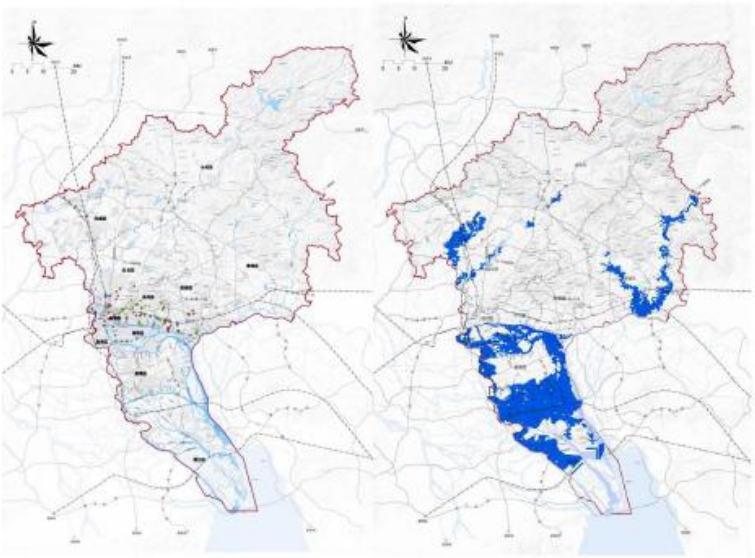

Figure 1 – The spots of frequent waterlogging (left), the vulnerable areas threatened by coastal flooding (right)

3 METHODOLOGY

3.1 FRAMING ANALYSIS

In examining the recognition of flood risk in planning, it is important to address the agreement and disagreement between the claiming of policy discourse such as rules, principles, criterions, and the reflections of policy discourse, such as the activities and choices conducted by institutions and agents. Such controversy can be examined by framing analysis, which is generally used to analyse “the mismatch between administrations` implementation of legislated policies and policy intent” (Hulst & Yanow 2016 P.92). As proposed by Rein and Schon (1994, 1996), though “frame critical analysis” and “frame-reflective analysis”, the two perspectives of framing analysis, this method helps to explain, such as the sense-making of problems, the evolution of understanding, the gaining of legitimacy and the value reflection of policy designers and practitioners.

Hulst and Yanow (2016) underlines three identities in conducting framing analysis,

1. the substance of policy issue
2. the policy process
3. policy-relevant actors` identities and relationship

Here, we take use of this outlines of exploration and apply it in the discussion of the agenda setting of flood risk in the spatial planning system. First, the fitting planning policies and plan documents are selected, and the content in relation to flood risk and planning will be sought. Following this, they are analysed to clue the changes of beliefs and standpoints of policy makers and planning practitioners in flood-proof routines. In order to recheck the statement of policy discourse, in reality, we add another discussion to the original framework: the reflection of policy intent.

Based on this, the discussion of this paper are sketched out along four axes:

1. How is flood risk defined in spatial planning documents and brought to the public in policy arena?
2. What routines are set in resolving flood risk in spatial regulations, plans?
3. What are the identities of spatial planners in representing the flood-proof intent in policy?
4. What is the reflection of policy intent in practice?

3.2 POLICY SELECTION AND DATA COLLECTION SOURCES

In order to reflect the new trend towards a resilient city, stimulated by the latest political innovation “Sponge city Programme”, and the transitions in spatial planning during this new trend, this research examine the official documents from 1990`s to present. Two reasons contribute to the time point we selected: the increasing flood risk caused by climate change and urban development. On one hand, it is the time, in 1990, when the climate change started to step into the political arena and had an influence on policy and plan making (Meng & Dabrowski 2016). The recognition of the impact of climate change on urban development was emerging, which sets the premise of this discussion. For the sake of Guangzhou, there is a remarkable increase of waterlogging pots from 2000 to 2012 due to the frequent storms (Li et al. 2015). Thus, flooding hazard caused by climate change is becoming a key factor that affecting residential property and urban development. On the other hand, it is generally recognised 2000 means a lot to China, which opened the door to the period of accelerating urbanisation. This new trend was highly praised in 10th 5 Year Plan (National Social and Economic Development Plan), regardless of the size of cities (Li 2010). During this period, a mass of people immigrated into large cities, for instance, Guangzhou, on account of the advantages in resources, location and employ opportunities (Chen 2013). By this, Guangzhou sees a rapid urbanisation and lots of problems following up.

Here, we choose Guangzhou Master Plan 2000-2010 (MP1), Guangzhou Master Plan 2010-2020 (MP2) and Guangzhou Sponge City Plan (SCP) in the following analysis, which provide the spinal column of the local spatial planning system and play an influential role in ensuring whether flood risk is seriously concerned and in what ways it is handled. Although this policy selection does not cover the full range of flood- related plans and policies, it provides an overview of current local resilient routines in the spatial planning system.

To enrich the insights from framing analysis, 30 experts and professor are invited in a series of semi-structure interviews. Interviewees at the provincial and municipal level were selected to present the principal institutions and reflect on the key viewpoints in the documents review. The interviewees cover administrators in the spatial planning system, administrators of water management system, experts in research institutions and private planning companies and representatives in real estate companies. Three questions concerning recognition and awareness are asked:

- Do you think your profession can contribute to a flood-proof city?
- What obstacles might hinder your contribution?

The survey helps to show the extent of recognition of flood risk among the relevant actors in spatial policy and planning practise. It increases understanding the extent of the correspondence and opposition between the agenda setting in legislation and the following interpretation

4 THEORETICAL CONCEPTS

Four concepts are identified as primary factors in this analysis from the theory of framing analysis derived from Schon and Rein (1994). They are problem-setting, routines for resolving problems and identities of actors in reflecting the policy discourse.

4.1 PROBLEM-SETTING

First, problem-setting, which denotes a sense-making process, is selected. Through this process, the specific uncertain or ambiguous problems are selected, analysed and converted into explicit questions (Schon 2008). Such sense-making work then set the basis for the formulation of rules subsequently and impact on the further implementation. Specifically, the concern of problems setting in this study is derived from the premise that we should not only pay the attention to the external implication from climate change in delta cities. Flood risk is also interwoven with internal pressure from the physical development such as urbanisation, land-use patterns and technical treatment (Meyer 2014). Such “binding together” pattern, if any, not only provide a perspective to view what the troublesome is and what should be fixed but also holds dissimilar patches together in a scrutable and cogent way to motivate and steer actions (Weick 1995; Rein & Schn 1996).

In many delta cities, high-density urban sprawl and uncontrolled development in the flood-prone area may cause the difficult in water discharge and increases the odds of people’s exposure to flood hazards, such as Guangzhou in Pearl River Delta and Argentina in the Parana Delta (Bosselmann, Peter 2014; Zagare 2014). In another context, flood risk is correlated to the construction of large dams upstream. The case in Mekong Delta and Nile Delta manifest the concerns that such technical treatment may lead to the lack of sediment disposal and land subsidence (Cornelia & Kantoush. 2014; Marcel et al. 2014). The clarification of this interwoven in policy analysis between flood risk and other elements, thus, contribute to a better understanding of in what ways is flood risk framed and how they shape and impact on the future ambitions and options in spatial development. Consequently, a fundamental reconsideration of the problem setting of flood risk is highly emphasised in this study.

4.2 ROUTINES FOR RESOLVING PROBLEMS

Policy discourse could be regarded as a storytelling process, which naming the problems, defining the features, explaining them to the public what has happened, what is going on, and what should be done at present and in the future (Hulst & Yanow 2016). Through this process, policy discourse bridges the problem setting and real problem solving, and enable a leap from what it is to what needs be done. Here, we pay our attention to the session what needs be done, namely, the routines for resolving problems, through four aspects, goals, philosophy, principles for action and available options.

Since it is easy to understand the meaning of goals, principles for action and available options, we concentrating on the clarification of philosophy. As Wittgenstein (1921; P.25) mentioned, “Philosophy aims at the logical clarification of thoughts”. Similar point of view is also elaborated in Nigel Taylor`s study that it

refers to the “activity which is concerned with the clarification, and critical examination, of the basic assumptions underlying our ideas and beliefs (and thus, too, theories) and our actions and intentions (and thus, too, practices)”(1980, P.160). In terms of planning, Taylor argues that philosophical inquiry covers two main aspects: the ethical judgments (e.g. the economic development is promoted even though it might spoil the natural circumstances, or give priorities to the public transportation not the private), and the knowledge of problem (e.g. the causes of traffic jam) (Taylor 1980). In this paper, we build our views of philosophy by emphasising the former one and connecting it with the value judgement. It is, in this way, used to reflect the value orientation of policy, strategy and plans (e.g. a programme is encouraged which brings about long-term economic profits and adds to the living quality in spite of large sum of investment in a short-term). By this, it reflects the collective consciousness, overall tendency or dominating ideology from the decision makers, in most case derived from the government authorities with citizen`s reflection embedded in.

The belief underlying this discussion is that different goals, principles, philosophy and available options could have different impacts on, for instance, the following detailed plan and design process. For the Dutch case in Rotterdam, economic values derived from flood-proof initiatives are remarkable in a series of official documents, for instance, Rotterdam Adaptation Strategy (Rotterdam Climate Initiative 2013). Correspondingly, the cost and benefit analysis is promoted in the following plan and design process, which as a tool consolidates a proposal by comparing the cost of new construction and the loss caused by flooding hazards otherwise. On the contrary, in the Chinese case “Sponge City Programme” in Guangzhou (which will be further explored in paragraph 4 - analysis), the economic benefits is overestimated, which leads to a lack of expenditure comparison and a risk that the programme will not be sustainable. Thus, the role of routines for resolving problems stands out.

4.3 IDENTITIES OF ACTORS IN THE POLICY DISCOURSE

The discussion of identity derives from the concern that planning practice might work as policy discourse claims because of the thoughts of identities of the potential actors. They might detach themselves from the affairs because of the weak sense of responsibility or conflicts out of different political positions (Forester 1999, Forester 2012). Policy discourse contributes to framing this identity through constructing a common ground, appealing mutual recognition, clarifying their power and building relationship between parties within their beliefs (Schon & Rein 1994, Forester 1999, Forester 2012).

4.4 REFLECTION OF POLICY INTENT IN PRACTICE

Although policy might portray a promising future, in reality, the actors will reframe the discourse according to their own understandings and interests, and apply the revised discourse in practice. It means there might be a mismatch between the intent and practise. Here, the discussion focuses on clarifying the real thoughts of actors in spatial policy making and planning practise.

5 SPATIAL PLANS BEFORE THE LAUNCH OF SPONGE CITY PLAN

5.1 PROBLEM SETTING

Both of MP1 (Guangzhou Government 2005) and MP2 (Guangzhou Government 2016) SCP include the discussion of flood risk but the ways of problem definition are different. It indicates flooding risk (too much water) is turning from a detached issue to a connector associated with other urban problems, such as water pollution, water quality, etc.

In MP1 (Guangzhou Government 2005), flooding is concerned under the subtitle flooding prevention and rainfall discharging, a section of the chapter public safety and disaster prevention. Beneath this framework, flooding is recognised as a natural hazard caused by frequent storm and overflows of river and coastal flooding. There is no discussion of the impact of climate and weak description of urban development on flooding. In addition, dealing with flooding is regarded as a detached issue with the construction of engineering infrastructure emphasised.

Although flooding is also framed in the similar framework in MP2 (Guangzhou Government 2016), it sees a slight change. There seems to be a shift in the attitude which tries to clarify the relationship between flooding and urban development. Apart from the description of natural impacts, in this plan, flooding is attributed to the problems brought by the rapid urbanisation, such as the insufficient discharging capacity of drainage and sewer system, the disappearance of waterways and canals system, the decrease of buffer zones for flood discharge and retention due to urban expansion. Correspondingly, traditional flooding mitigation projects are criticised as:

> *"a series of detached actions, which heavily rely on the engineering facilitates while neglecting their connections with urban development…Flood mitigation projects in the future with the chief objective of safety should be an intriguer which bring profits to a clean water environment and an ecological circumstance for working and living (P.445)."*

5.2 WHAT ROUTINES ARE FORMULATED IN RESOLVING FLOOD RISK?

GOALS OF FLOOD-PROOF INITIATIVES

In MP1(Guangzhou Government 2005), water safety is regarded as the primary goal that should be achieved. This goal is explicated in two aspects. On one hand, to protect the city from fluvial and coastal flooding" is highly emphasised through the reinforcement of the existing engineering infrastructure such as dykes, levees, pump station, etc. Beneath this elaboration, the frequency of fluvial flooding in city centre should be "lower than 1 in 100 years in short-term and lower than 1 in 300 years in long-term" (Guangzhou Government 2005, P 47). On the other hand, improvement of the discharging infrastructure and reinforcement of the existing retention infrastructure means a lot in raising the capacity to deal with excessive water though. Based on those infrastructures, "the frequency of pluvial flooding is supposed to be lower than 1 in 10 years in short-term and 1 in 20 years in long-term…", and "excessive rainfalls should be discharged within 24 hours" (Guangzhou Government 2005, P 48).

Even though the significance of water safety is still re-emphasized in MP2 (Guangzhou Government 2016), the close connection between flood-proof projects with urban development starts to impact on the policy formulation and enriches the goals setting. Apart from the modification of river flood defence standards and water discharging standards, this plan claims that implementing flood mitigation projects could be combined with the measures "improving the quality of water… enhancing the ecological environment… and shaping the culture identity" (Guangzhou Government 2016, P445). Thus, the goals of flood-proof statement start to explore the extensive possibility.

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The philosophy in dealing with flood risk is broadened through the evolutionary development of spatial planning making as time goes by. It is obviously that the concern of safety penetrates in both of two documents. As described in MP1 (Guangzhou Government 2005) and MP2 (Guangzhou Government 2016), the safety is cognizant as their first priority. However, the content of philosophy in MP2 (Guangzhou Government 2016) sees a subtle variation that there is a gradual transition from narrowed focus on water safety to a diverse orientation which adds the value to safety, ecology, environment and cultural identity. The reason why such transition is regarded as a subtle variation is that description of the available options to support this transition is insufficient in spite of these new value judgement in the policy statement. Thus, the extension of philosophy in MP2 seems more like a reframing the irritating flooding risk in a more comprehensive perspective than a radical switch.

PRINCIPLES FOR ACTIONS

The prime principle for Guangzhou`s actions shared by MP1(Guangzhou Government 2005) and MP2 (Guangzhou Government 2016) can be generalised as taking action according to local settings. It can be reflected by two main aspects: the distinctive geographic features of different areas and the status of existing infrastructure. Correspondingly, different options are proposed in terms of potential flooding resources along with the reinforcement the existing infrastructure.

In addition, MP2 (Guangzhou Government 2016) shows a new tendency of joint performance. As mentioned in the philosophy part, this plans calls on an integral choice which combines the flood-proof initiatives with other activities contributing to improving the water quality, living environment and cultural identity (Guangzhou Government 2016, P.445).

AVAILABLE OPTIONS

Divided by the sources of flood risk, In MP1(Guangzhou Government 2005) the options can be into alternatives to deal with the fluvial and coastal flooding, and alternatives for pluvial flooding. The former concentrates on engineering construction. Under its influence, reinforcing flood defence infrastructure, such as embanks, dykes, pumps, water lock; and raising the elevation of ground are emphasised (Guangzhou Government 2005, P.47). The latter focuses on a conservative way by ameliorating of existing water discharging infrastructure and protecting the open canals, waterways and artificial lakes from the negative impacts of excessive urbanisation. Activities such as improving the discharging system; preserving and dredging the canals and waterways; suppressing the erosion to existing waterways out of urbanisation, canals; and preserving the artificial lakes are encouraged (Guangzhou Government 2005, P.48).

The diversity of available options seems to be loosened in MP2 (Guangzhou Government 2016). Options focus their attention on the reinforcement of the dykes, flood walls, pumping facilities, reservoirs, canals and discharging system (Guangzhou Government 2016, P.442-447). Engineering construction appears to be the dominant approaches to face the flood risk.

In spite of those available options, there is a lack of description of areas without any canals and lakes in their site. In fact, lots of areas are located in those positions, where the available options are building underground discharging system and drainaging the water out of the city as soon as possible. It actually brings a hidden trouble to the city because of the fixed drainaging capacity of the discharging system. The point is normally it is difficult to change the designed permenant drainaging volume. However, due to the increasing frequent rainfalls and storms caused by climate change, the drainaging capacity will finally see its boundary. In that case, the lowland in the city will be submerged. Thus, a more flexible system which can bear the excessive water is needed.

In addition, for the sake of potential fluvial and coastal flooding, suggested options mainly rely on the “barriers”, underpinned by engineering approaches. To face the potential increasing risk caused by climate change, the only solution is to raise the height of dykes, flood walls and building more pumping facilitates. Engineering construction is necessary, but the narrow focus on it may lead to troubles. In flood-prone areas, natives will be used to the engineering protection (Solomon 2007)In the case that engineering construction is ill-prepared to resist the floods when water excesses the capacity of protecting the system, people would encounter a great loss, with little knowledge to handle the unexpected inundation. Thus, some extra protective options are needed.

5.3 IDENTITY ASSIGNED BY POLICY FRAMING

MP1 (Guangzhou Government 2005) and MP2 (Guangzhou Government 2016) share a weak recognition of identity assignment in policy discourse. It seems policy statements in these two files is more likely a technical tool which pays more attention to the problem setting and routines for action, while the discussion about who should be involved and shoulder the responsibility to handle the flood risk is neglected. However, it is still to be emphasised that, in MP2 when flood proof issues are talked about, there is a hint which claims that “water administration institutions will play a significant role in enhancing the water safety, water purification and waterfront environment ” (Guangzhou Government 2016, P 445). Thus, the identities of the relevant actor are vague and uncertain.

5.4 REFLECTION IN PRACTICE

In this session, 30 experts and professor are invited to the interviews, which achieved 25 positive response. They come from the Municipal Urban Planning Department, Water Affair Bureau, Pearl River

Delta Commission, provincial spatial planning and design institute, municipal spatial planning and design institute, research institute, civil engineering institute (working on drainage and sewer system and water supply system), private spatial and landscape planning company and real estate company. Their majors cover spatial planning, sewer discharging, ecology, landscape designer and planning, greening, water resources, sewer discharging water resources, flood defence, administration and management and housing.

Among those are 11 spatial planners, including 6 spatial planners who work on land-use and economic development, 4 spatial planners who work on landscape and ecology (2), and sewer system (2), 1 spatial planning administrator who work on drainage and sewer system.

The investigation established the willingness of participation in the routines towards a resilient city in terms of their past experience. We followed a guideline with two main questions:

- Do you think your profession can contribute to a flood-proof city? The attitudes from different institutions are categorised with five intervals from first priority, strong interest, neutral position, weak interest and no interest.
- What obstacles might hinder your contribution?

RESULT 1:

The results of those interviews show that 7 respondents, nearly 1/3, show strong interested in keeping eyes on flood risk, with 2 spatial planners working on landscape and ecology (1), and sewer system (1) are included.

Nearly half of respondents, 11 out of 25, respondents hold a neutral position in considering flood risk in planning practice. Here, neutral altitude refers to the situation that the respondents are aware of the increasing flood risk in the context of climate change but not reluctant to change their planning tools or measures to face this new challenge. Among them, 4 spatial planners working on land use and economic development, 1 spatial planners working on landscape, 1 spatial planner working on the sewer system and 1 spatial planning administrator working on sewer system are included, showing the neutral position.

3 respondents show weak interested in taking flood risk in their practice related to spatial plans or projects, including 2 spatial planners who work on land use and economic development.

2 respondents, who work on flood defence in the Pear River Delta Commission, put flood risk at their first priority and 2 respondents, who work in the real estate, show no interest in flood-proof initiatives.

Due to the small sample of the interviewees, the result cannot totally reflect the overview of attitudes at local circumstances. However, it still hints some phenomenon indirectly. It seems that not so many interviewees are willing to put flood risk in them agenda. According to the investigation, 16 respondents, nearly 2/3 of the whole sample, hold a neutrual, weak or even indifference attitude to the new challenges brought by flood risk. In contrast, 9 respondents, around 1/3 of the interviewee shows a strong interest in flood-proof initiatives or take it seriously.

A similar situation happens among spatial planners. 9 responses show a neutral or weak attitude while only 2 spatial planners show a strong interest.

RESULT 2:

The investigation about the obstacles help our to understand the underlying reasons of such neglect of flood risk in spatial related plans and practise.

According to interviewees, most people attribute their timid attitude to the potential sanitation problems brought by flood- proof initiatives, not the tradition in their fields, no agreement on available options, weak cooperation between different institutions, lack of experts in this new problems and lack of politicial support.

For spatial planners, the main reasons concentrate on the potential sanitation problems brought by flood-proof initiatives, not the tradition in spatial planning practice, lack of experts in this new problems and lack of polititical support.

6 A NEW ERA: THE LAUNCH OF SPONGE CITY PLAN

6.1 PROBLEM-SETTING

The definition of flood risk becomes richer in SCP (Guangzhou Government 2017). On one hand, the role of climate change starts to step into the arena and realised by the actors who are involved in the process of plan making. “Due to the climate change, there will be an increase in the events of rainstorm and thunderstorms. By this, the occurrence of waterlogging will be much higher than ever before (Guangzhou Government 2017, P.43). In addition, flood risk is regarded as a hub, closely linked with water pollution, poor ecological environment and weak culture identity. Dealing with flood risk is, thus, packaged in a systematic project, integral with other public issues. By this, decreasing flood risk is regarded an opportunity to resolve the other public problems out of rapid urbanisation.

6.2 WHAT ROUTINES ARE FORMULATED IN RESOLVING FLOOD RISK?

GOALS OF FLOOD-PROOF INITIATIVES

The goals of SCP (Guangzhou Government 2017) are expressed through five main aspects: raising the safety to flood; improving water ecology; purifying water environment; enhancing the usage of water resources and rebuilding the connection between water and citizens. Compared with the suggestions proposed in MP2 (Guangzhou Government 2016) that multi-objectives activities considering the flood risk, quality of water, ecological environment and culture identity are preferred, this time such policy statement is demonstrated clearly in a visionary language and used as a framework to charge the whole file.

PHILOSOPHY

includes clearly value judgement on bringing the benefits to water safety, ecology, environment and cultural identity. Though these clues, it helps to build a more safe, attractive, liveable and resilient city.

PRINCIPLES FOR ACTION

The changes of principles for action highlights the necessity of institutional cooperation and integrated measures in dealing with flood risk. In SCP (Guangzhou Government 2017), it advocates horizontal interactions between the profession of spatial planning, transportation planning, water institution, which provides the legislative foundation for future cooperation in a formal way. Consequently, it may lead to an easy-going circumstance for mutual learning and information exchange in the process of policy and plan making.

Although it is officially claimed that an integral system binding nature-based infrastructure with engineering infrastructure is significant, a greater emphasis on nature-based infrastructure can be perceived. By this, components of nature, such as wetlands, lakes, waterways even the farmland are recognised as a crucial element in water retention and detention. It gets the upper hand uncomplicated in terms of the traditional notion that natural elements are more acting as an ecological habitat for biodiversity. “It is meaningful for the rapid urban sprawl process in Guangzhou.” As an interviewee previously put out,

> *“To get out of the trouble of pluvial flooding is never easy. Because you cannot expect the rainwater discharging system can totally handle it, especially now the frequency and amount of rain can easily surplus our control due to extreme storms surge. However, we can still ameliorate it by relying on the green and blue network in this city. They take*

effect by storing the excessive water, slowing down the speed of run-off in transit, and extending the time of flowing into the rainwater discharging system."

AVAILABLE OPTIONS

In SCP (Guangzhou Government 2017), it calls for new remedies to deal with a series of water problems with flood risk included. In contrast to the conventional methods, new remedies are explicated through as follows:

- Raising of the water safety by the reinforcement of flood defence infrastructure, e.g. dikes, and levees; the construction of pumping; the upgrade of discharging system; the partition of the water basin; the adjustment of ground elevation; the construction of underground drainage tunnel; the building of water retention and detention areas, e.g. wetlands, parks, and green and blue corridors.
- Purifying the polluted water by the improvement of wastewater chain, e.g. the set of sewer treatment plant; the construction of overflows pollution control system; the purification of the contaminated canals and rivers; and the building of eco-purification system, e.g. wetland system
- Improving the ecology environment by softening the channels and canals and the utilisation of green open space in water retention and detention;
- Enhancing the optimisation of the use of water by the diversion of water resources; the improvement of water supplement system; the reuse of treated sewage; and the recycle of rainfalls.
- Reconstructing the connection between water and citizens by facilitating the access to waterfront area; arranging waterfront recreation; and build the image of water-related heritages.

Although the options are categorised into five axes, in real practice, a project might take two or more options. For instance, the softened canals might act as a part of green blue corridors which help to drainage the excessive water and reduce the pressure of underground discharging system out of pluvial flooding and provide an attractive place for recreation. It is obvious that different flood-proof options are related, overlapped, and interacted. Here, engineering based and nature-based options are regarded essential components constitute a comprehensive system.

6.3 IDENTITY ASSIGNMENT BY POLICY FRAMING

The SCP (Guangzhou Government 2017) takes a huge step in clarifying the identities of different actors. This file calls on collaborative efforts from different departments in raising the ability of the city to deal with flood risk, as well as building an attractive, ecological and livable water environment. The roles of key administrator are identified, for instance, the local Development & Reform Commission, Water Affairs Bureau, Housing and Construction Committee, and so on.

In this file, the role of Guangzhou Land Resources and Urban Planning Committee is defined as "the main actor who is responsible for the improvement of sponge city plan, as well as relevant plan and policy, for instance, master plan, detailed plan and greening plan; a coordinator who negotiates the interests from different administrations; a regular who sets the zoning index to guarantee the realization of the notions in sponge city programme; and manager who inspects the final implementation of sponge city projects (Guangzhou Government 2017, P 120) ." By this, spatial planning formally steps into the arena in dealing with flood risk. Although it could be criticised that most descriptions are related to the administrators, those statements are still promising to bring new changes for future spatial planning industry and attract other relevant actors involved in the spatial planning process, such as research institutions and private companies.

6.4 REFLECTION IN PRACTICE

Since the official document of SCP (Guangzhou Government 2017) is such a new plan which has just been launched in 2017, there is no practice operated in the full sense of this special plan. However, we still succeed in interviewing the policy makers of SCP. In this session, 5 experts involved in the plan making

are invited to the interviews, which achieved 3 positive response. It established the willingness of participation in the routines towards a resilient city in terms of their past experience. We followed a guideline with two main questions: Is there any problems arise in the plan making process? And what obstacles might weaken the willingness of relevant actors in participating in the sponge city projects in the coming future?

A spatial planner with the background of ecology and landscape architecture shared her experience on the dilemmas arising in the plan making process and showed the concerns of her role in the future projects:

> *"The arguments, I mean so many disagreements arose in the planning making process. But the problems concentrated on the seesaw game between nature-based infrastructure and engineering-based infrastructure. On one hand, the experts in the field of water management criticised the unrealistic expectation on the application of natured-based options in the city centre, which is the most vulnerable area while with insufficient space for green space. On the other hand, the experts in the field of landscape planning, with rich experience in low impact development (LID) and green infrastructure (GI), stroke back their opponents using the same cases in city centre by emphasizing the inadequate capacity to drainage rainfalls in the context of climate change even if there existed discharging system... Such conflicts are obvious especially in the initial stage of plan making when the green infrastructure is appointed with a relatively high preference."*
>
> *"For me, a representative of spatial planners is a little embarrassed. We didn`t have so much experience in practice concerning technics in water management and LID, which makes us difficulty in voicing our thoughts. Although we are regarded a leader in this planning process, in most cases, we act more likely as a negotiator. This lack of specific knowledge might hinder my future involvement."*

Another spatial planner who majors in water discharging system shared a similar idea on the disagreements between different professions and reframed current dilemmas into two necessities for future work: to raise the awareness of knowledge and to build the platform for mutual understanding and information sharing. In his opinion, resolving flood risk is an issue needed the support from numerous professions. However, the weak awareness of their own contribution and the way of cooperation among potential actors may hinder the collaborative activities in the future.

> *"It is not a main focus in the traditional spatial planning system. Without sufficient preparation, I mean the knowledge, spatial planners will be reluctant to consider it in following plans and practise. Even the Sponge city plan will be finally launched in the future, it makes no difference because people don`t know how to apply the notions in Sponge City Plan in the real projects. A similar situation might also occur among other potential actors and hinders their involvement in spatial activities.*
>
> *Currently, it is more significant to build a platform to promote the information sharing and enhance mutual understanding, rather than narrow our eyes on some flagship projects. They are the fundamental ways to solve the unawareness of knowledge."*

An administrator from Water Affairs Bureau proposed another interesting idea on the willingness of participation. In her opinion, the emerging sponge city plan is still like a strategy, with limited enforcement. Only if the different options can be transferred into the specific index and written in zoning plan, then the notions in sponge city could be realised smoothly. the As she proposed, "One of the potential work that can be done is to regulate the portion of green space for water retention and detention or the percentage of runoff that can be drainaged into urban discharge system for every piece of land." By this, the preference to plan enforcement is more emphasised than the spontaneous willingness of different participants.

7 DISCUSSION AND CONCLUSION

7.1 CURRENT ACHIEVEMENTS

Sponge City Plan (Guangzhou Government 2017) can be regarded as a plan brings flood risk in the arena of spatial planning formally. Compared with the MP1 (Guangzhou Government 2005) and MP2 (Guangzhou Government 2016), it is a big step for local authorities. It builds a new perspective to see this natural hazard, portray a new vision for an attractive, liveable and resilient city, set a more comprehensive routines to resolve problems and calls on the collaborative relationship in planning practice. As a new start, it will bring many changes.

On one hand, it seems the notion of dealing with flood risk is changing from a natural hazard framing to an opportunity framing. In previous experience, building dykes as strong as possible to defend the water and discharging water as soon as possible were highly praised. However, the nature-based infrastructure is now given more attention. Beneath this notion, lots of flagship water retention and detention projects, such as constructing wetlands, lakes, green-blue corridors at the large scale and altering paving into green in the small scale, will be claimed under the umbrella of sponge city programmes in the following years. In contrast to keeping feet dry, Sponge City Plan opens the door living with and bearing the excessive water in a relative safety range.

On the other hand, the combination of risk with other related issues, such as water pollution and waterfront recreation, show a clue in shaping mainstreaming adaptation measures and policies in the near future. It provides the opportunities to incorporate flood risk into existing other water issues and parcel it with other projects, for instance, building a piece of wetland for recreation by using brownfields, meanwhile, creating a micro water purifying and storage system. By this, the developed programs are conducted concerned with both short-term environmental benefits now and long-term climate risks in the future. Thus, flood-proof initiatives are gradually transferred from a separate concern to an integrated and multi-objective process.

7.2 CHALLENGES FOR FUTURE SPATIAL DEVELOPMENT

However, such discourse and intent cannot respond to all the concerns left before. For instance, there is no discussion about the broadcast of disease caused by mosquitos bred by water retention and detention areas. There is also a lack of methods to raise the awareness of specific knowledge and enhance the information sharing. Those missing pieces might leave the weak points which hinder the implementation of the proposed options in the near future.

In addition, there will always be a delay between the launch of a plan statement and the acceptance of this statement, let alone the implementation of the principles, options. Based on that premise, although Sponge City Plan (Guangzhou Government 2017) tries to clarify the responsibility of different actors and build a collaborative circumstance, in the near future, the actors involved in flood-proof initiatives will still be bothered with the difficulty in communicating with different institutions at practice.

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ID 1500 | STUDY ON THE SPACE GROWTH BOUNDARY DELIMITATION OF MIZHI COUNTY IN CHINA BASED ON THE COMPACT DEVELOPMENT CONCEPT

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1 INTRODUCTION

The loess plateau region in northern Shaanxi province in China is characterized by loess hilly and gully, fragile ecological environment, scarcity of land resources. The delimitation of space growth boundary is critical to the intensive use of land resources and the compact development of space. How to delimit the compact space growth boundary becomes the focus of attention and research.

The urban space growth boundary is one of the earliest urban land management policy tools adopted by the United States under the new urbanism in the West. The concept was presented in 1976 by Salem, Oregon, USA [1]. Its goal is to curb the social, economic and environmental problems brought about by the spread of the city. Urban space growth boundary is not to curb the development of the city, but through the space boundary to limit the development of the city in a clear geographical space. Thus, city's disorder expansion is blocked while meeting the needs of urban development [2]. Once the urban space growth boundary has been put forward, it has become one of the hotspots of urban planning. Many scholars at home and abroad are committed to many aspects of practice and research, such as the concept of its connotation and impact analysis, the formation of mechanism analysis, delineation methods and related management strategies, application in planning [3-7]. In the traditional urban space growth boundary delimitation method, mainly in static analysis, dynamic simulation of two types of methods, the specific technical means, including ecological suitability evaluation, binding CA model, BP neural network, SLEUTH model [8-10]. In the planning practice, planners often use the urban ecological suitability evaluation, and then take the empirical value to delimit the urban space growth boundary. And also some scholars have made a reference to the overall planning of urban construction land to determine the scope, that is, plus 25% of the floating rate on the scale of the construction land in master plan [11]. In general, different demarcation methods have their own strengths. But the association with the goal of urban space growth boundary is weak, which is the intensive use of land. In addition, there is a lack of adaptability research between two elements, regional natural terrain conditions and urban surrounding ecological environment factors, the urban space growth boundary and its urban space development trend adaptability, the urban space growth boundary and urban space development endogenous needs [12]. In this paper, the method of delimiting the boundary space of urban space has made a response to this problem, which is of great significance to the compact growth of urban space.

2 THE TECHNICAL ROUTE OF DELIMITING THE SPACE GROWTH BOUNDARY FROM THE PERSPECTIVE OF COMPACT DEVELOPMENT

In this paper, the technical route is divided into the following steps: boundary development constraint and power interpretation, boundary superposition simulation, boundary comparison and selection, boundary realistic development verification.

Firstly, the paper uses the ecological suitability evaluation to reflect external development constraints, and calculates the construction land area to reflect internal development needs. Secondly, by the superposition analysis of the external development constraints and internal development needs, this paper simulates to generate several possible space growth boundary lines. Thirdly, this paper calculates the fractal dimension to compare the compactness of each possible boundary line, and selects the most compact one as the space growth boundary of Mizhi County. Furthermore, its feasibility and rationality are verified combined with the construction status of Mizhi County to explore the method of delimiting the space growth boundary of Mizhi County. This method which is presented by the technical route effectively improves the compactness of the delineated urban space growth boundary. In the course of the calculation and

comparison of fractal dimension, the coincidence check with the present situation of urban construction is also added, which improves the rationality of the urban space growth boundary.

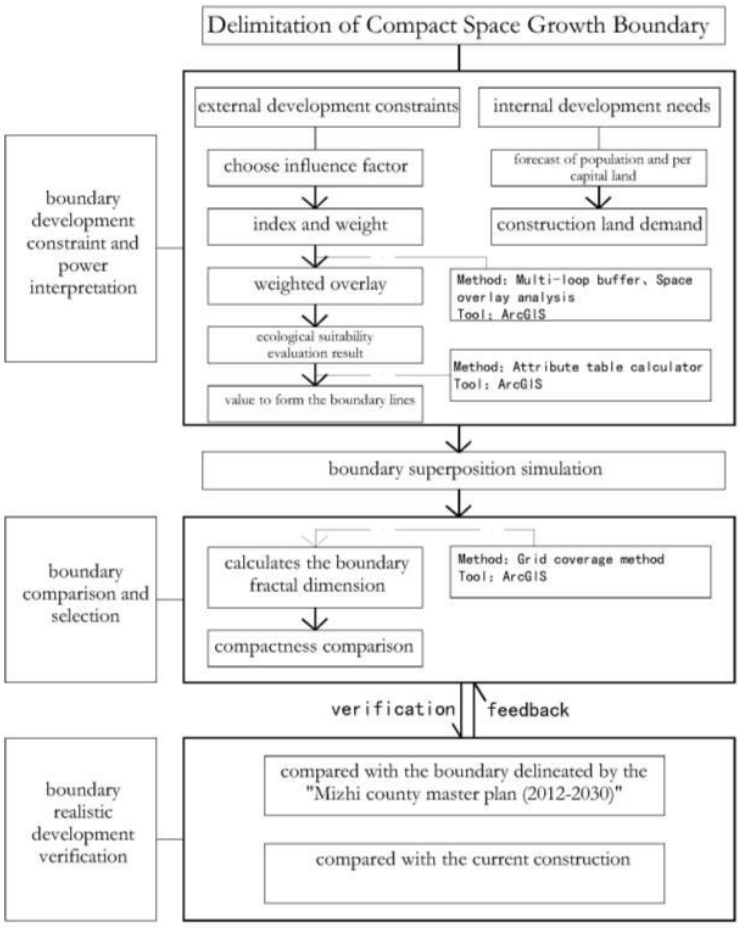

Figure 1 – Technical Route of Compact Space Grwoth Boundary Delimitation (Source: Author self-painted)

2.1 BOUNDARY DEVELOPMENT CONSTRAINT AND POWER INTERPRETATION

The development of urban boundary includes two aspects: external expansion constraint and internal development needs. The external expansion constraints of urban boundaries are mainly based on the evaluation of ecological suitability. First of all, it begins from the selection of influencing factors, and then carries on an evaluation of each individual factors in order to delineate the score. The more conducive to the compact development of urban space, the higher the score is. By using the ArcGIS software (Geographic Information System platform), the database of influencing factors is established. The multi-loop buffer analysis is carried out according to the evaluation score, and the influence of the single factor is given. Furthermore, by using the yaahp analytic hierarchy process software, the weight of each influencing factor is determined by expert scoring method and analytic hierarchy process (AHP). Finally, the paper uses the Rasterization and Raster Calculator function of the ArcGIS software to superimpose the single factor, and obtain the ecological suitability evaluation result. Based on the ecological suitability evaluation results, taking 0.5 as the intermittent value, the ecological suitability evaluation results are taken on the ArcGIS, and a number of space growth boundary lines can be obtained.

The urban internal development needs are measured by the total amount of land for construction based on the forecast population amount and the per capita construction land size at the end of the master plan.

2.2 BOUNDARY SUPERPOSITION SIMULATION

Through the evaluation of ecological suitability, the urban external expansion constraint is obtained. Also the urban internal development needs are obtained by calculating the total amount of construction land. The two are superimposed and simulated to generate several urban space growth boundary lines.

2.3 BOUNDARY COMPARISON AND SELECTION – CALCULATION AND COMPARISON OF FRACTAL DIMENSION

Boundary comparison and merit is based on fractal theory, and it is compared by measuring the boundary fractal dimension of each urban space growth boundary line.

The fractal dimension of the boundary expresses the complexity of the urban space growth boundary, and also reflects the stability of the patch in the urban built area. In general, the greater the boundary dimension, the more complex the urban space growth boundary is. And it also shows the crushing boundary of urban construction land, the poor stability of built area patch. The expansion of urban form is dominated by external expansion. On the contrary, the smaller the fractal dimension, the more compact the urban construction space is. In this situation, the stability of the built area is relatively good, and the expansion of urban form is mainly by the internal filling or promoting along the area [14]. Therefore, by calculating the boundary fractal dimension of each space growth boundary line, the fractal dimension of each space growth boundary line is compared, and the space growth boundary line corresponding to the minimum value of the boundary fractal dimension is taken as the spatial growth compact boundary.

In this process, the calculation and derivation of the boundary fractal dimension is as follows. Taking “L” for Length, “S” for area, “V” for volume, there is the following relationship:

$$L \propto S1/2 \propto V1/3 \quad (1\text{-}1)$$

In the boundary fractal dimension calculation of urban boundary lines, assuming that the circumference of urban boundary is “C”, the area of urban construction land is “S”, and the boundary dimension of city is “D”, then the following relationship is satisfied:

$$C1/D \propto S1/2 \quad (1\text{-}2)$$

That is $C \propto SD/2$ （1-3）

The above formula is rewritten as a general form:

$$C=\varphi Sf(D) \quad (1\text{-}4)$$

Where “φ” is the proportionality constant. If the graph is a square, then constant “φ” = 4. “f(D)” is a function related to the fractal dimension. On both sides with the logarithm, the following formula can be obtained:

$$Ln(C)=Ln(\varphi)+f(D)Ln(S) \quad (1\text{-}5)$$

Obviously, f(D) = D/2, so

$$D=2(Ln(C)- Ln(\varphi))/Ln(S) \quad (1\text{-}6) \text{ [15]}$$

2.4 BOUNDARY REALISTIC DEVELOPMENT VERIFICATION – VERIFICATION OF SPACE COMPACT BOUNDARY COMPACTNESS

By selecting compact evaluation factors, developing compact factor evaluation criteria, compact fractal comparison, etc., the paper selects a relatively compact urban space growth boundary. The compactness of the border needs to be further validated, including comparisons with the current master plan and current situation of urban land use.

Firstly, the compact space growth boundary is compared with the space growth boundary delineated by the urban master plan. The boundary fractal dimension of the two is measured and compared so as to reflect the compactness of it.

Moreover, the compact space growth boundary is compared with the urban construction land, and the adaptability to the development of urban construction is tested.

3 COMPACT SPACE GROWTH BOUNDARY DELINEATION PRACTICE

3.1 BOUNDARY DEVELOPMENT CONSTRAINT AND POWER INTERPRETATION

3.1.1 EXTERNAL EXPANSION CONSTRAINT – EVALUATION OF ECOLOGICAL SUITABILITY

(1) DETERMINATION OF INFLUENCING FACTORS

The choice of evaluation factors is one of the core problems in the evaluation of ecological suitability of urban land use. The more comprehensive the selected data, the more clear the evaluation target and the more accurate the conclusion is. In view of the difference between the connotation attribute of the urban space growth boundary and the definition of the concept in the traditional planning, the evaluation factor selection process should reflect the combination of the development demand and the ecological suitability, the combination of control and guidance functional properties, and the combination of rigidity and elasticity of the morphological properties [13]. In general, the choice of evaluation factors should reflect the compact characteristics. Evaluation factors should be closely related to land use conditions and ecological environment, and at the same time can have a direct effect on urban development. In the selection of factors should follow the systematic principle, comprehensive principle, dominant principle, operability principle. At the same time, combined with the actual environment and the construction of the city, the ecological environment factors influencing the urban space expansion are analyzed. The evaluation factor intuitively reflects the appropriate construction level of the land, and plays a significant role in the choice of urban land. The influence factors selected in the study can be divided into four categories:

1. Traffic suitability category, including national road, highway, city main road, passenger station, railway;
2. Environmental suitability categories, including rivers, historical units, basic farmland, flood control lines;
3. Urban atmosphere categories, mainly refers to the impact of urban built-up area;
4. Terrain suitability categories, including elevation, slope, slope direction factor.

In this paper, the treatment of these factors is in the construction of the impact factor in the evaluation of the results, excluding the scope of the ban on the construction factors.

In addition, combined with the status of Mizhi county, the single factor for the classification, from high to low were divided into 5,4,3,2,1 five grades. The higher the level, the characterization of the scope of the factors more suitable for the construction are. Taking the grade 5 of the slope factor as an example, it represents the terrain slope in the range of 0-8 degrees. The scope of the land is flat within this area. And it is more suitable for construction relative to other areas (Table 1). In the same way, the paper divides the classification for other factors, including elevation factors, slope factor, river factor, national highway factor, highway factor, urban road primary and secondary factors, passenger station factor, urban built area factor.

Evaluation Factor	Classification	Graded
Slope	0-8 Degree	5
	8-15 Degree	4
	15-25 Degree	3
	25-40 Degree	2
	>40 Degree	1

Table 1 - Slope Factor Evaluation Grading (Source: Author self-painted)

(2) DETERMINATION OF THE WEIGHTS OF THE INFLUENCING FACTORS

Firstly, the paper decomposes each single factor, and scores each factor according to whether it is suitable for urban construction. From the very suitable to unsuitable for construction scores from high to low, that the most suitable for the construction gets 5 points, unsuitable for the construction gets 1 point.

And then the paper puts the results of scoring into the Analytic Hierarchy Process (AHP) to judge the relative importance of each factor, so as to form a matrix to calculate the weight of each single factor. The general steps are as follows.

1. First of all, progressive structure is established according to the attributes of the factors.
2. The paper establishs a judgment matrix, and compares the importance between every two factors. The ecological suitability of urban land use is the criterion C, and the next level of which is dominated by terrain, landform and river system is u1, u2, u3. For criterion C, according to the importance of u1, u2, it is assigned values of points 1-5. Through this step, it establishes the judgments matrix of every two factors:

$$A = (aij)m \times n \; aij \; (i=1, \; 2\ldots m, \; j=1, \; 2\ldots n)$$

Where aij represents the score represented by the importance of ui and uj relative to C.

3. And then the paper uses the root method to calculate the weight of each factor. Let the weights of the factors u1, u2 ... un be w1, w2 ... wn, for the criterion C. The vector of the columns in A is geometrically averaged and then normalized, and the resulting column vector is the weight of its factor [14]. (Table 2)

Factor Classification	Factor Name	Factor Weight
Terrain Suitability	Elevation	0.0487
	Slope	0.2448
	Aspect	0.0445
Environmental Suitability	River	0.0447
Traffic Suitability	State Road	0.1332
	Highway	0.1120
	City Main Road	0.0938
	City Secondary Road	0.0555
	Passenger Station	0.0500
City Atmosphere	Status Quo Built Area	0.1728

Table 2 - Evaluation of the Impact Factor Weights in Evaluation System (Source: Author self-painted)

(3) WEIGHTED SUPERPOSITION OF INFLUENCE FACTORS

In the ArcGIS software, the weight of each factor is substituted into the vectorized base diagram. According to the different scores, the ecological suitability distribution of each factor is obtained. Finally, the weights of the selected factors are all superimposed on the evaluation base map, and the weight of each factor is summed according to the final evaluation of ecological suitability of urban land (Figure 2).

According to the results obtained by weight superposition method, the evaluation criteria and the evaluation values of urban land in different areas obtained by weight superposition method were used to divide the urban construction land according to the evaluation value. The higher the value of urban land, the more suitable for urban construction is. On the contrary, where the evaluation value is lower, it plays a more important role in the city's ecological security and the natural environment protection.

(4) THE FORMATION OF SPACE GROWTH BOUNDARY LINE

In the ArcGIS, taking 0.5 as the interval value, the paper gets seven boundary lines of which the score are 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0. The two sides of each boundary line show different colors (Figure 3). Among them, the outermost line scores of 1.0 which is the Mizhi county's space growth boundary (UGB). And that is the largest area of construction of the city. On this basis, the paper further seeks the delineation of the compact boundary of Mizhi County. By introducing the fractal theory, the fractal dimension of the boundary line of different scoring land is calculated. The smaller the fractal dimension, the more compact the corresponding boundary line.

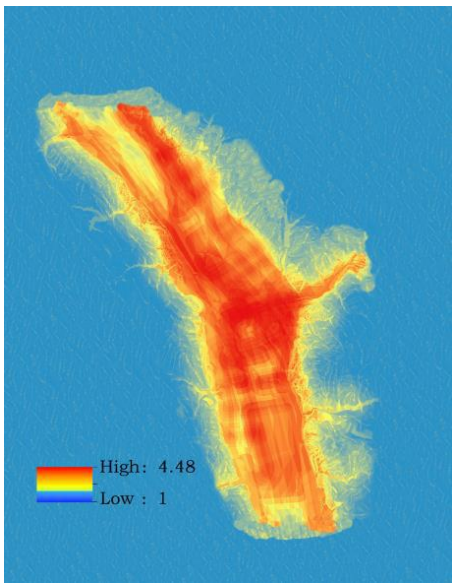

Figure 2 - Ecological Suitability Assessment Results (Source: Author self-painted)

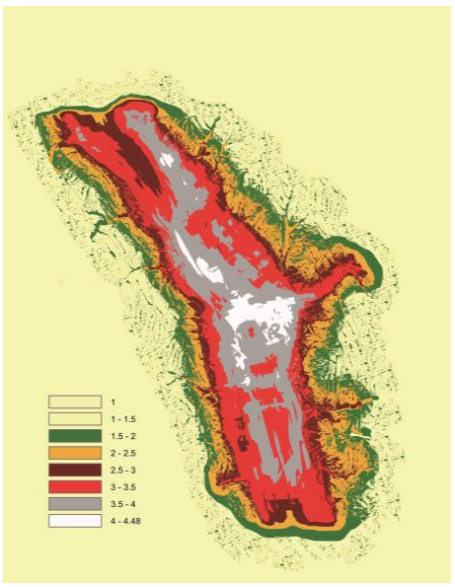

Figure 3 - Spatial Growth Boundary Line (Source: Author self-painted

3.1.2 INTERNAL DEVELOPMENT NEEDS – FORECAST OF TOTAL CONSTUCTION LAND SIZE

In the "Mizhi county master plan (2014-2030)", it has forecasted population size and per capita construction land size at the end of the plan, so as to estimate the total internal development need of the city. The master plan has determined that the population size of Mizhi county in 2030 controls in 10 million, and per capita urban construction land size of 99.4 square meters. Therefore, the construction land should control in 9.94 square kilometers.

3.2 SPACE GROWTH BOUNDARY SIMULATION

Based on the external expansion constraints and internal development needs of Mizhi County, it can be found that the construction area inside the growth boundary line 4.0 and line 3.5 are respectively 0.74km2 and 4.99km2. The construction area inside these two boundary lines are less than the total forecast of the construction land demand of 9.94km2. So it should be excluded (Table 3).

Evaluation of Land Suitability	4.0	3.5	3.0	2.5
Land Area （km²）	0.74	4.99	10.81	14.18
Evaluation of Land Suitability	2.0	1.5	1.0	
Land Area （km²）	18.32	22.71	34.33	

Table 3 - Land Area Statistics for Each Land Boundary Line (Source: Author self-painted)

3.3 SPATIAL GROWTH COMPACT BOUNDARY ESTIMATION AND COMPARISON

Firstly, the boundary fractal dimension of the five boundary lines screened left behind is calculated and compared. Then the degree of compactness of each boundary is compared through the boundary fractal dimension. The smaller the fractal dimension, the more compact the land boundary line.

3.3.1 BOUNDARY FRACTAL DIMENSION CALCULATION OF SPACE GROWTH BOUNDARY

For the boundary fractal dimension calculation of each boundary line, it is necessary to establish a square grid with a side length of 50,100,150,200,250,300,350,400,450,500 meters. The boundary line and the square grid are superimposed separately in the ArcGIS software, and counts the number of square grid coinciding with the space growth boundary lines. And then logarithmic operations are carried on the grid side length, the boundary line of the grid number. After that, the two sets of logarithmic values are plotted and fitted in a straight line in Excel. The absolute value of the coefficients of x in the final fitting equation is the boundary fractal dimension value corresponding to the space growth boundary.

In this case, the space growth boundary line with the ecological suitability evaluation value of 2.5 is taken as an example, and the boundary line is superimposed on the square grids (Table 4).

Grid Side Length (n)	0	100	150	200	250	300	350	400	450	500
Number of Grids (m)	1069	441	276	186	151	119	100	80	71	64
ln(n)	3.912023	4.60517	5.010635	5.298317	5.521461	5.703782	5.857933	5.991465	6.109248	6.214608
ln(m)	6.974479	6.089045	5.620401	5.225747	5.01728	4.779123	4.60517	4.382027	4.262680	4.382027

Table 4 - Boundary Dimension Calculation Table for the Boundary Line of the Ecological Suitability Evaluation Value of 2.5 (Source: Author self-painted)

In Excel, the two sets of logarithmic values are plotted (Figure 4), and fitted linearly to produce a linear equation y=-1.1861x+11.565, R^2=0.9926. It can be seen that R^2> 0.9, indicating that the degree of fitting is high, the boundary line shows fractal characteristics, and the fractal dimension of its boundary corresponds to the absolute value of the x front coefficient, that is 1.1861.

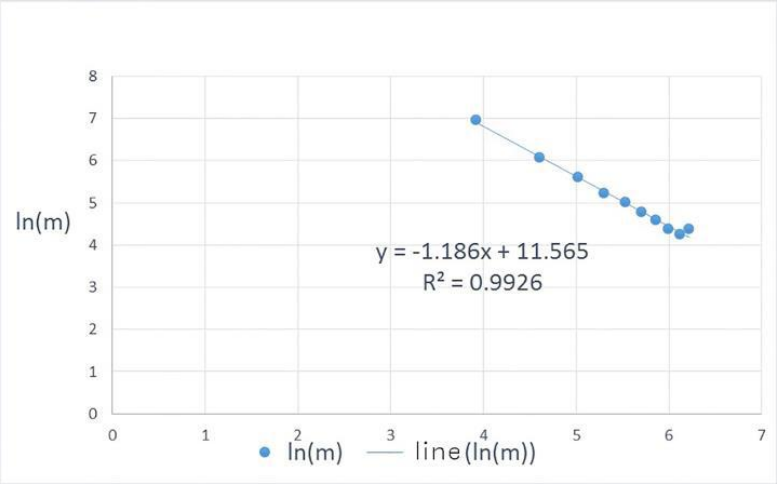

Figure 4 - Boundary Dimension Linear Fitting of Boundary Line with Ecological Suitability Evaluation Value of 2.5 (Source: Author self-painted)

3.3.2 COMPARISON OF BOUNDARY FRACTAL DIMENSION

Similarly, the same method is used to calculate the boundary fractal dimension of the remaining four space growth boundary lines. The final calculation results are obtained in the following table (Table 5).

Ecological Suitability Evaluation Score	3.0	2.5	2.0	1.5	1.0
Boundary Fractal Dimension	1.178	1.186	1.171	1.176	1.183

Table 5 - Fractal Dimension Values of Each Boundary Line (Source: Author self-painted)

The minimal boundary fractal dimension of the five boundary lines can be found to be 1.171, which is correspond to the boundary line with the ecological suitability evaluation score of 2.0. This boundary line is the most compact and intensive of the five boundary lines, which is the compact space growth boundary line of Mizhi county.

3.4 VERIFICATION OF THE COMPACT SPACE GROWTH BOUNDARY

On the basis of the above results, the compact space growth boundary line with the ecological suitability evaluation score of 2.0 is compared with the current construction of Mizhi county. We can find that the current construction is basically included in the compact space growth boundary (Figure 5). It shows that there is a certain realistic feasibility for the compact space growth boundary line of Mizhi county.

Then, the compact space growth boundary and the boundary delineated by the "Mizhi county master plan (2012-2030)" are used to calculate the boundary fractal dimension, so as to discern the compactness of the compact boundary (Table 6). The results show that the boundary fractal dimension curve of the boundary delineated by the "Mizhi county master plan (2012-2030)" is y = -1.1895x + 10.764, and the fitting coefficient R^2 = 0.9988. So the boundary fractal dimension is 1.1895. It can be found that the fractal dimension of the compact space growth boundary of Mizi county is 1.171, which is minor than 1.1895. This shows that the selected Mizhi County space growth boundary is relatively more compact.

	Mizhi County Compact Space Growth Boundary	Mizhi County Master Plan (2014) Space Growth Boundary
Space Growth Boundary Form		
Linear Fitting Equation	y=-1.1713x+ 11.595 R^2=0.9959	y=-1.1895x+ 10.764 R^2=0.9988
Fractal Dimension	1.1762	1.1895

Table 6 - Comparison of the Compactness of the Space Growth Margin of the Mizhi County (Source: Author self-painted)

4 CONCLUSION

With the continuous development of the city and the advancement of the urbanization process, delimiting the urban space growth boundary and setting the scope of urban development is an effective means to curb the random expansion of the city and realize the compact development of the city.

Based on the study of the existing urban space growth boundary delimitation method, this paper takes the Mizi county as the research case, and simulates the urban space growth boundary through the ecological suitability evaluation, and calculates the boundary fractal dimension to the space growth boundary lines. At

last, it selects the most compact space growth boundary. At the same time, combined with the status quo of urban construction, the paper verifies its feasibility and rationality.

It is important to emphasize that the ultimate goal of urban space growth boundary delineation is to achieve the sustainable development of the city. The compact development should be based on the necessity of "harmonious relationship between human and nature" idea. The ecological suitability evaluation and the real development check are the responses to it. It still needs to be further studied to join the urban economic and social development considerations in the delimitation of urban space growth boundary.

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ID 1510 | CLIMATE CHANGE ADAPTATION MEASURES FOR ITALIAN COASTAL CITIES

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1 CLIMATE CHANGE AND COASTAL AREAS: AN OVERVIEW OF THE MAIN IMPACTS

Coastal areas are commonly the geographical space of transition between land and sea, comprising of the land near the coast and the adjacent territorial waters. These areas include diverse systems such as delta environments, humid areas, lagoons, small islands, low-lying coastal plains, sandy beaches and sedimentary coasts. The borders of a coastal area are often defined arbitrarily and can be divided up among nations. Due to their own nature, these areas are intrinsically dynamic systems characterised by interacting morphological, ecological and socio-economical processes. Some of the characteristics that set them apart from all other systems (IPCC, 2007d, 2013, 2014) can be summed up as:

- high rate of dynamic change in the natural environment;
- high diversity and biological productivity;
- high rate of human population growth and economic development;
- high rate of degradation of natural resources;
- high exposure to extreme events
- strong need of management systems that consider both terrestrial and marine problems.

Thanks to these characteristics, coastal areas provide resources and suitable space for economic activities and human settlements, leading to a high rate of population concentration. It is estimated that, on a global level, 50-70% of the human population currently lives in coastal areas. The international scientific world appears to agree on the fact that coastal areas will be particularly affected by rising sea levels and by temperature and precipitation changes as well as by possible variations in the frequency, distribution and intensity of extreme events such as tornadoes and storms. Climate change will however have different characteristics depending on the region and the impact on the different coastal areas will vary from region to region according to environmental, social, cultural and economic characteristics.

The Mediterranean basin is widely recognised as particularly vulnerable to climate change (Hoozemans et al., 1993; Nicholls et al., 1996, Klein and Nicholls, 1998). Most of the current stressful elements linked to the effect of human pressures will be inevitably exacerbated by climate change. As a general rule, the most serious effects will be felt by the coastal systems already under stress and where human activity diminished the natural capabilities of adaptation. Only a relatively limited number of studies analysed the vulnerability of the Mediterranean basin in light of climate and sea level change. As a consequence, these problems have been rarely considered by coastal planning and management processes. In these contexts, there are in fact no universally applicable methods to assess the impact of future climate change and the relative identification of vulnerabilities (Gorgas, 1999).

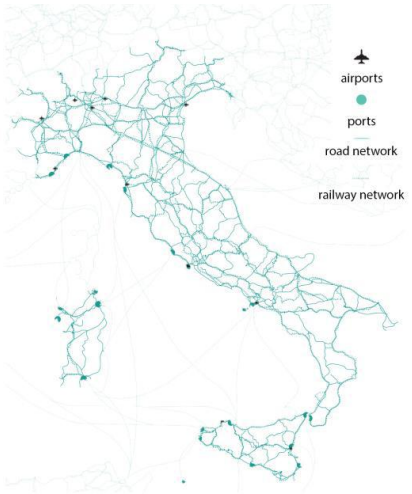
Italy has always been at the centre of the Mediterranean, not only on a geographical level - it has developed a unique coastal complexity that forces those in charge of territorial management and planning to make profound and thorough considerations. Of the 6,477 kilometres of coastline between Ventimiglia and Trieste and of the two largest islands (without therefore considering the numerous smaller islands): 3,291 kilometres have been transformed in an irreversible manner. More specifically, 719.4 kilometres are now occupied by industries, ports and infrastructures and 918,3 have been colonised by urban areas. Another worrying data is the diffusion of low-density settlements, which cover 1,653.3 kilometres, i.e. 25% of the entire coastline. One third of beaches is affected by increasing erosion, the marine habitat is constantly put to the test by pollution, as 25% of city sewage is still unsanitized (40% in some areas) (Zanchini et al. 2016). The Rapporto Ambiente Italia (Italy Environmental Report) paints a picture of these impacts with alarming data and studies that show how to address this situation through a change in policy. The challenge climate change is posing on Mediterranean coastal areas, with significant impact on the

ecosystems, coastline and urban areas, must lead to a new and more incisive vision of the interventions to perform.

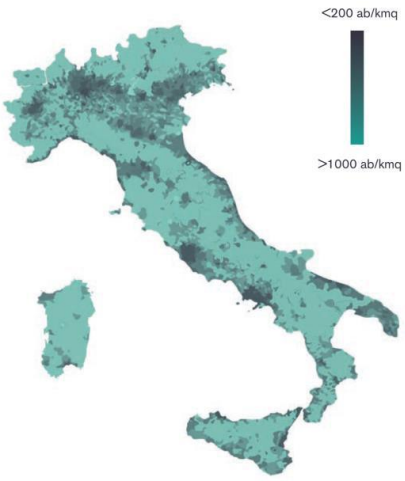
2 COAST VULNERABILITY: METHODOLOGY FOR SELECTION OF PILOT AREAS IN THE ITALIAN CONTEXT

The scientific consensus is that even if greenhouse gases were to be eliminated completely today, the air and sea temperatures would continue to rise due to past emissions (greenhouse gases have a lifespan of between 10 and thousands of years). The warming of the air and sea would lead to changes in precipitation, higher sea levels and more extreme weather events. According to Klein and Nicholls (1998) the six more important biogeophysical impacts induced by climate changes on coastal zones are: erosion and sediment deficit, increased flood frequency, inundation of low-lying areas, rising of water tables, saltwater intrusion and consequent biological effects. Due to their significant socio-economic implications, inundation and increased flood frequency will be treated in the socio-economic impacts section, rather than in the biogeophysical impacts one. The enhancement of the desertification process and the related soil degradation is another relevant impact which is already an environmental stress of concern for various Mediterranean regions. These effects, which are already affecting the Italian coastal areas and ecosystems, and the protections to take over the next decades paint a picture of the coastal impact on a national level and enable the identification of intervention areas on which to focus.

For the purposes of this research, we initially collected public data concerning geomorphology, settlements and infrastructures, economy, environment and the climate. Geomorphological data were taken from the Sistemi Informativi Ambientali (ISPRA) database, in particular, a national digital terrain model was used (DEM - 20 metre cells - National Geoportal) to reconstruct the orographic configuration of the Italian national territory. As regards the geological part, we used the geology map for Italy supplied by the Servizio Geologico d'Italia (ISPRA), which reports all geological and lithological characteristics of the Italian soil. This was done to distinguish the areas with alluvial/detrital soil from those with rocky/solid soil. Demographical, infrastructural and economic information was collected from multiple sources to reconstruct a reliable framework. For urban areas (settlements of various kinds, distribution of production macro-areas and population density), we used the database supplied by the IFEL-ANCI organisations. In particular, we took data concerning the localisation of urbanised areas, with specific attention to their population density. Secondly, to identify the economic weight of the settlements, we focused on mapping the economic-productive activities classifying them according to the primary, secondary and tertiary sectors. Transport infrastructures were mapped using two different databases, an open source one and a Ministerial one. The motorway network was taken from the OpenStreetMap database, while the railway network, airports and ports were identified thanks to the database supplied by the National Geoportal.



Main transport infrastructure
National scale
sources: *Geoportale Nazionale - OpenStreetMap*



Population density
National scale
source : *IFEL - ANCI*

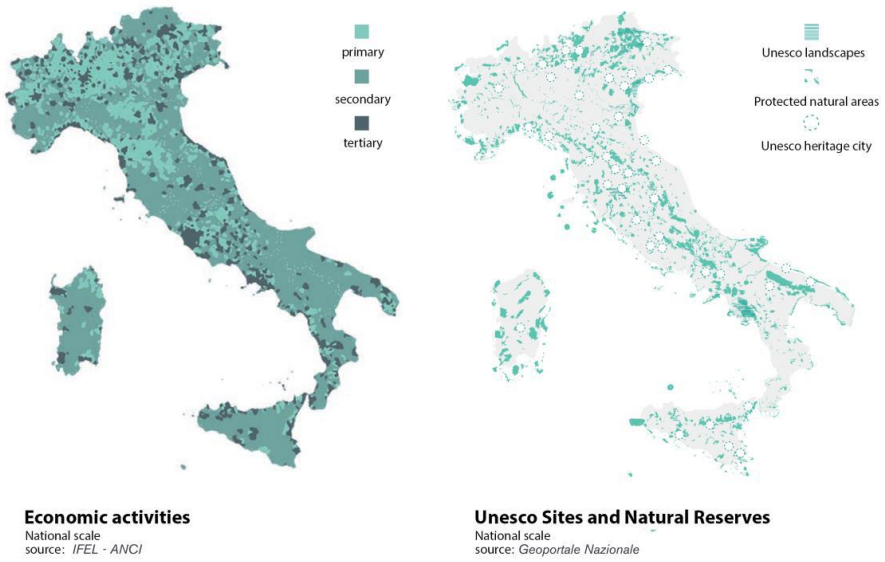


Figure 1 | National map of the main elements exposed to the impacts of climate change.
Processing by Magnabosco G. 2016

The climate question was tackled using multiple data and databases. The first macro-mapping of Italian climate areas was based on the Köppen climate classification scheme, then the factors specific to the Italian climate were analysed in depth: average sunlight (European Commission Joint Research Centre); annual average wind speed (European Commission Joint Research Centre); rainfall (Pluviometria Media Annua - SISEF) and sea currents (Carta delle Correnti Marine - Istituto Idrografico della Marina).

For the topics relating to the variables characterising existing and future problems on a national level, we used various databases and, in some cases, a re-processing of the data presented in said databases. As regards hydrogeological instability, we mapped the data supplied by the National Geoportal. Specifically, for what concerns inundations and flooding, we took into consideration the national data on these phenomena with return periods of 200 years. To these areas, we added the territories subjected to mechanical drainage (considering ENEA projections on the increase of extreme phenomena). As regards landslides, we consulted the Catalogo Frane IFFI (Landslide catalogue - Inventario Fenomeni Franosi Italia supplied by ISPRA) while, for droughts, we referred to the Atlante nazionale delle aree a rischio di desertificazione (National atlas of areas at risk of desertification) supplied by ISPRA and interpolated it with climate shift dynamics, which see the shifting of the interested areas towards higher latitudes.

The data on average sea rise and saltwater intrusion were taken from the Digital Terrain Model. The reports supplied by the IPCC and ENEA, suggesting an average value of +1 metre a.s.l., enabled the identification of the areas which will be affected by rising sea levels. Saltwater intrusion, which is a local dynamic not yet supported by an exhaustive national detection and mapping method, required approximation, calculated using a method similar to the one used for sea level rise. Only the land between 0 and 2 metres above sea level was considered. Finally, coastal erosion was identified using the data supplied by the EUROSION dataset.

2.1 METHOD TO IDENTIFY TARGET AREAS

The identification of target areas on which to focus analyses and governance actions was carried out by recognising and overlapping the drivers mentioned above according to a procedure divided into three steps:

STEP_1

A first selection was carried out by delimiting all the assets and forcings as far as 20 km from the coastline. Then we calculated the quantity of allocated assets (anthropogenic, productive, urban and infrastructural settlements) exposed to weather elements and assigned a number where the allocated asset is exposed

to one of the elements. We then moved on to a recapping of the previous results to identify which areas/networks/soils are affected by most forcings and classified various degrees of exposure.

Starting from this consideration, we proceeded with cataloguing a series of factors to identify the areas with characteristics in common in addition to the exposure factor. The different areas were classified according to their particular geological (soil composition), morphological (sea level and ground roughness), climate (climate classification) and settlement (average population density, forma urbis, transport network distribution) parameters.

Figure 2 | Mapping of the coastal risk in Italy. Processing by Magnabosco G. 2016

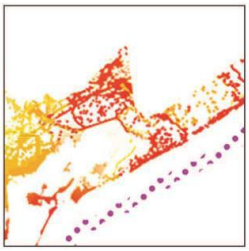
STEP_2

Starting from this consideration, we proceeded with cataloguing a series of factors to identify the areas with characteristics in common in addition to the exposure factor. The different areas were classified according to their particular geological (soil composition), morphological (sea level and ground roughness),

climate (climate classification) and settlement (average population density, forma urbis, transport network distribution) parameters.

STEP_3

We then proceeded to identify the areas that shared the conditions which emerged in step_1 and step_2, which enabled their classification according to exposure, anthropization, climate and geo-morphological conditions. 6 TARGET AREAS representative of the entire national coastal territory were categorised.

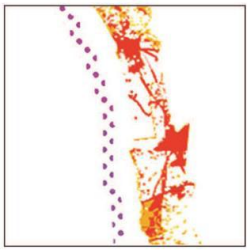


AREA TARGET 1: VENETO.

SETTLEMENTS:
- character: diffused
- density: medium high

COASTAL AREA LOW:
- alluvial soils
- presence of areas below sea level
- no reliefs

MAIN IMPACTS.:
- floods: settlements / networks - low alluvial soils
- s.l.r. : Settlements / networks - low alluvial soils
- i.c.s. : Low alluvial soils

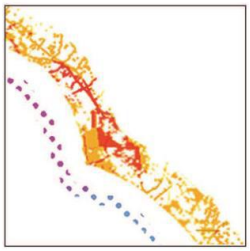


AREA TARGET 2: TUSCANY

SETTLEMENTS:
- character: concentrated
- density: medium

COASTAL AREA LOW + HIGH:
- alluvial and rocky soils
- presence of medium reliefs

MAIN IMPACTS.:
- floods: settlements / networks - low alluvial soils
- landslides: settlements / networks - high rocky areas
- s.l.r. : Settlements / networks - low alluvial areas
- i.c.s. : Low alluvial soils
- desertification: low



AREA TARGET 3: LAZIO.

SETTLEMENTS.
- character: concentrated
- density: high

COASTAL AREA LOW.
- alluvial and rocky soils
- presence of areas below sea level
- presence of high reliefs

MAIN IMPACTS.
- floods: settlements / networks - low alluvial soils
- landslides: settlements / networks - high rocky areas
- s.l.r. : Settlements / networks - low alluvial areas
- i.c.s. : Low alluvial soils
- desertification: medium

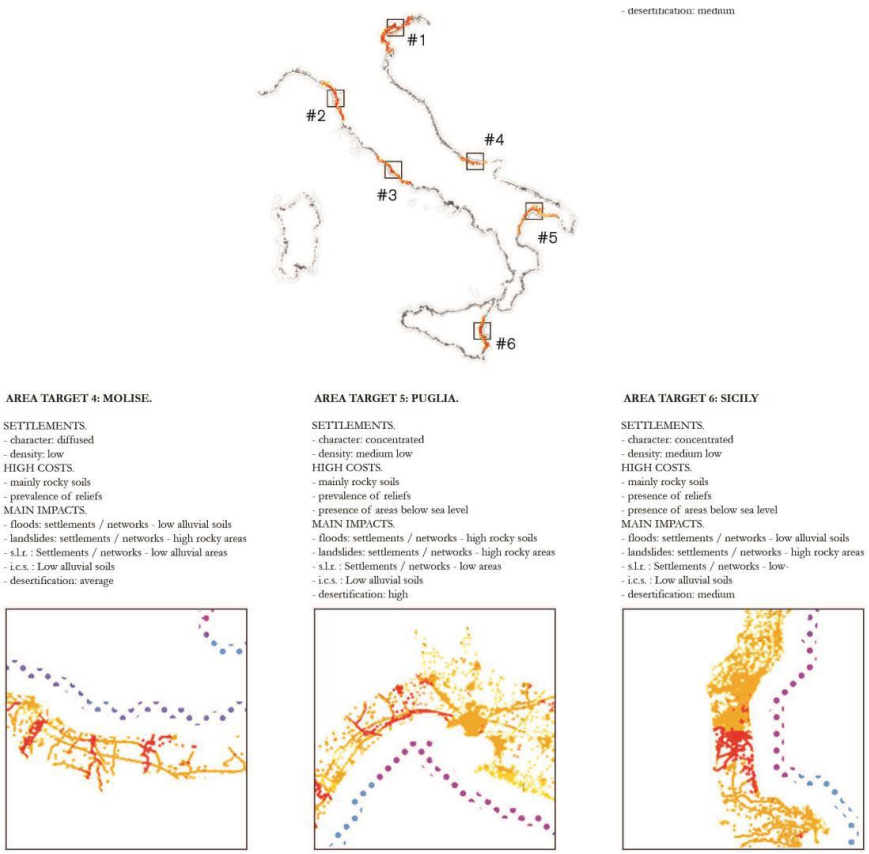


Figure 3 - Selection of target areas. Processing by Magnabosco G. 2016

2.2 2.1 IDENTIFICATION OF SOCIO-ECONOMIC IMPACTS ON TARGET AREAS

Socio-economic implications of sea level rise and climate change on coastal zones are mainly linked to the increase in the risks of flooding of human settlements, goods, infrastructure and services and to the loss of coastal land and habitats due to inundation of low-lying areas (Klein and Nicholls, 1998; Sterr and Klein, 1999). Other socio-economic impacts are those directly affecting important economic activities, such as coastal agriculture, fishery and tourism or those concerning water availability and human health (table 1)

Sector	Biogeophysical Effect					
	Flood Frequency	Erosion	Inundation	Rising Water Tables	Salt Intrusion	Desertification
Water Resources				■	■	■
Agriculture	■		■	■	■	
Human Health	■		■			■
Fisheries	■	■	■		■	■
Tourism	■	■	■			■
Human Settlements	■	■	■	■		

Table 1: Qualitative synthesis of direct socio-economic impacts of climate change and sea-level rise on a number of sectors in coastal zones (source: Sterr and Klein 1999).

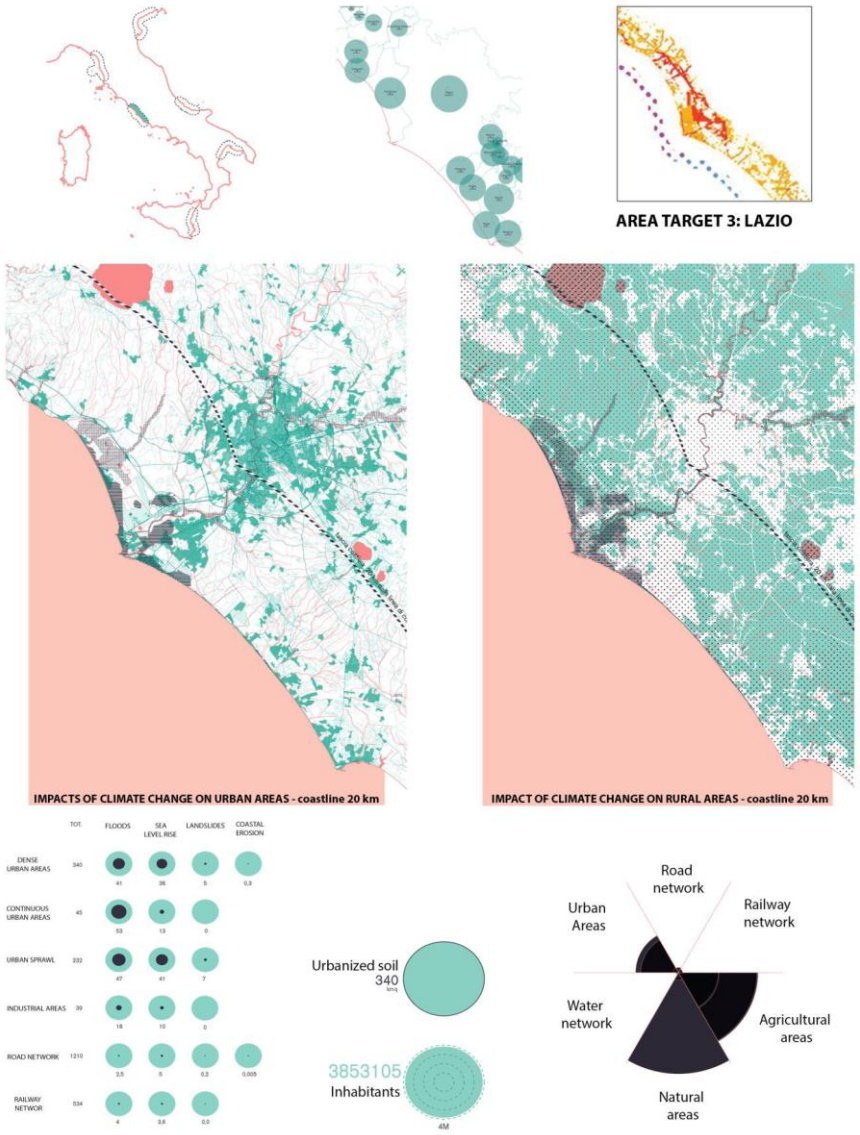


Figure 4 - Example of Climate change impacts on target area 3: Lazio. Processing by Magnabosco G. 2016

3 ADAPTATION AND COASTAL MANAGEMENT

Vulnerability (and related concepts) is specific to a given location, sector or group and depends on its ecological and socio-economic characteristics (Hinkel and Klein, 2007). Moreover, it is dynamic because sensitivity, exposure and adaptation capacity vary over time, stimulate and depend on various political, social, economic, ecological and technological aspects (ETC-ACC, 2010b). In this perspective, vulnerability assessments require different tools for different Space and Time, in different regions and for different purposes (ETC-ACC, 2010b). Considering the complexity of coastal zone dynamics and the long-term implications of climate change, coastal policy and management requires new large-scale integrated assessment and management tools in a wide range of scales: local, national (or regional), National and European. Assessments in each of these scales provide useful information for coastal zone management and if studies are consistent across all scales, they can result in nested results, maximizing their use for policy purposes. A more detailed approach at local and regional level is essential to understanding and managing the complexities of a specific area of study and to identifying more specific vulnerable areas and sectors that could support decision-making in designing appropriate adaptation strategies (Torresan Et al., 2008). Another important aspect to consider is the time scale involved in the processes and dynamics of coastal areas, which may, for example, vary from day to day for stormy waves, from days to years for tide ranges and for decades to decades Millennia in the case of vertical regions regional movements.

Sustainable management of coastal areas in Europe is strongly dependent on the success of an integrated climate adjustment and other changes that take account of and promote the capacity for adaptation of the system. The realistic assessment of adaptation options requires detailed analysis to capture the potential variation of responses within a region for a certain period of time rather than assume a uniform adaptation response (Nicholls and Klein, 2005). The need to adapt to climate change is evident and in coastal areas this need is greater and will continue for centuries considering long-term coastal challenges such as rising sea levels.

Integrated Coastal Zone Management is recognized as the most appropriate process for addressing climate change, sea level rise and other current and long-term coastal challenges (Nicholls et al., 2007; Nicholls and Klein, 2005). Proactive adaptation to climate change aims to reduce the vulnerability of a system by minimizing the risk and / or increasing the resilience of the system. Nicholls and Klein (2005) identified five proactive adaptation objectives for coastal areas: increasing the robustness of infrastructure designs and long-term investments; Increase the flexibility of vulnerable managed systems; Improve adaptability of vulnerable natural systems; Reverse Maladaptive Trends; And improve the company's awareness and preparation. Coastal adaptation is a complex and iterative process and for coastal areas there is another classification of three key adaptation strategies that are often used:

- Protect - to reduce the risk of the event by decreasing the likelihood of its occurrence;
- Accomodate - to increase the company's ability to cope with the effects of the events;
- Retreat - to reduce the risk of the event by limiting its potential effects (Smit et al., 2001; Nicholls and Klein, 2005).

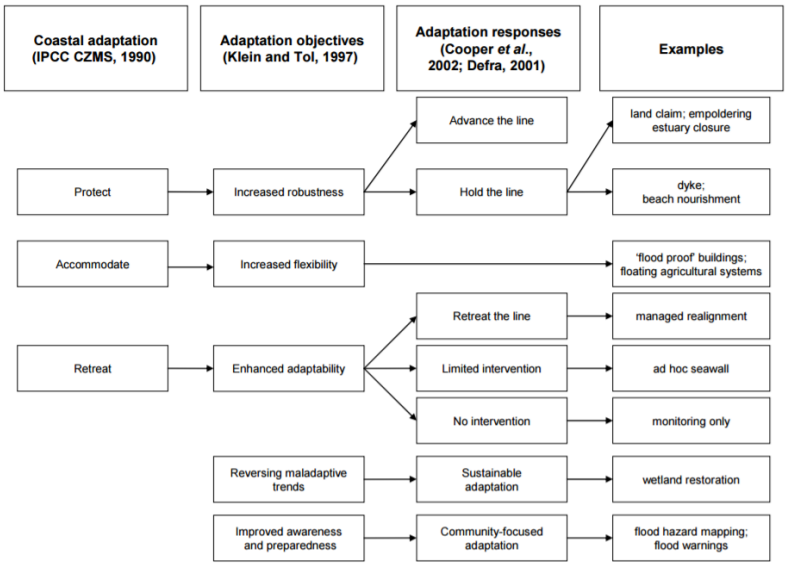


Figure 5 – Evolution of planned adaptation practices in coastal zones. Source: Nicholls et al., 2007

Nicholls et al. (2007) presented a diagram illustrating the links between these approaches and the evolution of thought with respect to adaptation practices in the coastal zone (Figure 5).

The EC White Paper on Adaptation to Climate Change (COM (2009) 147 final) It focuses on four pillars of action; One of these pillars is to integrate adaptation into key EU policies. The EU has a number of relevant instruments and policies for coastal areas that can facilitate sea and coastal adaptation to climate change, including: the Marine Strategy Framework Directive, the Water Framework Directive, the Floods Directive , The Integrated Coastal Zone Management Policy for the European Union, the Birds and Habitats Directives, the Integrated Maritime Policy for the European Union, maritime spatial planning and marine knowledge policy. In addition, EU Member States are developing and implementing national adaptation strategies. The implementation of these strategies has generated hard and soft measures and actions such as the improvement or installation of coastal defenses / floods / drainage, adaptation of ecosystem conservation management and their services, adaptation of agriculture and forestry, Water, climate integration Change in spatial and urban planning, implementation of beach nourishment schemes and institutional and legal measures (ETC-ACC, 2010a).

4 MEASUREMENTS AND TOOLS TO IMPROVE LOCAL PLANNING SYSTEM

It is possible to state that, instead of generating new impacts, climate change will affect Italian and Mediterranean coasts through the growth and intensification of existing problems such as speedy urbanisation, tourist and industrial development, excessive exploitation of marine resources, etc. with a high degree of certainty. These areas of high territorial complexity, where excessive exploitation and a mismanagement of coastal resources has already created vulnerable environments at risk (heat waves, storms, inundations, drought, etc), are precisely where human activity and ecosystems might be worsened by climate change. As it is now widely recognised that a sudden reduction of greenhouse gas emissions on a global level would not completely prevent climate change but would only delay its effects due to the inertia of natural systems against CO2 concentrations (DETR, 1999), combining our strength to control emissions is of strategic importance to reduce damage to the minimum. International prevention strategies must be combined with the definition and implementation of actions and policies at a regional, sub-regional and mainly local level that can mitigate or, in some cases, even eliminate the negative impact induced by climate change. These win-win strategies will prove useful to respond both to the current climate variability (extreme events such as drought and storms in particular) and to long-term changes characterised not only by weather changes but also by socio-economic factors.

For example, table 2 reports some possible measures that can be implemented in response to the main impacts of climate change for the Mediterranean basin and, in particular, for Italy.

Area	Impact	Possible adaptation measures
Water	• Water supply variability • Longer periods of drought in summer • Less water available from superficial aquifers • Uncertain water management • Increase in the risk of inundation • Lower air quality	• Increased flexibility in the management of water resources • Improvement of the efficiency of the water distribution network • Investments to improve the management of rainwater from extreme events • Improvement of ducts for the harvesting of rainwater • Increase investments to reduce water loss
Coastal areas	• Increased risk of flooding due to the rise of sea levels (increase in storms) • Change in the frequency of flooding return periods • Prolonged or permanent inundations with consequent loss of land (coastal habitats, dunes and humid areas in particular) • Saltwater intrusion into aquifers • Change in superficial water temperature and salinity • Lower sediment load in waterways • Increased coastal erosion	• Drafting and implementation of measures to adapt to climate change within coastal management strategies • Improvement of extreme weather events forecast (storms and intense rainfall) • Management and planning of moving coastal settlements where density is not too high. • Creation of coastal monitoring systems and mapping of areas at high risk. • Upgrading of coastal defence systems • Planting of vegetable species suitable to increase coastal resilience • Protection and artificial fixing of shorelines • Drafting of ICZM plans involving local stakeholders
Ecology	• Loss or reduction of protected areas • Loss of coastal habitats (coastal dunes and lagoons) • Change in ecological parameters (temperature, salinity, nutrient availability) • Change in the composition and distribution of species • Introduction of alien vegetable species • Increased risk of fire • Degradation of water quality (intensification and eutrophication due to algae)	• Review and increase of protected areas through the redefinition of coastal ecosystems. • Planning of new protected areas and ecological corridors between fragmented habitats

Agriculture	• Reduced water availability due to the increase in temperature and evapotranspiration, change in precipitations, drought periods and saltwater intrusion. • Increased superficial soil erosion • Increased variability of harvesting schedules • Increased working opportunities due to the availability of new agricultural areas at different latitudes	• Introduction of agricultural crops more resilient to intense periods of drought or floods • Monitoring of crop response to climate change • Implementation of agricultural techniques that limit soil erosion • Introduction of physical protection systems of coastal agricultural areas • Development of innovative irrigation techniques (combined with the upgrading of existing networks).
Human health	• Increase of heat islands • Worsening of air quality • Increased incidence of temperature on disease • Increased disease vectors • Higher risks connected to extreme events	• Strengthening of public health systems • Strengthening of vaccination programmes and of the surveillance on the increase of some diseases (e.g. malaria) • Training of health personnel specifically for problems connected to climate change • Health training to reduce the potential exposure of population at risk • Development of alarm systems in case of heat waves

Table 2 - Possible impacts and measures to adapt to climate change. Adapted from WISE, 1999 and Gabrielides, 1998, USAID 1999.

As regards adaptation, the first step is generally represented by the resolution or, at least, the mitigation of existing critical problems. These are often the result of strong human pressures and a stratification of different practices - defined by Burton as “maladaptation” (1996) - along the coast which, over time, limited the flexibility and natural coastal resilience to climate stress. Another important passage for climate-proof coastal planning and management is an assessment of vulnerabilities and the definition of suitable climate change adaptation measures within integrated coastal zone management (ICZM).

ICZM enables the analyses of the effect of pressure and stress factors on coastal systems, including climate change and sea level rise (EC, 1999), and is therefore increasingly recognised as the best tool to tackle current and long-term coastal problems (ECC, 1993). The actuation of the ICZM protocol and the implementation of climate change adaptation measures requires not only a significant change in perspective (long term rather than short term, prevention rather than emergency, integrated approach rather than single interventions) but actually, at least in some national contexts, a radical modification of institutional processes, legal and regulatory aspects and socio-economic development plans. Due to the political, cultural, economic and social differences within the Mediterranean basin, international cooperation and the transfer of technology and know-how are extremely important to construct a more resilient future for the entire region.

In this scenario, the scientific community is important to provide policies and decision makers with suitable support for what concerns the analysis of climate change impact (both on a sub-regional and local level) and for the qualification of said impacts, which requires the modelling of interrelationships on natural and human sub-systems. All efforts should focus on the elaboration of reliable local scenarios that describe how critical parameters will change in the future. However, the reliability of current scenarios is limited by the uncertainty that increases when passing from a global to a sub-regional or local scale. Regional and local studies are also bound by other factors, such as the increased natural variability of climate conditions and the influence on the climate system exerted by variations on local characteristics such as those regarding land use.

It is therefore necessary to elaborate not only sea level rise forecasts, but also a wide range of scenarios that can include possible future variations, as the current local impact of climate change is far from definitive. It is very important that adaptation and mitigation measures are drafted to be flexible and effective for a wide range of possible scenarios. To reach this flexibility, a gradual evolution of vulnerability studies will be necessary. As suggested by Klein (2003, 2007), this must be done first through a screening and then through an evaluation of vulnerabilities to reach a final project assessment. This final assessment, with its relative planning options, should be included in a wider ICZM protocol.

5 OVERCOME BARRIERS TO A PRACTICAL IMPLEMENTATION OF ADAPTATION MEASURES: THE ROLE OF MAINSTREAMING

It is important to recognize that climate change adaptation presents a fundamental challenge to managing the coastal resources and should be “mainstreamed” into coastal management and development at all levels. Mainstreaming means integrating climate concerns and adaptation responses into relevant policies, plans, programs, and projects at the national, sub-national, and local scales.

Mainstreaming recognizes that adaptation measures are seldom undertaken solely in response to climate change (IPCC, 2007b). Considering the scale of the problem and the linkages between climate change and development, coastal adaptation will happen as an overlay to other ongoing initiatives and governance frameworks. Existing institutions should be in the forefront of designing and implementing adaptation measures. This could include the managers of water resources, civil protection, public health and protection of coastal area. Successful mainstreaming requires reinforcing linkages between local and national level adaptation entry points. Together with non-governmental partners, the government must play a fundamental role to facilitate the connections between national, sectoral and local entry points (fig. 3).

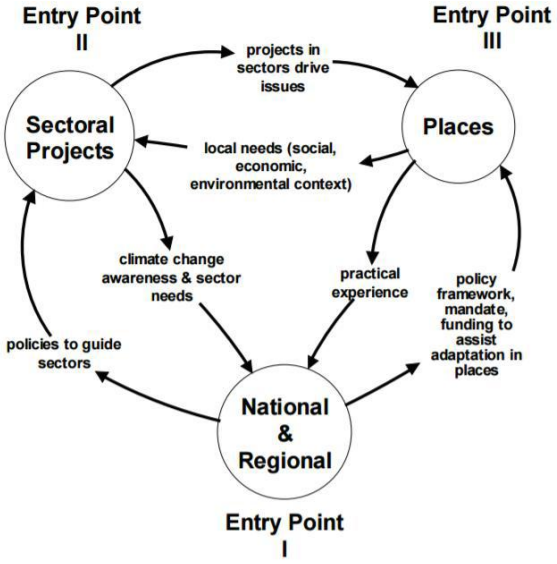


Figure 6 - Points of strength for an effective adaptation mainstreaming process.
Source: USAID Adapting to Coastal Climate Change - A Guidebook for Development Planners (2009)

Some examples include:

Creating enabling policy, finance and legal frameworks. This includes, for example, prioritizing adaptation in national planning and budgeting; harmonizing sectoral policies; creating national coordination committees, chaired by a ministry with power; and providing the financial and technical support necessary for adaptation measures to succeed.

Capturing local experience. Coastal adaptation in a specific place or area builds practical experience and a sense of ownership for those living and working there. This experience can be shared amongst different actors at the national level to build capacity. Linkages between local communities and government strengthen community voice in planning and national policy-making for coastal adaptation to climate change.

Rising public awareness. Awareness raising and education campaigns help convey information about the impacts of climate change and gain consensus on adaptation options. Governments need to engage more actively with the scientific community and provide easily accessible and up-to-date climate change information relevant to the needs of coastal sectors.

In order to be truly effective, mainstreaming requires forging agreements with a broad array of agencies and groups, each with different policies, approaches and objectives. Thus, mainstreaming can be time-consuming and challenging (from a political and economic perspective), especially due to the “normal”

resistance to the introduction of any new policy ideas. In the case of climate change adaptation, this is exacerbated by the cumulative nature and long-term timeframe of climate change impacts. It is also complicated by the fact that different individuals and organizations will have different perceptions of the uncertainties surrounding climate change and its impacts and will have different tolerance levels for risk.

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ID 1533 | AN OUTPUT OF PARADIGM-SHIFT IN URBAN PLANNING: "RESILIENT TRANSPORTATION" AND EXAMINATION ON CITY OF ISTANBUL

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ABSTRACT : Throughout the history, urban planning experienced several changes and developments with the light of economic, politic, demographic, social and environmental characteristics of existing time period and effects of these features on society. An example of these developments is the emergence of the idea of seeking a comprehensive and multi-faceted solution to the negative situations of cities in the early 1990s in the context of "sustainable planning". The question of how our cities will react in the face of adverse conditions has become a matter of debate. The focus of this debate lies in the fact that cities and the inhabitants of the city struggle with sudden changes and threats.

Aim of this study is determination of necessities for integrating urban transportation with urban resilience concept and examination of basic approaches for this integration method. One of the most important subject is identification of policies and scenarios in so that resilient transportation concept works with urban transportation system in harmony and reflection of this harmony to city as a whole. In addition to this, the determination of working principles integrated with different disciplines (social sciences, economic sciences, etc.) and the inclusion of macro and micro scales into urban planning are among the topics to be elaborated. Finally, on the Istanbul city, analysing existing potentials and possibilities in the context of urban transportation and making of policies, scenarios and solution alternatives are discussed on the city of Istanbul.

KEYWORDS: Resilient Transportation, Urban Resilience, Disaster Management, Sustainable Development

1 INTRODUCTION

Most of us know that research results which are carried out upon features of our planet are not positive. In recent years, policies and scenarios are being created for this issue and comprehensive solution and planning approaches are being developed. Cities are key point that has to be regarded mostly. More than half of humanity lives in cities according to World Bank data and urban areas are growing day-by day. one of the most important reason behind this issue is urban areas offer much more opportunities than rural areas. Concentration of population leads becoming more vulnerable and diminishing struggle power of cities against possible global threats and sudden changes.

Industrial cities which started to emerge and organize in the first half of 1800s in England can be shown as an example. Rural population fronted towards to urban areas with the changes in means of production and usage of machine power. This situation is accepted as "paradigm-shift" and it caused to accumulation of population in urban areas. As a result of this tendency epidemic disasters, air pollution and irregular urbanization started to emerge in industrial cities.

After this date, urban population has grown rapidly and settlements started to consist both in inner urban areas and periphery. necessity of making important renewals and developments is revived considering negative effects of rapid population growth and global threats (natural disaster, economic crisis, global warming, etc.). Sustainable development emerged in second half of 1900s as a purpose of ensuring balanced development with providing coordination of economic, environmental and social subjects. This new concept is accepted as "paradigm-shift" in urban planning context. Main discussion of sustainable development is progressing in the frame of "space". Environmental carrying capacity, capital of environment have a meaning when they are associated with "space" that has specific culture (Karakurt Tosun,2009). City is a key point for ensuring sustainable development and improvement because it contains many dynamics for ensuring improvement. Evaluation of these dynamics in long term effectively is possible with enabling of resilient urban system. Entire system is named as urban resilience and cities in which these systems are implemented are named as resilient cities.

Definition of resilient city is coordinated and comprehensive struggle system of cities with their dynamics and different actors against all kinds of threats(natural disaster, economic crisis, etc.) in physical, environmental, social and economical framework.

1.1 RESILIENT TRANSPORTATION CONCEPT AND BASIC PRINCIPLES

Resilient Transportation is a concept which emerged as an output of paradigm-shift in urban planning in 1990s. It is defined that comprehensive spatial, physical, economic and social studies in order to create defence mechanism and adopt all kinds of negative conditions and sudden shocks that cities experienced.

Figure 1 – Emergence Process of Resilient Transportation

Basic principles of resilience transportation are examined under 4 fundamental titles:

- Determination of tasks and responsibilities of stakeholders in global platform

Coordination should be ensured in both national and international platform for providing sustainability and resource of investments in regional and urban context, taking precautions for disasters, using all resources beneficially. It is seen that public institutions and local government make preparations for disaster and emergency causes. Moreover, they study to minimize risks in urban areas by using both equity capital and international support resources as World Bank (IPCD,2014)

- Providing integration of strategic and spatial plan of city in macro/micro scale that is prepared in disaster management framework to transportation master plan

Before preparing spatial plan of urban areas; basic decisions, policies and intervention methods has to be determined and strategic development plans should be prepared in macro scale.

Sustainable development which is admitted as an output of paradigm-shift brings sustainable urban concept in the process. Fundamental principles of this concept is resilience thinking and it is started to approve as new and remarkable parameter in planning of urban areas. 3 main elements become significant considering resilience principal.

- Urban structure and usage that has strategically importance
- Open spaces
- Access network

3 elements that are mentioned above have an importance separately, but network has different significance than others. Working in a harmony in a body of urban usages and open spaces has to be provided. Comprehensive access network should be created in order to ensure coordination between two of these. In this condition, a system will be established and 3 elements start to work in together.

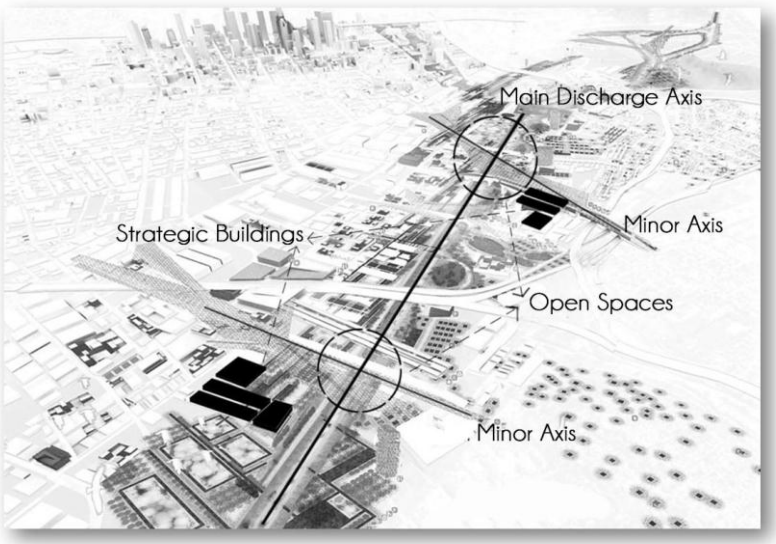

Figure 2 – Urban Elements in Context of Resilient Transportation

Access network should provide discharge people and vehicles easily and safely from assembly areas to less-risky areas such as periphery of cities. In order to do this, important discharge axis has to be determined in both existing and proposed land-use plans. In this point, these axis should be taken into consideration as determinant factor of spine while transportation master plan is being prepared. Determination of these corridors has to be done by experiments and regulations on network pattern which is defined previously. Only if demand based approach and structural characteristics of road are considered, system won't be reliable. Moreover, all axis should be regulated according to a defined hierarchy with each other and be provided continuity of them in entire network. One of the most important point is that main discharge corridors should connect major assembly areas due to having high capacity of

them. Second point is integration of minor network corridors to major axis in specified points. If these points locate in main assembly areas, it barns good solutions.

Determined axis should be designed regarding risk factors in disaster moment. These implementations are exampled as an increase in setbacks, keeping away of electricity and natural gas line from discharge axis, development in infrastructure of roads that are suitable for vehicle traffic, control of engineering structures which are on these axis. At the same time, creation of powerful access network is important so that vital food and health materials are carried to strategic areas in disaster moment.

- Ensuring inclusiveness, creating awareness of society with providing co-operation in institutional context

Being prepared for disaster does not cover things that should be done only for disaster moment. Society has to be prepared for possible disaster risks before in every aspects. In this point, government and NGO's have crucial role for raising awareness and informing all category of society. This can be ensured with the help of activities and drills that are prepared in public spaces, schools by private and public institutions. This type of activities strengthen organization, coordination and communication between society and NGO's. Thus, institutional capacity will be increased as well as technical capacity. Bringing together of different occupation groups in common point with the approach of creating common idea and action.

- Providing robust, flexible, durable and contemporary physical infrastructure

Methods that are used for ensuring physical infrastructure can show differences according to climate conditions of city, threats which are exposed by city in its history. However, regarding common platform, infrastructure investments that are made in the frame of transportation have to be integrated to existing infrastructure effectively and have to minimize negative effects of possible risks. In this point, using technological and contemporary methods means being more useful in economic aspects and more durable in physical aspect for long-term. Also, beneficial usage of resources is important issue for getting much more benefit in short and mid-term (Cities, 1. R., 2016). Infrastructure practices concentrate on high rainfall ratio, flood risks and increase in sea level scenarios in worldwide (Ebinger; Vandycke, 2015). These scenarios can be exampled as:

- Healing of regions where illegal housing intensifies by taking care of connector roads, flood risks and security precaution.
- Making embankments for landslide risks, stream improvement in regions where natural precautions are not sufficient (IPCD,2014).
- Regulating highways and pedestrian ways in selected regions in which are determined as discharge axis
- Increasing capacity of drainage systems in some area where has flood risk.

1.2 EXAMINATION OF ISTANBUL IN RESILIENT TRANSPORTATION FRAMEWORK

Istanbul is the most populated and developed city of Turkey in economic and socio-cultural aspects. It locates in northern-west part of Turkey and it is enclosured by Blacksea from north, Marmara Sea from south. Istanbul contains major fault lines due to its geopolitical location. Risk factors are more than other cities regarding all of these definition such as high population, enclosure by seas, including fault lines. Determining strategies, creating intervention methods, have to be carried out coordinated and comprehensive framework with considering all of these risk factor. This section of research contains integration of resilient transportation concept into the existing system of Istanbul as well as methods and principles.

1.2.1 METHODS AND PRINCIPLES OF RESEARCH

1.2.1.1 DETERMINATION OF RISK FACTORS AND PROBLEMS

Conditions which are cause risk factor have to be defined before determination of risk factors. These conditions:

- Existence of Bosporus which divide city into two creates necessity of significant transportation projects in order to provide access between Asia and Europe continents.
- Lack of service in urban transportation due to urban sprawl.

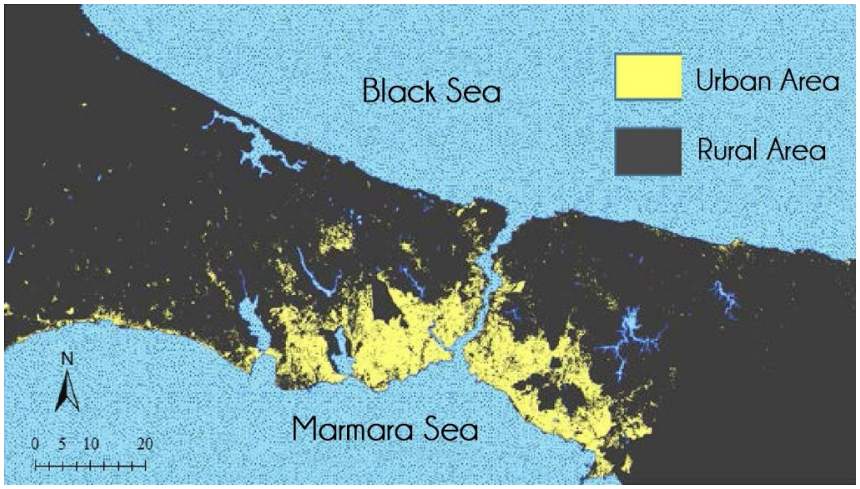

Figure 3 – Settlement Areas of Istanbul

- Existence of historical urban pattern especially in city centre causes insufficient infrastructure as well as deficiency in ensuring urban transportation services.

Risk factors can be determined based on these 3 basic conditions. These factors are sorted in the scope of infrastructure as highways railways and metro lines; harbour and piers; viaducts and tube tunnels. Moreover, inadequacy of open spaces that is caused by high population and urbanization, effects of important transportation projects on encouraging private car usage, existence of narrow roads especially in the city centre and as a result of this situation accessibility problem is seen in city centre.

1.2.1.2 DETERMINATION OF POTENTIALS AND DEVELOPMENT PRINCIPLES OF TRANSPORTATION INFRASTRUCTURE

Potentials of Istanbul metropolitan city can be sorted as evaluation of main transportation axis (E-80&D-100 roads) as significant collective axis for disaster moment, prevalence of inner urban marine transportation as an alternative mode, studies that are carried out by chambers, existence of transfer points which enable to interchange among different transportation modes, evaluation of BRT lines as an alternative for discharging people to safe part of city. In addition, existence of grand urban parks, coastal zones and harbours act as major assembly area.

Some infrastructure regulations have to be made in order to utilize all of these potentials that are mentioned above.

- Risk factors which are determined between major and minor axis and they affect emergency case road network have to be demolished. Emergency case road network is a prior network due to providing transportation of emergency medical services, first aid materials to strategically important areas such as hospital, assembly areas (IMM, 2011).
- Traffic flow planning should be done for disaster moment and later. This study covers route planning of ambulance and fire trucks, regulation of connections which are from minor discharge axis to major axis.
- Special strategic plans should be improved for rail lines, harbours and airports so that they can serve after disaster. These areas play significant role on accepting first aid materials from transoceanic countries easily and transporting them to suffered area by disaster. Moreover, these areas are rather useful for storing first aid materials, wrecks and wastes temporarily (IMM, 2011).

1.2.1.3 DETERMINATION OF ROADS THAT ARE AFFECTED BY COLLAPSE NEGATIVELY

The road network must function after the disaster. This situation applies both to public transport vehicles using road infrastructure such as buses and metrobuses as well as to private vehicles. In addition, it is necessary to prevent the road network from being shut down for various reasons so that the emergency vehicles can perform their functions at the moment of disaster and afterwards. For this reason, it is desirable to calculate in detail the extent to which the functioning of roads can be taken in emergency situations and to plan for roads and future arrangements for urban areas as a result of the calculation. (JCA; IBB, 2002). First of all, working areas should be identified and the existing road network diagram in these areas is revealed in a stepped manner according to the physical characteristics of the road. Then, the structure of the buildings on these roads and the most important threat elements and the probabilities of destruction should be evaluated. The necessary arrangements should be made primarily in newly constructed areas and then existing residential areas.

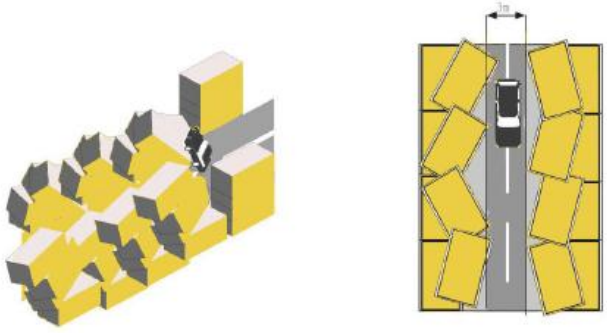

Figure 4 – Road Conditions Before and After Destruction

1.2.1.4 EXAMINATION OF EFFECTS ON BRIDGES & VIADUCTS

City of Istanbul needs several engineering structures because of topographic features and properties of existing transportation infrastructure. Most important engineering structures are bridges and viaducts in the context of disaster resilience and these are significant elements for transportation network. That's why, they links main axis which connect strategic buildings. Main axis have great importance for discharging people and vehicles from disaster area both in disaster moment and after, providing flow of disaster recovery and continuing all kinds of urban activity. Special protection and recovery practices should be made for bridges and viaducts that are significant elements of main axis because impairment possibility is pretty high for them. Even if deterioration of bridge structure is seen as just a point in transportation system it will be resulted in problem of maintaining system performance (JCA; IBB, 2002). Bridges and viaducts that are under risks are classified as major and minor according to disaster prevention report of Istanbul Metropolitan Municipality and Japanese International Cooperation Office. These classification is shown below.

1.2.1.5 CLASSIFICATION OF TRANSPORTATION NETWORK AND ENSURING INTEGRATION WITH OPEN SPACES

Strategies to be developed under this title can cover the entire city as well as appeal to a specific area. The important point is that the potentials determined in the previous phase should be evaluated effectively, the risk factors should be minimized as much as possible, and the problems should be solved. If Istanbul city is considered in particular, the development of strategic structures, increasing the number and quality of open spaces and establishing an effective access network is the starting point for a solution scenario. Because the coordination of these 3 elements both within themselves and among themselves provides an opportunity for the healthier, more effective and more resilient interventions to be carried out in the next phase. For example:

- Regulation of existing main transportation axis (D-100, E-80, Anatolian Highway, etc) and proposed ones which are determined in preparing process of urban transportation master plan as providing access in disaster moment effectively
- Determination of discharging corridors that has the characteristics of minor and collector roads which connect with main transportation axis in specified points.(Barbaros Avenue, Büyükdere Avenue, Şile Highway, Bağdat Street, etc.)

- Preparation of hierarchical system of open spaces, urban parks, university campuses, military zones (ITU Ayazağa Campus, Istanbul Urban Forest, Beşiktaş Square, etc.) in themselves and providing function of these elements with established access network in harmony and effectively
- Making necessary practices in order to strengthen access network inside historical urban pattern (Eminönü, Fatih, Balat, Beyazıt, etc)

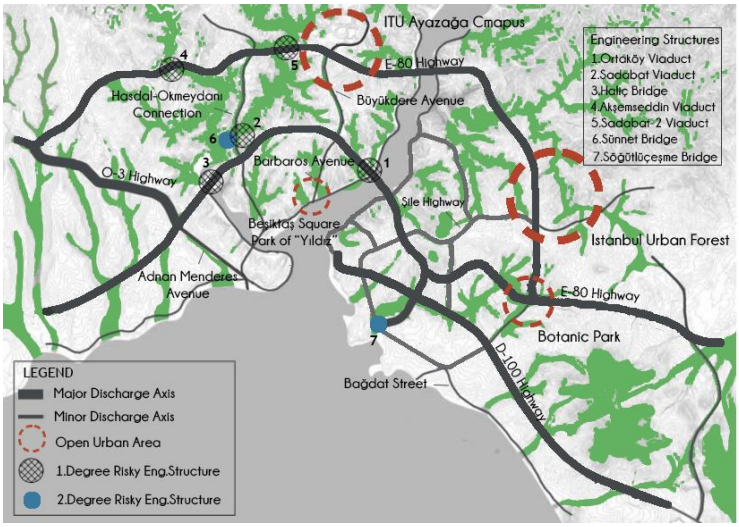

Figure 5 – Transportation Network Classification, Green Areas and Risky Engineering Structures

2 CONCLUSION

Since the past, the cities have been formed by the gathering of the communities of the people that the geography that they are in and ,in time, providing the needs and ownership of people is shaped by social and physical conditions. All of these have developed in the process, within the framework of complementary events and within the framework of causality. This development has continued for centuries, and as a result of these important events, different perspectives have been developed and, in other words, new dimensions, concepts and elements have been added to the urban planning process. Sustainable development that emerged as a product of this process has brought new concepts together. Among these concepts, urban resilience is one of the most interested subject for our cities. Achieving sustainable development is possible with the dynamics that make up the cities. Urban resilience is essential for effective assessment of these dynamics in the long term.

"Resilient transportation" has also emerged at this point as a necessity and an element of urban resilience. This concept is summarized as the evaluation and implementation of resilient city principals in the perspective of urban transportation. Interpretation and regulation of urban transportation policies on the basis of resilience and the fact involving both part of the city and whole city in different scale, including participatory planning approach, and interaction with the dynamics of the city are important characteristics of this concept.

In the past, earthquakes, floods and natural disasters have been exposed to the present and future threats to our country should take important steps to adopt the concept of a resilient city.

In the process from the 1999 earthquake to the day-to-day process, various searches and tests such as the determination of meeting points and area of containers in the structure and area scale within the scope of disaster management were started in city of Istanbul. These searches will have become a whole, not only in the space but also in the transportation, infrastructure, social and administrative areas, with the control and implementation mechanism. For example, it should be ensured that the identified assembly points are integrated with the elements, such as the major and minor discharging axis that are described in the study. In addition to this, informing the citizens about these arrangements will also enable the regulations to function as a whole.

The aim of this article is to present the study that can be done as a proposal in the subject of ensuring coordination among different disciplines which are mentioned above. The most important result to be

drawn when the subject is assessed in the city of Istanbul is the city's significant potential for the establishment of the defence mechanism. However, disaster risks, population surplus, restrictions on possible interventions to be made and great usage of private vehicles make it difficult to use the potentials efficiently and effectively.

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ID 1546 | DROUGHT RISK, FARMER COMMUNITIES' PERCEPTIONS AND PLANNING FOR RESILIENCE IN RURAL CRETE, GREECE

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ABSTRACT: Drought incidents may originate from both, manmade and natural factors and are characterized by uncertainty. The present paper attempts to shed light on the interrelations between exposure, drought perceptions and the adaptive responses opted by agents attempting to cope with drought risk and to provide insights into the planning processes implemented at the levels of the individual agents and the water management authorities. The choice of personal versus collective resilience strategies is largely a function of risk perception and the availability of resilience assets, but it is also a matter of power relations and alliance forging. The farming communities and the local self-government authorities of Messara plain in rural Crete provide the testbed on which the authors have attempted to scrutinize their initial assumptions by using appropriate questionnaires and interviews with key-staff of planning authorities.

1 INTRODUCTION: "DROUGHT", "DROUGHT RISK PERCEPTION" AND "PLANNING FOR RESILIENCE": THEORETICAL ASSUMPTIONS AND SCOPE OF THE WORK

Drought is often considered by the general public as the result of changes (more or less permanent) in the local prevailing climatic / meteorological conditions (basically in precipitation). According to the experts however, it is a phenomenon generated and influenced by both natural and manmade factors; even the natural factors may originate from the manmade component of Climate Change (CC). Drought is usually classified into five types or versions interconnected with each other: (a) Meteorological or Climatic; (b) Hydrological; (c) Agricultural; (d) Socio-economic and (e) Ecological. The present work focuses principally on hydrological, agricultural and socioeconomic drought in a rural territory since it is these versions

basically that affect and are affected by local farmer communities' Perceptions and Planning for Local Resilience and Sustainable Development.

Drought events are characterized by uncertainty, it is difficult to be predicted accurately (Keenan and Kranich, 1997). More importantly, the duration (start and end date) of drought incidents and their geographical range are not easily identified and monitored (Olcina-Cantos, 2007).

Agricultural Drought is manifested through insufficient soil moisture hampering crop growth and agricultural production. It is this type of drought that worries people in the grocery and meat business or people in farming communities who depend on agricultural income for their livelihoods. Hydrological Drought is the result of reduced precipitation or human interventions in the surface and groundwater catchments. It is visible in the reduced flow of rivers and lowering of the level of ground water catchments. Urban planners usually mean hydrological drought when they talk about drought, since water supplies and reserves are key components in managing urban growth. Socio-economic Drought is associated with the vulnerability of a community to long-term imbalances between water supply and demand. In this sense, the impacts of socio-economic drought depend on the ability of households, businesses and wider communities to adapt to the varying and deficient water availability (Olcina Cantos 2007). This is indeed why, Resilience to Drought –as the ability of a community to adapt to water shortages- plays a critical role in Drought Risk Reduction.

Resilience is the precondition for effective adaptation. What matters, is not only resilience of the concerned community as a whole but also resilience of individuals and the distinct institutions that make up this community (e.g. households, firms and agricultural holdings, agricultural corporations, water and planning authorities etc.).

Basic assumption of the authors is that both collective and individualized resilience depend on (a) the respective agent's Drought Risk Perception and (b) on the agent's accessibility to the necessary resources (natural, social, economic, political and physical) and consequent ability to engage these resources in appropriate adaptation processes. Davoudi et al. (2012) suggest that exposed and vulnerable agents are not a priori resilient, but instead that they struggle to become resilient. During this process, an agent reaches out for resources that might be available not only nearby and currently, but also at distant spatial and temporal scales, which other agents also appeal to (Sapountzaki, 2007).

The authors assume besides, that the form of adaptation to drought that is opted depends on the agent's initial exposure (real or perceived) and the resilience assets accessed by the agent. For example, the choice of farmers of a rural region to drill shared boreholes depends on their investing capability and their involvement in networks of collaboration with neighboring farmers (i.e. accessibility to economic and social capital). However, should a powerful sub-group of the above farmers achieve accessibility to extra water resources (e.g. to the water of a newly constructed dam and its reservoir) through political lobbying, this group will leave boreholes for a more effective and less costly adaptation to drought. It is evident that accessibility of this subgroup to political capital may deprive others (those who do not manage to connect with the dam's reservoir) from vital water resources. Agents with affluent resilience assets are in an advantageous position; they can select the most convenient for them adaptation solution. On the contrary, those deprived of resilience resources may have no opportunity for adaptation or only at great cost.

In the context of this paper, Planning for Resilience is considered as the process aiming at equitable accessibility to resilience assets. Equitable and just allocation of resilience resources depends however on power relations and is also a matter of Drought Risk Perception on the part of both the exposed agents and the planning and water management authorities. Hence, risk perception is important to planning for resilience at two distinct levels: (a) the level of the individual exposed agent, since it affects the agent's willingness and effort to become resilient and (b) the level of the planning and water management authorities since it affects their views on risk distribution and equitable allocation of the resilience potential. Perceptions matter a lot because (drought) risk does not represent an actual fact in the prevention stage but only an uncertainty about adverse consequences.

The role of perception in people's or social agents' preferences on how to cope with risks has been thoroughly investigated in the past (e.g. Slovic, 1987 and 2000, Tversky and Kahneman, 1974, Kaperson et al., 1988, Douglas and Widalsky, 1982, Renn, 1998).

More importantly, natural hazards are characterized by uncertainty and therefore are hard to perceive and comprehend. Thus, agents are forced to structure their adaptation process based on probabilistic judgements according to the alternatives they are aware of and which are available to them (Slovic, 1987). The social and institutional environment in which the agent operates influences perception of risk. Accordingly, the agent's willingness to adapt depends on the level of risk perception; low risk perception usually translates to no response and no or inadequate preparedness on the agent's behalf.

Individuals and/or institutions however do not perceive all natural hazards in the same way. Fear, new and unknown risks and stigmatized hazards affect perceptions. For instance, flood incidents occur rapidly, last over a short period and usually have a more devastating impact than drought events. It has been argued that the severity of consequences (experienced or imaginable) rather than the actual degree of exposure determines the respondents' perceptions. Risk perceptions are also associated with former experiences (recent or old-dated); agents located in a disaster-prone region but have never suffered any adverse consequences demonstrate lower risk perceptions and are more likely to be less resilient than agents of the same region who have encountered losses in the recent past (Wachinger et al., 2013).

In general, it seems that risk perception is affected by disaster experience, stigmatization of specific hazards, the assumed or imagined consequences and the frequency of occurrence. However, several queries remain open: How do risk perceptions of institutions and social agents interact influencing one another? How risk perceptions of institutions influence their strategies for Resilience Planning? How the latter affect accessibility of individual social agents to resilience assets? How risk perception of distinct social agents determine their option for adaptation and survival? Finally, what is the role of power relations in the allocation of resilience assets and prospects of adaptation? Above queries are at the focus of the present work and rural Crete, in particular the farming communities of Messara plain have been selected as the field of an experimental study to offer tentative answers. More specifically the study will shed light in the interrelations between Drought Risk, Drought Risk Perception and Planning for Resilience of Agricultural Businesses/Holdings to and the local economy Drought.

2 THE EMPIRICAL STUDY IN MESSARA PLAIN, CRETE: METHODOLOGY AND RESULTS

2.1 THE GEOGRAPHICAL AND DEVELOPMENT PROFILE OF MESSARA PLAIN

The Messara Plain is an agricultural region located in the south-western part of the Prefecture of Heraklion, Crete, Greece. Local development and well-being in the area are closely connected with land productivity and water availability. The plain is featured mainly by the Geropotamos River, which springs from the southern foot of Mount Idi (Psiloritis) and runs across the western part of the plain. In broader terms, the Messara Plain is located on an island (Crete) resembling a closed hydrological system with finite water resources.

As regards administrative structure, the plain is divided by the boundaries of two municipalities: the western part lies within the boundaries of the Municipality of Festos, while the central and most of the eastern part is administered by the Municipality of Gortyna. Total population of the Municipalities of Festos and Gortyna is 40,098 people (National Statistical Service of Greece, 2011). The main economic centres in the area are the towns of Moires and Tympaki, which comprise 25% of the total population (approximately 10,000 inhabitants) (Figure 1). About 50% of the area's total economically active population is employed in the primary sector of production and 40% approximately in the tertiary sector (mainly tourism) (National Statistics Service of Greece, Census 2011).

Most of the land in the Messara Plain is used for agricultural purposes. In rural areas, the cultivation of olive trees, citrus fruit trees and vineyards is very common; greenhouse agriculture has also been extensively developed. Near the town of Tympaki in the north-western part of the plain, there is an extensive cluster of greenhouse establishments producing fresh vegetables that are forwarded to domestic and international markets.

Water supply of the housing sector is provided by the respective Municipality, whereas irrigation is provided by the Local Land Reclamation Organizations (LLROs) in collaboration with the Municipality. The

LLROs were formed by the Greek Ministry of Agriculture and are responsible for the abstraction, management and distribution of water intended for irrigation. Today, the municipalities supervise the LLROs that operate within their administrative boundaries. In several cases, municipalities have ceded the operation of municipal boreholes to the LLROs. The Water Directorate of the Decentralised Administration of Crete, in cooperation with the Department of Hydro-Economics of the Region of Crete, is responsible for issuance of permits for drillings. Finally, the construction of large scale infrastructure works on the supply side of the hydrological system are planned and supervised by the Ministry of Agricultural Development and Foods. According to the hydrogeological and water resource management studies that have been carried out in the past (Decentralized Administration of Crete, 2014; Kritsotakis and Tsanis, 2009), approximately 95% of total water abstractions in the Geropotamos River basin is used for irrigation (50 million c.m. annually). Domestic uses account for only 4% approximately (2.7 million c.m. annually). The rest of the land use accounts for less than 1% and includes water consumption for livestock farming and industries (Decentralized Administration of Crete, 2014).

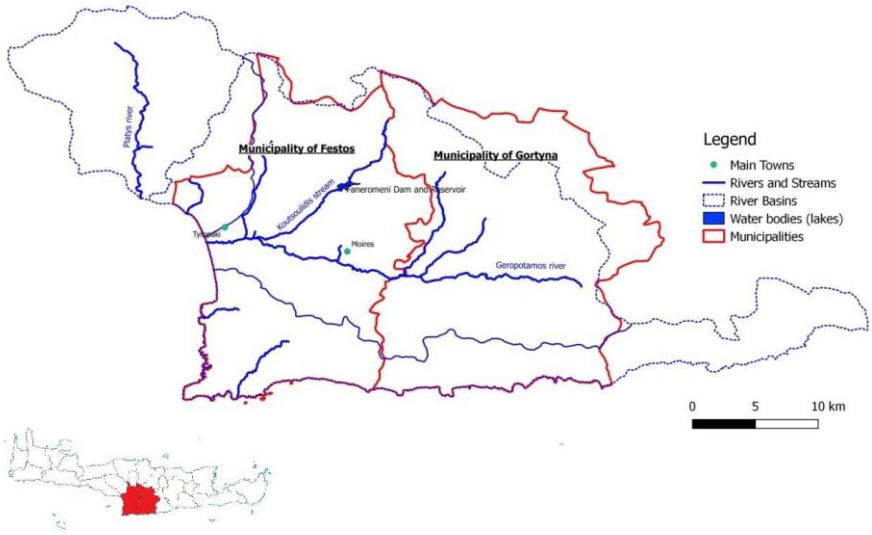

Figure 1: The boundaries of the case study area, the included municipalities and hydrological basins and the locations of main towns. Source: Geodata website. Accessed on 15h February 2017. (http://www.geodata.gov.gr). Map created by the authors.

2.1.1 RURAL DEVELOPMENT IN A DROUGHT-PRONE AREA: A RESULT OF OVERDUE AND UNCOORDINATED IRRIGATION AND LAND CONSOLIDATION SCHEMES.

The dynamics of rural development of Messara plain had been identified since the late 1960s. In 1972, the United Nations Food and Agricultural Organization (FAO) carried out extensive research on the potential exploitation of the aquifers of Messara and the introduction of irrigation schemes across the plain (Electro-Watt, 1972, Kritsotakis and Tsanis, 2009). According to this study, water abstracted from the alluvial aquifer located underneath the areas of Tympaki, Moires and Agioi Deka should suffice for the successful implementation of the planned irrigation schemes (Figure 2). Furthermore, the proposed construction of the dams of Faneromeni and Agia Galini would provide additional water supply to meet future demand for irrigation.

The irrigation scheme would be implemented in stages; priority would be given to the areas of Tympaki, Moires and Protoria[1] and would be followed by investments in the area of Gortyna.

Before the onset of the project however, implementation of an extensive land consolidation programme was proposed, in an attempt to boost agricultural productivity and increase the agricultural income. Land consolidation is a tool used by planners worldwide in locations and economies that rely on rural development. It is rather useful in cases where land tenure is fragmented and the net income of agricultural holdings is below par. Such projects aim at consolidating parcels to create enlarged and

[1] The current study focuses on the River Basin of Geropotamos and the Municipalities of Festos and Gortyna. The wider area of Protoria has not been included because it is located in a different river basin and a different Municipality as well.

undivided agricultural units, allowing for better management of water resources, increased productivity and optimal arrangement of drainage infrastructure. Ultimately, land consolidation projects may achieve the renewal of rural societies and a more efficient use of rural space (FAO, 2003).

In the 1970s and 1980s the State of Greece, regulated and implemented a land consolidation scheme in the western part of Messara Plain, aimed at increasing agricultural income, reducing costs per unit of production and reducing water demand per stremma[1]. Today, the scheme has been implemented only in the areas that were included in the FAO study. The areas that did not benefit from the process continue to face the same problems as they did before the initiation of the scheme.

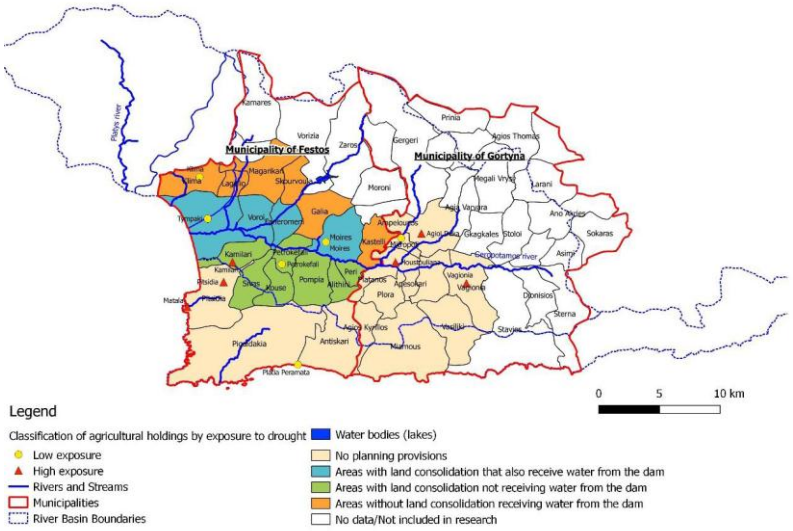

Figure 2: Distribution of land consolidation and water management provisions per local administration unit in Messara plain. Source: Geodata website. Accessed on 15th February 2017. (http://www.geodata.gov.gr). Map created by the authors, based on data collected from the questionaires and the legal documents regarding land consolidation projects in Messara plain.

The plan proposed by the FAO study, considered the construction of the dam of Faneromeni to be an integral part of the irrigation scheme. Significant delays in the initial schedule however, left the farmers' communities exposed to drought. Lack of adequate water resources as well as loose implementation of the legislative framework led numerous farmers to invest in private or shared boreholes in order to mitigate their vulnerability to drought.

It has been estimated that in 2007, more than 1.400 boreholes were used for water abstraction in the entire Messara plain, with the majority being located in the wider area of Moires and Tympaki, (Kritsotakis and Tsanis, 2009).These practices have led to overexploitation of the aquifers, with direct consequences on the quality and quantity of the accessible underground water. Salinization problems have been identified at locations near the coastline, whereas inland areas face the risk of water depletion. The increased risk of hydrological drought is also manifested in the reduced surface runoff of Geropotamos River. Before the implementation of the irrigation and the land consolidation schemes in the mid-1980's, the flow of Geropotamos River and its tributaries was perennial. Since the mid-1980's, water abstraction has increased to such an extent that the rivers dry out entirely during the summer months (Kritsotakis and Tsanis, 2009).

To a certain extent, the prevailing climatic conditions have contributed to this phenomenon. Analyses of rainfall patterns in Messara plain suggest that major meteorological droughts have a return period of 100 years. Nevertheless, droughts of shorter periods (observed as a deviation from the expected precipitation rates) have occurred at least four times during the past 40 years (in 1973-74, 1976-77, 1985-86 and 1999-2000) (Koutroulis et al. 2011). In Eastern Crete, precipitation is significantly less than that of Western Crete, mostly due to the mountainous terrain and the climatic conditions of the Eastern Mediterranean region. Climate Change is likely to affect the existing rainfall patterns, thus increasing the probability of

[1] In Greece, land area is measured by the unit of 'stremma' (plural: 'stremmata'), which is equivalent to 1,000 square metres (https://en.wikipedia.org/wiki/Hectare#Are, accessed 10th February 2017).

longer and more severe drought episodes in the future (Koutroulis et al. 2011). Such change might result in reduced potential for irrigation, which in turn will have a negative impact on the local communities and economies that depend on agriculture (Koutroulis et al. 2015).

Since 2013, the dam of Faneromeni and the respective reservoir have been in operation as an alternative method of water supply in the area but only for agricultural purposes because there are no water filtration services in place yet. The dam has been built on a tributary of river Geropotamos. The reservoir of the dam of Faneromeni serves only part of the Messara Plain, i.e. an agricultural land of approximately 40.000 stremmata located in the northern and western part of the Municipality of Festos (Decentralized Administration of Crete, 2014) (Figure 2). Since the full operation of the dam the pressures on the aquifers have been significantly reduced in the areas that are served by the reservoir. However, boreholes and wells are still being used as the sole method of water procurement in the areas that are not served by the dam, thus aggravating the stress on the local aquifers. Additionally, the extensive and occasionally unregulated use of fertilizers has resulted in the pollution of certain aquifers with nitrates.

During the past 20 years, the area of cultivated agricultural land in Messara plain has increased by more than 50%, from approximately 140.000 stremmata in 1991 to 240.000 stremmata in 2010 (National Statistics Service of Greece, 2010). Agricultural production has increased as well. In 2010, the total annual output of the agricultural holdings located in the Municipalities of Festos and Gortyna was approximately 212.000 tons (National Statistics Service of Greece, 2010). It is estimated that more than 20% of this quantity (i.e. approximately 44.000 tons) was produced in the greenhouse cluster located in the northwestern part of Messara plain (Figure 3). This output refers to water intensive cultivations such as cucumbers, tomatoes and eggplants.

The greenhouse hub of Tympaki is the principal employer in Messara plain. It has been estimated more than 2.000 employees work in the cluster, representing approximately 45% of the total agricultural workforce and 25% of the total economically active population of the Municipalities of Festos and Gortyna (National Statistics Service of Greece, Census 2011).

The agricultural holdings of greenhouse farmers range from four to fifteen stremmata. The greenhouse cluster of Messara is the largest cluster in the Prefecture of Heraklion and accounts for the highest share of the local agricultural gross domestic product (GDP). Indeed, most vegetables cultivated in this cluster have a high annual return. According to data from the Greek General Secretariat of Public Income (2014), in 2013, the average income for greenhouse tomatoes was estimated at 1.200 Euros per stremma and 650 Euros per stremma for greenhouse cucumbers and pepper plants. The products of the greenhouse holdings are forwarded directly to European countries (e.g. Germany, Russia, Italy, UK); they are also directed to the main Greek urban centres, principally, Athens.

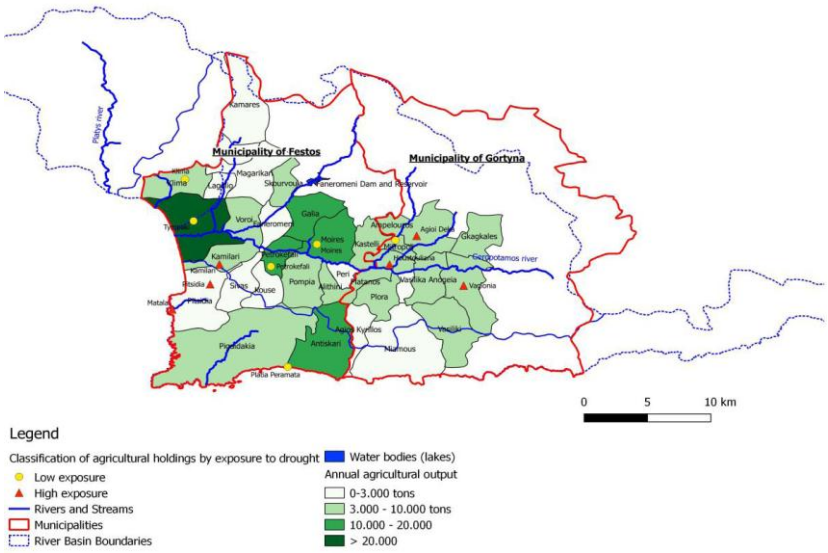

Figure 3: Annual agricultural output per local entity in tons, for the year 2010. Data source: National Statistics Service of Greece. Spatial data: Geodata website. Accessed on 15th February 2017. (http://www.geodata.gov.gr). Map created by the authors.

Rural (open-air) farmers mostly grow olive trees, and to a lesser extent, vineyards and citrus fruit trees. These cultivations account for an annual income of approximately 40 to 80 Euros per stremma. Although the total size of their agricultural holdings ranges from 10 to 150 stremmata, many farmers are obliged to cultivate a large number of small and isolated fields of less than two stremmata each, due to fragmentation of land ownership.

2.2 METHODOLOGY, DATA ANALYSIS AND FINDINGS: THE CHALLENGES OF PLANNING FOR RESILIENCE TO DROUGHT IN MESSARA PLAIN

2.2.1. METHODOLOGY AND DATA ANALYSIS

As mentioned the basic objective and scope of the present paper has been to investigate interrelations among (a) exposure to drought of agricultural holdings, (b) perceptions of the leaders of the exposed holdings and of the planning and water management authorities and (c) the planning decisions aimed at resilience and adaptation to drought. The methodology adopted consisted of four successive steps:

1. Selection of a sample of agricultural holdings in Messara Plain

The sample selected represents the various levels of exposure and vulnerability to drought. The basic assumption was that rural (open-air) and greenhouse farming present different degrees of exposure to drought and so do holdings of different size at different locations (enjoying different water provision services). Since the research is still ongoing, the agricultural units included in the sample will grow in number at a later stage. Currently, the authors have investigated a sample of thirty-six farming units, half of which were practicing rural cultivations and the other half, greenhouse farming. Furthermore, in order to 'capture' the repercussions of land use planning and water resource management policies implemented in Messara plain, the holdings were selected from a wide range of locations, eight in the Municipality of Festos and four in the Municipality of Gortyna (Figure 4). So far, the authors have been able to test their initial assumptions and identify some preliminary correlations between exposure, perceptions and resilience to drought. However, the analysis of the full-scale sample is expected to unveil more details regarding the examined interrelations.

2. Submission of a questionnaire to the sample of agricultural holdings

Information on risk perception of the leaders, the resilience potential of the holdings (accessed and contested assets) and the planned or implemented adaptations, were obtained through structured questionnaires that were submitted to the agricultural holdings. More specifically, the respondents were requested to:

a. Refer to their experience with respect to water shortages
b. Describe their perceptions about evidences of drought manifestation in their area and anticipated impacts.
c. Document the natural, social, institutional and financial resources that they sought or had at their disposal during the opted processes of adaptation
d. Reveal their current and future adaptation preferences
e. Recognise the actual and perceived impacts of these adaptations, to other holdings and the wider economy and community

3. Interviews with key-staff of planning and water management authorities

In addition to the above, structured interviews with key-staff of planning and water management authorities were carried out, in order to obtain information on drought risk perceptions of these institutions and their rationale regarding distribution of resilience assets and advocacy of certain forms of adaptation. At this stage, the interviewees selected represent the administrative authorities at the local level (i.e. the Municipal authorities and the LLROs) (Figure 6).

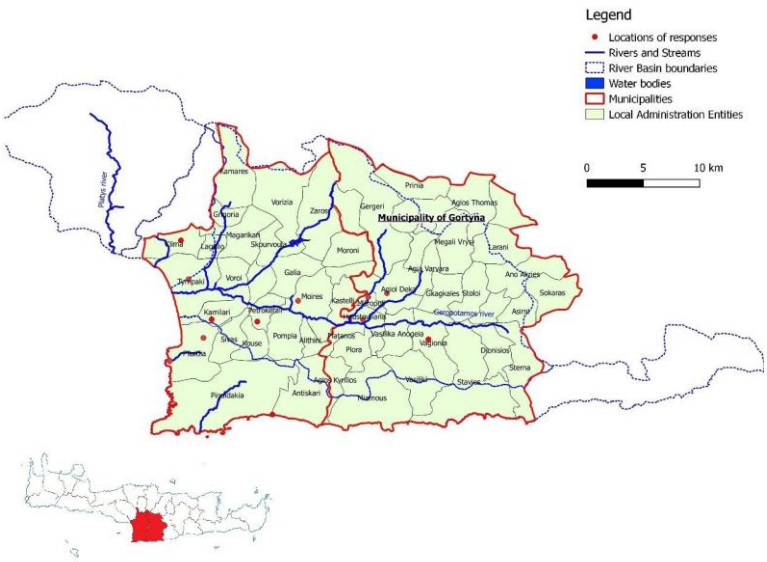

Figure 4: The locations of the responded questionnaires in Messara plain (www.geodata.gov.gr, 2016) (map created by the authors).

Respondent group	Number of responses
Group 1: Leaders of agricultural holdings practicing open-air farming	18
Group 2: Leaders of agricultural holdings practicing greenhouse farming	18
Total sum of responded questionnaires	**36**

Figure 5: Respondent groups and number of responses received from each category

Administrative authority	Interviewee
a. Municipality of Festos	The Mayor
b. Municipality of Gortyna	The vice-Mayor's assistant
c. LLRO of Tympaki	The President
d. LLRO of Moires	The President

Figure 6: Interviewed administrative bodies

4. IDENTIFICATION OF CORRELATIONS

In order to determine the correlations between drought risk perceptions and adaptation options or support of specific adaptive interventions, the authors assumed the factors that were relevant to each of these categories.

a. Real exposure to drought is related to current experience of water supply interruptions that besides hamper the productivity of the agricultural units.
b. Perception of drought risk is derived from the views on drought as existing threat, causes of drought events and anticipated losses/impacts. Losses include productivity reduction, loss of production, shrinkage of cultivated land, loss of international and domestic markets and loss of income.
c. The social, geographical and financial setting as well as political and institutional arrangements determine which resilience assets might be accessible (under certain conditions) to each agent at a given time (now or in the future).

The first step is to classify the sample by their exposure level (high and low), according to their experience of water supply interruptions.

In the next step, the prevailing drought risk perceptions and the preferred choice of adaptation for each exposure group have been estimated by the frequency of positive responses received in the relevant questions in the questionnaires. The objective is to address the impact of exposure on risk perception, of

risk perception on resilience preferences and of exposure on resilience/adaptation options, according to Figure 7.

Finally, in the third step, the responses received from the agricultural holdings were juxtaposed with the responses received by the institutions, in order to identify potential convergence or conflict of the drought perceptions and adaptation options.

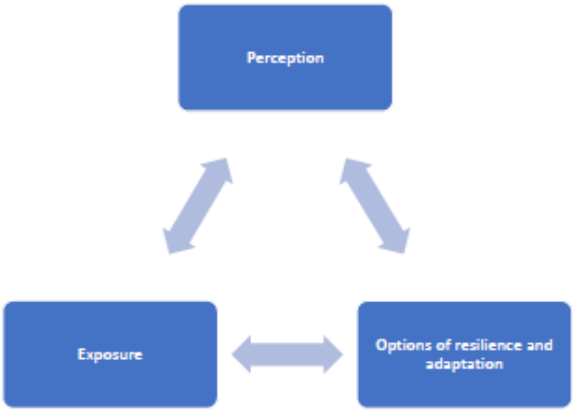

Figure 7: Interrelations between exposure, perception and options of resilience and adaptation examined in the current paper

4. A. IDENTIFICATION AND PROFILING OF GROUPS BASED ON THE FARMERS' EXPOSURE TO DROUGHT

The authors classified the agricultural units into two main groups, based on their exposure to drought risk (high and low exposure).

Low exposure group: This group covers the farmers cases who have not experience recently water shortages or interruptions. All members of the group are cases of high water demand and more than 80% of them maintain greenhouse cultivations. Almost 70% of the members are located in areas that are being served by the dam of Faneromeni and have also benefited from the land consolidation

schemes. Additionally, almost 90% of them have further mitigated exposure through boreholes. In most part, this group formulates a spatial cluster (Figure 2).

High exposure group: The group covers farmers who have recently suffered from water interruption. The vast majority of the members of this group are rural farmers maintaining fragmented agricultural holdings; they do not have accessibility to the dam of Faneromeni, have not benefited from land consolidation schemes and do not form a specific cluster.

	High Exposure	Low Exposure	High Exposure (% of total members in the group)	Low Exposure (% of total members in the group)
Total Number of Respondents	19	17		
Number of respondents in group using additional water supply through boreholes	8	15	42%	88%
Number of respondents with high water demand (more than 100 m3 per stremma annually)	4	17	21%	100%
Type of cultivation				
Farmers cultivating in greenhouses only	1	9	5%	53%
Farmers maintaining both, rural and greenhouse cultivations	1	5	5%	29%
Farmers maintaining only rural cultivations	17	3	89%	18%
Agricultural units that receive water supply from the dam of Faneromeni	1	11	5%	65%
Agricultural units that have benefited from the land consolidation scheme	4	11	21%	65%

Figure 8: Profiling of the high and low exposure groups. Data retrieved from the questionnaires.

4. B. INTERRELATIONS BETWEEN EXPOSURE AND RISK PERCEPTION

Both groups of high and low exposure are featured by high risk perception in the sense that all of them consider their area to be exposed to drought with adverse impacts on their agricultural holdings. This means that current exposure does not affect risk perception.

About 50% of the members of both groups think that drought events result from the combination of natural and manmade factors.

Low exposure group: About 40% of the low exposure group consider exposure to drought as the outcome of exclusively natural causes. This specific subgroup perceives drought as originating from reduced precipitation. A minimal proportion (12%) understand drought as an exclusive issue of insufficient coverage of their own water needs.

High exposure group: No one from the high exposure group believes that exposure to drought is only due to natural causes. It is interesting that half of them attribute exposure to only manmade reasons.

This is consistent also with responses to the query on the meaning of drought; almost 40% of them consider drought as insufficient coverage of their water needs.

Contrary to the former conclusion that recent exposure levels do not affect the perception of drought as an existing and imminent threat in the wider region, it seems that exposure influences the perception of drought causes. All high exposure farmers believe that drought and its impact on their holdings comes at least partly from unwise/discriminating/unfair water management by users and the authorities.

	High exposure group	Low exposure group
Meaning of drought		
Reduced precipitation	16%	41%
Insufficient coverage of water needs	37%	12%
Both	47%	47%
Cause of drought events		
Natural	0%	35%
Manmade	47%	12%
Both	53%	53%

Figure 9: Interrelations between exposure groups and drought risk perceptions.
Data retrieved from the processed questionnaires.

4. C. INTERRELATIONS BETWEEN RISK PERCEPTION GROUPS, MODE OF RESILIENCE AND ADAPTATION RESPONSES

The above analysis reveals three distinct categories of agricultural units regarding risk perception, (a) farmers perceiving drought as reduced precipitation, (b) farmers who consider drought to be a manmade risk and (c) farmers who identify drought to be the result of the combination of both, manmade and natural factors. Each group follows different trajectory as regards the perceived mode of resilience (personal or collective) and the adopted adaptation responses.

Group perceiving drought as reduced precipitation: The majority (70%) of the group that attributes drought to climate change relies on social collaboration options and water policies of the authorities. For this group, individual responses are not sufficient for problem resolution; the only option is trusting water authorities and social collaboration initiatives. However, despite the fact that this group considers collective resilience as the best response to drought, in practice, the majority of the respective farmers aspire to personal options of resilience such as upgrading of cultivation techniques, reduction/rationalization of water consumption and/or drilling new boreholes. Perception comes in contrast with adaptation practices.

Group perceiving drought as a manmade risk: As anticipated, this sub-group considering drought as originating from unwise-discriminating management on the part of the authorities and the other users does not put trust in social collaboration and the water authorities. The farmers of this sub-group prefer relying on their own response initiatives. This finding is supported by the preference that the farmers designate on the personal options of resilience.

Group perceiving drought as being both manmade and natural risk: This sub-group understands drought as the combined outcome of meteorological factors and the socio-economic patterns of water demand.

Contrary to the above sub-groups, the leaders of the agricultural holdings in this group opt for a wide range of adaptation responses involving both, personal and collective options of resilience.

In conclusion, if farmers consider as accountable for drought the water institutions and other farmers who deploy the same water resources, personal resilience becomes then the only option. Reversely, trusting the authorities and neighbouring farmers for collective resilience might be based only on perceiving drought to originate from "exogenous" factors such as climate change. In practice however, it seems that personal resilience is the predominant mode of resilience, regardless of risk perception.

4. D. INTERRELATIONS BETWEEN EXPOSURE GROUPS, MODE OF RESILIENCE AND ADAPTATION RESPONSES

Prevalence of personal resilience options over collective is supported further by the analysis of the interrelations between exposure, perceived mode of resilience and actual adaptation responses.

The high exposure group seeks after water authority activation and social collaboration to address issues of water scarcity, despite the fact that most members of this group consider that the water supply interruptions result from water mismanagement on behalf of the authorities and their fellow counterparts. This indicates that actual and severe exposure to drought may lead farmers to bypass issues of trust and resort to collective resilience options that foster the interaction among farmers or between the farmers and the authorities.

On the other hand, low exposure greenhouse farmers usually afford to proceed with personal resilience investments, particularly private boreholes, to be at the safe side in case of an extreme drought event. Their perceptions favour collective resilience but actions speak louder than words; in practice, they employ personal resilience while lobbying for a water policy favourable for them.

	High exposure group	Low exposure group
Actual adaptation responses	(frequency of responses %)	
Structural and technical resilience reducing demand (personal resilience)	79%	94%
New sources of water abstraction impacting on others (personal resilience)	37%	71%
Struggling for benefits from social and institutional resilience	74%	24%
Opted mode of resilience		
Individualised	37%	24%
Collective	47%	59%
Both	16%	18%

Figure 10: Interrelations between exposure groups, mode of resilience and adaptation responses

4. E. INTERRELATIONS BETWEEN DROUGHT PERCEPTIONS OF AGRICULTURAL UNITS AND INSTITUTIONS

The planning and water management authorities at the local level (i.e. Municipalities and LLRO's) demonstrate different drought risk perceptions.

Municipalities: Since both municipalities include in their jurisdiction areas with recent exposure to drought, both consider drought as a real and existing problem. As the Municipality of Gortyna is faced with more exposed holdings than the Municipality of Festos, the first local authority considers drought as an exclusively manmade issue, while the second attributes the problem to both natural and manmade causes. Perceptions of local authority institutions are on par with the perception of the most representative group of agricultural units in their area.

LLROs: The two LLROs that were investigated also demonstrated different perceptions regarding drought risk. Both LLROs are supervised by the Municipality of Festos, hence it should be expected that these

local institutions would share similar perceptions with their supervising authority. While this stands true in the case of the LLRO of Tympaki, the representatives of the LLRO of Moires believe that the area of Messara is not prone to drought incidents; water availability is sufficient. What considers the LLRO of Moires is the deterioration of water quality due to the extensive use of fertilizers. They thus recognize that any water scarcity issues are clearly due to insufficient management on the users' behalf.

It should be noted that most agricultural units located in the areas of Moires and Tympaki and that are served by the above LLRO's have been included in the low exposure group that perceives drought to be the outcome of reduced precipitation.

While Local Self-Government Authorities share the views of the farmers of their jurisdictional area regarding the origin and cause of drought problems, LLROs are featured by more technical, scientific views, which most probably are far apart from the farmers'. This is unsurprising since the locally elected representatives depend on their electoral clientele.

4. F. INTERRELATIONS BETWEEN ADAPTATION RESPONSES OF AGRICULTURAL UNITS AND INSTITUTIONS

The adaptation options of the institutions range from the provision of information to customers regarding the availability of water resources and advice on water saving techniques, to the enforcement of irrigation by turns, in the case of extreme water scarcity. Furthermore, these institutions use water pricing as the basic mechanism to regulate demand. To their most part however, both the Municipal authorities and the LLROs base their adaptation on accessing new waterbeds and increasing the available supply.

Predominantly, the institutions engage in the effort to increase supply, regardless of their risk perceptions. Although they consider that drought is the result of water mismanagement on behalf of the users, these institutions do not focus on regulating/controlling demand. In high exposure areas the intention is to increase supply; bankruptcy however, impedes the institutions from proceeding with the required investments (e.g. the Municipality of Gortyna). But not only there, water management institutions prioritize increase of water supply (through the dam and municipal boreholes) also in the areas where agricultural holdings are facing low exposure. One can hypothesize that such institutional adaptations aim to enhance water availability in order to reduce private boreholes that besides put the municipal aquifers under intensive pressure. As mentioned, the low exposure group consists mostly of greenhouse farmers producing vegetables of high benefit. This group of farmers is struggling to compete in the international markets; hence, water availability is a precondition to the economic sustainability of their businesses. Consequently, a second and sounder hypothesis is that institutional adaptations serve rather the survivability/economic sustainability of the local greenhouse sector than sustainability of water reserves. This second hypothesis is supported by the fact that prosperity of the local economy of Messara plain relies largely on the profitability of these agricultural units.

		Municipality of Festos	Municipality of Gortyna	LLRO of Tympaki	LLRO of Moires
Options aimed to increase supply	Drilling of additional boreholes	+		+	+
	Construction and procurement of water from dams and reservoirs	+		+	+
	Purchase/transfer water from neighbouring areas authority/institution			+	+
Options aimed to regulate demand	Increase in water price	+		+	+
	Informing customers on water availability and providing motives for water saving	+		+	+
	Enforce irrigation by turns and impose limits on consumption	+		+	+

Figure 11: Adaptation options for each institutional entity.
Data retrieved from the processes questionnaires. The preferred adaptations are highlighted.

The capacity/capability of the institutions to carry out the necessary investments to ensure increased supply as well as the timeframe for the completion of these investments may be crucial factors that determine whether the agricultural units will opt for personal or collective resilience. Unless the agricultural units appreciate the benefits of such investments on their productivity and long term economic

sustainability, it is unlikely that they will choose to adapt only through the collaboration with the institutions and other agricultural users. The willingness of each famer to follow the path of collective adaptation depends also on his/her holding's financial capacity/capability to plan and implement his/her individual resilience strategy.

3. FINDINGS: MULTIPLE PLANS FOR RESILIENCE COMPLEMENTING OR UNDERMINING ONE ANOTHER

There are multiple sustainability and resilience stakes in Messara plain:

a. sustainability and growth of the greenhouse sector,
b. survivability of the rural farming sector,
c. resilience to drought of the domestic sector,
d. resilience to hydrological drought,
e. resilience versus economic and political vulnerability of institutions responsible for water policy.

Some of these objectives converge while others are mutually antagonistic. Consequently, common or complementary survivability/domination objectives lead to the formulation of alliances. For instance, political persistence of the self-government institutions in Messara depends on the support and expansion/growth of the major employer in the area, the greenhouse sector. Reversely, satisfaction of the resilience interests of the latter depends on reinforcement of their political patron, the Municipalities.

Both agricultural holdings and water authorities plan for resilience, sometimes in a complementary way, other times by planning processes conflicting one another.

Exposure influences perception regarding the origin of drought problems and the degree of trust on the institutions has a strong effect on the selection between personal and collective resilience on the part of the agricultural holdings. In Greece, where institutions enjoy low levels of trust on behalf of the public and the economic agents, personal resilience is a widespread and predominant option. Notwithstanding, however beneficial for individual agents, personal resilience deprives planning institutions and water policy from vital resilience resources and the power to plan for hydrological resilience and the resilience of the entire socio-ecological system. All in all, the resilience objectives pursued refer by priority to the continuation and growth of the greenhouse sector and not the social-hydrological system. The identified conflicts between perceptions opting collective adaptive responses and the actual preferences on personal, are due to the predominance of the perceived economic risk faced by the greenhouse sector.

In accordance, the local authorities have further "fortified" greenhouse farmers by literally designing almost all the major planning interventions around the needs of this specific group. This informal alliance between the greenhouse farmers and the self-government institutions undermines the objectives for resilience of the rural farming sector and the hydrological system.

Such planning processes result in an increase of resilience disparities among the farming communities of Messara plain. While greenhouse farmers accumulate more and more resilience assets, rural farming holdings are always deprived from the necessary resilience assets and are always excluded from the planning scope of water policy institutions. At the same time, these same farmers are at the receiving end of the impacts of the adaptations attempted by their counterparts.

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ID 1556 | SPATIAL TRANSFORMATIONS THROUGH MIGRANT CRISIS IN GREECE

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1 INTRODUCTION

Although migration is not new, in recent years Europe has to deal with an entirely unanticipated reality. Since European migration crisis began in 2015, the number of people that have arrived at European Union borders through regular or irregular channels has continually increased. This migration surge rapidly became the largest and most challenging that Europe has faced since the World War II (European Union, 2016a). The term "migrant crisis" is preferred instead of "refugee crisis" explained by analyzing the desegregation of migrants and refugees arrived in Europe by nationality. According to UNHCR (2017a), Syrians constitute the 6.4% of total arrivals in the Mediterranean and 38.5% in Greece. This statistics constitutes an indisputable proof that Europe and Greece, in particular, faces a migration crisis with intense refugee waves.

Since 2015, a large proportion of migration flows has directed to Europe through the countries of the Mediterranean – South (Metcalfe-Hough, 2015). Greece is the country of first entry for the vast majority of migrants and refugees arrived in Europe by sea or land because of its geographical location. Greek Islands of the Aegean Sea have greeted more than 70% of arrivals between 2015 and 2016 (UNHCR, 2017a). Thus, throughout this period, the country has been converted into a transit zone for migrants to Central and Northern Europe. Migration/refugee movements formed "corridors" from East to Western Europe; through Turkey and Greece to the mainland EU, which is their final destinations (Frontex, 2016).

This unprecedented phenomenon force European Institutions, which were almost unprepared to deal with an excessive crisis like this, to cooperate and develop a migration policy to immediately respond to the crisis in the Mediterranean and set out longer-term steps to manage migration in all its aspects (European Union, c2017). Asylum policy is the most significant component of EU migration policy. EU objectives are to develop a common policy on asylum, subsidiary protection, and temporary protection, intending to offer an appropriate status to all third-country nationals who need international protection and ensure that the principle of non-refoulement is observed (European Union, c2017). However, the main challenges, as Frontex (2016) noted, consist of effective surveillance measures, rescue operations, gaps to facilitate the accommodation and detection of false records.

Regarding Greek Asylum System as part of a joint European asylum system, it was flawed long before migration crisis bursts. It is indicative the fact that Dublin transfers to Greece from the other Member States have been suspended since 2011 following two judgments of the European Court of Human Rights (ECHR) and the Court of Justice of the European Union (CJEU) which identified systemic deficiencies in the Greek asylum system. The Commission proposed in May 2016 to reform the Dublin system, notably introducing a new fairness mechanism to ensure no Member State remains with a disproportionate pressure on its asylum system (European Union, 2016b). According to UNHCR (2017a), from 1.015.078 migrants arrived in Greece in 2015, only 13.197 applied for asylum. Most of them wanted to get to Germany, Hungary and Sweden. An application for asylum is a time-consuming procedure, though. As a result, Greece, being the gateway to the destination countries for millions of people, turned into an infinite hotspot.

2 ANALYSIS OF SPATIAL TRANSFORMATIONS AND THEIR IMPACTS

Migration dynamics radically altered the urban (and rural incidentally) settings. For the last two years, the intensive migration flows in Greece have affected the urban and rural systems across the country. In this context, through a four-stage research, the types and the consequences of all spatial transformations that have occurred will be determined. The methodology used is the statistics (primarily secondary data) – land

cover map processing, literature review and to a limited extent field observation. However, it should be mentioned that data availability is a limiting factor, but not capable of making the research results invalid.

2.1 1ST STAGE: RECORDING OF MIGRANTS CAMPS

The first stage of the research constitutes a complete record of migrant camps (migrant/refugee structures and gathering places, both formal and informal) all over the country. This process has a primary difficulty; national and international institutions categorize these sites according to different criteria, complicating the record and the data collection as well.

Greek Government set up, in the middle of migration crisis, the Law No. 4375/2016. According to this legal document, refugee structures required for addressing the migration flows categorized into three groups: i) Reception and Identification Centers, located mainly in border areas of Greece, but in inland areas as well, ii) Open Temporary Reception Structures and iii) Open Temporary Accommodation Structures. On the other hand, international organizations such as International Organization for Migration (IOM) has embraced the UNHCR categorization for migration/refugee sites, grouping them into i) Reception and Identification Centers, ii) Emergency Response Sites, iii) Relocation Sites, iv) Collective Shelters.

For the purpose of this research, the UNHCR's categories are adopted. The results of the recording (data retrieved from UNHCR (2017a) Report for May 2017) show that the vast majority of migrant camps are "Emergency Response Sites" (approximately 84%), while "Reception and Identification Centers" are the second most common group (10.71%). "Collective Shelters" (3.57%) and "Relocation Centers" (1.79%) are significantly smaller categories (Diagram 1).

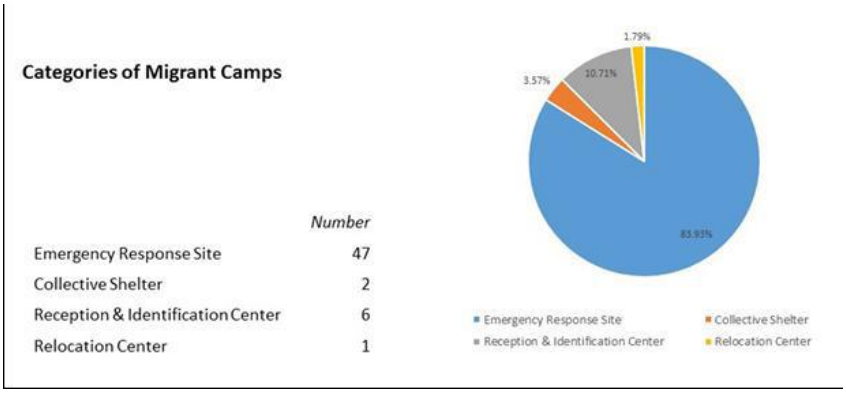

Diagram 1 - Categories of Migrants Camps (%)
Source: (Data retrieved from UNHCR, 2017a), Own Processing

All these categories include formal sites, both in the mainland and the islands (Figure 1), organized and operated by Hellenic Authorities or other Institutions (e.g. United Nations). It is important to note that the geographical distribution of each category is related to the migration flows inside and outside of the country (Frontex, 2015). For Instance, as expected, Reception and Identification Centers are recorded, almost exclusively, in the Dodecanese. This area, where the most overcrowded sites are located, is the entrance gate to Greece and Europe (IOM, 2016). Other types and especially Emergency Response Sites, which host about 1/3 of total migrants waiting for their asylum applications, are scattered across the territory. In some way, the country is divided into two zones; the first one is the inland zone operating as a reception area, while the second one is the mainland as a waiting area.

Another issue concerning these types of camps relates to their capacity. At the first stages of migration crisis, occupancy rates in accommodation facilities had transcended 100% – 46,660 people in total when the average capacity was 34,150 people. The most overcrowded sites recorded mostly in Dodecanese (Chios, Samos, Kos, Rhodes), raising the capacity of sites to 65,682 (including on-hold sites) (UNHCR, 2017a). This situation combined with severe conditions (e.g. food, hygiene) indeed opposites from Dublin's Regulation (Neville et al., 2016). However, the last year this has been improved.

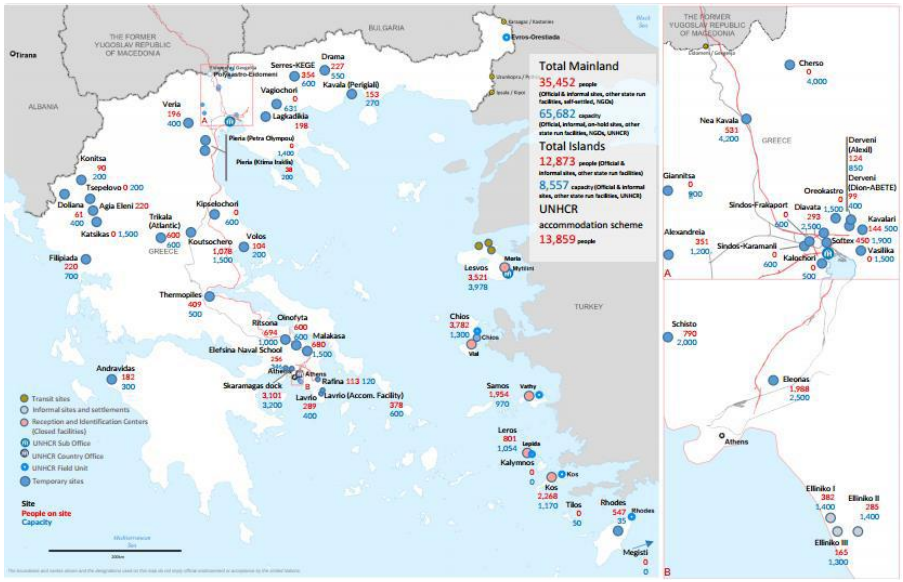

Figure 1 - Daily map indicating capacity and occupancy (as of 14 March 2017)
Source: UNHCR, 2017a

Besides, except for formal sites, there are also informal gathering places as a consequence of the uncontrolled influxes of migrants and refugees, the problems in the Greek asylum system, the lack of information, the detention conditions in several formal camps, etc. These informal migrant sites have been recorded mostly in Athens; Victoria's square and the port of Piraeus are the most representative examples.

Victoria's square located in the center of Athens is a place where migrants set up improvised camps. Although Greek authorities have evacuated the Square since March 2016, they continue gathering there mainly to converse and gain information from other migrants who live in Greece for years. The other informal camp is that in the port of Piraeus. When migrants disembarked from ships, they prefer staying in the harbor, having a potential "freedom," rather than being collected in camps far away from essential services. These two areas, which transformed into informal gathering sites, were not selected randomly. Both are open public spaces in the urban fabric with a high rate of citizen mobility. Consequently, it is easier for migrants/refugees not only to contact with migratory networks and mediators, but also to move to Idomeni. Idomeni is another informal camp. Its peculiarity compared to the above areas lies in the fact that is located away from basic services but very close to FYROM borders making migrants transit to their final north-European destinations much easier. Informal gathering sites are a phenomenon, neither government and media nor locals could overlook.

2.2 2ND STAGE: OVERVIEW OF SPATIAL CONDITIONS

The second stage of the research refers to an overview of spatial conditions of the areas that now host migrant camps. Specifically, in order the spatial transformations occurred to them to be better understood, it is necessary the previous land uses and land covers to be examined. Furthermore, analyzing their geographical location, namely proximity to urban settlements or transport network, is of considerable interest as it provides a clear view of the placement options and their impacts on the spatial structure. Option for accommodating persons of concern appropriate to the context in which displacement is taking place is of utmost importance (UNHCR, 2017b).

As it emerged from the available data, there are many categorizations about these areas. A primary categorization is based on infrastructure existence. The layout, infrastructure and shelter of a camp will have a significant influence on the safety and well-being of its residents (UNHCR, 2017b). Apart from those without any infrastructures, there are migrant camps with infrastructures which vary from buildings with all necessary facilities (e.g. toilets, baths, kitchen, bedrooms, heating, etc.) to rudimentary infrastructures. The latter may not be absolutely appropriate for housing, but to a lesser or greater extent satisfy a temporary need. An indicative example is the fact that during the winter season, the migrants/refugees at camps which have, entirely or partly, any infrastructures were significantly protected

by weather conditions in contrast with those who stayed in tents. Furthermore, their quality is questionable; even in camps that do have the necessary infrastructure, service can be inconsistent and compounded by the state of “permanent temporariness” associated with refugee camps (Cullen Dunnt, 2015 cited by Tomaszewski et al., 2016). The vast majority of migrant camps placed in areas with existing infrastructures, while only 5% of them in areas without existing infrastructures at all, such as urban voids, agricultural land or rural areas (Diagram 2).

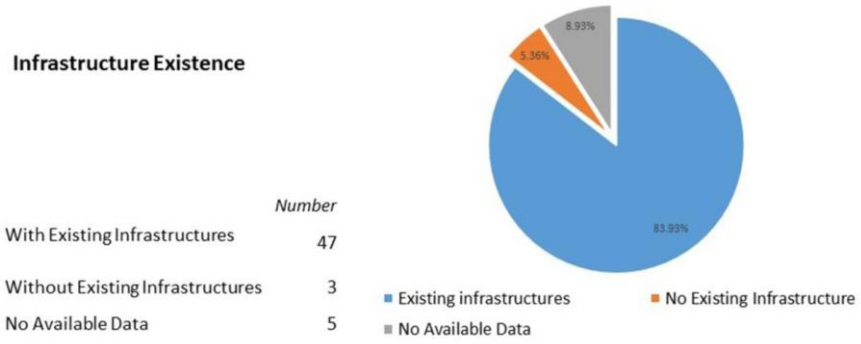

Diagram 2 - Categories of camps according to infrastructure existence (%)
Source: (Data retrieved from field observation, local authorities and local press), Own Processing

Another categorization, related to the above, refers to whether these sites and the including buildings were previously used or not. Sites without infrastructures either were used as agricultural land in rural areas or have not been deployed at all (e.g. urban voids in urban settlements). On the other hand, sites with existing infrastructures, which were not used, were abandoned for an extended period or they were seasonally used (such as campsites). The second case, and especially the abandoned infrastructures, is the one that appears most of the time.

2.2.1 LAND USES/COVERS CHANGES

Land use/land cover changes are a basic indicator which reflects the complex spatial transformations and contributes to a more efficient spatial management. Therefore, the previous land uses/covers of the areas that have been transformed, temporarily or in the long term, into migrant camps can define the degree of differentiation they have suffered. The previous land uses/covers of the 56 examined areas vary from military camps to industrial buildings, hospitals and malls. In particular, 17 different land uses/covers have recorded, as shown in the diagram below.

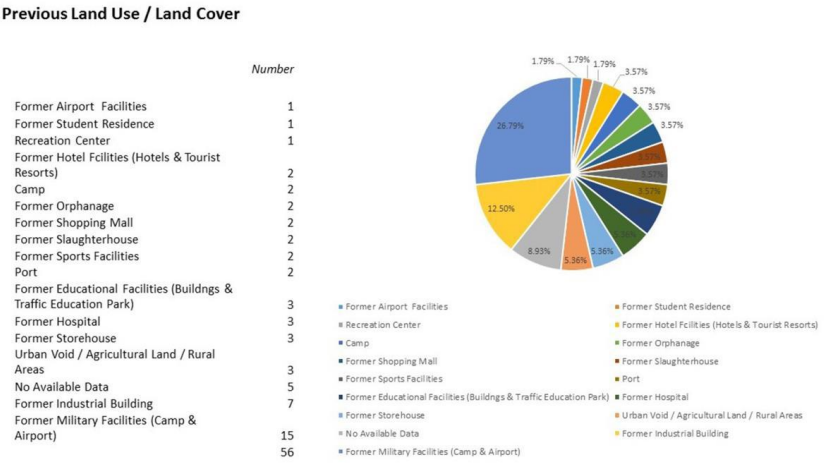

Diagram 3 - Categories of Previous Land Use / Land Covers (%)
Source: (Data retrieved from field observation, local authorities and local press), Own Processing

The preponderance of migrant camps (26.79%) is hosted at former military facilities, either in military camps or less often in military airport bases, while industrial buildings are the second most common “previous land use” (12.50%). Urban voids /agricultural land/ rural areas (they compose a broad category with similar features such as no infrastructure existence), storehouses, hospital and educational facilities (Buildings & Traffic Education Park) constitute the 5.36% of the former uses each. Also, ports, sports facilities, slaughterhouses, shopping malls, orphanages, campsites and hotel facilities (hotels and tourist resorts) represent the 3.57% individually. Other land uses, such as recreation center, student residence and airport are more rarely met (1.79% each) (Diagram 3).

The main reasons why these areas were selected relate to a range of conditions they met. The first and foremost reason is that, due to their acreage, a large number of migrants could be hosted there, combined with the fact that most of these areas had already had infrastructures (e.g. sanitary infrastructures). Camps require significant investments in infrastructure and systems for the delivery of essential services. The running costs of maintaining and operating these dedicated facilities and systems are also considerable and often must be sustained for many years or even decades (UNHCR, 2017b). Therefore, the selected areas, despite the repairs that were made, constituted a fast and cost-effective solution.

2.2.2 GEOGRAPHICAL LOCATION

Geographical location of migrant camps is another aspect of political and social importance. Location options can affect both migrants and host communities and their relations. On the one hand, site selection is a critical factor in the ability to provide a safe and healthy environment for persons of concern (UNHCR, 2017b). It can also define the rights and freedoms of migrants, such as their ability to move freely or easily. On the other hand, security and reducing the economic and social impacts of a migrant presence is the basic priority of the locals. Thus, initial decisions on the location of the camps should involve the Government as well as local authorities and communities. Likewise, they should involve its residents. This approach is necessary to avoid long-term protection issues such as conflict with local communities (UNHCR, 2017b). In the case-study, migrant camps were classified into four groups according to their proximity to urban settlements or transport network: i) Away from Transport Network & Urban Settlement, ii) Near Transport Network, iii) Near Transport Network & Urban Settlement and iv) in Urban Settlement. The first category (approximately 16%) includes camps “Away from Transport Network and Urban Settlements” which imply the alienation of migrants who have difficulty accessing essential services and as a result, they vehemently protest (Diagram 4). However, these sites are accepted more readily from local communities. The option of camps “Near Transport Network” which are the most common category (33.93%) and “Near Transport Network and Urban Settlements”, the second most common category (28.57%), is an “intermediate” solution which cannot remove restrictions of accessibility completely, but it facilitates transit scopes and allows migrants to get access to essential services. Camps located “in Urban Settlements” (21.43%) give migrants the possibility to live with greater dignity, independence and normality as members of the community, either from the beginning of displacement or as soon as possible after that (UNHCR, 2017b). Nonetheless, host communities vehemently oppose this option most of the time causing phenomena of social unrest. In that case, refugees (in urban areas) may be subject to xenophobic attacks and treated with mistrust by host communities (UNHCR, 2017b).

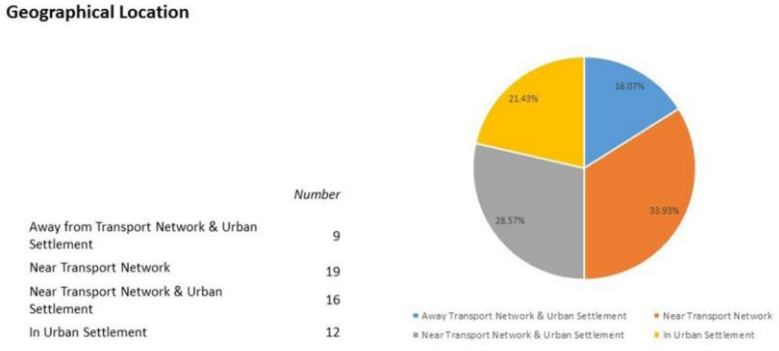

Diagram 4 - Categories of camps according to their geographical location (%)
Source: (Data retrieved from UNHCR, 2017a), Own Processing

2.3 3RD STAGE: CLASSIFICATION OF SPATIAL TRANSFORMATIONS

The classification of transformations occurred in the areas that now host migrant camps is a step required to understand the way previous conditions led to current transitions. Alterations are recorded in different geographical scales, locally and nationally. The first case includes transformations referring to the spatial structure of these areas and the practices through which the changes emerged, while the second is about the new role specific regions obtained because of their geographical location.

At the local level, the spatial structure of areas became migrant sites underwent either form or use changes. Camps located in areas without any infrastructures at all, such as urban voids or agricultural land, provoke both form and use changes; essentially, atypical settlements were developed, changing the form and the use of peri-urban and rural areas. Informal gathering sites (e.g. Victoria's Square) are a commensurable case but in urban areas. By contrast, official camps located in areas with existing infrastructures (abandoned shelters) underwent only use changes. The category of spatial structure changes may also include, in the broad sense, landscape transformations recorded mainly in Greek Islands where a large number of migrants arrive on a daily basis. A pattern according to which islands are reception centers of migrants has replaced the tradition model of cosmopolitan islands full of tourists. These changes are the consequences of two practices i) central command-planning procedures and ii) unauthorized movements of migrants. As noted before, formal sites, organized and supervised by Greek Government (Ministry of National Defense and Ministry of the Interior) and local authorities as well, are selected through a comprehensive planning procedure. On the contrary, informal gathering sites is the result of unauthorized movements of migrants who refused to stay at authorized camps.

At the national level, transformations bears on the role of some regions during the migration crisis. Due to the direction of migrant fluxes and the spatial distribution of migrant camps, specific areas have a dynamic role in addressing this crisis. Analytically, the eastern part of the country operates as a gateway (reception zone) for migrants coming through South-eastern Mediterranean countries. These zone consists of Dodecanese islands. Mainland, as claimed above, operates as "waiting zone". However, the Greek (mainland) territory is divided into two sub-zones where the northern part constitutes the final (interior) destination due to its proximity to the Balkan borders and the metropolitan area of Attica has become a point of transition between the two aforementioned zones.

2.4 4TH STAGE: IMPACTS AND INTERACTIONS

The characteristics of current migration crisis differentiated it from the previous ones. The rate of daily arrivals, the intense diffusion of migration sites, the different socioeconomic and spatial features of the regions where are located, all together, combined with the brute fiscal crisis that has affected Greece entirely, have begotten a complex system of multi-level impacts and interactions.

In the previous stage, spatial transformations at all geographical scales were examined. As shown, areas included in each of the three geographic zones that identified, present similarities regarding the economy, the urban development model and the social structure. This relative homogeneity leads to transformation patterns which are analyzed at this final stage to figure out their impacts and intersections between them and other key issues of urban development.

Dodecanese islands represent the first transformation pattern. This zone faces the strongest pressures of migration flows. The overcrowded camps with dangerous living conditions are considered as polluting sites putting public hygiene at risk. Also, the migrants' presence at tourist hotspots makes these islands an unattractive tourist destination with adverse effects in the local economy which is mainly based on touristic activity. However, migrants and members of international institutions and NGOs working at migrant camps are to some extent a source of income for many local businesses (shops, hotels, etc.). Furthermore, another economic issue is the risk of land values decreasing in areas around migrant camps that are usually intended for vacation houses or tourist resorts. From the social point of view, the local community was unprepared to accept and meet the needs of this sensitive social group. Consequently, social stability and equilibrium are in danger.

The second transformation pattern refers to urban settlements that host migrant camps. This case has some risks similar to the previous ones. The environmental degradation of sites transformed into migrant camps is one of them. Moreover, the wider area around them may suffer from real estate marketing

problems such as land values decreasing or from deterioration in the quality of the built environment. The lack of migration policy in an unprepared community to host such a large number of arrivals, may turn these camps into ghettos and therefore areas of “urban fear”. One basic characteristic of that pattern concerns the changes in cities character which become even more multicultural. This is a two-side issue depending on the policy agenda whether and how it will benefit (economically, socially) the cities.

The last transformation pattern is mostly met in rural areas where migrant camps are located far away from urban settlements and basic services. In that case, camps operate as settlements directly dependent by nearest cities, creating transit fluxes to and from them. However, the most important issue is that a standard of immigrant isolation is reinforced which can affect the relations between the local and migrant community.

3 CONCLUSIONS

As can be seen from the above, Greece faces a complex migration crisis, which has already left its deep social and spatial footprint. During this period, as the country was unprepared to deal with it, many wrong manipulations were made. Thus, it is of great importance to identify the mistakes and develop the best practices, so the “lessons” learned from this situation to constitute an emergency roadmap for other countries and future cases.

Planning is both an indispensable condition and a useful tool for the preparation and response to a migrant/refugee crisis. Site planning, a long-term procedure, which involves hardy political decisions, is among the first of the required steps. The rational spatial distribution of migrant camps is necessary so that the carrying capacity of each area does not exceed. On the one hand, this ensures better living conditions for migrants and consequently avoiding the development of informal gathering sites. On the other hand, it limits local community’s protests, fostering better relations between locals and migrants and therefore migrants’ social integration to host community. In this context, adopting a ‘bottom up' approach to planning, so that decision-making involve national and local governments as well as host and refugee communities is an essential principle. Planning should be based on migrants/refugees needs but also reflect the wishes of the host community as much as possible (UNHCR, 2017b) to address or even prevent potential conflicts between them. A comprehensive immigration policy, which adopts a different, more proactive approach to welcoming newcomers (UNHCR, 2017b) will address such problems. This policy should provide guidelines to other spatial policies and programs in order adaptive urban planning in response to a migrant crisis can be effective.

Focusing on the Greek case, beyond the many problems created, there could be benefits in the long term through making use of migrant human capital. Giving them incentives to stay in Greece, such as housing at abandoned rural settlements or agriculture/farming jobs, can benefit the reconstitution of the agricultural sector or lead to an inversion of desertification of settlements and demographic aging. Apart from policy-making mentioned above, there are also technical aspects that should be fixed. Firstly, there is a need for a database about migrant flows, migrants’ profile and migrant camps. Without this information, policy-making is almost impossible.

Finally, the research offers key conclusions that may be exploited so that ways and means to more effectively and integrate urban and regional planning would be addressed in similar situations. Nowadays, it is more necessary than ever to develop best adaptive planning practices capable to manage emerging risks for places of dignity.

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ID 1562 | CLIMATE ADAPTATION IN REGIONAL PLANNING IN GERMANY

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1 INTRODUCTION

The legal basis of the German spatial planning system is the Federal Planning Act (Raumordnungsgesetz des Bundes, ROG), which defines the core task of spatial planning to be the "anticipatory, comprehensive, supra-local and cross-sectoral organisation of the spatial and settlement structure for the medium and long term" (ARL, 2005, p. 965). Within the German planning system, regional planning is the intermediate level of comprehensive planning, bridging the (political) frameworks of the national level, sectoral planning and the (practical) implementation at the local level. It concretises the aims and guiding principles of comprehensive spatial planning of the national and federal-state level for all planning regions and prepares regional plans in accordance with § 8 (1) no. 2 ROG.

Due to regional planning's comprehensive, supra-local and yet spatially-specific character, it is qualified for addressing impacts of climate change. This becomes especially valuable in the light of absence of a separate sectoral planning division responsible for considering climatic changes (ARL, 2013; BMVBS, 2009; Federal Government, 2008).

In 2008, climate adaptation was given concrete political and legal status through the resolution of the 'German Strategy for Adaptation to Climate Change' (Deutsche Anpassungsstrategie an den Klimawandel, DAS) and the amendment of the ROG through the supplementation of the 'Climate Protection Section' (Klimaschutzparagraph). The latter states that "the spatial requirements of climate protection must be

taken into account, both by means counteracting climate change and by serving the adaptation to climate change" (§ 2 sect. 2 no. 6 ROG). In addition to the DAS, the 'Adaptation Action Plan' (Aktionsplan Anpassung zur DAS, APA) was published in 2011, representing a national strategy with objectives and measures for climate adaptation (Federal Government, 2008). Additionally, the 'Conference of Ministers on Spatial Planning' (Ministerkonferenz der Raumordnung, MKRO) presented a concept of action regarding the spatial consequences of climate change and possible prevention, mitigation and adaptation strategies in 2009, respectively 2013. The MKRO concept highlights the role of spatial planning in climate change adaptation and mitigation[1] and contains Fields of Action for further elaboration through regional planning.

This paper presents the status quo on the implementation of adaptation-relevant designations in German regional plans, as claimed by DAS, ROG and MKRO. First, an introduction to the methodology of the analysis is given (see subchapter 2). Subsequent, research results of the Germany-wide analysis are presented (see subchapter 3). The overall implementation rate of climate-adaptation related designations for all planning regions and all Fields of Action is presented first, before a more detailed description of the research results follows for the two Fields of Action with the least implementation rate (Coastal Protection and Protection of Mountainous Areas). The two exemplary Fields of Action are described regarding their climatic and spatial-planning relevance and existing approaches and model designations are introduced. Additionally, an in-depth presentation and interpretation of the research results is given. Last, a conclusion on climate adaptation in regional planning and remaining potentials is drawn (see subchapter 4).

2 METHODOLOGY

The formal regional plans serve as the basis for the analysis on climate adaptation in regional planning. As regional plans are both the most important (formal) spatial planning instrument at the regional level (BMVBS and BBSR, 2011) and are available for all planning regions in Germany, comparability of the results is guaranteed (Schmitt, 2014). Although informal instrument are not considered in the analysis, their importance for regional planning processes, e.g. in risk communication, has to be stressed[2].

The MKRO concept defines seven Fields of Action for climate change adaptation, which are to be implemented at regional and local planning level. For the Germany-wide analysis, these Fields of Action are further concretised into 22 action foci (see Tab. 1). Model designations are derived for each of the 22 action foci (exemplarily see subchapters 3.1.2 and 3.2.2), which are systematically analysed regarding their existence and legal validity in all regional plans.

Field of Action I – Flood Protection in River Areas	
I.i	Preservation of existing flooding areas for retention purposes
I.ii	Retrieval of flooding areas for retention
I.iii	Risk prevention in potential flooding areas
I.iv	Improvement of retention in the river catchment areas
I.v	Preservation of potential sites for flood protection facilities
Field of Action II – Coastal Protection	
II.i	Complementary risk minimisation in storm-surge protected coastal areas
II.ii	Risk minimisation in insufficiently storm-surge protected coastal areas
II.iii	Preservation of buffer zones (building development prohibited) in areas of unprotected coastal erosion
II.iv	Protection of areas for clay and marine sand extraction for coastal protection purposes
II.v	Preservation of areas in embankment foreland and hinterland
Field of Action III – Protection of Mountainous Areas (esp. Alpine Region)	
III.i	Preservation/Restoration of the protective functions of mountain forest
III.ii	Protection from natural (mountain) hazards
III.iii	Protection and development of mountain regions as living, economic and touristic areas
Field of Action IV – Protection from Heat in Settlement Areas	
IV.i	Protection of significant regional climate-effective free spaces and compensation areas
IV.ii	Spatial management of settlement and infrastructure development

[1] While climate mitigation aims to avoid or reduce further anthropogenic influences on the climate (e.g. by reducing greenhouse gas emissions and increasing energy efficiency) climate adaptation aims to adapt to unavoidable impacts of climate change (Birkmann et al., 2013; BMVBS, 2010).

[2] Informal instruments can support balancing the lack of flexibility of formal instruments, which is one reason why a combination of formal and informal instruments is recommendable in implementing climate adaptation measures.

Field of Action V – Regional Water Scarcity	
V.i	Preservation of water resources
V.ii	Endorsement of preservation and improvement of soil water balance
V.iii	Anticipatory management of highly water-consumptive land-uses
Field of Action VI – Changes in Tourism Behaviour	
VI.i	Determination of new tourism development areas
VI.ii	Protection of sites for tourism-related infrastructure
Field of Action VII – Displacement of Animal and Plant Habitats	
VII.i	Protection of a regional, functionally-connected network of ecologically important free spaces
VII.ii	Minimisation of further fragmentation of the landscape

Table 1 – Fields of Action and action foci for climate adaptation
(own depiction following Bavarian State Government, 2013; MKRO, 2013)

The legal validity of the designations within regional plans is the core element of the analysis, which allows the evaluation of the status quo and further potentials in climate adaptation. The legal validity is differentiated as follows: Aims of comprehensive spatial planning and designations of priority areas (Vorranggebiete) evolve a stronger legal validity as they are directly binding for any subsequent planning (and do not need to become subject to a weighting process). Due to the strong legal validity, aims and priority areas are evaluated with an implementation rate of 100%. Guiding principles of spatial planning and designations of restricted areas (Vorbehaltsgebiete) evolve weaker legal validity as they remain subject to weighting, which is why they are evaluated with an implementation rate of 50%[1]. The total implementation rate of a planning region results from the normalisation of the addition of the implementation rates of all action foci relevant for the region[2]. The normalization allows the comparison of planning regions with different number of relevant Fields of Action. Accordingly a planning region achieves an implementation rate of 100% if all action foci are designated as aims or priority areas6 (Schmitt, 2014).

The analysis incorporates all German regional plans that were in force on the reporting date 30. June 2014. This also includes regional plans that were temporarily invalid[3] as well as segmented plans that were not yet integrated in comprehensive regional plans. However, preparatory regional plans or amendments that were not yet adopted are neglected. Furthermore, special types of planning regions are not taken into account, as comparability cannot be provided. This applies to the city states of Berlin, Bremen and Bremerhaven, Hamburg, the Federal State Saarland, municipalities of Lower Saxony and the city region Ruhr. All in all, the analysis comprises 111 regional plans (Schmitt, 2016).

3 STATUS QUO IN REGIONAL CLIMATE ADAPTATION IN GERMANY

Figure 1 illustrates the strong heterogeneity in the implementation levels of adaptation-relevant designations in Germany's regional plans. Apart from two planning regions in Lower Saxony (temporarily invalid) and the planning regions of Brandenburg (solely segmented plans), all planning regions reveal a status quo of more than 20% in regional climate adaptation. However, only one planning region in Bavaria achieves more than 80%. On average, German regional plans achieve an implementation rate of 52.71% regarding adaptation-relevant designations (reporting date 30. June 2014).

[1] Although the classification of a designation's legal validity is a simplification of the actual effectiveness of aims and guiding principles, the approach allows for quantification and systematisation of the research results. for the regionfor the regionfor the regionfor the regionfor the region

[2] However, an assessment on whether it is appropriate for an individual planning region to solely designate aims and priority areas cannot be provided and lags behind the aim of a Germany-wide analysis.

[3] According to the Regional Planning Act of Lower Saxony (Niedersächsisches Landesraumordnungsgesetz, NROG), planning regions are obligated to assess the need for amendment or updating of regional plans according to § 5 (7) NROG. If the regions do not attend this obligation, plans become temporally invalid until updating is completed.

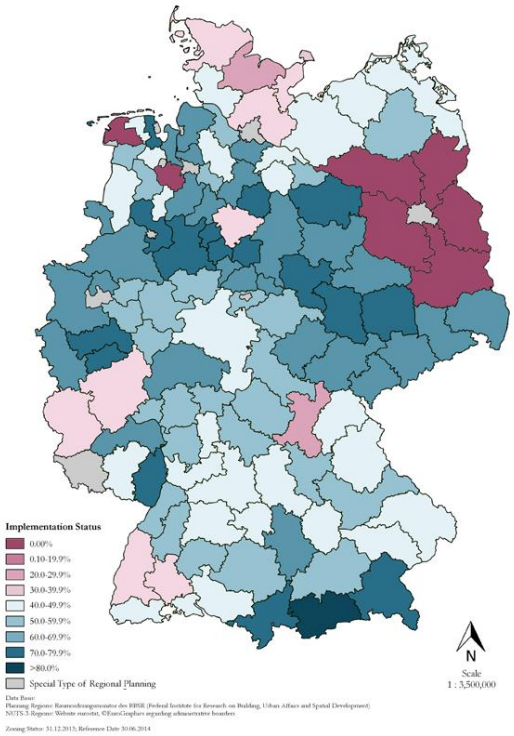


Figure 1 – Status quo of adaptation-relevant implementations in regional plans in Germany (own depiction following Schmitt, 2016)

Table 2 depicts the implementation rate of adaptation-relevant designations for each Field of Action of the MKRO concept. There are large differences between the Fields of Action that range from nearly 90% implementation rate in Fields of Action IV and VII to solely 16.0% in Field of Action III.

	FoA I	FoA II	FoA III	FoA IV	FoA V	FoA VI	FoA VII
	Flood Protection in River Areas	*Coastal Protection*	*Protection of Mountainous Areas (esp. Alpine Region)*	*Protection from Heat in Settlement Areas*	*Regional Water Scarcity*	*Changes in Tourism Behaviour*	*Displacement of Animal and Plant Habitats*
Implementation Rate	43.6%	18.2%	16.0%	88.5%	44.3%	52.5%	89.5%

Table 2 – Implementation rate per Field of Action (own depiction following Schmitt, 2016)

An explanatory approach for the differences between the Fields of Action is that the action foci of Fields of Action IV and VII, which achieve the highest implementation rates, lie within the core task of spatial planning according to § 8 (5) ROG, i.e. settlement development, preservation of free space and infrastructure development (see e.g. IV.ii and VII.i). The high implementation rates in both Fields of Action are achieved mostly indirectly, e.g. through securing regional green corridors rather than by direct addressing climate adaptation. In contrast, the Fields of Action II and III traditionally lie within the responsibilities of sectoral planning and do not yet seem to be addressed in formal regional plans (Schmitt, 2016). In the following, Fields of Action II and III are investigated in more detail.

3.1 FIELD OF ACTION II – COASTAL PROTECTION

Field of Action II – Coastal Protection covers flood protection from storm surges on the one hand and the prevention of coastal degeneration through erosion on the other hand. The contents of this MKRO Field of Action shall supplement the (informal) Integrated Coastal Management as introduced by the European Commission (European Commission, 2016). Germany has an Integrated Coastal Management (Integriertes Küstenzonenmanagement, IKZM) since 2006, which already complements the formal sectoral plans (BMUB, 2006).

3.1.1 CLIMATIC AND SPATIAL-PLANNING RELEVANCE

The most important climate-change related variables in coastal areas are the rise of the sea level, frequency and magnitude of storm surges and swell. As a result of the expected rise of the sea level, a stronger hydrodynamic load as well as an increasing coastal erosion are to be expected. However, the extend of these impacts is highly uncertain (MKRO, 2013). Secondary consequences of the sea level rise may be flooding of insufficiently protected areas, the need for larger (technical) effort for coastal protection measures as well as land-loss due to erosion. Additionally, the increase in extreme precipitation, which leads to larger runoff, the average rise in temperature, which may lead to intensified tourism in coastal areas, as well as the increase of nutrients and pollutants into the coastal sea are results of climatic changes (BMVBS and BBSR, 2013).

The spatial-planning relevance of Field of Action II presents in the fact that the protection from storm surges and erosion are indispensable prerequisites for settlement development in coastal areas, as both reduce the damage potential. Coastal protection is a matter of land preservation and accordingly lies within the responsibilities of spatial planning. Regional planning can contribute to protection from flooding and erosion in particular through active and passive coastal protection measures as well as through the coordination of land-use demands in coastal areas (MKRO, 2013; BMVBS and BBSR, 2013). The most essential regional planning instrument for avoiding damages is the management of land uses through designations in regional plans.

The MKRO identifies five action foci for Field of Action II – Coastal Protection:

- II.i – Complementary risk minimisation in storm-surge protected coastal areas
- II.ii – Risk minimisation in insufficiently storm-surge protected coastal areas
- II.iii – Preservation of buffer zones (building development prohibited) in areas of unprotected coastal erosion
- II.iv – Protection of areas for clay and marine sand extraction for coastal protection purposes
- II.v – Preservation of areas in embankment foreland and hinterland (MKRO, 2013)

3.1.2 EXISTING APPROACHES AND MODEL DESIGNATIONS

The designation of coastal protection measures in regional plans strongly depends on the accuracy of climate change projections and their spatial resolution. Therefore, both an assessment of the current situation (detection of areas endangered by storm surges and erosion) as well as the integration of present and future sensitivities and impacts is necessary. Only then, appropriate measures can be identified and implemented, which are liable with respect to competing land-use demands.

Measures of preventive coastal protection can generally be classified as suitable if they are of flexible and extendable character. Good examples are temporal land-uses as well as temporally compatible, revisable land-uses in buffer zones. The designation of restrictive covenants in especially risky areas (e.g. low-lying areas) can also be an adequate measure. In addition, spatial planning can contribute to the sensitisation and information of population through designation of flood-prone coastal areas and thereby gives incentive for private risk protection (MKRO, 2013; BMVBS and BBSR, 2013). The following designations are suggested by the MKRO and were used for the analysis of regional plans (see Tab. 3)

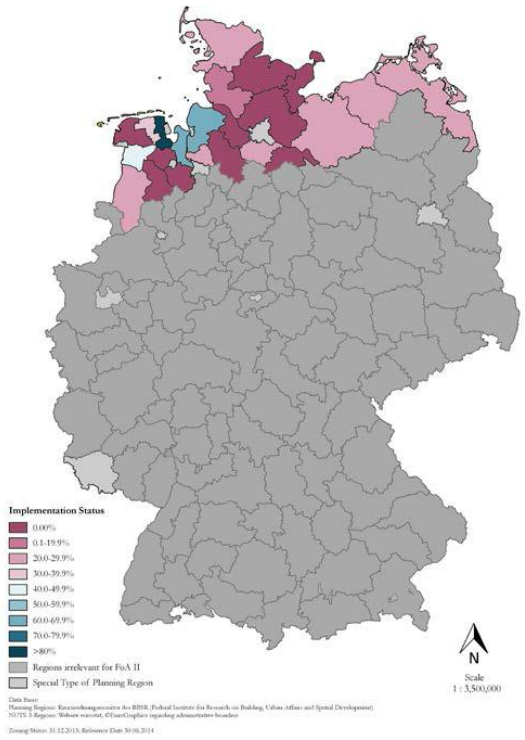
Action Focus	Model Designations
II.i Complementary risk minimisation in storm-surge protected coastal areas	Complementary risk minimisation in storm-surge protected coastal areas may be carried out using text or designations in maps, e.g. by assumption of risk-prone areas according to flood risk maps of EU FRMD. • Designation of risk areas • Rebuilding of roads to higher elevation (dikes) in order to improve accessibility of potential dike damages and for building polders for further protection • Covenants on use for particularly low-lying areas (potential longer and deeper inundation); e.g. through restrictive covenant

II.ii Risk minimisation in insufficiently storm-surge protected coastal areas	• Designation of restricted areas for development of buildings, infrastructure and other land-uses without additional protection from storm surges
II.iii Preservation of buffer zones (building development prohibited) in areas of unprotected coastal erosion	• Designation of priority areas for buffer zones (safety distances) in erosive coastal areas • Designation of priority or restricted areas for permitted land-uses in erosive coastal areas • Designation of land-uses securing free space, e.g. priority and restricted areas for nature and landscape In addition, temporal, compatible and revisable land-uses may be permitted in buffer zones.
II.iv Protection of areas for clay and marine sand extraction for coastal protection purposes	• Designation of priority and restricted areas for the protection of clay extraction sites in embankment foreland and dike-protected coastal marshland • Designation of priority and restricted areas for the protection of clay extraction sites in embankment foreland
II.v Preservation of areas in embankment foreland and hinterland	• Designation of priority and restricted areas for coastal protection planning in front of and behind coastal protection facilities as well as for the exclusion or restriction of other land-use demands (e.g. settlement, tourism, nature protection)

Table 3 – Model designations for Field of Action II – Coastal Protection
(own depiction following MKRO, 2013; BMVBS and BBSR, 2013)

3.1.3 RESEARCH RESULTS FOR COASTAL PROTECTION

For the analysis of Field of Action II, it was insufficient to solely address planning regions adjacent to the sea, as e.g. coastal protection facilities (action focus II.v) may present in form of a second dike line in the hinterlands. Also, clay extraction points (action focus II.iv) are usually located in the coastal marshes (MKRO, 2013; BGR, 2008). For this reason, flood risk maps according to the EU Flood Risk Management Directive (FRMD) were used for identifying planning regions for which Field of Action II is of relevance. According to the EU FRMD and the German Federal Water Act (Wasserhaushaltsgesetz, WHG) flood risk maps were to be prepared also for coastal areas by 31. December 2013 and were analysed for the planning regions of the federal states of Mecklenburg-Western Pomerania, Lower Saxony and Schleswig-Holstein[1] (Schmitt, 2014).



The analysis comprises 23 coastal regions. Eight of the 23 regions do not provide any designation regarding coastal protection in their regional plans. On average, only one out of the five action foci is implemented by the coastal regions (see Fig. 2).

Figure 2 – Status quo of implementations in Field of Action II (own depiction following Schmitt, 2016)

[1] The city states Hamburg and Bremen are also 'coastal areas' but are not considered in the analysis as both are special types of planning regions.

There is great variation among the five action foci of Field of Action II. While action focus II.i (Complementary risk minimisation in storm-surge protected coastal areas) is covered by more than half of the planning regions, mainly as a guiding principle, only one region covers action focus II.ii (Risk minimisation in insufficiently storm-surge protected coastal areas). Designations regarding marine sand extraction for coastal protection purposes, as a part of action focus II.iv, are – so far – non-existent in Germany's regional plans.

A comparison of the federal states shows that Schleswig-Holstein has by far the least designations regarding coastal protection, which is, amongst others, subject to the following critical reflection of the research results. The planning region with the most designations in Field of Action II is Friesland, located in Lower Saxony (see Fig. 2).

3.1.4 REFLECTION AND FURTHER ADAPTATION POTENTIAL

In previous studies, e.g. by the Federal Ministry of Transport, Building and Urban Development (2010), coastal protection was understood to be relevant only for planning regions with a coastline. This analysis uses the EU FRMD flood risk maps as the basis for determining the Field of Actions' relevance for planning regions, i.e. also includes planning regions in the hinterlands. But as all regional plans relevant for Field of Action II entered into force before the deadline for flood risk map implementation, none of the plans uses the advanced definition, which is why especially the hinterland regions achieve poor results in the analysis. Accordingly, the long continuance of regional plans as well as the elaborate perpetuation process seem to be reasons why amendments are not implemented in shorter time. It can be assumed that with the next perpetuation of regional plans, coastal protection (as subject to the EU FRMD) will be integrated also in regional plans of the hinterlands.

Regarding action focus II.iii – Preservation of buffer zones in areas of unprotected coastal erosion, the research results need to be corrected in retrospective, as this action focus is only of relevance for planning regions with coastlines. Accordingly, the analysis results are slightly negatively biased, as II.iii is relevant only for 15 instead of 23 planning regions.

Furthermore, currently sectoral planning seems to cover more adaptation-relevant implementations than comprehensive spatial planning. Mecklenburg-Western Pomerania and Lower Saxony have a 'Coastal and Flood Protection Plan' (Generalplan Küsten- und Hochwasserschutz), which covers all of the action foci of the MKRO concept. Schleswig-Holstein also has a 'Coastal Protection Plan', which contains sectoral development aims that simultaneously serve as aims for comprehensive regional planning (Ministry of the Interior Schleswig-Holstein, 2010). This seems to be the major reason, why the federal state shows the least implementation rate within Field of Action II. However, the 'Coastal Protection Plan' determines that the sectoral aims need to be further concretised in regional plans, e.g. regarding individual coastal protection measures and dike lines, which is currently missing in the regional plans, as the analysis proves.

Further adaptation potential can especially be seen in action focus II.ii – Risk minimisation in insufficiently storm-surge protected coastal areas, as so far this action focus is subject to only one of the regional plans. However, as uncertainties are risk-immanent, the management of risks is a challenging task which deserves to get more attention; not only in Field of Action II – Coastal Protection.

Concluding, the lack of integration of designations in sectoral plans into formal regional plans hints at a lack of cooperation between sectoral and comprehensive planning, which leaves room for further improvement. Additionally, there is a need for revision of coastal protection strategies and measures in order to allow adaptation to climate-change induced impacts (MKRO, 2013). In summary, the results of the analysis remain plausible since the (informal and sectoral) instruments and strategies that exist in coastal protection in Germany have so far been widely disregarded in the regional plans (Schmitt, 2014).

3.2 FIELD OF ACTION III – PROTECTION OF MOUNTAINOUS AREAS

Field of Action III – Protection of Mountainous Areas (especially Alpine Region) addresses the climate-change induced change in hazard potential in mountainous areas as well as the handling of geogenic hazards.

3.2.1 CLIMATIC AND SPATIAL-PLANNING RELEVANCE

Strong climate change impacts are to be expected for mountainous areas in Germany, particularly in the Alpine region. An above-average temperature rise is projected, which is accompanied by an increase in the average annual temperature, an increase in winter half-year temperatures, as well as an increase in days with maximum temperatures above 30°C. Warming is accompanied by a decrease in permanent and partial frost days, a decrease in snow safety for winter sports areas and a significant degeneration of glaciers. In consequence, an upward shift of the vegetation zones and adverse effects on the alpine flora and fauna are to be expected. In addition, an increase in the frequency and magnitude of severe precipitation and thus an increased flood risk is predicted. Severe precipitation can moreover lead to a change in geogenic hazards such as rockfall, mud slides and avalanches (MKRO, 2013; BMVBS and BBSR, 2013). According to the Bavarian Environmental Agency, the following natural hazards are of particular relevance in mountain areas: flood, subrosion (eluviation, leading to sinkholes and subsidence) and karsting, soil deformation (subsidence/uplift) and mass movements (Bavarian Environment State Office, 2014).

These geogenic hazards call for a supra-local and comprehensive management capable of respecting the spatial diversity of mountainous areas, which is why Field of Action III is spatial-planning relevant (BMVBS and BBSR, 2013). Mountain areas are both ecosystems, as well as living, cultural and economic areas. Regional planning can in particular influence the protection of the population against natural hazards. It is also capable of influencing the economic (especially touristic) and settlement-related development possibilities (MKRO, 2013; Federal Government, 2008).

In contrast to the other Fields of Action, the MKRO concept does not contain action foci for Field of Action III, but refers to the contents of the 'Alpine Plan' (Alpenplan), which has been part of the Bavarian Regional Development Programme (Landesentwicklungsprogramm, LEPro) since 1972 and serves as the major instrument for the development of the Alpine region. The following action foci were derived from the ‘Alpine Plan’ and used to analyse the regional plans in mountainous areas:

- III.i Preservation/Restoration of the protective functions of mountain forest
- III.ii Protection from natural (mountain) hazards
- III.iii Protection and development of mountain areas as living, economic and touristic areas (Bavarian State Government, 2013).

3.2.2 EXISTING APPROACHES AND MODEL DESIGNATIONS

The Federal Geological Service (Staalicher Geologischer Dienst, SGD), respectively State Offices, can provide hazard maps on geogenic natural hazards for regional planning. Although these maps do not contain statements on the probability of ocurrence and the damage potential of natural hazards, they may serve to identify the spatial extent of potential hazards (Bavarian Environment State Office, 2014). Furthermore, sectoral planning devisions can usually provide hazard maps or management plans (e.g. avalanche maps) (MKRO, 2013). Tsectoral planning devisions can usually provide hazard maps or management plans (e.g. avalanche maps) (MKRO, 2013). Tsectoral planning devisions can usually provide hazard maps or management plans (e.g. avalanche maps) (MKRO, 2013). T he following designations are suggested within the ‘Alpine Plan’ by the Bavarian State Government and were used as criteria for the analysis (see Tab. 4).

Action Focus	Model Designations
III.i Preservation/Restoration of the protective functions of mountain forests	• Designation of priority and restricted areas for securing mountain forests and their protective functions[9]
III.ii Protection from natural (mountain) hazards	Designations for preservation of areas prone to mountain hazards, e.g. by • Designation of priority and restricted areas of protective forest (for minimising alpine hazard potentials, especially avalanches, rockfall and mud slides)[10]
III.iii Protection and development of mountain areas as living, economic and touristic areas	Designations for securing and development of special functions (settlement, economy, tourism) of mountainous areas

Table 4 – Model designations for Field of Action III – Protection of Mountainous Areas (own depiction following MKRO, 2013; BMVBS and BBSR, 2013) [12]

3.2.3 RESEARCH RESULTS FOR THE PROTECTION OF MOUNTAINOUS AREAS

The identification of planning regions for which Field of Action III – Protection of Mountainous Areas (esp. Alpine Regions) is relevant, is ambiguous. First, the three German alpine regions are considered, as indicated by the title of the Field of Action. However, since all action foci are equally relevant for the German low mountain ranges, all planning regions with an altitude of at least 500 meters are analysed.

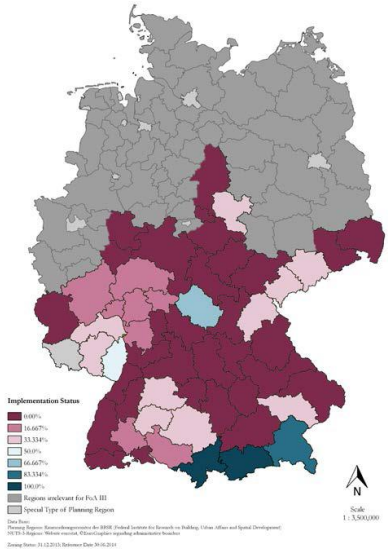


Figure 3 – Status quo of implementations in Field of Action III (own depiction following Schmitt, 2016)

Accordingly, Germany has three Alpine regions and 47 low mountain range regions (see Fig. 3). While the regional plans of the three Alpine regions reveal aims and priority areas for (nearly) all action foci, more than half of the remaining mountainous regions currently do not consider any action focus of Field of Action III. In total, 28 of the 50 mountainous regions do not provide any designations in their regional plans concerning Field of Action III.

With 16.0% Field of Action III shows the lowest implementation rate of all MKRO Fields of Action. The comparison of implementation rates of the three action foci within Field of Action III shows, that action focus III.i – Preservation/Restauration of the protective functions of mountain forest is designated most often, while III.ii – Protection from natural (mountain) hazards is designated least often.

3.2.4 REFLECTION AND FURTHER ADAPTATION POTENTIAL

One explanatory approach for the low overall implementation rate in Field of Action III can be seen in the relatively broad definition of mountainous areas (existence of mountains with an altitude of at least 500 metres), which can, nonetheless, be considered appropriate as negative impacts of climate change can also be expected for low mountain ranges (Schmitt, 2014). In the light of increasing climate change-related

[1] Guiding Principle 2.3.2 LEPro Bavaria: “Forests and their protective functions together with the cultivation of the cultural landscape shall be secured in the Alpine regions, in particular through agriculture and forestry.”
[2] Guiding Principle 2.3.3 LEPro Bavaria: “The Alpine region shall be sustainably developed, structured and secured so that a) the diversity, character and beauty of its landscapes as well as the natural diversity of its wild living animal and plant species are preserved by securing and developing their habitats and sustaining their network b) its functions as cross-border areas for living, recreation, economy and transport are secured while respecting its importance as natural and cultural areas of European importance, c) alpine hazards are minimised.

risks, the need for dealing with challenges for mountainous areas in regional plans becomes even more urgent.

A reason why action focus III.i – Preservation/Restoration of the protective functions of mountain forest is designated most often is § 12 of the Federal Forest Act (Bundeswaldgesetz, BWaldG). The BWaldG states that “the designation of protected forest particularly comes into consideration for the protection against adverse environmental effects […], erosion by water and wind, drying up of soil, harmful surface runoff and avalanches.” (§ 12 sect. 2)

The key challenge in Field of Action III seems to be that currently there are no established formal regional planning instruments. If at all, informal instruments are used for the protection of mountainous areas (e.g. regional management). Generally speaking, the use of informal instruments is an important approach in dealing with mountainous areas in the light of climate change. Regional management initiatives and risk governance processes can e.g. contribute to an increase in risk awareness, better risk communication and the implementation of risk concepts (MKRO, 2013). However, the analysis shows that there is great remaining potential and need for implementation also within formal instruments, especially regarding action focus III.ii – Protection from natural (mountain) hazards.

4 CONCLUSION

The analysis represents the current status quo in implementation of climate adaptation in (formal) regional planning and demonstrates remaining adaptation potentials. It becomes clear that regional planning has a “profound knowledge” (BMVBS, 2010, p. 79) regarding climate adaptation but most often lacks a direct implementation within regional plans. The analysis shows that there are great differences in the implementation rates of the MKRO Fields of Action. Those Fields of Actions, that achieve a high implementation rate, lie mostly within the key responsibilities of spatial planning, as e.g. the management of settlement and infrastructure development. On the other hand, especially in the two Fields of Action with the lowest implementation rates (Coastal Protection and Protection of Mountainous Areas) there are planning regions that do not address relevant action foci within regional plans at all, which hints at a lack of awareness of comprehensive spatial planning for these tasks.

Both examples reveal further adaptation potential: In Fields of Action that currently address climate adaptation rather indirectly, the importance of climate change needs to be stressed so that climate adaptation can soon serve as the justification for regional planning actions. In Fields of Action that are currently barely addressed by regional planning, the cooperation between sectoral and comprehensive planning needs to be strengthened and perpetuation procedures need to be enhanced. Therefore, further adaptation potentials cannot only be seen in raising the implementation rates for each action focus alone but in additionally strengthening the relevance of climate adaptation in regional planning so that it is perceived and handled as an independent action requirement (Schmitt, 2016).

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ID 1566 | THE URBAN RISK ASSESSMENT: A METHODOLOGICAL PROPOSAL

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1 CITY PLANNING AND CLIMATE CHANGE

The risks for cities and natural environment coming from the climate change seems to give back substance to the considerations on urban sustainability, a word rich in promises, but poor in applicative content.

The Global Risks Report 2016 considers all the possible potential impacts on global scale, measured in a Cartesian system. In the diagram, the x-axis defines the probability of occurrence, and the yaxis shows the impact degree on economies, population and environment. The highest position, caused by a high probability and a devastating impact on world scale represents a failure of adaptation and mitigation policies. Then the migration caused by wars and environment disasters follows, and the third position is assigned to water scarcity (both attributable to the climate change consequences).

Today the challenge of climate change represents one of the most complex scientific and political questions of the 21th century. International institutions like IPCC, OCSE, FAO, UNDP, just to mention a few, identify climate externalities like extreme rainfalls, heat and drought waves as scenarios of high environmental impact for the next 100 years. The worst-case scenarios in economic and human life terms will occur above all in the cities (Betsill, Bulkeley, 2005; Biesbroek, Swart, van der Knaap, 2009; Van der Veen, Spaans, Putters, Janssen-Jansen 2010).

The climate change topic enters local political agendas, pushed by the urgency perceived on an international level, though finding difficulties in application.

The climate proof approaches seem to require a substantial modification in the urban planning, both by reducing the climate-change emissions (mitigation), and by making the urban systems more resilient to possible climate changes (adaptation) (Musco, 2015).

These two paradigms, mitigation and alteration, even if both oriented to climate aspects, differ in action scale and application models: the international level deals with mitigation policies (expressed in targets), whereas the local level becomes the place where adaptation challenges will take place, there where the action is oriented to reduce local vulnerabilities (physical, social and economic) in relation to the possible impacts of the climate change (fig. 1).

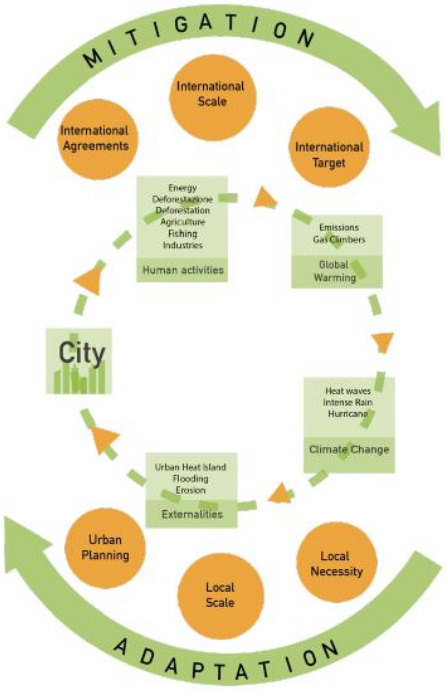


Figure 1 - Diagram of mitigation and adaptation approaches from environmental perspective (personal processing).

Adapting a territory entails mainly the modification of the consolidated fabric, vulnerable to climate impacts. In these terms, to plan a territory transformation, increasing its resilience to climate change, means to generate new rationalities in the territory planning to identify the possible impacts, measure their risk, and evaluate between the various adaptation options.

The analysis scenarios supporting an evaluation of the urban risk of climate change, require not ordinary urban knowledge frameworks (recalling the ordinary knowledge frameworks produced within the present mandatory planning practice). But details and informative types of local institutions prove to be not adequate to vulnerability and risk evaluations.

The implementation of territorial knowledge frameworks and information in general, finds in the new technologies an useful and efficient tool to produce, manage and make use of spatial information. The new technologies (ICT in particular), are more and more active in managing the spatial information. This work originates from this considerations, and investigates the possible modalities to structure an adaptation process on local scale (from analysis to identification of adaptation options), wondering about the role of technological and spatial information setup according to the territorial government activities.

2 ADAPTATION AND NEW TECHNOLOGIES OF INFORMATION

In defined urban contexts, risk perception and management can change in a substantial way. Local administrations try to contribute to mitigation strategies (through the voluntary instrument PAES, Sustainable Energy Action Plan), but above all, in the future, they should try to adapt by integrating multi-scalar policies of risk management into territorial planning and management processes. The new knowledge fostered by the NT allows the arrangement of effective knowledge frameworks as a support in the analysis and assembly phases, and it favours the understanding and the production of risk scenarios of short, medium and long term. The new technologies, if systematically applied in the planning process, can support the different phases, and allow the Plan to be less linear, granting more cyclicality in the work. The cyclicality in planning operations, made possible by the technological implication in the process, releases the planning from the rigidity of the horizontal process (Cecchini A., 1999), and allows continuous reviews and monitoring phases.

The local planning commitment to foreseen adaptation measures today, based on uncertain future scenarios, has to be supported by: a well defined work process, an integrated territorial information system and city planning instruments that take into consideration the possibility of continuous inspections. In this way, even if it means working with uncertainty, the goal of an effective planning is achieved. Therefore the interventions of adaptation will have to be considered through a comparison between the different urban situations, where the risk (or the vulnerability) doesn't refer to the city in general, but to specific urban areas of the city. In this way the risk mapping assumes different values on the territory, by indicating which areas are more vulnerable. They allow to better understand which possible measures can increase the resiliency of the area in relation to the considered expected impact.

The impacts attributable to the climate change considered in this work, which the proposed analysis process is organized on, are: heat waves and urban flooding.

Both the impacts are two of the most common in urban settings, because they both derive from dense urbanization and scarce permeability. These two features make many cities vulnerable, and endanger population, economic activities and infrastructures.

The work goal is therefore to identify an approach able to evaluate the impacts effects in the different urban transepts of the city, with the aim of supporting the planning phases with new investigation instruments, that can return the city as classified for risk and vulnerability. The classifications, besides suggesting the priority areas, are a guide in choosing the possible solution for that kind of city.

3 CONTROL CLIMATE CHANGE IMPACT THROUGH CITY PLANNING

The 5th IPCC report (Ar5, 2014), figure 2, defines a new approach to vulnerability evaluation in which it deeply modifies the terminology used in AR4 of 2007, and moves the analysis process close to the one produced by UNISDR for the disaster risk reduction (DRR).

The UNISDR DRR approach is defined as application of policies, strategies and practices to reduce a disaster vulnerability and risk, in the larger context of the sustainable development (UNISDR, 2004). The DRR is rooted in the school of thought founded in 1970 (Torry, 1978, 1979, Hewitt 1983, 2007; Lewis, 1999 et al), that considered the social, economic and environmental aspects as elements strongly exposed to risks. This was in stark contrast with the previous disaster recovery approach that looked at the natural events as inevitable, and the attention was addressed more to post-disaster aspects (Mercer, 2010). We can say that the UNISDR approach in disaster risk reduction anticipated, and perhaps laid the bases to build the paradigm of climate changes adaptation. The DRR recognizes the importance of understanding the different environmental stresses referred to a risk in general, by introducing the evaluation of danger, vulnerability, and adaptation capacity, to identify the best solution to reduce the risk in the most sensitive areas (Wisner et al., 2004). A DRR successful application aims to create a resilient community without limiting its development, or reducing its services (UNISDR, 2004).

The new approach therefore has the merit of further improving the impact evaluation, that beyond vulnerability, also evaluates the environmental risk. The terminological modification entails the necessary reference to one method or the other (2007 or 2004), when factors such as the exposure, for example, are considered.

While in AR4 the term exposure is referred to climate factors, in AR5 the concept of exposure leads back to the possible functions of a specific environment, which can be compromised on the bases of a potential impact.

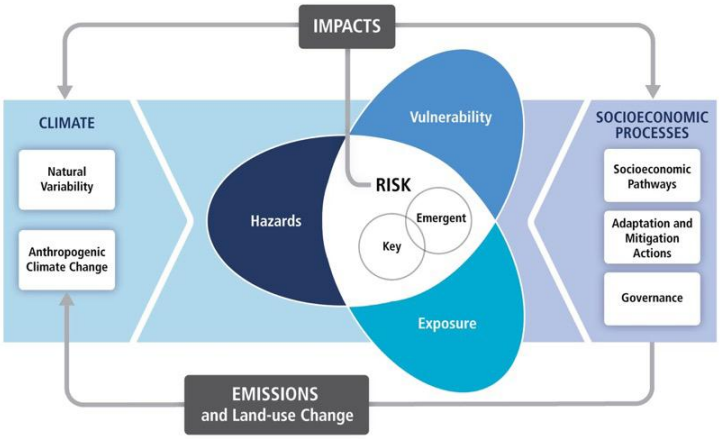


Figure 2 - Diagram of the aspects considered in the risk evaluation approach proposed in AR5 by IPCC. The new methodology, compared to the previous one of 2007, considers the risk towards a potential impact related to climate change. (source AR5-WG2 IPCC, Chapter 19).

The study defines the hazard (that in 2007 was expressed within the concept of exposure) as the potential possibility of an extreme climatic event to happen, that's able to provoke damages as loss of lives, or damages to infrastructures, services and ecosystems.

In this approach the vulnerability is a variable to calculate the risk (and not anymore a process output), and it is defined as the inclination of a system to be negatively influenced by the hazard. It includes also the concepts of sensitivity and adaptation capacity described in the previous methodology. The exposure, as third variable to determine the risk, is intended as the presence or not of infrastructures, services, species and ecosystems, cultural properties in the considered area, that could be negatively influenced by potential impacts.

Referring to the aims of the hereby described study, that is the building of a process able to evaluate the vulnerability from the effects of environmental climate change on quarter scale, the developed

methodology finds its roots in the process that is common to all the three evaluation systems described (figure 3). The considered terminology is referred to the IPCC AR5 approach.

The work goal is to return a numerical evaluation of a local scale vulnerability (to arrive to a risk evaluation) for every possible local impact. To reach this goal it's necessary to quantify the sensitivity in every local portion in relation to the supposed impact, and to evaluate the adaptation possibilities. This logical path is the result of considerations emerged after the analysis of all the approaches, characterised by different terminologies.

One of the primary limits of vulnerability (and risk) evaluations, realized to address the urban adaptations processes, is the analysis scale. The adaptation is a set of measures (in structure and governance) linked to a specific local portion, defined in relation to its vulnerability level and risk. To accomplish a vulnerability analysis on urban scale, on the whole town portion, can be useful to know the vulnerability level of a town compared to another. But it suggests very little about where and how territorial government activities could take action. Consequently, it is convenient to clarify that to accomplish a vulnerability (or risk) analysis on local scale, entails having very detailed and homogeneous information about the whole territory. Substantially the fundamental limit, in implementing the analysis processes of urban territory (to adapt them to CC) is the lack of spatial information. This reflection went along with the research in the different applicative experiences. The vulnerability evaluation of the city of Padua, the vulnerability evaluation of some towns of the Metropolitan City of Venice, and the risk analysis of New York City, represented good chances to test the methodology, and to reflect on the employment of new technologies of information as instrument to implement the urban knowledge frameworks.

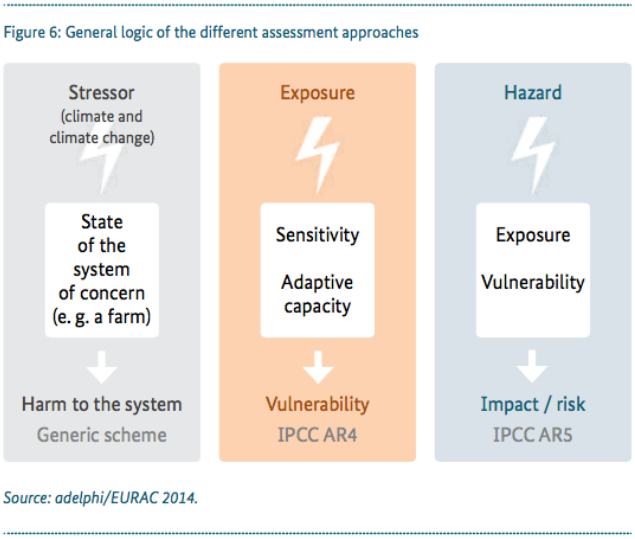


Figure 3 - Diagram of the different approaches in risk and vulnerability evaluation.
(Fonte Fritzsche K, et al, (GIZ), 2014; rework of Adelphi/ EURAC 2014.)

In all the three areas of work, the first difficulty was related to the lack of territorial information to evaluate the territory uniformly on local scale.

The process here expressed and described, inherited by direct experiences of European Planning, represents a path to adaptation integrated in the local territory government activities.

The fundamental reflection considers that a process of urban adaptation shouldn't weigh on the already numerous tasks of local administrations, but it has to find the way to integrate in the already existing processes, and to be implemented through the compulsory instruments of operational city planning. The significant goal of a local adaptation process is to reduce the vulnerability (related to the risk) of a territorial area in relation to an expected impact, increasing in fact its resiliency. The term resiliency is often linked to the concept of climate change, referring to the capacity of a territory to endure damages caused by an expected event. We can say that the vulnerability is the territorial resiliency unit of measure. The relationship between vulnerability and resiliency is not defined, many researchers underline the complementary nature of the terms (Turner 2010, Gallopin 2006), and often they link the resiliency concept

to the learning ability of a society, and its capacity of responding to negative events. In wider terms, the undeniable relations between the two concepts are in the measurement of climate change effect: by reducing the vulnerability, and increasing the adaptation abilities, the resilience increases.

Following these consideration, the adaptation process for local governances is articulated in 6 steps (figure 4).

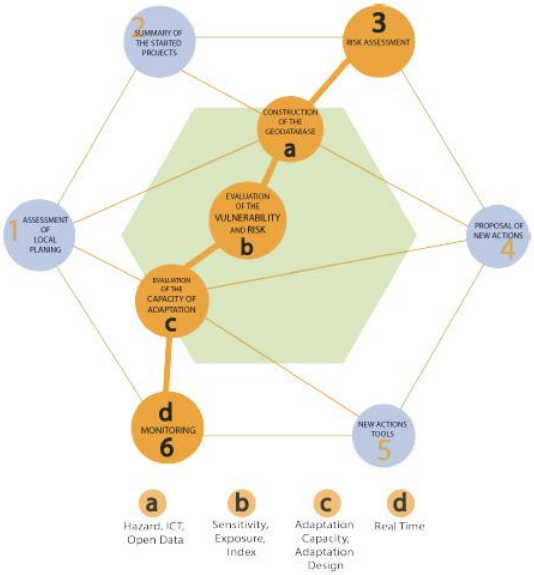


Figure 4 - Simplified diagram of the methodology developed during the work.
Every circle includes different processes designed to support the approach exportability to different cities.

4 VULNERABILITY ASSESSMENT

The backbone that supports the different phases of the assumed adaptation process (a,b,c,d), by producing vulnerability and risk analysis, and fostering the monitoring, is developed with the goal to guarantee the methodology exportation and replicability. The steps sequence, referred to the evaluation of risk and adaptation capacity, was arranged with the goal of guiding the cities towards the elaboration of an adaptation process, by considering the ICT instruments as allied in production, management, sharing of spatial information and territorial knowledge.

The sequence (orange backbone) translates logics and paradigms defined by IPCC in the 5th report (WPII, 2014) and by the UNISDR DDR (Disaster Risk Reduction). As announced, the work goal is to return a quantitative evaluation of urban vulnerability and risk in relation to a potential climate impact. The expected output is a classification of the territory, on local scale, in which every urban portion returns it's own inclination to support the impact. To do it, it's necessary to quantify the sensitivity of the local portion in relation to the alleged impact, and finally evaluate the adaptation possibilities (to implement then through planning process) about exposure parameters. To encourage the work replicability, the study produced some tools, built on computer code SQL, to make more ease (and standard) the calculation of indexes of vulnerability and adaptation capacity evaluation on the possible urban impacts caused by heat waves (Urban Heat Island) and urban runoff. The goal is to maximize the support to integrated decision processes, to facilitate the structuring of multifunctional adaptation measures able to reduce the impact of a possible danger, and together improving the quality of the affected area.

The methodology elaboration is represented by flow charts to facilitate its application in other urban contexts (figure 6).

The process starts with the identification of possible impacts deriving from climate change. The probability of every impact in relation to the referred geographic context, will form the list of impacts to analyse. The inherent specificities of every impact will guide then the structuring of the new geo- database (e.g. urban runoff impact requires different information levels than erosion or desertification impacts). The composed knowledge framework has to be put in relation also to vulnerability indexes (respect to the considered

impact). Vulnerability indexes have the function of translating the result of the possible impact on the urban area (in this case the hexagon with side of 60, 80 and 250 meters/side).

At present, the spatial complexity reached by the cities, together with an increasing necessity of analysing and understanding the territory in a even more local scale (that means to aggregate information on population, economy, commercial productions, environmental system etc.), lead to the rediscovery of the hexagonal grid like software GIS spatial analysis model. In the hexagonal grid the angles are reduced to 60°, by drawing the hexagonal shape near a more representative one in the space, that is the circle (picture 5).

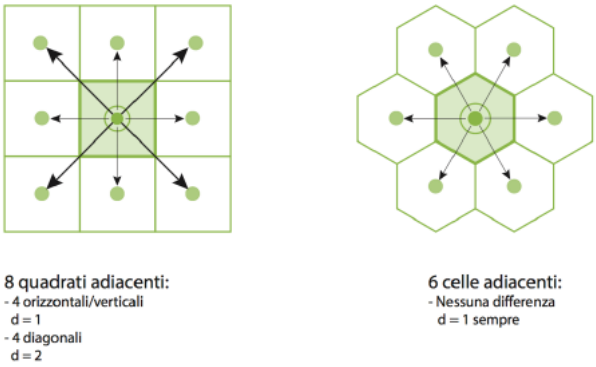


Figure 5 - Representation of the distances between focal points of a square and a hexagonal pattern. (Personal processing). Representation of the distances between focal points of a square and a hexagonal pattern. (Personal processing).

At present, the spatial complexity reached by the cities, together with an increasing necessity of analysing and understanding the territory in a even more local scale (that means to aggregate information on population, economy, commercial productions, environmental system etc.), lead to the rediscovery of the hexagonal grid like software GIS spatial analysis model. In the hexagonal grid the angles are reduced to 60°, by drawing the hexagonal shape near a more representative one in the space, that is the circle (picture 5). The added value in employing the spatial hexagonal pattern model in territorial analysis, is the possibility of producing complex calculations in a very fast and automatic way, by using standardised units to develop the mathematical comparison of identical areas. These cells can be compared to the nearby cells or distant ones, so they provide very precise results and maximize the reading of the spatial reports. The hexagonal decomposition of the space, moreover, facilitate the maps communicability.

The database therefore will include only one table (entity), composed by hexagonal grids, in which every feature will include the value (summed up or medium, according to the information type) of information, created by remote sensing (e.g. vegetation, impervious surface etc.), and then intersected with every hexagon area. In this way all the information are included in one table, facilitating its management. But, even more important, the model allows to examine all the aggregated information we have, related to the portion of territory surface contained in every hexagon.

Once organised the database, by aggregating the information into the entity made of hexagonal geometries, we proceed with expressing the chosen index in relation to the considered impact. The operations have been built through SQL programming that formulates mathematical calculations between the fields of the hexagonal table, in which every line represents a georeferenced hexagonal geometry.

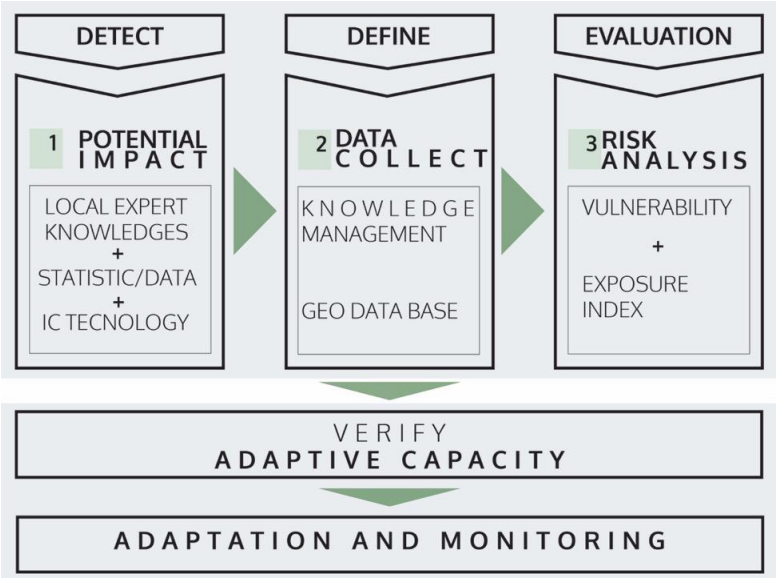


Figure 6 - Simplified diagram of the methodology developed during the Doctorate research. Every point includes different processes aimed to facilitate the approach exportation in different cities (Personal processing).

The operations have been built through SQL programming that formulates mathematical calculations between the fields of the hexagonal table, in which every line represents a georeferenced hexagonal geometry.

The indexes employed for the evaluation of areas subject to accumulate heat (sensitivity), have been identified on the bases of the indexes suggested by A. Mahdavi (2012), (Figure 7).

GEOMETRIC PROPERTIES	SYMBOL	RANGE	DEFINITION
Sky View Factor	ψ_{sky}	0-1	Mean value of the fraction of sky hemisphere visible from ground level
Built area fraction	A_b/A_{tot} A_b : building plan area [m^2] A_{tot} : total ground area [m^2]	0-1	Ratio of building plan area to total ground area; fraction of ground surface with building cover
Impervious surface fraction	A_i	0-1	Ratio of unbuilt impervious plan area (paved, sealed) to total ground area
Built surface fraction 2.0	A_w/At A_w : total wall area [m^2]	>1	Total wall (vertical horizontal)
	As/At $As = (A_R + AW)$ A_R : total roof area [m^2] +	~1	Roofs
Street Incoming Solar Radiation	Kwh/m^2	>1	Potential solar incoming for street surface
Roofs Incoming Solar Radiation	Kwh/m^2		Potential solar incoming for roof surface

Figure 7 - The table summarises the set of indexes employed in the sensitivity analysis of the three pilot areas. For every area have been employed some indexes, according to the available information. A. Mahdavi (2012)

To evaluate the sensitivity, related to the increasing rainfall and possible urban runoff, the methodology considers the employment of the model Soil Conservation Service (USDA, 1972), (figure 8). The model,

based on the mm/rain per exact instant, quantifies the interception and the infiltration from the ecosystem services, and distinguishes the efficient rain or the direct runoff.

The database structure contains information, expressed in square meters, referred to the surface atlas, and the formula calculation for every hexagon.

$$P_e = \frac{(P - I_a)^2}{P - I_a + S}$$

Figure 8 - Formula to calculate the specific volume of saturation based on the curve number. In this way the saturation parameter changes according to the covering type (e.g. grass or asphalt). (Source USDA, 1972).

For experimental purpose, we wanted to proceed with the Pe evaluation in a scenario. It examines the rate of the direct runoff, by supposing a rainfall of 45mm3/m2 in a time frame of one day. The indexes are calculated and added up for every hexagonal portion, and return the vulnerability evaluation for Urban Heat Island and flooding, (Figure 9, 10).

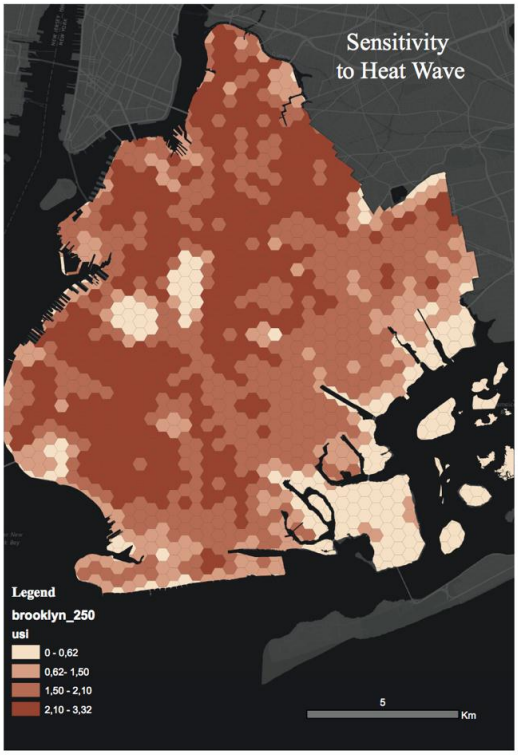


Figure 9 – Map of local Sensitivity to Heat Wave. (Personal processing).

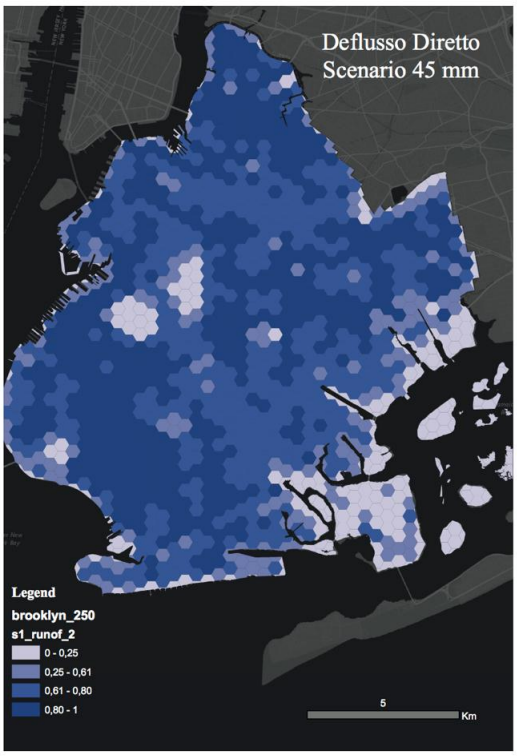


Figure 10 – Map of local Sensitivity to Flooding. (Personal processing).

5 RISK ASSESSMENT

IPCC (2014) defines the risk as “the potential damage, consequent to an impact, in which something valuable can be affected, and the result is uncertain, as the values difference is recognised”. Therefore, to evaluate the risk, after having defined the impact related to the hazard, and classified the territory on the bases of the vulnerability (observing the urban morphology sensitivity to the impact), the research focuses now on the exposure evaluation, by quantifying the urban functions inside every hexagon.

As for the other classifications, the methodology considers:

1. the preparation of necessary informative levels (entity);
2. the phase of information organization into the report database;
3. the phase of migration of all the entities useful for exposure evaluation, into the unique hexagonal entity (by aggregating every information on every intersecting hexagon);

4. the phase of calculation of exposure evaluation indexes (concentration of exposure attributes , e.g. m2 in schools).
5. Creation of an exposure map by summing up the value of every index for every hexagon.

In this way a further urban reading will be created, referred to the functions of the urban fabric on the hexagonal pattern, and every value will be compared with the vulnerability, previously calculated. The risk map is therefore the result of the sum of values expressed in the vulnerability and exposure indexes. In this way a very vulnerable territory, but laking in relevant functions, has a lower risk value than a territory with the same vulnerability level, but containing many more functions (e.g. schools, commercial activities, demographic density, etc.).

The functions evaluated for every hexagonal cell are:

- -population expressed in inhabitants number
- public transport m2
- commercial activities m2
- productive activities m2
- public services m2 (hospitals, schools, public buildings etc…).

The data have been collected from two different sources: the population has been acquired from the Global Human Settlement Layer (GHSL), instead the other functions have been obtained by MapPLUTO 16V2 elaborations.

The risk map (figure 11) is the result of the sum of sensitivity and exposure values.

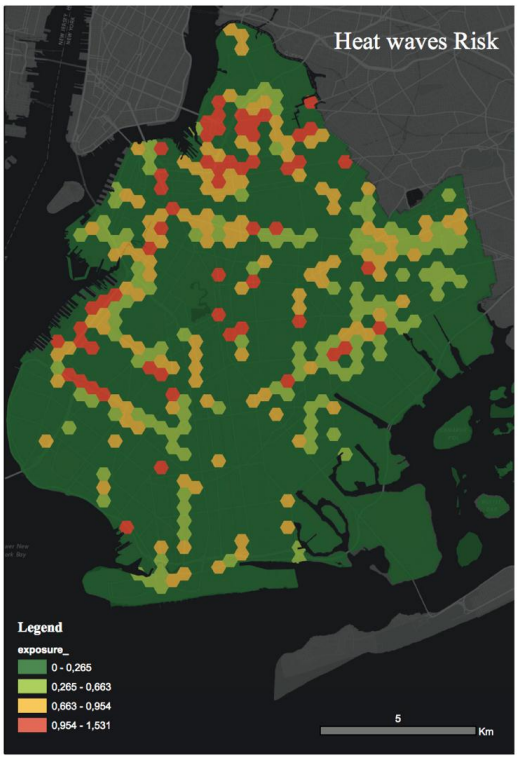


Figure 11 – Map of local Risk to Heat Waves. (Personal processing).

In this way a further urban reading will be created, referred to the functions of the urban fabric on the hexagonal pattern, and every value will be compared with the vulnerability, previously calculated.

6 THE ADAPTATION CAPACITY AS A PLANNING DRIVER TO URBAN RESILIENCE

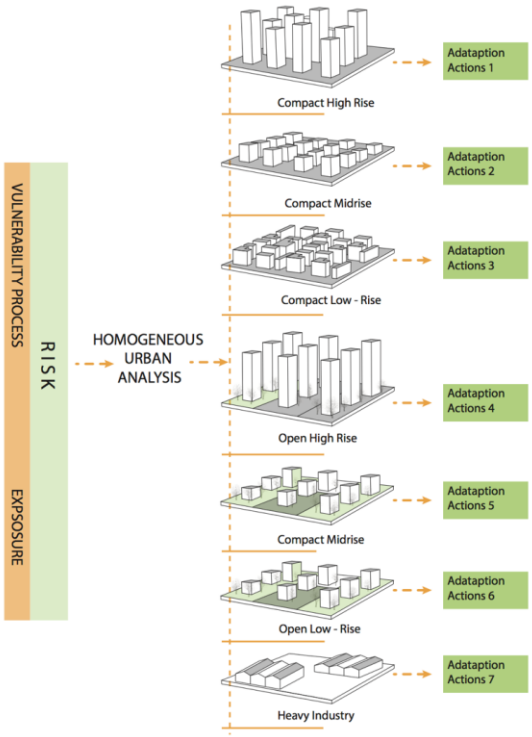
In the end, the indexes of adaptation capacity, in the developed methodology, have been developed with the aim of supporting the decisional processes on the actions design (on the bases of the territorial conformation of the investigated sector) to adapt the territory to the evaluated risk. The idea of classifying the urban fabric through morphological parameters comes from a study by Steward and Oke (2009) called "Values of geometric and surface cover properties for local climate zones". This work considers the employed methodology very interesting, and useful to characterize the urban classification starting from the parameters identified by Steward and Oke.

Therefore the work is proceeded with the identification of the range of values that characterises one area or another for any index. The ranges of chosen values have the bases on the study of Steward and Oke, and identify 7 urban classes. The work final goal, that is to address the transformation of territories built to adapt to CC, considers the "adaptation capacity" variable, the different types of urban space, and the various morphological features of the city.

The final mould of the described process evaluates the city through a series of indexes, able to classify the city territorial morphologies, by returning a series of urban classes with homogeneous physical features (that is for adaptation options). For every homogeneous area, the research provides for flow charts that collect and explain a series of possible technical measures to reduce heat and water impacts, by considering the opportunity of every territorial class (Figure 12).

The inherent difficulty in the attempt to modify the consolidated territory, constrains to think to the transformation project (to facilitate the adaptation) of an area as sum of relevant measures in project opportunities, city planning instruments, and other opportunities (e.g. EU or national funds for urban renewal).

Therefore, to adapt the city doesn't mean to build new resilient areas, but instead to be able to manage a process in continuous transformation. This entails a long term prevision of solutions for uncertain problems, to find the best possible strategy to apply (in terms of project opportunities, city planning instruments and technique).



To sum up: knowing the morphological and functional situation of an urban district guides the planning towards two important phases: in the analysis phase, it characterizes the risk allowing to trace back the evaluation process in reverse, and identifies distinctive sensitivity and exposure elements; - in the decision process, in which the urban classification, described in the previous chapter, orients the measures selection by considering the adaptation capacity of the contemplated area. The adaptation capacity for every area is the result of the relationship between possibilism (urban spaces, techniques, financing) and opportunities (planning, plan or regulation).

Figure 12 – Logic diagram illustrating the classification of the territory. (Personal processing).

The territorial classification, through the identification of homogeneous morphological parameters, has the aim to support the planning process in the decision phase in planning process. Each of the 7 urban areas considered and classified as examples for the city of Brooklyn, contains some adaptation options that can be applicable, others less applicable.

Every produced profile (figure 13) contains the map that identifies the urban areas that belong to the analysed typology (e.g. Compact Mid-Rise), through the hexagonal pattern. Hexagonal perimeters will be green coloured, orange or red coloured (in the example on vulnerability and risk related to heat waves), representing the risk level.

Therefore every risk map permits to identify the morphologic typology of the endangered area considered.

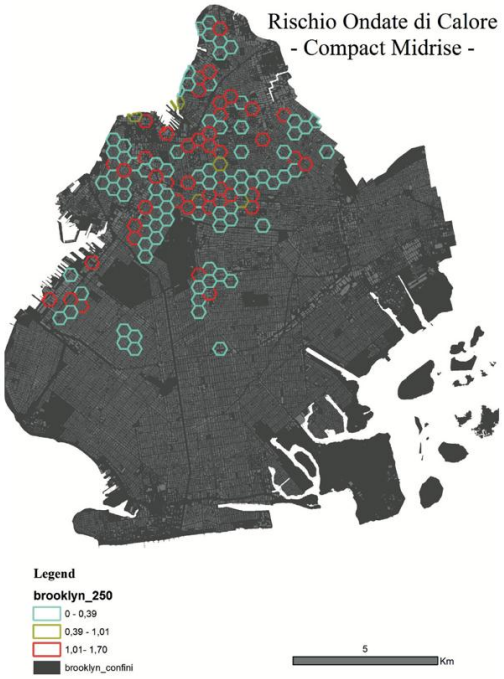


Figure 13 – Map of classification for "compact mid rise". In red, high-risk cells in urban heat island. (Personal processing).

7 CONCLUSIVE NOTES

The climate, stressed by externalities generated by anthropic systems, produces uncertain and geographically differentiated impacts, involving the cities and the territorial government activities. Urban planning and territorial science, in the next years, will be more and more involved in finding immediate solutions towards unexpected and complex problems created by the interaction between territory and abnormal climate externalities.

Spaces and buildings related to local climate aspects, surfaces materials, ecosystemic services, they are all elements that have to regain centrality in the urbanistic project, and have to be related to long and medium term climate scenarios.

Therefore the adaptation of a reinforced territory will have to compensate for vulnerabilities and climate dangers, through modifications that could reinterpret and enhance the urban landscape features (as result to physical geography, human geography and local culture). In this way, the inevitable city adaptation phase can be a chance to renew the urban areas, an opportunity to inspect the abandoned elements and to create new economies.

The territorial government activities will have to be able to re-elaborate analysis practices and project models, to manage the transformation and support the urban resiliency to climate change, with the aim of guiding the changes of the environments built in relation to the risk level; at the same time they should monitor the transformation efficiency in medium-long term.

To work on uncertain scenarios, and with solutions applicable through a sum of projects covering a period of 10-15 years, needs the structuring of a system to manage the information, that would be able to support the complex analysis phases, and to facilitate a monitoring system. The future knowledge frameworks of the cities will have to be integrated, expressed and shared. In this way they can support the territorial government activities in interpreting “not ordinary” dynamics derived from the climate, with ordinary dynamics. Uncertain scenarios, opposed to action urgency, put the city planning practices more and more in contact with the new technologies of information.

These reflections led to the approach development presented in this work. The work fundamental goal was to support a better reading of urban dynamics, through a territorial analysis process that, not only measures the vulnerability level and the risk of every urban portion, but at the same time it fosters the decision processes in choosing the most effective solution according to the subjectivity of the area, and a “real time” monitor of future implemented solutions. The database structure, built and finalized to contain all the information of the knowledge framework, aggregated in hexagonal areas, functions as matrix for the monitoring process. The measures that step by step are implemented in the territories, modify the numerical values of the attributes in the table, and guarantee a comparison between several years. In this way, the process circularity will guarantee the revision of the informative attributes (e.g. m2 of permeability), and it allows to evaluate benefits or possible consequences of the actions that have been implemented up to that moment, and then to rapidly modify them.

The climate variables considered in this work (according to the possible impacts attributable to the rise in temperature and the rainfall intensity), are based on scenarios produced by IPCC, therefore laking of an accurate local evaluation. The studied analysis process is developed to return vulnerability and risk evaluations starting from the hazard trends (as rise of temperature and rise of rain intensity), and to optimise the evaluations with well defined climate scenarios. This element facilitates the use of methodology, and untangles from the necessity of precise local climate drivers.

The new technologies recently applied in city planning practices, allow to modify analysis, planning and methods of territory organization through the spatial information. The possibility of consistently updating data and project, makes the process planning less rigid and linear, and more inherently temporary (Cecchini A., 1999). As observed, the ICT easily guarantee the acquisition of territorial information, by increasing the options to implement and organise the knowledge frameworks.

The flexibility of innovative knowledge frameworks imposes less rigidity to the plan, as direct consequence, so that it better can accept the alterations resulting from the updates of the dynamic knowledge frameworks.

The hereby described process evaluates the vulnerability and the risk from the result of indexes selected on the bases of data acquirable with the currently available technologies. A predictable technologies innovation can generate new informative typologies which can opt for other indexes, or can improve the existing ones.

The employment of information and communication technologies is essential to start an adaptation process that, working on uncertain and long-term scenarios, needs to be developed in dynamic environments.

It's important to highlight that the technologies, considered in the process, are instruments, options to facilitate the work. While maintaining its independence, it helps to identify, in his dynamic, the best options offered by the technological innovation.

The exposure, that is all the urban functions that risk to be compromised by an assumed impact, is the only variable useful to evaluate the risk, that cannot be considered objective. If the sensitivity and vulnerability evaluation is assumed according to empirical measures, the exposure is influenced by the political will of the territorial government and the local culture. In the proposed work, the exposure evaluation has been carried out by assigning the same importance to every entry (population, public

transport, commercial activities, production activities and public service). But it's possible and desirable that a local governance may diversify the importance of the entries according to the local political agendas. For example, in an area vulnerable to heat, the population (or specific age categories), or the commercial activities, can be more affecting. Choosing one or another modifies the exposure result, and its risk value.

This is one of the reasons for which the adaptation process has to be participative, and able to investigate the risk perception of the inhabitants of urban areas with high vulnerability.

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ID 1583 | TRANSLATING NEW CONCEPTIONS OF CLIMATE CHANGE RISK INTO URBAN CLIMATE CHANGE RISK ASSESSMENTS AND ADAPTATION RESPONSES

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1 INTRODUCTION

Identifying and assessing risk is common across a number of disciplines from health sciences to disaster risk management to critical infrastructure protection. Yet, the climate change adaptation community has preferred a vulnerability-based framework in order to conceptually understand and respond to climate change (Intergovernmental Panel on Climate Change (IPCC), 2012). However, since 2012, the main scientific organisation that leads on climate change, the Intergovernmental Panel on Climate Change (IPCC) has reframed climate change in order to look at risk rather than vulnerability. Such a move intends to harmonise the climate change adaptation community with those working in the allied discipline of disaster risk management (Aven & Renn, 2015). There is a further supposition that the risk-based concept can help to shift the focus from top-down, science-first vulnerability assessments to risk assessments that can better include a range of stakeholders (Meadow et al., 2015). There is, however, scant literature on the means of co-producing risk assessments.

There are also potential difficulties in translating the new risk-based concept into practice, particularly in spatial planning which combines expertise from a range of disciplines. The definition of risk differs across disciplines and sectors (Thywissen, 2006; Wolf, 2011). In addition, existing climate change adaptation projects have used vulnerability-based conceptual frameworks, and there is therefore a question mark over the way that their resultant data can be easily reused.

Our paper explores the move from a vulnerability based framework to a risk based framework. After outlining the underpinning components of vulnerability and risk, we demonstrate the utility of a risk based framework for spatial planning policy and practice. However, the latter half of the paper points to potential issues in the translation of climate change risk to adaptation policy more broadly and spatial planning in particular. We conclude that the concept of risk helps cities to identify adaption options and build resilience to the changing climate by connecting across disaster risk management and climate change adaptation approaches. However, the conceptual mismatches – particularly around the notion of 'exposure' - have to be approached cautiously particularly with regard to spatial data.

1.1 THE RESIN PROJECT

The paper draws upon work undertaken for the EU Horizon 2020 funded Climate Resilient Cities and Infrastructure (RESIN) project. RESIN is an interdisciplinary, practice-based research project investigating climate resilience in European cities. Through co-creation and knowledge sharing between cities and researchers, the project develops practical and applicable tools to support cities in designing and implementing climate adaptation strategies for their local contexts. This includes a city typology, which utilises European spatial data in order to build a picture of the hazards, exposure and vulnerability at NUTS3 level.

Before the practical work could commence, it was essential to choose a persuasive and easy to communicate conceptual framework and, within that, definitions. We chose to follow the IPCC's risk based definition of climate change which represents the state of the art (Carter et al. 2015). RESIN's conceptual framework is a dynamic risk-based one that highlights two distinct – but potentially interconnected – systems: the urban system and the climate change adaptation system (Figure 1). On the left, the urban system has a number of hazards and drivers of change that lead to climate risk. Awareness of such climate risks may provide the route into the adaptation planning system on the right hand side where city managers can begin a process of assessing risk, identifying and prioritizing adaptation options, and developing an implementation plan. This can then feed back into the urban system in order to build climate

resilience. Of course, we recognise that the synergies between the two systems may not be seamless; some cities may never go on the journey of the adaptation planning process and build resilience in reactive ways. The conceptual framework also shows that risk, and the hazards and drivers of risk, can never be completely eliminated.

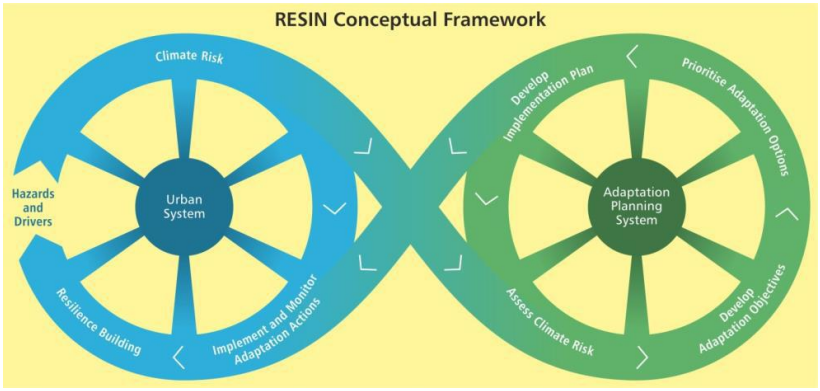

Figure 1 - The RESIN Conceptual Framework. Source: Authors.

2 FROM VULNERABILITY TO RISK

2.1 THE IPCC'S EVOLVING FRAMEWORK

Until recently, the vulnerability assessment of socio-ecological systems (SES) was the main focus of the climate change adaptation literature. Vulnerability, as adopted by the IPCC up to the Fourth Assessment Report (AR4), was defined as: 'The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity' (IPCC, 2001, p. 995). This could be expressed as a function: Vulnerability = f (Exposure, Sensitivity, Adaptive Capacity) and is visually outlined in Figure X.

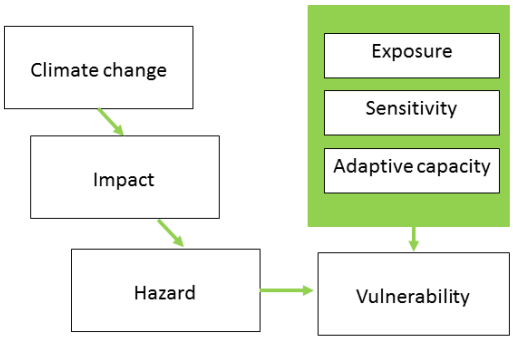

Figure 1: Pre-IPCC AR4 Conceptual Framing of Climate Change Vulnerability

Where:

- Sensitivity: is 'the degree to which a system or species is affected, either adversely or beneficially, by climate variability or change' (IPCC, 2014b);
- Exposure: is 'the nature and degree to which a system is exposed to significant climatic variations' where the exposure unit is 'an activity, group, region, or resource that is subjected to climatic stimuli' (IPCC, 2001);
- Adaptive Capacity: is the 'ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences' (IPCC, 2001).

Here, climate change impacts upon a system. The degree to which that system is exposed in terms of the character and magnitude of climate change and the degree to which a given unit of analysis is affected combine to make an impact. Once the adaptive capacity of a system is subtracted, the residual figure would indicate the extent of the system's vulnerability.

Vulnerability-based frameworks developed quickly. Within the climate change literature, the emphasis of early work (so-called 'first-generation') was on biophysical vulnerability which tends to focus on observed and projected changes in climate that may exacerbate exposure and sensitivity (Füssel & Klein, 2006). However, this could be criticized for privileging a 'science first' perspective to the detriment of implementing action. Thus, scholars began to draw attention to the ways in which existing socio-economic circumstances interact with climate change, and led to a distinction between outcome vulnerability and contextual vulnerability (O'BRIEN, ERIKSEN, NYGAARD, & SCHJOLDEN, 2007).

Critics pointed to a number of reasons why the framing climate change in terms of vulnerability could be problematic. Vulnerability can be interpreted negatively and, thus, by labeling people and places as 'vulnerable', a passive attitude may be adopted to climate change. Similarly, the negative framing overlooks the importance of local culture and underlying resilience, particularly in non-western nations (Bankoff, 2001; Giupponi & Biscaro, 2015).

The vulnerability framework also did not fit with other models available in the more present-day oriented disaster risk management literature whereby the concept of risk predominates (e.g. UNISDR 2009). Given that climate change adaptation and disaster risk management have many overlaps, bringing the two disciplines together is desirable from a practical point of view (EEA 2012). Thus, the IPCC has modified their definition of vulnerability in AR5 by moving to a risk-based conceptual framework (IPCC, 2012; 2014a).

Yet, risk is also a term that is difficult to define (e.g. Thywissen 2006; Wolf 2011) even though there is an international standard on risk management. ISO 31000 defines risk as the 'effect of uncertainty on objectives' (ISO/IEC 31000: 2009). An 'effect' is a positive and/or negative deviation from what is expected, whilst 'objectives' may be different aspects or goals. Furthermore, risk is characterised with reference to potential events and consequences, and can be expressed in terms of a combination of the consequences of an event and the associated likelihood of occurrence. Likelihood is the 'chance of something happening' and can be measured qualitatively or quantitatively (ISO/IEC 31000: 2009). In general terms, likelihood can be used interchangeably with probability. That said, probability more precisely refers to a quantifiable measurement where 'measure of the chance of occurrence [can be] expressed as a number between 0 and 1, where 0 is impossibility and 1 is absolute certainty' (ISO/IEC 31000: 2009).

This definition, albeit broad, results in a classic risk calculation whereby risk is a multiplication of the probability of an event with the consequences of an event (1):

Risk = Probability X Consequences (1)

However, in the case of natural hazards, the variables are not independent of one another insofar as likelihood of occurrence is affected by the size of the impact (European Commission 2010: 16). That is, it is not the presence of a hazard that indicates the risk, rather, a hazard only becomes a risk when a system is exposed and vulnerable; thus, 'risk is also a function of the underlying environmental and socioeconomic context in which …. climate change occurs' (Preston & Jones, 2008, p. 278). For these reasons, the notions of vulnerability and exposure can be introduced to capture these nuances – since the probability of an impact occurring may be affected by enacting vulnerability and exposure reduction measures. Therefore, as reflected in the IPCC AR5 approach, there is a functional relationship between the elements of risk, which are broken down to reflect the hazard, exposure, and vulnerability (Figure 2). Exposure and vulnerability combine as the consequences ('the impacts, if these events/trends occur') whilst probability relates to the hazard; or the 'probability of the occurrence of hazardous events/trends' (Birkmann et al., 2014, p. 23)). Ultimately, these concepts lend themselves well to the spatial identification of risk.

Risk (R) = f (Probability of a Hazard (p),* Exposure (E), * Vulnerability (V)) (2)

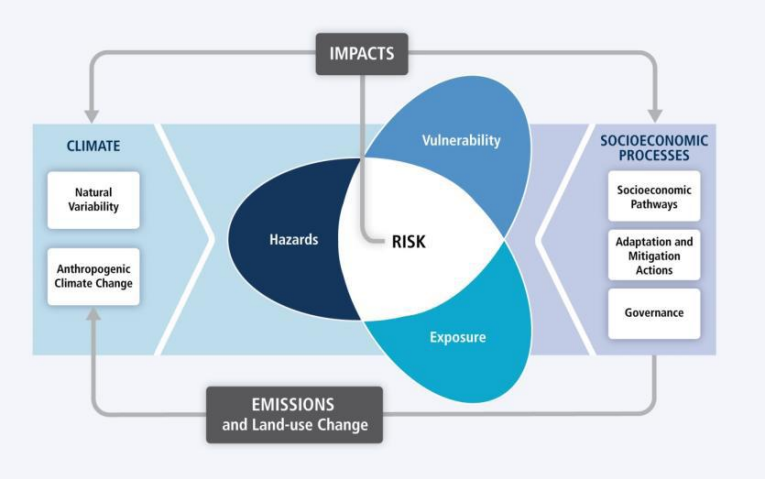

Figure 2 - The IPCC AR5 conceptual framework with risk at the centre. Source: IPCC, 2014

2.2 COMPARING DEFINITIONS

Table 1 compares and contrasts the key concepts between each knowledge area to explore the commonalities and differences. When those working within the pre-IPCC AR5 concepts refer to vulnerability, IPCC AR5 and disaster risk management understands this as risk. Similarly, vulnerability in IPCC AR5 equates to sensitivity and adaptive capacity within climate change studies (pre-IPCC AR5), or, for disaster risk management, simply 'sensitivity' (Kaźmierczak and Handley, 2011).

	IPCCAR4	IPCCAR5
Adaptive Capacity	The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences (IPCC 2007)	The ability of people, institutions, organizations, and systems, using available skills, values, beliefs, resources, and opportunities, to address, manage, and overcome adverse conditions in the short to medium term (IPCC 2014b).
Exposure	The nature and degree to which a system is exposed to significant climatic variations (IPCC 2001).	The presence of people, livelihoods, species or ecosystems, environmental services and resources, infrastructure, or economic, social, or cultural assets in places that could be adversely affected (IPCC 2014b)
Hazard	No glossary definition	The potential occurrence of a natural or human-induced physical event or trend, or physical impact, that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resources (IPCC 2014).
Risk	No glossary definition	The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk results from the interaction of vulnerability, exposure, and hazard.
Sensitivity	The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change.	The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change.
Vulnerability	Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity (IPCC 2007)	The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.

Table 1 – Comparison of vulnerability related terminology

The most important shift has occurred in the formulation of exposure, a concept has not been well-defined in climate change adaptation studies (Räsänen et al 2016; Jurgelivich et al. 2017). The pre-IPCC AR5 considered the degree of exposure (that is, the degree to which railway tracks or electricity substations come into contact with a hazard as a consequence of the magnitude of climatic variation). IPCC AR5 modifies this to focus more on what is exposed (an electricity substation or railway tracks) (Table 1) It is argued that this makes sense, particularly when thinking about critical infrastructure, because an electricity transmission line, for example, is only exposed to windstorms if it is above ground (McCord et al., 2015, p. 48).

Vulnerability, on the other hand, is now only composed of two components: sensitivity and adaptive capacity which, largely, retain the same definition. Risk, on the other hand, is a newly introduced definition which tries to capture both the language of probability/consequence in addition to the spatial formulation of hazard, exposure and vulnerability. Both definitions are suitably open enough for divergent interpretations.

3 ISSUES IN TRANSLATING CLIMATE CHANGE RISK FOR SPATIAL PLANNERS

Now, why do any of these conceptual changes matter? Quibbling over conceptual differences may seem pedantic in the face of the hard work of trying to increase the resilience of people and places to extreme weather events and climate change. However, the framing of climate change, whether that be through the lens of 'vulnerability', 'risk' or 'resilience', is important because 'frames allow certain questions to be asked while others get silenced' (Fünfgeld & McEvoy, 2011, p. 15). Therefore, the remainder of this paper focuses on why the movement towards risk appears to be a useful concept for spatial planners, but also point to some of the difficulties that the RESIN project has encountered as a result of the changing IPCC terminology.

3.1 WHY IS RISK USEFUL?

3.1.1 DECISION MAKING

There are a number of reasons why the concept of risk, and the undertaking of risk assessments, has advantages over vulnerability driven terminology and related assessments. Conceptually, separating out exposure can be beneficial to spatial planners as it emphasises the worth of exposure reduction measures (e.g. not building in flood risk areas). Conversley, a focus only on probability and consequences tends to privilege the construction of more robust flood defences (Klijn, Kreibich, de Moel, & Penning-Rowsell, 2015). The separation of exposure from vulnerability helps decision makers prioritise actions that can either reduce exposure to a hazard, or else reduce vulnerability through measures that address sensitivity and adaptive capacity. It also moves the climate change adaptation community closer to models that have been used in disaster risk management and, in turn, the insurance industry (Lindley, Handley, Theuray, Peet, & Mcevoy, 2006).

An example may illustrate this. In order to understand the risk of flooding to a building, it is necessary to understand whether the building is exposed (spatially) to the flood in the first place. Further accentuating the risk may be particular factors that make a building sensitive to flooding (such as the presence of basement floors). The risk may be less if adaptive capacity is high; the existence of early warning systems is an example here. Given the understanding of the different elements of risk, a decision maker can then prioritise actions based on:

- Reduce greenhouse gas emissions to lessen the frequency and severity of future hazards
- Undertaking adaptation measures that reduce exposure (by relocating the building outside of the potentially flooded area)
- Undertaking adaptation measures that reduce sensitivity (by making sure that vulnerable groups or activities are not housed in that building)
- Undertaking adaptation measures that increasing adaptive capacity (by installing flood mitigation measures for the building; presence of early warning systems).

The resultant data on the IPCC's risk elements (hazard, exposure, vulnerability) can be useful separately; for example, in communicating hazard probabilities and informing measures to reduce vulnerability to hazards. The ability to deconstruct different risk elements offers additional insights to decision makers when planning adaptation responses, by identifying which issues are driving risk in a particular situation. But, it is when these elements are brought together within a risk assessment they become more powerful. This is particularly the case where supporting spatial data is available, as the elements of weather and climate risk vary according to location (Tapia et al. 2015).

Impact and vulnerability assessments remain useful as elements of the risk assessment process in order to advance climate change adaptation and resilience goals. The differences between impact, vulnerability and risk assessments, and the functions that they perform in adaptation and resilience planning, are outlined in Table 2.

It can be seen that impact, vulnerability and risk assessments all have a role to play in adapting and building resilience to climate change. However, neither impact nor vulnerability assements consider the probability of occurence of hazards, potential exposure, or the severity of related impacts and vulnerability assessments do not provide the outputs to enable such decisions to be taken as effectively, and could therefore be usefully seen as processes that can contribute to a risk assessment. Risk assessments go beyond impact and vulnerability assessments, and bring together different elements of the adaptation agenda (including impacts and vulnerability) to provide a basis for analysing which weather and climate risks are most pressing.

Risk assessment is, therefore , a process that is focused on supporting decision-making. Brown and Wilby (2012) describe analysing climate risk as a matter of 'due diligence', which can be interpreted as taking a reasonable level of care before taking a decision. This, as Dickson et al. (2012: 23) suggest, ties risk assessment closely to decision making; '… [risk] assessments aim to simplify complicated experiences of risk in order to assist in decision making.'

	Impact Assessment	Vulnerability Assessment	Risk Assessment
Inputs	Impact assessments require details of weather and climate hazards and the natural and human systems with the potential to be affected.	Sensitivity and adaptive capacity data are needed to undertake a vulnerability assessment, based on the IPCC's approach.	The IPCC's risk approach focuses on the interaction between hazard, exposure and vulnerability. Data is required on these themes to complete an assessment.
Outputs	Potential weather and climate impacts to natural and human systems. Cascading impacts, within and between systems, are significant yet can be difficult to establish due limited data and modelling capacity.	Details of the vulnerability of 'receptors' to weather and climate hazards. Data permitting, vulnerability can be mapped spatially.	Identification of weather and climate risks according to their probability and impact . Data permitting, risk assessment outputs can be mapped spatially.
Issues	Impact assessments generally provide no indication of the probability that impacts may occur. Impact severity, which relates factors including hazard intensity and the vulnerability of the system to the event, is not commonly considered.	Adaptation responses can be developed to reduce vulnerability. However, without details of the probability of, and potential spatial exposure to, hazards, responses to reduce vulnerability cannot be as effectively targeted.	Risk assessments provide a picture of priority risks, in terms of their probability and consequence, enabling available response capacity and resources to be targeted more effectively.

Table 2 Differences between impact, vulnerability, and risk assessments. Source: Authors

The benefits of undertaking a risk assessment can also be observed in the outcomes of decisions informed by a risk-based approach, particularly where spatial risk data is available. Here, developing responses to minimise losses and negative impacts associated with climate change is key. Cities and urban areas face risks from a range of sources, one of which is extreme weather that might occur more often as a result of climate change. Other risks, generated by socio-economic and bio-physical drivers of change, may have a greater or lesser influence on decisions than climate change. This judgement can be made if climate and non-climate risk information is available to be evaluated (Willows and Connell 2003).

King et al (2015: 8) highlight the importance of such an evaluation, noting that; 'The most important decision that any government has to make about climate change is one of priority: how much effort to expend on countering it, relative to the effort that must be spent on other issues.'

3.1.2 ADDRESSING UNCERTAINTY

Risk assessments are particularly good for reducing uncertainty because they focus attention on (i.e. the highest risks), the locations where risks are most prominent, and the relative significance of climate and non-climate related risks. Here, the risk assessment is narrowing or helping to prioritise the range of possible risks to consider, and clarifying the objectives of the adaptation planning process. This can, in turn, help to direct attention to the allocation of available capacity and resources for climate change adaptation and resilience building. Risk assessments also help to fill knowledge gaps by increasing understanding of the probability and consequence of different risks. King et al. (2015: 23) build on this noting that, 'one of the key purposes of risk assessment is to allow decision-makers to weigh choices for action under uncertainty.' Risk assessment can help to illuminate the implications of different decision options when responding to climate risk, which may include a decision not to act and therefore to accept the identified risk(s).

However, risk assessment processes (and therefore outcomes) are affected by uncertainty. For example, uncertainty in climate projections must be recognised within any analysis of the probability of occurrence of hazard events. Here, it is important to be clear as to which dimensions of uncertainty risk assessment can respond to. Addressing this point, Willows and Connell (2003: 48) note that, 'risk assessment deals explicitly with uncertainty in decision-making rather than giving an over-confident view of what is known.' Climate change risk assessments do not reduce uncertainty associated with climate change, but the process can support decision makers in analysing the consequences of an (uncertain) changing climate in order to focus and target strategies and actions in response.

3.2 POTENTIAL PROBLEMS

Having established the utility of a risk assessment, we now turn to some of the problems that may be encountered by the movement from vulnerability to risk in climate change adaptation studies. Many studies undertaken to understand climate change within Europe work within the IPCC's pre-AR5 framework. The EEA's Urban Vulnerability Map (2015) used indicators relating to sensitivity, exposure and response capacity. The ESPON climate vulnerability assessment also utilized the IPCC's AR4 definition where vulnerability is a function of sensitivity, exposure and adaptive capacity (ESPON Climate 2011). The Vulnerability Sourcebook (BMZ 2014), which outlines a detailed process of undertaking vulnerability assessment, also holds to the IPCC's AR4 definition. There is thus a challenge for those who wish to draw on assessments and approaches that have been formulated under the earlier IPCC definition.

Retrofitting extant data may be problematic. For example, the ESPON project produced supporting data on the Territorial Effects of Climate Change on European Cities (ESPON Climate 2011). Underpinning the report was spatial data that resulted in the broad identification of five 'climatic types'. The data is at NUTS 3 level and includes data for climatic conditions and the pre-AR5 components of vulnerability: exposure, sensitivity and adaptive capacity. The data is available for reuse. However, examination of this data entails detailed considerations of how the concepts were developed to ensure that it remains of use today. ESPON's exposure indicators measure change in a hazard (e.g. Changes in annual mean temperature), which corresponds to AR5's 'hazard'. Similarly, ESPON's sensitivity data indicates susceptibility to harm insofar as a receptor is located (AR5's 'exposure') in the presence of an exposure element (AR5's hazard). ESPON Climate (2011) then combine sensitivity and exposure to create an impact which, with the addition of adaptive capacity, gives overall vulnerability scores. The sensitivity indicators are comprised of physical sensitivity, cultural sensitivity, social sensitivity, environmental sensitivity and economic sensitivity. All but the economic sensitivity data are spatial. It is not that the data cannot be reused, but a process of working through the definitions and looking at the indicators is required in order to reframe and repackage them in order to be useful to the AR5 concepts: it is surely a waste of resources to compile new datasets where significant effort has been made to commission and promote the original ones. Exposure indicators may be used as 'Hazard' whilst some, but not all, of the sensitivity indicators can be used to represent 'Exposure'.

4 CONCLUSION

From the perspective of adaptation and resilience, climate change risk assessments can offer decision support in a number of ways, including:

- The provision of valuable insights into context-specific risks associated with the changing climate, which may otherwise not be accessible.
- Risk assessments focus attention on the highest risks, with the highest probability of occurrence and the most severe negative consequences (or impacts). Therefore, a risk assessment can help decision makers to prioritise risks to respond to when aiming to adapt to the changing climate.
- Identifying high risks associated with the changing climate can clarify objectives, help to prioritise adaptation options, and to support the allocation of resources that are available for adaptation and resilience work.

However, in order to make previous climate change adaptation assessments usable for state-of-the-art thinking on climate change, there needs to be a careful translation of the concepts and their allied data: this is particularly acute around the concept of exposure. Vulnerability and risk are commonly employed in everyday usage, thus they are useful to advancing climate change adaptation; however, the focus should be to 'concentrate on assessments instead of detailed theoretical definitions' (Wolf, 2011, p. 1108).

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ID 1602 | THE SPATIAL DISTRIBUTION OF URBAN HEAT VULNERABILITY AND COPING STRATEGIES IN BEIJING

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1 INTRODUCTION

Under the influence of global climate change and local urbanization, the heat wave is thought to be more intensified and frequent. So far, the definition of heat wave has not been reached a general agreement all over the world, but severe consequences caused by heat waves on health effects have been demonstrated in many cities. With the constant process of Asia's urbanization, heat wave events will be the uppermost one of extreme weather conditions that Asian cities have to confront in the future (IPCC,2014). Thus, it is emerging objectives for urban planning that how to efficiently reduce the urban vulnerability and prevent public health from the current or potential risk of heat wave events.

Similar to other extreme weather conditions, impact areas of heat wave event are distributed unevenly. Thus, before reducing urban heat vulnerability (UHV) by means of urban planning, to identify the place and people vulnerable to heat waves is the fundamental basis for variant planning strategies. In terms of spatial pattern caused by the heat wave, the intra-urban variation of magnitude and duration during heat waves is significant. Some studies find urban heat island (UHI), a atmospheric phenomena that city area warmer than its countryside, aggravates the intensity of heat wave events within the urban area (Yang and Chen et al., 2015). In turn, higher temperature during heat wave events make UHI effect more significant. With the interaction between heat waves and UHI, urban residents have to be suffered from a higher risk of consistent heat stress. In addition to the variation of geographical range, the difference of heat-related health is another aspect need to be identified. Under the same weather condition, some people may be affected more than others. The research from public health recognizes general characteristics of people that are vulnerable to heat waves by the case study of heat-related mortality and morbidity, which includes age, economic characteristics, pre-existing health condition and thermal environment (Harlan and Brazel et al., 2006). Therefore, mapping UHV, which emphasize not only vulnerable areas, but also susceptible people, is urgently needed.

Through the lens of international experiences, UHV mapping is the key instrument to support technologically the implementation of heat waves prevention and mitigation (Wilhelmi and Purvis et al., 2004). In the cooling actions of eighteen American cities, UHV assessment is widely adopted as a necessary part (GCCA, 2014). For the Birmingham's climate change adaptation action, UHV is utilized in identifying priority areas to improve the resilient capacity (Birmingham city council, 2012). Similarly, based on the map of UHV in Australian capital cities (NCCARF, 2013), Moreland UHI effect action plan identifies five types of priority areas (Moreland city council, 2016). Thus, the first section of this article summarizes the recently progress in UHV assessment, in order to select the comprehensive framework presented for Beijing central city.

2 PROGRESS IN UHV ASSESSMENT

Although UHV assessment is considered as an emerging field in vulnerability studies, the method and index system of UHV is interacted with that of conventional vulnerability research. In view of the different perspective and discipline background, the frameworks (Figure 1)adopted in the assessment of UHV have not been reached a consensus, which are derived from two categories of definition of vulnerability in the context of climate change— biophysical vulnerability and social vulnerability (Brooks,2003). The biophysical vulnerability refers to the influence extent caused by external hazard, which is arisen from the evaluation of natural hazards and their impacts. In the conceptual framework of biophysical vulnerability, a function of hazard, exposure and sensitivity, biophysical conditions have more fundamental impacts on the final result than other indicators. Although this term is seldom used to describe vulnerability recently, similar concepts and frameworks are prevalent in the field of risk assessment. The research of ASCCUE project firstly incorporated the Crichton's Risk Triangle into assessing the heat wave risk within UK's urban areas (Lindley and Handley et al., 2006). However, the vulnerability of the Crichton's Risk Triangle should be referred to as sensitivity of biophysical vulnerability, because there are similar in focusing on the demographic characteristics rather than on the adaptive capacity of people. Following this risk assessment methodology, (Tomlinson and Chapman et al., 2011) considered UHI effect as a nocturnal form of heat wave hazard and made some attempt to evaluate the risk of UHI effect. However, this assessment framework can't present the ability of people in coping with the outcomes and effects of heat waves, which tends to make the result deviating from the original objective.

Compared with the biophysical one, the social vulnerability is described as a state that is rooted within a system before it encounters a hazard event (Allen,2003). In this case, it is thought that vulnerability is determined by the inherent characteristics, such as sensitivity, adaptive capacity of people, rather than any particular type of natural hazard. After the social vulnerability index (SoVI) was developed and presented for all American areas (Cutter and Boruff et al., 2003), this concept was gradually prevalent in different researches. Taking into account the universality of social vulnerability, some studies made some modification to improve its pertinency. (Reid and O'Neill et al., 2009) firstly applied the framework of social vulnerability to the heat waves by means of some specific heat risk factors and developed the heat vulnerability index (HVI). Although some studies followed and validated this conceptual framework, temperature data was utilized to overlay and identify the hot-spot areas, where high heat vulnerability is coincided with high temperature(Wolf and Mcgregor et al., 2013), or to improve the effectiveness of HVI model in predicting the heat-related mortality (Harlan and Declet-barreto et al., 2013; Maier and Grundstein et al., 2014). A modified HVI (extreme heat vulnerability index, EHVI) which was developed by (Johnson and Stanforth et al., 2012) added three environmental indicators related with health impacts of extreme heat and highlighted the role of exposure to heat. Because the vulnerability which are exclusive of exposure and specific hazard sometimes can't direct proper prevention and mitigation planning, comprehensive concept of vulnerability was presented in the IPCC third assessment report, where vulnerability was defined as "the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes"(IPCC,2001). From the perspectives of exposure, sensitivity and adaptive capacity, (Wilhelmi and Hayden et al., 2010) developed a specific analysis flow to assess UHV, (NCCARF, 2013) attempted to incorporate the indicator of heat wave hazard into the framework.

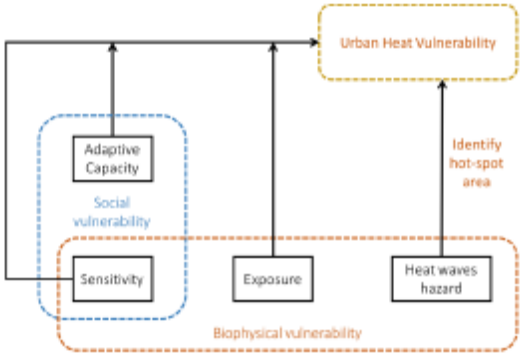

Figure 1 - Conceptual frameworks for UHV assessment.
source: authors' elaboration

Note: The boxes with rounded corner represent the main conceptual frameworks adopted in the related literature. The boxes with black outline represent the important component derived from above conceptual frameworks.

In summary, the assessment of UHV is transformed from unilateral evaluation to comprehensive emphasis, this trend also can be discovered in the field of risk management. Based on the risk assessment framework which is composed of hazard, exposure and vulnerability, (Dong and Liu et al., 2014; Xie and Wang et al., 2015) respectively evaluated the heat wave risk at the city-scale and nation-scale of China. Due to the exposure independent of vulnerability, the contribution made by biophysical indicators is more dominant within the framework. Compared with the progress in UHV assessment abroad, it is an emerging field which has just gained widely attention in China. There are two questions need to be responded in this study: (i) Previous quantitative studies mainly focused on the city-scale in China, how to further implement the assessment methodology into the fine-scale, like sub-district ? Although the assessment at city-scale can help policy-maker directly recognize the overall degree of heat vulnerability, it can't be worked not only as a guideline for distributing the resource of disaster prevention and mitigation, but also as a communication tool for informing people of their high risk state.(ii) As the important part of climate-change risk management and adaptive planning, how to fill the gap between the result of UHV assessment and specific planning methods? If there is no efficient ways that direct the result into implementation, the UHV assessment will be invalid. Therefore, this study utilizes the central city of Beijing as a case study area and puts emphasis on following issues: (1) Setting up the assessment framework of UHV and presenting it for Beijing central city, (2) By overlaying the result of heat vulnerability and heat waves hazard, hot-spot areas will be identified as priority for mitigation strategies and adaptive design, (3) From the perspectives of disaster prevention and mitigation, three specific strategies are presented for priority areas. Thereby, as a spatial decision support tool, this study aims to help policy maker to achieve the more efficient performance of mitigation measures towards the higher vulnerable inhabitants and communities. Meanwhile, for urban inhabitants, the spatial mapping of heat vulnerability can be used for identifying their health conditions during heat waves.

3 STUDY AREA

Beijing, the capital city of China, neighbored by Hebei Province and Tianjin Municipality, is composed of 16 districts, with a total land area of 16,410 km2 and a total population of 21.5 million by the end of 2014. The study area is the Beijing central city which consists of six districts, as shown in the Figure 2, Dongcheng and Xicheng districts are classified as urban areas, the rest are classified as near suburban areas including Chaoyang, Haidian, Fengtai and Shijingshan districts.

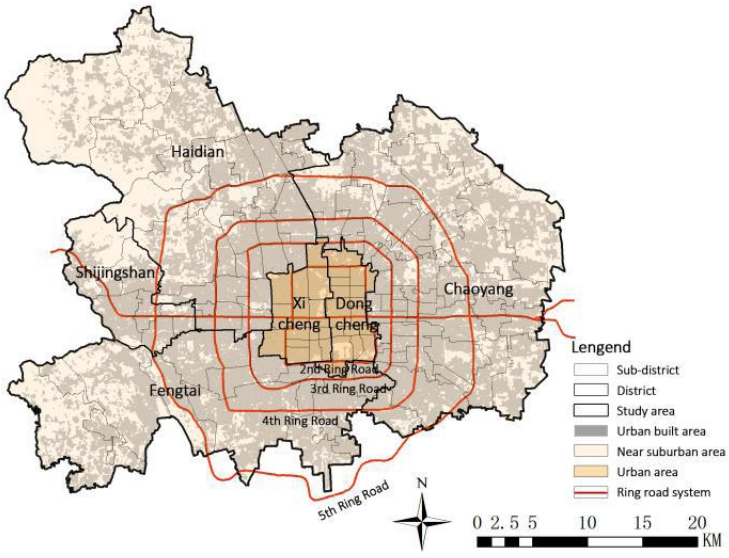

Figure 2 - Sub-districts of study area.
source: authors' elaboration

The central city, with an area of 1084 km2, covers 8% of the total administrative area of Beijing with 60% of Beijing's total population. Due to the urban expansion from 2000 to 2010, there are a lot of farmlands outside 4th Ring Road are partly displaced by man-made land, which is also considered as the main reason of consistently aggravating UHI effect in Beijing. As a result, the risk in near suburban areas grows faster than other areas within the city (Dong and Liu et al., 2014). In addition to the high population density, Beijing's aging population is expanding fast, which may also increase the potential risk for heat waves.

For the 1961-2010 period, air temperature in Beijing has risen by average 1.36℃ as a result of global warming and UHI effect. Recently the frequency of heat wave is continually increasing. The previous study demonstrated that more extreme high temperature events occurred in the Beijing′s urban areas than others (Zheng and Fan et al., 2006). In order to focus on the specific heat wave event, this study adopts the definition of heat waves from China Meteorological Administration(CMA), a period of more than three consecutive days in which daily maximum temperature exceeds 35℃, and selects three heat waves events in the summer of 2009 and 2010 year as research objects. Considering the requirement of similar weather during clear sky condition and quality of temperature data, the research data and weather conditions are shown as Table 1. In addition, the size of assessment unit is important for the final result. As the lowest level of administrative division and smallest unit of census in China, sub-district level plays fundamental role in mitigating the impacts of heat waves. Therefore, this study utilizes 129 sub-districts (not include the Capital Airport sub-district) to identify the spatial pattern of heat vulnerability.

Period of Heat waves event	Research data	Maximum temperature(℃)	Precipitation(mm)	Wind speed(m/s)
23/06/2009-26/06/2009	24/06/2009	40	5.2	2.2
	25/06/2009	36	5.3	2.5
11/08/2009-13/08/2009	11/08/2009	36	4.4	1.7
	12/08/2009	35	4.3	1.9
	13/08/2009	35	4.1	1.7
02/07/2010-06/07/2010	03/07/2010	38	5.9	1.7
	05/07/2010	41	5.9	2.2
	06/07/2010	41	5.9	3.0

Table 1 - Weather condition of selected objects.
source: www.wunderground.com

4 INDEX SYSTEM

For the purpose of this study, UHV is viewed as a function of exposure to heat, sensitivity and adaptive capacity of people. Exposure is defined as the extent to which a system is subject to the geographical range of heat waves hazard; sensitivity is the degree to which a system is affected by heat waves based on the stability within the system; adaptive capacity describes the ability of a system to avoid and reduce the negative outcomes and impacts of heat wave. Thus, high magnitude of vulnerability to heat may results from high exposure, high sensitivity or low adaptive capacity. Based on this framework (Figure 3)and local characteristic of study area, twelve indicators are obtained from census data and remote sensing data. The source of census data includes 2008 Beijing Economic Census Yearbook and 2010 Beijing Population Census, remote sensing data is retrieved from MODIS and contemporaneous Landsat TM satellite images.

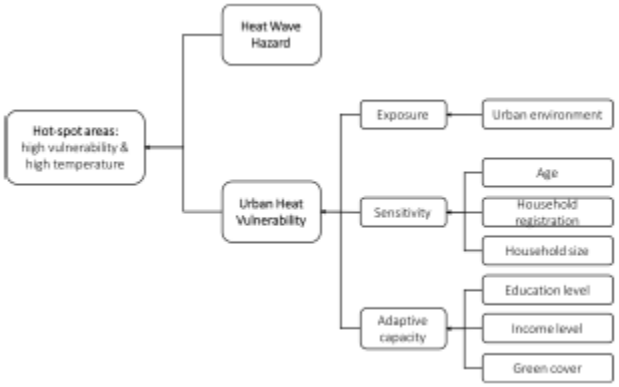

Figure 3 - Detailed flowchart of urban heat vulnerability assessment.
source: authors' elaboration

Within the framework, exposure to heat is affected by both indoor heat and outdoor heat, however there are not specific indicators to describe indoor thermal environment from census data. Thus, this study only focuses on the role of urban environmental characteristic in contributing to outdoor heat. Urban environmental characteristic is represented by the normalized difference building index(NDBI), nocturnal surface UHI effect and population density. The NDBI (MIR-NIR/MIR+NIR) is a measure to indicate the abundance of man-made land which is called as impervious surfaces. As shown in some studies, NDBI is used to be alternative indicator of land surface temperature(LST) because of the strong correlation between them. Recently UHI effect has been shown to interact with the high temperature in summer. Therefore, higher risk to heat is often within areas where has a long duration of high temperature all day. To make intra-urban difference in temperature more obvious, UHI effect is represented by nocturnal surface temperature derived from the LST products (MYD11A1) of MODIS satellite image. MYD11A1 product provides per-pixel temperature at 1km spatial resolution and includes daytime and nighttime LST retrieved by the split-window algorithm. Although LST can't be regarded as a direct observation on UHI, it has been demonstrated to be strongly related with air temperature during the clear sky condition. Compared with canopy UHI calculated by interpolation method, the measurement with remote sensing techniques can make the spatial distribution of surface UHI more consecutive. However, the cloud cover within study area can't make all selected objects (Table 1)available. Thus, nighttime LST products during the heat waves in 2010 (03/07/2010, 05/07/2010, 06/07/2010) are selected to present the nocturnal UHI effect. For the third indicator, population density within sub-district is one of indicator to measure urban density. Although the relation between population density and heat-related mortality is ambiguous (Johnson and Stanforth et al., 2012), the role of high population density in aggravating exposure to UHI effect and high temperature is identified among some studies (Tomlinson and Chapman et al., 2011; Romero-Lankao and Qin et al., 2012).

In the case of heat waves, sensitivity of people depends on some indicators that derive from heat-related mortality and scio-economic factors discussed in social vulnerability index (SoVI). Based on the previous studies, age, preexisting health condition and living alone are main contributors that influence the sensitivity to heat. In addition to these general indicators, scholars point that household-registration system, or hukou in Chinese, reinforce the inequalities in public service between immigrants and local inhabitants. Thus, four indicators are selected as representative: the percent of population older than 65 years or younger than 5 years, the percent of immigrants and the percent of population living alone .

Adaptive capacity has a strong influence on the vulnerability to heat. Quantitative and qualitative indicators are both utilized to present the awareness and practices toward the high temperature hazard, however, in this study, it's impossible to investigate this information within the large area. Thus, some alternative indicators are chosen to describe the education level, income level and green cover. The inhabitants with high education level can, to some degree, quickly response towards the current hazard and adopt the exact coping strategies, while some heat-related mortality are mainly attributed to the lack of risk awareness. Thus, low education level is represented by two indicators including the percent of population with education level lower than high school and the percent of illiterate in the population older than 15 years. Income level can indicate not only the economic status, but also the access to public service, thermal environment, dwelling types, the availability of cooling amenities and many characteristics related to that. In the study conducted by (Harlan and Brazel et al., 2006), the concentrated poverty areas are

demonstrated to have higher temperature and less green cover than other communities. Although this phenomenon is not so acute in Beijing, income level plays a crucial role in capacity to adapt to heat waves. Due to no poverty populations or income data within sub-district level, the last three careers are defined as low-income ones based on the 2008 industrial wage ranking from 2009 Beijing statistical yearbook. In view of the employed population of farming, forestry, animal husbandry and fishery is negligible within Beijing's central city, thus corresponding groups engaged in resident service and accommodation & catering are considered to be in the low economic status. With respect to urban green space, it is considered as one of most efficient methods to ameliorate thermal environment. In the studies related cooling effect of urban green space, green coverage is found to have a negative correlation with ambient temperature around the green space. Therefore, this study utilizes green coverage within sub-district as indicator to represent the external resource for mitigating the heat risk. Green coverage is calculated by the dimidiate pixel model based on normalized difference vegetation index (NDVI), which is retrieved from contemporary Landsat TM satellite image.

5 METHODS

5.1 DATA PROCESSING

Due to the difference between the dimension of data, these indicators should be firstly normalized by range standardization method. With respect to the negative or positive correlation (Table 2) between indicator and component, for example, adaptive capacity will decrease when employment population of accommodation & catering increase. Thus, positive standardization equation (II) and negative standardization equation (III) are shown as following. Before indicators are normalized, an m x n matrix X (I) is composed of individual items x_{ij}.

$$X = \begin{bmatrix} x_{11} & \cdots & x_{1n} \\ \vdots & \ddots & \vdots \\ x_{m1} & \cdots & x_{mn} \end{bmatrix} \quad \text{(I)}$$

$$X_{ij} = \frac{x_{ij} - \min_j\{x_{ij}\}}{\max_j\{x_{ij}\} - \min_j\{x_{ij}\}} \quad \text{(II)}$$

$$X_{ij} = \frac{\max_j\{x_{ij}\} - x_{ij}}{\max_j\{x_{ij}\} - \min_j\{x_{ij}\}} \quad \text{(III)}$$

Where:

xij refers to the original value at the ith sub-district and jth indicator (i=1,2,...,m; j=1,2,...,n);

m refers to the number of sub-districts, n refers to the number of indicators within each component;

Xij refers to the normalized value of xij;

max$\{xij\}$ refers to the maximum among the original value, min$j\{xij\}$ refers to the minimum among the original value.

5.2 WEIGHTING METHOD

The approach to determine the weight of indicators consists of subjective weighting method and objective weighting method, both of which are widely used in the statistic analysis. As one of the objective weighting methods, entropy weight method is utilized to calculate the weight of indicators within each component in this study. Entropy is originally described as a disordered and chaotic state in the thermodynamics. After Shannon introduced this concept into information theory, entropy represented the uncertainty of information. Because the utility of information is negatively correlated with the uncertainty of information, entropy-weight determines the relative weight among indicators.

$H_j = -k\sum_{i=1}^{m} P_{ij} ln P_{ij}$	(IV)
$w_j = \frac{1 - H_j}{n - \sum_{j=1}^{n} H_j}$	(V)
$C_i = \sum_{j=1}^{n} X_{ij} w_j$	(VI)

Where:

Pij refers to the proportion of Xij in the sum of all sub-districts' value at jth indicator, $Pij=Xij\sum Xijmi=1$⁄,k=1/ln$m$,when Pij=0, PijlnPij=0;

Hj refers to the entropy of each indicator within the component;

wj refers to the entropy-weight within each component;

Ci refers to the value of each component.

Component	Indicator	Correlativity to component	Entropy-weight	Data source
Exposure	Nocturnal surface UHI effect	+	0.17	MYD11A1
	NDBI	+	0.24	Landsat TM satellite image
	Population density	+	0.59	2010 Beijing Population Census
Sensitivity	Percent of population younger than 5 years	+	0.18	2010 Beijing Population Census
	Percent of population older than 65 years	+	0.23	2010 Beijing Population Census
	Percent of immigrants	+	0.35	2010 Beijing Population Census
	Percent of population living alone	+	0.24	2010 Beijing Population Census
Adaptive capacity	Percent of population with education level lower than high school	–	0.19	2010 Beijing Population Census
	Percent of illiterate in the population older than 15 years	–	0.23	2010 Beijing Population Census
	Employment population of accommodation & catering	–	0.05	2008 Beijing Economic Census Yearbook
	Employment population of resident service	–	0.19	2008 Beijing Economic Census Yearbook
	Green coverage ratio	+	0.34	Landsat TM satellite image

Table 2 - Weights of indicators within each component.
source: authors' elaboration

5.3 VULNERABILITY SCORING

For the purpose of identifying the intra-urban variation and spatial distribution of UHV, sub-district scores of heat vulnerability (V) are calculated by following assessment equation (VII) where E=exposure to heat, S=sensitivity and A=adaptive capacity.

Although some previous studies adopted statistic method, such as principle component analysis (PCA) or analytic hierarchy process (AHP) to weight among components, the acknowledged relationship between components is still need to demonstrate, meanwhile, in addition to the evaluating scores from experts, the important roles of inhabitants and policy makers in determining the weight need further to be strengthen. Thus, this study utilizes equal weight to integrate these three components.

Because the threshold of heat wave are defined as air temperature, the trasformation from diurnal LST into air temperature need to be calculated by the means of the relation equation (VIII),which R2 is up to 0.797(Li,2013).

$$V = E + S - A \qquad \text{(VII)}$$

Where:

T refers to the air temperature;

TLS refers to the diurnal land surface temperature during heat wave.

According to the calculation result, the surface temperature is approximately 45.1℃ when air temperature reaches 35℃. Because the time that diurnal temperature data of MODIS image collected is belongs to the period of maximum of air temperature one day, the areas that temperature exceeds 45.1℃ are thought to be suffering from the impact of heat wave hazard. Thus, this study calculates the average value of LST within each sub-district and then select sub-districts with a surface temperature of 45.1℃ and higher to form the heat wave hazard layer.

6 RESULTS

In order to present the intra-urban variant score of sub-districts clearly, five classes are categorized by natural breaks (Jenks) method in ArcGIS 10.3. In this section, results of single component and composite map will be presented and discussed.

According to the spatial pattern of exposure in the study area (Figure 4), sub-districts located in the city center are at high and very high level, as the distance from the city center increased, the score of exposure goes up and then down. In contrast with the highly centralized pattern of exposure score within western cities, there are some sub-districts with low level located in the Beijing's center area. It may be attributed to the presence of large open spaces, including the Forbidden city, Temple of Heaven park and Beihai park, which inhibits the continued increase of exposure to heat. The sub-districts with the very high level, comprising 25 sub-districts, are scattered throughout the city center. These areas are where many communities clustered, including newly-built type with high-volume and old one with high-density.

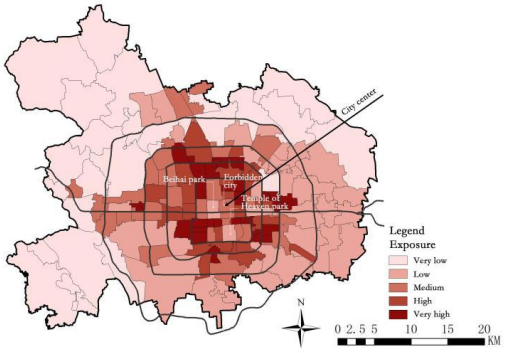

Figure 4 - Sub-districts scores of exposure.
source: authors' elaboration

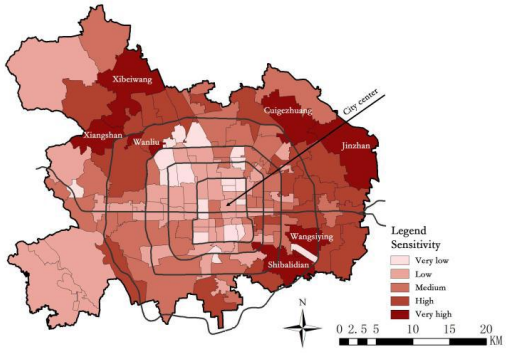

Figure 5 - Sub-districts scores of sensitivity.
source: authors' elaboration

According to the distribution of scores of sensitivity (Figure 5), the spatial pattern of sensitivity is utterly different from that of exposure. Sub-districts with high and very high level are located in the near suburban areas rather than city center. The ones with very high level, comprising Wanliu(0.634), Wangsiying(0.620), Cuigezhuang(0.617), Xiangshan(0.571), Jinzhan(0.555), Xibeiwang(0.553) and Shibalidian(0.549), form three high-score clusters. In general, these three clusters highly concentrated sensitive people are all typical areas in urban-rural fringe, which representing both urban and rural feathers.

Finally, significant concentration in the distribution of human's adaptive capacity is located in the northern part within the study area. The twelve sub-districts with very high level comprise Qinghuayuan(0.846), Yanyuan(0.815), Aoyuncun(0.776), Datun(0.772), Zizhuyuan(0.759), Qinglongqiao(0.758), Xueyuanlu(0.753), Donghu(0.747), Wanliu(0.733), Shangdi(0.730), Haidian(0.719) and Xiangshan(0.715). The concentration of the best education resource and high-skilled employments appeals for many high-class and middle-class residents to live around. Besides, the large parks and natural landscape, owned by Aoyuncun, Xiangshan and Qinglongqiao sub-districts, play a important role in alleviating the thermal environment.

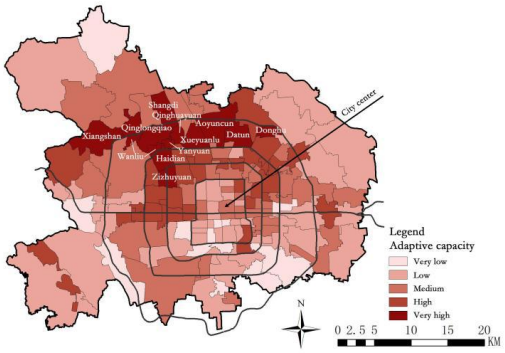

Figure 6 - Sub-districts scores of adaptive capacity.
source: authors' elaboration

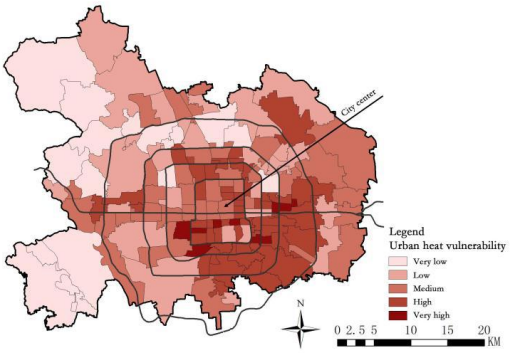

Figure 7 - Intra-urban variation of urban heat vulnerability.
source: authors' elaboration

Figure 6 shows that the "very high" vulnerable sub-districts are scattered throughout the city center and the "high" vulnerable sub-districts are located in the southeastern part of study area, where the high exposure is experienced as well as high sensitivity and low adaptive capacity. The histogram (Figure 7) also indicates that the majority of "very high" vulnerable sub-districts are located in the Xicheng and Chaoyang district, while the percent of the "high" vulnerable sub-districts in Chaoyang district is higher than others. The "low" and "very low" vulnerable sub-districts are mainly concentrated in the Haidian district.

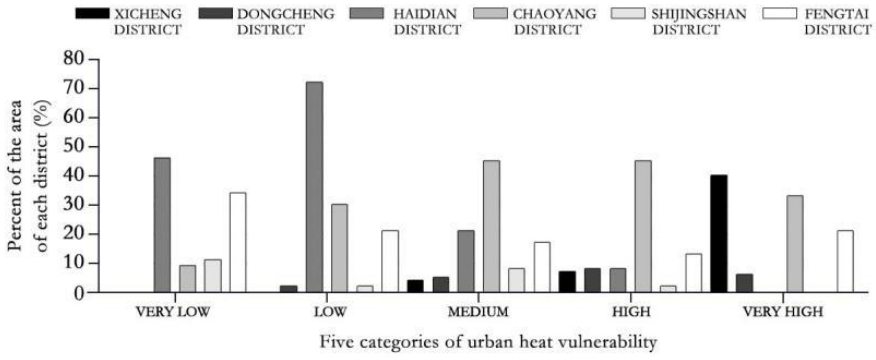

Figure 8 - The area percent of each district in the five categories.
source: authors' elaboration

The Pearson correlation coefficient is carried out to determine the relationship between temperature and the UHV. The result shows that the coefficient reaches up to 0.581 ($p<0.01$). In order to identify the hot-spot areas, where high vulnerability co-occurs with high intensity of heat wave, the "very high"vulnerable

sub-districts, as well as “high”vulnerable sub-districts, are respectively overlaid on the heat wave hazard layer. The hot-spot areas are divided into two categories. The “very high”vulnerable sub-districts with LST higher than 45.1 ℃ are ranked as the most important hot-spot areas, which comprising Guanganmenwai, Niujie, Youanmen, Dashilan and Chongwenmenwai. Thus, the identified hot-spot areas should be considered as priorities areas for the implementation of adaptive planning.

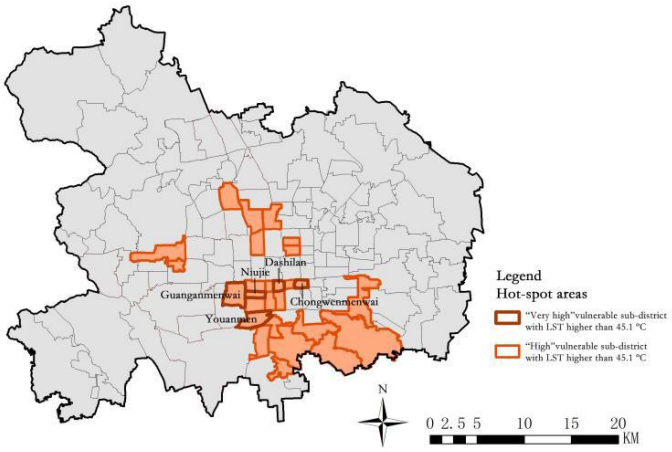

Figure 9 - Hot-spot areas.
source: authors’ elaboration

7 PLANNING STRATEGIES FOR HEAT WAVE

In order to cope with uncertainties of climate change by means of urban planning, adaptive strategies should focus both on the pre-disaster prevention and post-disaster mitigation. The hot-spot areas can be utilized to form the priority in implementing adaptive planning. For the specific strategies in the priority area, this study presents the potential ways as following.

Urban design plays the important role in regulating urban micro-climate conditions (Golany,1996). In order to enhance the effect in alleviating the thermal environment, the specific strategies are presented in following three spatial scales. At the city scale, urban design should be integrated with the meteorological data to set up hierarchical ventilation corridors which can facilitate air flow; at the neighborhood scale, the contribution of different physical factors in impacting on air temperature should be identified, then based on the simulation with different combinations of identified factors, the efficient strategy on the cooling effect is presented; at the building scale, the principles of green building and low-carbon building should be implemented in all kinds of buildings as much as possible. Compared with urban and building scale, the cooling effect at the neighborhood scale is easy to perceive and operate. Taking into account the characteristics of physical environment, the planner or policy maker should develop variant plannings at the neighborhood scale, in the sub-district with high proportion of impervious surface and low building density, increasing the area of vegetable cover may be the most efficient way, however, in the sub-district with high building density, the design strategies may be mainly focused on the improvement of cooling effect (Norton and Coutts et al., 2015). Although urban design for prevention can reduce the intensity and frequency of heat wave in some degree, it is impossible to avoid the advent and impacts of heat wave fundamentally. Thus, the seasonable response during the heat wave is equally important. The accessibility to the hospitals and other medical resources within the hot-spot areas should be the first focus of mitigation strategies.

8 CONCLUSION

The study presents a method for quantifying urban heat vulnerability at the sub-district scale in Beijing central city. The result shows that “very high” and “high” vulnerable sub-districts are located in the city center and southeastern part of study area, which means the uneven impacts of heat wave event. By overlaying between heat vulnerability and heat wave hazard, the five sub-districts, which are considered

as the most important hot-spot areas, are identified to be the priority areas in adaptive planning. In terms of the specific implementation of adaptive planning , urban design for prevention and accessibility planning for mitigation are the potential ways. However, before applied into practice, the assessment of urban heat vulnerability and the effect of such strategies are still need to be further tested. This will be the focus of future work.

ACKNOWLEDGMENT

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ID 1630 | PARTICIPATORY MODELLING TO SUPPORT GROUP DECISION MAKING PROCESSES IN CLIMATE RESILIENT URBAN DESIGN

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1 INTRODUCTION

Interest in climate resilience is growing worldwide among policy makers, urban planners, citizens and scientists. Climate Resilient Urban Design (CRUD) relates to the (re-)design of urban areas in such a way that cities and citizens become less vulnerable to climate change. Weather phenomena like heat stress, droughts and floods impact the lives of city dwellers, villagers, and rural residents all over the globe. The making of policies dealing with climate resilience in urban environments is a process that inevitably involves stakeholders from various disciplines, each with their own interests, constraints and goals.

Group Model Building (GMB) (Vennix, 1999) is known to facilitate the decision making processes by modelling important variables and their causal relations in a Causal Loop Diagram (CLD). This participatory group modelling process creates a shared understanding of the problem, incorporating the views of all stakeholders, and it improves the support for the final decisions taken.

The GRACeFUL (Global systems Rapid Assessment tools through Constraint Functional Languages) project aims at supporting decision making in complex problems by connecting participatory processes (using GMB) to scientific evidence through novel tools. Rapid Assessment Tools typify causal factors and linkages with concrete data from other system layers and produce a set of viable and acceptable alternative solutions to be used in decision making. Simulation tools will simulate the alternative scenarios over time and visualization tools will show the results of the different CRUD solutions on maps. The case study area is a neighbourhood in the city of Dordrecht, the Netherlands. The municipality is planning to redevelop the public space in this neighbourhood taking into account climate resilience and involving different stakeholders, including citizens.

The aim of this paper is to identify important variables, their causal relations and feedback loops which are generally involved in Climate Resilient Urban Design problems. These factors, relations and loops help us to develop the GRACeFUL Rapid Assessment Tools. Student workshops were held in which six groups of Urbanism and Water management students represented different stakeholder roles. Each group created a Causal Loop Diagram (CLD) on the Dordrecht case study neighbourhood and used this participatory modelling process as an exercise to create a better Climate Resilient Urban Design.

This paper is organized as follows. First, the participatory modelling method Group model building will be explained. This is followed by a description of the workshop on climate resilient urban design. Section 4 represents the analyses of the CLDs and the paper ends with a discussion.

2 GROUP MODEL BUILDING

The participatory modelling method Group model building is particularly useful for problem structuring and diagnosis in decision making processes (Vennix, 1999). It is known to include all stakeholders' views, input and explanations and thereby the method guides the participants to an improved and shared understanding of the problem and a stronger support for the final decisions made.

Group model building is a facilitated participatory modelling method which implies that an independent facilitator will guide the group of six up to 15 different stakeholders through the process, often assisted by a modeller/recorder. The participants are generally seated in a semi-circle or U-shape with the facilitator and a whiteboard (or projection screen if the model is created using system dynamics modelling software) in front (Rouwette and Vennix, 2017).

Group model building consists of a divergent as well as a convergent phase. The creative divergent phase is typically covered by using an existing method like brainstorming, in order to elicit as many variables associated with the problem as possible. In the convergent phase those variables will be related to each other, creating a causal diagram or system model. This so-called Causal Loop Diagram (CLD) represents the variables that (in)directly affect or are affected by the problem variable, and the causal relations between the variables. As an illustration, figure 1 shows a picture of a part of the causal loop diagram created by group 2 of the 2017 CRUD workshop. A positive causal relation means that both factors change in the same direction. For instance, according to group 2017_2, an increase in damage caused by floods will lead to an increase in climate awareness. Negative relationships between factors indicate a change in opposite directions (Rouwette and Vennix, 2017). For example, an increase in climate awareness will decrease household consumption (right-hand side of figure 1). Furthermore, feedback loops within the diagram (e.g., between climate awareness and climate policy in figure 1) are important indicators for balancing or escalating behaviour.

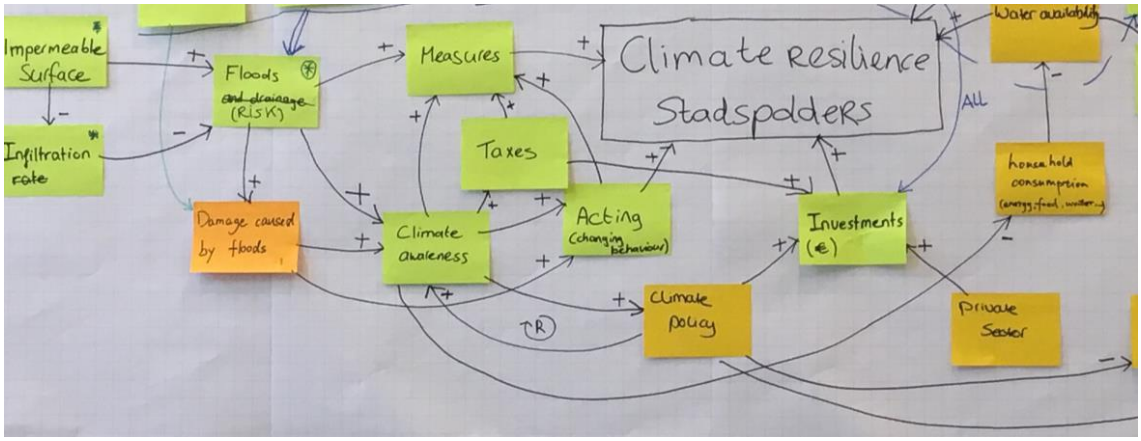

Figure 1 - Causal loop diagram made by group 2017_2

Related to the urban planning field, issues regarding specific projects on topics like tourism development in a coastal area (Vugteveen et al., 2015), neighbourhood safety (Rouwette et al., 2016) and coastal flooding were addressed by using Group model building. To the best of our knowledge, this method has not been

applied to climate resilience at the urban design level taking into account pluvial flooding, drought and heat stress.

3 CRUD WORKSHOP

As part of a one-day workshop on Climate Resilient Urban Design (CRUD), in May 2015, 2016 and 2017 two student groups, each consisting of six students, worked on a Causal Loop Diagram (CLD). The remaining five to six groups used other methods/tools in preparation of the design phase. The students were master students Urbanism (Faculty of Architecture and the Built Environment) or Water management (Faculty of Civil Engineering and Geosciences) at Delft University of Technology. Each student was assigned a stakeholder role. The following roles were divided: 1) local residents representative; 2) local businesses representative; 3) city of Dordrecht – spatial planning & development; 4) city of Dordrecht – water; 5) environmentalist; 6) recorder. Their task was to create a climate resilient urban design for the Stadspolder neighbourhood in Dordrecht. As a problem structuring exercise each year two groups of students participated in a Group model building (GMB) session. In these GMB sessions first factors related to Climate Resilient Urban Design were elicited. Subsequently, the students created a CLD by linking the factors that were causally related.

3.1 STADSPOLDER NEIGHBOURHOOD

Stadspolder in a neighbourhood in Dordrecht located in the east part of the city (see Figure 2). The neighbourhood was built in the 1980s and 1990s. Nowadays the public space is in need for reconstruction and therefore the municipality of Dordrecht seized this opportunity to not only renew the streets, sewage system, parking lots and green space, but to redesign the public space and making it more climate resilient. The Stadspolder neighbourhood has a so-called cauliflower structure, which was typically applied to Dutch neighbourhoods designed in the 1970s and 1980s. These cauliflower neighbourhoods are characterised by a maze-like grouping of cul-de-sacs or small courtyards intended to encourage social bonding by facilitating spontaneous encounters among neighbours (Wekker, 2016), to improve intimacy and to reduce through traffic. Main problems in the Stadspolder neighbourhood concern parking (limited parking space, parking in front gardens), dwellings with low doorsteps and accessibility.

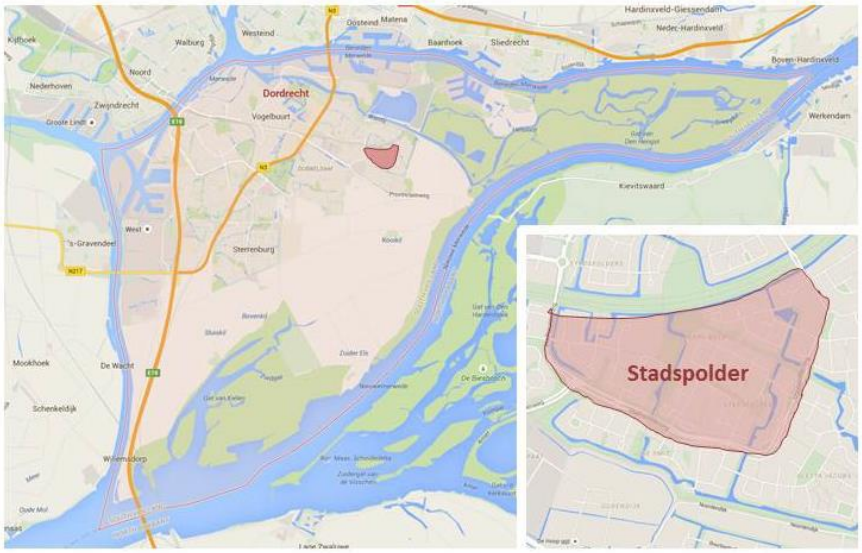

Figure 2 - Stadspolder's location in Dordrecht (in red)

4 ANALYSES

This section describes the analyses of the six CLDs constructed by the groups of students at the CRUD workshop. The first thing that catches the eye is that all six models are different even though the Master

students have similar knowledge and the project case is exactly the same. Another observation, which often is noticed when analysing GMB sessions on the same topic, is that the different groups use different words to indicate the same thing. Furthermore, it should be noted that the CLDs are not perfect after only 1.5 - 2 hours of modelling.

The analysis starts with identifying general causal relations to and from 'climate resilience'. This is followed by a specific focus on the climate resilience aspects flooding and heat stress. The respondents did not consider drought to be a problem to the Stadspolder case. Finally, other important themes in the causal diagrams, safety, awareness, liveability and costs, will be evaluated.

4.1 CLIMATE RESILIENCE

The GMB groups worked with 'Climate resilient Stadspolder' as the central variable in the CLD. This implies that 'Climate resilient Stadspolder' was the first factor written in the centre of the empty board and subsequently, the variables elicited in the brainstorming phase which had a causal relation to the factor(s) on the board were added to create the causal diagram. As a consequence, all groups have connected factors to this central variable. Table 1 shows per topic which factors were causally related to it, both ingoing and outgoing arrows, and whether the arrow had a plus or minus sign. When looking at the incoming arrows, the most frequently connected factors to 'climate resilience' deal with flooding and heat stress on the negative side (i.e., the more flooding the less climate resilient), whereas measures, water management factors (like vegetation, green/blue space, drainage/storage capacity, permeable surfaces), sustainability related factors and safety show a positive causal relation. The outgoing arrows from climate resilience head towards living quality, different forms of sustainability and safety holding a plus sign and flooding and heat stress having a negative causal relation.

4.1.1 FLOODING

In the causal diagrams this dimension of climate resilience is indicated by flood risk, floods, flooding and flood events return period. Group 16_2 connects flood risk to floods by an arrow with a positive sign which implies that a higher flood risk leads to more floods. Other factors with a positive link towards flooding concern rainfall (events), impermeable surfaces, groundwater level, maintenance issues, drought dikes risk and run-off. On the other hand, infiltration/permeable surfaces, water drainage, water storage, green space, quality of sewage, quality of water management, (measures and emergency preparedness) are factors which reduce the flood risk when improved. Regarding the outgoing arrows of flooding, variables like damage, hazards and costs, but also measures and awareness are linked with a plus sign (the more flood events, the more damage or the more awareness). Whereas safety, living quality and accessibility are negatively affected by flooding.

4.1.2 HEAT STRESS

Urban heat stress or heat risk was mentioned by four out of six groups. Their causal diagrams show that increasing the space for buildings and roads raises heat stress levels. On the other hand, urban heat stress declines due to an increase in green/blue space, water availability, citizen initiatives and sun reflection. Factors caused by heat stress concern energy cost for cooling and heat stress business opportunity, holding a plus sign (the more heat stress, the higher the costs for cooling) and water quality, safety and native biodiversity are connected with a negative arrow (the more urban heat stress causes poorer water quality).

		Incoming arrow		Outgoing arrow	
-	group	+	-	+	-
Climate resilience	17_1	vegetation	flood risk		
		area for water	ground water fluctuation		
			consumption		
	17_2	measures			
		acting (changing behaviour)			
		investments			
		water availability			
		green/blue space			
	16_1	adaptivity	flooding (extreme)	living quality	flooding (extreme)
		energy transition	urban heat stress		
	16_2	space for green/ water/nature	impervious areas		heat stress
		open water availability (surface)		flood risk	open water availability (surface)
	15_1	CRUD measures		amount of vegetation	
		drainage capacity			
		permeable surfaces			
		green housing			
		storage capacity			
	15_2	quality of water management		economic sustainability	flood risk
		adaptive measures		environmental sustainability	
		social sustainability		safety	
		biodiversity			
		safety			
Flooding/floods	17_2	impermeable surface	infiltration (rate)	damage caused by floods	
			measures	climate awareness	
				measures	
	16_1	management groundwater	water storage		climate resilience
		drought dikes risk	climate resilience		living quality
		block in sewer/ maintenance issue	landscape permeability/ infiltration		
	16_2	flood risk		hazards open water	accessibility
flood risk	17_1	run-off	infiltration capacity	costs for business	climate resilience
			quality of sewage		
	16_2	impervious areas	climate resilience	damage during flood	
		groundwater level	water drainage	floods	
	15_2	extreme rainfall events	emergency preparedness		safety
			quality of water management		
			climate resilience		
			green space		
flood events return period	15_1	rainfall	amount of permeable surfaces	quality of life	

		Incoming arrow		Outgoing arrow	
	group	+	-	+	-
(urban) heat stress	17_2	space for buildings/ roads	water availability	energy cost for cooling	
			water storage		
			green/blue space		
	16_1		citizen initiatives	HS business opportunity	climate resilience
			vegetation/green-blue infrastructure	water quality	vegetation/green-blue infrastructure
			albedo roofs		native biodiversity
	16_2	space for buildings	climate resilience		
			space for green/water/nature		
			open water availability (surface)		
heat risk	15_2		green space		safety
Liveability	16_1	aesthetics	flooding (extreme)		
living quality		water quality	densification		
		native biodiversity	subsidence		
		urban farming			
		climate resilience			
		citizen initiatives			
		green mobility/parking			
		infrastructure			
		attractiveness recreational areas			
quality of local living environment	16_2	water quality		healthy environment	
		interaction with nature		population	
quality of life	15_1	amount of vegetation	quality of life		
		safety			
		environmental quality			
		CR measures			
		return period flood events			
social sustainability	15_2	social cohesion		climate resilience	
		public awareness			
		urban farming			
wellbeing residents	17_1	welfare of residents	housing density	support for initiatives	
		vegetation			
		area for water			
		biodiversity			
		water recreation			
Awareness	17_2	floods		measures	household consumption
(climate)		damage caused by floods		taxes	
		climate policy		acting (changing behaviour)	
				climate policy	
(collective)	17_1	support for initiatives		support for initiatives	consumption
(public)	16_1			citizen initiatives	
(public)	15_2	education		social sustainability	
Safety	15_1	accessibility in crisis		quality of life	safety
		water available for fires			

		Incoming arrow		Outgoing arrow	
	group	+	-	+	-
Safety (continued)	15_2	climate resilience	flood risk	climate resilience	
			heat risk		
			health risk		
Cost	17_1	flood risk			local business
money/ subsidy	16_1	subsidence		green roofs	
		HS business opportunity		energy transition	
maintenance costs	15_1	maintenance			CR measures
taxes	17_2	climate awareness		investments	
				measures	
water taxes	16_1		landscape permeability/infiltration	landscape permeability/infiltration	
investments	17_2	taxes		climate resilience	
		climate policy			
		private sector			
economic development	16_2	development of area		population	
economic sustainability	15_2	job opportunities			
		available funds			
		climate resilience			
		urban farming			

Table 1 - Factors in CLDs by theme and their causal relations

4.1 OTHER IMPORTANT CRUD THEMES

The six Causal Loop Diagrams show some other topics that are part of a climate resilient urban design system model. Liveability, awareness, safety and costs are often mentioned. Furthermore, 'measures' in general or specific measures are frequently part of the causal diagram. This subsection describes the causal relations regarding those themes.

4.1.1 LIVEABILITY

Liveability is chosen as a blanket term for the factors living quality, quality of local living environment, quality of life, social sustainability and wellbeing residents. This theme appears in five out of the six CRUD system models. Group 16_1 really puts an emphasis on their living quality factor since they identified twelve ingoing arrows, making it the most prominent factor. According to them aesthetics, attractiveness recreational areas, native biodiversity, water quality, climate resilience, urban farming, green mobility, infrastructure and citizen initiatives contribute to a better living quality. On the other hand, flooding, densification and subsidence negatively affect the liveability of the Stadspolder neighbourhood. Group 16_2 adds that interaction with nature positively influences the quality of the local living environment. Furthermore, they indicate that increasing liveability leads to a healthy environment and a growing population. Group 15_1 focusses on quality of life which according to them is affected by more vegetation, safety, environmental quality, measures for climate resilience and a longer return period of flood events. In the case of social sustainability (group 15_2), social cohesion, public awareness and urban farming are positively connected. Finally, the wellbeing of Stadspolder's residents (group 17_1) is influenced by welfare of the residents, vegetation, biodiversity, area for water and water recreation and housing density. The latter factor is in this CLD the only negative causal link (i.e., the higher the housing density the lower the wellbeing).

4.1.2 AWARENESS

Compared to the presentations of groups using other tools/methods at the CRUD workshop, the GMB groups often come up with 'raising awareness' and 'involving local residents' as measures for increasing the climate resilience of the Stadspolder neighbourhood. These are actions which are not directly related to maps (compared to technical measures like bio swales or green roofs). Collective, climate or public awareness turns up in four causal loop diagrams. Regarding the incoming arrows, we see that support for

initiatives, climate policy, education, floods and damage caused by floods are factors raising awareness. Whereas awareness causes more support for initiatives, measures, taxes, acting, climate policy, citizen initiatives and social sustainability. Some direct feedback loops show up here. A decrease in household consumption an effect of increased awareness as well.

4.1.3 SAFETY

Another theme that can be distinguished is safety. This factor is described in half of the CLDs and for this analysis it also includes hazards open water and emergency preparedness. Regarding ingoing arrows, accessibility in crisis, water available for fires and climate resilience show a positive causal relation (the more water for fires the greater the safety), while flood risk, heat risk and health risk negatively affect safety (the higher the risk the lower the safety level). Safety, in its turn, has positive causal effects on quality of life and climate resilience. Hazards open water are increased by more open water availability and more floods, whereas improved water quality decreases the exposure to hazards. Finally, emergency preparedness grows when available funds increase and education on this topic improves. On the other hand, preparedness for emergencies causes a reduced flood risk.

4.1.4 COST

Inevitably costs are involved in restructuring neighbourhoods when applying measures to make them more climate resilient. All of the groups had factors in their CLD that deal with this theme. Costs for business, money/subsidy, maintenance costs, taxes, investments, economic development and economic sustainability were mentioned. With regard to investments, the factors taxes, climate policy and private sector positively affect the number of investments made. ‘Investments’ is also directly connected to climate resilience (i.e., the more investments the more resilient the neighbourhood is). CRUD measures in general and some specific measures are linked with cost as well. For example, the higher the taxes, the more measures will be adopted, the higher the maintenance costs the lower the number of measures implemented, the more money/subsidy the more green roofs and the more urban farming the more economic sustainability. This economic sustainability is positively influenced by job opportunities, available funds and climate resilience as well.

4.2 DISCUSSION

Six causal loop diagrams were obtained from workshops on climate resilient urban design of the Stadspolder neighbourhood in Dordrecht. Analysis of the causal diagrams shows that all system models seem to be very different even though the case study area is exactly the same and the Master students had a similar background in education. Furthermore, also the wording used to indicate the same factor differs between groups. This is often noticed when evaluating causal diagrams on the same topic. A general explanation is that a causal loop diagram represents how the group thinks about the problem. Other stakeholder groups might create a different model based on the exact same problem.

Another observation is that the CLDs are more focused on flooding than on heat stress or drought. The students might consider pluvial flooding as the main problem, however this could also be caused by an overrepresentation of water management students in the groups (usually five water management students and one urbanism student). This also explains why typical urban design variables, like aesthetics and attractiveness, are not frequently mentioned.

Finally, the group model building sessions in the CRUD workshops were quite short (1.5 – 2 hours) compared the usual GMB process, which covers at least two sessions of 3 to 4 hours with opportunities for reconsideration and improvement. Hence, the final CLDs created by the student groups are not absolutely perfect.

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ID 1671 | LISBON SOCIAL DIMENSION IN URBAN RESILIENCE

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ABSTRACT: The world has been facing a continuous increase in the number and size of urban areas. Social dynamics changes are inevitable, calling for the need to examine and monitor urban systems, in particular urban resilience to social problems and to changes in socio-ecological systems. This paper intends to analyze and understand how the municipal policies in Lisbon have been contributing (or not) to the resilience of the urban system, through a social dimension. We have looked at what is that socially drives the urban system, what, why and how social disturbances and changes affect its resilience, and how the municipal policies may contribute to it. A literature review on urban resilience and social innovation was developed to identify a proper methodology to be adopted and to identify the main elements to be addressed in this analysis. The methodology adapted consists of five steps: (i) translation of the social dimension into urban resilience, through social dynamics and social innovation concepts; (ii) definition of the focal scale; (iii) identification of indicators; (iv) development history; (v) interpretation from the perspective of long-term resilience. In applying the methodology to the city of Lisbon, the city governments´ policies were analyzed, and the social drivers, social disturbances, and changes affecting the urban system resilience identified and assessed. The results indicate that demography, social vulnerability, mobility and city attractiveness prove to be key drivers to assess the social contribution to urban systems resilience. These key drives can be applied to other cities with the same urban development typology as Lisbon. Research on the Lisbon's system showed that the city has been facing, over the last 50 years, a mix of desirable and undesirable qualities. Desirable qualities seem to facilitate the urban system's transition to a sustainable behavior, building urban long-term resilience; while the undesirable qualities can be seen as an opportunity to reverse the city social disturbances negative trends by changing current city governance policies.

1 INTRODUCTION

The world has been facing a continuous increase in the number and size of urban areas. The United Nations (2014) has already alerted that the world has, currently, a population of 7.2 billion of which over half (54 percent) lives in urban areas.

Cities, as growing drivers of the world's future and engines of economic growth, present several social challenges, as poverty and disease, but at the same time offer opportunities for sustainability. Social dynamics changes are inevitable, calling for the need to examine and monitor urban systems, in particular urban resilience to social problems and to changes in socio-ecological systems.

The present paper intends to analyze and understand how the municipal policies in Lisbon have been contributing (or not) to the resilience of the urban system, through a social dimension.

Thus, a literature review was performed on the concepts of urban resilience and social innovation, in order to identify a proper methodology to be adopted and to identify the main elements to be addressed in this analysis. After, the methodology developed by Kumagai, Gibson, & Filion (Kumagai et al., 2010) was adapted to the context and purpose of this paper and applied to the city of Lisbon.

A particular focus of this paper is on governance actions. More specifically, on Lisbon municipal policies and plans and their respective strategies, objectives and proposed actions to be devloped and implemented.

2 LITERATURE REVIEW

2.1 URBAN RESILIENCE

Urban systems are complex and dynamic systems with ecological and human issues that depend on each other at multiple scales , where ecological functions are altered to accommodate the human activities and structures (Kumagai et al., 2010). Cities, urban systems, as living systems – open, dynamic and connected systems – are continuously evolving through the influence of internal interactions and external factors (Bai, 2003), being considered one of the best examples of a social-ecological system (SES) (Levin, 1999).

Cities may change abruptly and faster than the human capability to understand the influence of certain factors on those changes (Resilience Alliance, 2007), demanding a profound knowledge on cities complexity and development, and capacity to adapt (Batty, Barros, & Alves Junior, 2004). Resilience Alliance (2007) considers that the abrupt changes of cities depend both on temporal and spatial perspectives and that what may appears to be an abrupt change to a certain system might be a gradual or insignificant to another system. For example, the urban gentrification process can take decades, market cycles in housing prices crashes over months and sometimes years, stock markets crashes over days, while urban traffic jams occur over minutes (Batty et al., 2004).

The concept of resilience applied to urban systems can be defined as the "degree to which cities are able to tolerate alteration before reorganizing around a new set of structures and processes" (Alberti et al., 2003), and measured by the way cities balance simultaneously human and ecosystem functions (Resilience

Alliance, 2007). The decrease of resilience increases vulnerability, leading to the urban system exposure to greater risks of the vagaries of surprise and uncertainty (Folke et al., 2002). Generally, the resilience decrease takes progressively smaller shocks to cause crises or chaos on systems. This is a cumulative process that tends to shift a systems towards criticality (Resilience Alliance, 2007).

An earlier approach developed by the Resilience Alliance (Resilience Alliance, 2007), the urban resilience four cores, looks into urban resilience structured in four subject areas:

- Metabolic flows, consider production, supply and consumption chains which do not start or end within the city premises;

- Governance networks, include institutional structures and social organizations and the society capacity to learn, adapt and reorganize to meet urban challenges related to rapid urbanization and its environmental impacts;
- Social dynamics, consider demographics, human capital and inequity, as well as urban individuals and their interactions (groups or communities) with urban landscapes, and the influence of a cultural set of patterns determining a social order;
- Built environment, the urban physical patterns and their spatial relations and interconnections, such as: ecosystem services in urban landscapes, modeled by the process of urbanization, subjected to complex patterns and processes interactions.

Understanding the role of time and how it affects future urban options is a very important part in urban resilience (Resilience Alliance, 2007). These four core subjects allow the study of the urban system resilience (as a whole) and of each of the four subjects of the urban system individually.

Many applications of resilience to urban systems have been dealing with the potential future changes and disturbances that may affect the system, disregarding whether or not the results contribute to a sustainable behaviour. Sustainability includes, as one of its crucial elements, lasting well-being which can be understood as the "decent life for everyone based on integrity of socio-biophysical systems and maintenance of their support functions, while paying attention to intra- and inter-generational equity" (Gibson, 2006; Kumagai et al., 2010). Intra-generational equity requires ensuring that sufficient and effective choices are pursued for all in ways that reduces dangerous gaps in sufficiency and opportunity – and security, health, social recognition, political influence, and so on – between the rich and the poor, while intergenerational equity requires favoring the present options and actions that most likely will preserve or enhance the opportunities and capabilities of future generations to live sustainably (Gibson, 2006).

In order to differentiate from those applications, Kumagai et al. (2010) developed a methodology to assess the resilience of urban systems regarding lasting well-being, the system transition to a sustainable behavior and governance activities through the perspective of long-term resilience. Their methodology consists in understanding what drives the urban system under assessment, what characterizes it, how did the urban system developed/changed through time and in analyzing it through the lens of long-term resilience.

The long-term resilience of an urban system is "the system capacity to respond to change and disturbance and to enhance the conditions for well-being, based on careful attention to the complex interrelationships of all factors and to the specifics of particular contexts through governances combining adaptation with transition" (Kumagai et al., 2010).

Kumagai et al. (2010) identifies as one of the urban resilience study major problems the fact of resilience might be desirable or undesirable. The ecological literature tends to assume resilience – the maintenance or re-establishment of system capacities to maintain structure and function – as positive, but when considering human systems such assumption is more difficult to do and might become considered as regrettable. For example, the resilience of systems that support organized crime and perpetuate racism or high-consumption habits is undesirable because it would not promote lasting well-being of the urban system. It can be assumed that every urban system has a mix of desirable and undesirable qualities and that is not always desirable to have a resilient system (Kumagai et al., 2010).

Building long-term resilience of urban systems requires that the efforts to enhance the resilience of systems delivering desirable services be accompanied by, and integrated with, efforts to facilitate transition to systems that foster and support sustainable behavior (Kumagai et al., 2010).

Building long-term resilience also requires governance structures and practices and can be achieved through five governance activities (Kumagai et al., 2010):

- Recognition (by governance arrangements) of complex system in terms of boundaries, contexts, interdependency, fast and slow variables, modularity, and interactions;
- Anticipation (based on recognition) of future possible disturbances and vulnerabilities;
- Active transition (enabled by anticipation) to act previously to disturbance;
- Adaptability against inevitable surprising disturbances and

- Communication backed by trustworthy networks, willingness to learn and change, and structural flexibility must support and enable the other four activities.

Kumagai et al. (2010) also states that the incapacity to make transition needed to deal with anticipated changes further reduces the potential adaptive capacity of the urban system.

2.2 SOCIAL INNOVATION

The term social innovation (SI) was first addressed, in the academic literature, by Max Weber and Emile Durkheim, who defined SI as “innovations in the organisation of work and of society” (Hubert, Thébault, Schinas, Bonifacio, & Konings, 2010). Max Weber defined a relationship between the concepts of social order – set of social structures, institutions and practices which linkage aims to maintain and apply behavioral and relationship ways – and innovation – improved solutions application to meet new, in-articulated, and/or current market needs (Maranville, 1992) – as the social change impact of certain behaviors considered, in the beginning, as uncommon or unexpected (Hubert et al., 2010).

Afterwards, social innovation re-emerged as a concept and practice to deal with economy restructuring implications, changes introduced by the development on information technology and mass unemployment. Since then, several definitions and considerations on social innovation have been developed in the last years by several authors (Cloutier, 2003; Hämäläinen & Heiskala, 2007; Hubert et al., 2010; Moore, Westley, Tjornbo, & Holroyd, 2010; Mulgan, Tucker, Ali, & Sanders, 2007; Mulgan, 2006; Nussbaumer & Moulaert, 2007; Phills, Deiglmeier, & Miller, 2008; B. F. Westley, Zimmerman, & Patton, 2006; F. Westley & Antadze, 2010).

F. Westley & Antadze (2010) definition of this concept can be highlighted: "complex process of introducing new products, processes or programs that profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs" (F. Westley & Antadze, 2010).

The social system may be defined as "any organized assembly of human resources, beliefs, and procedures united and regulated by interaction or interdependence so as to accomplish a set of specific functions" (F. Westley & Antadze, 2010) with its own boundary, culture and political identity, economic structure and social interactions established (F. Westley & Antadze, 2010)(F. Westley & Antadze, 2010). Westley (2008) alerts for the importance of social systems to keep their identity while, at the same time, to be able to adapt to change and novelty.

Christensen et al. (2006) states that a social innovation with a broad or durable impact will be disruptive, catalytic, and will challenge the social system and social institutions as well as will enable some changes in their convictions and governance ideals. In other words, Westley and Antadze (2010) and Westley (2008) refer to a broad or durable impact social innovation as a successful social innovation that must have a wide scope, crossing as many social levels as possible, and reaching different scales.

Huddart (2010) states that social innovation "opens up new approaches to addressing complex problems and covers a lot of ground, but is still taking shape", and proposes twelve principles to guide strategy around social innovation after developing an analysis of initiatives considering environmental, economic and social spheres. Principle 7 “Commit to social inclusion”, for example, considers that the inclusion of vulnerable populations leads to more wide solutions and enduring results.

Society can be defined as "a myriad of rules, some formal, others informal such as cultural practices that determine how people interact with the ecosystems around them" (Resilience Alliance et al., 2010), and the capacity of a society to generate a steady flow of social innovations is an important contributor to overall social and ecological resilience. In a broad sense, social innovation can be seen as part of the solution for the complex problems regarding SESs in the world (F. Westley & Antadze, 2010; F. Westley, 2008).

Westley and Antadze (2010) and Westley (2008) present the example of vulnerable populations' re-engagement (community reintegration of lonely, homeless, mentally ill and poor people) as a frequently addressed subject in social innovation agenda and as a contributor to resilience increase. Contrarily, the exclusion of some population from primary services, for example, leads to a loss of resilience and also to the exclusion of these population opinions, points of view and diversified experience. Therefore, social

innovation serves and is served by vulnerable populations, and their re-engagement in social systems identity as persons of interest and involved ones is linked to social-ecological resilience (F. Westley & Antadze, 2010; F. Westley, 2008).

3 METHODOLOGY

The methodology adopted in the present paper is based on one existing methodological approach to resilience in urban systems available in the resilience theory literature and developed by Kumagai et al. (2010).

Kumagai et al. (2010) methodology assesses the resilience of urban systems and uses as its focal system the City Region of Tokyo, adopting a long-term perspective, considering people's lasting well-being and governance actions through five steps:

1. Translation of resilience into urban context: defines the elements that characterize and drive the type of urban system in analysis (for example, a city under or already developed or a post-industrialized city), and establishing the framework for performing the resilience assessment;
2. focal scale definition: defines the spatial and temporal boundaries;
3. indicators identification: the focal scale indicators are grounded by the identified elements;
4. development history: analysis of the indicators evolution across time
5. interpretation from the perspective of long-term resilience: assesses the long-term resilience of the focal scale according to the change/evolution of indicators, considering governance activities to build long-term resilience for the lasting well-being of people.

The main purpose of this methodology was to look at how urban system incorporates resilience. In the case of Lisbon, presented in the next sections of the paper, the purpose was to look at how urban resilience can incorporate a social dimension. Therefore an adaptation of the Kumagai et al. (2010) methodology was necessary and developed.

Kumagai et al. (2010) identified four aspects to interpret resilience in the urban context - demography, mobility, tax revenue and resource-efficiency (relevant to relate resilience to the urban redevelopment of post-industrialized cities such as Tokyo City Region). In the case of the city of Lisbon, the objective has been to translate and integrate social resilience into urban resilience context, and four drivers of urban resilience were adopted:

- Demography: understands how and why population has been changing and provides an analysis of the emerging demographic issues that must be considered by governance;
- Social vulnerability: understands people's emerging needs and risks, and provides an analysis of the social state for governance priorities;
- Mobility: provides an analysis of the socio-economic relations between the urban system and its surroundings regarding the population access and use of the transport network;
- City attractiveness: - relates to how attractive the urban system is, what are its strengths and how governance is managing such strengths;

As in the Kumagai et al. (2010) methodology, a particular focus of this paper will be on governance actions. The political and planning measures adopted by the city governments over time, as well as the actions and initiatives developed were analyzed.

The following section shows the application of the adapted methodology to the case of the city of Lisbon. It includes, first, a brief presentation of the city government policies over the years, and after the identification and analysis of the four drivers that will allow the further assessment of the case study's social disturbances through the long-term resilience perspective.

4 CASE STUDY

The present case study is the city of Lisbon, capital of Portugal and one of the Lisbon Metropolitan Area municipalities, as represented in Figure 1. Lisbon is the focal scale in this study.

The city of Lisbon is the most populous one of Portugal, with a population of 506.892 inhabitants within its administrative limits (INE - Instituto Nacional de Estatística, 2014a; PORDATA, 2015), within a surface area of 100 km2 (IGP - Instituto Geográfico Português, 2014).

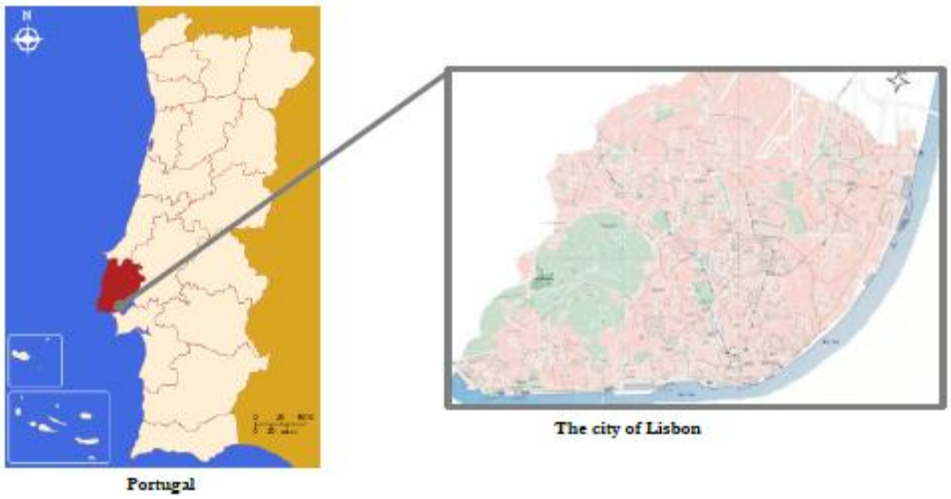

Figure 1: Location of the city of Lisbon in Portugal.

Owner of a characteristic charm and located across Tagus River, Lisbon is considered a global city due to its financial, commercial, artistic, educational and touristic importance, and the country's main economic and urban center. Within its limits, Lisbon has the biggest and busiest airport – Portela Airport – and the oldest underground subway in the country – Lisbon subway.

During the last 80 years, Lisbon urban area has been evolving according to the major directives of development defined in the city master plans. About 80 years ago, the country and the city governments "started" the Lisbon expansion through the construction of roads and new housing neighborhoods, economic housing neighborhoods and housing for poor. The need for a city master plan was recognized, but the urgency for the constructions did not allow it to be done in advance, leading the city government, afterwards, to admit that with the knowledge of a master plan, several problems would have had different solutions than the ones adopted. Thus, in 1938 the city government (under the administration of the Engineer Duarte Pacheco) hired the urban architect Étienne de Gröer to, along with municipal technical services, define the major guidelines of the city expansion and develop the first master plan of Lisbon, which was concluded in 1948, the Lisbon Urban Master Plan of 1948 (LUMP 1948).

After the new legislation for developing Municipal Master Plans (MMP) in 1990, the Lisbon Municipal Master Plan of 1994 (LMMP 1994) established the occupation, use and transformation rules of the municipal territory. However, it did not consider its implementation schedule, being mainly an administrative and supportive document.

In 2001, the city government of Lisbon initiated the process of revising the LMMP 1994 and during the years the LMMP 1994 was under revision, the city government realized several workshops and forums of discussion for stakeholders to participate and assured, afterwards, that their contributions and opinions were considered in the development of the new MMP, Lisbon Municipal Master Plan of 2012 (LMMP 2012).

The LMMP 2012, the MMP currently in force, establishes the major development strategies and the urban policies for the municipal territory. It also defines its implementation schedule, acquiring a strategic character and no longer being just an administrative and supportive document. The LMMP 2012 reflects an integrated vision of the municipal territory and aims to reinforce the city competitiveness, to ensure territorial equity and to support territorial integration and cohesion. Table 1 presents the resume of the main objectives of the three Municipal Plans of Lisbon analyzed, LUMP 1948, LMMP 1994 and LMMP 2012.

LUMP 1948	LMMP 1994	LMMP 2012
Limitation of the urban development	Protect urban life quality	Attract more inhabitants
Regulation of the land use	Harmonize the relation between housing and services construction	Attract more business and jobs
Establishment of the use of high speed paths	Humanize the city and its public spaces	Stimulate urban rehabilitation
Administrative, social and cultural equipping of each neighborhoods and the city	Improve mobility, transports and parking	Qualifying public space
Sanitation and improvement of dwelling and work places	Recovery and rejuvenation of the city resident population	Return the riverfront to the people enjoyment
Conservation and protection of architectonic and natural city wonders	Increase Lisbon potential as a city metropolis	Promoting sustainable mobility
		Increase environmental efficiency

Table 1: Main objectives for the three Municipal analyzed, LUMP 1948, LMMP 1994 and LMMP 2012. Data source: CML - Câmara Municipal de Lisboa (2012, 1994a, 1994b), Groer and CML - Câmara Municipal de Lisboa (1948) and Soares (1994).

The International Society of City and Regional Planners (ISOCARP)[1] assigned, in 2013, an excellence award to the LMMP 2012 for its innovative character regarding the theme: Frontiers of Planning – Evolving and Declining Models of City Planning Practice.

4.1 DRIVERS

As referred before, the analysis of the social dimension was developed according to four drivers: (i) demography; (ii) social vulnerability; (iii) mobility; (iv) city attractiveness. For each driver it was considered a set of available data, allowing the analysis of the drivers.

As for the driver demography, it is possible to state that the evolution of the population living in Lisbon has been decreasing since 1981 as a consequence of the Lisbon Metropolitan Area massive urban development and of the increase of the Lisbon price per m2. As an attempt to revert this situation, the LMMP 1994 defined as one of its major objectives the recovery of the city resident population, which was reinforced in the LMMP 2012 with the definition of the goal: attract more inhabitants. Moreover, the LMMP 2012 intends to: (i) create an affordable housing program through an incentive system directed to the middle class, and of parking for residents, especially in the neighborhoods with an identified need; (ii) approach work and resident places through the previous elaboration of a multifunctional MMP; (iii) protect residential neighborhoods from high levels of noise and bad air quality due to traffic; (iv) construction of new sports equipment and rehabilitation of older ones.

However, this continuous decrease in resident population, mainly due to the exit of the younger population from the city of Lisbon, has been contributing to the population ageing. In fact, in 2001 the ageing population index registered its highest value in Lisbon (203,4%), followed by an apparent stabilization. Nevertheless, local government recognized, in 2008, that this tendency of ageing population had reached a critical point and started developing assisting programs to promote a healthy and active ageing of the city inhabitants. The LMMP 2012 even highlights, as a priority, the intention of constructing day centers, residential housing, nursing homes, university residences and multifunctional spaces for seniors.

The infant mortality and illiteracy rates, both have been decreasing, being nowadays almost eradicated. This decrease is mainly due to the national government reforms on health and education initiated around 1970 (when both indexes were very high) that allowed all population to access education and medical care. Nowadays, the increase access to education and health services continuous to be guaranteed through, for example, the LMMP 2012 action guidelines for these issues: (i) construction of new 1st cycle and pre-schools, rehabilitation of older 1st cycle schools and opening of nursery schools vacancies; (ii) construction of an hospital, of health centers and continuing care units.

[1] ISOCARP is an international association, founded in 1965, that gathers the most recognized and highly qualified urban planners.

The set of data available for the driver social vulnerability presented different evolutions. In one hand, the criminality in Lisbon (number of crimes per thousand inhabitants) has been decreasing, presenting in 2015 its lower value ever.

On the other hand, the unemployment rate of the inhabitants of Lisbon has been increasing, presenting a more pronounced increase since 2010. It can be argued that this pronounced increased is due to the financial and economic crisis in the country since 2009. As an attempt to counterbalance this pronounced increase, the LMMP 2012 has as one of its objectives to attract more jobs, improving the capacity to create more jobs and install more workplaces and increasing the city economic sustainability.

However, the loss of economic power has been contributing to the increase of vulnerability of Lisbon population. The continuous increase of the number people in homeless situation is one of the examples of this increase of vulnerability. This complex issue of has been recognized, as critical, by the city government, who has been developing programs to support this vulnerable population in an integrated way.

But, with so many issues contributing to the increase of vulnerability of the city (loss of economic power, increase of unemployment and increase of homelessness population), the need for special attention and for the assistance to the population increase. The Food Bank in Lisbon has been able over the years to increase its assistance to people and institutions, even with a slight decrease in the number of received products.

As for the mobility, the city of Lisbon has registered, over the years, a continuous increase in the number of people entering the city work or study. This is coincident with the major decline in the resident population of Lisbon and consequent continuous growth of the resident population in the other municipalities of the Lisbon Metropolitan Area (population that no longer lives in Lisbon but continues to work there).

Along with this, there is also an increase, although much lower, in the number of people exiting the city to work or study. This might be justified by the exit of some sectors of activity from the city of Lisbon to the periphery (other municipalities of Lisbon Metropolitan Area) due to improvement of the accesses and infrastructures near Lisbon and mostly due to lower rental costs. The need to attract more business and more companies to the city is recognized by the local government in the LMMP 2012, where is declared the intention to: (i) be possible to locate companies in any point of the city; (ii) reserve space for companies in future urbanizations and supply of adequate spaces for companies installation; (iii) use better the existing business areas; (iv) intervene in the market to compete with the business clusters in the border municipalities through MMP new soil programming mechanisms; (v) increase the edificability index and reduce the permissions in urban polarities and business areas; (vi) support initiatives regarding the reuse of abandoned industrial spaces.

The increase of people circulating in the city every day along with the development of accesses and public transportations, led to the increase of collective transports investment, namely to the expansion of Lisbon subway, through the increase on the subway's network length. Also the number of the subway passengers has been increasing though the years. Nowadays, is under discussion the expansion of the subway network to more four areas of the city.

The local government identifies in the LMMP 2012 the need to ensure a sustainable mobility through (i) the promotion and increase of collective transport, (ii) the reversion of traffic congestion, (iii) the daily use of bike paths, (iv) the improvement of sustainable and multi-modal mobility and (v) the qualification of public space. The LMMP 2012 also has several actions identified to be implemented to promote this sustainable mobility, as for example: (a) the increase of bike network, security and comfort in the use of bicycle in urban areas; (b) the creation of a bike sharing service, and of conditions to increase subway network through channels reservation to the network expansion; (c) Reduction of the number of vehicles entering the city through the control of parking supply for those who enter the city to work; (d) Increase the parking supply for residents. Most of these actions are already implement or to be implemented.

At last, the driver city attractiveness. The increase of the real estate valorization, for example, has been leading to the exiting of population from the city of Lisbon to its periphery. As already identified, the LMMP 2012 highlights several actions to attempt to stop this exit.

As for the number of startups operating in the city, despite the financial and economic crisis lived, the innovation persisted, and the number of startups has been increasing over the years. The local government emphasizes the need to keep promoting these business model, promoting, in the LMMP 2012, business incubators through the continuity of the existing start-up model.

The attractivity of the city to tourists (either foreign or national) has also been increasing, with the overnight stays in Lisbon hotel and similar establishments doubling between 1992 and 2012. The city of Lisbon has even been rewarded for its excellence. In the last 10 years, the city has been distinguished with a total of 29 World Travel Awards, and in the year of 2014 Lisbon received 8 awards including the Europe's Leading Destination. The LMMP 2012 strengthens the need to keep improving the touristic appealing of the city through (i) the creation of more public spaces to overcome the lack of green areas in the city historical center, (ii) the improvement of public space "life" for people and (iii) the qualification of the riverfront for recreation, leisure and tourism. The last two points are being implemented, being still possible to see some of these works in the city under development.

5 DISCUSSION AND CONCLUSION

The urban spatial planning along with the drivers analysis (as presented in the previous section) show that the Lisbon urban system has been facing, over the last 50 years, a mix of undesirable and desirable qualities.

The undesirable qualities correspond to the social disturbances that the urban system has been more difficult to respond to, and which have been the major concern of the current city government in an attempt to revert their negative trends. Thus, it is possible to identify them as the decline in the resident population, mostly the younger and active one, and a consequent ageing demographic trend over the last 30 years, the fast increase of unemployment rate in the last years, the continuous exit of companies from Lisbon to the periphery registered over the last decade and the increasing population leaving in a homelessness situation

All these social disturbances have been recognized by the current government as critical issues that need to be addressed and overcome. For all, were designed strategies and actions, mainly in the LMMP 2012, to be implemented, in an attempt to revert the negative trends, as, for example:

- the creation of affordable housing program through an incentive system directed to the middle class and the approach of work and resident places, to attempt to revert the decline in resident population;
- the construction of day centers, residential housing, nursing homes and spaces for seniors, to promote a healthy and active ageing;
- the improvement of the capacity to create more jobs and install more workplaces, to attempt to revert the increase of unemployment rate;
- the possibility of locating companies in any point of the city, the reservation of space for companies and the intervention in the market to compete with the business clusters in the boarder municipalities, to attempt to revert the exit of companies and
- the development of programs to integrate and support homeless population.

The current MMP not only addresses the undesirable qualities as an attempt to revert them, as it identifies and addresses the desirable ones as a way of promoting lasting well-being.

As for the desirable qualities, these can be identified as those that create capacity for the urban system of Lisbon to respond to disturbances, more specifically, the positive trends previously identified (infant mortality and illiteracy rates almost eradicated, increase of the number of startups, increase of the touristic appealing, decrease in the number of crimes and the increase in the assistance of the Food Bank to people and institutions).

Once again, for all these issues, the current city government identified strategies and actions, mainly in the LMMP 2012, to be implemented, as:

- the construction of new schools and rehabilitation of older ones;

- the construction of an hospital, of health centers and continuing care units;
- the promotion of the business incubators;
- the increase of bike network, security and comfort in the use of bicycle;
- the improvement of sustainable and multi-modal mobility;
- the qualification of public space and
- the requalification of the river front for recreation, leisure and tourism.

Some of these points have already been implemented by the current city government, as the ones regarding sustainable mobility. Others, as the requalification of the river front is being implemented.

As a conclusion, it is possible to state that the municipal policies of the current city government, mainly in the representation of the LMMP 2012, are promoting lasting well-being and contributing to maintain the desirable qualities in that state, as desirable. Moreover, it can be said that these qualities are contributing to the long-term resilience of Lisbon urban system, once they not only promote lasting well-being, as they create capacity for the urban system to respond to disturbances and facilitate the urban system transition to a sustainable behavior. Thus, the municipal policies of Lisbon addressing these desirable qualities are contributing to the urban system resilience.

In terms of the undesirable qualities, it is important to highlight that in previous plans to the LMMP 2012, not all the social disturbances were identified and addressed, which led to a critical point, as being faced nowadays. Even for the case when the social disturbance was addressed, as in the LMMP 1994 attempt to revert the decline of resident population, it appears that the strategy defined to revert the negative trend was not well succeeded, once the trend continued to occur afterwards.

The undesirable qualities represent the social disturbances that the urban system must continue to deal with and that the current city government is attempting to revert, being necessary more time to understand if this attempt will be well succeeded or not.

Thus, municipal policies represent an important contributor for an urban system resilience, as long as they are strategic and, most important, as long as they are flexible to be able to adapt to the changes occurring in the urban system.

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ID 1718 | THE PROFILE OF RISK GOVERNANCE (IN MUNICIPAL PLANNING) IN PORTUGAL

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ABSTRACT: This paper aims to define a risk governance profile for hazards with direct intervention in spatial planning, considering the various perspectives involved in Portugal. In risk management, relations between the different levels of the State acquire a successively relevant role, taking into account approaches of cooperation between the national, regional and local actors. Recognizing for the Portuguese case, the weight and influence of the State in the management of risks and the growing diversity of actors and interests involved in land use planning, we question the distribution of responsibilities in risk management among government actors at different geographical levels (local, regional, national) and, beyond the State, which stakeholders and interests. Based on an adaptation of the model proposed by Walker et al. (2013), a risk governance profile was defined for Portugal for hazards\risks with direct intervention in spatial planning, considering the various perspectives involved. In order to support the identification of the governance profile, an online questionnaire was built and an e-mail was sent to the target public, in 2014. Unlike the model advocated by Walker et al. (2013), where a qualitative and non-measurable risk governance profile is chosen, the adaptation of the survey considered an evaluation scale. The identification of the different stakeholders involved in risk management was based on the information obtained from the literature review, analysis of the legislation and discussion with some of the key actors in the field of civil protection. Among other conclusions, the obtained risk governance profile highlight a relevant role of local government actors in the decision-making process, a low culture of multi-stakeholder participation\involvement, and infrequent and limited risk public communication. At the same time, it showed the interest manifested by the technicians of the local administrations focused on the decision on the spatial development, guaranteeing compliance with the legislation. The importance of the risk governance profile derives from the possibility it offers in the identification, evaluation, management and communication of risk, as well as a relevant basis for the development of a spatial decision making support system on the transformation of land uses that integrates the analysis of natural and technological risks.

KEYWORDS: risk governance profile; spatial planning; risk stakeholders.

1 INTRODUCTION

In Portugal, the emergency response continues to be based on Humanitarian Associations / Voluntary Firemen (Amaro, 2009), although Walker et al. (2010) identify a change, in the sense of a greater diversity of actors involved, in the development of new functions, stronger forms of collaboration and partnerships. In risk management, relations between different levels of the State play an increasingly important role, taking into account approaches of cooperation between national, regional and local stakeholders.

Recognizing for the Portuguese case, the current influence of the State in risk management, and the diversity of actors and interests involved in spatial planning (Mileu,2016), this article searches the way in which responsibility in risk management is distributed among government actors at their different levels (local, regional, national) and which actors and interests are involved? The answers to these questions will allow the identification of stakeholders, their relations and priorities (driving forces) in the land-use transformation and how risks are considered in decision-making.

Based on an adaptation of the framework proposed by Walker et al. (2013), this paper aims to define a risk governance profile in Portugal for hazards / risks with direct intervention in spatial planning. This model is based on several key characteristics identified in the governance literature as well as in specific works on risk governance and that allows in a simple way to determine the variability and dynamism of risk governance practice.

2 METHODOLOGICAL APPROACH FOR PROFILING RISK GOVERNANCE

Based on the risk governance framework proposed by Walker et al. (2013), a model based on the same eight key characteristics was adapted, namely the governance scale and its distribution between national (1), regional (2) and local levels (3), with a spectrum from weak to strong in each case; how much those at risk are expected to be responsible for protecting themselves, compared to how much responsibility rests with government (4); the extent and culture of stakeholder participation in the governance system (5), extending from high to low; the type of insurance provision in place, in terms of how much this is marketized and segmented according to level of risk (6); the extent of communication with the public about risks (7), extending from high to low; and the degree of balance between governance tasks and the availability of resources for such tasks to be carried out (8).

To get a risk governance profile in Portugal for hazards / risks with direct intervention in spatial planning a survey was used. The survey was developed on the online platform www.surveymonkey.com, and was sent to the target audience by e-mail, between January 19 and April 19, 2014 (it was available at https://en.surveymonkey.com/s/CYYTZ9V). The dissemination of the survey was carried out using a list of contacts and using the National Association of Portuguese Municipalities as a facilitator near the municipalities.

Unlike the model advocated by Walker et al. (2013), where a qualitative and non-measurable risk governance profile is chosen, the adaptation of the survey consider an evaluation scale between one and four.

3 APPLYING THE FRAMEWORK

3.1 THE STAKEHOLDERS

The identification of the different stakeholders involved in risk management was based on the information obtained from the literature review, analysis of the legislation and discussion with some of the stakeholders. As a result, 156 valid surveys where obtained, with a significant number of responses from the central and local government (59%) and from the general public (17%) (Figure 1).

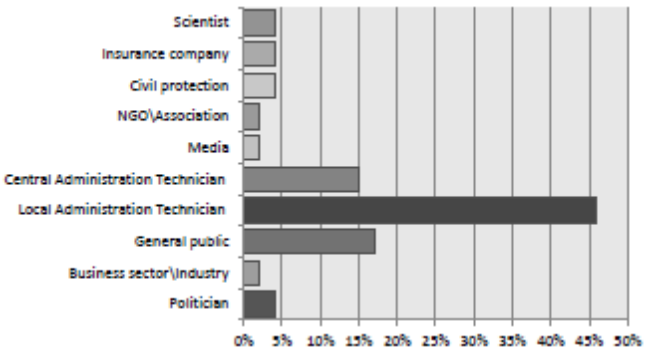

Figure 1 – Survey answers by stakeholder
Source: Survey

In spite of the interest and involvement of the different stakeholders in the management of risks, assume some volatility and different configurations, a question about the interest associated with spatial planning and\or risk management, was included in the survey. Table 1, adapted from Westen et al. (2011), is a summary of the stakeholder's involvement in risk management and results from the analysis of the responses of the stakeholder's to the different interests manifested in risk management.

Stakeholders	Interests manifested
Civil protection	Ensure adequate measures for disaster response.
Scientist	Develop scientific studies on hazards\risks and disseminate such studies to the community and administration.
Media	Publish information on disasters and their impacts.
Central Government Technician	Ensure compliance with the law.
Local Administration Technician	Support the decision about territory development in compliance with legislation.
NGO\Association	Promote environmental and sustainable development.
General public	Living in the desired location without restrictions.
Politician	Ensure people safety, do not cause controversy and maintain popularity.
Business sector\Industry	Ensure the development of the activity without restrictions.
Insurance Company	Sell insurance policies associated with the real value of risk and make profits.

Table 1 - Interests manifested by different stakeholders in risk management
Source: Survey

3.2 HAZARDS RISKS WITH DIRECT INTERVENTION IN SPATIAL PLANNING AT MUNICIPAL LEVEL

The examples of risk governance profiles presented by Walker et al. (2013) concern a particular natural hazard (floods) or a series of natural hazards (volcanism and earthquakes\landslides and earthquakes). The risk governance profile obtained from the survey concern to a set of hazards that have a common characteristic: their direct intervention in spatial planning. The hazards identified by the stakeholders in their evaluation, allow us to perceive the relevance of the different hazards in Portugal in spatial planning, even if influenced by interests and involvement (Figure 2). Considering the survey results, floods and forest fires assume greater importance, while the subset of other hazards, which included tsunamis or technological hazards, assumed less importance.

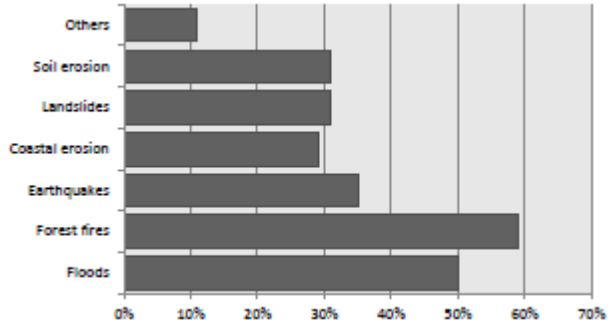

Figure 2 – Hazards considered by respondents
Source: Survey

3.3 PORTUGUESE (MUNICIPAL) RISK GOVERNANCE PROFILE

The first three questions in the survey assess how responsibility for risk management is distributed among government stakeholders at different levels (local, regional, national). The first question, addresses the "clear, well-specified and comprehensible national policy framework for risk-related issues", has an average score of 1.95 and can be classified as a weak political framework (Table 2).

1 Weak national policy framework	2	3	4 Strong national policy framework	Average
27,71% 23	49,40% 41	22,89% 19	0,00% 0	1,95

Table 2 – Survey results for risk governance key characteristic 1
Source: Survey

The second question assesses the “role of regional institutions in the implementation of national policies”, and registers an average of 3.0 (Table 3). Although there is no regional administrative level in Portugal (apart the autonomous regions), this assessment reflects the proximity and functions in the risk management and spatial planning by the deconcentrated services of the State, such as the departments of nature conservation and forests, administrations of river basins, regional emergency operations centers or commissions for regional coordination and development.

1 Weak role for regional institutions	2	3	4 Weak role for regional institutions	Average
4,82% 4	21,69% 18	42,17% 35	31,33% 26	3,00

Table 3 - Survey results for risk governance key characteristic 2
Source: Survey

Regarding the role of municipalities, the average score of 3.12 indicates the strong role of the municipal level in the response and prevention strategies in major disasters or catastrophes (Table 4). Municipalities in Portugal have strong responsibilities in the emergency response component. They are responsible for civil protection in their territory and in the prevention component, they have a major responsibility in the area of spatial planning.

1 Weak local\municipal role	2	3	4 Strong local\municipal role	Average
7,23% 6	16,87% 14	32,53% 27	43,37% 36	3,12

Table 4 - Survey results for risk governance key characteristic 3
Source: Survey

The risk individualization question assesses the responsibility on those at risk to protect themselves. The average of 2.94 reflects the expectation of the involvement of people and\or companies in their self-protection. However, the results show a high variability around the mean, which may reveal the primary role of the Central State and other entities involved in the activities related with emergency response and risk reduction (Table 5).

1 Minor responsibility on those at risk to protect themselves.	2	3	4 Minor responsibility on those at risk to protect themselves.	Average
8,43% 7	26,51% 22	27,71% 23	37,35% 31	2,94

Table 5 - Survey results for risk governance key characteristic 4
Source: Survey

The culture of participation\involvement for the different stakeholders in the risk decision-making process presents a high percentage (50%) of responses revealing a low participation culture and a relatively closed decision-making process (Table 6).

1 Weak culture of *multi-stakeholder participation*	2	3	4 Strong culture of multi-stakeholder participation	Average
32,53% 27	50,60% 42	13,25% 11	3,61% 3	1,88

Table 6 - Survey results for risk governance key characteristic 5
Source: Survey

The risk transfer to insurance companies is characterized by having a weak relationship with segmented and risk-oriented insurance. Despite the high level of responses (37%) corresponding to this assessment, it is possible to verify a set of responses in the opposite direction obtained from the insurance companies who participated in the survey (Table 7). The responses justify the high relationship to segmented and risk-oriented insurance related with the seismic risk. The seismic risk is an example of geographic segmentation for the insurance policies values in the national territory.

1 Low reliance on segmented and marketised insurance	2	3	4 High reliance on segmented and marketised insurance	Average
37,35% 31	30,12% 25	27,71% 23	4,82% 4	2,00

Table 7 - Survey results for risk governance key characteristic 6
Source: Survey

The public risk communication, presents an average evaluation of 2.04, denoting a significant communication frequency with the public (Table 8).

1 Very little public risk communication	2	3	4 Exensive little public risk communication	Average
28,92% 24	39,76% 33	30,12% 25	1,20% 1	2,04

Table 8 - Survey results for risk governance key characteristic 7
Source: Survey

The existence of resources in the entities responsible for risk management in relation to the associated performance presents a high percentage of responses (59%), reflecting an imbalance between the institutions available resources and effectiveness in the development of their competencies (Table 9).

1 Inbalance between governance tasks and available resources	2	3	4 Good balance between governance tasks and available resources	Average
20,48% 17	59,04% 49	20,48% 17	0,00% 0	2,00

Table 9 - Survey results for risk governance key characteristic 8
Source: Survey

4 CONCLUSIONS

Based on the survey results, Figure 3 illustrates the national risk governance profile for hazards with direct intervention in spatial planning. The result of this profile has a bias, associated with the fact that the sample had a large number of responses from local authorities. This high number of responses is due to the fact that the National Association of Portuguese Municipalities has been requested to collaborate and the questionnaire has been redistributed to all municipalities, and for this reason the analysis must consider this trend.

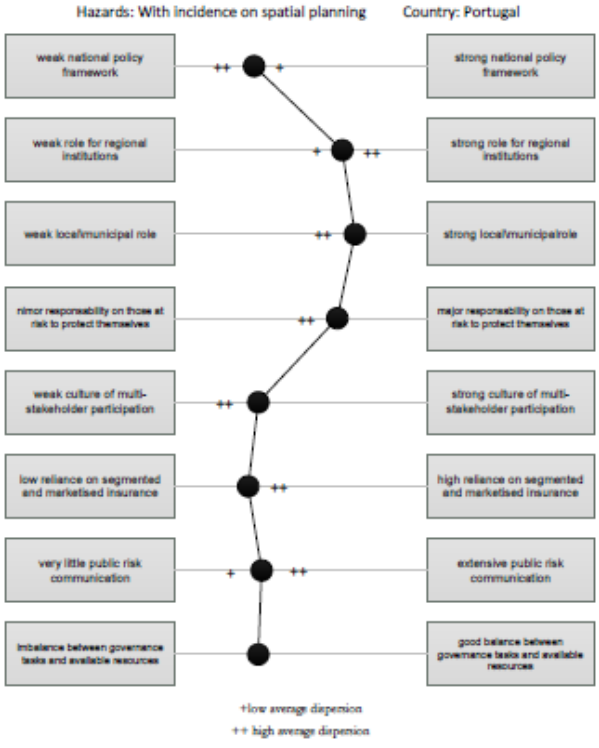

Figure 3 – Risk governance profile

In this schematic representation of risk governance, it's possible to observe the weak evaluation of the political and legislative framework at the national level, which is explained by the legislative dispersion in the risks domain and in a thematic segmentation of risk management. Regarding this evaluation and the lack of a formal regional administrative level (with the exception of the Autonomous Regions of Madeira and the Azores), the centralizing character of the State is confirmed through the evaluation of the deconcentrated services in the implementation of national policies, since they implement the State's governance approach and thereby segment geographically the state's public policies. The preventive component of risk management has a strong a municipal responsibility, while the functions related with the response component are associated to the Central State (eg medical emergency, security, civil protection). Related with risk management, the main functions of the Central State can be summarized in: the provision of scientific information on hazards (eg LNEC, LNEG), monitoring and safety of the main national equipment's and infrastructures (eg REFER, IP, LNEC), providing warnings and alerts (eg IPMA, ANPC), providing response when the municipal level response capacity is exceeded (eg ANPC), development of emergency and spatial plans (eg CCDR, DGT, ANPC) and giving financial support to municipalities and local entities through the state budget and European funds.

The risk preventive component presents a significant importance at municipal level. This importance is related with municipal spatial planning attributions. In the area of civil protection, the Mayor is responsible for the municipal civil protection policy, to trigger, on occurrence of a major accident or catastrophe, the civil protection actions of prevention, assistance and rehabilitation as well as to promote the elaboration of the municipal emergency plan, which defines the guidelines regarding the way the various agencies, services and structures involved in civil protection operations work. Regarding risk individualization, the risk governance profile shows the expectation of involving people and companies in their protection. The multi-stakeholder participation and participatory involvement of the actors involved in risk management is one of the aspects shown by the profile that has a greater consensus due to the weak participation and involvement of the different actors. The risk transfer assessment obtained in the risk governance profile show a weak relation between insurance and risk zoning, although this assessment is not corroborated by insurers, in particular the seismic hazard. The communication of public entities with the population on issues related to hazards\risks is characterized by being infrequent and limited. The last key feature of the governance profile concerns the existence of resources in the entities\agents responsible for risk management, and showed the underfunding of entities and an ineffective performance.

The importance of the risk governance profile for Portugal comes from the possibility of identification, evaluation, management and communication of risk. It can allow in the development of a decision support system (DSS), to identify the different actors, their relationships and priorities in the decision-making component on the transformation of land use, integrating the component of natural and technological risks analysis (Mileu, 2016). In this case, it showed the high interest of the local and central administration as actors in the decision-making process, despite the relationship between the two that can be sometimes classified as ambivalent.

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ID 1726 | STRENGTHENING THE CULTURE OF RESILIENCE IN URBAN SPACE VULNERABLE TO RECURRENT UNFAVOURABLE CLIMATIC PHENOMENA – EXPERIENCE EXCHANGE AIMED AT SOLUTIONS

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1 INTRODUCTION

The city of Petrópolis, situated in the serrana region of Rio de Janeiro State, is no exception to the rule when it comes to the population growth observed in most cities, and mainly in Brazil, where the urbanization rate today has reached around 80%. The phenomenon of urban growth is set against an absence of improvements in infrastructure that is detrimental to the quality of life of the citizens. Moreover, this has not even been the object of public policies aimed at avoiding the negative impacts on natural resources. On the contrary, these are becoming scarce due to the disorderly nature of the urban expansion on the periphery (Baptista and Calijuri, 2007).

This phenomenon is also present in the city of Amadora, situated in the large metropolitan area of Lisbon. It is the fourth most populated city in Portugal. In the 60s, Amadora changed from being an industrial and residential suburb to a suburban city. As a consequence, the population flow and its concentration in the territory of Amadora – as well as in the surrounding area – have led to high pressure on urban space, the public services, and, of course, the organizations and institutions in charge of administering them. This condition configures a crisis of urban growth (Nunes, 2012).

Although the cities present specificities in their formation and urban layout, the cultures coexist and feel the same socio-environmental impacts attributed to urban densification, aggravated by climate change, which, as a consequence, generate natural catastrophes. In their search for solutions and alternatives, we have adhered to the U.N. international campaign, Constructing Resilient Cities 2010-2015, which addresses issues of local governance and proposes development of assets of good practices that would make all communities more resilient after facing disaster situations.

Both seek to articulate the managerial instruments of prevention with the urban planning, as well as the information programmes, mobilisation and awareness with the aim of reducing disaster risk.

Thus, the objective of this study is to verify possible solutions to minimize the impacts of urban flooding and reflect on the importance of the strengthening of the culture of resilience in the alternative practices of local communities, as well as considering assumption of a philosophical posture towards the common well-being of the world community while acting locally.

At this point, it was considered basic to include a Spiegelberg (1971, p. 522) presentation of a Gabriel Marcel's (195-), the Christian Existentialist, as well as Merleau-Ponty's (1996) expression to describe the relationship subject-world density - "être-au-monde" - which clarifies the inextricable: the man insertion in the world and the world presence on man. In this sense the phenomenological posture demands that relationship also is to be assumed "as a life-style" (Fraga, 2009, p. 114) what is obviously fundamental for the concretization of the proposition presented above.

2 METHODOLOGY

In opting for the case of Amadora as a reference to an analysis of the Brazilian reality, it is prudent and could be productive, due to the cultural proximity to Brazil's cultural origin and the logic of Portuguese language, as, albeit situated on the European continent, Portugal inevitably left undeniable cultural traits (Lima et al., 2016, p. 896).

Upon embarking on this study, a query on the part of Dartigues emerged as an alert regarding its development. He asked: "would it be possible to conceive of dignified humanity without philosophers?" (Dartigues, 1973, p. 89). For the second time, this provocation, stimulating in its reflections about the environmental theme, motivated a second question, one regarding management: would it be sufficient to have a theoretical base for management practice from which philosophical fundamentals were lacking?

In view of the theme's orientation towards the social, fundamental phenomenological philosophy elements at the base of this discussion were considered to be a necessity. This is because Phenomenology, despite making clear its own conception of method – not a path to be followed a priori, but that of the things themselves, in an insertion into the movement of that which happens, distinguishes the traditional justification of the action from its legitimation in the world of the living, implying imbrication between fact and value (Fraga, 2009, p. 44). Besides this,

> *"The possibility of dialogue between the Philosophy of Experience and Phenomenology is important […] because it makes the criterion of Relevance appear, which reveals the philosophical meaning of the administrative action. This, as well as being intentional, conscious and essential to the human mind, becomes more comprehensive than mere justification of the results, seeking legitimation only after consideration of the implications of its application to practice, in the real world." (Fraga, 2009, p. 44).*

Therefore, this legitimate self-assertion in the face of the action coexisting authentically in common in resilience, reveals the synthesis aspired by Phenomenology and the Philosophy of Experience: result and consequence taken as universally indissociable in the discourse and practice in the action. This recognisably ambitious proposal , given the fragility of the ethical posture in day-to-day human life, is the aspiration of this study/proposal.

3 FROM THE URBAN SPECIFICITIES TO THE GENERAL NOTION

There are innumerable factors that interfere with the result of construction in city space, such as the configuration of the site, the different interests on the part of the agents and actors, along with the local culture, which directly interfere with the appropriation of the place.

In 1846, the German engineer, Júlio Frederico Koeler presented the project for the Vila Imperial de Petrópolis, which was in a tentacular form, accompanying the courses of the rivers and streams, and divided into a dozen blocks around the centre (Figure 1).

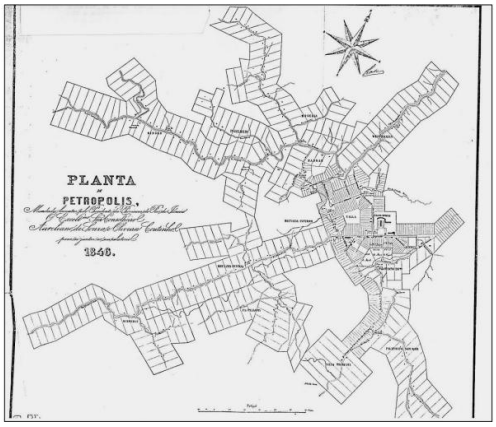

Figure 1 - Plant of Petrópolis (1846)
Source: Souza, 1995

Observing the project and associating it to the decree in the period, an urbanistic plan was contemplated, with clear indications of zoning, roadway hierarchisation, occupation and construction norms, differentiated land division, environmental protection, water supply and sewage disposal. Among the actions of Barão de Mauá, the introduction of railways marked an emblematic historical period. The first railway in Brazil, inaugurated in 1854, linked the port, Estrela on Guanabara Bay to the foot of the Serra de Petrópolis mountain range (Souza, 1995). Furthermore, considering the topography of the place with its geological

and geotechnical peculiarities, the characteristics of the Mata Atlântica forest, and the course, volume, etc. of the rivers involved, we conclude that the plan was perfectly adequate for the natural conditions of the site, and, therefore, devised founded on scientific premises (Souza, 1995).

Regarding the design and use of the centre, the relation between the roadway system with the Serra da Estrela highway, the categories, dimensions and destinations of the periods, indicate there was intentionality in the urban design. The origin of the city of Petrópolis featured a path that did not follow the general urbanistic pattern, resembling a chessboard, not even the colonial Portuguese pattern with an irregular path, with rivers in the background of the plots of land. Originally it was destined to be a work of imperial determination, a scientific idealisation of European construction (Souza, 1995).

With the accelerated urbanisation process as of the 70s, the disobedience of the environmental protection and preservation laws have increased the magnitude of the impacts to extreme levels (Figure 6). The population increase has led to a greater quantity of sewage dumped into water bodies. As the land adjacent to the rivers had already been occupied, concentration of population in the central area of the city and valley bottoms has led to a great occupation of the surrounding region, driven by property speculation that has neglected the non-occupation distances established by law (Baptista and Calijuri, 2007).

The municipality of Amadora (1960-1974), situated in Lisbon's first expansion zone, had the following principal urban growth inducing elements:

> *"The railway line, the roadway network (in particular the royal highways and, later, the regional network), plus the creation of a vast area adjacent to Lisbon where large manufacturing industries have been established (Venda Nova). Thus, the proximity and easy access to Lisbon, along with the exit of residents from the capital due to the expansion of tertiary activities, are factors that explain the growth in demand for housing and installation of economic activities in Amadora." (Castro, 2016, p. 13). (Figure 2)*

Figure 2 - Map of Amadora, area adjacent to Lisbon
Source: Google Maps, 2016

In this way, Amadora rapidly constituted Lisbon's most important suburb – notably becoming the fifth largest housing nucleus in the country (Salgueiro, 1987, p. 132) in 1960. The case of Amadora is significant in terms of how suburbanisation constituted the most important process of population redistribution in the Lisbon agglomeration in the 50s, 60s and 70s (Nunes, p. 124-125) – akin to the main European cities (Champion, 2001).

The specificity of the Lisbon Metropolitan Area overlapped, among others, phenomena like the suburbanisation and periurbanisation; the successive diversified flows of immigrants; the urbanisation and rehabilitation of the historic districts (Mendes, 2008); the deindustrialization and industrial relocation; the deconcentration of economic activities and litoralisation linked to tourism and leisure by means of notable improvements in accessibility (Castro, 2016).

Among the elements considered in the physical formation of these cities, one may notice that the natural geographical characteristics are not addressed in a consistent manner, and the site becomes the preponderant articulating component between nature and the city. Some scholars of urban form perceive the site as a product of articulation of the parts that form the natural environment, such as water courses,

lakes, oceans, relief and vegetation, but each of these parts is not studied separately. Besides this, both evolve differences of hierarchy and status, and the latter are established as constitutive of the different meanings attributed to the suburban experience.

The site is perceived as the primordial element in the spatial configuration of the urban form. The elements that comprise the space, such as roadways, plots of land, buildings and the possible arrangements among them, give rise to other elements, such as blocks and their layout, which comprise various models and give rise to cities. Moreover, it is possible to identify the ways in which they will be vulnerable, and also develop solutions to minimize the impacts of natural catastrophes.

In parallel, one must also observe that cities present other systems of meanings, other spheres and nuances of social practices. Drawing from philosophical thought, according to Wittgenstein, the discourse of the city has its particular language games that differ in their logic and reach from those manifested at the linguistic level, and within this, in their distinct thematic plans. On the other hand, Victor Hugo homologated the city as a book (Margulis, 2009, p. 89)

For Barthes (1990, p. 260), “the city is a discourse, and this is truly a language: the city speaks to its inhabitants.” The city does not only function, but also communicates. Based on this presupposition, the cities are an immense laboratory of trial and error, success and failure, in terms of construction and urban design. It is in this laboratory that the urban planning should learn, devise and test its theories (Jacobs, 2000). Therefore, more than knowing how to plan, it is important to know how to interpret the lexical polysemy of the city, which houses the old and the contemporary, whose existence is complex and dense.

4 THE URBAN DRAINAGE PLAN: PROBLEM AND SOLUTIONS

A significant part of the impacts caused by natural catastrophes are accentuated in urban areas that present an accelerated, disorderly urbanisation process, without planning and implementation of actions that are conducive to adequate land occupation. In the absence of norms that regulate such occupation, it is inevitable that large areas become impermeable, due to buildings, pavements, paved streets, and the urban densification itself.

Compensatory drainage measures, such as: infiltration trenches, permeable paving, and micro reservoirs for runoff containment, have proven to be good control instruments for surface drainage. Their use has become possible through urban drainage planning that has begun to oblige new constructions to adopt alternative means of urban flood control (Souza and Goldenfum, 2001).

In an attempt to minimize the effects of flooding caused by heavy rain, the cities of Petrópolis and Amadora have identified a need to implement urban drainage plans, as set out below.

Since the natural catastrophes suffered in 2011 and 2013, the city of Petrópolis still awaits release of the Federal and State funds to carry out the works that are required, including those to minimize the impact of heavy rains like those suffered in January this year.

As rightly pointed out by the Mayor, Rubens Bomtempo, “rainfall on this scale is not just a problem for the municipality, but for the whole National Civil Defence System. It is necessary for everyone to play a part, but this is not happening. Throughout 2015, for example, we requested INEA (Instituto Estadual do Ambiente) [State Environment Institute] to dredge our city's rivers, but nothing has been done till today.” (Prefeitura de Petrópolis, 2016).

In 2013, the Ministério Público [Public Ministry] filed a Public Civil Action so that Petrópolis City Hall, the Rio de Janeiro State Government and INEA would execute works to prevent the Quitandinha and Piabanha rivers from overflowing, contemplating an engineering project and reforestation of the respective riverbanks. Besides this, it requested proposals to solve the problem of unstable mountainsides in the municipality, such as slope containment works and removal of residents from risk areas (Jornal do Brasil, 2013).

The difficulty in abiding by rules, norms and procedures that are not necessarily adequate for the cultural peculiarities, or, as in the case of the Brazilian public administration, considering that the public environment possibly contains traces of patrimonialism, and does not possess adequate material

conditions to execute the scheduled tasks, opens up a path for formalism to arise." (Lima et al., 2016, p. 896), that is, a certain type of diversion for the purpose of pretending to do.

It is important to mention that there is occupation of a great part of the Quitandinha river basin, the result of the growth experienced in the city over the last few decades. "This expansion has contributed to the aggravation of the drainage conditions in the basin, such as increasing ground impermeability that leads to greater potential for water courses to overflow. These events have become progressively more frequent." (Amaral et al., 2015, p. 2).

Finally, in accordance with the Municipal Basic Sanitation Plan for the city in question, improvements are necessary in the infrastructure and operational installations of drinking water, sewage, urban cleaning and handling of solid residues, as well as drainage and handling of urban rainwater.

In 2008, the Lisbon City Hall approved a drainage plan that would provide for, among other infrastructure, the construction of a tunnel between Martim Moniz and Santa Apolónia to divert excess river flows that had frequently caused inundation of the squares, Praça da Figueira and Terreiro do Paço (Publico, 2014.)

After approval, "the development of the Plan was concluded, in effect constituting a 20-year planning instrument for the city's drainage network", covering an area of 10,282 hectares, which, according to the proposal, included the municipality of Lisbon and parts of the Amadora, Oeiras, Odivelas and Loures municipalities. The project would also involve flood control in the Alcântara basin, construction of a reservoir between Benfica and Campolide, and another in Avenidas Novas (Publico, 2014).

Besides this, the Oeiras and Amadora municipal chambers, respectively, by means of Proposta de Deliberação [Proposed Deliberation] no. 109 - CMO, and no. 73 - CMA, both dated 24th February 2016, unanimously decided to ratify the decision of the Conselho de Administração dos Serviços Intermunicipalizados de Água e Saneamento [Administrative Board of the Intermunicipal Water and Sanitation] of the Oeiras and Amadora municipalities, thus commencing the procedure to create a project (Projeto de Regulamento de Drenagem de Águas Residuais dos Serviços Intermunicipalizados de Água e Saneamento dos Municípios de Oeiras e Amadora) to regulate the drainage of residual waters (Câmara Municipal de Amadora, 2016).

Based on the above, it is possible to verify that the application of urban drainage may be as much by means of structural measures as by non-structural ones, taking into account the premise that intervention must begin in the upper reaches of rivers, thereby increasing the effectiveness of the drainage and reducing the possibility of floods in other places downstream.

For the sake of clarification, the non-structural actions seek to discipline territorial occupation, people's consumer behaviour and economic activities. Considering those most adopted, the non-structural measures can be grouped as follows: actions to regulate land use and occupation; environmental education aimed at control of diffuse pollution, erosion and waste; flood insurance; flood forecast and warning systems (Canholi, 2014).

By means of delimitation of areas subject to flooding along with risk assessment, it is possible to establish zoning and respective regulation regarding construction, and also eventual individual protection works (such as installation of panel barriers, watertight doors, and others) to be included in existing constructions.

The viability of the adjustments by means of hydraulic and soil use modelling is a way of mitigating the impact of the urbanization process, at the same time that an attempt is made to, for example, restore the natural hydrological conditions of the rivers. It also requires use of the peak rainfall, not only its diversion. Therefore, in places where such systems are applied, planning must be integrated with the urban growth, that is, with the urban landscape (Gonzalez, 2014).

According to Pompêo (2000), sustainable urban drainage presupposes integration of water in the urban environment, and its synchronisation with the hydrological cycle, taking into consideration the ecological, environmental and landscape aspects along with leisure opportunities.

Such works may not put an end to flooding, but will probably reduce their frequency and minimize their effects. In this sense, it is always valid to seek alternatives for cities and their inhabitants to better resist natural catastrophes and be more resilient.

5 THE CULTURE OF RESILIENCE AND ITS PARTICIPATIVE PRACTICES

As Lefebvre (2001, p. 113) rightly observed, “only groups, classes or fractions of social classes capable of revolutionary initiatives can undertake, and fully carry out, solutions to urban problems; with these social and political forces, city renewal becomes the work.”

The relevance of the human in the results of experience is the meaning sought by philosophical positions, implying engaged self-determination and profound discussions about the issue of the other end of the social. “The relevance is justly the criterion whose level in administrative action, in being more comprehensive, […] considers the consequences of this action for the human.” (FRAGA, p. 44). This is irrespective of the formal governmental administration or initiatives taken by private organisations, or even of isolated action performed by small neighbourhood groups, since the human being will always be involved.

In Petrópolis, there is an organization called Núcleos Comunitários de Defesa Civil (NUDECS) [Community Civil Defence Nuclei], formed of residents trained by the City Hall to act as volunteers in the prevention of natural catastrophes.

Since 2013, 500 have been trained for the 54 nuclei established. Furthermore, a Comitê de Ações Emergenciais [Emergency Action Committee] has been created, its purpose being to debate what is being done to render Petrópolis safer with regard to the heavy summer rains. Another mobilisation initiative of the local community is Projeto Fortalecendo a Resiliência aos Desastres [Strengthening Resilience to Disasters Project], committees for school safety of formed in schools with the aim of presenting the basic concepts of what constitutes risk (Prefeitura de Petrópolis, 2017).

Faced with delay in the drainage works for the Quitandinha and Piabanha rivers, Petrópolis shopkeepers have developed a culture of resilience in order to prevent floodwater invading their stores. It is observed that increased awareness of risk leads to investment in protection to safeguard against loss due to the rains.

To illustrate the above, we highlight the initiative of two local shop owners. One had always had his shop, situated in Rua Tereza, invaded by water whenever the Quitandinha river overflowed. He used to attach quite a low panel barrier, but, after the 2006 flood event, he decided to increase the height to 1.20m (Figure 3).

Figure 3: Ever higher flood levels demand ever higher barriers. Source: Globo/G1, 2016.
Figure 4: Shop front flood barrier wall 2m high. Source: Globo/G1, 2016.

After 30 years, having suffered six floods, in each incurring a loss estimated at R$ 50 thousand, another storekeeper built a containment wall almost 2m in height, an investment worth over R$ 10 thousand (Figure 4).

Based on experience and increased risk awareness, as a response to minimize the problem, shopkeepers and community representatives, in the face of the fragility of public policies, have taken upon themselves the responsibility and the decision-making power, thereby strengthening their culture of resilience.

In 2017, the Petrópolis City Hall approved Projeto Calçada Limpa [Clean Pavement Project], which stimulated the local commerce to place refuse collection bins in front of their premises, including separation of organic waste and recyclables. So as to ensure participation of these businessmen, an information campaign was also conducted.

The local councillor, who presented the bill of law for this project, stresses the following benefits: “As we live in a city with rugged terrain that is detrimental to us, we need to be very careful about our rubbish. So this project will aid conservation of the environment and promote public health, given that it will avoid disease outbreaks, avoid obstruction of street drains that relieve runoff and flooding.” (Diário de Petrópolis, 2017). This responsibility is also attributed to the shopkeepers and other members of the local community. It is worth remembering that these are alternative practices to mitigate the effects of heavy rain, but it is vital that there be greater mobilization and partnership on the part of the public authorities.

Based on the Campanha Construindo Cidades Resilientes [Constructing Resilient Cities Campaign], the city of Amadora, wishing to place emphasis on the local level, launched the so-called Local Campaign, “Sempre em Movimento, Amadora é Resiliente” [Always on the Move, Amadora is Resilient] to run from 2010 to 2015. The Local Campaign team mobilised the diverse stakeholders (municipal services, local agents, civil society groups, universities and specialised organisations, offering them partnerships and local alliances. Several workshops and public sessions were organised to explain the benefits and the commitments necessary to guarantee a more resilient community. This campaign accumulated over 30 stakeholders, and there was intense mobilisation (Carvalho et al., 2013).

Social networks have been remarkable in strengthening the culture of resilience: Amadora Resiliente (Facebook) provides information ranging from how to proceed in case of heavy rain to techno-operational communications from the Instituto de Meterologia YouTube [YouTube Meteorological Institute] on how to reduce disaster risk on the municipal scale; Canal Amadora Resiliente (YouTube channel) is the audio-visual space of the Making Cities Resilient Campaign – Amadora and the Projeto Amadora Educa [Amadora Educational Project] (Figure 5).

Figure 5: Amadora Educa 2016
Source: MCPC of Amadora, 2016

The relevance of the human in the results of experience is the meaning sought by philosophical positions, implying engaged self-determination and profound discussions about the issue of the other end of the social. Turing back to relevance it is important to emphasize its key to relevance, according to the posture that aggregates the phenomenological essence to the philosophical experience of John Dewey (1979) is the consideration of the consequences of the action as inseparable from the result, at any level or in any situation.

It is perceived, therefore, that the resilient city, in the domain of natural catastrophes, has a greater capacity for preparation, adaptation, anticipation, learning and self-organisation due to external shocks (Santos, 2009).

6 CONSIDERATIONS

Reflecting on Dartigues (1973), perceiving that "the relationship of each person with the world is as singular as each person", clarifies that there is mutual enrichment among the multiplicities of singularities in the ordinary world. It makes one see that the posture of the agent in the administrative action may strengthen authentic sharing towards participative administration, broadening its possibilities, "[…] not only based on universal abstract principles, but also on resumption of co-humanity with "mutual respect" through "co-responsibility", concretely among neighbours and public and private administrators in the cities." (Dartigues, p. 151).

They may be considered alternative multipliers of the good practices implemented, as of the moment that these communication channels and interaction can amplify the number of citizens with knowledge of self-protection measures, besides the awareness and participation of the various community stakeholders in determining strategies to reduce disaster risks with planning and increased awareness.

Finally, it shows the importance of care in its various concretisations, understandable by all and capable of inspiring fundamental values and attitudes that strengthen the culture of resilience, simultaneously contributing to the self-protection of communities in situations of disaster risk, considering the community of the world in authentic co-humanity, regardless of whether a situation experienced is easy to cope with or challenging, accompanied by risk of major disaster.

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ID 1747 | INVESTIGATING THE ROLE OF RESILIENCE THEORY IN ASSESSING SUSTAINABILITY OF COASTAL TOURISM DESTINATIONS: THE CASE STUDY OF NEW ZEALAND

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1 INTRODUCTION

The connection between resilience theories and human intervention methods such as coastal management and tourism activities was and remains to be an interest of many researchers in local and international scales. The interest of researchers arises from the growing environmental threats to coastal areas and the importance of tourism in the local and global economies. Their work has focused in two main directions. One direction has focused on measuring ways to decrease the negative effects of tourism on ecological systems. The second direction has been to investigate better ways of incorporating tourism activities within coastal management plans and increasing tourism's contribution to coastal resilience rather than focusing only on reducing its impact on the environment.

Harvey (2006) highlighted that there is a major knowledge gap in the study of the ability of coastal megacities and small communities in the Asia-Pacific region regarding adaptation to changes. He recommends that giving more focus towards developing planning systems, assessment methods, and coastal management techniques could fill such a gap. Pisano (2014) highlighted the need to incorporate the resilience concept when dealing with our vulnerable systems including coastal areas.

Luthe and Wyss (2014) highlighted the knowledge gap in the study of the relationship between tourism governance and resilience and emphasised that resilience has an explanatory power to clarify ways that tourism activities could adapt and even transform under various pressures. Luthe and Wyss (2014) also highlighted how tourism systems could be approached as interrelated Socio-Economic-Ecological Systems (SEES) and that developing resilience in such systems would increase their capacity to deal with stresses while maintaining the stability of a tourism-related economy and at the same time ensuring the diversity needed for innovation and future development. They discussed how current assessments of functional tourism networks complement resilience understanding and how tourism systems could adapt with both slow and prompt change processes. In the New Zealand context, there is a knowledge gap regarding assessing the resilience of coastal tourism destinations. The attention has been given to evaluating the socio-economic and environmental impacts of tourism in coastal destinations in relationship to climate change.

Blackett et al. (2010) have focused on coastal communities' efforts in adapting to climate change effects, using Coromandel Peninsula as a case study of NZ coastal tourism destinations. Other researchers such as Becken et al. (2010) have analysed the activity in itself from an economic viewpoint and through visitor forecasting. In their studies, they investigated the effects of marine farming and fishing on the destinations, as well as using surveys to determine weather and climate effects on tourism, by tourist satisfaction.

Despite these valuable studies and the importance of this topic both in international and national levels, these researchers highlighted the existing knowledge gap and the lack of studies on an integrated assessment and locally developed resilience indicators that assess coastal tourism destinations and their ability to achieve sustainable outcomes, specifically in the New Zealand context. This research goal makes it clear that there is a need for research that makes a connection between resilience theory and multi-dimensional activities such as tourism especially when located in complex systems such as coastal areas.

For the reasons above, this paper investigates the ability of socio-ecological resilience analysis to assess coastal tourism destinations, and how these destinations could achieve sustainable outcomes. This paper is based on the findings from a doctoral research undertook a preliminary assessment using three NZ case studies and uses them to test the proposed mechanism for assessing coastal tourism destinations. Drawing from the research goal, as shown in Figure 1, there is a complex triangular relationship between the three main components of research, coastal tourism activities, socio-ecological resilience, and planning practice within New Zealand as the research case study.

There are three linkages between these research components; one is the linkage between socio-ecological resilience and coastal tourism activities, which is described by the indicators assessing coastal tourism destinations. The second linkage is the connection between tourism activities and the NZ planning practice, which helps in understanding the current situation of tourism activities, measuring their resilience, and perceiving their future trends. The last linkage is coastal management with its different techniques, which represents the intersection area between socio-ecological resilience theory and NZ planning practice Coastal management techniques help in identifying challenges facing tourism destinations and methods for dealing with these challenges.

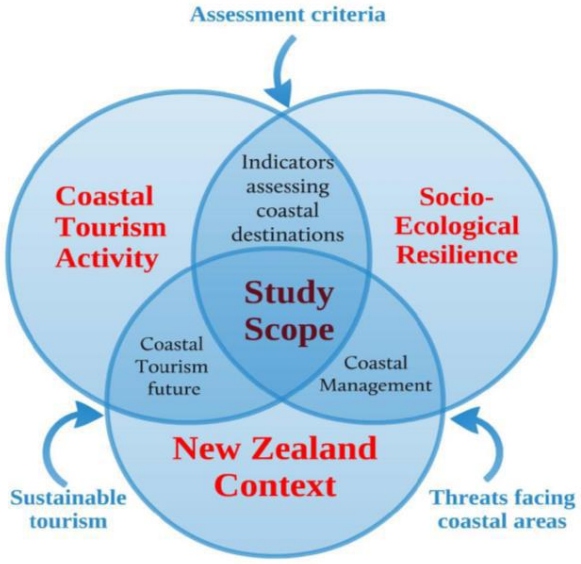

Figure 1 – Paper Scope

Therefore, through the course of this paper, these components will be discussed starting with clarifying the relationship between resilience and sustainability followed by explanation of the New Zealand context and responsibilities of different agencies in managing coastal areas.

This is followed by explaining the research methodology that this paper is based on, and then the main discussion of results extracted from the data analysis and fieldwork.

2 SUSTAINABLE DEVELOPMENT (SD) AND RESILIENCE

For a successful assessment of complex systems such as coastal destinations, the relationship between sustainability and resilience and the difference between these two concepts needs to be identified. The resilience concept has a variety of definitions. Some researchers have debated the definition of this concept and its vagueness.

Olsson et al. (2015) were one group of researchers who emphasised the notion of resilience and found connections between the different definitions. Table 1 shows Olsson et al. (2015) understanding of previous resilience definitions by different scholars. They categorised them into definitions with a descriptive attribute indicating a neutrality character of resilience versus other definitions with a prescriptive attribute where resilience is considered as a "good" outcome.

Meanings	Attributes	
	Descriptive— neutral (N)	Prescriptive— good (G)
Bounce back (BB)	BB-N	BB-G
	Holling, (1973) Resilience and stability of ecological systems	Perrings (1998). Introduction: Resilience and sustainable development
Bounce back and transform (BB-T)	BB-T-N	BB-T-G
	Walker *et al.* (2006). A handful of heuristics and some propositions for understanding resilience in socio-ecological systems.	Folke *et al.* (2010). Resilience thinking: integrating resilience, adaptability, and transformability

Table 1 - Typology of resilience definitions in ecology and social-ecological systems from Olsson et al. (2015)

Strunz (2012) and Derissen et al. (2011) attempted to clarify the difference between the concepts of SD and resilience by considering sustainability and SD as a normative target, a goal, and the desired status, while resilience is an analysis concept that deals with change.

Cote and Nightingale (2013) explained the variation between the two concepts by stating that conventional human-environment analyses emphasise the maximisation of sustainable outputs and increase the capacity of institutions to manage "undesired" change and return to an initial stable state. Fath et al. (2015) also maintained that the goal of sustainability is for systems to persist in delivering their function over an infinite time horizon. Based on this definition, resilience is a tool to achieve sustainability; resilience aims to maintain a system's ability to recover from disturbances and continue delivering its services.

In relation to this research, the complexity in coastal areas is reflected in the relationship between SD and resilience, with examples of overlap in some aspects. For example, environmental sustainability has a direct connection with integrated coastal management, when the coastal area is managed in an integrated framework; this improves the process of managing the area, which will have a positive effect on the environmental sustainability of the area, and could help in enhancing the resilience of socio-ecological systems.

However, some areas do not necessarily relate directly to each other, such as the relationship between the economic sustainability of tourism activities and the resilience of a socio-ecological system. For example, the tourism activity in the area could be economically sustainable with a continuous and rapid increase of tourists while the ecological systems specifically (and coastal resources in general) face continuous degradation that negatively affects resilience. This degradation could be caused by many factors, including excessive use by tourists, the absence of an adaptive management framework, and lack of conservation projects. Whether the factors are generic or case study specific is discussed later in this paper.

Ultimately, there is a difference between resilience and sustainability. For example, a system could be resilient to different changes and adapt without any change in its characteristics. However, this system may not be sustainable on its own. It is evident, therefore, that there is a significant difference between SD as a target, and resilience and transformational change as approaches to explain the system status now and in the future. This difference is significant in this research as it uses indicators and resilience assessment to evaluate the sustainability of an area.

Therefore, according to the discussion in this section, sustainability as a concept as described by (WCED, 1987), Clifton (2010), Cote and Nightingale (2013) and Fath et al. (2015) is a desired status. This status

aims to create a balance between the environmental, social, and economic needs of communities in the present and preserve resources for the future. However, sustainability in itself is not a tool, and it does generate its tools.

In the other hand, resilience as a concept means as described by Walker et al. (2004), Brand and Jax (2007) as the system ability to maintain performing its functions and reorganise itself after any disturbances. Therefore, it is dealing with adaptability to change and dealing with different thresholds and pressures either internal or external. Resilience concept is a practical tool used to assess different complex systems. The resilience assessment process aims towards explaining the status of the systems and their ability to deal with changes with consideration to the potential outcomes.

The above discussion emphasised the need to understand the concept of resilience with its different definitions and its relationship with sustainable development. It critiques the current reformist approach used to deal with development and points out that the challenges faced in achieving sustainable development, along with the increasing complexity of our socio-ecological systems, are all factors that support the need to use other approaches. The transformational approach that is based on the eco-centric paradigm states that social systems are part of nature and there is no separation between social and ecological worlds, and consider the characteristics of both worlds.

This approach aligns with the concept of socio-ecological/ evolutionary resilience where a system tries to avoid disturbance, but if it occurs, the system adapts to it and if necessary transforms to a more desired status. Where socio-ecological resilience under a transformational approach is a way to understand the complexity of socio-ecological systems and facilitate the assessment process of the systems as combined, interconnected entities.

It is dynamic enough to deal with changes that could eventually lead to a sustainable outcome rather than narrowing the understanding of resilience as a return to equilibrium after a shock regardless of whether that equilibrium is desirable.

Therefore, the discussion established the differences between the terms sustainable and resilient. On the one hand, SD is normative, a target which systems should reach. To achieve such a target, organisations/ stakeholders/ planners should define the indicators that measure achievement of such a “desirable” status, as well as the measures needed to manage the complex systems in such a manner that they attain that status. On the other hand, resilience is a tool that allows researchers to achieve the following tasks. Firstly, it leads to an understanding of the complexity of these systems. Secondly, it leads to interaction with a change in a manner that allows innovation and creativity. Thirdly, it identifies the crisis/ disturbances that occur in a system, and the system ability to transform crisis into opportunities for transformation and eventually for the achievement of a more desirable status.

A system could be resilient against shocks/ changes, but that does not mean it is a sustainable system. For example, dictatorships could be resilient systems, but that is not to say that they are sustainable. Systems may survive shocks, but they might not be able to maintain a balance between the current needs of the society and the preservation of resources for future generations’ needs, which is the core of SD. However, the systems do not stand-alone or exist in a vacuum; rather, they are firmly affected by other systems. Therefore, the concept of panarchy was also discussed, where cross-scale relationships between different systems were reviewed and explained, to be used later in this research to explain the changes happening in the case studies. The following section will describe the New Zealand context and its hierarchy.

3 THE NEW ZEALAND CONTEXT

New Zealand as the research case study is a South Pacific country that comprises an archipelago of 33 islands, with two main islands, the North Island or “Te Ika-a-Māui,” and the South Island or “Te Waipounamu,” with a total population of 4,242,048 residents according to the latest statistics (Statistics NZ, 2013). About 85-90% of the urbanised New Zealand communities are located within 10 km of a coastal area (Ministry for the Environment, 2009). Environmentally, New Zealand has New Zealand has around 18, 218 km of coastline, and the world’s sixth largest marine area at 4, 400, 000 km2. Due to the importance of the coastal environment, it needs to be clearly defined. However, the NZ legislative system

does not provide a definition of it. The Planning Tribunal stated, “What constitutes the coastal environment will vary from place to place and according to the position from which a place is viewed, where there are hills behind the coast, it will generally extend up to the dominant ridge behind the coast” (Brake and Peart, 2013).

Policy 1 of the NZCPS emphasises on the same perspective, stating that “recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities”(DOC, 2010, P. 11). The same policy also explains the extent and characteristics of the coastal environment, which include the coastal marine area and the islands within it. The explanation extends to areas where coastal processes occur and those at risk from coastal hazards, coastal vegetation, and habitat of indigenous coastal species, and elements of the natural landscape (DOC, 2010, P. 11). The coastal environment also includes the items of historical heritage in the coastal marine area, inter-related coastal marine and terrestrial systems, and factors of infrastructure that have modified the coastal environment (DOC, 2010, P. 11).

The RMA (1991, Part 1) also defined the coastal marine area, as “The foreshore, seabed, and coastal water, and the air space above the water - (a) of which the seaward boundary is the outer limits of the territorial sea, (b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river” (Section 2).

The importance of reviewing these definitions of coastal environment is that to assess coastal tourism destinations, the boundaries of the coast need to be clarified according to the NZ context along with understanding the NZ legislative system regulating the coastal marine area and any development occurring inside it. The legislative system depends on a hierarchy of statutes covering different levels as shown in Figure 2. This hierarchy starts with the Resource Management Act 1991 as the main statute regulating the use and development of all resources including the coastal areas at the national level.

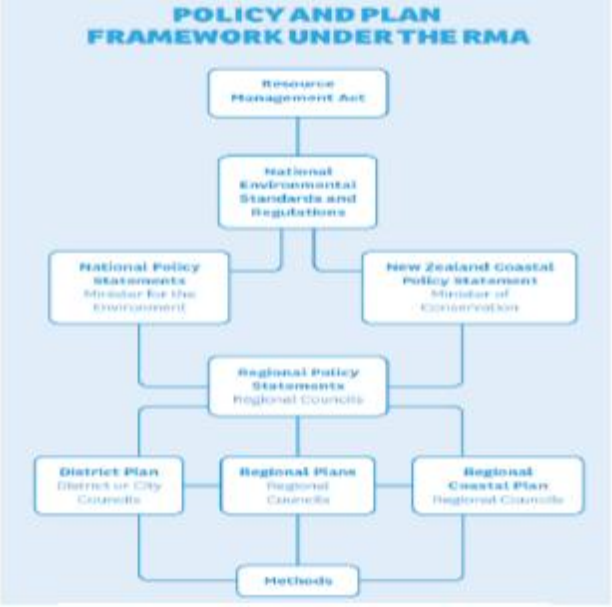

Figure 2: Policies and plans regulating coastal area under RMA. Source: ECAN (2013)

Under the RMA come the national environmental standards and the National Policy Statements including the New Zealand Coastal Policy Statement (NZCPS), which are also statutory documents at the national level. The regional policy statements are the next level of documents at the regional level, and they must achieve the purpose of the RMA as stated in (Part 5, Section 59), and that includes complying with the national policy statements including NZCPS.

Then the hierarchy continues to the next level through regional plans which as stated in the RMA (1991, Part 5, Section 63) should achieve the purpose of the act. The aim of the regional coastal plans as indicated in Section 63 of the RMA is to assist the regional plans in conjunction with the Minster of Conservation. Then comes the district plans that need to give effect to all the higher acts and national

policies and assist territorial authorities to carry out their functions as stated in RMA (1991, Part 5, Section 73).

3.1 AGENCIES' ROLES IN NEW ZEALAND COASTAL MANAGEMENT

After explaining the New Zeland legislative structure, it is important to account for the role of different agencies in managing the coastal areas to clarify an overlap of responsibilities and the power to make decisions regarding preservation of coastal resources or permitting development/ activities. The role of every agency is controlled by its statutory power and responsibilities in the coastal marine area. The responsibility of managing coastal areas spreads between different agencies. Starting with the central government level represented by Minister of Conservation, and the Ministry for the Environment, followed by the regional authorities and then the local/ territorial authorities under the RMA as explained in Figure 3.

In addition, the role of iwi trusts and local community representatives play a role in managing certain parts of the coastal areas, without excluding the Department of Conservation (DOC) role and their responsibilities in their estate land and marine reserves under the RMA and the Conservation Act.

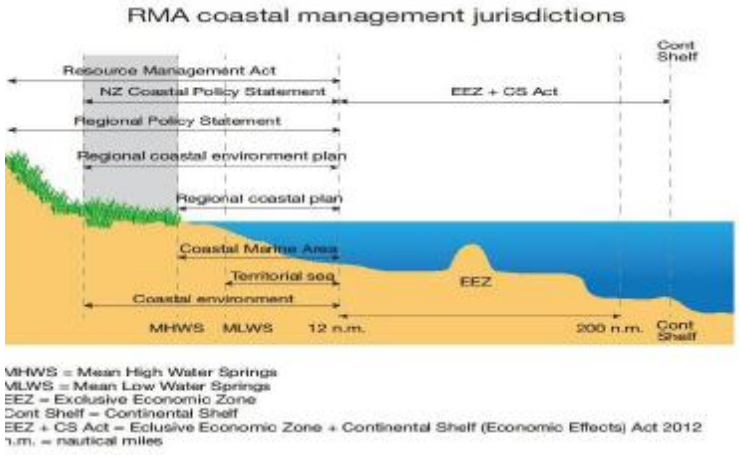

Figure 3: RMA coastal management jurisdictions (DOC, 2013)

The roles and responsibilities of each authority in the New Zealand system is explained through Table 2, as mentioned earlier the roles are defined through the RMA, the Local Government Act, and the Conservation Act.

	Authority	Their role in manging the coastal areas
Central Government	Minister of Conservation	Under section 28 of the RMA for preparing and monitoring the implementation and effect of NZCPS, also approving regional coastal plans and regional coastal plan changes.
	Department of Conservation (DOC)	Protecting the environment in Crown land designated as DOC estate land and marine reserves, and maintaining biodiversity, while conserving the local key species generally. DOC works closely with the Minister and carries out a number of tasks under the RMA such as preparing NZCPS, approving regional coastal plans in cooperation with regional authorities (DOC, 2016)
	Ministry For the Environment (MfE)	MfE does not have an actual management power over the coastal marine areas, but it focuses on cooperation with regional and local authorities in the coastal areas. It is responsible for producing national policy statements except NZCPS, national state of the environment reports and national standards using regional and local data that could help the decision makers take actions to solve any emerging problems and help in preventing any potential threats (Brake and Peart, 2013)..

Table 2: The roles and responsibilities of different NZ authorities under the RMA and LGA (Central government level)

Authority		Their role in manging the coastal areas
Regional Scale	Regional councils	Operative side of the government, implementing the RMA and NZCPS, and their role is further explained in the Local Government Act 2002. The regional councils role is set out in section 30 of the RMA, which include among many creating regional policy statements and regional coastal plans and giving directions/ creating cooperation with the local councils regarding issuing resources constents, implementation of these policies and plans in their areas. Also, they possess power over the marine areas, and have the authority to give permits to activities and resource consents to development projects such as within waterways. They should also cooperate with DOC in the case of marine reserves without overlaying powers over DOC estate land or coast (Brake and Peart, 2013, p. 22).
	UNITARY authorities	According to RMA (1991) and LGA (2002), the unitary authority combines both the roles of regional and territorial authorities under one umbrella. As an example the Marlborough District Council (2003) have the Unitary authority power in Marlborough Sounds "Under the Resource Management Act 1991 it therefore has an obligation to prepare a Regional Policy Statement, a Coastal Plan, a District Plan and such other Regional Plans as are necessary" (p. 1-1). This give it the ability to avoid any fragmentation of power between different authorities as in the double tier model in other places in NZ (regional-district).
Local Scale	Territorial authorities (City and district councils)	Their functions are set out in section 31 of the RMA, which include among many preparation of the district plans and monitoring their implementation, working to achieve the RMA objectives, NZCPS goals, and regional plans/ policies regarding the coastal areas (Brake and Peart, 2013, p. 22). Also, they are responsible to give resource constents for activties in the coast and solving coastal issues at a local scale on the land (landward side).
	Local Community representatives	They do not have statutory power to affect decisions, but through the public consultation process granted under the RMA, these representatives can have a say/ express community voice(s) regarding some of the decisions related to coastal development and preserve the environment for the community interest.
	Maori (iwi) organisations	The RMA specified their responsibilities in the management of coastal areas. Their responsibilities among many include prepare iwi management plans addressing coastal issues from their iwi interests, and preserve cultural heritage. However, the RMA does not specify the contents of these plans and gives the councils the option to consider these plans when making decisions regarding the coastal areas. Therefore the plans do not carry statutory power, unless it is a part of a regional coastal plan as a part of a co-governance procedure (Brake and Peart, 2013, P. 23). The iwi orgainstions may have a joint management agreement with local authorities either under the RMA and the Treaty settlements or in voluntary non-statutory basis. Also, under the Marine and Coastal Area Act 2011, groups that have customary marine titles (access and ownership) can produce planning documents to set out objectives and issues. The decision makers must consider these documents.

Table 3: The roles and responsibilities of different NZ authorities under the RMA and LGA (Regional & Local levls)

4 METHODOLOGY

The research methodology should be based on a clear process. This process as explained by De Vaus (2002) consists of a cycle of steps, which aim to test the existing theory using deductive reasoning. According to De Vaus, the process starts by defining the theory to be tested, leading to deriving a set of conceptual propositions about the theory. These propositions are then converted into testable indicators that determine the appropriate methods of data collection and analysis. This data gathering and analysis leads to the formation of distinct results, which in turn give rise to theory construction using inductive reasoning. The analysis and results are then discussed, leading to the formation of a new theory or the modification of the existing one. Figure 4 displays De Vaus's (2002) steps with the blue boxes illustrating their application in the current study. The steps begin with a definition of resilience theory, followed by the construction of the propositions and a test of whether or not resilience theory can analyse the social and ecological systems in New Zealand coastal tourism destinations. These propositions are then converted into a set of initial indicators derived from the literature, and the data collection methods are determined. Then the relevant data about tourism and socio-ecological resilience in the case study areas are collected to explain the existing situation. Finally, after analysing the data using panarchy and adaptive cycle principles, the results are used either to confirm the usage of resilience theory as an assessment tool for such complex systems or to show the problems of using this theory in the context of New Zealand coastal tourism destinations.

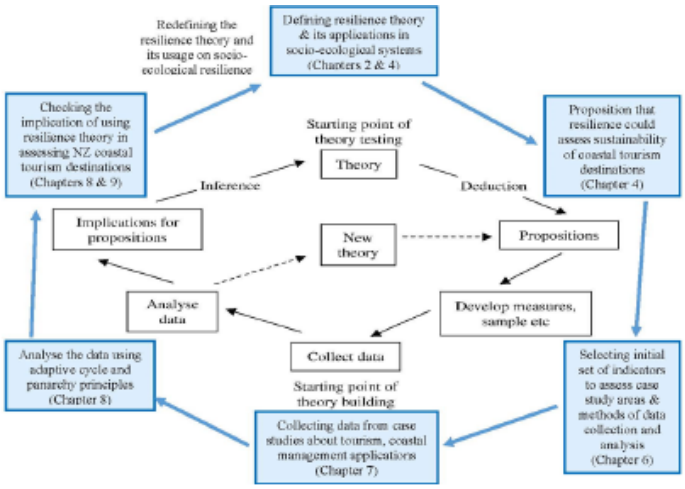

Figure 4: The logic of the research process and its application to the research goal. Adopted from De Vaus (2002)

To reflect the nature of socio-ecological systems in complex structures such as coastal tourism destinations as explained earlier, the methods of data collection and analysis need to be a mix of qualitative and quantitative ones. The underlying definition of mixed method research is triangulation between quantitative and qualitative methods covering the scale of the case study areas. Triangulation, as defined by Creswell and Miller (2000) as “a validity procedure where researchers look for convergence among multiple and different sources of information to form themes or categories in a study” (p. 126). Glenn (2009) stressed the advantage of triangulation as a tool to increase the credibility of results, as it also reduces the potential biases that could exist in a single source or from investigator’s bias.

According to Glenn, the researcher examines data across various sources, as this will reduce any bias either from the researcher or from a data source (e.g., results being influenced by a certain document) and will increase credibility because of the convergence of evidence from different resources. A hypothetical example of this triangulation would be if the intervention process, the opinion of different key players are all subjective and could have some bias to enlarge or critique the role of their organisation in protecting the coastal environment and enriching the tourism activity.

However, the existence of detailed plans produced by governmental authorities to protect the coastal environment and results from indicators about implementation of these plans, give a clear direction about the actual size of human intervention that each of these authorities have in the case study area.

The data collected was analysed in terms of the research questions. The analytical methods were based on the triangulation of qualitative and quantitative methods, as shown in Figure 5. The qualitative methods depended on the content analysis of statutory/ non-statutory documents. The concept and hypothesis coding techniques, were used to analyse interviews, and based on the responses, the status of the case studies was investigated. In addition, the main issues from the point of view of the main personalities managing the coastal areas were identified. For the most part, the coding process was undertaken manually, with some inputs from the Nvivo software package to help with the theoretical coding and to draw relationships between policies stated in the statutory documents and projects in practice.

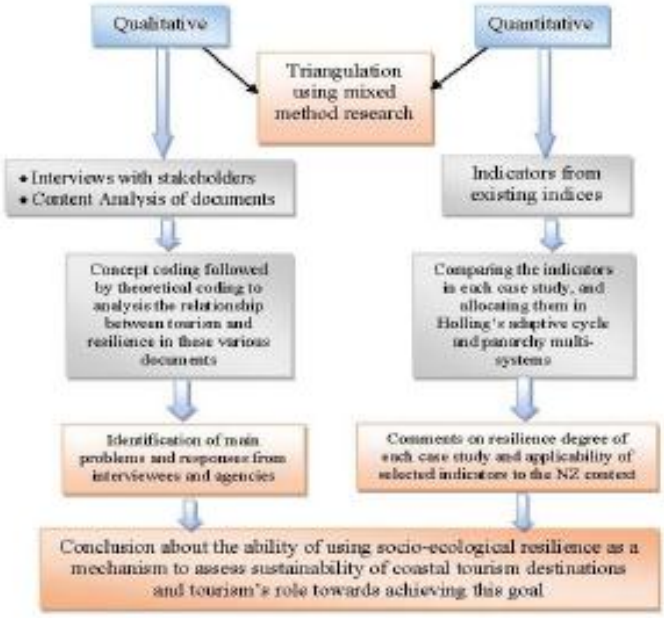

Figure 5: Paper Methodology

In terms of implementation, depending on the indicators that were developed based on the collection of related national and international indices, the preview of the current situation in the selected locations was conducted using observation methods, along with results from indicator assessment supported by conclusions extracted from the interviews and documents analysis.

All formed an integrated database of resilience status of the study areas, which included the existing and potential future coastal tourism activities in New Zealand. All these methods led to an identification of the problems and issues in the case study areas and were used to assess the resilience stage of each case study within the adaptive cycle and through the panarchy concept.

5 DISCUSSION OF RESULTS

This paper goal was to investigate whether and how socio-ecological resilience analysis can be used to assess the sustainability of coastal tourism destinations in the New Zealand context. The answer to this question started with clarifying the relationship between resilience and sustainability as discussed in section 2. Establishing that socio-ecological resilience in coastal areas means “the capacity and potential of a coastal system to absorb disturbance and still maintain its function, structure, and identity and feedback mechanisms.”

Resilience as an analysis tool describes the status of different systems and explains the internal relationship between complex systems through models such as panarchy. It also can monitor different socio-ecological systems over a period by examining changes/thresholds and indicate the future direction of these systems using metaphors such as Holling’s adaptive cycle. In contrast, sustainable development is a desired status that complex systems such as coastal tourism destinations aim towards achieving.

Following the course of this paper, it can be concluded that the preferred output is to have socio-ecological systems in the coastal tourism areas that are resilient against thresholds and disturbance. However, the final output should be pushing these systems to reach a sustainable status. Therefore, if there is a reorganisation in these systems after experiencing a disturbance, it should be a change/ opportunity that contributes towards sustainable outcomes for these systems.

The investigation was based on a preliminary assessment model compromising of two parts. One part was based on resilience theory using Holling’s adaptive cycle and panarchy model, while the second part was based on tourism models using Butler’s life cycle analysis. These metaphors were used to account for the status of the systems and indicate their future direction/scenarios.

This combined assessment model was tested at an empirical level; through three case studies that cover different types of coastal management in tourism destinations within New Zealand. This was followed by resilience assessment of each study area on defining the system components, factors affecting this system and key players and institutions controlling the coastal tourism destinations.

This preliminary resilience assessment finalised by positioning each case study at certain stages within within Holling's adaptive cycle and Butler's tourism life cycles using data from initial indicators and other data analysis methods. This positioning of the case studies was accompanied with an explanation about each stage's characteristics and the future scenarios for these case studies based on the study findings.

For example, following the Christchurch earthquakes in 2010 and 2011 an unpredictable change, tourism was negatively affected in Akaroa with a decline in the number of tourists in the township. These changes included the declaration of the Akaroa Harbour Marine Reserve in 2012 and increased coastal protection of the marine reserve through cooperation between ECAN and DOC.

These changes led to the social and ecological systems in Akaroa entering a stage of self-reorganisation as shown in Figure 6 to cope with the outside pressures. Although this means that the socio-ecological system in Akaroa is resilient, it is not to say this delivers a sustainable outcome.

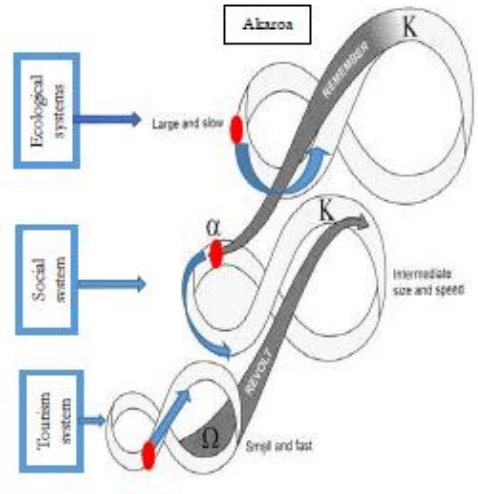

Figure 6 –Results of preliminary assessment of systems in Akaroa shown in panarchy model

Tourism activity in Akaroa has also proved to be resilient by seizing the opportunity to replace Lyttelton as a cruise ship stop, rejuvenating the tourism activity again, and even exploiting the resources. However, these changes have caused pressure on the coastal marine area, which means it could be an unsustainable system in the long term. In Akaroa, the aim is to maximise the economic benefit of the harbour through marine farming and encouraging coastal tourism development and recreational facilities. However, although this proves the resilient character of the socio-ecological system in the area to cope with these changes, it does not ensure that the systems are in or heading towards a sustainable status. The resilience assessment model indicates that the social and ecological systems may be moving into an exploitation phase.

The situation in Whitianga is different, as shown in Figure 7. The increasing tourism activity has resulted in changes in the social system to respond to this growth. However, although the systems appear to be resilient regarding tourism activity, this does not reflect the status of the ecological systems that are neither resilient nor delivering sustainable outcomes.

These results, based on the preliminary resilience investigation, also explain the future direction in which the systems are heading. More exploitation/ growth in tourism activity could cause pressure on the ecological systems and that in itself could initiate a response from the social system to try to adapt to these changes.

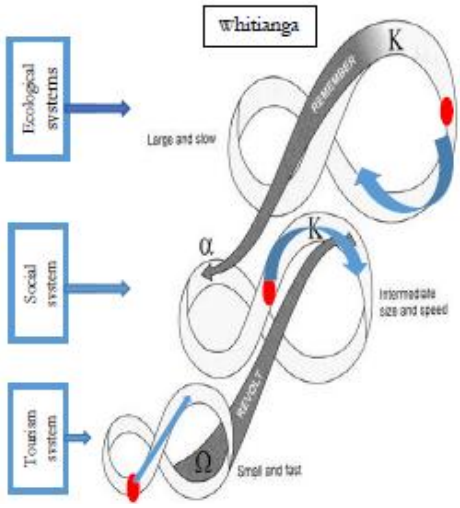

Figure 7: Results of preliminary assessment of systems in Whitianga shown in panarchy model

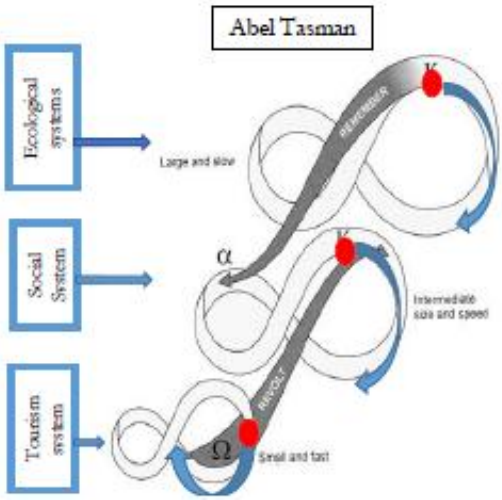

Figure 8: Results of preliminary assessment of systems in Abel Tasman shown in panarchy model

According to the preliminary resilience investigation, the systems in Abel Tasman reflect conservation status in the panarchy model as shown in Figure 8. This status of the system is due to the character of Abel Tasman as a protected area (national park) under strict regulations, with full control of tourism activities and close monitoring from DOC and the unitary authority. However, due to the absence of clear indicators assessing sustainability, it is hard to evaluate the systems' sustainable status.

Also, complicating results is the ambiguity in defining resilience in complex systems, the misuse of resilience theory as a unifying assessment method beyond its potential by many researchers, as well as the complexity and multidimensional nature of tourism.

Furthermore, resilience assessment was limited due to the lack of appropriate definitions of benchmarks, bottom lines, and locally developed indicators to assess these destinations in New Zealand. These factors also showed the absence of empirical measures/ indicators to assess the effects of tourism on the coastal areas in New Zealand. The analysis of the regional plans and regional coastal plans showed the absence of critical resilience thinking in the New Zealand governance process. Overall, policies are moving towards the preservation of the status of the coastal areas and their ecological systems based on an engineering resilience approach, rather than enhancing their quality based on an ecological resilience approach.

Moreover, these plans do not define whether the systems are heading towards a sustainable status. The main focus of these plans is not to improve the outcomes (except some scattered efforts by DOC, and NGOs to improve the status of ecosystems such as in the case of Abel Tasman), but rather to keep the systems functioning in their current status after any disturbance, regardless if this original status is desirable/ sustainable or not. The same situation is evident in the district plans, where the regulations and coastal defence mechanisms are moving towards hard engineering solutions – such as hard concrete sea walls and other precautions – to protect coastal development against natural hazards. The adoption of soft engineering solutions, such as regeneration of wetlands and conserving sand dunes, is still not considered the norm when dealing with coastal issues. Arguably, more sustainable ecological measures could sustain coastal development and enhance the resilience of the socio-ecological system at the same time – as has proved effective in cases such as Abel Tasman National Park and parts of Whitianga.

Also, the district plans currently focus on regulating development with controls on land subdivisions and infrastructure. The plans do not promote the use of innovative ideas that control coastal development while considering socio-economic and environmental factors. Therefore, the plans do not connect future development with activities such as tourism, and there is no clear discussion on tourism's role in enriching the local economy, its effects on the coastal areas, and its ability to enhance the resilience of socio-ecological systems in the case study areas.

Moreover, regarding integration between different organisations and plans to achieve sustainable outcomes in these coastal destinations, the research showed the lack of vertical integration between

governmental agencies responsible for the coastal area, especially in the case of connection between regional and district councils. Furthermore, central government agencies such as MfE, play a weak role in contributing to sustainable coastal development. The lack of horizontal integration in the local coastal communities the local iwi, the private sector, and local NGOs, was evident in the case studies of Akaroa, and Whitianga. However, the integration was better in Abel Tasman National Park as a marine protected area.

6 CONCLUSION

To deal with such complex systems, approaches such as socio-ecological resilience are more applicable than other approaches. Socio-ecological resilience aims to recognise the components of these complex systems, understand their internal relationships, and identify the challenges and opportunities facing these systems. The preliminary resilience assessment revealed that tourism activity could have a positive effect on the sustainability of ecological systems through encouraging environmental protection programs. This effect can be seen in the case of Abel Tasman, where tourism pressures generate more conservation efforts to adapt to these changes. A similar practice happens in Whitianga where the need to retain the level of tourism encourages local authorities to protect the beach from coastal erosion to keep it as a popular tourist destination.

However, one of the main factors that could ensure that the positive impacts of tourism are maximised and its negative impacts are minimised is practising forms of tourism that increase the sustainability of the ecological systems. The results of this study showed that although tourism activity is sustainable in certain locations such as in the Abel Tasman case, there is not enough evidence about the spread of this practice among New Zealand coastal tourism destinations due to the following factors:

Firstly, analysis of tourism practice in the three case studies did not fit the criteria of sustainable tourism. Each area's dependency on tourism activity is increasing, with a growing desire to gain economic revenue from recreational activities. Protection of coastal areas is not happening at the same speed, with some out-of-date plans that need reviewing, such as the Waikato Regional Coastal Plan that includes Whitianga, or limitations in the budget to implement permanent coastal protection measures, as in the case of Akaroa.

Secondly, resilience assessment using indicators and positioning of the case studies in Holling's adaptive cycle and tourism life cycle showed that two case areas – Akaroa and Whitianga – are facing different levels of pressure on their coastal areas. There are signs of mass tourism syndrome affecting the nature of these main destinations.

Thirdly, Abel Tasman National Park is protected and managed under the restricted control of DOC in cooperation with the Unitary Authority of Tasman District Council (TDC). Therefore, it is a special case in that it is one of the national parks in New Zealand – a status that few areas can attain.

Therefore, all these gaps at the theoretical and practical level revealed by evaluation of the case studies require decision makers, managers, and researchers to create a clear definition of what is the desired status and what kind of positive outputs coastal areas should reach. When evaluating resilience in a coastal tourism area, it is important to clarify what kind of resilience is being assessed, what kind of systems are the focus of this measurement, what the stages are, and what the goal of that assessment process is.

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T20 | TERRITORIES UNDER PRESSURE: DISRUPTIVE EVENTS, SHATTERED CITIES, COLLECTIVE MEMORIES

CO-CHAIRS: ENRICO GUALINI; ADRIANNA KUPIDURA; SOFIA MORGADO

We live in times of political, socio-economic, and environmental uncertainty in which radical pluralism appears to challenge established socio-spatial orders. In societies of 'liquid modernity', collective belonging is expressed through a variety of processes of territorial identification and spatial appropriation, by which places of collective livelihood, of identity, of memory are constituted. Identification with the cultural heritage and memory of places in the territories of everyday urban life is key to personal, social and cultural identity, and the free expression and coexistence of such forms of identification are essential for a polis which dwells upon diversity.

The impact of current societal changes – multiculturalism, hypermobility, migration – appears however to affect more and more negatively their political perception. Socio-cultural diversity and mobility – once positive connotations of 'multicultural' citizenship – are increasingly perceived as threats as they highlight allegedly irreconcilable contradictions between contrasting spatial claims. This reflects tensions which are deeply inscribed in the spatiality of social relations.While territorial belonging is increasingly relativized as a principle of integration, new spatial practices create new social divides. Tensions and contradictions in social and economic development determine spatial cleavages which challenge the sense of collective belonging: creating new spaces 'at the margin', but also creating margins within the very social fabric of the city.

In the landscape of 'neoliberalized' urban development, effects in terms of accessing health, education and other social services and of benefitting of full citizenship rights are reflected in a sense of spatial non-belonging which becomes a matter of dispute and contestation. Under conditions in which state action and regulation is often incapable of equitably accounting for this diversity of claims, spatial and symbolic orders become openly contested. While contestation bears potentials for improving democratic participation and political integration, hegemonic reactions to urban contestation often result into new forms of inequality. The resulting shifts in political climate may even create less democratic landscapes which are less open towards differences. Thus, all too often,the 'politics of identity' turns into an ideological framework for manipulatory and exclusionary spatial practices, often resulting in the marginalization of social, cultural or ethnic groups. Ideologies of identity, selective austerity practices, and discourses of fear result in restrictions of active citizenship and often produce effects of segregation and/or exclusion which adversely affect the pluralism of urban social life.

Spatial identities, paradoxically, become divisive, and places of memory hard to share. And yet, the capacity to combine these values with recognition of diversity is essential for a progressive and equal city. The track invites to deal consciously with the manifold manifestations of these challenges, and to explore potentials for progressive responses through creative experimentation and social innovation in the practices of spatial planning, urban design and city management.

ID 1389 | STUDY ON THE CONDITIONS OF LAND USE CONVERSION FROM RESIDENTIAL LAND TO FARMING LAND

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ABSTRACT: The demand for residential land is declining and the number of vacant houses and lots is increasing in depopulated areas in rural areas, suburbs and old city centre in Japan for this a few decades. Recently, afforestation for urban forestry and urban agriculture is being promoted as a countermeasure to the increase in vacant houses and plots in depopulated areas of Detroit in the USA. On the other hand, these countermeasures are rarely found in depopulated areas in Japan because abandoned farmland and derelict forests are also increasing in depopulated areas in Japan due to growing aging population. The Ministry of Agriculture, Forestry and Fishery in Japan gives priority to the reuse of abandoned farmland and derelict forests because of already developed infrastructure, like irrigation systems, rather than focusing on the reuse of vacant residential land. Current scenario of Japan gives rise to a question i.e. “will vacant residential land continue not to be used in the future?” Examples of recycling residential land for farmland are very limited. At present, the only known case of land use conversion in Japan is in the city of Fukugawa where colonization residential lots have been converted to farmland. The aim of this study is to conducts a case study on Fukugawa Land Conversion and investigates the implications of the possibility of land use conversion from vacant residential lots to farmland and of smooth shrinkage of the city area. The colonized residential lots are scattered along the river Ishikari in Hokkaido. In this area, the original colonizers constructed their own accommodation in the centre of their farming land when they settled in the Meiji Period. As a result, the farming landscape became concave. When aged residents of the colonized residential land stopped farming and moved out, this irregular form of farmland prevented transfer of ownership to other farmers because of its low productivity. The main industry of the City of Fukagawa is farming, so the Fukagawa municipal agriculture committee decided to subsidize the demolition of vacant houses, redevelopment of farmland and costs of land use change up to 90%. As a result, some of the colonized residential lands have been transferred and are used as farmland now. At the same time, the lower productivity farmland is being abandoned and derelict farmland in mountainous areas is being left as it is. This case suggests that the economic rationality of improving farming productivity is needed in order to convert land use from residential land to farmland. In an era of population growth and economic growth, the actual demand for secondary and tertiary industries and residential land use increased and consumed farmland, but in a period of population decline, farmland has also shifted and moved from lower productivity areas to higher productivity areas and actual land demand for farming may not be increasing. In other words, the possibility of increased productivity in agriculture and forestry can create the possibility of land use change from residential land to farmland or forest land. This suggests the importance of productivity improvement of regional agriculture and forestry for discussing shrinking city areas.

1 INTRODUCTION

The concerns on the increase in vacant houses and lands are growing significantly in Japan facing due to the problem of population decline. The Ministry of Land, Infrastructure, Transport and Tourism (MLITT), in Japan has already introduced several policies favoring increase in the number of vacant houses. MLITT, for example, is encouraging both promotion of reusing second-hand houses by renovation and conversion from vacant houses to elder care facilities. These are typical examples of reducing the number of vacant houses despite their limited quantitative impact in the reduction of vacant houses. This is because number of total households in Japan will also decline after 2020 and even when the new house construction will become zero, the decline in the number of households leads to increase in the number of vacant houses. Consequently, sooner or later, the reduction of vacant houses and increase in the vacant lots are easily expected to become next social issues.

The vacant lots in the residential areas can be used as the seed lots for expansion of neighbor houses and open space for crowded residential areas. Otherwise, they can be used as green infrastructure to prevent inner-flooding and to conserve bio-diversity. In addition, as can be seen in Detroit in the state of Michigan

and Cleveland in the state of Ohio in the USA, those vacant lots can be used as the land for urban agriculture and urban forestry.

In Detroit, its population decline in the city area, in particular, middle class outmigration from the city areas resulted in food-desert in the city because chain stores like super market withdrew owing to the shrinking its market area. Urban agriculture is proposed as one of countermeasures for this difficult situation. On the other hand, Ministry of Agriculture, Forestry and Fishery (MAFF) in Japan are not positive to convert the vacant residential or commercial land to farming land and forestry land. The ministry considers that the vacant agricultural land (derelict agricultural land) with enough irrigation infrastructures should be revived for the new comer to agricultural sector prior to use those vacant residential land and commercial land needing newly development of irrigation infrastructure. This policy by the ministry has a certain rationality to save the additional investment for land improvement even though the land use conversion to urban agriculture and forestry are the is recent phenomena in the world.

The case introduced in this study is of a city losing its population. It is a rather rare case and completely opposite to the government policy which doesn't prioritize residential lands as the seeds land of farming. As of December, 2016, this case may be the only case of the land conversion from residential land to farming land in Japan. This study, therefore, aims to clarify the rationalities and conditions of land conversion from residential lands to farming land.

The structure of this paper is as follows;

Firstly, the residential land of the case study is very famous as colonized residences. The history and feature of as colonized residence are explained. Secondly, the case history and outline are explained. History of this case includes the background information and the background information becomes the basis of the discussion of the rationality and conditions of the land conversion in this case. Thirdly, the rationalities and conditions of this case are discussed. Fourthly, the implications for land conversion from residence to farming land in depopulated area are extracted from the case. Finally, the discussion is summarized and further research tasks are proposed.

2 METHODOLOGY

2.1 LOCATION OF THE CITY OF FUKAGAWA

The case study area of the city of Fukagawa is located in Hokkaido, Japan. The area is famous for agriculture. There are many rice pads in the city areas.

Figure 1 Location of the city of Fukagawa in Hokkaido, Japan

The city of Fukagawa has been losing its population continuously. Also farming population is also declining significantly in contrast to the stable number of households. The population dropped from 36,579 in January 1975 to 21,500 (estimated) in February 2017. The farming population also dropped from 3531 in February 2000 to 1611 in February 2015. This demographic change means that there are many retired farmers in the city due to ageing and outmigration of the younger generation of farmers' families.

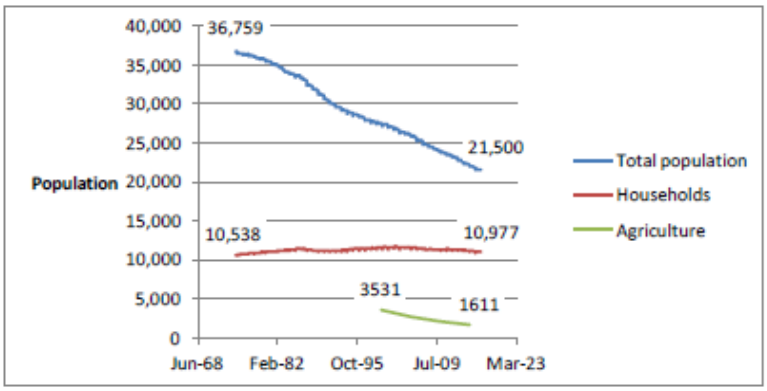

Figure 2 Demographics in the city of Fukagawa
Source: “total population” and “households” are from the statistics of the city of Fukagawa and “agriculture” is from “Agriculture and Forestry census of Japan” by the Ministry of Agriculture, Forestry and Fishery in Japan.

2.2 LITERATURE REVIEW

Only two articles, i.e. Muramoto (2010) and Yamamoto (2012), were published on this. The history and outline of this case were introduced by these articles.

2.3 FIELD INTERVIEW

Due to the lack of information on the case, the field interview was conducted on 7th October, 2016 in Osamunai office of the city of Fukagawa. Three officers of municipality agriculture committee, Mr. Yahitsu (Director), Mr. Miyatani (Deputy director) and Mr. Kubota (Agricultural land promotion chief), were corresponded. Outline of the case, background, response from the citizens, and possibility of application to other areas and prospects of this case were discussed in the interview.

3 RESULTS

3.1 CASE OF LAND CONVERSION FROM RESIDENCE TO AGRICULTURE IN THE CITY OF FUKAGAWA

The city of Fukagawa is located locates on the almost at the centre of Hokkaido in Japan. The city was colonized by many colonizers when Hokkaido was colonized in Meiji era. Colonizers constructed their accommodation in the center of pioneered farmland. This accommodation with unique location is called as colonizer’s residential lots (屯田宅地). These colonizer’s residential lots are typical landscape in the centre of Hokkaido.

Figure 3 Aerial photograph of colonizers’ residential lots in the city of Fukagawa Source: Yamamoto (2012)

Figure 4 Residential lots’ map in the city of Fukagawa Source: Yamamoto (2012)

The placement of colonizers' residential lots in their farmland was efficient when colonizers cultivated their farmlands on their own or by using cattle horses because of closer distance between their house and farmland. The irregularly shaped narrow farmland surrounding colonizer's residential lot has become inefficient for the cultivation by larger agricultural machines.

Once the trend of farmer's retirement and movement to other areas due to ageing in Fukagawa started like in other agricultural areas of Japan, these irregularly shaped narrow farmlands started facing the difficulty in transfer to the new successors, like neighborhood farmers because of its low efficiency. The case with a vacant house on the land, in particular, creates more difficult situation a vacant house is left even when the surrounded farmlands were transferred.

Fukagawa is famous for its rice production area. Improvement of in the agricultural production efficiency by existing farmers is one of the key issues for sustaining the rice production as major regional industry. The abandoned cultivation lands including colonizer's residential land near existing farmers, in particular, the good agricultural lands, are expected to be liquidized and be transferred to the successor smoothly resulting into the efficiency of farming activity. In addition, this farmland consolidation to existing farmers is also expected from another point of view to keep the area clean. As vacant houses and abandoned cultivation land sometimes causes a nuisance as the weeds on them becomes the sources of pests, deteriorates landscape. Invariably garbage, such as peeled-off tin roof etc. get thrown on the surrounding farmland. The liquidation of vacant houses and colonizer's residential lots was not promoted in spite of these problems like in other regions mainly because of the cost of demolition of vacant houses and land registration changes. Also, permanent vice-minister of MAFF issued the circular of "Shinki Kaiden no Yokusei ni tsuite (新規開田の抑制について) i.e. regulation of new rice /paddy field development" on 10th February, 1969. This regulation does not allow any farmers to increase the area of rice pad freely. This circular also becomes a strong barrier to promote the liquidation of abandoned cultivation land between retired farmers and successors.

In this situation, the central government in the second supplementary budget created a special temporary grant to revitalize the Regions and Life (地域活性化・生活対策臨時交付金). This grant was 100% subsidy to the local government which does not matter regardless of the type of employment. The Fukagawa agricultural committee, therefore, decided to use this grant to liquidize colonizer's residential lots to successors as good farmlands. The agricultural committee created the project of promotion of non-agricultural land reuse (非農用地利活用促進事業) and during 2008 and 2009, conducted survey of objective land and re-registration of land use, did soil works to develop agricultural land. This new countermeasure was developed to cope with the above mentioned circular by MAFF. The committee asks the successor to replace the area of rice pad within his/her ownership to satisfy with the circular request. Normally replaced rice pad is converted to the farmland for vegetables and other crops.

In 2009, the upper limit of subsidy set to 90% and 1.35 million JPY. After 2010, the city of Fukagawa developed the same policy and subsidized the cost of land conversion including soil works, survey and re-registration costs by 90% and 0.7 million JPY. As a result, more than 10 applications have been received every year and vacant houses have been demolished.

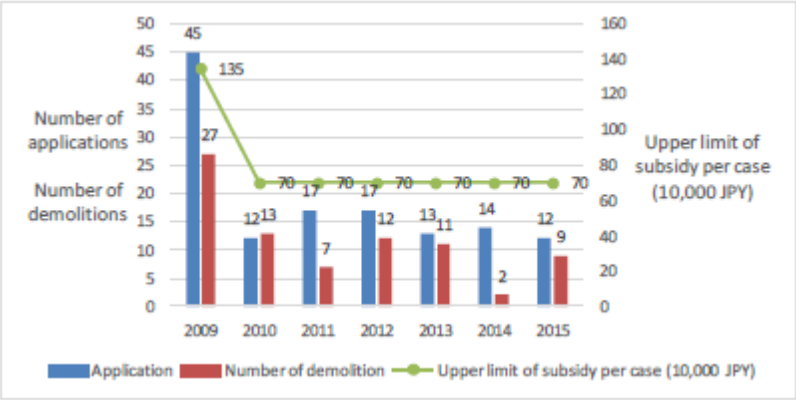

Figure 5 Results of non-agricultural land utilization promotion programme
Source: interview results to Fukagawa municipality agricultural committee

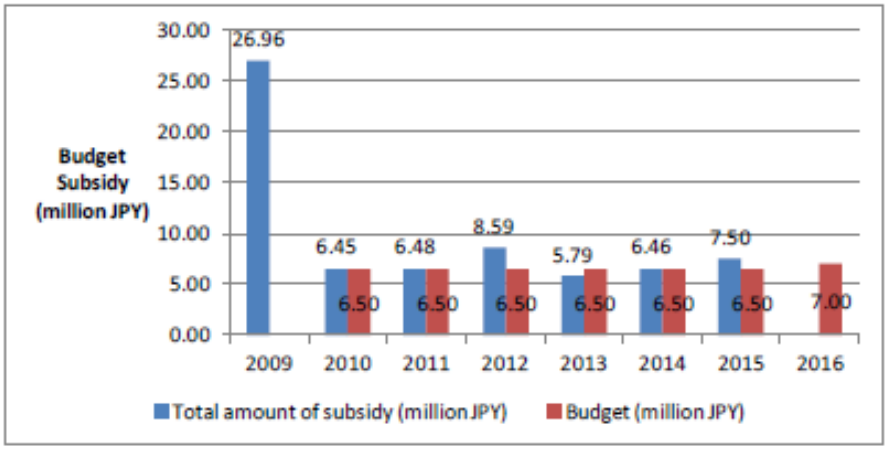

Figure 6 Budget and total subsidy of non-agricultural land utilization promotion programme
Source: interview results to Fukagawa municipality agricultural committee

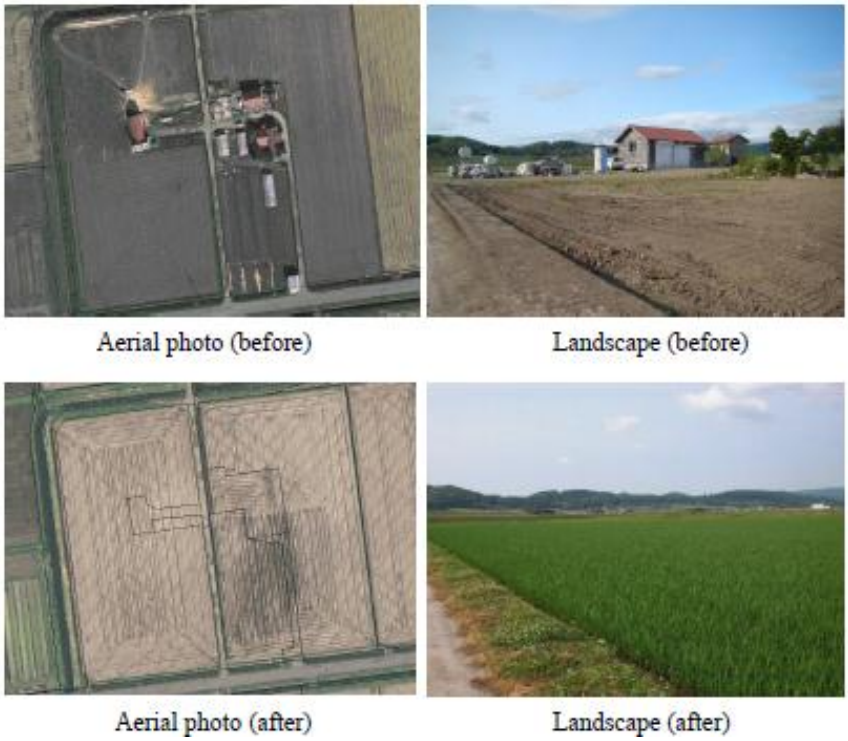

Figure 7 Before and After results of removal of vacant houses from farming lands
Source: Yamamoto (2012)

Annually 6.5 million JPY have been allocated in the budget under this policy. In 2012 and 2015, the actual execution amounts were over the original budget, and the supplementary funds were allocated to the deficit. This policy is being demanded by the locals; hence, the officers' in-charge in the committee recommended the policy to continue for the time being.

The results of this policy i.e. before and after are shown in the following pictures. It is obvious from the picture that that the formerly irregular land has been developed to rectangular rice pad.

3.2 EFFECTS AND ISSUES OF THE CASE OF COLONIZER'S RESIDENTIAL LAND CONVERSION

The committee reported the followings as the positive impact of this policy.

- The cases of abandoned farmland with colonizer's residential lots acquisition are increasing and this has resulted in the prevention of increase in the number of absentee land owners.
- Local contractors receive orders of soil works and demolitions. As a result, this policy contributes to local economy development

In addition, the committee also highlighted the following positive impacts in the interview conducted in October, 2016;

- Water distribution in the rice pad has become more efficient and this also makes it easier to demonstrate the performance of agricultural machinery. Accordingly, both the committee and farmers recognize the improvement in the efficiency of farming.
- The committee and farmers understand that the property value of farmland can be sustained by this policy because the farmland can be used as good farmland with rectangular shape.

The committee didn't evaluate the effect of this policy quantitatively, but the demand for this policy is still high and sufficient consensus of the merit of this policy has already been formed. Therefore, it is understood that this policy has sufficient cost-benefits ands needs to be continued.

On the other hand, several issues remain unanswered.

- In principal, a land owner of colonizer's residential lot and surrounding farmland has to apply for this policy. Consequently, this policy cannot solve the problem of existing abandoned lands owned by absentee landlord.
- The MASS circular is still effective and this policy cannot be used for the expansion of rice pad area for regional development.
- This policy cannot be applied to residential or commercial lots if they are not situated next to farmland. In the city of Fukagawa, the different policy has been developed for vacant residential or commercial properties.

The first two issues are not the matters of the city of Fukagawa. The countermeasures for this are expected to be developed by the central government.

4 IMPLICATIONS OF THE CASE

Implication in the implementation of the countermeasures to utilize vacant housing lots in the period of population decline is that the land conversion possibility depends on the needs of productivity improvement in adjacent farmlands.

The reason why farmland is eroded by land conversion to housing land during population growth and economic growth period is because of the high demand for housing lands. This land conversion resulted in the net decline in the area of farmland and net increase in the area of housing land.

Based on this research results, even in the period of population decline, as long as the MASS circular is effective, the vacant residential lots will not use for the land conversion seeds of farmland. There will be a decline in the residential lands, but the area of rice pad will not increase when the land conversion from housing land to farmland happens just for the sake of agricultural productivity improvement. This means that, in Japan, based on the current regulatory framework in agriculture, as the reason of land conversion from residential land, the land demand for the expansion of farmland, in particular, rice pad, is not strong enough.

It can be concluded that the land conversion demand for residential lands by agricultural productivity improvement occur in the following process in Figure 8.

Firstly, population decline leads to decline in the number of agricultural workers. This decline will demand for larger agricultural machines and higher performance in order to cultivate the same area of farmlands with fewer workers. Solutions under such circumstances, for improved agricultural productivity and better efficiency are: shaping irregular farmland and expansion of the farmland area. Converting the neighboring residential lands to farmland is the most logical step under those circumstances. This conversion leads to replace active rice pad. Better and closer rice pads are preferred and worse and farther farmlands are

abandoned. At a later date, even if we assume that the MASS circular is abolished, still, worse and farther farmlands, typically, in low uplands are abandoned in case that the work capacity of farmers is limited and low efficient farmland should become inferior. This farmland replacement process can also lead to the improvement of agricultural productivity.

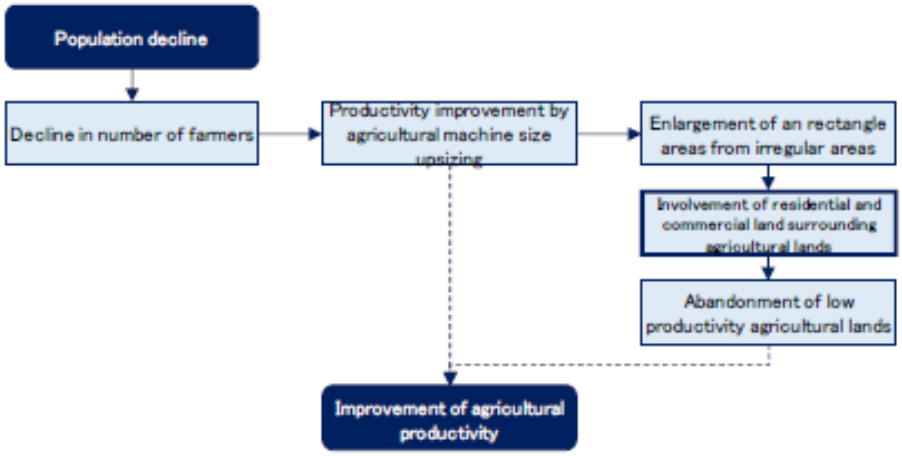

Figure 8 Residential land conversion process in the process of agricultural production productivity improvement caused by population decline

This process suggests that aggressive agricultural policy to improve Japanese agricultural productivity may lead to land conversion from residential land adjacent to farmland. On the other hand, how many areas are converted from residential land to farmland depends on the shape of farmland and how much agricultural productivity is improved there.

Type	Adaptive tractor	Width of work (cm)	Performance (minutes/10a)
HC10 series	11- 18	160-202	13-32
HS20 series	16- 33	183-244	11-28
HR20 series	20- 54	200-310	5-15
HL20 series	45-100	274-391	4-11

Table 1 Pudding performance by types of tractor
Source: Yammer (2016)

For example, in pudding case of rice pad, pudding performance varies depending on the type of tractor. The difference is about three times as shown in Table 1.

Output of tractors in Japan has become gradually higher, but only 14% of tractors of 50 ps output that can attach the high efficient padding equipments are being used. High performance tractor is of course costly, and cost-benefit should be considered carefully. But, from the view point of expansion of per capita cultivation area in the period of population decline, there is a big potential to introduce high performance tractors in Japan. This introduction may lead to shape and expand irregular rice pads and this shaping and expansion may lead to land conversion from vacant residential land.

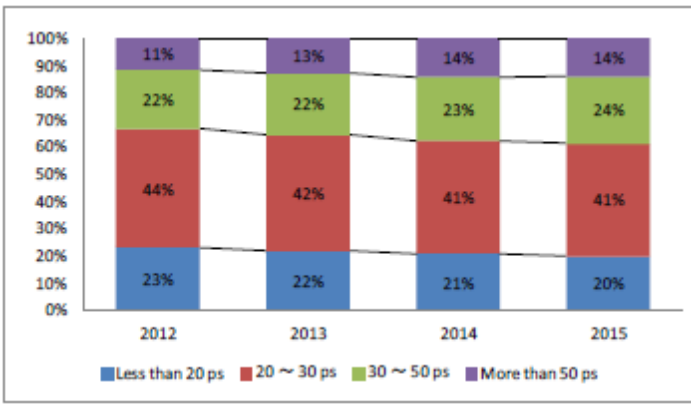

Figure 9 Composition ratio by based on tractor output
Source: Nichinoko Toukei (each year) by Japan Agricultural Machinery Manufacturers Association

Note: Estimates from shipping statistics on the conditions that durable year Life with the use of tractors is assumed as seven years.What you mean by durable? Is it life?

It is noted that the urban small residential lots adjacent to farmland sometimes has concrete boundary wall as compared to the colonizer's residential land. As can be seen in Figure 10, a colonizer's residential land is very low and there is very little height gap between residential area and farmland. This little gap can reduce the amount of soil movement and save the cost of land conversion. On the other hand, recently developed small residential lands converted from rice pads usually have concrete boundary wall. This means that the demolition works of these small concrete boundary walled residential areas are more costly than that of colonizer's residential area.

Figure 10 Colonizer's residential lands with a vacant house and surrounding farm land

Figure 11 Land conversion work from a colonizer's vacant house to farming land

Ground leveling work in the land conversion can be shown in Figure 11.

Firstly, the embankment for the house is removed. After that, the top soil of rice pad is scraped and collected to move to the area of previous residential area to cover the land there. Finally, the ground leveling work is conducted for smooth supply of water.

The above mentioned discussion is based on the current situation of preventing the new rice pad development and formation by consent of existing landlord on the colonizer's residential land. Once the MASS circular is abolished and much bigger agricultural production corporation is established for expanding its production size on the field, much bigger land conversion from residential land may be happened. Moreover, a new policy for absentee and unknown land owner to liquidate abandoned cultivation, residential and commercial land can be introduced for helping administrative intervention, existing derelict cultivation and more numbers of residential land can be used as active cultivation land.

There are cases of typical abandoned vacant residential lands that are not adjacent to farmland and of big residential complex on the slopes of the hills in the suburb of big cities in Japan that do not have any big farmland area near there. Such cases are difficult and different solutions have to be worked out for such cases.

5 CONCLUDING REMARKS

The countermeasures of vacant houses and vacant land are the usual discussion from supply-side, but Fukagawa case suggests the importance of discussion from demand-side as well. The case suggests that discussions should be held not only from quantitative aspect like demand of areas, but also from qualitative aspect like productivity.

Fukagawa case suggests that the vacant residential land adjacent to farmland may have a possibility to convert to farmland, but it also suggests that “how much of size” depends on “how much of productivity improvement”. It can be found that the expansion of field area, abolishment of the MASS circular on prohibition of new rice pad development and enhancement of agricultural machinery are some of key triggers for potential land conversion. In other words, aggressive agricultural policy reforms are expected to promote land conversion from residential land to farmland.

Fukagawa case can be applied to for only residential lots adjacent to farmland, but there are no good solutions found for the vacant residential lots in the city. We, therefore, have to still look for other solutions for major problems of vacant residential lands. The case study of Fukagawa case suggests that researchers should also take up the perspective of productivity of land use into their research and investigation works.

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ID 1457 | TRANSNATIONAL SPACES IN THE CITY, BETWEEN FRACTALIZATION AND DIVERSITY NEW RELATIONS BETWEEN CENTER AND PERIPHERY

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ABSTRACT: Contemporary metropolis are increasing their transnational spaces and relations such as, the CBD, the internet and cluster places directly related to the global and transnational networks. Different migrations are implemented first in areas of fordist production then in the place of the service economy. These processes challenged the relations between center and periphery (concentration, dispersion, value of urban land). These processes are also challenging the differentiation between internal migrant and the new migrant. The consequences are different on employment access and stability, on residential settlements, on participation to the city. The first question comes for a better description of the transnational metropolis, on the specific process of differentiation, competition so to settle the degree of inequalities : -Transnational areas related to center and periphery; -School policies and migrants access (interior, exterior, new) - Politics of diversity concerning national migrant and external migrants. Two types of discrimination and inequality could be specified : The inequalities and race relations of the subaltern internal migrant, linked with the foundational state; the inequalities of competition and transactional economy for the new migrants. *The second step of analysis intends to develop a better assessment of economic and public policy;Effect of economic redevelopment and conversion policy; Effect of anti discrimination politics concerning the access to market, access to civic rights, access to public service; Effect of diversity policies. The analytical challenge is to compare two metropolis inside their transnational areas concerning key social processes such as the relations between center / periphery, the anti-discriminatory policies.. The comparison will be developed between the two cities of the Paris region (12 millions), Vienne and Bruxelles metropolitan (3/5 million unhabitants). The results concerns the discriminating effects of some policies : The diversity policy manages the competition between migrants, with populist racism .Market policies for equal distribution do not act directly on differential and foundational racism. Public policies are under tension have to combine equality of access, between civic participation and enlarged transnational open networks. The question of metropolitan incorporation and its limits (education, politics, metropolitan economy) comes along with the issues of reinforcement of transnational spaces (multiple relationships, multiple player, polycentrality, dystopia). The metropolitan tensions split between settlement policy and diversity policy, between migrant from the inside and new migrants, between Inequality of access and injustice. The modernization process combining resources, skills, retraining are reframed by these side variables. * Traditional analyzes of transnationalism focus on CBD, their ability to dominate and to reorganize the metropolis by attraction and polarization ‘ Knight and Gappert, Gordon) assuming the risk of subordinating or forgetting the periphery. What has become of the peripheries in this new conjuncture of the transnational economy ?, The images of distribution networks, service society and subordinate flexible employment seem predominating. Our paper consider the double face of transnationalism, in the new regimes of economic interdependence (including neo-liberalism), in the management of populations (numerous migrations, refugees according to the type of incorporation). The regimes of urban interdependence are affected by these two sides of the transnational spaces, hence comes a series of conflict and disruption, which deserve to be specified. Our presentation examines the changing relations between the center and the periphery in popular areas social spaces (peripheral cities and pendulum mobility), in the middle classes (patrimonial city and gentrification, individualized transport). In the centrality of (European) metropolis, the peripheries of the metropolis are driven by the mass consumption, by urban bourgeoisies in their selected access to the center, by cultural tourism. We consider how migrant diversity and possible cosmopolitanism are perceived. New relations between North and South relations write their marks, their inscription and their reference in urban peripheries and in urban centers. The result is a diffracted view of the relations between the center and the periphery which urban analysis must be able to account for. It affects the relationships between urban spaces of diversity and plural identities. *The urban laboratory focus on the diversity of cultures and access to the center (Ledrut, Lefebvre). The migrant question, developed by the Chicago school, involves the reception of migrants and their social rights, and the definition of a common public space (Park, Hughes). Two models are presented; The urban mosaic of communities (Chicago Park) dispatched a plurality of territories in friction

and competition (Kivisto, 2009). It initiates the territorial dialectic of boundaries and identities (Lamont, 1998). Other theses emphasized the conditions and possibilities of gathering identities through iterative processes (Benhabib, 2005), by concrete approaches to gathering closer to bodies and subjectivities (Butler, 2016). Our approach intends to extend the parameters of the urban laboratory, not only on the central occupation, but also on the types of urban exchanges and the trajectories of access to the center. We will present the fieldworks, the communes Bagneux and, Sevran (as laboratory of social differentiation) inside Paris Metropolis. The social dynamic and spatial dynamic organization of Parisian metropolis will be compared with the social and spatial dynamics of the relation center and periphery in Bruxelles and Vienna metropolis.

1 SOCIAL SPACES BETWEEN CENTER AND PERIPHERIES

The periphery can be defined by exclusion, by lackness. It can be defined by its places and its landscapes (cf royal image of the “ile de France”). It is also interesting to define the periphery by its relations with center (distance, center, access to places of employment, access to legal decisions and their arbitration), in particular to combat the idea of peripheral and subaltern subjects. So comes the typologies of the middle classes on their access to home ownership, The rurban model of the 1970s (Roux and Bauer, 1976). are dominating the consumption typologies on the purchasing power of these different middle classes, depending on the type of housing and the accession process, depending on access to shops and means of transport, typology of mobility modalities (Damon, 2012). These are typically functional typologies drawn up by specialized management bodies.

It is more difficult to formulate a typology of the places and spaces of the periphery, the modalities of gathering , sedentarisation and residential, social and political cohabitation. The question of social spaces and of political spaces in the periphery disappears between functional, consumer and non-place themes, disqualification and relegation. Suburban subjects and their relation to space remain invisible. They mark a challenge for urban analysis. The question of the different residential peripheries and the complex modalities of cohabitation are quickly covered by the discourses of mediatization. . With the fixation of stereotypes, the suburbs are sources of discourse and rejection, such as the rapid image of the ghetto based on the encirclement of minority populations, The suburbs can be presented as places of life style associated with attachment to the neighborhood, residential cosmopolitanism from below. The suburbs are quickly considered as discursive places, with sporting mytholgies, supporting a language of the suburbs. Suburbs are proclaimed as places of creation, in search of an authenticity of suburban voices, in the rhetoric of rap (Carpenter and Horvath, 2015).

2 SOCIAL CONTINUITIES WITHIN HETEROGENEOUS URBAN SPACES

The first object of investigation and analysis will be to observe the different contents and social spaces of the periphery, working-class suburbs, residential suburbs, suburbs of middle classes, migratory suburbs. How to observe the different modes of cohabitation between the residential groups and the social groups (belonging and identity), and the corresponding modalities of articulation of the social groups ?.A related method of approach (linked ecology of connected systems) makes it possible to think both the urban and the collective housing, in a model of social differentiation, including multiple settlements, cohabitation between social groups with different social and cultural contents '(Park Burgess, Abbot). It is necessary to characterize the residential spaces, the social and cultural spaces of the periphery, within the new possibilities of the multiple worlds, beyond the classical image of the 1960s / 1970s of the rurban/ rural continuum. Urbanism is modified and diminished in the new post-modern formulas (exotopia and disappearance, dilution of centers in the network society (Soja, 1999)

3 TYPOLOGIES OF URBAN SPACE AND REEVALUATION OF SOCIAL SPACES

Raymond Ledrut analyzes the organization of urban social space. It distributes the typology of social spaces according to the forms of self-organization within the differentiation of the social space and the composition of the social space. The social space characterizes the relations between the center and the

periphery, not only in the distance to the center but also in the access to the public service, their accessibility their decentralization, a certain idea of diffuse republic in front of the central republic .

In his analysis of the neighborhood social space, Bourdieu highlights the weakening of the state as an explanatory variable and the crisis of social reproduction as a consequence (Bourdieu, 1993). The result is a typology of social spaces following the subordinate forms of precariousness and social fragmentation. The result concerns decline and exclusion from the inside (precarious families, young people, migrants). Hence the comes laim for public service to support social reproduction and social integration. Olivier Beaud insists on the crisis of social representation (precarious family, young disqualified) (Beaud 2003). This crisis of durkheimian sociology (representation if integration) introduces the notion of social disqualification.

* The post-modern approach developed by Andrew Merrifiield and Ernest Soja (Merrifield, Soja, 1999) describes the fragmentation processes and the polarization of the city (revanchist city) with the demands of justice, spatial justice: environmental justice. The method of marginal alterations (margin / alia), highlights the spatial, social and relational differences that are added in the extension of metropolises. The notion of "exopolis" formulated by Foucault is associated with the reading of the socio-spatial differences. But social space remains fragmented, segmented without political reformulation of civic space. It is a matter of describing the illiberal space. The fragmentary current has been reinforced to the detriment of the reading of social space, the civic reading of space. Michèle Lamont overemphasizes the boundaries and identity of each social group in a process of marking and competition between social groups (Lamont, 2012).

4 EXTREME SOCIAL SPACE.HOW TO COMBINE THE EVENT AND THE STRUCTURE ?

Surveys after the 2005 riots in North of Paris Region focus on the revolts of young people classified as racial riots trued to analyse back the social problems of the periphery (including social housing). Michel Kokoref, Hughes Lagrange and Marco Oberti emphasized the urban segregation and the school problems (Kokoref, 2008, Oberti and Lagrange, 2006). They shared the diagnosis on different groups of young people, forming a unity in the anti-CPE struggles, dividing into urban riots. The questions of culture then come on the socialization significance of the school (Verpraet 2001), the life styles of the families, the possibilities of speech and the conquest of autonomy The urban development of the theme of tradition and modernity can be expanded in access to social housing standards, in the design of residential housing (Stébé, 2016), in the way in which peri-urban housing and small towns assume the conflict between traditions and modernity (Roques, 2009).

5 SOCIAL SPACES AND COEXISTENCE

The central question of urban analysis focus on the qualities and modalies the social space, the different ways of sedentarization and spatialization of social groups. It is a matter of reading the human settlements and the modalities of cohabitation. How to consider and to evaluate the human settlements and the modalities of cohabitation. The approach is to read the relational space and the solidarities that form in the public space and its crisis, ie the disjunctive space.The second objective is to reassess social space in suburban communes, in relation to typical residential spaces, forming communal combinations between social groups.

6 POLITICS OF REQUALIFICATION AND REEVALUATION OF THE RESIDENTIAL SPACE

The requalification policies assessed the notion of residentialization to denote the modes of weak appropriation of the inhabitants (Verpraet, 1991). It is then necessary to specify the modes of social relations within the same space of residence, between relations linked to the locality and external social relations, independent of the locality (Guerin Pacé et al., 2003). The Ined survey (2003, 2009) conducted

with 10 000 inhabitants by questionnaire underlines the diversity of territorial anchorages with regard to migratory paths (Guérin Pacé, 2009). Multiform spatial identities are distributed according to the diversity of social relations, especially for young people. Residential attachment and inscriptions take s within a broader set of social relationships. The concept of residential space is important for the anchoring of precarious, The survey finds divergent attachment and identification behaviors between relational and non-mobile young people, rooted ones, difficult paths (migrant precarious adults and the elderly).

The discourse on peri-urban space tends to minorize the suburbs in number and growth, in their capacity for integration and incorporation. The peri-urban pattern overemphasizes integration by the village (social control, between oneself, low density, service chosen) by marking the opposition reported with the mass society in the public housing suburbs (mass housing, Heterogeneous diversity) (Charmes, 2011, Guilly, 2014). This opposition undermines the incorporation of single unit homes inside suburban societies, the coexistence of several models of residence, between several types of mixing in the suburbs of the 1950s / 1970s. It would be more appropriate to envisage and explain an increase in the diversity of cohabitation models.

7 THE REQUALIFICATION OF RELATIONS BETWEEN THE CENTER AND THE PERIPHERY

The notion of center and periphery set up spatial relations (attraction versus rejection) and relations of power (occupy the center versus reject in the periphery). It takes meaning in the deciphering of the different power relations and the different types of subject (Chevallier, 1977). The notion of social space formalizes the balance of relations between social groups. The notion of political space characterizes the balance between political forces and systems of power. Three socio-political models seem to dominate the sociological analysis of the urban periphery.

a. The civic / national/ republican integration around the city center's shops and communal institutions is the classical model of urban sociology. (Ledrut, 1968). The overflowing of these urban institutions by new populations, rural and provincial migrants, European and non-European migrants) implicates the urban analysis of transition periods, the time to shape some new social actors who will relay to the institutions Public and communal institutions,

b. In this gap between the center and the periphery, the analysis of margins, of conflict, are developed within the analyzes of self-organization and decentralization, analysis of progressive political acculturation. (Merrifield, Oberti).

c. The dispersion of the middle classes on the urban periphery combines the processes of urban dispersion and proximity with the nature and the residential, processes of social differentiation and social distinction.

In this framework of plural analysis, it becomes possible to specify the methods of anchoring and associating new populations, especially migrant populations, within these sociopolitical models. To what extent do the distances and the distinction between the middle classes and the urban periphery change the reception of new populations in the periphery? Can we observe and explain the formation of new transnational spaces in the periphery with qualities of sociabilities ?

8 TWO CITIES INSIDE PARIS METROPOLIS

Of the two mixed suburbs, on similar urban types, were formed with different histories between the 1960s and the 1980s, with different rates of migration, different ways of organizing the partition of space, designing Urban and residential mix. The research and analysis approach focuses on the relationship between social space and residential life, - between residential and associative life, on the city management of residential spaces . It is necessary to distant the conflict analyzis of the years 2005 (youth revolt) and their polarizing interpretation to better understand the stakes of residential space, the formation of social space and political space; to examine the measured potentialities of polycentrism Bagneux is a city of 59,000 inhabitants, an industrial city converted into a housing estate. It includes 58% of social

housing, but also single unit housing. Industrial restructuring and housing operations have generated the successive strategies of residential occupations. With the factories /firms of the 1930s and 1950s and the HLMs of the 1950s are associated labor class pavilions and small incomes. With the relocations of the 1970s and 1980s (Thompson, Westinghouse), the degradation and precariousness of social housing is compounded.

The years 2001/2010 ensure the development of many city projects under the egide of the anru. Numerous urban redevelopment operations follow one another: a) a one site renovation of mathurins, a former Thompson factory site in 1983, then the DGA until 2014, 16 ha. The urban project concerns the opening up of urban areas, combining housing, public facilities and green spaces, and reserving 25% of social housing (rental and accession) to guarantee a social mix and offer opportunities for residential development.

* We underline the importance of community life in the surbrubs cities. Alongside the ecological associations, alongside the republican associations (Movement for Peace, Attac), associations for concrete solidarities (women, nature, africa) are founded, an association of Mali linking different villages, an association of Malian women's associations and ecologists., Community association (Mali, Soninke). The cultural and residential plurality of the municipal life is realized by the associative networks. A cosmopolitanism from below is designed with an associative tone. It is possible to support an anchoring and an opening up of the public space combining republican associations and migrant associations, especially with the presence of migrant women on concrete residential issues (crèche, youth education, response to violent behavior). The strategies of requalification and residentialisation stabilize a diversified associative life. This social and residential ground encourages anti racist actions on the school, carried by the project of the Mouss

*The action of the municipality is coordinated on two registers: The repertoire of neighborhood social development develops as a support to the steps of residentialisation of families and households as a vector of urban socialization anchored in transitional spaces and public spaces concrete. Opening and supporting associative networks for newcomers ensures a relay of municipal policy. The result is the formation of a substantial republican fabric on housing, school and cultural action conceived as vectors of socialization for newcomers.

9 AULNAY / SEVRAN, TWO MODELS OF COHABITATION

Sevran / Aulnay seem to characterize by two models of social incorporation. Aulnay, a predominantly suburban town has gained its wealth on the incomes of the Peugeot PSA plant. It develops a security model based on the social control of the populations. Sevran with its numerous public housing dwellings and its diverse populations displays a policy of republican and ecologist integration. The addition of social housing estates in the 1970s and 1980s, oriented towards motorways and industrial zones, creates a disorientation of space following centrifugal logics. Sevran comprises a population of 50,412 inhabitants, relatively stable since 2004 of which 20% foreign nationality. The policy of republican integration around the republican village and its services seems to be bypassed by the industrial space and its crisis, by the migrating multiplicity and its transnational orientation.

Sevran is formed of many new urbanizations built after the years 1975 to the north of the city, welcoming populations of recent immigration. They came in addition the republican village and on residential buildings in the suburbs. The first qualification of these peripheral areas are made in terms of poverty, social inequalities and urban relegation. Sevran Beaudottes, 10 000 inhabitants, groups 33% of the households with the foreign head of household, 23% of the population is unemployed, 1/3 rmi of the city, 80% of the population below the bac, 25% below the resource minimum. etween 1960 and 1974, 2000 housing units were built on the Rougemont district. This district is concerned by the "Grand Projet de Ville" (Urban Renewal Operation) devices. The district has 6,634 inhabitants (in 2007).

The economic space around Sevran is widening between industrial areas Garonor, the Peugeot -Citroen production site decommissioned in 2004, the Villepinte exhibition center, Roissy airport. The Roissy le Bourget territory (IAU 2015) comprises 234,000 jobs for 47,000 companies, organized on very specific functions of the logistics metropolis: 30,000 jobs, airport 92,000 jobs. . Inside the 329,000 active residents in the area, 63,000 do not have a 8% degree. The socio-professional categories are distributed on

qualifications below the regional averages (managers 16%, intermediate occupations 24%, employees 35%, workers 26%).

* The residential life of the city is organized around the village center town; reinforced by many public services, school, cultural center, house of associations, The town hall conducted a policy of "soft security", in opposition to the security policy posted in Aulnay. . The space of the city is marked by a partition according to the type of urbanization and production of the housing, between the residential south, mixed with the majority French and the northern predominantly residential African with poor ressources. The social housing units of the 1970s are appropriated by the new migrant populations (Mali, Comoros, Haiti). The African residential area remains poor and relegated distant from the french spaces.

The diversity of the community life presents the diversity of the cultures of the city. But the associations present culture as an affirmation and an exteriority and much less as a residential relational dimension,: Association of the Comores in Sevran, Association of Friends of Mali, Association of Young People for the Development of Mali, Association of Buddhists Khmers Krom, Association of Sufis of Macedonia in Paris Franco-Guinean Intercultural Association, Haiti dynamic, Cultural Youth Caribbean Heritage, House of Armenian Culture etc ...

10 DEVIANCE, URBANITIES, SECURITY

A recent qualitative analysis of urban conflicts reveals the pervasiveness of insecurity and suspicion, with media focus (Sanchez, 2012). In Sevran beaudottes (10,000 inhabitants), 38% aged below 20 years, 1/3 rmi of the city, 25% households are below the ceiling of resources. Municipal political life can be exposed on the themes of integration and ecology. It faces the problems of delinquency and insecurity within the partition between the northern and southern districts. Should we talk about urban apartheid and urban separation? The migrant presence in the municipal council includes representatives of migrant european origin 20% migrants of European origin (Portuguese, Romanian) dispute with the migrants of the maghreb, in particular of Morocco. It seems more accurate to analyze the distantiation of the republican village center.

11 DISJONCTIVE COHABITATION

Integration with a republican and ecologist aim seems to be overwhelmed by new populations, networks and youth. A decentralized transnational space can be formulated with regard to republican integration. A more recent population leads to a weaker residentialization (Guérin Pacé, 2009). As a result, security discourses occupy the public space. The multiple vectors of social support in Sevran appear divergent and uncoordinated. The economic vectors are dispatched on economic sites. Institutional vectors attempt to converge on the city center and the administrative centers (Bobigny, Paris). But the relational vectors of young people are scattered between community relations and the spaces of mass consumption.

12 COMPARATIVE ANALYSIS : INCLUSIVE INCORPORATION AND CENTRIFUGAL INCORPORATION

Sevran and Bagneux are two similar mixed suburbs with different histories between the years 1960 and the 1980s, with different rates of migrations, different ways of organizing the partition of space, designing urban and residential mix

- Bagneux - The incorporation of peripheral HLM housing estates is supported by an intense and diversified associative life. The coupling of the municipal institution and the peripheral districts passes through the school and the numerous associative relays (except maghrebins)

Aulnay / Sevran set up the limits of associative inclusion, for recent populations experiencing the outsourcing/ externalization of employment, Social relays pass through families, social centers and children.

The second thesis deals with a diversity of forms of cohabitation between the suburbs, the neo rural village, the village of executives and their external economic space, the fordist suburbs, the suburbs flexible service, urban mixtures.

The comparison between Bagneux / Sevran highlights the centripetal incorporation (associating the municipal center as village with the requalified periphery of Bagneux) and the centrifugal requalification resulting from a strong partition of the social and urban space (the republican village overflowing). The integration of peripheral populations into the social and political life of the city, costs more effort for the municipality. Some populations are placed outside the republican framework, especially the youngest and more mobile, the most subject to media mass orientations, with possibly pregnancy of religious models.

13 ANCHORING AND MOBILITIES IN THE PERIPHERAL CITY

Transnational population flows are important at the periphery of agglomeration, but they must proceed through the anchoring, association and integration modalities developed by each city, by each commune. Centripetal integration enhance the integration of transnational populations through residential relations and associations, through the support of residential requalification. The centrifugal integration remains marked by the partitions of the space, possibly the political partitions. It excludes certain specific populations (according to a stigma due to the absence of an integration policy). Parallel social spaces are developing, partitions between national and extra territorial, The methods of anchoring and associating peripheral flows remain an important sociological and urban planning question. Diversity politics concerns not only the distributive flows but also the modalities of residential settlements, the type of cohabitation, the community links, the linked ecology of each place and residence. Our fieldwork distinguished between disjunctive cohabitation, converging cohabitation, accomplished cohabitation

14 CONCLUSION : POLYCENTRIC METROPOLIS, POLITICS OF DIVERSITY V POLITICS OF COHABITATION

*The metropolis can be conceived as diffusion and as dispersion, it can also be conceived as an arrangement of residences, cohabitation, mixing and incorporation at the time of the city flow. It is then necessary to distinguish between the different types of social groups, the different types of residentialization and incorporation. The issue moves on the relations between peripheral and metropolitan worlds, between social worlds and the regimes of urban interdependence.

The notion of peri-urban covers a set of landscape and socio-geographical meanings where the definition of space is organized by the distance to the center, according to the relation between oneself and the relation to nature (Charmes, 2011). We must reintroduce the dimensions of lifestyles in order to envision the relations between centralities (consumption, recreation, studies) and peripheries (residential, family, ecological landscapes) (Marchal, 2015). The subject develops a distanced relationship with political institutions.

15 SOCIAL SPACE AND RESIDENTIAL SPACES

The analysis of social spaces and residential areas on two cities, inside suburbs, first and second crown of suburbs, highlights the important articulation between the residential and social areas of the communes. Residential space concerns also the set of social relations developed between families in their daily appropriation, shopping, children, families, associative relations. The requalification operations highlight the constitution of the residential space, its intermediate objects (family game), but also the overall appreciation of the inhabitants on the functioning of the neighborhood; The appreciation of the social space underpinned by residential practices: stay or leave. Guérin Pacé and his team crossed cut the diverse have modes of identification with space and the modalities of belonging. It marks the components of a multiform identity inside spatial relations. (Guérin, Pacé, 2009)

- An attachment to the place of birth for people with little mobility 9%
- A place of anchorage after a difficult life course often 20%

- Geographical inscription, an identity component left behind by decommissioned young people 25%

Attachment and identification behaviors diverge between young people who are more attached to relational practices (24%)and populations that are not mobile, rooted (11%) , difficult paths (20%)(precarious migrant adults and the elderly.

The diversity policy as a flow management, a distributive and non-spatial vision must also recognize and assume the social diversity according to types of association, types of cohabitation and types of rights.

Political space includes cohabitations and bounded alliances between residential and social groupes. Municipalities takes an important role to define their support for associative life, in the management of populations as biopower (Esposito2006), inside urban planning decisions, in order to compose and articulate the different modes of production of space (diffuse residential, dense residential, collective housing, residential housing).

16 MULTI-LEVEL METROPOLIS AND URBAN INTERDEPENDENCES:

The social and urban analysis of the current peripheries can be specified by the following substantive and analytical categories

The residential space is framed between the center and the periphery, stressed by the escape of the center, individual autonomy, the new relations between nature and culture.

The social space is stabilized and embedded in the relations between center and periphery (Ledrut 1968). It characterizes the modes of relations between social groups. The central State intends to regulate the relations between social groups, according to civil peace and political space.

The formation of a political space is marked between the center and the periphery. The center ensures centralization, rationalization and regional reforms to delegate problems (Chevallier 1977). The state is formed by these different relations bounded between integration, and dispersion, between revolt and social control. The transnational spaces push the fragile residential political space to form a post-modern state.

Neo-liberalism takes advantage of the regimes of urban interdependence, distribution channels, infrastructure and logistics, resources and shared raw, access to networks. This private appropriation of externalities must access to the political space in order to ensure these captures .

*The hypotheses on the urban continuum-urban-rural perimeter highlight the inflexion and turn points (the preservation of nature, the weight of the residential) that change the pressure of urbanization on diversified urban sequences.

Inside the classical sequence of the 1930s / 1960s the individual pavilions and the rural space are added, to the city center and the dense suburbs of collective dwellings (Bardet), Inside the classical provincial sequence, the natural space and the peri-urban are added inside a diffuse sequence Provincial (Sechi).

The great metropolis, by encouraging the development of transnational spaces, displaces the peri-urban sequences where transnational spaces and peri-urban residences are confronted: between dense suburbs, transnational space, pavilions and rural areas; Between dense suburbs, transnational space, pavilions, natural space, peri-urban areas.

The effects of the transnational flux accelerate the uncertainties and the shortcomings of the centrifugal urbanization between hype place and road for flight. . The social stakes concern the redefinition of political spaces within the relations between center / periphery, between bureaucratization and control, between revolt and autonomy, according to new forms of self-organization (a continuation of socio-political debate). Transnational interdependences tends to distord urban (so-called) interdependencies .

Neo liberalism spaces can develop through different types of incorporation and biopower, the fordist city, the consumer service city with flexible jobs, the knowledge society for high rank professionals. It requires

different types of social space, different labor qualification and stabilization, different bio v institutional powers

17 VIENNA SIEDLUNG, DIVERSITIES AND PERIPHERIES

Vienna (1.7 million inhabitants) is a central city of central Europe which experienced the withdrawal of its empire (in 1920 (Hungary, Czech Republic, Slovakia), but the city welcomes many migrants and refugees of its former Empire. After the war in Yugoslavia in 1993 1995, it hosted refugees from Bosnia, Croatia and Serbia with a large Turkish migration (cf simmering Otakring district) The important issue of the Syrian refugees in 2015 merely highlights the traditional importance of these transit routes (25% of migrants).

The capital Vienna is an historic passage of the Danube between 'west europe and' east europe (turkey middle east) (Musil). The social space is marked by polarization and social segregations but also characterized by patchworks settlements (Hammadinger). The socio-political relations of the last twenty years also opposed the metropolitan social democratic integration model Vienna (siedlung politics) and a more authoritarian periphery opposite to the migrant presence such as Caranthie. These political formulas have been polarized on the possibilities and limits of incorporation in the case of Syrian refugees 2015.

Diversity policy can take place by enhancing the diversity in social neighborhoods and semi-peripheral neighborhoods (Simering Ottarkring). It can also promote the extension and structuring of the metropolitan periphery in a more solidary metropolis. The growth of the service and high-tech sectors has now transformed into office.

The pressure of peripheral urbanization is marked by the organization of the polycentric periphery (Kramar). Urban-Suburban-Management's affirmed policy ("SUM: Stadt-Umland Management", 2006) want to develop an emancipated cooperation between Vienna and suburban municipalities 2006 such as-regional coordination, mediation involving all relevant actors). So results the development of secondary centers in the metropolis, such as Donau city, Erdberger Mais' (5000 habitants), Wienerberg-City

18 BRUXELLES COMMUNITY POLICIES SETTLEMENTS INSIDE FEDERALIST CAPITAL

The metropolis of Brussels is of average size 1, 1million habitants, associating an average administration, a diversified working class and affordable mixed housing. The multipolar city is developing on numerous industrial zones, shopping centers and a few service centers (Lemmert) in relation with residential periphery of middle classes in the Flanders region, forming an alveolar region based on these solidarities of interest (Remy)

The CBD was recently formed around the European affairs district, the Nato and more recently the office centers around the stations were developed according to the 2009-2020 development plan. This development policy was accompanied by the requalification of certain districts and expropriations protest (station du midi (Kesterloot, 1998)

The place of foreign communities in the city is important following the desindustrializations of Liège and Namur. Mixed neighborhoods include Moroccan communities and communities of Turkish origin juxtaposed, Sharbaeck, Mollenbeck and others. These neighborhoods correspond to the poorest district of Brussels (Martiniello). Bruxelles attends 350,000 foreigners so 30% of the resident population. This immigrant presence is an argument of contest for the nationalist parties (Vanlaer). Community policies in a federal state authorize and require the explicit presence of immigrants in the municipal lists associated with the political parties, immigrants present, associated with the PS list, democrat). In terms of cohabitation, we can recognize very mixed neighborhoods, supported by a federal community integration policy with some points of radicalism stemming from the capture of young people radicalized by external networks.

Several interpretations of the periphery may be grasped inside the Bruxelles case. Beside the diffuse city, peripheral urbanization, the alveolar metropolis(J Remy); are rising the Flemish suburbs, highly educated

homogeneous families who opposed the multicultural city center , as a source of community conflicts in Belgian federalism. The interpretations of community treatment tend to diversify between the Flemish communities, the French communities, the multiple migratory communities .

19 METROPOLITAN SOCIETY AND POLYCENTRISM

The geographical and sociological literature set up the diversity of modes of formation of space in the periphery corresponding to the diversity of territorial modalities of social groups by associating sociability and territories, spatial identities, by arranging networks and associations, networks and clubs, for senior managers in urban centers.

* The study of the polycentric metropolis, of the relations between center and periphery inside two communes (first and second crown) frames several models and regimes of polycentrality, as an extension of the relational city, of these connected ecologies. We have exposed some variations inside the existing models :-a/ Diffuse urbanization and centripetal incorporation,

- b/ Diffuse urbanization and centrifugal incorporation, c/ Urbanisation diffuse and transnational networks. Our case studies differentiate between diffuse urbanization, community incorporation and federalism in Brussels, the centripetal and isolation of the metropolis in Vienna, the diffuse polycentrism and the uncertainty of political life (the Paris region). The notion of a diffuse city (extension of urbanization) does not specify the types of association, civic centers, secondary centers, cohabitation policy whoa may connect these expanded urban and social processes

20 PLANNING FACE THE EXPANSION OF THE POLYCENTRIC SPACE

Polycentrism is a subject linked to the planning scheme. A criterion analysis highlights a more complex spatiality formed, between the attraction of the center, the polar network and polycentrism. The challenge concerns the capacity of the center to fix the norms on the various peripheral territories, on the different modes of spatialization, territorialization and socialization. Three solutions appear in the present situation:

In the diffuse polycentrism, the middle classes with status are organized on a residential dispersion, with a social distinction and a social distinction, protected by nature. Some workers' groups follow them in the same patterns on a residential status but within degraded districts of second choice. This urban pattern opposes the middle classes in the center (gentrification), the middle classes in the periphery (residentialization, club society, eco city)

With dense polycentrism, the suburbs recover the city, the suburban areas alongside public housing, shopping centers. Semi-diffuse polycentrism combines high-tech fittings (high-technology research center, technological park ie "cluster") and ecological resources, the "smart city" model completes the model of the residential city peri-urban. It is then possible to specify the identity configurations that are established in the allocation of space (the partition of space), in the qualification of space (according to view and point of view), in citizenship .

21 PLANNING, DIVERSITY OF SOCIAL SPACE AND POLYCENTRICITY

This redefinition of the relations between the center and the peripheries, these plural forms of polycentrism in the urban periphery, makes it necessary to define the role of urban institutions in order to compose the norms of exchange between center and periphery, to articulate centripetal models and centrifugal models of incorporation social..

The assemblage of metropolitan cities (EPCI, commune community) have been able to prove their capacity in urban production, in the organization of sustainable development on an enlarged scale. The questions remain about their responsibilities and their potential in the management of populations, residential flows, cultural exchanges within the periphery, and the social equilibrium between centrifugal

urbanization and centripetal urbanization. It implies the development of new forms of urban citizenship at the periphery.

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ID 1511 | GREEN INNOVATION AREAS AS CONTESTED SPACES? INVESTIGATING POTENTIALS AND RISKS OF REVITALIZATION SCHEMES IN SHRINKING CITIES

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1 INTRODUCTION

All over the world many cities are undergoing structural changes with symptoms of economic crises (Pallagst, et al 2013). In these postindustrial or 'shrinking' cities, the transformation of former brown field areas has left many large urban areas abandoned or vacant. When looking to revitalize these cities, substitute industries often play a major role (Pallagst, 2012; Harkavy and Zuckerman 1999). Previous research by the authors made clear that revitalization efforts often focus on green infrastructure, in particular utilizing vacant properties for commercial uses such as urban gardening, farming, or agriculture (Pallagst, 2013; Pallagst forthcoming). Vice versa vacant or abandoned urban areas offer both, the potential for a sustainable transformation of former polluted sites (Vargas-Hernández 2011), and for creating jobs in new emerging areas thus transforming the identities of places.

The US city of Flint, one of the major cities caught in a long term spiral of economic decline and being governed under conditions of austerity, has brought about the urban planning category 'green innovation areas' in order to implement creative and innovative solutions in existing vacant spaces (Pallagst et al., forthcoming). Potential uses in these much debated areas are not fixed, but should explicitly be experimental and innovative. So far they might range from extensive greenhouse uses to less extensive clover fields, but their potential is not yet fully explored. The implementation of new and innovative modes of production in the urban realm is so far not represented in research for urban areas, in particular when development schemes like bioeconomy are considered. Here, issues and land use conflicts, often raised by civil society, might extend towards nuisance, over-exploitation of space, and rising land prices, leaving many open questions for urban research. This is exacerbated for instance in the Mexican realm, where, traditionally, in many areas public policies have been imported and imposed by external pressure without considering the local conditions, leading to high levels of influence of and power of economic and / or political interests and provoking serious conflicts.

The joint German-Mexican research presented here aims at scrutinizing the use of vacant inner city spaces as green innovation areas – discussing their potentials and detecting possible risks for implementation in shrinking cities.

2 STRATEGIES APPLIED IN THE US CITY OF FLINT AS A STARTING POINT FOR INVESTIGATING GREEN INNOVATION AREAS

2.1 THE GENERAL CONTEXT OF SHRINKING CITIES

Shrinking cities used to be a taboo topic, not fitting into the agenda of local politicians, who wanted their cities to be growing and prosperous, resembling growth machines. According to Oswalt (2006), more than a quarter of the world's metropolises shrank in the 1990s and this will continue to increase, notwithstanding the on-going urbanisation processes. Shrinking cities have been a stigmatised topic in planning for a long time. However, the discourse in planning in Europe, in particular in Germany, actively takes on shrinking cities, and extensive literature has been written on the topic (e.g. Bontje, 2004; Gestring, Glasauer, Hannemann, & Pohlan, 2005; Häußermann & Siebel, 1988; Siedentop & Wiechmann, 2007). In the USA, the academic discussion is catching up as more and more scholars are investigating the trajectories of urban shrinkage (Beauregard, 2003; Hollander, Pallagst, Schwarz, & Popper, 2009; Ryan, 2012). In view of the shrinking cities reality in planning, one has to ask if the one-sided focus on

growth in planning is over. The challenges of shrinking cities seem to have the potential to trigger change in planning cultures and planning styles.

In search of planning strategies to deal with shrinkage, policies, plans, and projects have been initiated with different approaches, such as urban regeneration, urban redevelopment, and urban renewal, and all of these efforts try to tackle shrinkage-related causes to reverse or manage the downward-spiral process. These measures can serve as part of a planning strategy for expansion as well as a strategy for managing decline. The common denominator is their focus on improving the quality of life in the respective area.

Once cities have accepted that they are shrinking, they will most likely plan for decline. Among these strategies are right-sizing and greening, where blighted areas and abandoned quarters are turned into different forms of interim or permanent uses such as wilderness, community gardens, urban agriculture, and parks—thus creating new opportunities for open space and new landscapes while at the same time enhancing the quality of life for residents.

Despite merely dismantling the urban fabric, new opportunities for sustainability and quality of life might arise out of the shrinking cities phenomenon. Among them is 'applying the green' as a model for planning and revitalization. The example of Flint can be viewed as an example of how a shrinking city can turn away from an existing growth paradigm.

Greening and green spaces have gained significance in recent years both in growing cities and in shrinking cities, assigning greening the status of a tool with strategic urban development potential (Reimer et al 2015). The term 'greening' is used here as a strategic approach that aims to develop green infrastructure along with supporting environmentally and socially acceptable practices at the national, state, regional, and local levels.

How does this relate to the specific situation of shrinking cities? As shrinking cities embed huge conversions of former brownfield sites into green spaces as part of their right-sizing strategies, greening might be of particular and growing importance for shrinking cities. By definition, greening in shrinking cities involves the regeneration of former industrial sites for new parks, community gardens, restored habitats, flood-mitigating measures, water treatment plants, and municipal agricultural land, combined with the integration of existing green spaces (Schilling & Logan, 2008). Furthermore, greening can include the transformation and reorganization of road transport, the expansion of routes for pedestrians and cyclists, design measures to beautify the urban environment, promotion of urban gardens and farms, as well as the deliberate demolition of derelict buildings, which can be replaced through open spaces and sustainable planning policies (Adelaja, 2010).

Greening has the potential to generate benefits throughout all social, economic, and environmental areas. In fact, many of the heavily damaged and devastated areas of urban regions of shrinking cities have great potential for implementing greening measures. Accepting the fact that some areas cannot be considered for further development and instead should be transformed into a network of green spaces, hiking and walking paths, community gardens, and parks is a suitable requirement for the long-term need to deal with shrinkage. In addition, green infrastructure improves the quality of life of local residents, provides recreational opportunities, and increases the property values of neighboring homes (Schilling, 2007). Furthermore, investment in green infrastructure can represent complex economic benefits for the city and thus boost the economic growth of the city and its region.

2.2 THE FLINT CONTEXT OF GREENING

Previous research by one of the authors (Pallagst, 2010) investigated shrinking cities in the USA in order to gather in-depth knowledge about experiences with applying strategies to steer the development of shrinking cities with the example of Flint/Michigan. During the course of the research, greening turned out to be of special importance as a future development path for shrinking cities. Hence, Pallagst further investigated the case of Flint in 2014 with a specific focus on aspects of greening integrated into the new master plan of the city (Pallagst et al, forthcoming). The master plan developed by Flint displays a strong focus on greening embedded in a context of neighborhood stabilization.

The reason for investigating Flint was—among other aspects—the suggestion of the new place type category 'Green Innovation Area' in the master plan. The new master plan was developed with a bottom-up collaborative process involving numerous suggestions by the citizens. The plan proposes several aims including citizen-based strategies by encouraging small businesses, developing community assets, and strengthening neighbourhoods. Based on existing vacancy rates, designated development zones were identified throughout the city, including a zone for residential and commercial development, a right-sizing zone, and a zone for residential demolition. The latter were declared as 'Green Innovation Areas' (see Figure 1), where formerly residential areas are to be converted to urban agriculture. In particular, green infrastructure is intended to strengthen Flint's position as an employment centre at the neighbourhood level.

Figure 1: Envisioning the place type 'Green Innovation Area'
Source: City of Flint (2013): Imagine Flint, Masterplan, p. 33

However, interviews with land bank staff and city officials in 2014 made clear that implementing the new measures is highly dependent on the commitment of stakeholders, in particular the city government and community and neighbourhood groups. Due to the diminishing tax base and high costs for maintaining infrastructure, the city government is in need of new forms of community-based governance and co-production, where community and neighbourhood groups shape the city's new green spaces step by step. However, due to soaring debts the city of Flint was placed under state management with an appointed emergency manager steering the city's financial situation, making any type of governance more complicated.

Innovative ideas might have the potential to attract new businesses, and even research and development, but these might at first be rejected by inhabitants in these areas. Residents still residing in the areas find it hard to adjust to the idea that their formerly urban neighbourhood will soon be 'de-urbanised' and turned into green space with a use yet to be determined.

3 GREEN INNOVATION AREAS (GIA) AS A DEVELOPMENT PATH FOR MEXICAN AND GERMAN CITIES?

Based on the insights of the Flint case with the yet to be defined category Green Innovation Areas, the authors initiated a joint German - Mexican research project which will be outlined in the paragraphs below.

3.1 THE GIAGEM APPROACH

Following the National Research Strategy "BioEconomy 2030" of the German Federal Ministry of Education and Research, an interdisciplinary approach is considered necessary which ties in with aspects of societal change – involving different stakeholders in a knowledge exchange and by bundling individual research topics. In addition, approaches for regionally- and locally-adapted land management and decentralized

approaches should be tested (German Federal Ministry of Education and Research, 2011; Bundesministerium für Ernährung und Landwirtschaft, 2013). Major challenges lie within in a sustainable

use of natural resources, and in supplying land for bioeconomic uses in a way that minimizes land use conflicts (Bundesministerium für Ernährung und Landwirtschaft 2013). What would that imply for establishing bioeconomy in an urban realm?

Traditionally, public policies of bio economy have been imported and imposed by external pressure on México without considering the local conditions, leading to high levels of influence and power of economic and / or political inmates and provoking serious conflicts. Consequently, it is required to formulate policies, strategies and regulatory frameworks in a country with weak governance.

As mentioned in the introduction, shrinking cities often turn to substitute industries to create a new economic basis. The implementation of new and innovative modes of production attached to a bioeconomic development scheme in the urban realm is so far not represented in research for urban areas. Issues and land use conflicts, often raised by civil society, might extend towards nuisance, over-exploitation of space and rising land prices, leaving many open questions for urban research when it comes to implementing bioeconomic uses in urban areas. Nevertheless, bioeconomic development in urban areas might be a vital source for sustainable development perspectives – in particular in shrinking/ old industrialized cities thus enhancing the quality of life and economic perspectives for citizens.

Already in 2007, Jordan et al called for a more integrated and sustainable approach towards bioeconomic uses: “Financial and policy support should be given to the multi-stakeholder processes of learning, deliberation, negotiation, and experimentation that are needed to establish and evaluate research and demonstration projects” (Jordan et al 2007: 1571). In the same direction goes the discourse of a co-creation of society and biotechnology: First attempts in this respect suggest a quality based agricultural production based on regional/local food chains and a ‘strategy of territoriality’ based on sustainable land uses (Levidow 2008). The concept of a regional bioeconomy has since then taken shape with further research studies, such as where examples of urban gardening in the city of Berlin are showcased as best practices of bioeconomic uses (Erbstößer 2014). Nevertheless, a discourse on the potentials and strategies regarding bioeconomic uses in postindustrial cities is yet in its infancy – let alone a means of implementing bioeconomy as a land use type in urban planning and development processes and decision making.

As highlighted in part 2 of this paper, the US city of Flint, one of the major cities caught in a long term spiral of economic transformation and decline, has brought about the urban planning category ‘green innovation areas’ in order to implement creative and innovative solutions in existing vacant spaces. The hypotheses underlying the research presented here is that leveraging vacant inner city spaces could offer novel solutions for industries such as bioeconomy, and kick-start urban transformations in a strategic way. As part of a German-Mexican research collaboration, the project GIAGEM (Green innovation areas in Germany and Mexico) aims at enhancing the use of vacant inner city spaces as green innovation areas for bioeconomic uses and their potentials for implementation in German and Mexican cities. It investigates the following research questions:

1. Which key knowledge transfer aspects regarding green innovation areas can be derived from ongoing projects (Germany, Mexico)?
2. What are the legal, administrative, economic, and societal conditions for green innovation areas and for developing areas for bioeconomic uses in Mexican and German cities?
3. In what way can existing approaches such as green innovation areas serve as prototypes for other cities (toolkit)?
4. Which areas for further research can be identified by the partners, setting the frame for coordinated projects?

The main output of this research will be a roadmap defining the different steps in order to prepare cities and local communities as well as SMEs in planning and decision making processes to implement bioeconomic uses in urban areas as an innovative and sustainable urban land use.

3.2 METHODS OF THE GIAGEM RESEARCH

Methods applied in the frame of the project GIAGEM include qualitative and quantitative approaches building on the individual competencies relating scientific and operational practice in urban development

and comparative research and urban transformation processes. A literature review was employed for data acquisition of green innovation areas as potential for bioeconomic uses. In addition, a comparative model for the German and Mexican projects and cases was developed, outlining basic requirements and indicators for GIAGEM. In addition, comparative research methods will be applied for studying the projects in order to identify strengths and weaknesses of previously applied strategies for green innovation areas. These factors will enable a learning process on green innovation areas, and on different strategic approaches on how to deal with this space for bioeconomic uses. One research workshop (in Mexico), offered a platform for discussion of concepts and approaches among researchers an interdisciplinary mode: engaging both fields: shrinking cites/urban development and bioeconomy. The results of the comparative projects and case studies will be evaluated and validated in terms of the analytical frame. On this basis, strategies and policy recommendations will be derived.

3.3 FIRST INSIGHTS IN GIAGEM CASE STUDIES AND RESULTS

One of the first steps in the projects was to define what Green Innovation Areas could or should be. Thus the authors came up with the following definition:

'Green Innovation Areas (GIAs) are a new kind of land use type with the purpose of revitalizing vacant or abandoned spaces. GIAs are locations for new innovative uses which are not yet specified, yet they are of experimental and innovative character. The range of uses can be attributed to the area of bioeconomy (among others). GIAs address a number of public, private and civil society actors. They aim in particular at connecting the communities' and the entrepreneurs' interests by means of long range land use planning and sustainable land use allocations. In doing so they support two aspects: sustainable and land conscious settlement planning, and implementing bioeconomic (or other entrepreneurial) uses in urban revitalization processes.'

In terms of case study research, the project GIAGEM is still work in progress. Both teams, German and Mexican, have identified preliminary cases to be investigated.

Among the German cases currently being examined is 'Fresh Sea Fish Farm' located at Völklingen. Increasing demand for fish worldwide led to overfishing. Aquaculture thus offers an alternative to satisfy demand & reduce the ecological footprint. Located on a former coke plant, the area has undergone a tremendous redevelopment process initiated by the city government. But, this process was characterized by a highly contested mix of over-ambitious goals and mismanagement. Despite its innovative approach, the project is still stigmatised by the bad image of its development phase.

Among the Mexican cases being investigated is the 'Parque Agroecologico Zapopan', a community based urban farm located in the city of Zapopan/Guadalajara, Mexico. The 'Parque' is considered an innovative public space that combines the direct participation of the community within an urban farm project with practices that support the culture of sustainability as well as training workshops on different agroecological themes to generate a unique space in the city open to all citizens. The agro-ecological park seeks to better integrate the relationship between landscape and city in a novel way. With a model of reforestation of the public spaces with the use of species edible, usable and adapted to the habitat. It advocates for educating a new generation of environmental activists. It thus offers a model of community development that includes the formation of citizen leaders committed to their environment.

Both cases show different approaches towards dealing with abandoned spaces – the German case started as a top-down approach, and is now entirely privatized; the Mexican case is based on cooperative sharing. During the course of the research, a stakeholder based analysis will offer more in-depth insight into the opportunities of GIA in urban development and revitalisation efforts.

4 PRELIMINARY CONCLUSIONS

Applying green innovation areas as a revitalization tool for shrinking cities still needs to prove if it is suitable as a model for future development and revitalization in search of a new quality of life. In this regard, Nassauer and Raskin (2014) observe that '…the spatial scales and temporal processes of

abandonment and vacancy in the most highly vacant cities may present thresholds representing socio-ecological dynamics that call for novel planning and design approaches' (p. 250).

Research questions which still need to be addressed in terms of green innovation areas are:

- In what way should the new green innovation areas be developed: As grassroots movements? As new employment opportunities for small and medium sized enterprises? As spaces for highly specialized research and development?
- How can social capital be leveraged, potentially in the context of co-production and co-sharing of green innovation areas, and be utilized in shrinking cities?
- In what manner can the development process of the new green innovation areas be governed, and by whom?

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ID 1590 | REGIONAL INTEGRATION IN ETHNIC AND RELIGIOUS CONTEXTS: TAKING GERMANY AND CHINA AS EXAMPLES

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ABSTRACT: Recently, caused by the precarious situation ,a large quantity of refugee are facing a immigrant condition, which is one of the major city development problems in the European region. It also brings social, religious and cultural integration to receiving country, which will be a new challenge in the future urban planning. As we know , the effective regional development strategies to consider different religious and cultural backgrounds will benefit urban stability, harmony and diversification. So this paper will analyze the developmental experience of Germany and China, comparing the referential value of different regional integration strategy under the East and West context. Germany, for example, new status policy protects a large number of refugee camps in most cities, which also makes change to city resource allocation and facilities utilization , as well as urgent need of residential projects and new requirement constructions. Taking Germany as an example, we can see what kind of influence this "top-down" policy will give to city. Compared with China which is another political system, as a multiply nationality country, there is a long history about regional integration in China. Taking Xi'an Huimin Street as an example, to discuss the pros and cons of the "bottom-up" self-built development model.

1 INTRODUCE

Partial precarious situation and intensive regional relationship especially in religious areas arises a critical discussion about regional integration which is one crucial problem in European stability. Regional integration would contribute to territorial cohesion , and both of them are the premises of national cooperation and economic growth, such as Europe 2020 strategy, which explicit the value of territorial cohesion and its meaning in future development. Thus the integration in some regions of ethnic conflicts and religious problems is worthy to getting much more attention.

2 THE PROBLEM REGIONAL INTEGRATION WILL FACE

Involving divergent social group and cultural background, the regional integration is not just a simple planning problem but a serious social problem, the core point of which is about “people”.

For new comers, after enduring different factors like family destroy from war, they have to suit new environment not only living environment , but also social atmosphere. So how to make use of their familiar collective memory and community life to conquer personal psychological barriers and build new life circle becomes a central question. For local people, they will meet more different new out-comer groups which mean social resources like working opportunities, social welfare and education will be distribute again. Obviously, how to make a balance between different groups and culture and benefit form each other in order to build health relationship gets increasing concerns.

No matter for local residents or for the new, it is both a long-time process to coordinate each other and promote themselves’ development, which emphasizes especially a powerful instructor and strategic framework to guide and carry out next step ’s approaches . In following parts, writers will compare two different developmental examples to explain two kinds of regional integration policies: “bottom-to-up and culture -oriented development approach” and ”up-to-bottom and economic -oriented development approach” .

3 EXAMPLE A: URBAN ETHNIC COMMUNITY IN CHINA

Due to the complicate situation of nationality in China formed from thousands of years ago , unity and stability is the theme and aim of each age past. After the establishment of P.R.C, the policy about ethnic minorities have been regarded as the fundamental national policy and been implemented for 68 years (There are 56 ethnic groups , except Han race, another 55 ethnic groups are called ethnic minorities), fully Carrying out the ethnic regional autonomy system. We insist on Opposing oppression and discrimination ,developing ethnic equality and unity, encouraging to establish different ethnic community in scales and types, especially in historical protected areas.

3.1 XI-AN HUI DISTRICT

“ Hui” is the name of Muslim people in China, which is also the third -largest ethnic minority. Due to their distinctive religious culture and eating habit, the majority of Hui people prefer to live in group, so there are many hui settlement areas in northern Chinese city like Beijing, Tianjin and Xi’an. Xi-an Hui district is a typical ethnic community in city and already have been formed for thousands year.

3.1.1 HISTORICAL DEVELOPMENT

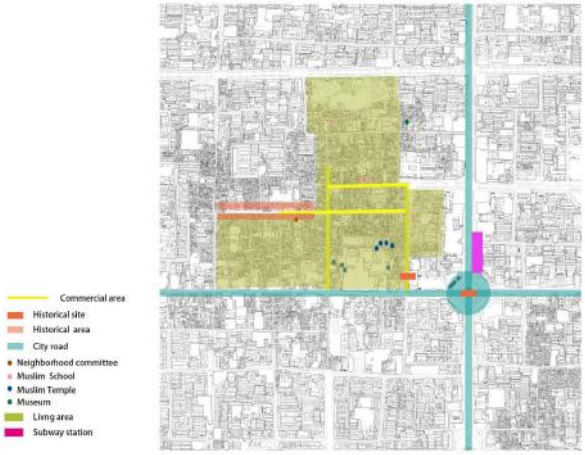
From Han dynasty(around 202 B.C), After ancient silk road formed, Chang’ an(ancient name of Xi’an) as the capital city had become the start point of Silk Road, so it attracted a large amount of Muslin came from western Asian and middle Asian countries to do business and settle here who also intermarried with local woman and formed the pioneer Hui group in Xi’an. At the beginning of Song dynasty(around 960 A.C),because of the stop of silk road trade, those ancient Hui group had to build their settlements including Mosque and residential and commercial areas and lead to new Central Plain life. During the war around

Yuan dynasty (around 1271 B.C), a large number of Arabian and Persians came to Central Plain following troops and then settled here. Though thousands years of development of agriculture and economy, Hui group in Xi'an and their habitat had trended to stable situation.

3.1.2 ENVIRONMENTAL SITUATION

Hui district is located in the center area of Xi'an city which is near the historic drum-tower. This district is limited by urban road and separated from another residential areas. So the inner environment of the district is different from outsider. There is the only one entrance connecting this district and city.

The structure of Hui district is like a small village in the city, including commercial street also is main street , residential area , several mosque , school and neighborhood committee. These facilities and services can basically satisfy local people's living request.



Commercial street: The main street is the commercial area not only in this district, also famous around Xi 'an city and attracts city residents and tourists increasingly. Various restaurants and booths along the street which is almost operated by Hui people also have along family business history.

Residential area and buildings: Living area is behind the street , using traditional building layout like "street -shop-yard-building-yard-street",each unit 's inner space organized by the count yard is the family living and working space. But after many years of modern development , increasing population and numerous external population have made local people start to build additional construction on the original buildings in order to get more rent.

Mosque and religious life : The mosque usually located in the joint point of road . Some of them were built in Ming dynasty, regarded as the sacred symbol. Grand mosque is the largest and most well ¬known one among them. Hui people 's daily religious activities and festival events usually happens in such places.

School and neighborhood committee: The whole Hui district is managed by local committee and be regarded as a community. Local committee will in charge of social work like social insurance , demographic census and social health care insurance.

Traffic situation: Because of old urban district morphology just considering walking as the main commuting way at the beginning , after motor transportation age coming, the street space becomes crowded and chaotic. Lacking of strict traffic policies and traffic plannings , cars ,good vans and electric mobiles also threatens pedestrians' safety .

Recreation Environment: In the main road, Crowded situation and increasing number of tourists does not help to build appreciate environment due to lack necessary facilities like duty water and garbage processing stations and advanced public infrastructure. Numerous public areas around residential areas are also used in commercial way like roadside markets .

3.2 THE RELATIONSHIP BETWEEN XI-AN HUI DISTRICT AND XI'AN CITY

City context and city development strategy are essential to the vision of district as we known. Especially Xi'an, having experience 13 dynasties ' capital , is the symbolized city of "Han "nationality culture. In such urban background, respecting the diversity of culture is fully meaningful to regional prosperity because of favorable social environment and stable economic foundation.

The inclusive attitude given by city to Hui district provides them with more chances to develop local culture and economic. Such as cuisine culture, the main industry in this area is catering services, and restaurants are the main operational business, which are regarded as the most busy catering commercial street in the whole city . Apart from hui people's smart brain and expert business skill, its popularity also depend on government 's support. Even in official assertion, this district is regarded as a recommended place to experience Xi'an various historical culture, which also be beneficial to increase local people's income and provide more job opportunities.

More attention also brings more opportunities and then new development. In recent 20 years , due to mountaining torists flock in Xi'an city, Hui district has become the most attractive point, so local government also give more support to distirct development such like beautifying the street environment , improve the facility, import more financial support.And now, because of "the Blet and the Road" national policy , The position of Xi'an and Hui nationality street also be highlighted.

Nowadays, the Hui district have already become a necessary part in the city, they shared tourist resources and benefit image between each other, also bring a well-being culture and social environment for local people no matter nationality.

3.3 BOTTOM-TO-UP AND CULTURE -ORIENTED DEVELOPMENT APPROACH

Such development mode explains the natural developmental way and "bottom-to up" organizational method which would also inspire researchers to think about the value guidance during the long time process. Spontaneous formation: their natural formation process gives a stable basis about geographical relationship and family connection to long time self-organization. The strong historical accumulation also gives powerful belief and collective memory that will continue to influence the group in future.

A Self-help and management community: Independent environment and independent living habitat gives Hui people enough freedom to deal with the inner staff. Hui nationality has their admitted leaders, prestigious families and core organization. They can decide their staff independently, including the right to deal with their buildings and live like in traditional village. Area with spacial culture feature : Culture can strengthen community cohesion among group because that culture embeds in people's living habit during long history which leads to common sense and collective behavior at the same time, influencing personal sense of belonging. On the other hand, such collective action will also make their culture impressive then improve cultural influence.Refocusing on culture is not only a way to define themselves, but also to gain more respect from others.

3.4 LIMITS AND SHORTCOMINGS

In spite of above advantages, there are still some limits restricted to management. The current building appearance and structure is not well, but even government want to do some revolutions and change district layout, it is difficult to coordinate needless to say to take some measures due to the local self-management policy and governments' limit right. It is not easy to realize unified planning and large construction.

4 EXAMPLE B: REFUGEE POLICY IN GERMAN

Nowadays, refugee crisis has been regarded as the most difficult challenge since the second world war. Increasing number of refugees is flocking into European Union countries. Among these countries, German accepts the largest number of refugees and plays a leading role in helping other EU countries to solve the

refugee problems. But recent terrorist attack arises public's scare, the skeptics that come along also challenge the government's authority. So what is the double sides of German refugee policy and what can it bring to city's development.

4.1 CURRENT SITUATION

The German refugee policy has brought new newcomers to Germany and met new ethnic integration. Throughout history, we can see , after the second world war, a large number of Turks had been introduced to German and had lived in German through two or three generations' integration. For decades, although the German government try to make Turkey's Muslim integrate into the mainstream society through policies, but consciousness difference and national identity make it difficult. At present, the second fusion led by refugee policy has experienced test. Since January 1, 2006, Germany will start to repatriate those refugees who have not applied for asylum or without valid certificates . This new refugee policy is designed to control the number of refugees in Germany. Actually , in the past few years, Germany had insist on carrying out the "open welcome" policies for refugees, even public would call for the government to launch humanitarian aid. But the open situation had been changed after continuous terrorist attacks incited by extremist hided in the refugee group. And those attack events also arose public 's scare around Europe. Thus German government abandoned the friendly welcome refugees policy, and changed to "tightening" refugee policy. We can see the integration happened in German is governed by the policies, a kind of top-down approach oriented by policies. Political decisions and the public 'willing will influence the process of integration to a large extent. Especially in the western society, the public will have a great effect of policy implementation. So valid policy is the key to solve integration problems and get support from the public then to enforce top-down policy.

4.2 BENEFIT OF TOP-DOWN POLICY

Facing the refugee crisis all around Europe, such top-down and policy-oriented approach could control the situation better. From the international scope, it can balance the conflict and keep overall stable situation, and from national level , it can regulate resources and financial resources in order to supply more support.

4.2.1 GOVERNMENT AND FINANCIAL SUPPORT

In 2015, The federal government have taken 1.1 million refugees into Germany. According to the standard of placement, the government will afford 670 euros per person per month as refugee bonus, so it will cost vast sums for governments. We can see , related laws and regulations are the basis of the policy 's enforcement which can maintain stability and balance. Government can call up force and money to regulate the policies.

4.2.2 REFUGEE COMMUNITY CONSTRUCTION

Due to the existing camps cannot meet the demand of refugee resettlement in real situation. So the German governments and the state governments plan to rebuild the refugee camps in order to resettle refugees, like reusing abandoned barracks and old facilities. Then new refugee settlements appears and new ethic inhabit forms, which will also influence current urban spatial framework.

4.2.3 GUARANTEED EDUCATION AND BENEFIT

In order to help refugee group to integrate into German society, language courses and child care have been set, including social activities and visiting activities. But the language barrier and culture distinct cause more difficulties than people thought.

4.2.4 PROBLEMS IN REFUGEE CAMPS

How do the limited number of camps satisfy the increasing demand of large flocking refugee？ Except building new settlements, most of refugee had to live in crowded room with dozens of people. Facing such lager social group , although this phenomenon is inevitable , it is difficult to keep the order , needless to say humanism concern and cultural construction.

4.2.5 DEPRESSION AND PSYCHOLOGICAL PRESSURE

Actually Refugees have beard the greater pressure in their living. For example, they are facing complex procedures and waiting for long time to eager to get the identification certification, and they do not have chance to work and just can stay at camps. As many reports explored, the poor living condition in the camps and helpless management system always lead to frequent incidents such as violence, theft and rape. It seems like that they escape from the war, but the fact is still suffered, their dream for better life still have not been came true.

4.2.6 THE LACK OF A MUSLIM CULTURAL ENVIRONMENT

In the new and unfamiliar environment, loosing their original cultural environment cause an embarrassed situation for them, which means loosing emotional sustenance and loosing their spiritual support. On the other side, their inherent national consciousness makes it is difficult to integrate, especially when meets language and cultural barriers. For themselves, they do not have ability to build a new Muslim homeland for themselves. So the missing geographical relationships makes such camps be a temporary shelter rather than a home.

5 CONCLUSION

No matter which kind of approach, the main problem is to solve people's living problem and build stable social environment. Though the "down-to-top" strategy, we can conclude that common cultural background is the basis of common living. So it is essential to build ethic community and management system. Similarly , though the "top-to-down" policy, we can see the importance of powerful national indication and the meaning of building spiritual home and supply cultural environment.

HIGHLIGHT AND LIMITATION

Though comparing two different ethic integration method in eastern and western context, the writer attempt to conclude the valuable approaches and views. And it is creative to propose these two approaches : "from down to top and culture-oriented" and "from top to down and the policy-oriented. In the further study , writer suggest the different urban spatial framework under these two approaches can be discussed deeply. Then the write has to admit the limitation of the article, due to language and culture problem, this article does not discuss deeply about the second part.

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ID 1596 | FROM MACRO-LEVEL POLICIES TO MICRO-LEVEL PRACTICES: CHANGING GLOBAL ECONOMIC LANDSCAPES AND PROLIFERATION OF MIDDLE CLASS GATED COMMUNITIES IN MEXICO

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ABSTRACT: Gated Communities are a global phenomenon that has gained academic attention in the past three decades. The discussion about these fortified enclaves may have started in the United States of America (Blakely & Snyder, 1997; Marcuse, 1997; Davis, 1998; Low, 2001), but in the last decade, the debate has extended worldwide, particularly in contexts of large socio-economic disparities like Latin America. Gated Communities in countries like Mexico are no longer a "privilege" of the affluent classes but it has become a common choice for middle class groups. The conditions of insecurity, violence, and growing distance between socio-economic groups have normalised the presence of these enclaves to the point that municipal authorities, developers, financial institutions, and citizens, consider them as a desirable residential option for orderly urban development. The process of normalisation of gated communities in Mexico for the middle classes is not a simple matter of choice. On the contrary, the emergence and proliferation of gated communities can be linked to the policies promoted by global financial institutions. The proliferation of these large-scale enclaves for the middle classes could only happen in a context of neoliberal urbanism. Since the 1990s, national economic, housing, and urban development policies have aligned to global financial interests by deregulating planning, changing land tenure options, financialising housing development, and promoting a debt-driven economy (Zanetta, 2004). The "borderless world" of free market housing strategies is actually contributing to the creation of physical walls, fences, and gates segregating people by income. Segregation by design has become common in Mexico with tangible and intangible borders and the governance problems and tensions are already taking a toll. The growing inequality in the country is increasing strains between social groups fuelled by fear. Aspirations and anxieties are changing everyday practices decreasing shared spaces and increasing spending in security. The promised wall along the Mexican border by Trump is not that different from the walls separating poor neighbourhoods from middle class and high-income gated communities in most Mexican peripheries. The experience in Mexico where global economic policies have shaped modern peripheries can serve as an example to understand how trends are shaping political, economic, and spatial relations. European countries are known for urban development and housing policies that foster diversity, inclusion, multiculturalism, and sustainability. However, the current political context of fear, far-right movements, and anti-immigrant groups might aim to promote divisive urban developments like those in Latin America. Learning from the proliferation of middle class gated communities in Mexico can provide some hints of the challenges and the risks of these sort of enclaves in terms of urban governance in the long term.

1 INTRODUCTION

The phenomenon of gated communities has been analysed in academic literature since the late 1990s and early 2000s (Blakely & Snyder, 1997; Marcuse, 1997; Davis, 1998; Low, 2001). The earliest literature focused on socio-spatial segregation and the appearance of exclusive fortified enclaves for the affluent groups. However, the presence of gates and fences in housing developments has extended to different socioeconomic groups and there are examples of this all over the world. The analysis of these enclaves has left the residential realm, incorporating in the discussion more complex territorial challenges including governance, management, politics and social cohesion. In Mexico, gated communities are not new; there are examples of their existence for high-income population since the beginning of the 20th century (Scheinbaum, 2010; García P. & Hofer, 2006). However, in the past couple of decades, these residential fortified enclaves have become normalised, particularly for middle-income groups. In my doctoral thesis, I argue that the proliferation of middle-class gated communities in Mexico is not only a matter of choice of individual families self-segregating, but a complex combination of policies and practices, where municipalities, developers, and residents have more incentives to build, manage, and live in this sort of developments than in the traditional open street neighbourhoods in the inner city.

During my research, I found that residents, developers, and even public officials justified the "normalisation" of middle-class gated communities in Mexico due to the growing concerns in relation to crime and violence in recent years. However, the roots of these spaces can be found in transnational economic interests. After important efforts in the 1970s and 1980s of state-funded programs aimed at the most vulnerable population and the creation of valuable welfare institutions, Mexico's political and economic policies drifted to an open neoliberal model, with clear socio-economic distinctions, and a more tangible spatial segregation. The presence of fences, gates, and other security features have become "the new normal" and this has had serious implications in social interaction, urban management, and overall urban governance, and that is why it matters to understand why these enclaves exist and how they became normalised. In the early 1990s, as part of the North American Free Trade Agreement (NAFTA), there were important changes in Mexican economic, political, housing, and planning national policies, connected to recommendations from global financial institutions like World Bank (Moreno-Brid, Pérez C., & Ruíz N., 2005; Vidal, Marshall, & Correa, 2011; Zanetta, 2004). The changes in land tenure and housing provision policies had clear macro-economic goals, but its impacts went far beyond the national housing and planning systems, reaching individual households. An open campaign to improve the quality of life of all Mexicans was expressed in reaching a middle-class status, which was tangibly shown through privately owned automobile, homeownership, and access to privately run services like education, security, health, etc. (De la Calle & Rubio, 2012; Walker, 2013). Middle-class gated communities boomed under these global economic policies, engaging thousands of families into the challenges of a debt-driven economy. In my thesis, I propose that the discussion about middle-class gated communities should address all these issues beyond the fortified enclave, and that is why in my research I focus of "gatedness", a practice-based analysis of gated communities.

Middle-class gatedness or the proliferation and normalisation of gated communities for middle-income groups in Mexico is a relatively recent phenomenon, since middle classes lived until the 1980s and early 1990s in open-street neighbourhoods in central areas. In the early 2000s, an ambitious national housing strategy contributed to the creation of new suburban residential enclaves around the most important cities. Around the same time, conflicts between drug cartels and organised crime became more visible, and stories about kidnappings, burglaries, and extortions became more common. The "talk of crime" as Caldeira calls it (Caldeira, 2000), became part of daily conversations. In the last decade "talk of crime" passed from coffee shop small talk to Facebook timelines, WhatsApp groups, and dramatic media warnings. After living in the UK for a couple of years, I was very surprised during fieldwork to see how this fear had grown amongst my closest friends and family members, and how it was affecting everyday lives and choices. Restaurants were no longer chosen for the quality of the food or service, but according to safe parking conditions. Residents interviewed in the gated community Lomas de Angelópolis in the metropolitan area of Puebla-Mexico in 2013, shared significant security concerns that "forced" them to leave their old neighbourhoods, even though they were aware that the quality of the housing, location, and overall facilities were satisfactory. Fear of crime and violence has made every other person a potential threat, and gated communities embody this need to segregate physically from them.

Mexico's metropolitan areas are full of fear-driven spatially segregated expressions, and they have reshaped not only the urban structure of the cities but also the capacity of social interaction. The challenges and risks of these changes in urban and social relations relate to growing inequality and subsequently increase in crime, corruption, delinquency, and distrust. The current atmosphere of fear in Europe, widely spread by far-right and anti-immigrant groups, is threatening principles of diversity, inclusion, multiculturalism, and sustainability. These valuable principles seem almost impossible to attain in Mexico under current circumstances. In this paper, I will discuss the role of global economic policies in the shaping of modern peripheries and the role of fear and distrust in the reshaping of socio-spatial relations. The aim is to give a general idea of the risks and challenges of the normalisation of these fortified enclaves. The article is organised in two sections. The first section is about the impact of macro-level economic policies in micro-level housing practices, using the example of the proliferation of middle-class gated communities in Mexico. The second section is a discussion about the difficulties of "building bridges in a time of walls". This section focuses on the risks and challenges that come with the normalisation of a "gated life" and how it makes it more difficult to accomplish just, inclusive, and equitable urban spaces.

2 FROM MACRO-LEVEL ECONOMIC POLICIES TO MICRO-LEVEL HOUSING PRACTICES: MIDDLE CLASS GATED COMMUNITIES IN MEXICO

Socio-spatial segregation is not new in Mexico; it can be traced back to pre-Hispanic times and the Spanish viceroyalty. The Mexican nation after the independence maintained pre-existing stratified social structures. Even after Spanish ruling, characterized by high levels of inequality based on race, ethnicity, religion, or origin, cities were organised in a socially segregated way (Scheinbaum, 2010). However, for centuries there were “shared spaces”, places where different social groups could meet, such as churches, parks, promenades, green areas, and even streets. In recent years, this socio-spatial segregation has become more tangible and the number of shared spaces has diminished importantly. The emergence and proliferation of gated communities cancels the possibility of physical cohabitation. The changes in land, planning, and housing policies in the early 1990s in Mexico contributed to the privatisation of urban development and the financialisation of social housing provision. These macro-economic policies have had a very determinant role in “gating up” society because the housing market was seen as an economic boost tool, and the presence of privatised governments, securitised environments, and isolation from municipal governments was seen as economically convenient.

The financialisation of social housing institutions like INFONAVIT, the national salaried workers’ housing fund institute, is an example of the drift in housing and planning policies, which contributed since the early 2000s to the extension of sprawling metropolitan areas. The outcomes of this sprawling model of urban development has brought serious problems in the provision of adequate public services, health, sports and entertainment facilities, public transport, security, amongst others. One of the main problems of the housing production process since the 2000s is that the federal goals were mostly quantitative, and the lack of qualitative standards contributed to low-quality housing production in inadequate urban surroundings. Most of the new social housing developments from the 1990s and early 2000s were built in unserved peripheral land surrounded by poor infrastructure and agriculture land. This condition contributed directly and indirectly to the emergence of gated communities for all socio-economic groups. The isolation from the city became a motivation for fortification. On the other hand, the financial incentives for developers and people interested in acquiring a house were mostly concentrated in new housing developments. Therefore, the combination of the two situations made it easier for middle-income groups to buy houses inside gated communities. The incentives were not only concentrated in financial possibilities to build and acquire, they were also promoted by poor peripheral municipalities with no resources to provide the services needed. Municipalities joined developers and even created ad-hoc planning regulations, so that these private investors covered urbanisation, maintenance, infrastructure, and security costs.

The increase in housing production after the 2000s indicates how profitable it became, bringing the main housing developing companies to the Mexican stock market. The economically focused housing provision strategies are far from the original constitutional aim of providing adequate and dignified housing for all. The economic forces and stakes are so high that they can be seen as a way of transnational spatial governance. In this borderless world, where geographic boundaries are less important than economic flows, the housing market can become a dangerous tool. The moment national housing policies abandon the goals of adequate housing and leave it to the market; the risks of creating unequal urban environments are bigger. The physical fortification of houses, neighborhoods, cities, and even countries are as much as a result to increased fear and security concerns, as a global financial market outcome. Political conflicts and social unrest have become a motif for displacement not just from war torn areas, but also from formerly safe inner cities.

The walls and fences have become the tool to isolate from the surrounding hostile conditions and therefore the entitlement for its use becomes increasingly acceptable. There are conflicting positions around walls and fences and Trump’s proposed wall in the Mexican border shows the complexity. The wall-building phenomenon seen from a middle-class housing development in Mexico seems acceptable because of the individual and collective interests protected. However, the same people condemn Trump’s proposed border wall. The normalisation of the residential gated community and the opposition to the border wall raises several questions, which show how hard it is to determine individual and collective “rights”. The issues around gun control are similar. Middle-class gated communities are filled with armed private security guards. Inside this premises it is seen as acceptable. However, every other person with guns outside the gates or privately securitised spaces like banks, shopping malls, universities and even parks, is seen as a threat. The same is happening in some areas within the European Union. Principles of diversity, inclusiveness, and multiculturalism are under threat because the fears, risks, and security concerns of the

few, are shaping the physical urban spaces for the most. Transnational planning strategies coming from Europe focus of adequate public transport, liveable housing, quality public spaces, but the reality of fear-driven and unequal urban environments like the Mexican one, prefer copying spatial segregation strategies from places like the US. The transnational planning influence has left the official planning models of land use, zoning, and densities and prioritised the discourses of security and economic growth fuelled by anxieties and aspirations. The influence in policy is no longer expressed in national, regional, and local laws and regulations, but rather on "supranational" markets that profit from such aspirations and anxieties. The new tendencies of governance in privatised government-run spaces like gated communities show the disassociation between the tangible territory within the physical walls and fences, and the real city outside the gates.

The housing policies of the 1990s in Mexico have already shown the short-term impacts of segregated urban structures, such as the disconnection between residents with local authorities, connectivity and public services problems, and also an increase in everyday expenses linked to transport, maintenance fees, and payment of other privately run services. The transnational planning influence we are observing in this case is not a formal one, but the construction of policies built on economic interests and meanings. Healey (2013) provides conceptual and methodological tools "for the critical analysis of transnational flows of planning ideas and practices" (p. 1511). In the paper, the author goes through different theoretical approaches from globalisation and international literatures, and points out that the analysis should focus on the flows, rather than the origin of the ideas. For instance, Mexican housing policies since the 1990s are closely linked to the recommendations from the World Bank to enable housing markets to work. However, as Zanetta (2004) points out, the Mexican government chose to ignore the parts of the policy recommendations that were inconvenient for their economic growth purposes.

The kinds of transnational flows can also get "lost in translation" and accomplish different goals. One example in relation to gated communities, is how new urbanism principles of design have been used by developers to market their private enclaves which sell quality public spaces, community life, and walkable areas. The discourses are "perverted" for particular interests. On one hand, new urbanism principles that would aim to accomplish inclusive and diverse communities become ideal urban exclusive design. The discourses are also perverted for real estate interests. The "compact city" discourse is used for isolated high-rise building projects. In the case study I used for my doctoral thesis in Puebla, I analysed a whole section of a gated community with high-rise buildings completely unrelated to any of the values and principles of compact cities. The flows of transnational planning lose its value in translation in terms of meaning, for instance "the right to the city", used for decades by the most progressive planners has reached main stream and has been interpreted by mid-level public officials to push all sorts of policies, projects, and activities. The flow patterns are no longer unilateral, coming from an "accomplished" planning system into a "third world" or "developing" country. The flows move in different levels and networks. "Good practices" come from all over the world. For instance, Medellín and Bogotá have become world best practice examples of social justice with their public transport, public space, and cultural facilities projects. Porto Alegre's participatory budgeting has been copied and adapted in several countries. Therefore, transnational flows of planning ideas and discourses come from all directions but are also "lost in translation" in all directions. Developers inside gated communities conveniently include those ideas, policies, and practices that fit their purposes and the lack of adequate municipal planning systems give them the freedom to define their own strategies.

When it comes to middle-class gated communities in Mexico, policies and practices intertwine with each other in connection with aspirations and anxieties. Urban policies are transformed to fit private developer's interests. In addition, policies and practices are designed according to fears, security concerns, and special interest groups. The planning model in countries like Mexico are still promoting modernist ideals, which have proved detrimental for cities, like the investment in car-oriented infrastructure, suburban isolated life, and sprawl. This shows that even if planners have knowledge that the current housing and urban development model is not the best one, they are unable to change it because of the strong pre-conceptions and meanings of economic growth, security, and competitiveness that come with them. The micro-practices in household levels become a priority for citizens over the collective rights and benefits. Therefore, discourses and practices that shape policies are clearly defined and modified by meanings (Wagenaar, 2011).

The transnational planning discourses and practices in gated communities in Mexico bring the combination of twentieth century modernist urbanism, with millennial dream community life. The policy discourse analysis focuses on the mentalities and how they become institutionalized into practices (Healey, 2013, p. 1517). Gated communities are places of metaphors, perceptions, dreams, and avoidance for individuals in designed communities. The value of planning under the privatisation of urban development has lost its collective appeal. Forty years of institutionalised planning in Mexico has not convinced the population on the benefits of state planning, locating private urban designers into a more powerful level. The main concern in Latin American countries is not how to plan but how to manage. Since the problem is not getting things done but what happens afterwards, that is another reason why gated communities have become so appealing. Private governments assume the present and future responsibilities. Gated community designers bring all the new elements of the "creative classes" into their developments to bring the youngest and the hippest population. It is important to look at the attitudes, the interconnections, the ideas, and the perceptions. As Shove et al (2012) propose, social practices should be analysed considering the "competences, meanings, and materials", which means that it is not only the capacity of the state to propose planning frameworks, but also the capacity to materialise them, and most importantly how actors interpret them. A diminished state under the influence of the privatisation of urban development is a serious governance threat with potentially high risks in the future.

Micro-practices are connected to macro-level economic policies. If we pay close attention to global financial institutions recommendations, we can track how their impact goes down to individual households. The Washington Consensus and its deregulation, privatisation of state roles, and commercial liberalisation can be identified in national laws, policies, plans and programs, but they are also identified in the increase of private automobiles, home ownership, consumer debt, and changes in consumer consumption patterns. The neoliberal policies in households is one of the mentioned risks, because economic uncertainty can potentially affect middle-income groups with the risk of losing everything they own.

The problem with aspirations and anxieties defining planning policies, ideas, discourses, and practices is that they can throw back unintended consequences. The issue about middle class gated communities in Mexico is that the whole concept of a fortified housing residential enclave with a private administration has not only become normal but "desirable", particularly under the current perception of insecurity and violence, which means that under these circumstances it is extremely difficult to "bridge gaps". In the following section, I will address this issue in detail.

3 BUILDING BRIDGES IN A TIME OF WALLS

In Mexico, gated communities have become so normalised for middle-income groups, particularly in suburban areas, that it would seem that this is the only valid way to accomplish the goals of habitability, security, quality urban spaces, and community life. For residents and potential buyers, security or at least the feeling of security is the priority number one. A fear-driven urban development is hard to modify because it would require changing people's perceptions, attitudes, and behaviours. When we talk about building bridges in a time of walls, it is easy from a theoretical position to show the advantages from open, diverse, inclusive and multicultural communities. However, it only takes one story of "talk of crime" to make the exclusive, segregated, safe and reliable gated community more appealing. Mexican planning is a bricolage of local traditions and knowledge with imported policies and practices. Since the 20th century, there have been attempts to experiment with foreign ideas, from garden cities to smart cities. The problem is that these influences in the context of fear-driven development produce highly segregated spaces. In a recent smart city exhibition in Puebla, the large majority of the companies exposing their products were surveillance and security systems. Some visitors even pointed out that it was more a "big brother" exhibition than a smart city one. The transnational planning ideas of securitisation have found fertile ground in Mexico, and even people living in supposedly safe gated communities continue investing in CCTV systems, electrified gates, and other security items.

The risks and challenges of modern Mexican gated communities is not just in the shape of walls and fences but the inequality and the physicality of segregation. It is not only the increasing gap between the rich and the rest of the population, but also the super-stratification of middle to lower-income groups. Gated communities in that sense should be seen as a dangerous urbanisation model in terms of governance. Case studies all over the world help understand the challenges of the changing transnational political economic landscape. In the case of Mexico we can see how crises and political uncertainty are

shaping and reshaping the urban structure. The difference between Europe and America, and the north and the south are an opportunity to learn from each other's mistakes. Particularly under the challenges of urban governance, climate change and economic turmoil, as they do not respect geopolitical boundaries.

The Mexican middle-class gated community I analysed in Puebla during my doctoral studies can be seen as an "extreme case" because of its large scale and multi-clustered structure (more than 21,000 houses located in stratified mini-gated communities). The research showed that residents felt judged by outsiders and considered they had valid reasons to live in a gated community and it had nothing to do with the exclusiveness, status, and prestige drivers usually mentioned in literature. There were three main issues why these residents considered that gated communities are not only desirable but necessary:

1. Municipal authorities are unable to respond to their needs and they feel that private administrations are more reliable and provide better services.
2. Their family's safety is more important than anything else is and if it takes a wall, a fence, a security guard, a camera, and an alarm, these residents would not hesitate to pay for all of these, because it provides them peace of mind.
3. The ideal of a shared space for all sounds good, but they would rather live amongst "people like them". The residents I interviewed do not consider themselves racist or discriminatory but defend their right to hang out with people with the same interests and tastes.

From a policy perspective, it becomes very hard to promote inclusive urban environments, because the meanings attached to this model of "safe urbanism" is so strong. The "new normal" makes the traditional city undesirable because it does not offer the same elements of beauty, security, reliability, and infrastructure. The risks and challenges of these urban segregated structures is that once they become normal, people become "numb" and stop feeling or realising the conditions of disconnection and isolation. Gatedness is becoming so desirable that it is leaving the residential areas and reaching public spaces, universities, state facilities, etc. In Puebla, even bike lanes and public parks are being gated, because people feel safer that way. Public and private universities are incorporating more access control strategies and increasing their security budget to fulfil their students' expectations. The problem with this normalisation is that it makes it more difficult to make changes in policies and practices. Scholars and planners are interested in regulation that would prohibit this sort of enclaves; however, what we have seen in recent decades is that planning regulations only work when residents are convinced of their benefits. Otherwise, they will not try to enforce such regulations. Most residents in the city of Puebla value the presence of 24-hour security personnel or safe and closed environments. These become more important than location in relation to work, school, or public spaces. In my thesis, I propose that in order to change policies and practices, we should start focusing on meanings rather than regulation and planning instruments. The research in Puebla showed that as long as the meanings attached to projects gave them a positive feeling, there would be no opposition. Even though they knew the project was not complying to federal or state law. The clearest example was the construction of the International Baroque Museum designed by the famous architect Toyo Ito. It was more important to have an outstanding architectural project from a famous architect than protect one of the few spaces left for metropolitan parks and public green areas.

The normalisation of gated communities in Mexico, gives us a glimpse of how the new normal justifies patterns of behaviours and understandings and therefore political discourses. Presenting my research in European planning conferences has proved a very interesting opportunity since it made me realise, that even myself as a researcher, I had grown so used to these developments that I could not see some of the issues. It also made me aware of how many students from European countries found these enclaves as a completely different reality from where they came from. However, an interesting issue I found with my research is that even Europeans who would probably live in tower blocks in the central areas in their own countries preferred the gated options once they came to Mexico. In Puebla, in the case study I analysed, several real estate agents chose houses within the premises for Germans working at the newly built Audi factory or the executives at Volkswagen. The support for this choice was based on security concerns, but that does not change the fact that residents have found at ease in these enclaves and would not want to move out. So, how do you build bridges if the benefits of building walls seem so much better? Perhaps the answer is in everyday life practices and recognising the value of shared spaces. Not just green areas and parks, but shared spaces for education, health, culture, entertainment, sports, etc. Elements that make our everyday lives better that help us fight our fears and security concerns.

The walls separating the poor from the rich and even the high middle-income resident from the low middle-income resident seem like they are here to stay as long as the incentives to do something different are not as attractive. The Mexican border wall or a gated community wall does not fix any of the structural challenges our countries are living, it only makes people “feel safer” and modify social interactions. Empirical research about gated communities has shown that these places are not immune to crime and violence, the difference is the type of crime. The same happens with other border control strategies aiming to stop criminal acts. The border is not a mind-changing threshold that immediately blocks and changes behaviours. Meanings become more powerful than the tangible objects. What can we do to regain trust? What can we do to increase tolerance to difference? How do we change our relationship with the outside? Mexican planning is facing a very difficult phase. Traditional institutionalised planning has failed and private urban development has promoted segregation, exclusiveness, and social discrimination. This is the time to search for alternatives in times of uncertainty. The alternatives are emerging out of other global economic trend: financial instability. Millennials are choosing cohabitation and other shared spaces housing and working strategies. Weather this is a temporary trend or a real policy solution, we should be paying attention to the meanings and values of these shared economies and systems, but also the risks of financialisation of shared economies to avoid the downfalls of Uber and Airbnb. This is a time to include meanings in policymaking so that implementation strategies are more effective. This is the time to work with future scenarios that show us the benefits of inclusive urban spaces, and the risks and challenges of segregated fortified enclaves. This is the time to regain our capacity to feel and relate to the other outside of my immediate circle.

4 CONCLUSIONS

The effect of gated communities is a sort of “numbing urbanism” in the sense that we do not even feel anymore. It is not the problem of how fear is shaping our lives, but rather how it has made us numb. Willing to sacrifice our freedom, our choices, and our feelings for security is putting our cities at risk. The normalization of gated communities is not just about how we want to protect from outside dangers, it is also a tangible expression on how segregation, exclusion and spatial discrimination have become the new normal, and how this new normal is shaping people’s perceptions, actions, and practices, but also shaping policies and discourses. The Mexican government has been aiming towards the middle-classification of the Mexican population. This process of middle-classification of people was an attempt to erase the memory of poverty and large inequality that prevailed since the Revolution. However, instead of creating a common ground and space for all, the economic policies that shaped this thought, has also been directly and indirectly involved in the shaping of newly unequal cities and metropolitan areas. This is the time to rethink the way we understand public and private roles in urban development, but also an opportunity to shape policies through the understanding of meanings in order to make cities more livable.

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ID 1636 | SPORTS MEGA-EVENTS AND URBAN LEGACIES: THE 2014 FIFA WORLD CUP, BRAZIL

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ABSTRACT: The idea of organising Sports Mega-Events had been defended by strategic urban planners as a way to attract considerable public and private resources to be invested in cities. In this respect, the city of Barcelona has been an outstanding example for the urban transformations as a result of the 1992 Olympic Games. The construction or renovation of ports, airports, public transportation and sports facilities, housing, hotels and tourism developments is regarded as the urban legacy of organising such mega-events. In October 2007, Brazil was chosen to organise the 2014 FIFA World Cup. Seemingly a natural vocation due to the country´s historic relationship with football, the competition to host this mega-event was related to the political project of its governors during a period of rapid economic growth and the emergence of the country on the world scenario. Between October 2007 and July 2014 a series of projects in infrastructure, mobility and stadia construction was carried out at a cost of ten billion dollars. The aim of this paper is to understand the main results of the World Cup interventions in Brazil, which were its main urban legacy and who were the winners and losers in this process.

1 THE RATIONALE FOR SPORTS MEGA-EVENTS PLANNING

The idea of promoting sport mega-events has been defended by international urban strategic planning consultants as a way for cities to compete with each other for the 'scarce international investment' and achieve economic development in a 'highly competitive environment' of contemporary capitalism[1]. They say that when hosting these events, a considerable amount of public and private investment in

[1] We refer here to the concepts of current capitalist development stage, where the global accumulation regime is given by the dominance of finance capital over the productive, made possible by international capital flows deregulation and the adoption of the neoliberal political and economic doctrine (Chesnais & Brunhoff 2005, Foster 2010, Harvey 1990, 2005).

infrastructure, services and employment-generating activities will be implemented in the city that would take longer to happen without them: it is the so-called LEGACY.

The mega-events are a short-term event requiring investments in a series of works for it to be carried out. In the case of sports mega-events, the two main and most important are the Olympic Games and the FIFA World Cup. From the late 1970s on, with the global television broadcast, there was a major transformation in their organisation, as the media worldwide exposure caused the event to become highly profitable for their sponsors. Thus, large multinational corporations, such as sports brands, automotive, beverage, electronics, food and telecommunications industries, have been investing billions of dollars expecting financial return from the exposure of their brands (Broudehoux, 2015).

The sports facilities needed (stadiums, arenas and gyms), transport infrastructure, telecommunications, hospitality (to accommodate the delegations, journalists and tourists) and related services have caused a series of works and investments in urban development, which many times had led to great urban transformations.

On the other hand, the global economic restructuring crisis of the 1980s has led to profound changes in the paradigm of urban planning and policy, making urban administrations to adopt a neoliberal approach, taking a more active attitude to attract economic development, adopting techniques of corporate strategic planning, moving from 'managerialism' to 'entrepreneurialism', in Harvey's words (Harvey, 1989).

The role that the city of Barcelona played in the 1992 Olympic Games is regarded as one of the first examples of this new paradigm, which uses the promotion of major event as integrant part of urban strategic planning, as can be seen in the words of Borja and Castells:

> *The response to the awareness of crisis has been facilitated in some cities by the ability to attract and make use of a major international event. Barcelona has become a paradigmatic example of this. The strategic plan would not have been the framework for an ambitious urban transformation project, now partly implemented, without the spur of the 1992 Olympic Games. (Borja & Castells, 1997, p. 93)*

Since then, several municipal and national governments have struggled in the competition to host these mega-events, with the aim of promoting and transforming their cities to be 'sold' to the consumer market, becoming investment and tourist destinations on a global scale.

However, the sponsors' billionaire interests cause these interventions to result in strong physical-spatial and socio-economic impacts on the city and its residents. Sometimes, the combination of television, marketing and commercial rights sale of these events make these powerful transnational companies and the organizing committees to have a supranational decision power, dictating rules on the construction and location of the stadiums and equipment, even changing national and local legislation[1].

Many authors have explored the impacts of mega-events planning. Kassens-Noor (Kassens-Noor, 2012), after analysing the transportation planning for four Olympic cities (Barcelona, Atlanta, Sydney and Athens) came to the conclusion that the IOC - International Olympic Committee had a strong influence on these projects. They turned out to be quite different from what had been planned for these cities prior to the bid. Worse yet, they represent a strong shift away from investing to meet these cities mobility real demand and eventually become great 'white elephants', with little use by local people after the games.

Furthermore, the impact of interventions and works regulations of these events has generally resulted in losses for local communities. In this aspect the main 'winners' of this process were the entrepreneurs, landowners and big business at the expense of the most excluded population sectors, especially the low-income residents of the surroundings and the small local businesses.

[1] We remember here two emblematic cases: the first one was the demand of FIFA to change the location of Cape Town Stadium in 2010 South Africa World Cup for a photogenic place, with the sea in the background, avoiding its construction in the original planned location close to a poor neighbourhood and low income residential developments (Broudehoux 2015); the second case is the clash between the FIFA rules regarding spirits consumption in stadiums (since one of the main sponsors is a beer producer) and the national legal restriction on their consumption, which had to be relaxed in Brazil during the event.

Brimicombe (2013) evaluated the results of 2012 Olympic Games in London and came to the conclusion that the main legacy promises at national level were not met. First, the expenses for the event were much higher than the original budget (£ 9 billion against £ 2 billion), and the public sector was responsible for 90% of the total, despite initial promises on the contrary. The goals of transforming the UK into a sporting nation also did not occur: it was expected that one million young people would initiate sports activities for an hour at least three times a week after the games, and later this estimate was revised for just one hour once a week.

Even the urban legacy of the Games to London is questionable. Their location in the East End was proposed to promote an urban regeneration process in an area characterised by industrial transition with large environmental burden and strong presence of vulnerable low-income population. Considering the two main local goals, provision of social housing and jobs to meet local needs, the legacy also seems to have been a failure. Westfield Stratford City, one of the largest shopping malls in Europe, with GLA – Gross Location Area of 175,000 square meters, was built next to the Queen Elizabeth II Olympic Park, in order to provide economic activities and jobs to the area. However, according to the local plan draft conducted by the London Legacy Development Corporation only 20% of the ten thousand jobs created was directed to local population, in an area where there are serious unemployment problems (LLDC, 2013).

The Olympic Village was transformed into a luxury housing development, 'East Village London', and has been sold to the community. Prices of new homes skyrocketed: a new one-bedroom flat was selling at £ 300,000 in 2014, in contrast to two-bedroom terraced houses, which were being sold at an average of £ 230,000 (Zoopla Propriety Group, 2014). The Olympic Village building quality highly contrasts with existing vicinity homes and only 24% of the 2,818 new homes will be for social housing (Watt, 2013).

Four hundred homes have been demolished for the Olympic works and "Olympic-related gentrification and displacement processes associated with rising private housing costs have already been identified" (Watt, 2013, p. 104). The current low-income residents face uncertainty about the possibility to remain in the place in the future, bearing in mind that since the 1980s the Eastern Thames Valley has been subject to various urban regeneration projects, attracting many foreign investors such as Russian, Chinese and Arabs.

1.1 ORGANIZING A SPORT MEGA-EVENT IN A BRIC CONTEXT

Brazil is presently considered as a BRIC country. Due to its economy size and growth in recent years, Goldman Sachs chairman, Jim O´Neill, have coined this acronym to define the largest emerging market economies consisting of Brazil, Russia, India and China (O´Neill, 2001). After the Debt Crisis of the 1980s, Brazil overcame the economic crisis and controlled inflation with Plano Real stabilisation plan. However the economy continued to slide, growing at an average of 2.8% a year; the overvalued new national currency, the Real (R$), and the free trade caused a deindustrialisation process and unemployment continued high (12.3%) (IBGE, 2014). In amidst of the Chinese led economic boom and commodities high valorisation of early 2000s, the Brazilian economy grew again at an average of 4% a year, reaching 7.6% in 2010, becoming the 7th biggest economy in the World[1] with a GDP at market prices of US$ 2.3 trillion in 2014 (The World Bank, 2014).

The election of the leftist Luiz Inácio Lula da Silva[2] for president much contributed for these changes. During his office (2003-2010), Lula da Silva adopted a macroeconomic policy based in two fronts that became known as 'neodevelopmentalism'[3] (Ban, 2012). First, an aggressive economy and exports policies

[1] Behind: United States (US$ 17.4 trillion), China (US$ 10.4), Japan (US$ 4.6 trillion), Germany (US$ 3.9 trillion), United Kingdom (US$ 2.9 trillion) and France (US$ 2.8 trillion)(The World Bank 2015).

[2] Luiz Inácio Lula da Silva (1945-) is a Brazilian politician. Former metal worker and trade union leader, he was one of the founders of the left wing PT – Partido dos Trabalhadores (Workers Party). After running three times for presidency, he was elected president in 2002 after approaching centre-left and re-elected in 2006. By the end of his term in 2011, he managed to elect his successor, Dilma Rousseff, also from PT.

[3] According to Ban (2012) 'neodevelopmentalism' entails a new form of state activism. It is a national capitalist development program meant to guide the transition of developing countries away from the Washington Consensus. It is based on the adoption of a development strategy that allows domestic firms to seize global economies of scale and technological updating processes, but also innovation policy and an activist trade policy targeted at investment opportunities for domestic firms.

boost financed by BNDES[1], fostering the 'National Champions', major Brazilian enterprise groups in the fields of agribusiness, construction and industry (cement, beverage, food, petroleum oil and steel). Many Brazilian companies have consolidated as multinationals, expanding their presence especially in Latin America and Africa (Columbia Law School, 2007).

Second, the implementation of various economic and social programs to reduce extreme poverty. The minimum wage has had a real 75% increase, discounting inflation. 'Bolsa Família'[2] (Family Allowence), an income transfer program, was created to ensure the right to food and access to education and health for families in extreme poverty. And after almost twenty years of absence, the Federal Government returned investments in infrastructure in areas such as housing, sanitation, transport, energy and hydric resources through PAC – Programa de Aceleração do Crescimento (Growth Acceleration Program) with a prevision of a US$ 237 billion investments for the 2007 three following years and in social housing production, creating in 2009 the 'Programa Minha Casa Minha Vida' (My House My Life Program) that initially aimed at producing one million homes, but reached three million units[3]. With these economic measures unemployment fell to 6.4% and 25 million people left extreme poverty (Báez, Rodella, Sharman, & Viveros, 2015).

It was in this favourable conditions context at national and international levels that Brazil jumped on the sports mega-events planning bandwagon, hosting the 2007 Pan-American Games in Rio de Janeiro, the 2014 FIFA World Cup and the 2016 Olympic Games again in Rio de Janeiro. The bids had the Government approval and even its proactive attitude from the beginning. More than that, organising such mega-events would crown President Lula da Silva political project, showing that the country, under his presidency, had finally the conditions to be recognised as an emerging power. In that sense the organisation of the 2007 Pan-American Games was a test for Lula da Silva´s great ambitions, as can be seen in his own words:

> *Normally the Olympic Games are organised by the rich and developed countries. With the Pan-American organisation, we want to prove that we can do equal or even better than any rich country of the World. We are going to organise the best Pan-American Games ever so that we can dream with other realisations… We are interested on bringing two events to Brazil: 2014 World Cup and after that, the Olympic Games. (UOL, 2006)*

Lula da Silva believed that organising such events would bring prosperity and political capital with the amount of investments that had to be done. In that sense, it represented the legitimate justification to boost the contractors (the 'National Champions'), national and local economies with public and private money for the works of new arenas, facilities and infrastructure.

1.2 THE 2014 FIFA WORLD CUP ORGANISATION

Despite wide criticism that 2007 Pan-American Games had received, specifically with regard to over-pricing and the urban impacts (Mascarenhas, Bienenstein and Sánchez 2011), the Brazilian Government had decided to compete for the right to organize the 2014 FIFA World Cup. After FIFA ratification in 2007, eighteen cities entered a dispute to host the event. Despite the fact that FIFA would prefer fewer host cities (between six and ten), the Brazilian government pushed for a larger number (twelve), justifying it due to the country´s continental dimension. In reality, this would allow investment distribution among different regions of the country, promoting the host cities transformation just in time for 2014 national elections, as can be seen in the Federal Government rationale on the legacy below:

[1] BNDES is the Brazilian National Social and Economic Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), founded in 1952 that has played a fundamental role in stimulating the expansion of industry and infrastructure in the country.

[2] Created by the Federal Law 10,836/2004, it is an income direct transfer program to families in poverty and extreme poverty. In 2015 the program assisted 11.5 million households (23% of the national total), transferring R$ 25.4 billion (US$ 6.5 billion) in benefits Fonte bibliográfica inválida especificada..

[3] In four years, it reached a total of more than three million of contracted units, 53.3% of which for families earning less than three minimum wages (Santo Amore 2015).

The objective of the Federal Government is to coordinate an investment program that will transform some of the most important capitals of the country, from North to South and from all regions: Belo Horizonte, Brasília, Cuiabá, Curitiba, Fortaleza, Manaus, Natal, Porto Alegre, Recife, Rio de Janeiro, Salvador and São Paulo. For all Brazilians, whatever the result of the World Cup will be, an important legacy in infrastructure, job and income creation will remain, promoting the country's image globally." (Brazil, 2013)

After the host cities definition, the Federal Government, under the Ministry of Sports, started to develop the necessary projects to carry out the World Cup. They were divided into three major groups, called planning cycles (infrastructure, support services and operational actions)10. The infrastructure projects were those that provided the greatest number of physical-spatial interventions, causing therefore the greatest impact on cities. They were divided into four types:

10 These groups were divided into three planning cycles (Brazil 2013): infrastructure projects from 2009-2010 (stadia, urban mobility, airports and ports); support services projects from 2010-2011 (security, tourism infrastructure, telecommunications, energy, environmental sustainability and institutional communication); operational actions from 2011-2013 (airport and port operation; urban transport; energy supply, medical and transitory facilities)(Brazil. Ministry of Sports 2014).

1. Stadia;
2. Urban mobility;
3. Airports;
4. Ports.

In January 2010 the Minister of Sports, twelve state governors and twelve cities mayors signed the Responsibility Matrix agreement, where they committed themselves to carry out the necessary actions and works for the World Cup. The Federal Government was responsible for the renovation of airports (INFRAERO – Federal Airport Infrastructure Administration) and ports (Secretaria dos Portos – Department of Ports). However, as several airports have undergone privatisation, the franchisers also have borne the costs (58%). The urban mobility works were of various types, from building public transport systems and facilities, such as BRT – Bus Rapid Transit and LRV – Light Rail Vehicles lines, train or metro stations, to the construction of streets, roads and fly-overs. Largely the mobility works were related to the connection of the airports to the stadiums or to road adequacy in their surroundings. The costs were shared between the Federal Government (50%) and the local instance (50%), both state and city governments, depending on each case. The participation of Federal Funds came through CEF (Federal Savings Bank) loans under the PAC Mobilidade Urbana (Growth Acceleration Program – Urban Mobility mode). With regard to the stadiums, despite government promises to only invest in infrastructure, the largest amount of money was from public sources (92.7%). The BNDES has opened a credit line for companies with interest rates below the market. Municipalities and states granted tax exemptions, if not invested directly in the stadiums construction/renovation. Afterwards, public money, considering lines of credit, loans, tax exemptions or direct spending represented 84% of the 10.1 billion dollars[1] spent on 2014 FIFA World Cup organisation, being 51% from Federal Government and 33% from states or municipalities, as seen in table 1 (Brazil. Ministry of Sports, 2014).

[1] The total amount was R$ 27.1 billion (Reais) converted at an exchange rate of R$ 2.68 for US$ 1.00 for 23 December 2014, according to Brazilian Central Bank (http://www4.bcb.gov.br/pec/conversao/conversao.asp). These values can present some little differences as between the Responsibility Matrix signature in January 2010 and its final version in December 2014, the Real devalued 14% against the Dollar, discounted the inflation. From that date until March 1st, 2016, the Real has had a strong devaluation, losing 49% of its value, mainly due to an economic crisis and severe recession Brazil has been suffering.

	Total Investment	Financed by Federal Government	Federal Investment	Local Investment	Private Investment
Urban Mobility	3,260.1	1,637.2	9.3	1,613.7	-
Arenas	3,131.7	1,425.5	-	1,477.8	228.4
Airports	2,346.2	-	994.8	-	1,351.4
Ports	223.3	-	220.9	2.4	-
Other	1,169.7	-	872.7	256.9	40.3
Total US$ million	**10,131.0**	**3,062.7**	**2,097.6**	**3,350.7**	**1,620.2**

Table 1 – The final Responsibility Matrix investment by type of work
Source: Brazil, Ministry of Sports, 2014.

From a regional point of view, investments were concentrated in the Southeast Region, the country´s most developed. According to table 2, the total amount spent in São Paulo, Rio de Janeiro e Belo Horizonte accounted for 42.8% of the total.

	Total Investment	Financed by Federal Government	Federal Investment	Local Investment	Private Investment	
São Paulo	1,899.6	149.4	255.9	385.7	1.108.7	18.8%
Rio de Janeiro	1,446.8	589.8	172.3	684.7	-	14.3%
Belo Horizonte	979.5	502.6	163.5	313.5	-	9.7%
Cuiabá	912.9	316.8	39.2	556.8	-	9.0%
Brasília	810.1	18.8	4.5	546.8	239.9	8.0%
Recife	625.1	402.7	16.5	205.8	-	6.2%
Fortaleza	613.5	284.4	154.1	174.9	-	6.1%
Natal	577.7	262.1	110.1	65.3	140.2	5.7%
Manaus	488.7	149.4	195.5	143.8	-	4.8%
Curitiba	418.2	162.9	64.9	93.0	97.2	4.1%
Salvador	354.5	120.9	66.8	166.9	-	3.5%
Porto Alegre	190.0	102.8	39.7	13.5	34.1	1.9%
Other (all cities)	814.7	-	814.7	-	-	8.0%
Total US$ million	**10,131.0**	**3,062.7**	**2,097.6**	**3,350.7**	**1,620.2**	**100.0%**

Table 2: The final Responsibility Matrix investments by city
Source: Brazil. Ministry of Sports, 2014. Elaboration by the author.

In order to speed up the works, the Federal Government enacted a new public tender law (Brazil, 2011) that allowed contractors and contract requirements to be flexibilized, thus reducing the process time from 250 to 90 days. This new tender regime has received many critiques from engineers and architects professional associations for giving the contractors too much power as they became responsible for the basic and executive projects, allowing them to define the works, changing its characteristics.

Another controversial law was the General Law of the Cup (Lei Geral da Copa) which established among other things (Brazil 2012): end of spirits consumption prohibition during the event; the revision of ticket discounts for students, elderly and handicapped; street commerce prohibition around the World Cup facilities; Federal Government civil responsibility for incidents and damages during the event; extended and free visas for World Cup foreigner workers and athletes; etc.

At the local level, contractors, entrepreneurs and the land-based elite entered in competition for resources and projects from the Federal Government. In many cases, investments in infrastructure and stadiums were directed to areas of potential expansion of the real estate capital, not without causing the eviction of low-income local population and planning legislation flexibility.

The large volume of public investment and little public return of the works caused a great population reaction, who took the streets of Brazilian cities in thousands demanding for public transport, schools and hospitals at ‘FIFA standard’, and crying slogans such as ‘Cup for whom?’ or ‘There will be NO Cup’ (BBC News, 2014). Organised social movements, composed by workers, students and intellectuals has joined together locally in the Comitês Populares da Copa (Cup Popular Committees) and nationally in the ANCOP (Cup Popular Committees National Articulation) denouncing the values spent on the Cup and human rights violation against the poor population evicted for the works.

2 THE CONTESTED URBAN LEGACY

The 2014 FIFA World Cup in Brazil took place in twelve host cities between June 12 and July 13, resulting in 64 games, 171 goals, audience of 3.43 million people in the stadiums, public of 5 million people in the Fan Fests (Brazil 2014). Despite fears that the works would not be ready for the event and that insurgent demonstrations could compromise it, the event took place without major problems. In the end, the Brazilian team suffered a shameful seven to one defeat to the Germans at the Mineirão in the fateful July 8 semi-final and then another three to one defeat to the Dutch in the Brasília July 12 third place contention.

Nevertheless, the event had good results as a tourism booster: a million foreign tourists came to Brazil and three million Brazilian tourists travelled during the World Cup (Brazil, 2014). Research done by the main national research institute with foreign tourists showed their great satisfaction with the event (Datafolha, 2014): 83% of respondents considered the World Cup organisation as excellent or good, 92% considered the stadiums' comfort and safety as excellent and good, 95% considered the Brazilian a sympathetic and hospitable people, 76% considered good the transportation to the stadium and 69% said they would live in Brazil.

But, if from the spectacle and tourism points of view the event was a success, why was it antedated and followed by large popular demonstrations? What went wrong?

First of all, there is the question of the huge amount of public funds that were used for the World Cup organisation despite promises on the contrary. In a country where 35.5% of the 47.3 million households are not connected to a sewage system (IBGE, 2011), spending 8.5 billion dollars of public money (out of 10.1 in toto) on a mega-event organisation seems to be blatantly wrong. Having this in mind, it is easy to understand the indignation of the social movements that have made demonstrations against the World Cup, shouting slogans like 'We want hospitals, public transport and schools at FIFA standards'.

The very nature of planning consists of social justice, or at least it should/used to. However the 2014 FIFA World Cup organisation has much disregarded this fact. Considering the planning process, it seems that sport mega-event organisation in Brazil has only reaffirmed the trend towards neoliberal urban planning, based on policies that emphasize economic opportunities, mainly to the great capital.

The 2014 FIFA World Cup organisation in Brazil was followed by a more flexible and 'business friendly' urban legislation: density parameters were upgraded, environmental restrictions were relaxed, tax exemptions were given, everything to attract investments around the stadia and the infrastructure works. This can only be understood considering the so called 'neodevelopmental' policies adopted at a national level such as PAC (Growth Acceleration Program) and PMCMV (My House My Life Program).

Designed to boost the building and the real estate sectors, neither of them took into consideration their urban impacts. So, Brazilian biggest contractors and a diverse myriad of real estate companies took advantage of public money to boost new urban development. In this sense, it was shown in many chapters that the main 'losers' of the 2014 FIFA World Cup organisation were the lowest-income and most-excluded strata, exactly the strata urban planning should care for.

According to the Brazilian Presidency Executive Office data, about 35.6 thousand people were removed from their properties as there have been 13.6 thousand recorded removals (10.8 thousand households and 2.8 thousand shops and other sort of properties), either by expropriation or forced eviction (Secretaria Geral da Presidência da República apud. ANCOP 2014, p. 39). These figures are 34 times more than the 2012 London Olympic Games as seen in section 1.

Most of these people were living in informal settlements such as favelas placed near the works sites. Many families were replaced to housing developments many kilometres away from their original place, generally in more precarious situation considering urban infrastructure and public facilities, though sometimes in better housing conditions. Their removal has assured higher levels of profitability for the real estate sector new developments in favoured urban areas.

Figure 1 – Favela removed for mobility works in São Paulo. Source: https://www.vice.com/pt_br/article/esses-sao-os-resistentes-das-desapropriacoes-da-favela-buraco-quente

Considering the urban legacy main promise, the mobility works, it was also disappointing. Certainly the two current biggest urban problems in Brazil are mobility together with access to housing. Historically investments have been concentrated on road works that generally favours motorised individual transport (automobiles, motorcycles, etc.), despite the fact that the great majority of trips, 69%, are made by either non-motorised (foot or bicycle) (40%) or motorised collective (buses, trains, metros, etc.) (29%) (ANTP, 2012)[1].

According to newspaper reports, one year after the World Cup only 21.4% of the mobility works were finished (Amora, 2015). The delays have majored the prices 33% in average, but sometimes have doubled or even tripled. Worse still, some works have been abandoned or postponed such as the VLT (light rail) of Cuiabá, capital of Mato Grosso State, whose trains (40) were purchased and are parked in a courtyard, as there are no tracks to put them on. Some have become 'white elephants' like São Paulo light rail, that left the State Responsibility Matrix since the stadium changed from its initial place and it now faces an undefined future (figure 2).

Figure 2 – Abandoned light rail works in São Paulo. Source: the author, 2016.

From the airports 10 out of 13 were ready (76.9%), however most of them were renovated by the concessionaires. The urban mobility promises failure has aggravated the political ambience since bad urban mobility conditions had been causing major demonstrations in many Brazilian metropolises since the famous '2013 June Journeys' that took almost two million people to the streets (Watts, 2013).

Considered the stadia, eleven were finished and only one remained uncomplete (Cuiabá). However, the great question here is their usage after the end of the World Cup. According to a newspaper report, only football games are not sufficient to guarantee profitability in any of them (Terra, 2015). So, all of them have to search other financial return sources such as shows and other sports competitions to keep the budget

[1] The report was done for 438 Brazilian cities with a population over 60 thousand inhabitants, representing 64% of the national population (ANTP, 2012).

balanced. From the twelve built stadiums, three of them (Brasília, Cuiabá and Manaus) had ended 2015 with a deficit of R$ 17.6 million (US$ 4.5 million).

From the twelve stadiums, nine belong to the states and Federal District governments and three belong to local football teams (Atlético Paranaense in Curitiba, Corinthians in São Paulo and Internacional in Porto Alegre). Amongst the public ones, five are renovated and are now managed in a PPP scheme. All of these have caused a rise in ticket values that together with the FIFA standard renovation have caused the gentrification of the spectacle. Five stadiums are now managed by two of the Brazilian biggest contractor corporations, Odebrecht (first place) and OAS (third place), that are now being investigated by the Operação Lava-Jato[1] (Car Wash Operation) in the largest scandal of corruption involving Petrobras, the Brazilian Petroleum Corporation, five contractors and many politicians.

Figure 3 – Maracanã Stadium in Rio de Janeiro. Author: Daniel Basil. Public Domain
Source: https://commons.wikimedia.org/wiki/File:Maracanã_2014_d.jpg

Finally, after the mega-event euphoria, Brazil faces again economic and political uncertainties. If the planning of the sport mega-event began during a period of great optimism and economic growth for Brazil, its delivery occurred in a downturn, result of the exhaustion of the internal demand growth process, associated to less favourable international ambience. The 2008 international crisis, China's growth reduction and the end of the commodities valuation cycle due to oil prices sharp fall hit the Brazilian economy in full.

In the national arena, political crisis due to Operação Lava Jato media exposure, involving the ex-president Lula da Silva, has eroded the president Rousseff governance basis causing her impeachment. The delay on the Government response to the economic crisis and the worsening of domestic political ambience have led to market instability, foreign investment departure, a sharp 49% Real devaluation. The GDP fell from 2.7% growth in 2013 to 0.1% stagnation in 2014 and -3.8% recession in 2015 resulting in the downgrading of Brazil's investment grade by all risk agencies (Soto & Ayres, 2013).

All of these factors have altered the course of sports mega-events planning from now on in Brazil as the political and economic conditions that made it possible have now changed considerably. Unfortunately, it seems that for most of the Brazilians the 2014 FIFA World Cup left a bitter taste far beyond the defeat of their national team.

[1] Operação Lava-Jato is the largest investigation of corruption and money laundering Brazil has ever had. It is led by federal prosecutors and the Federal Police. The scheme involves Petrobras, major contractor corporations and politicians. Up to now, this investigation has resulted in 133 arrest warrants, 84 convictions and the search for R$ 14.5 billion (US$ 4 billion) of money diverted (http://lavajato.mpf.mp.br/atuacao-na-1a-instancia/resultados/a-lava-jato-em-numeros-1). The name lava-jato (car wash) comes from the beginning of the investigation that started investigating a car wash network that was used to launder money from criminal organisations.

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ID 1734 | SOCIAL SEGREGATION IN ATHENS' METROPOLITAN AREA IN THE PRE-CRISIS PERIOD

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1 INTRODUCTION

This paper seeks to explore social segregation trends in Athens metropolitan area in the very first years of the economic crisis, and discuss the socio-spatial patterns of the metropolitan population, based on the 2011 statistical census data. The spatial aspect of social structures introduces a different dimension on social segregation trends, reflecting segregative outcomes of different socio-economic processes around the world. Varied and nuanced forms of social segregation present in various cities around the world, altering the way of measuring and evaluating the character of the progress. Nevertheless, a potential rise in social segregation depends upon certain mechanisms that allocate residential areas to different social groups (Maloutas, 2007). Hence, the contemporary economic crisis changes in turn the social impact of economic restructuring, and social segregation comes to terms with new realities.

Up until the early 2000s Athens hadn't undergone intense processes of socio-spatial division. Residential segregation in Athens remained relatively low by international standards before the outbreak of the economic crisis. During that period, the metropolitan area of Athens constituted a paradox paradigm of social segregation and social polarization, partially due to the spatial structure of the housing market and to the respective policy framework. Undoubtedly, eight years on since the outbreak of the crisis, the urban space of Athens has been exposed to the socially dividing effects of globalization, experiencing rising social inequalities, demographic changes, marginalization of lower income strata, reduction of social mobility, high unemployment rates, etc (Maloutas, 2007).

Exploring the factors that contribute to the development of social segregation patterns in Athens and elsewhere, one should certainly identify social polarization. According to some authors (Sassen, 1991), social polarization is the key factor for the generation of such phenomena. However, various approaches of social segregation claim that the impact of globalization on cities is more complex and diverse than social polarization alone. Hence, it has been underlined that both the formation of socio-spatial structures and the distribution of social groups along residential areas constitute dynamic processes whose roots are identified not only at the economic restructuring process but also at several other factors of regulatory, social, and cultural origin (Préteceille, 1995; Hamnett, 1994; Maloutas, 2014; Marcuse and van Kempen,2002). Particularly in the case of Athens, the institutional and regulatory framework is considered to be the primary agent to define socio-spatial patterns. In this context, it is useful to draw attention to the particularity and the complexity of socio-spatial trends in the Greek capital city, and to approach social segregation as a dynamic and multifactorial phenomenon.

The idea of this paper is to designate the situation before the absolute sovereignty of the economic crisis in the Greek urban space, and should produce a basis for more effective social and spatial policies for the reduction of segregative trends. The first section of the paper introduces the social segregation context and the scientific discussion that has taken place approximately during the last decades. Emphasis is laid upon different approaches that have developed through the empirical analysis of the phenomenon in urban areas worldwide. The second section presents the methodological steps made in order to study the character of social segregation in metropolitan Athens. The third section discusses the research results, attempting also a comparative analysis based on previous studies. Finally, the concluding section provides some reflections about the socio-spatial composition of the Greek capital city in order to design the future of a metropolis in crisis.

2 SOCIAL SEGREGATION: A CONCEPTUAL APPROACH

The concept of social segregation was primarily introduced by the Chicago School (Grafmeyer and Joseph, 1990; Wirth, 1980). Following the economic restrictions imposed in the 1970s and their impact on the social composition of cities, social segregation constituted a large part of both social sciences and urban studies. The globalization process boosted the role of metropolises and cities in the advanced capitalist world, due to their attractiveness to new financial activities, banking services, IT systems, real estate management, etc. A major impact of this economic restructuring was the increase of social polarization and segregation tendencies, which were also expressed spatially. Social polarization refers to the increasing inequality between the transnational corporate elite and those at the bottom of the class structure, as well as to the higher concentration of people at these two extremes (Sassen, 1991).

'Innovative' spatial policies and strategies with a significant impact to the local housing and social composition of neighbourhoods, such as gentrification, have highly contributed to the establishment and the exacerbation of spatial division patterns. According to Sassen (1991), the gentrification process is defined as the appropriation of the urban space by the corporate elite – e.g. the new middle class – and, at the same time, the segregation of the impoverished population – lowest social strata, immigrants etc. Such processes, however, have not been so widespread neither in European cities nor in the Global South, confirming the multifactoriality of the segregation phenomenon. In this context, several authors claim that the process of globalization and its impacts on the socio-spatial structure include more complex and various stratifications and separations (Maloutas, 2014).

More recent approaches have highlighted the role of urban strategies and social policies, as well as the welfare state in the progress of social segregation (Hamnett, 1994; 1996; Marcuse and Kempen, 2002).Studying the metropolitan area of Paris, Préteceille (1995) has underlined determinants of segregation other than social polarization, such as the process of professionalization. Additionally, he has stressed the role of the welfare state as to the regulation of the impact of the economic to the social restructuring and to the determination of actual trends. Hamnett (1994, 1996) presented similar arguments regarding London. In the same framework, Musterd et.al. (2016) claim that there are four structural factors contributing to the exacerbation of social segregation, namely social inequalities, welfare regimes and housing systems, changing economic structures and the level of global connectedness.

The consequences of economic restructuring give some recognizable elements of polarizing and segregating phenomena in the post-industrial Western and Southern European cities. Recent studies have shown that social inequality has risen since the 1970s in many European countries. More importantly, research undergone by Musterd et.al. (2016) showed that, as far as European metropolitan cities are concerned, socio-spatial segregation is lower than North America, and that, among the European cities, segregation levels vary significantly. Moreover, in most occasions, segregation correlates positively with higher income disparities, more liberal forms of welfare regime and higher global connectedness. It is highlighted, however, that several factors can have effect well after a certain period of time.

The limited welfare state development in Southern European countries and the absence of policies against segregation tendencies attest the increasing difficulties to shape the outcomes of economic restructuring in terms of polarization, and to resist the rise of the social inequalities (Maloutas, 2014). It is worth noting that segregation stems from mechanisms that allocate the residential space on different social groups, and that it doesn't exclusively depend upon the development of social polarization. This is indeed the case in Southern Europe, where the processes of globalization couldn't gain influence against the traditional family

system, in the allocation of residential space (Allen et al., 2004). As Maloutas (2007) also showed, segregation in Athens has decreased since the early 1990s, despite the fact that inequalities and social polarization had actually increased.

These approaches stress the contribution of local processes with diverse social and spatial attributes in the global and general context. Nevertheless, a large majority of the existing literature agrees that the outcome of capitalistic economic progress is always a rise in urban division and social inequality. Castells (2000:164-165) describes segregation as the phenomenon of "multiple black holes of social exclusion throughout the planet n this new geography of social exclusion". In fact, segregation constitutes a pattern of socially diversified areas. Some other approaches stress that segregation processes are visible in homogenous and isolated micro-areas in cities defined by specific socio-spatial characteristics. All such areas inhabited by certain social groups – such as the high and upper middle class, the lower middle class, the working class and the immigrants – are characterized as ghettos or ethnic enclaves, in that they are inhabited by ethnic minority groups. Other categories of isolated and homogenous areas identified by their socio-economic status are defined as slums, squatter settlements or shanty towns and gated communities (Grzegorczyk, 2013).

Furthermore, the concept of social segregation proposes the hypothesis that there is a relation between social and spatial distance. Contrariwise, various examples of European cities underline that, even within socially mixed areas the social distance remains, due to the effects of the social structure itself. Most of the times, the analysis of social segregation is based solely upon the residential distribution. Residential division, however, isn't the only expression of segregation, as the latter can include and combine a number of other forms of the social hierarchy, such as social mobility and nationality (Frantz, 2011). According to Lajoie (1998), the concept of social segregation may be identified in its different forms as urban, social, residential or scholarly segregation. In their entirety, these forms of segregation are directly connected to socio-spatial inequalities, indicating each time a different 'type' socio-spatial injustice.

Thus, segregation patterns call for various approaches in different contexts, due to the complex pattern of the metropolitan areas, and to the complexity of the segregation mechanisms. However, enclaves of affluence, deprivation and ethnicity are dispersed across the metropolitan areas (Jalowiecki, 2010). In line with Jalowiecki (2010), the European cities are characterized by greater stability of social structure due to the lower spatial mobility of the residents and to the socially mixed city centers.

Based on the above analysis, this paper emphasizes the contextual diversity of determinant factors other than the market mechanisms, which in Southern Europe concern mainly the state and the regulatory framework, and can be described as the clientelist and familist social regulation, traditional family bonds, the traditional small-scale owner occupation pattern, etc. (Maloutas,2004). In the next sections, the paper aspires to present the socio-spatial pattern of metropolitan Athens in 2011, two years after the breakout of the Greek economic crisis, under the assumption that the negative effects of the economic crisis haven't presented still. The policies adopted to counteract the economic crisis have had multifaceted effects, such as rising social inequality, ongoing deregulation of the labour market, tax relief and other accommodations for investors, a declining public sector, privatizations, increasing housing taxes, etc. The neoliberal orthodoxy set in motion has dramatically deteriorated living conditions in Greece, questioning any prospect towards social equality. In this regard, it is expected that more recent data would present a rather different image of socio-spatial trends and particularly of social segregation in Athens. Although more recent data are not available, it is indeed useful to study the situation on the early stages of the economic crisis.

3 METHODOLOGY OF THE RESEARCH

Initially, the research examined the composition of the population under study, the area under study and the geographic units which compose this area. After selecting the variables to be elaborated, the data have been extracted from the dataset of the 2011 Greek census (Hellenic Statistical Authority, 2011).

Although the breakout of the Greek economic crisis was in 2009, it is useful to examine social segregation, even in reference to a period when the impacts of recession weren't as strong as today.

The urban population under study consists of age groups between 20 and 65+ years old. The potentially economically active population, along with the retirees – on a case-by-case basis – are the age groups

which constitute the population that participates and contributes to the overall process of segregation. People under 20 years old have not been included in the overall research, as they mostly constitute dependent members, living in their parents' residences, scholar or university students and not economically active. Furthermore, the age group of 65+ was not included in the analysis of the employment and professional status variables, since it mainly consists of retired – not economically active – members of the population. This group has only been taken into consideration for the evaluation of the education level patterns in order to estimate the distribution of the educated population across the urban space.

Regarding the geographic zone, the Athens metropolitan area has been selected in that it constitutes a matrix of all the social groups and categories that we aim to investigate. Moreover, the geographic units under study are the 2011 census tracts, the lowest-scale units available from the Hellenic Statistical Authority at this time. The study area of metropolitan Athens is divided in 3.406 census tracts, after removing the 18 units of population less than 20 years old. Variables referring to socio-economic data as well as to personal characteristics and social mobility aspects – such as the education level, the employment status and the professional categories – are used in order to evaluate the "snapshot" of social segregation in Athens. It should be noted that, in absence of foreign-citizenship data at the census tracts level, this variable was studied at higher levels, as is explained in the next section.

Having elaborated the necessary variables for education, employment and professional status, and foreign citizenship concentrations, various hierarchical cluster analyses have been implemented according to each one of the aforementioned variables as well as personal characteristics and social mobility aspects. The objective of the analysis is to define an adequate number of groups clearly reflecting different levels of residential inequalities and disparities in the Athens metropolitan area.

Hierarchical clustering is a widely used data analysis tool allowing to successively merge data observations in similar groups of units (census tracts). The merging process is based on a measure of similarity as for example the Euclidean distance. It is a monotonic process in other terms, the similarity between merged groups is monotone decreasing with the level of merge. At the end of the process, when all units have been merged in a single group, the loss of information (variance) is maximal.

For each one of the hierarchical cluster analysis implemented, the main question was to define the most appropriate numbers of groups, reflecting the different patterns of spatial distribution of the population under study. This question has to be treated with caution, respecting two main criteria: (a) high intra-group homogeneity with high inter-group heterogeneity, (b) selection of a limited number of groups with limited loss of information. It is often admitted that this loss must not exceed 20%. Taking into account these two criteria, different alternative solutions have been systematically produced for each one of the variables. Through a cautious interpretation of each one of the selected partitions (different number of groups), it was finally possible to select the most adequate number of groups. Finally, the results of the different cluster analyses are presented in maps in order to reflect and interpret the spatial distribution of the Athenian population.

4 INTRODUCING ATHENS' SOCIAL SEGREGATION

4.1 PAST AND PRESENT SOCIAL SEGREGATION PATTERNS IN ATHENS

It is clear that in Athens, same as in all the Northern European countries, social segregation doesn't present with high levels of socio-spatial division, such as in Anglo-Saxon metropolises (Frantz, 2011). Based on this remark, social segregation in Athens has generally been characterized as 'soft'. In line with Maloutas (2007), three causes have conduced to the minimal segregation patterns which characterize Athens. Firstly, the increased importance of intermediate social categories, as well as the significant social mobility driven by the broad access to higher education until 1990s. Secondly, the highest and upper-middle social strata had similar housing practices to the lower social strata, reinforcing social segregation only after the 1970s, by their movement to the suburbs. The third cause was the absence of large projects and building companies because of the high rates of individual homeownership, the organization of the Greek family occupational system, the constitution of stable self-help networks in residential areas, the low residential mobility, etc (Maloutas,2004).

Housing policies and practices in Greece is indeed a complex issue. The housing stock and the social composition of the metropolitan area were influenced by the self-promotion and the antiparohi systems[1]. Multistorey buildings were constructed within most of the urban areas in and around the city centre, resided by low, middle and high social strata, provoking vertical social segregation patterns. Since the 1990s the higher and middle social strata have moved towards the suburbs of Athens, reinforcing horizontal segregation in the periphery. The demand of new housing was limited to the suburbs and the existing stock in the central areas was socially redistributed. Furthermore, the access to the homeownership started to decrease following the deterioration of the two dominant housing systems. At the same time, an increase in the land values and housing prices was observed until the end of 2000s (Alexandri, 2014).

For all the aforementioned reasons, Athens constitutes a somewhat peculiar case of social segregation. The cluster analysis carried out in order to categorize the socio-demographic characteristics of the population showed that the social composition of Athens has generally kept the same basic structure and characteristics in comparison to previous periods. An accumulation of affluence along with richer housing settlements persists at the north-eastern and south-western city districts, making the Athenian region socially polarized in general. It is worth noting the increasing polarization and the simultaneously decreasing social segregation in metropolitan Athens during the 1990s (Maloutas, 2007). The two extreme poles of professional categories have since increased. On the one hand, there seems to be a growth trend for higher professional categories related to professionals and managers. On the other hand, the lower professional pole has increased its share partly due to the immigrants' waves in the 1990s. "The demographic changes in the city have also had significant social effects" (Maloutas, 2014 :156).

Another important demographic change concerns the significant waves of immigration which arrived in Athens in the last three decades. People from the Balkans, as well as from Eastern European countries, represented the majority of immigrant population at that time. In the 2000s a new wave of immigrants arrived in Greece, originating from war or poverty zones in the Middle East and Africa (Kandylis et al, 2012). Thus, the city of Athens had a new experience of immigration. As a consequence, different immigrant groups present a differential social integration history.

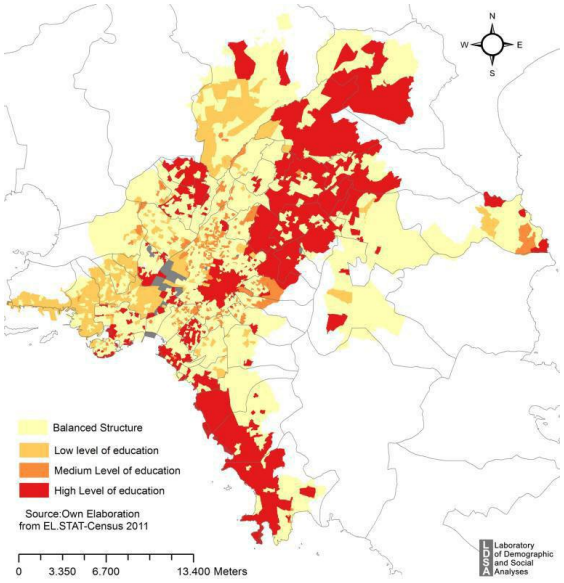
Immigrants who arrived in Greece between 1990 and 2005 were integrated socially, as well as into the local economies. They were occupied at various types of professions – the 2004 Olympic Games, housing markets and several other jobs abandoned by native Greeks. The immigrants arrived in Athens, settled in mainly abandoned and degraded housing stock, in neighborhoods around the inner city. It is worth noting that the central housing stock was abandoned before the arrival of the progressive waves of immigration, giving place to them. After 2005, the integration of immigrants in Athens and in Greece was more difficult due to their low educational skills and to the deterioration of the economic climate. Most of them are mainly men, originated from Middle East and Africa countries and they are confronted with the absence of immigrant integration policies (Maloutas, 2014). As a result, most recent immigrants are situated at the lower social strata areas and are faced with the danger of no mobility prospects and potential marginalization (Arapoglou et al, 2009).

As mentioned above, in the case of Athens – same as in other metropolises of Southern Europe – spatial proximity doesn't necessarily mean social proximity. The co-existence does not only have ethnic, but also hierarchical character, since the immigrants' origin and social status define the immigrant population hierarchy. Thus, many groups of immigrants settled in the same areas as the native middle or working class, but continued to live into much more degraded housing conditions. Second generation immigrants do not have the same social mobility prospects (Kandylis et al, 2012; Maloutas, 2014). The immigrants also didn't settle into areas of homogenous social categories but in the socially mixed areas of the antiparohi system contributing to the vertical social segregation patterns (Maloutas, 2014). The only exception is the Western side of Athens, which traditionally consists of areas resided by the working class. On the contrary, the foreign corporate elite and activities have been attracted by Athens in a small degree. Thus, the global corporate elite didn't put pressure to the distribution of the housing stock. Contrarily, the immigrants attracted massively by Athens belong to the lower social strata affecting the local housing stock (Kandylis et al, 2012; Maloutas, 2014)

[1] Antiparohi system is related to the system where promotion is co-exercised by small owners and small construction firms in ad hoc joint ventures to produce small condominiums" (Alexandri, 2014: 18).

4.2 MAIN FINDINGS OF THE RESEARCH: A COMPARATIVE ANALYSIS

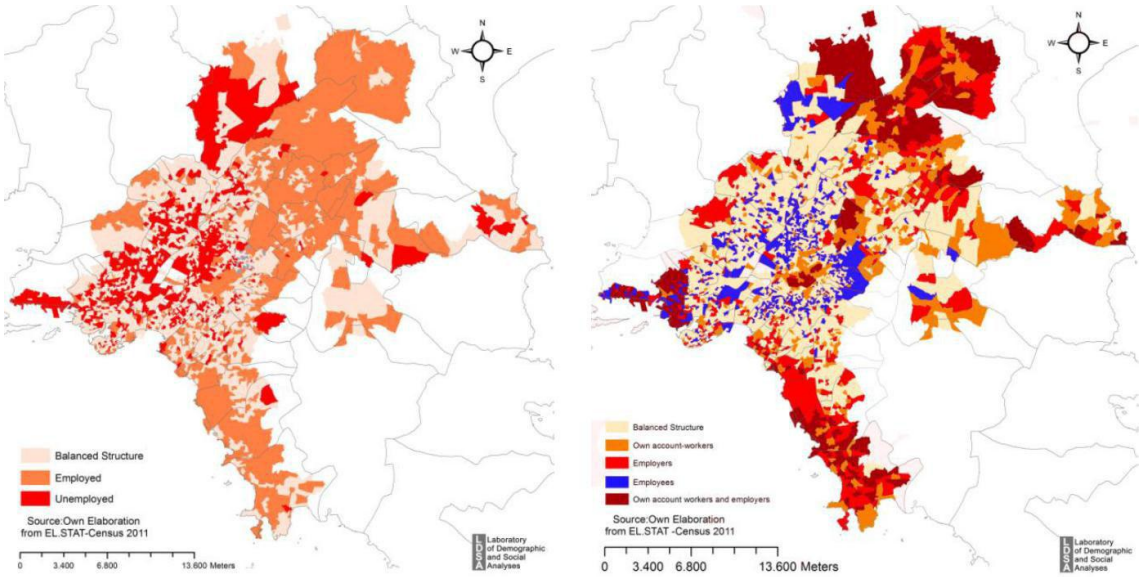
Presenting the main findings of the cluster analysis conducted, the following maps (figures 3.1 to 3.5) depict the socio-spatial patterns of the Athenian urban population based on the 2011 census data which were extracted from the Hellenic Statistical Authority. The data with regard to the education levels, the employment status and categories, and the professional status have been elaborated at the census tracts levels, whereas the foreign citizenship data were only available at the higher census tracts level. The findings provide us with the opportunity to conduct a comparative analysis for the aforementioned categories.



Map 3.1: Education level concentrations (2011)
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

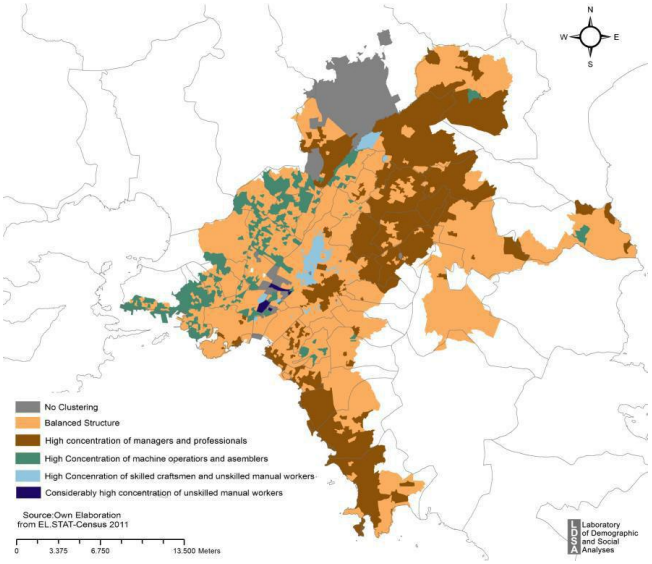
The analysis regarding population categories by level of education resulted in findings as depicted on map 3.1. Population with higher level of educational attainment represent people who have completed tertiary or post-secondary education. Respectively, medium level stands for people who have completed secondary or vocational/technical secondary education, whereas low level stands for people who did not complete primary or secondary education. The findings of the analysis show that a large proportion of the population follow a balanced structure regarding education attainment, namely all of the categories are allocated evenly, based on each category's average. Furthermore, there is a clear image of over-representation of higher education that extends from the coastal south-western to the north-eastern districts of Athens. People with low levels of education are mainly located in western and north-western districts, within and around Piraeus. An interesting note is that the two main categories represented in the Athenian urban space are low and high education levels. The distribution of people of medium levels of education seems to be fairly even. In this sense, the distribution is very clear and corresponds to composition findings of previous studies.

The metropolitan space is divided into three prevailing groups of educational levels, reinforcing the 'traditional' image of social segregation in Athens. It should not be ignored that higher education attainment is a strong indicator of social mobility: The spatial distribution of education level may indicate the correspondence between education credentials and position in the labour market. Thus, it is a way to interpret the social patterns in urban space concerning social segregation. Nevertheless, some highly educated immigrants and native population "systematically suffer from the incapacity of the local labour markets to provide jobs adequate to their skills and qualifications" (Kandylis et al, 2012:271, Labrianidis, 2011). In summary, the differentiation among the clusters of education levels is clear: the suburbs of middle and middle-high social groups as well as the city centre exhibit the highest level of education, while the western and inner city districts display low levels of education. The level of education is thus corresponding to the prospects for social mobility introduced in the middle and high class areas.



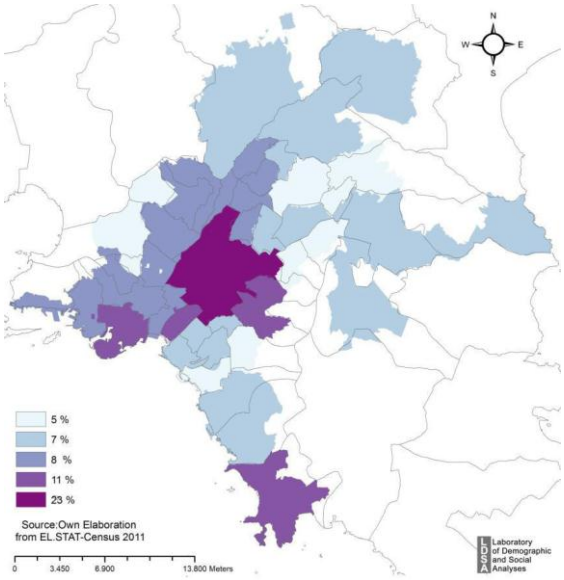
Maps 3.2-3.3: Employment status and employment categories concentrations (2011)
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

Maps 3.2 and 3.3 depict the distribution of the population in regard to the employment status and to the main employment categories. As can be observed on both maps, there is a particular trend expressed in the metropolitan area. North-eastern and south-western districts display high rates of employment represented by the employment categories of employers and won-account workers, namely the middle-high social classes. On the other hand, high percentages of unemployment correspond to areas of high percentages of employees. These areas are located in districts around the municipality of Athens and towards the North-west, and have already taken effect of the recent economic crisis outburst. Close proximity to the city centre as well as relatively low property values are two main factors contributing to the choice of residence for these social groups. Own-account workers are concentrated mainly in the same areas with or in proximity to the employers, however there is a strong presence also in the city centre. This trend coincides with the traditional household structure in Greece, the traditional small-scale commodity production units and the freelance occupations of traders, architects, civil engineers, etc. Finally, a wider ring around the city centre of Athens is characterized by a balanced structure, as people from all social strata still choose to not abandon the city-center because of its significant importance, contributing to the mixed social distribution of the metropolitan population.



Map 3.4: Professional categories concentrations
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

In respect to the professional status (map 3.4), Athens seems to be fairly divided. It should be mentioned that the professional categories of technicians, service and sales workers, and clerical support workers, which represent a significant proportion of the Athenian working population, were not included in the final cluster analysis stages due to their relatively uniform distribution across the study area. The categories ultimately selected were those indicating relatively high coefficient of variation (CV) levels: administration managers, professionals, technicians, skilled craftsmen, plant and machine operators and assemblers, and manual workers. In the north-east and south-west districts, as well as in some of the central areas, the dominant professional categories are both professionals and managers, members of the high and middle class of the urban population. This pattern is systematically present and expresses the need of higher classes to reside in certain areas. On the other hand, central and western districts are dominated by lower working classes, namely machine operators and assemblers, skilled craftsmen and unskilled manual workers, most of whom work in the remaining large industries of a broader area extending around Piraeus and Perama.



Map 3.5: Foreign citizenship population rates (2011)
Source: Hellenic Statistical Authority (2011), own elaboration (Laboratory of Demographic and Social Analyses)

Map 3.5 shows the foreign citizenship population's concentrations across the metropolitan area. The research for this variable was conducted at the higher census tracts level, due to lack of lower-scale data. The available data are categorized according to the countries of origin into two groups, of intraEU and extraEU citizenship. This kind of information is useful for an analysis such as the present, however an interpretation at this level entails risks: a higher level census sector may be highly heterogeneous, consisting of municipalities or areas of divergent socio-ethnic features. A choice was therefore made to not present cartographically this information within the current analysis. In any case, some basic trends are present: north eastern and south-western districts are those with the most powerful presence of intra-EU immigrants, whereas extra-EU immigrants are located mostly in areas around the city centre, towards the western and north-western parts of the metropolitan area. Thus, most extra-EU immigrant groups live in areas accessible to the labour market or near neighborhoods with relatively low rent prices and a variety of accessible domestic services.

Bearing in mind the above remarks, as well as the fact that three out of four immigrants originate from countries outside the EU, the information provided in map 3.5 is not surprising. With the exception of the southest high-level census tract, high concentrations of immigrants appear in the central and western districts of Athens. As expected, the municipality of Athens has the highest rates of both intra-EU and extra-EU immigrants, respectively 4.5% and 18.4%. The socio-economic facilitations and opportunities that arise from residing in the city centre are apparent for the vast majority of the social groups, regardless of country of origin or position in the social class stratification.

5 CONCLUDING REMARKS

The analysis conducted has shown that, although less in comparison to other major metropolitan areas, Athens is indeed segregated. Two basic spatial patterns have been revealed, confirming previous studies.

The first spatial pattern extends from the north-eastern to the south-western suburbs and in part includes the city centre. The areas composing this pattern are mainly affluent suburbs where the high and middle-high social strata reside. The populations in these areas are mostly well educated, employed, employers or own-account workers and administration managers or professionals. The population of immigrants residing there is relatively low and consists mostly of people of origin from a county-member of the European Union.

The second spatial pattern includes areas in proximity to the city centre and most significantly the western and north-western parts of the metropolitan area. Local residents are usually low-educated, while they are characterized by high rates of unemployment and of people whose status in the employment hierarchy is 'employee'. The various concentrations of machine operators and assemblers are due to the various industries that are located in or around Piraeus, Perama, Korydallos, Aigaleo, etc. Immigrants who originate from countries outside the European Union have settled in these areas, seeking to join the local labour market and to live in areas where the cost of living is relatively cheap.

The Municipality of Athens as well as certain districts around it present as socially mixed. People of any social strata or country of origin choose to live there, since there are more opportunities in terms of job variety, cheap housing stock, accessibility, etc. The predominant social groups of the city centre are highly educated, unemployed, employers and own-account workers and, in terms of profession, managers and professionals. Manual workers also have a strong presence in some districts, working in construction services, manufacturing industries etc. The social mixture formed expresses the multiculturiality of the capital and the potentials towards an optimum coexistence amongst different social groups. This 'snapshot' presented corresponds with the contemporary social structure characterizing the Athenian city centre. It seems that, even at the very first years of the economic crisis, dismissals were already rising and own-account workers were unable to manage financially, ending up unemployed.

Certainly, the impact of the economic crisis during the past six years since the last census has dramatically changed the socio-economic landscape of Greece, particularly of Athens. It is expected that more recent data would show an even more polarized image of the metropolitan area. What is to be seen is if the current economic climate is going to persist and, if so, how it will have impacted the spatial patterns currently characterizing Athens. Previous studies (Maloutas, 2007) had shown that a rise in social inequality does not necessarily mean a respective rise in socio-spatial polarization and segregation. An open question, therefore, rises as to the development of social segregation patterns in the event that social inequalities reach considerably high levels, as in the case of contemporary Greece.

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ID 1736 | FRAMING THE SOCIAL AMPLIFICATIONS OF RISK IN URBAN TRANSFORMATION OF ISTANBUL

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1 REDUCING DISASTER RISK AND ITS SOCIO-ECONOMIC DIMENSIONS

International disaster risk reduction framework concentrates on global cause and effect relations of natural disasters from a nominal perpective that hardly copes with developing countries relative socio-economic conditions and turns in to a matter of internalization. There is a requirement of a complementary perspective to observe and mesasure the socio-economic effects. From a theorethical research perspective, social amplifications of risk introduce us the how social and economic feedbacks in a social system could amplify or repress disaster impacts.

Common efforts on reducing disaster risk has been defined comprehensively through International Decade for Disaster Risk Reduction (1989). Yokohoma Strategy (1994) and Hyogo Framework for Action (2005-2015) were the concomitant procedures followed by Sendai Framework (2015-2030) recently. The general emphasis of sustainable development other than reducing disaster risks and poverty were determined as the main coordinated tasks. In order to reduce disaster risks Hyogo Framework (2005-2015) focused on national goals integrated to local action plans as the top priority and an institutional commitment. As a precondtion of determining urban risk drivers in each country mainstreaming information, innovation and education were identified as urban scale targets that would lead to develope a prevention culture and resilience. In disaster risk management, objectives have been shifted from post disaster perspectives as

preparedness, response, emergency and recovery to proactive strategies as disaster risk reduction and mitigation. (UNISDR, 2004) Sendai Framework held in the 3rd World Conference of UN in Japan, makes clear determination in reducing disaster risks while preventing the new risks to generate in urban systems. Poverty, inequality, climate change and unplanned-volatile and rapid urbanization were depicted as urban risk drivers that generate the impacts of disaster risks. Last decade, the perspective on risk as a social phenomenon truly altered the risk perception from a sole physical statement in to a social statement affected by, social, socio-economic and cultural statements. The similar emphasis in Sendai Framework (2015-2030) reclaimed that reducing disaster risks, vulnerabilities and urban poverty demand new priorities from urban planning and disaster risk reduction.

Disaster risk reduction not only concentrates on the impacts of disasters but also vulnerabilities that imply potential dangers and gaps in the physical environment. Vulnerability includes the socio-economic attributes of disaster risks, and defined as the potential referring to physical, economic, natural and social losses and losses in human life. (UNISDR, 2009) Vulnerability and poverty have an intertwined relationship in urban system. Poverty is defined as insufficient nutrition, sanity, education and habitation conditions as well as safety and all other basic needs. (WB, 2001) As an urban component of poverty, squatters are in the first rank in reducing disaster risks for environmental degradation, policy changes, rural unemployment, urban immigration, strict building codes, and other physical vulnerabilities. In fact factors determining the urban poverty and vulnerability differs.

In society, all low-income groups might not be vulnerable to disasters while mid to high income groups could be vulnerable. (Bankoff, 2003) As stated in Sendai Framework, vulnerability to natural disasters, urban poverty and risk drivers indicate for explanatory qualities in determining disaster risks in urban environment. Distinct socio-economic groups in urban environment have been also exposed to disaster risk relatively distinct. In Turkey, low income groups have been faced with the major negative impacts drastically. Referring to recent approaches in Turkey and international frameworks this paper aims to seek authentic definitions for social amplifications generated by/doubling up socio-economic drawbacks and vulnerabilities in urban transformation process of Istanbul.

2 INTERNATIONAL APPROACHES ON URBAN TRANSFORMATION AND DISTATER RISKS

There have been distinct periods shaped the urban fabric of Istanbul that was initially triggered by industrialization and migration in 1950s, then by adaptation to neoliberal politics in 1980s and by the impact of disaster events after 1990s. 1980s were specific to new modes of urbanization and new urban typologies converted through the introduction of globalization. Industrial development shifted to urban development in Turkey in line with the sharp tendency of adapting in to global politics.

Bourdieu (1984) identifies 1980s as a period of reshaping urban realm through distinct classes, through the differentiation of their roles in production and consumption. The sharpness of spatial differentiation is visible in housing areas, offices and public space. Regarding Harvey's (1973)

redistribution of income, urban transformation is pumped for rearranging and reproducing urban processes. More, it has been utilized as a strong tool for rearranging the redistribution of income, increasing the flow of production to consumption and diversifiying the spatial differentiation patterns in between urban poor and urban elite.

The entrepreneur local governments, promoted policies and implementations to advertise historical fabric of cities to attract capital and human. Production spaces as the object of industrial production became in to consumption spaces subjected to tourism and recreational facilities under deindustrialization. In scope of these changes, flagship projects including EXPO areas, stadiums, theme parks were all concentrated on large-scale events in UK, USA and North America. (Ünsal & Türkün, 2014) In short term, best use, highest revenue and capital transfer were targeted other than urban renovation. Late developing countries are eager to utilize urban transformation for this purpose to integrate in to global production by maintaining service sector and housing-led urban development.

The nucleus of post-industrial city had been framed via the segregation of urbanization, labor and economic development. Agricultural production was pressured by IMF policies through cutting subventions

to the small producers. (Ünsal & Türkün, 2014) Migration to large industrial cities and decentralization of industry generated housing areas settled as urban corridors. (Davis, 2006) Squatter areas developed rapidly at the periphery of industrial cities had been a common picture starting from 1960s especially in Mexico, Venezuela, Peru and Nigeria. (UN-HABITAT, 2003)

After 1980s in western countries urban transformation developed to endorse sales and privatization of housing areas. Inevitably in 1990s, drawbacks of the previous term has been observed as unemployment, poverty, social exclusion and socio-spatial segregation. (Crump, 2002) Housing policies once defined as a solution to eliminate impoverishment became an instrument for rearranging the redistribution of income despite offering urban poor and low-income groups affordable houses. In order to attract mid-class families to urban deprivation areas, mix-use and mix-class projects were developed in many western countries to impede class segregation in urban environment. As a reflection of neoliberal tendencies on housing policies, in USA; privatization of housing areas was supported by facilitating redevelopment and sales of the former social housing areas. (Ünsal & Türkün, 2014) In UK, urban renaissance was adopted as renovation of housing areas settled at urban centers to prevent emerging housing units at suburbia and diminish spatial segregation. By the support of IMF and WB neoliberal policies with increased impacts have been emerged in new forms of policies such as sustainability, livability, good governance, competition and financial accountability. (UN-Millennium Goals, 1999) On contrary public policies have been focused on poverty, inequality and environmental problems. UN-led urban policies propose alternatives to planning in squatter rehabilitation based on increasing the efficiency of market, civil society and NGOs; collaborative and active partnerships in between local governments and private sector, legalizing squatter areas by integrating them in to housing sector. (Nijman, 2008)

Recently in determining new problems and priorities in today's cities, there has been a requirement for introducing a new research field in scope of the relation in between disaster risks, urbanization and poverty. According to the new statistics of increasing frequency of natural disasters, population density and urbanization movements; reducing natural disasters becomes a top priority. UN identifies global risk tendencies as rapid urbanization, urban impoverishment, global warming and climate change. Global disaster impacts initially affect urban development tendencies in developing countries. In mid-scale to mega cities and being exposed to natural disasters is primarily related to geographical distribution, scale and urban functions. UN states that recently, ¾ of 1000 large scale cities are exposed to at least one natural disaster. Low-income groups and urban poor have been mostly affected by natural disasters. (UNISDR, 2014)

When international frameworks focusing on managing disaster risks and urban processes have been reviewed; resilience, sustainability, reducing poverty and squatter rehabilitation are set as effective goals including main projects of redevelopment and urban transformation. As a pre-disaster approach, urban transformation has been developed as a part of a broader plans and programs based on reducing future losses and existing vulnerabilities. In post-disaster approach, urban transformation is basically implemented as a redevelopment process that targets to eliminate demolishing impacts of natural disasters. On the other hand, international case studies and UN reports declare that as a redevelopment process in post or pre-disaster approach, urban transformation stimulates rapid urbanization, haphazard development typologies and increase potential hazards during disaster.

3 THE CASE OF ISTANBUL: URBAN TRANSFORMATION AND REDUCING DISASTER RISKS

In Turkey, the relation between urban processes and disaster risks is weak and unstable in consonance with the urbanization trends. Urban transformation had started in 1950s by the transformation of squatter areas. Until 1960s, urban transformation was set for providing social housing to the new comers in immigration movements but latter it got commercialized. (Keleş, 1990) As a template for today's urban transformation, Squatter Law 775 was enacted for coping with informal settlements. However, in 1980s squatters changed by economic policy. New development movements brought housing speculations and rent competition by economic change and large scale urban transformation projects. The problem of titling squatter dwellers as illegitimate income generators certainly promoted the efforts of legalizing squatters to get political votes via housing development plans.

After 1980s the entrepreneur role of local governments weakened the authority of central government and accelerated privatization movements in urban areas. Mega projects, shopping centers, office areas as well as housing grants for mid and low-income groups and social housing projects were mushrooming by global tendencies in Istanbul. For facilitating large-sale international investments, a legislative, administrative and practical re-structuralization had been employed by authorities. Not only an economic one but also ideological and cultural transformation had been adapted. The visible impacts of this transformation were observed on large-scale urban projects as the second Bosporus Bridge while invisible impacts were only seen in housing areas of urban poor and low-income groups. The transformation of Istanbul from industrial to post-industrial city; and production space to consumption space has been called as the first steps to become a world city.

Before 1999, urban transformation was developed accordingly to inner dynamics of capital and political processes such as migration, inadequate infrastructure, and privatization. The most observable and measurable consequences of political changes had been squatter amnesties. In between 1983-1984 legalization process of squatters was supported by private deeds offices. Under Prime Ministry, the Mass Housing Authority (TOKI-1984) was established to provide social housing. Though the distribution of ownerships by reclamation plans in squatter areas was failed as the law no 3414 was established and had given squatter dwellers the right of transferring their dwellings to others which led to housing speculations immediately. By these implementations the squatter areas were settled and left in urban centers differing from the previous forms settled in peripheral areas.

The Great Marmara Earthquake (1999) was a turning point for legislative and administrative restructuring for accelerating urban transformation. More than 18.000 people died and 100.000 buildings were demolished. The extension of duties and rights of the Mass Housing Authority (TOKI) by Urban Transformation Law 6306 (2012) given TOKI the authority to construct new housing areas at public land (2003) and to establish partnerships with local governments.(2005) Through the revisions adapted in TOKI Law 2985, it has became the full authority to clear, rehabilitate and transform squatter areas. The law on Conservation by Urban Regeneration (5366, 2005) was also an unclear implementation by the limits of conserving and regenerating historical urban areas that totally pillaged many historical districts and opened them for gentrification.

After 1999, urban transformation was restructured by a new form of legitimacy based on externalities likewise earthquakes. Planning and other development tools were excluded by the dichotomy of providing earthquake-safe housing and redistribution of income. Urban processes have been governed by the central political authority and the rights and interests of differentiated socio-economic classes were opened for competition. Urban transformation expanded rapidly in Istanbul and around Turkey for the purpose of reducing earthquake risks. The background of disaster management in Turkey is rather responsive to political change. Starting from the Republic Period, post-hoc laws and administrative reforms had failed to generate a holistic approach and institutionalization. Post-disaster framework concentrating on a long term post-disaster redevelopment after damages and demolitions.

4 CONCLUSIONS ON SOCIAL AMPLIFICATIONS OF RISK

As a supporting theoretical framework, the social amplification of risks by Kaspersons has been developed in the mid-1980s in scope of institutional risk assessment. Risk events are experienced through physical harms and society create interpretations of risk as social and cultural processes. Social and technical aspects of risk and various theories related to social science perspectives as communication theory, and referring findings are gathered in a holistic framework. Through assessing risk technically, the main theory relates psychological, cultural, sociological perspectives and risk-centered social behaviors that express the risk perception. Although risk perception is prioritized witihn the framework; the fundamental hypothesis is that risk and impacts harm humans and ecosystems directly while social amplifications of risk harm economy, social institutions and socio-economic differences in society indirectly. At first glance, social amplifications of risk primarily occur in the information flow in society and then in response mechanisms of society accordingly. Risks are sensible to information flow with the aspects of psychological, social and cultural processes and by increasing or diminishing the risk perception. In fact, responsive social behaviors or reactions could hold secondary social or economic impacts that alter the structure of risk by its perception in society. Physical risks and their impacts could be duplicated by

decreasing their visibility while they could even be decreased by increasing their visibility through political notions and manipulations of specific socio-physical indicators and structures.

Within this scope, the social amplification of risk refers to a socio-economic criterion focusing on the relation of urbanization and social structure through amplifying the physical impacts of disaster risks. The fundamental relation of the theoretical analysis is the correlated relation in between disaster risks and transformation-led urbanization that is both steered by and led to socioeconomic differentiation. Urban transformation in Istanbul has been grounded in socio-physical facts such as disaster risks, social amplification and vulnerabilities. Though, their physical and so-called impacts on urban system could be clarified by developing a holistic approach.

Theoretically urban transformation for the purpose of reducing disaster risks has two outcomes. At first, there are two separate sets of means and ends within the same process and their quantitative impacts are led to transformation-led urbanization. Secondly, urban transformation process and impacts are concluded in to distinct outcomes for differentiated income groups.

Rather than focusing on the amplification process of risk through the social medium or social stations, secondary impacts of disasters based on behavioral and communicative responses are identifired. In scope of the socio-economic criterion; secondary impacts go beyond individuals or groups but the whole social system. In Turkey, during the process of urban transformation in disaster prone areas in the redistribution of income, urban poor or low-income groups are neglected by absorbing the rent rise in to power actors such as the government, contractors or mid/high income groups. Low income groups are prevented from getting their share from increase in value by urban transformation are totally excluded by diminishing returns and the negative impacts of living in a disaster area. When free market inequality and the inequality imposed by urban transformation are compared it is found that the second one is much more oppressive, ideological and also targeting to consume the share of urban poor. Considering the urban transformation process by all of its complementary legal and defacto extensions, it reveals two major consequences. First, during the urban process; the emphasis on disaster risk reduction is switched to urban rent. Secondly, after the urban process; the requirement of a feedback mechanism regarding the impacts of urban transformation on reduced/prevented disaster risks in disaster prone areas is suppressed by the muddling arguments of reconstructing the new building structure.

Physical Consequences referring to physical attributes of disaster risks include both visible/natural and invisible/socio-economic/ideological risks that have physical outcomes as vulnerabilities and changes in the nature of risks.

Social amplifications in urban transformation refer to socio-economic vulnerabilities and disadvantages of urban poor as wells as ideological hazards and politicized risks. As an effective devise for the relocation and redistribution of disaster risk, urban transformation reproduces the built environment by its exchange value. The outcomes are measurable both as an input and output in the urban process. Harvey (1982) states that economic crises often intersect with the intensification in creative destruction through large scale projects and high rates of construction. Although urban transformation in Istanbul is set to reduce disaster risks; in common market-led interventions adopted by urban and regional authorities, the highest and best use is kept sustained during the process. More, the redistribution of income prioritizing disadvantaged urban areas is neglected because of the absence of planning mechanism. As social ampplification risk becomes a commodity or a destructive good pertains the favorable conditions for extensive crises to reproduce means of production. Risk changes in to a liquidatable commodity and becomes tradable through power actors; governmental institutions, local administrations, contractors and dwellers.

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ID (1017) | TOWARDS A THEORY OF CHANGE: MARGINAL AREAS AND DEVELOPMENT POLICIES IN A CULTURAL PERSPECTIVE

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1 INTRODUCTION

The paper aims at exploring the relation between processes of policy-making and cultural dimensions, assuming that cultural and symbolic dimensions are relevant in the ways in which both policy-makers and beneficiaries understand and respond to changes.

The frame is represented by the Horizon2020 project Re.Cri.Re.: between the representation of the crisis and the crisis of representations, started in May 2015 and involving several disciplinary fields: psychology, urban and territorial studies, economy, sociology, philosophy.

The research opportunity is given by the on-going Italian experience in national and local policies for inner areas called "SNAI" (Strategia Nazionale per le Aree Interne, National Strategy for Inner Areas). This policy, built in 2013, is operating in 20 pilot areas across the country and it will cover, in next years, all the areas defined as "peripheral" or "ultra-peripheral" of Italian peninsula, corresponding approximately to the 60% of Italian territory. In particular, our contribution will focus on the implementation of SNAI in one specific pilot area, Alta Irpinia, a Southern area located in the mountain part of Campania Region.

In the following pages we will briefly present the cultural approach to policy-making in general terms, as we are elaborating it in Re.Cri.Re. project. Then we will introduce local development and cohesion policies, framing SNAI and the implementation in Alta Irpinia, with some conclusions concerning how to incorporate a cultural perspective in the processes of policy-making.

2 CULTURAL PERSPECTIVE IN POLICY-MAKING

Re.Cri.Re. project[1] is built on the idea that in policy-making the analysis of cultural dimensions is highly valuable because they moderate the impact of policies, especially in time of crisis. With "cultural dimensions" in Re.Cri.Re. it is intended the deep structure of systems of meanings which allow human beings to produce their own interpretation of events (Salvatore et al., 2017). In time of crisis, the systems of meanings are challenged and interrupted, producing different potential scenarios: ruptures, closures, new adaptations, innovation. We know, by literature and experience, that the impacts of policies are not just the sum of their intrinsic characteristics, such as attended outputs, targets groups, tools; neither they depend just on the relevance of the contents (cohesion, development, gender equality...). Policies for local development are a quite clear example of this. In local development policies, "culture" is usually used as part of the immaterial assets contributing in creating the specific milieu, able or unable to support and to embody the changes required by the policies. Even if the existence of these local immaterial specificities is widely accepted, we experience a lack of professional approaches able to integrate the recognition of cultural dimensions in processes of policy-making. The experience in the analysis of the complex process of policy-making empirically showed that policy-makers often have a sort of sense of what are the prevalent directions of cultural dimensions at stake in the communities in which they operate, and they can use this knowledge in different ways and for different purposes. For example, they can use it to norm, considering cultural dimensions as a problem to be solved; or they may use their knowledge in functional terms, for example to adapt communication or interventions; or, eventually, they can consider cultural dimensions as a crucial part of human variability and as something to be addressed, something that can be generative in terms of change.

One of the goal of Re.Cri.Re. project, as result of cooperation between territorial and psychological studies, is to propose approaches enabling policy-makers to consider the role of cultural dimensions in their own practices ina dynamic and strategic way.

In the present paper, we will adopt the idea that the process of policy-making is a special kind of human interaction among policy-makers and beneficiaries, in which the issues of "future" and "change" are central. As every human interaction, it is based on the "idea of the other", grounding the actions, the tools for communication and the goals. With "idea of the other" we basically refer to the ways in which each participant represent the other, as a ground of the relation. The research, in this phase, is focusing on how policy-makers see, and consequently act towards, the target population in terms of their human variability: that is, the specific and context-based ways through which beneficiaries understand and interpreted the world, the resources and also the policies themselves. This approach allows to see policies, their failure and success, in a different perspective. In particular, three main questions grounded the analysis:

Question 1. Theory. Which aspects of the human variability are taken into account? Which type of knowledge concerning beneficiaries is produced during design, implementation and evaluation phases?

[1] see the website of the project: www.recrire.eu

This question is related to the set of information concerning the beneficiaries that policy-makers (and other relevant actors) consider as relevant in policy design, implementation and evaluation. It also includes the possibility to change, during implementation and evaluation, the aspects considered as relevant. For example, categories such as behaviours, shared values or social capital can emerge as unattended problems or issues during implementation, convincing policy-makers to include them as relevant aspects in describing the beneficiaries.

Question 2. Approach. How (strategies, methods, instruments) the human variability has been taken into account and eventually addressed?

The focus is on the tools used to address the human variability, namely the model of action chosen by policy-makers.

Question 3. Purpose. What are the purposes of the recognition and action related to the human variability in policy-making?

This question focuses on the ways in which the recognition of human variability is used, for which purposes. It allows us to understand the (often implicit) link between human variability recognition and policy-making. For example, the local cultures are sometime used as a reason to motivate the failures of policies itself. In other cases, the knowledge concerning human variability is used to improve communication strategy or to adapt goals and processes. In other cases, this knowledge is used as fundamental resource, as a vector of change and as a goal in itself.

3 TERRITORIAL COHESION AND POLICIES FOR LOCALITIES

Economic and social cohesion goals are part of the history of the European Union itself, since the Single European Act (1986) through which the Original Treaty (1957) is integrated with the aim to pursue an “overall harmonious development” in order to reduce “disparities between the various regions and the backwardness of least-favoured regions”. At that time, the emergencies were related to the processes of de-industrialisation in Central and Northern Europe and to the marginalisation, especially in terms of infrastructures, of rural areas. Cohesion policy were strictly related to an ideal of European social model, in which the public intervention was intended to balance the inequalities and externalities produced by the market economy; more concretely, the policy is related, according with Faludi (2004), to the French model of amenagement du territoire, which is defined as “public action concerning the disposition in space of people, activities and physical structures based on a balanced notion reflecting the geographical and human situation in the area under consideration” and to the durable European Commission Presidency of Jacques Delors, spanning over ten crucial years, from 1985 to 1995.

Cohesion policy is still the most relevant expenditure of EU, covering approximately the 30% of the total budget and being distributed in all the Members countries. It is very difficult to judge the effectiveness of such an effort (see the introduction in Farole, Pose, Storper, 2011). Regional disparities increased in last 20 years, but at the same time this was also partially statistically related to the process of Enlargement; more recently, the global financial crisis strongly contributed in increasing poverty and disparities among European Regions (see the introduction of the 6th Report on economic, social and territorial cohesion, adopted by European Commission, 2014). However, it is not possible to know what it would have happen, especially to marginal areas, without a so complex and multi-shaped policy as the cohesion policy is.

Letting aside (controversial) general evaluations, the cohesion policy represents the European framework to which strategies of local development were related, in last 30 years. More precisely, cohesion policy faces some of the issues which are crucial for local development policies, such as how to produce development in a frame of spatial inequalities, how to deal with both growth and equity, and how to improve the processes of local policy-making through the involvement of local authorities and stakeholders.

In Italy, local development is initially related to the so-called Third Italy and to the passage from variegate experiences of economic and social development to the construction of a model, the "industrial district" in which the local factor was mainly conceived as an economic factor. During Nineties and 2000s, the focus on local development progressively shifted, and several authors (among others: Amin 1999; Pasqui, 2005)

contributed in enhancing the role of institutional, cultural and cognitive assets to explain why some regions show more proclivity to produce development than others.

Governa (2007), briefly sum up some of the main, well-known, criticalities raised by practices of promotion of "local development": the tendency in repeating the same processes and solutions for very different contexts, despite the common and rhetorical recognition of the uniqueness of "local" contexts; the apparently un-escapable problem of vicious circle, in which some local immaterial assets (such as good local governance, trust in institutions, capabilities to build visions for the future) are both a premise and an output of the process of development; the weakness of partnerships, often born for the sake of specific financial goals and then unable to produce durable changes. In other situations, most positive experiences seem to be produced by specific, "enlightened" actors such as a mayor, a group of deputy mayors or a public manager, in an idiosyncratic, unique way (Donolo, in De Leo, Fini 2012).

At the ground of the idea of "local" development there is the recognition that localities and their actors are necessarily the ones embodying the production of change. Consequently, the relation between the national or European policy-makers and the local stakeholders reveals to be crucial, as well as the relation between local stakeholders and inhabitants.

In the attempt to address both the limits and the potentialities of cohesion policy, Barca's report (2009) re-framed this relation through a "place-based approach". In his view, the role of European and national policy-makers is to provide the general aims of efficiency and equity, strategic fields of interventions, innovation and the tools to evaluate processes and results; while local stakeholders are the ones who hold the specific knowledge concerning available potentialities and criticalities. In Barca's view, inspiring Italian National Strategy for Inner Areas, the role of the national level is also to "destabilize" the local balance of power, which sometime are the main responsible of the lack of development at local level. This top-down "destabilizing" activity will correspond to a bottom-up activity which is in charge of local groups (both local decision-makers and civil society), in order to provide site-specific knowledge and to cooperate with the national level to find place-based solutions. The local is, in this view, in charge with the production of "knowledge chains", that is the possibility to identify the local assets and to connect them with a strategic view of the local context; and it is also the place in which local innovators are to be found, supported and possibly included in the process of definition of the local strategy, through a scouting process (Barca, 2016; Tantillo 2015).

4 THE DESIGN OF NATIONAL STRATEGY FOR INNER AREAS IN (VERY) BRIEF

The National Strategy for Inner Areas (SNAI) is a policy enacted by the National Italian Government starting in 2012 and promoted by Fabrizio Barca, at that time Ministry for Territorial Cohesion. SNAI is organised as an inter-sectorial programme, involving several Ministries: Territorial Cohesion and Southern Italy; Work and Social Policies; Education, University and Research; Health; Infrastructures; Economic Development. Presently, the programme is in charge with the Department of Cohesion Policies of the Presidency of the Council of Ministers. SNAI is a multilevel programme, promoted at national level and implemented through Regions at local level. It adopts a mix of sources, both European, national and regional: SNAI aims at combining 2014-2020 EU funds (ERDF, ESF, EAFRD, EMFF) with interventions to improve the provision of essential services through additional resources included in Italian Stability Law, in cooperation with National Ministries, Regions and Provinces. SNAI focuses on areas of the country which are significantly far from hubs of services and infrastructures: nearly 13 millions of people live in these areas (approx. 25% of Italian population), covering the 60% of Italian territory (UVAL, 2014).

The demographic trends, considered as crucial in defining inner areas, are described considering the last 40 years (1971-2011), as characterised by: reduction in the number of inhabitants; ageing of the population; increase of immigration, considered as a partial "mitigation" of the ageing and abandonment of inner areas; change in land use and productive activities (in particular agricultural activities are declining, favouring the growth of forests but also the increase of hydrogeological risks). SNAI team produced a very detailed and open access database concerning more than 100 indicators, useful to describe the socio-economic and territorial conditions of Inner Areas in Italy. They are also working to include more and more these territories in the political agenda of Italian governments.

Generally speaking, the strategy aims at inverting the demographic decline of these areas, in terms of emigration, ageing and low level of birth-rate. This goal will be pursued promoting two type of actions:

- ensuring adequate public provision of essential services in these areas (especially in education, health and mobility), also fostering cooperation among Municipalities;
- supporting local development strategies, through a place-based approach.

The strategy implies experimentations in each Italian region, choosing one or more pilot areas. In pilot areas, SNAI national team is cooperating with local stakeholders and mayors to define a specific, context-based strategy. Strategies will have some priorities in terms of fields of action, in particular: territorial safeguarding; valorisation of natural and cultural assets and sustainable tourism; agricultural business and production; renewable energy supply chains and energy saving; handicraft and local knowledge.

5 THE CONTEXT OF ALTA IRPINIA, CAMPANIA REGION, ITALY

25 Municipalities in Alta Irpinia were chosen to be one of the areas implementing the National Strategy in Campania Region. Irpinia is a historical and geographical sub-region located approximately 100-150 km East from Naples. It represents the hill and mountain area of Avellino Province, with several peaks overpassing 1500 mt on the sea level. The landscape can be described as a succession of valleys and mountains, very rich in waters and forests. Historical villages are often located on the top of hills, born during as fortified settlements. The area is classified as "high seismic risk", and this has been dramatically evident in November 23rd 1980, when a violent earthquake hit the area.

Nowadays, the pilot area includes a population of approx. 60.000 inhabitants, with very low density: only 2 Municipalities out of 25 reach 5.000 inhabitants (Lioni and Montella) and 4 of them are under 1000 inhabitants (Cairano, Cassano Irpino, Monteverde and Rocca San Felice). In the phase 1971-2011 these Municipalities lost the 25% of their population. Presently, the percentage of population over 65 years-old is approx. 24% of the total population, overpassing also the average of all Italian inner areas.

We will focus on the history of Irpinia after the violent earthquake that hit the area in November 23rd 1980, killing approximately three thousand people and causing the displacement of 280.000 inhabitants. Before the earthquake, Irpinia was mainly an agricultural area, already experiencing demographic decline and emigration. This occurred in line with the two main trajectories of internal migration in Italy: from the South to the North; from rural areas to the major cities. After the emergency phase, the process of re-construction started, following some peculiar strategies. It was intended as an opportunity to push for the economic development of the inner areas of Southern Italy, which were the most deprived of the country. Several sites were selected and provided with the infrastructures to host industries; entrepreneurs were supported through non-repayable loans, in order to start their activities in the area, promoting industrial development through strong financial support in deprived areas (Sarno, 2009). In Irpinia, several industrial areas were built in few years, especially in the valleys; a very scattered diffusion, increasing also costs for infrastructures, that was then described as "one bell tower, one chimney stack", often damaging environmental conditions (Ventura, 2015). As M.S. and S.C. referred during the interviews (they are actors of local development starting their activities in those years), the process of re-construction was dominated by a blind trust in the entrepreneurs, most of them coming from the Northern Italy, and a deep distrust for local farmers and artisans. Moreover, the equation between industrial activities and development leaded to partially ignore the peculiarities of the area. Only some of them survived and are still active, such as Ferrero and Zuegg, in agro-industrial sector, respecting the local peculiarities in terms of agricultural production. Other industrial activities which are still relevant are in mechanical (FIAT in Melfi, in Basilicata Region), high-tech and in wood industry. Despite these relevant exceptions, most of the industrial activities, supported during the re-construction, quickly failed. In parallel to the national model based on industrialisation, an alternative model of local development was prompted by a group of professionals, following the experience of bottom-up local development promoted in Sicily by Danilo Dolci and Lorenzo Barbera. This experience was based on cooperation and cultural empowerment (see for example Ventura 2013, documenting the experience of women cooperative activities for re-construction and employment). However, it was pretty marginal compared to the enormous afflux of money provided by national initiatives oriented towards re-construction and industrialization.

The evaluation of the re-construction phase, the use and abuse of money, the effects on territorial assets, on local economy and social structure are very complex and still matter for debates: according to several local actors, those decisions and events are still at the ground of the present economic, social and environmental situation in Irpinia.

Surely, a the different political and administrative attitude occurred in Italy during Nineties, after the "Tangentopoli" phase. The use of public money for private enterprises was partially interrupted; the development was organised more and more through "negotiated planning", a form of planning based on agreements between public actors (at various level) and private actors, aiming at pursuing a more regular, planned and accountable process of development. In parallel, the last 20 years were also characterised by a new relevant political actor for local development, that is EU. In Irpinia, LEADER Programme and funds for rural areas were the most used tools to activate initiatives for local governance and local development. Nevertheless, during Nineties and early 2000s, the demographic decline went on, despite the efforts of the re-construction, the attempts to develop industrial production in the area, European funds and the new tools for local governance. In last years, the situation was described as a progressive "desertification" , in demographic and economic terms.

6 IMPLEMENTATION OF SNAI IN ALTA IRPINIA

According to interviews to SNAI staff, Alta Irpinia was one of the most controversial experiences among pilot areas. Alta Irpinia was chosen, thanks to the cooperation between the national, inter-ministerial team and the Region Campania, in late 2014. In January 2015, Ciriaco De Mita was chosen to represent the assembly of the Mayors. Ciriaco De Mita is the Mayor of Nusco and he was one of the most relevant Italian politicians during Seventies and Eighties; his activity was decisive in the prevalence of the industrial development strategy after the earthquake and he is still recognised as very influencing, also at national level.

In July 2015 the first draft of the Strategy was defined, as required by the national directives for the pilot areas. The Draft of the Strategy for the pilot area "Città dell'Alta Irpinia" has the form of a list of criticalities followed by a "to do's list" reflecting the double nature of SNAI, operating both in public services and welfare and in development strategies. Accordingly, the Draft of the Strategy is organised in "Comunità di Servizi" (it could be translated in "Public services Community") and in "Comunità operosa" (Industrious Community), referring to the need to improve the welfare and infrastructural system and to support local development. Municipalities were also required to introduce some innovations concerning institutional cooperation: the group of mayors of Alta Irpinia decided to work on producing a common digital real estate registry and on the digital infrastructure for the area.

During the implementation of the strategy in Alta Irpinia, some unpredicted and unexpected effects occurred. In particular, the assembly experienced problems in cooperation among members and with other local actors and in transparency and openness of the process of the strategy definition, despite the goals of institutional cooperation and development through local "innovators" promoted by SNAI.

Local conflicts among Municipalities where also increased by changes implemented by Campania Region in the distribution of resources for Rural Programme. The Rural Programme (financed through EU funds) supports cooperation among private and public actors to develop initiatives for rural development through LAGs (local action groups). LAGs, together with "Comunità Montane" , represented the main forms of organisation among public and/or private actors in Italian rural areas and particularly in Irpinia. The number of LAG financed in Irpinia passed from 4 to 2, several Municipalities of Alta Irpinia are excluded and the new LAGs cover areas which are significantly not homogenous in their historical, geographical and social characteristics. The attempt, failed, to create a new LAG among the 25 Municipalities of the pilot area produced an unclear and conflictual situation in terms of groups involved in local development in Alta Irpinia, which will beneficiaries of funds and regional and national support. There is also the real risk to break up the experience of LAG CILSI, which was pointed out by national and regional experts as the most active and effective in the area. In other terms, the decisional process in Alta Irpinia does not seem to exploit and develop the results which were already considered as relevant in terms of rural development.

The process of decision-making is described by the experts of SNAI, by some local actors and in several articles appeared in local press, as poorly open and too much oriented by the influential presence of the

Mayor of Nusco, having negative effects on the involvement of the civil society but also on the internal debate. Some of the Mayors of the assembly actively claimed for a higher level of openness of the decision-making process but they were partially marginalised. In December 2016, these "dissidents" (as they were defined by some local press) organised a public meeting in Calitri together with associations of farmers, artisans and other associations of the civil society. They met in order to propose an alternative view of the process, claiming in particular for an increased openness, for more efforts towards young people and for a special attention towards agriculture and environment issues and they produced a written proposal which was then presented in the pilot area assembly. This action was interpreted as a threat to the unity of the official pilot area assembly: the president of the pilot area and other members of the assembly considered the meeting in Calitri as an attempt to divide the assembly and as a problem to be solved with the marginalisation of their proposal.

The first draft was then re-formulated in the Preliminary Version of the Strategy, realised with the support of the national Agency of consultancy "Invitalia". Nevertheless, the passage towards the Framework Agreement (APQ), which is the final step towards the implementation of the strategy (and the full availability of financial resources) is requiring more time than expected (in March 2017 the APQ is not ready; however, only 5 out 19 areas in Italy already signed the APQ at this time). Moreover, in spring 2017, the Assembly of Mayors established an agreement with the Governor of the Region, for the total amount of 200 million Euros. The average financial support provided by SNAI for the implementation of the local strategy is 6-8 millions of Euros. The regional agreement reinforced the local Assembly, together with the explicit support provided by the national SNAI team

6.1 TYPE OF KNOWLEDGE

In this sub-chapter we will answer at the question 1: which aspects of the human variability are taken into account? Which type of knowledge concerning beneficiaries is produced during design, implementation and evaluation phases?

It is interesting to point out that this aspect was considered as central for the policy-makers and experts implementing the National Strategy. According to Natali (2016), one of the most interesting aspect of SNAI is indeed the approach for the collection and the use of information, and finally for the production of knowledge, concerning the local contexts. In her words, as soon as we look at inner areas from distance, they appear to be all similar: demographic decline, ageing, school drop-outs, lack of care of landscapes and cultural heritage. But these similarities are an illusion, because each specific place is facing these situations in its own way. She underlines the importance of "behaviours", which are rooted in systems of relations, powers, which tend to be an obstacle for changes. Each of them is inherently ambivalent, and it could be preserved or it could be changed, having reasons for both these attitudes. Again, Natali described the fieldwork activity as a passage from a schematic view to a more and more detailed one, including those people holders of "precious knowledge", with a point of view worth of attention and consideration. This process is both useful to incorporate the local knowledge and to involve this people in participative planning activities. According to Natali, it implies more efforts in and more time if compared to traditional planning activities, producing an inquiry (referring to the work of John Dewey) oriented to mix knowledge and action, social interactions and decision-making.

In terms of collection of information and production of knowledge, SNAI team work through both desk analysis and fieldwork analysis. The desk analysis was firstly based on demographic and socio-economic data. The definition of Inner Areas itself was based on specific quantitative parameters, based on the distance from primary services (mainly: hospitals, secondary schools, train station). During the design phase, the national team produced an open access database including more than 100 indicators for all the areas related to: demographic situation and historical trends; land use; employment and productive activities; health system; school system.

Together with these data, homogenous for all Italian inner areas, the national team cooperated with the regional team in order to produce a more qualitative analysis of the selected areas called "open diagnosis". In this phase, the collection of information was based on territorial analysis (focused on demographic trends; characteristics of agricultural activities and other economic specialisations; digital divide; cultural heritage and tourism; health performances; accessibility; education and school system; presence of NGOs); on the mapping of local actors and networks; on qualitative interviews (in Alta Irpinia they realised

96 interviews). In particular, the semi-structured interviews focused on the main changes occurred in the last 20 years and the vision for the future, referring to 2030. Moreover, they asked for the potential and existing resources of the area; the main obstacles and problems faced at local level; the possible solutions; the ways in which those potential solutions could improve the condition of limited development and the demographic situation; which other local actors could be involved. The synthesis of these interviews were organised through a SWOT model, with some elements related to symbolic dimensions, such as: a pessimistic view of the future; a general lack of trust in policy-makers and a diffuse sense of unproductive disputes; the idea of Irpinia as an area of hidden potentialities, having already missed its opportunity of development during Eighties and Nineties; the perception of the interviews themselves as something good, as an opportunity of inclusion and voice.

However, this knowledge, collected by national and regional experts, was considered as useless and negative by local policy-makers and by the mayor De Mita, for being too critical towards local administrators and inconclusive . In this sense, two different and partially conflictual representations of the local human variability were at stake: the one promoted by the national experts and the one produced by local policy-makers.

During implementation, at regional and national level, there was a recognition of the lack of openness of the decisional process and the charismatic role of the leader. Consequently, some adaptations were organised (see below).

6.2 APPROACHES

Question 2. Approach. How (strategies, methods, instruments) the human variability has been taken into account and eventually addressed?

One of the main tool of SNAI is the direct involvement of Mayors. Mayors of the selected inner areas are asked to be part in the place-based approach promoted by the SNAI, implying the definition of a local strategy with the support of national and regional experts.

Secondly, SNAI staff worked providing a robust set of data to the local policy-makers, highlighting some specific problems, especially concerning public services. In Alta Irpinia, for example, they registered low performances in schools; negative trend in people employed in agriculture, especially in the young generation (under 40); increase in the percentage of forest areas.

During implementation phase, the knowledge produced by the national level and the one in which local actors are embedded partially clashed, producing a negotiation among them. The national and regional team decided to support the local assembly reinforcing their competencies with the assistance of a group of external experts, mainly due to the difficulties observed in the process of implementation.

This negotiation was feasible because both of them had the same goal, that is reaching the stage of definition of a local plan; and it was solved through an increase of technical and also political support.

6.3 PURPOSES

Question 3. Purpose. What are the purposes of the recognition and action related to the human variability in policy-making?

In a first phase (that is, design and first part of implementation) the focus was on the production of knowledge for the selection of target areas and for the definition of local plans. That is, data concerning human variability were collected mainly with the purpose to delimitate the field of action and to provide local policy-makers with a set of qualitative and quantitative data, useful to define and to implement the local strategy. During the implementation, the collection of qualitative data and the observation of the process itself, in its effects on the local context, leaded to a partial change of focus, moving towards an increased attention to the role of local policy-makers (change in tools) and in communication (increase of national intervention at local level).

7 CONCLUSIONS

Despite the recognition of the role of immaterial dimensions in processes of local development, we are still far from theories able to include the immaterial dimension in operative terms. In the present paper and in Re.Cri.Re. project, we proposed to focus on the ways in which the relation between policy-makers and beneficiaries is built, in order to understand some of the implicit premises leading design and implementation of the policy.

Alta Irpinia is a very interesting context: in last four decades, it has been, and still it is, a sort of laboratory for policies for local development. The area experienced at least three phases. During the first one (1980-beginning of Nineties), industrial development was pushed. In that phase, it seems to prevail a view of the beneficiaries as unable to produce their own path for re-construction and change. The support to industrial production was realised through a highly other-directed model of development: entrepreneurs often coming from outside the area (mainly from Northern Italy), supported by national government, offering industrial jobs to people in an area which was clearly oriented to agricultural production and with high environmental quality. The alternative model, based on cooperation, was marginalised. In a second phase, in Nineties and 2000s, the attempt to promote an endogenous development mainly through EU funds was not able to slow down the demographic decline, to compensate the national policies and to produce cooperation among local stakeholders and policy-makers, with few exceptions. Broadly speaking, the cuts in public services in national peripheries and the image of eternal deprived area ended in supporting the abandon of the area by inhabitants and the economic decline, despite EU efforts.

In this last phase, Alta Irpinia is involved in a national strategy in which inner areas are seen as the site of important social and economic potentialities for the country. Local contexts are seen in multi-layered ways: they are seen as both the site where potential innovators live, as well as the sites for extractors of local resources and promoters of "close local communities", defined as "enemies of the inner areas" itself (UVAL, 2014). During implementation, the collection of qualitative information and the openness to adaptations offered the possibilities to let emerge more nuanced visions of local contexts.

However, in Alta Irpinia the goal to destabilize the local continuity with the past partially failed, and the national strategy appeared to be captured by local traditional systems of power and in some respects it ended in reinforcing them. As we observed, policy-promoters (the national level) and policy-implementers (the local level) produced two different and conflictual vision of the beneficiaries: at national level, they produced an explicit knowledge, potentially dynamic and dialogic, which was not included in the process of policy implementation by the holders of local, more implicit knowledge and power. The tools used to implement the policy reinforced the latter, even with some improvements in management and openness, with the main purpose to reach the formalisation of the strategy.

Two possible conclusions can be traced, taking into account the cultural approach. The first one is related to the culture of local policy-implementers: in a policy promoted by national government to be implemented at local level, the human variability of local policy-makers could be considered as a crucial variable, as well as the one of target population. Secondly, the representation of innovation as something promoted by "special" people, to be scouted as local talents, may prevent to know and to work within and on the local systems of meanings.

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T21 | URBAN FUTURES: CHALLENGES AND VISION

CO-CHAIRS: PETER ACHE; PETER NAESS; DAVIDE PONZINI; EDUARDO CASTRO

"I've seen things ... you people wouldn't believe. Attack ships on fire off the shoulder of Orion; I watched c-beams glitter in the dark near the Tannhäuser Gate ... All those moments will be lost, in time, like tears in rain. Time to die."

In Bladerunner (Scott, 1982) replicant Roy paints in his soliloquy horizons no human has seen. LA 2019 is the setting for the cyber-punk movie, posing questions regarding citizenship, environment, technology, power, and democracy. The city is a gigantic dystopian machine.

2019 is close, just two years from the AESOP 2017 conference: where are the urban beams glittering in the future?

We invite papers to a track, which as a 'laboratory' tries to present experiments, either intellectual or practical, sketching out broad utopian views or developing concrete utopias (Bloch, 1986). Spatial horizons are not specified. Time horizons should reach far, helping us to escape the boxes of actual debate.

The track aims at fostering new ideas and ways of understanding urban futures. We encourage considering the possible evolutions of environmental, technological, political, social variables or conditions in the very long term. Scenarios can include, but are not limited to:

- the impact of radical climate change and radical mitigation strategies,
- pervasiveness of smart technologies and security measures,
- dismantling of statehood,
- radical modifications in current geopolitical order,
- massive migrations,
- decrease of international and intra-national inequalities,
- capacity to improve global national and regional governance,
- capacity to control the big financial powers,
- new urban structures favoring human interaction, or else.

Papers should be submitted to the track, approaching perspectives on above outlined themes or other relevant ones. We would like to hear from you, what the important relations and conditions that affect people and places in the future are and how we could react to this, counteracting problematic or enhancing positive developments, but in all cases dealing with “unknowable novelty”.

The format of the track will be different, too. Together we will work during the track sessions on new horizons, which shall also be sketched out in experimental forms of interaction. Inspired by Harvey (2012, X) and Lefevbre, the track invites you to envision “an alternative urban life that is less alienated, more meaningful and playful but … conflictual and dialectical, open to becoming, to encounters (both fearful and pleasurable), and to the perpetual pursuit of the unknowable novelty”.

ID 1316 | THE CHANGE OF URBAN SPATIAL FORMS AND ITS INFLUENCING FACTORS – FROM TOWN PLANNING TO COMMUNITY EVOLUTION

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1 INTRODUCTION: THREE TYPES OF FORCES IN SPATIAL PLANNING

Since the 1980s, the Urban Regime Theory, which interprets the influencing factors affecting urban spatial forms was initially proposed in the U.S. Because of this theory developing a new way to interpret urban forms from the perspective of social science, it occupies the dominating position in the system of urban study theory. The founders of this theory, Logan and Molotch (1987) maintained that these factors could be concluded as three types of forces, which represented the interest of governing party, financial group and community organisation. Meanwhile Stone (1989) pointed out that the coaction of these forces decides most urban spatial forms at the material level. Based on their views, the aim of this essay is to interpret how the change of spatial forms is affected by each force and how these forces interact in deciding spatial form evolution. To start with, the theoretical model of urban regime theory will be introduced. Then, two cases about new town planning in UK will be discussed to evaluate the change of spatial forms and the different spatial characteristics caused by each force. Furthermore, the interaction of three forces in spatial evolution will be interpreted through the studying case in China. Finally, new conceptual model will be proposed, which could explain the relationship among three forces in influencing urban spatial forms. The conclusion indicates that the urban spatial forms are affected by three types of forces reflected in different aspects mainly including spatial structure, transportation system, land shape, land-use, density and accessibility of infrastructure etc. Depend on it, the cause of different spatial forms could be explained much clearly.

1.1 PRINCIPLE STRUCTURE OF THE URBAN DYNAMIC MODEL

According to the Urban Regime Theory, the Shaping and changing of urban forms is the reflection of three forces' interaction. To illuminate this interaction, the American scholar Zhang (2001) proposed two dynamic models which referenced the mechanical principles to analyse the interaction more visually. Through the perspective of urban dynamic model, each case could be analysed in more systematic way. More important, it becomes possible to compare spatial form with each other to evaluate their similarity and difference in unified standards and conclude the influencing factors.

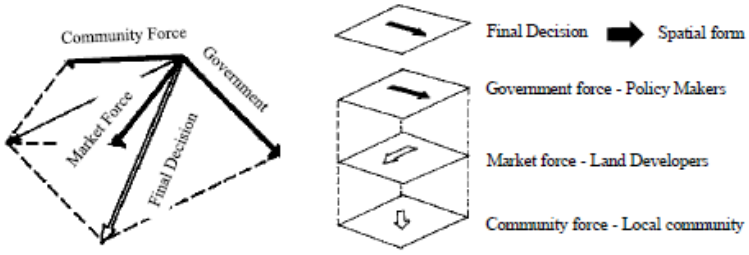

Figure 1 - Resultant force model1 | Figure 2 - Covering force model2 .Source: Zhang, T., 2001. The Urban Restructuring of Chinese Cities in 1990s and Its Dynamic Mechanism. City Planning Review, 7, pp.7-14.

[1] In the resultant force model, each force is defined as equal weight in the resultant force model. The 'final decision' will be decided by the parallelogram rule of forces. For the reason that government force, market force and community force could usually occupy different weights, covering force model is created.

[2] In the covering force model, three forces possess unequal weights. At the same time, the decision order is adopted according to the order that the government force has the most powerful impact while the community force has the weakest impact. The force has covering feature which means the force with larger weight and higher decision level could cover other forces with smaller weight and lower decision level.

1.2 TIME AXIS IN CASE RESEARCH

The time span of this research mainly focuses on three periods (Figure 3). From 1950s to 1970s, three generations of new towns were built with different planning strategies because of changed government policies (Rydin, 1998). Around the same time, the Caoyang Xincun in Shanghai was built for working class. The community form had minute change before 1990s and after that housing policy had passed structural adjustment to accommodate market-economy regime (Goldman, 1997). Although these cases have different developing background, their form changing could be explained in the same method.

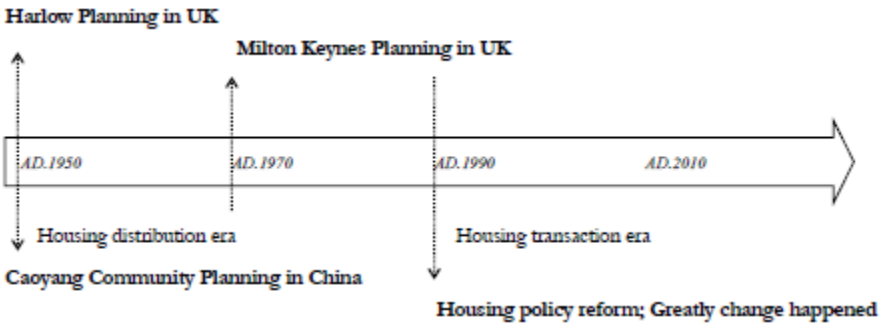

Figure 3 Time axis in research[1]
Source: author supply.

2 EVALUATION: THE CHANGE OF NEW TOWN PLANNING

2.1 NEW TOWN PLANNING OF HARLOW AND MILTON KEYNES

In 1946, The New Town Act was passed by Parliament of UK, which provided a basis for the planning and building new towns to solve the main social problems after war, such as housing shortages and economic rehabilitation (Marmaras, 2014). The new town planning is usually classified as three generations. Harlow is the typical example in the first generation from 1946 to 1950, while Milton Keynes has the same statues as Harlow in the third generation from 1967 to 1970s (Sun, 2007). Generally speaking, the first generation of new town was theoretically affected by Garden City to achieve better living environment (Gibberd, 1965). Firstly, the Harlow planning arranged lower population density. Meanwhile, residence zones and industrial zones were strictly planned in separated districts with large scale. In addition, the road structure consisted of ring roads and radial roads, which were planned to strengthen the connection between each residence zones (Figure 4).

In contrast, Milton Keynes planning created more different spatial forms (Figure 5). It primarily resulted from the increasingly social demands for various public facilities. Compared with the Harlow planning, the scheme emphasised on the integration of spatial function. What's more, the convenient connection with intercity transportation was recognised as key factors to build more successful town. At same time, ring roads and radial roads in previous case were replaced by the gridiron road system to improve the transport efficiency. Overall, the different spatial form between Harlow and Milton Keynes could reflects the change of social demands and concerns (Sun, 2007).

[1] The Harlow and Milton Keynes are the representatives of first and last generation of new town, which show the significant difference in spatial forms.

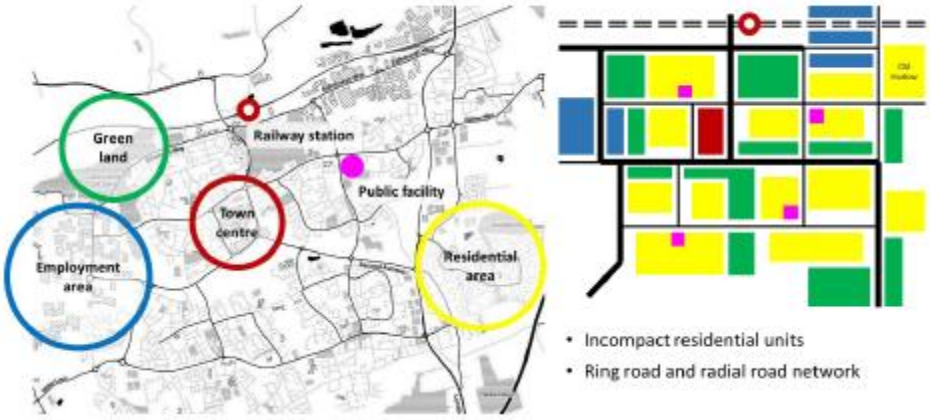

Figure 4 – Spatial characteristics of Harlow; Source: author supply.

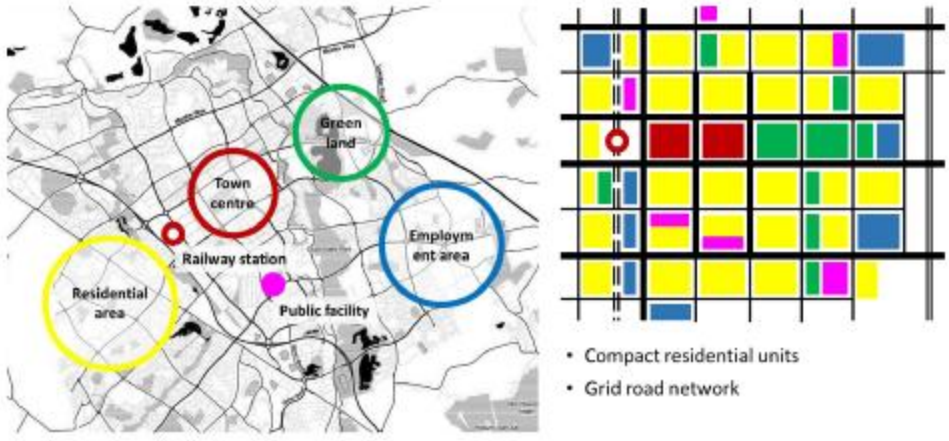

Figure 5 - Space characteristics of Milton Keynes; Source: author supply.

2.2 CHANGES OF PLANNING AFFECTED BY THREE FORCES

Based on the force model, the previous planning may be affected by government force, market force and community force. Each force could have its particular influence on the spatial forms (Figure 6 & Figure 7). Through the comparative analysis in general community unit, the influencing mechanism could be revealed to some extent.

Figure 6 - One community unit in Harlow | Figure 7 - One community unit in Milton Keynes; Source: author supply.

2.2.1 THE GOVERNMENT FORCE

At first, the new town planning was recognised as a positive method of dispersing the population and creating better living environment for the working class. But from 1950s to 1970s, the motivation of planning new towns changed to developing the underdeveloped areas. To meet this economic development target, larger towns were planned which involved more diversified urban facilities. The new town was not just considered as a lager neighbourhood where to live, but also a small city which could provide most of employment opportunities to the residents (Duany et al., 2003). A modern city centre was planned with typical gridiron road system which was convenient to organise various function zones. Therefore, the government force could more focus on solving social developing problems, constructing the spatial structure and distributing the important infrastructures of whole transportation system (Figure 8 & Figure 9). The force is also frequently changed to accomplish policy target which may be recognised as key factor to develop the society by policy-makers.

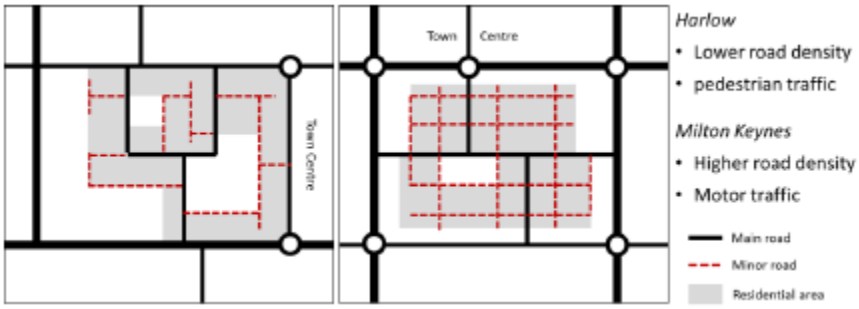

Fig.8: Spatial structure of Harlow; Fig.9: Spatial structure of Milton Keynes;
Source: author supply

2.2.2 THE MARKET FORCE

The second point is about market force's effects. It had weak influence in the Harlow planning, while the force showed vital effect in the Milton Keynes planning (Figure 10 & Figure 11). With different from the government force, the target of market force is normally constant which is acquiring the largest profits. So the land value is one of the most important factors focused by the market force, which means the land could be divided into smaller pieces and more regular shapes. Moreover, the land-use density trends to be as high as possible to heighten the benefits and the mixed function zones could increase the value of land as well.

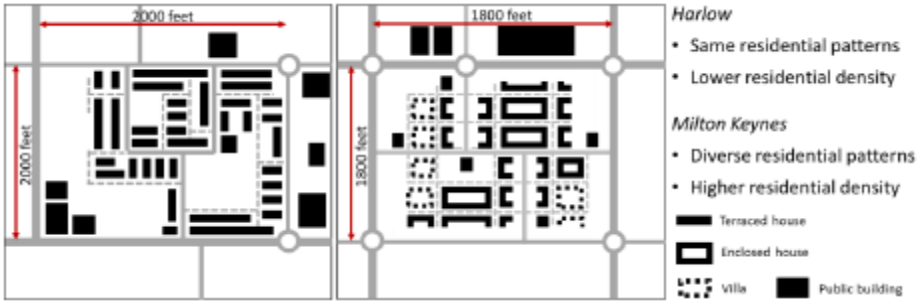

Fig.10: Building pattern of Harlow; Fig.11: Building pattern of Milton Keynes;
Source: author supply

2.2.3 THE COMMUNITY FORCE

The last force is easily ignored by the other forces, but it plays an important role in ensuring the residents' concern because the community force reflects the intention of commons and their benefits. Usually, it emphasises on the equity to use most of public facilities and have comfortable living environment, which was obviously embodied in the case of Harlow (Figure 12 & Figure 13).

All in all, the three types of forces could show their specific effects in the planning schemes, especially on the spatial structure, land development and living environment. Similarly, their effects are also evidently reflected in the urban renewal, especially in the community renewal.

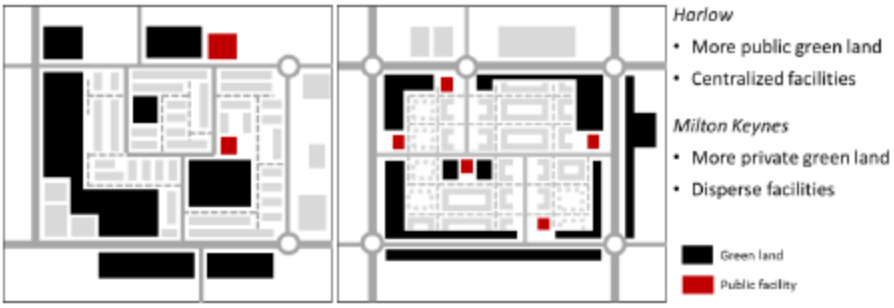

Fig.12: Open space of Harlow; Fig.13: Open space of Milton Keynes;
Source: author supply

3 INTERPRETATION: EVOLUTION OF URBAN COMMUNITY IN SHANGHAI

3.1 COMMUNITY EVOLUTION OF CAOYANG XINCUN

The effect of community force is accompanied by the growth of a community in normal conditions. Without a long period of community development, the community force could not have the apparent effect in deciding urban spatial forms (Gaubatz, 1999). The spatial evolution of Caoyang Xincun would help to interpret how does the interaction of three force affect the community form.

As the first-built community for the working class in China since 1950s, the planning and construction of Caoyang Xincun in Shanghai shows the greatly attention to common class given by central government (Wang, 1956). Because of its sixty-year development, the spatial form in Caoyang Xincun contains diverse types. Broadly speaking, the spatial form in Caoyang Xincun has changed from a single form to diverse forms especially after the 1990s when the housing policy changing from housing distribution system to housing transaction system in China (Figure 14).

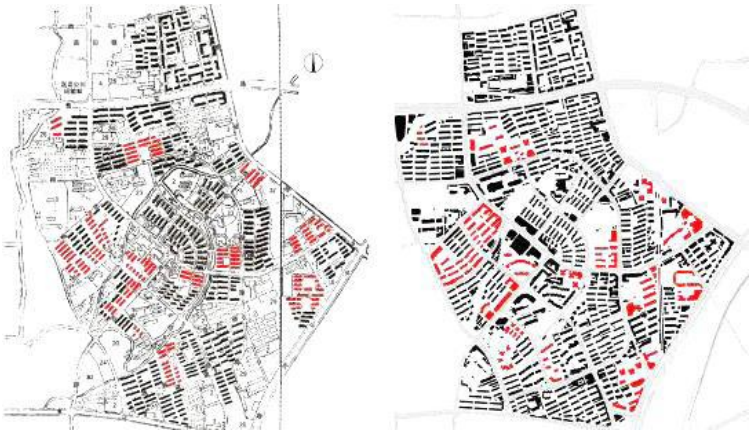

Figure 14 - Spatial forms in 1980s and 2010s[1]; Source: author supply.

[1] In the figures above, the red colour means the building forms changed compared with different periods in Caoyang Xincun. For example, the early-stage terraced house was intermittently built from 1950 to 1977. Since 1978, the alteration and addition of terraced house has become more common. After 1992, the high-rise residential building began to replace the terraced house gradually.

3.2 INTERACTION OF THREE FORCES IN DECIDING COMMUNITY EVOLUTION

Resulted from sixty-year housing construction, the form change of Caoyang Xincun may show as the natural growth in disorder. The housing policy reform in the late 1980s destroyed the former warfare housing system which meant that the land development was not just decided by the government. At the same time, the commercial capital began to be involved in urban expansion and renewal (Wang et al, 2015).

3.2.1 THE GOVERNMENT FORCE

Briefly speaking, the evolution of Caoyang Xincun could be divided into two periods due to the housing policy reform in the late 1980s. During the formative period from 1950s to 1970s, the spatial structure took shape basically. From 1970s to 1990s, the extension forms become the mainstream gradually to meet requirement of increasing population. It could be concluded that the government force was the dominating force at that time to raise the housing numbers directly and ignore the living environmental quality for residents. It is probably because of the social contradiction concentrating on solving housing shortage crisis. Meanwhile the market force did not exist in housing distribution system during the formative period.

3.2.2 THE MARKET FORCE

Oppositely, Since the end of 1980s, the housing privatization regime and land marketization regime was set up, the market force showed powerfully influence on increasing the spatial density through the way of reconstructing the old neighbourhood and purchasing the industrial lands for real estate development. It could be recognised as the influence on spatial forms resulted from the growth of land value, because of the rapidly urbanisation in Shanghai greatly promoting its location superiority.

3.2.3 THE COMMUNITY FORCE

In addition, the community force shows its unique influence on the aspect of community management through the local authority. For instance, each piece of reconstructing land is required to build more public service facilities and more green land needs be redesigned in most old neighbourhoods.

To sum up, the early spatial forms was basically decided by the government force, which led to the unified spatial structure and similar housing forms. After the housing policy reform, the change of spatial forms was primarily effected by the final decision combined with the government force and the market force, which led to the rise of residence density and social stratum polarization. Besides, the community force begins to show its influence in some community renewal issues.

4 CONCLUSION: THE CHARACTERISTIC EFFECTS OF THREE FORCES

4.1 SUMMARY OF INFLUCING FACTORS

Depends on the analysis of three typical cases, the difference of changing spatial forms could be summarised into three levels. The first level is the spatial structure and transportation system which is primarily effected by the government force, because the government could centralise the numerous resources to accomplish a policy target in normal condition.

The second level is land scale and land density which is usually decided by the market force. In general, the land value has closely relationship with the location and traffic accessibility, while the land scale and density is the reflection of its value in visible aspect. More valuable land commonly corresponded to smaller land scale and higher developing density, which means gaining more profits.

The third level is the accessibility of using public facility and living environment decided by the community force. It is insignificant during the stage of urban expansion and new town planning, but plays an important role in restricting the market force by directing the resources used for the local public concern.

4.2 CONCEPTUAL MODEL OF INFLUENCING FORCES

Based on the urban dynamic model, a new conceptual model could be created to explain the different spatial forms affected by three forces. In this model, each force's effect could be estimated on the vector axis and their connecting lines form a specific triangle. The red triangle represents the Harlow form with strong government and community force. While the blue one represents the Milton Keynes form with strong market force (Figure 15). On the other side, the green triangle represents the Caoyang form after 1990s compared with the former form in black (Figure 16). In general, the shape of triangle visually indicates the interaction of three forces, which help to explain to what extent they influence the spatial forms.

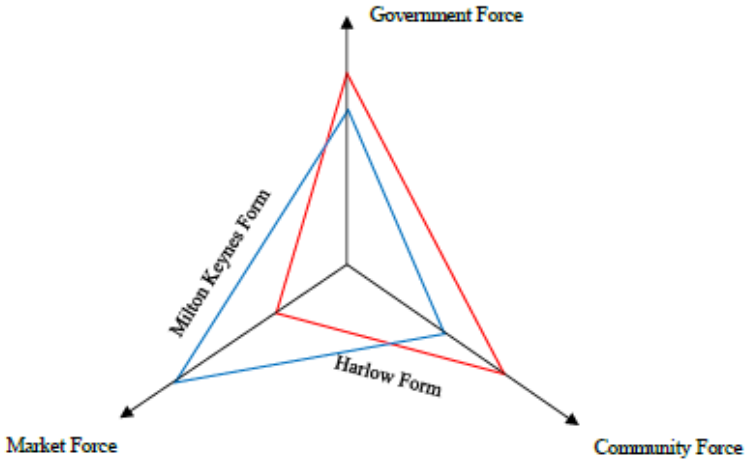

Figure 15 - The conceptual model for explaining different spatial forms in three forces; Source: author supply.

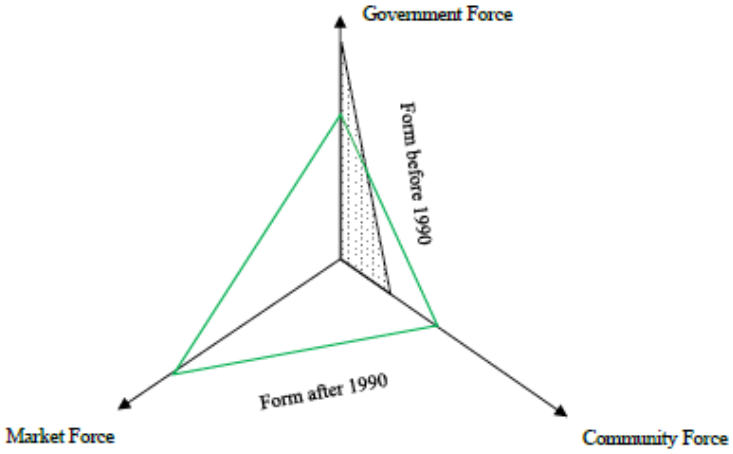

Figure 16 The conceptual model for explaining the change of spatial form in Caoyang Xincu; Source: author supply.

Though the cases analysed in this research essay try to interpret the influencing factors in changing the spatial forms, more materials need to be considered in various conditions to modify this conclusion. It could be concluded that the urban spatial forms are effected by three forces together through the regional planning and renewal. Under the effect of three forces, the urban society may be reconstructed with the change of urban forms as well. What's more, through the research perspective of three forces, the orientation of spatial planning should be rethought to find the balance point among three forces in dealing with urban development issues.

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ID 1427 | DISSECTING THE URBAN(IZED) BINOCULARS. ´LOOKING AT´ URBAN FUTURES

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1 INTRODUCTION

In current discourses and practices, ‘the future’ and ‘the urban’ are frequently connected: our society’s future is expected to be ‘urban’, and, accordingly, the anticipation of futures for our cities and urban-society-to-come proliferates (e.g. Glaeser, 2011; Gleeson, 2012). In the practices and processes of such ‘urban futuring’, the discipline of urban planning plays a central role. By its very nature and functionality, urban planning engages with the ‘not yet’ of the city (a.o. Connell, 2009; Hillier and Healey, 2016). Indeed, today, urban planners together with a diverse range of stakeholders increasingly engage in anticipations for our urban futures: how will our cities and the urban-society-to-come look like?

Thus, it is common in urban planning to look into the future of cities and ‘the city’ more generally. Typically, an urban planner looks forward in time, to have some kind of impression of what the urban future might bring, and subsequently, hopes to influence and give direction to that future through the decisions and actions of planning in the present (Connell, 2009). Alongside and combined with more standardized procedures and tools, planners today have a variety of foresight methods and techniques at their disposal for their anticipatory action, ranging from forecasting and backcasting to envisioning and scenario-making (e.g. Ratcliffe and Krawczyk, 2011). To a greater or lesser extent, many planning efforts in this way aim to anticipate, to ‘foresee’, what the future city or city future will be like. As such, they are in various degrees

based on the assumption that one can make plausible anticipations or predictions of that future; that, to a certain extent, it might be possible to 'know' the future, and, by extension, to make more 'strategically prudent' decisions about the future (Borup et al, 2006, p. 296; also Connell, 2009; van Lente, 2012).

Yet, the future as such can never actually be 'known'. It is an abstract concept, and per definition not (yet) existing. Hence, the future is actively constructed in the present (a.o. Adam, 2005; Adam and Groves, 2007; Borup et al, 2006; Inayatullah, 1990). Therefore, it is also contingent upon the diverse and complex processes, practices, and contexts in which it is negotiated, represented, imagined, and thus shaped. The future is always in process, always a future "underway in the present" (Borup et al, 2006, p. 296). When one wants to know more about the future, it is therefore crucial to examine the active construction of futures and the effects thereof, as opposed to trying to 'merely' predict or anticipate the coming state of things. In other words, it is important to look at the future as opposed to, and alongside of, looking into the future (Borup et al, 2006; Brown et al, 2000).

The distinction between these two approaches constitutes and important backbone for this paper. The aim of this paper is to propose an analytical framework for the analysis of urban futures and urban 'futuring'. Reasoning from the looking at the future-looking into the future division, I postulate here that urban planning practice and theory currently relate more to the latter, whereas an analysis of the future within urban planning needs to take a perspective informed by the former. Indeed, as Borup et al (2006) describe, 'looking at' the future is mainly the perspective of the analyst, while 'looking into' the future is principally the perspective of the practitioner (see also Adam, 2005).

Following this, one can diagnose that, in urban planning practice and research, an in-depth reflection and analysis of the roles and workings of the future is largely lacking. A general tendency in urban planning literature is to acknowledge the key role of the future in urban planning practices, processes, and discourses, but to not scrutinize this futures dimension thoroughly. Typically, attention has been given to other dimensions. For one thing, planning studies and urban theory have become increasingly centered on spatiality, thus leaving temporal relations and the dimension of time largely unexamined (e.g. Connell, 2009; Myers, 2001; also Adam, 2005). Also, the communicative turn in planning practice and theory has led much of contemporary planning research to be primarily oriented towards governance aspects and the process dimension, at the expense of more substantive issues (e.g. Allmendinger and Tewdwr-Jones, 2002; Fischler, 2014; Forester, 1999; Healey, 1996, 2006, 2007; Innes and Booher, 2015; Sager, 2009, 2012). Thus, the futures dimension of urban planning, though fundamental, seems to have become 'snowed under' (e.g. Abbott, 2005; Connell, 2009; Myers and Kitsuse, 2000). Calls and efforts to remedy and intensify planning's future engagement do occasionally arise (e.g. Isserman, 1985; May, 1985; Cole, 2001). However, there still appears to be an overall inclination to either bypass or only implicitly address planning's futures dimension, whereby it is often taken for granted and regarded as self-explanatory.

To be sure, though urban planners thus seem to approach the future rather confidently and uncritically, they are not meant to be portrayed here as wholly agnostic to the unknowability, uncertainty and plurality of the future, as if they shortsightedly proclaim and believe their own prophetic competence. The diversity of existing future-oriented planning and foresight approaches (envisioning, scenarios, etc.) already demonstrates that there is an awareness of, as well as reflexive attitude towards, the fact that the urban future can be addressed in various ways. Furthermore, in recent debates and experiments, both planning theorists and practitioners have more explicitly acknowledged and addressed the indeterminacy of the future and the ways in which planners could or should deal with this (see e.g. Balducci et al, 2011; Bertolini, 2010; Van Wezemael, 2010). However, even in such cases, the ultimate disposition of the planner – whether theorist or practitioner - is still to 'foresee' and act upon that future. In other words, urban planning is essentially very much concerned with strategically looking into the future.

As a consequence, a crucial issue tends to be largely overlooked and blackboxed: how is this done? How is the 'looking into the future' actually being performed? What exactly happens when planners and other relevant actors engage in future-oriented planning activities? How is the urban future, or better, how are urban futures thought about, represented, negotiated, circulated, and actively constructed within the practices and processes of urban planning? Accompanying these questions, one should then also ask: why is this so? (a.o. why these futures, and why do planners and other stakeholders 'future' in this way); and, how does this affect the planning processes and their outcomes? Inherent in these questions is the idea that both the urban futures produced and the ways and techniques of urban futuring can become performative and generative, meaning that they can come to affect and steer action and agency in

intended and unintended ways (a.o. Adam and Groves, 2007; Borup et al, 2006; Groves, 2016; Van Lente, 2012). This performative aspect of 'urban futuring' thus emerges as a vital point of attention when one wants to understand urban planning, and leads a researcher to scrutinize the reciprocal relationship between ideational and material dimensions of urban futures and urban futuring. In an approach based on these views, it is not the 'mere' anticipation of the future that takes centre stage. Rather, the focus is put on the construction, circulation, and performativity of urban futures and ways of urban futuring within the anticipatory processes and practices of urban planning. To put it differently, such an approach looks at the future within practices that look into the future.

This paper is strongly informed by this line of reasoning. It argues that, to better understand the practices, processes, discourses, and outcomes of urban planning, it is paramount to analyze the active construction of urban futures and the performative effects thereof within these processes, practices and discourses. The intention of the paper is twofold: firstly, to explain why the 'futures dimension' is essential in practicing, understanding, and transforming urban planning, and why this is currently a very topical and important issue; and secondly, to propose a theoretical-conceptual framework to analyze this futures dimension within urban planning. In its core, the framework provides a necessary critical and reflexive perspective on urban planning and urban futuring, and encourages a deconstruction of the ways of thinking, doing, and organizing urban futures. To conclude, the paper reflects on some of the challenges and further refinements of the suggested approach, while it also considers its potential to open up the future thinking and praxis for our cities and regions, and to help in imagining and realizing 'futures that would otherwise not be'.

2 WHY THE FUTURE?

In this section, two arguments are central. Firstly, urban planning and the city are characterized as intrinsically tied to the future. Secondly, and relatedly, it is explained why, in current times, this intrinsic future-orientedness of urban planning and the city has become both prominent and contested, and thus needs to be investigated.

2.1 URBAN PLANNING AND THE FUTURE

2.1.1 THE RUPTURE OF CONTINUITY: PLANNING'S ASCENSION

When considering the relation between the future and (urban) planning, it is important to take into account how the practice of planning originated. As Connell (2009) has pointedly argued and explained, planning's origination is intrinsically bound up with a historical change in the societal experience and construction of 'time' and 'the future'. It was only when the understanding of time allowed for the conceptualization of an 'open future' that planning became relevant.

Building on the work of historians (Koselleck, 2002, 2004), sociologists (Adam, 1990; Luhmann, 1976) and anthropologists (Lowenthal, 1992, 1995; Wallmann, 1992) that have addressed how 'time' and 'the future', as social constructs, have been conceived in the history and present of (Western) society, Connell describes how the concept and practice of planning emerged as a reaction to the 'rupture of continuity' (Lowenthal, 1992; Connell, 2009, p. 85). This rupture indicates the breach between traditional and modern society, and accordingly, between the traditional and modern experience of time. Before the Renaissance and the Enlightenment – roughly before the 16th century – the experience of time was cyclical and continuous. Being based strongly on the natural turnings of the sun, moon, and seasons, time was 'harmonious': past, present, and future were not qualitatitavely different from each other, but instead, interchangeable points in a repeating temporal cycle. This continuous understanding of time also fitted with the "grand eschatological framework" derived from – mainly Christian – religious scriptures, which described a fixed path from 'Creation to the End', without any differentiation between past, present, or future events. The future was held to be an extension of the past (Connell, 2009, p. 89). As such, the future could not offer antyhing that was intrinsically new. Therefore, it was knowable.

All of this changed between the 16th and 18th century, when the modern construct of time emerged (Connell, p. 89; Koselleck, 2002, 2004). In contrast to the traditional sense of time, this modern time was

discontinuous. Past and future were disjointed, and disassociated in time by the present. As Koselleck argues: “Finally, the divide between previous experience and coming expectation opened up, and the difference between past and present increased, so that lived time was experienced as a rupture, as a period of transition in which the new and unexpected continually happened” (Koselleck, 2004, p. 246). Conforming to this new experience of time, and to the gradual secularization of society, the religion-inspired eschatological framework was given up and progressively replaced by an increasing belief in the ideology – or ideograph – of progress (van Lente, 1993; also Morgan, 2002, 2015).

Within this modern construct of time, the future became discontinuous and thus more open. It was experienced as a realm of possibility and choice: the future could now be controlled and actively constructed (Connell, 2009). Accordingly, society became more and more future-oriented, and would continue to have this strong and relatively optimistic future focus until deep in the twentieth century.

It was in this context that planning originated. Society as a whole was rather unaccustomed to the new sense of time and the future, and in these conditions, the new concept and practice of planning came up for four interrelated reasons. Firstly, there was no vocabulary or language available to adequately express the new experience of time. No existing concepts or words could articulate what it meant to (be able to) actively construct the future, i.e. what it meant to engage in planning (Connell, 2009, p. 90). There was thus a need for the terminology of planning, even if just for the expression of the modern experience.

Secondly and relatedly, the relative openness of the future meant that decisions about that future could and should be made. The notion of a non-prescribed future, open to choice, possibility, and control, generated a “societal ‘need’ to know what future decisions need to be made today” (Connell, 2009, p. 91). In this context of “required decision making” (Luhmann, 1993), planning answered to this requirement. It acquired the societal function of connecting the present with the future, of importing the future into present decision-making (Connell, 2009, p. 91).

Thirdly, planning was meant to reduce the uncertainty of the opened up future. The modern future was bereft of the traditional and predictable expectations of things to come. This made the experience of the future precarious and somewhat frightening. Likewise, making decisions for the future was difficult and hazardous. Planning, therefore, aimed to ameliorate this by maximizing what is known, and minimizing what is unknown (Connell, 2009, p. 92). Connell (2009) argues that planning, in this way, served to ‘normalize’ the future, making it more stable and secure. Through binding the future to present-based, socially accepted expectations, planning reduced both risk and uncertainty.

Fourthly and lastly, the rise of planning was also related to the need for taking into account the future public interest. Modern society consisted of all kinds of systems and centres of control (e.g. economy, religion, politics, science), but lacked a channel for considering the public interest – especially the future public interest – within the public sphere. In the context of modern societal problems, like the deterioriation of cities, the necessity of such a channel became decidedly clear (Connell, 2009; see also Hall, 2002; Luhmann, 1971, 1995). Planning also went to take up this societal function.

Taking together the elements of this socio-historical narrative of the relation between planning, society, and the future, Connell arrives at the following description of planning in modernity:

> *“Thus, in addition to planning’s function of binding the future in decision-making, the practice of professional planning fills the additional, specific function of binding the future public interest to present decisions. In this way, the function of professional planners is to normalize the future public interest by making it a visible part of the public domain” (Connell, 2009, p. 93).*

What emanates from this account is that planning in the modern era was, and is, in its essence, linked to the future. Looking at it this way, planning is relevant to society exactly because of its future orientation; and the orientation towards the future is what characterizes planning.

Indeed, a survey of contemporary renderings of planning confirms this. Whether described as an “exercise of deliberate forethought” (Alexander, 1992, p. 13), an “explicit exercise in imagining the future” (Healey, 1996, p. 242), as “persuasive storytelling about the future” (Throgmorton, 1992, p. 17), or as “a forward-looking activity that selects from the past those elements that are useful in analyzing existing conditions from a vantage point of the future – the changes that are thought to be desirable and how they might be

brought about" (Friedmann, 1987, p. 11), it is evident that, to do and to think planning, is to 'do and think the future'.

2.1.2 THE RUPTURE OF DISCONTINUITY: PLANNING IN DISTRESS

Yet, although the future is always present within planning in some way, planning's commitment to the future is not constant. It shifts back and forth, as Freestone (2012) has also stated. He describes how the future engagement in planning can be said to follow a cyclical trend, going from more to less explicit and sophisticated and back again. Interestingly, in the past decades, the future engagement and orientation of planning has attracted criticism, as it has been said to be superficial, too present- and short term-focused, negligent, and unimaginative (a.o. Abbott, 2005; Connell, 2009; Freestone, 2012; Myers, 2001).

Such criticism clearly ties up with a broader change in society, which can be termed 'the rupture of discontinuity' (Connell, 2009, p. 93). Precisely the opposite of the rupture of continuity, the rupture of discontinuity has made the construct of time and the future more continuous again. Corresponding to wider developments associated with 'postmodernity', the 'post modern era' can be said to have an experience of time and the future which is connected to epidemic uncertainty and a "semantics of indeterminacy, incommensurability, variance, diversity, and complexity" (Connell, 2009, p. 93). Confidence in knowing the future and in the progress that the future would bring has been lost, and the societal experience and outlook have become increasingly predicated on the present, and on personal instead of collective futures (Lowenthal, 1995). This leads to a "shrinking" of the future, which steadily turns into a simple extension of the present (Nowotny, 1992, cited by Adam, 1990, p. 140; Connell, 2009, pp. 93-94). Other reasons brought forward for this are the accelaration of social change and its associated compression of the dimensions of everyday life, such as space-time compression (Leccardi, 2003; Rosa, 2003). In the face of an unsteady future and a contracted present, the future is almost merged with the present, which "appears to be the sole temporal dimension available for defining choices, an existential horizon that includes and replaces the future and the past" (Leccardi, 2003, p. 35).

These criticisms on the contemporary engagement with the future are widespread, and scattered over various academic fields, including history, sociology, geography, planning, and futures studies. Scholars have come to diagnose the societal future orientation as superficial, short-term and present-focused, and unimaginative (e.g. Abbott, 2005; Adam, 2005; Hayward, 2003; van 't Klooster and van Asselt, 2011; Lowenthal, 1992, 1995, 2006; Ratcliffe and Krawczyk, 2011; Slaughter, 1996). This is also echoed in critical commentaries which postulate a 'crisis of the imagination' (Ghosh, 2016) or a restraining hegemony of a 'capitalist realism'

(Fisher, 2009), which have incapacitated our ability to engage with the long-term and to think of futures which are qualitatively different from the present. This contemporary "temporal myopia" (Bindé, 2000), was already strikingly and provokingly perceived in the 1970's by Polak (1973), who identified a process of "defuturizing" (see also van der Helm, 2005): "We mean by the term defuturizing a retreat from the constructive thinking about the future in order to dig oneself into the trenches of the present. It is a ruthless elimination of future-centred idealism by today-centred realism. We have lost the ability to see any further than the end of our collective nose" (Polak, 1973, p. 195).

Of course, the 'rupture of discontinuity' has affected planning too. Surely, the escalation of uncertainty, the loss of confidence in the future, and the preoccupation with the present must have become reflected within planning, right? Connell (2009) confirms this assumption. The semantics of complexity, diversity, and indeterminacy tied to the postmodern experience of time have also found their way into planning and planning theory. Complexity is proclaimed on all levels (e.g. Byrne, 2003; de Roo and Silva, 2010; Healey, 2007; Balducci et al, 2011), and, in accordance, the future is less and less regarded as knowable or controllable: "Consequently, the 'post' modern semantics of planning emphasize adaptation and mitigation, rather than confidence and control, managing processes and designing livable cities rather than planning for the public interest, difference and diversity rather than commonality and unity" (Connell, 2009, p. 95)

Correspondingly, the focus of planning has been pulled towards the present. In a climate of intricacy and insecurity, articulating and constructing the future in a valuable and socially acceptable way has become a difficult, contested, and almost undesirable matter. Thus, haunted by the perils of disagreement and uncertainty, planning has reacted by largely resorting to the present, be it an 'extended' one (a.o. Myers,

2001; Connell, 2009). Shorter-term decisions are preferred, just as devices and analyses which are either more superficial or very technical, or both. Hence, an explicit, in-depth, sophisticated, and open approach to the future is lacking in much of contemporary planning.

Nevertheless, planning's relevance and function still rest upon its future orientation. To plan is to bring the future into the present, to make decisions in the now about what needs to be done and decided in the not yet. So, while the depth, quality, and emphasis of planning's future engagement may vary across time and space, and between actors, practices, and processes, there is no doubt about the intrinsic future-orientedness of planning: "....the funtion of planning is only relevant to a future-oriented society, and a future oriented society requires planning to function. Furthermore, although not all practices of professional planners are aimed at the future, the function of planning always is" (Connell, 2009, p. 97). Set against the rupture of discontinuity, its continuous construct of time and the future, and its associated tendencies to presentism, what one can find here is an inherent tension between the functionality and relevance of planning on the one hand, and the postmodern experience and construct of the future on the other hand. What can planning be in a society which can hardly be called 'future-oriented'? And what is to become of society if even planning does not adequately engage with the future?

In line with this problematic, and in reaction to the post modern milieu of uncertainty, complexity, and present-focused planning, one can discern a gradual upsurge in 'real' engagement with the future in planning, both in academia and practice (e.g. Freestone, 2012; Vermeulen, 2015). Scholars have expressed the need to "put the future back in planning" (e.g. Myers, 2001; Cole, 2001; Dalton, 2001). One way to contribute to this, they argue, is to establish a more active and deeper interaction between the fields of planning and futures studies. Another way could be to bring back utopian thinking within urban planning (a.o. Corijn and Vermeulen, nd; Friedmann, 2000; Ganjavie, 2012; Hoch, 2016; Maassen, 2012; Paden, 2001; Pinder, 2002, 2004, 2005, 2007, 2015; Sandercock, 2002; Vermeulen, 2009), or to reinvigorate strategic spatial planning (Albrechts, 2004, 2010, 2015). More radically, various authors have claimed it is necessary to thoroughly rethink planning and many of the assumptions and practices on which it is based, and to establish a 'post structuralist' mode of planning (e.g. Balducci et al, 2011; Hillier, 2011). Such efforts seem to have an effect, as Freestone (2012, p. 10) identifies a "current upturn", in which "the future is making a comeback into planning in various practical and innovative ways".

In any case, planning's relation to the future is a defining issue for contemporary planning debates and practices. Planning is inherently future-oriented, but presently faces various challenges, tensions, and criticisms in relation to its future engagement. Its capacity and willingness to deal with the uncertain future has been questioned and/or proven to be inadequate. This predicament is destabilizing planning as a field and has spawned an ongoing search for new ways of doing and thinking and organizing, most of all ways of dealing with the future. Hence, futures and futuring are topical concerns in the planning field, but as of yet rather unresolved and not sufficiently examined. Therefore, it is critical to thoroughly and explicitly study this futures dimension of planning.

2.2 THE CITY AND THE FUTURE

In the previous section, it has been explained that planning has an intrinsic relation to the future. When it comes to urban planning specifically, this inherent future-orientedness takes on an extra dimension. The 'urban' within 'urban planning' simultaneously specifies and expands the future engagement of planning: it specifically focuses on that which is related to the 'urban' and the city, and exactly because of that, it also extends the futures dimension, since its object - the city – in itself is a fertile ground for future imaginations and expectations.

The city is and always has been one of the most widely, diversely, and fervently imagined objects in human history. As the place where people, money, culture, technology, science, employment, education, resources, and much more agglomerate, cities arguably constitute the crucial category of human settlement (e.g. Weber, 1922; Glaeser, 2012). They are seen as the sites where the problems of human existence coalesce, but at the same time, the sites where most of the solutions to these problems are likely to be developed. Accordingly, cities are generally regarded as centres of innovation and creativity, and by extension, as the ground where social change and the future are fundamentally given shape (a.o. Bandarin and van Oers, 2012; Glaeser, 2012; Gleeson, 2012; Hall, 2002; Hodson and Marvin, 2009, 2010; United Nations, 1992, 2017). Today, in a context of ever increasing urbanization, this prominence of cities

and city-regions for the urban and societal future is professed even more vigorously (see e.g. Gleeson, 2012, on 'new urbanology' and recent urban triumphalism, and Brenner and Schmid, 2014, on the 'urban age thesis').

Similar to the discipline of planning, 'the city' itself from a conceptual, imaginary, and discursive viewpoint has typically had a clear link with the future. In addition to being crucial sites of contemporary life where the future is rather literally materially shaped and constructed through decisions and actions of planning and urban development practice, cities, future cities, and city futures have long been the conceptual, theoretical, imaginary, metaphorical, and discursive locus in which and through which social change is both apprehended and anticipated (a.o. Clarke, 1992; Duarte et al, 2015; Hall, 2002; Harvey, 2000; Neuman and Hull, 2009; Wunenburger, 2003). This was already the case in, for example, Plato's philosophical utopian thinking about the ideal city state in the Republic, in Thomas More's philosophical-literary Utopia, and, very clearly in our current lifetime, in the genre of science fiction (Clarke, 1992), where the urban these days is more frequently depicted as dystopic than utopic. As Clarke states: "for [at least] the past five centuries (…) the make-believe city has been the benchmark of all imaginary societies" (1992, p. 702). In such imaginaries, the future is almost always central: what will or could happen; what do we want to happen; what do we not like to see happening; what is possible, plausible, and/or preferable.

An aspect which plays a significant role in this imaginary and discursive connection between the city and the future is technology. Especially since the advent of modernity, cities and technologies have been inextricably interlinked (a.o. Duarte et al, 2015). Technology, in various forms and in various ways, has enabled and facilitated human life in urban settlements, and has thus given shape to urbanity as we know it (Tarr, 2008; also Castells, 1989; Hodson and Marvin, 2009). From such a perspective, the city itself could even be thought of as a technology (see e.g. Evans and Marvin, 2006; Hulsbergen et al, 2005, p. 171).

Such linkages and associations between the city and technology reinforce the futures dimension in the understanding of cities. After all, future expectations, whether promissory or unsettling, constitute a fundamental part of the development, perception, and 'being' of technologies (a.o. Borup et al, 2006; van Lente, 1993). When thinking about technology, the consideration of future possibilities, dangers, and implications is less than one step away. These future imaginations and expectations about technologies can, and do, get transferred to the imaginations, expectations, and discourses about cities. In particular, such dynamics can be discerned in relation to the technology-driven and technology-brimming cities of today. The contemporary epitome of these tendencies can be found in the 'smart city' discourse and imaginary (Kitchin, 2014, 2016; Merricks-White, 2016; Vanolo, 2014; also Caletrio, 2014): the idea of the city steeped in and animated by a multiplicity of advanced 'smart' technologies and applications, which as such is either conceived and propagated as a magnificent promise for the betterment of human life and society, or, increasingly, as a profoundly risky and undesirable type of future urbanity.

Overall, then, the city is an object of versatile imaginations, associated with a wide range of expectations for the future; expectations and future imaginations which are not only about 'the city' in general, or about specific cities (e.g. London), but which often also say something about societal futures at large. Such future imaginations and expectations vary in their normativity. Seemingly more descriptive and more specific predictions and projections exist besides and intermingle with 'grand narratives' and imaginaries of progress and hope (utopia) and of decline, apocalypse, and fear (dystopia) (a.o. Baeten, 2002). Hence, the city, as an imaginary and discursive field, contains an intrinsic hope and and intrinsic 'doom'; and, focusing less on normative dimensions, the imaginary and discursive field of the city and the urban is strongly futures-oriented.

In various ways and to various extents, the future imaginations for cities can then also affect and become embedded within the materiality and practices of the city. Most notably, urban planning - the discipline specifically engaged with shaping (the future of) cities – unmistakably draws upon as well as contributes to the discursive and imaginary renderings of future cities and city futures (e.g. Hall, 2002; Collie, 2011). This may be seen as a reciprocal, interactive dynamic: the practices, processes, and products of urban planning (including the academic sphere) are influenced by the future imaginations and expectations that circulate about the city as well as urban planning itself, and, conversely, these imaginations and expectations are of course also affected and shaped through and within those practices, processes, and products of urban planning. This supposed dialectical interplay, together with the intrinsic future character

of both urban planning and the city, make it particularly interesting and critical to research the future(s) in urban planning.

3 PROPOSING THE FRAMEWORK

In the previous section, it has been explained why there are plenty of reasons to explicitly and comprehensively investigate the roles and workings of the future within urban planning. More practically, the field currently struggles with the uncertainty of the future and associated challenges to planning's relevance and functioning. More conceptually and profoundly, urban planning is inherently tied to the future both in its 'urban' and in its 'planning' dimension, and virtually owes its existence and purpose to exactly that futures dimension. Extending the latter idea, the futures dimension could not only be seen as crucial to practicing and understanding planning, but, importantly, it could also be regarded as the fundamental sphere in which and from which planning should be transformed. Following this, it would precisely be the future engagement of urban planning – its futuring and its futures - which should be examined rigorously, to enable transformations that would help urban planning to become more effective, competent, and relevant for current times.

In that light, it is all the more interesting and surprising that efforts to do this have thus far been minimal. As described before, in existing research on urban planning, the futures dimension tends to be bypassed and/or regarded as self-explanatory. Neither the few exceptions (e.g. Balducci et al, 2011; Myers and Kitsuse, 2000) nor the recent "comeback" (Freestone, 2012) of the future in planning research and practice sufficiently make up for this shortcoming.

Therefore, this paper suggests to research the futures dimension in urban planning specifically, systematically, and extensively. The futures dimension in urban planning should be exposed and focalized, so that it is given the analytical rigor and attention it deserves. Only then can the analysis capture the particularity of the futures dimension, of the specific aspects, mechanisms, and dynamics at work when the (urban) future is being dealt with. Such an analysis needs to draw upon those fields and approaches which explicitly engage with the future and with anticipation, such as the sociology of the future (a.o. Adam, 2005). Remarkably, despite the relation between urban planning and the future, the insights and perspectives from these fields have largely been absent in urban planning research (and practice). To be fair, the field of urban planning has quite regularly been linked up with the field of futures studies, both in theory and practice (see e.g. Cole, 2001; Khakee, 1988; Ratcliffe and Krawczyk, 2011). However, the connection made here has mainly had an instrumentalist bias, whereby insights, methods, tools, and techniques derived from the futures field have been applied in planning, with the overarching aim to provide planners with various forms and degrees of "anticipatory competence" (Borup et al, 2006, p. 296), i.e. an (improved) capacity to anticipate the future and act and decide upon that future (see also e.g. Ahlqvist and Rhisiart, 2015; Son, 2015). Though useful and valuable, such an approach is still dominated by a disposition of 'looking into' the future, as opposed to one of analytically and reflexively 'looking at' the future, as outlined in the introduction.

In contrast to this, the suggestion here is to analyze urban planning by building upon those approaches which 'look at' the future; those approaches which take a critical and reflexive stance towards futures and ways of futuring and their natures, roles, dynamics, and effects within the present. More specifically, I propose a theoretical-conceptual framework which integrates three of such approaches: the 'critical-post structural' approach to futures by Inayatullah (1990), the sociology of expectations (a.o. Borup et al, 2006; van Lente, 2012), and the sociology of the future as outlined by Adam and Groves (Adam, 2005; Adam and Groves, 2007; Groves, 2016). Together, these are held to provide a framework which enables a thorough and valuable analysis of urban futures and urban futuring within urban planning.

3.1 THE CRITICAL-POST STRUCTURAL APPROACH TO FUTURES

To begin with, the 'critical-post structural' approach outlined by Inayatullah (1990) offers a useful base to reason from. Informed by a Foucauldian perspective on discourse, the critical-post structural approach to futures encourages and allows the researcher to investigate how the present and the future have come to be authoritatively created (Inayatullah, 1990, p. 136). The approach as such employs a constructivist perspective, which is also apparent in its theoretical underpinnings: time and the future are seen as

historical social constructs, and are thus not a way of describing but of creating the outside world ('reality'); and language is a crucial dimension in which and through which time, the future, and the world are constructed and constituted. The future emerges here as mainly constructed by language within discursive spaces and practices.

The critical-post structural futures approach puts discourses and epistemes centre stage, i.e. ways of knowing and ways of organizing knowledge. It reasons that the way we construct, understand, and know 'reality', 'time', and 'the future' now is not a description of reality 'out there', but rather that it is the result of the victory of one discourse over another (Inayatullah, 1990, p. 132). Time and the future are discursive and contingent. The ways in which – at a certain time and place – the future is constructed, understood, known, and organized could always have been otherwise. To research this future from a critical futures perspective, then, means to inquire into how the future is epistemologically constructed.

An episteme, for Inayatullah (1990, p. 116), denotes the "way we order the real and our knowing of it". Epistemes consist of all kinds of epistemological assumptions of the real (a.o. ideological-cultural assumptions, assumptions of language, assumptions in relation to the problem of meaning, etc.). Part of and implicated within such broader epistemes of the real are epistemological assumptions concerning time and the future. This is significant when one considers planning: every planning effort involves epistemological and philosophical assumptions, beliefs, and expectations concerning reality and how it is, can, or should be known; and, more specifically, regarding time and the future and how they can and should be known, performed, and dealt with. As Inayatullah states: "Every planning effort to plan the future is submerged in an overarching politics of the real" (1990, p. 116).

Clearly, such assumptions and ways of thinking are pivotal for practicing and understanding planning, since they influence how planning is done and organized. Yet, this is not a unidirectional phenomenon, since the ways of doing and organizing at the same time influence the ways of thinking. One can conceptualize this as a reciprocal dynamic between ideational and material dimensions: the epistemological assumptions and ways of thinking mutually interact with all kinds of expressions, discourses, and practices which continuously materialize, actualize, and also (re)shape the assumptions. When this conceptualization is transferred to the analysis of urban planning and its futuring, it means that epistemes, their epistemological assumptions of the real, and accompanying ways of doing and organizing affect how time and the future are understood, constructed, and performed, and, by extension, how planning is conceived and carried out.

Therefore, epistemes and their assumptions and actualizations should be examined, but the problem is that they are usually not (Inayatullah, 1990, p. 116). According to Inayatullah, epistemes are often not scrutinized and therefore left naturalized in planning efforts and debates: "Planning theories (…) thus often emerge as mentalities, frozen ahistorical categories of thought, ontological givens" (1990, p. 116). The consequence of this is that normalized and naturalized ways of knowing and doing can come to function and appear as self-evident 'systems of truth', instead of contingent and actively created realities based on a variety of assumptions and practices that could have been different. Under these circumstances, the fact that other ways of knowing, doing, and organizing are possible becomes obscured.

Thus, applying this critical futures perspective to the analysis of urban planning and its futuring, it becomes vital to investigate the epistemological construction of the future in urban planning. Through both genealogy[1] and deconstruction, one illustrates and deconstructs how actors 'know' and 'perform' the future through language and various instutionalized practices. Normalized ways of understanding and performing the future are thereby put to question. Furthermore, by doing this, it is also uncovered how current ways of knowing, doing, and organizing the future embody power relations, how they "reinscribe the power politics of the present" (Inayatullah, 1990, p. 134). Ultimately, such an analysis can help to open up the discourses and epistemes of the future in urban planning, by showing that alternative discourses, and alternative

[1] The concept and method of genealogy is rather complex and interpreted and used in various ways (a.o. Crowly, n.d.; Kearins and Hooper, 2002; Tamboukou, 2003), but it is beyond the scope of this paper to discuss that. Here, a general description in the context of this paper suffices: a genealogy of the future looks back into the history of the future in the now, and 'genealogically historicizes the present' of the future, by tracing and examining important influences on the current ways of thinking, doing, and organizing the future . The attempt is to understand how and why established ways of constructing 'time' and 'the future' have become the dominant ways of creating the world (Inayatullah, 1990).

constructions of ‘time’, ‘the future’, and ‘reality’ are possible. Deconstruction can thus enable and facilitate reconstruction.

3.2 THE SOCIOLOGY OF EXPECTATIONS

The critical futures approach rightly emphasizes that the futures and ways of futuring within the present should be problematized and deconstructed. Yet, it does not specify so clearly how this should be done, and which aspects or dynamics should be analyzed. The sociology of expectations can help in this respect. This perspective shares with the critical futures approach the overall ambition to deconstruct and ‘dereify’ the actively constructed future within the present, by, among other things, “developing on a detailed examination of the forms of action and agency through which the future is both performed [as a temporal representation] and colonized [as a spatial and temporal locus]” (Brown and Michael, 2003, p. 5). In contrast to the rather general outlook described by Inayatullah, however, the sociology of expectations takes a very specific point of departure for its analysis of the future: expectations.

Expectations, in this framework, are defined as “statements about the future – uttered or inscribed in texts or materials – that circulate” (van Lente, 2012, p. 772). As this definition makes clear, expectations here are practically analogous to the notion of futures. What also follows from the description, is that expectations, or futures, exist and travel in a variety of forms, types and ways. Originally developed within the field of Science and Technology Studies (STS), the sociology of expectations studies “the production and circulation of expectations in science and technology” (van Lente, 2012, p. 769). In doing this, the approach can provide insights into the nature and structure of expectations (i.e. futures); into the dynamics of expectations (how do they circulate, how do they come up and fade away, how do they interact with other expectations and future statements, images, etc.); into the force of expectations (they can legitimate, provide guidance, and coordinate actors and agency); and into the relation between expectations, strategy-making, and steering capacity (van Lente, 2012).

An essential theoretical starting point in the sociology of expectations is that expectations are performative. Expectations, as statements about the future, are not simply descriptions or ideas, but actually do

something. They create a new or adjusted reality. As such they are fundamentally generative: “…they guide activities, provide structure and legitimation, attract interest, and foster investment. They give definition to roles, clarify duties, offer some shared shape of what to expect and how to prepare for oppertunities and risks (…)” (Borup et al, 2006, p. 286). Furthermore, expectations can bridge boundaries, dimensions and layers, and coordinate and broker relationships between actors. By engendering all of these effects, expectations and the futures within them are enacted, performed, and made real in the present. They thus shape scientific and technological as well as social and political change. Unsurprisingly, the futures articulated in and through expectations are therefore also highly contested.

Although originally meant to study developments in science and technology, the sociology of expectations can be equally valuable to investigate the particularities and workings of futures in other spheres of society. In particular, as van Lente (2012) has argued, the approach has value for the analysis of foresight exercises, regardless of their specific type or whether these take place in business, government, engineering, research, or planning contexts. After all, foresight exercises per definition deal with the future, and thus with expectations in their various forms, interactions, and effects.

It is useful here to distinguish between ‘formal’ assessments of the future on the one hand, and ‘informal’ assessments of the future on the other. Deliberate foresight exercises can be regarded as “formal articulations of possible futures” (van Lente, 2012, p. 769), which take place within and relate to a broader, informal environment of visions, promises, expectations, and future articulations and ideas. This informal “sea of expectations” (van Lente, 2012, p. 777) influences foresight exercises, and to a certain extent and in various ways can even guide and structure them.

As might be clear now, the sociology of expectations provides a very useful perspective for the analysis of urban planning, and its futures and futuring in particular. As argued above, urban planning and the city more generally are inextricably tied to the future. In other words, urban planning takes place in an environment where a great wealth and diversity of expectations, future images, and future imaginations about cities and the city are produced, negotiated, constructed, embedded, and circulated. The arena of

urban planning, therefore, constitutes the sphere in which the futures of the city are constructed and shaped.

Taking the perspective of the sociology of expectations thus enables one to conceptualize urban planning in this way, and by extension, to analyze it from this viewpoint. The theoretical underpinnings of the framework are crucial in such an investigation. Firstly, the performativity of futures is postulated. Futures are taken to have a fundamentally generative, performative, constitutive role within urban planning. Secondly, it is exactly this role which is further explored. A study of urban planning along these lines focuses on the following elements: what kind of futures are constructed and circulated?; how are all kinds of futures – both conciously and unconciously – constructed and circulated, and why?; how do they intermingle and interact in various ways and forms, and through various actors and channels, and why?; and which effects does this have on the practices, processes, discourses, and outcomes of urban planning? Thirdly, it is kept in mind that the more formal articulations and assessments of the future within urban planning are situated within a broader field of more informal expectations, which can influence the contents and processes of futuring (van Lente, 2012).

When one extends the theoretical ideas of the sociology of expectations, and connects them with the definitions of urban planning which practically all emphasize its future-orientedness, a challenging theoretical-conceptual position emerges, related to the nature of planning and the role of expectations therein. When urban planning is intrinscially tied to the future, and when futures are taken as performative and generative, could it not be posed that futures are the buildings blocks and drivers of urban planning? Are not these future expectations what planning builds upon, is driven by, and exists for? Hence, are not future expectations then the ‘raison d’etre’ of urban planning? It seems that, without such expectations, there would be no planning. Futures are thus situated at the base of what planning is and is meant to be (see also section 2). Following such reasoning, to examine futures and their performativy within urban planning means to research into the core of urban planning, both in its theoretical-conceptual and in its more practical and material dimensions.

One interesting facet that might be brought to light by such a dereification of the future within urban planning is to what extent, how, and why urban planning efforts draw from – and are thus bounded by – existing repertoires of expectations and futures. This is an insight that follows from the idea that formal foresight exercises happen within a wider informal environment, where a variety of expectations circulates (van Lente, 2012). The futures created within urban planning exercises are very likely to be constructed from an existing set of future articulations and assessments. So, whereas such processes are usually meant to engage with the future openly and to possibly engender alternative futures and ideas, they run the risk of contributing to path-dependency and lock-in (van Lente, 2012, p. 777). Planning efforts, just like foresight exercises, draw from “existing repertoires of expectations”, and, therefore, “will not generate many ‘new’ expectations, although ‘new combinations’ between elements of the repertoires are possible”, and thus, “they may reproduce images and arguments that are already circulating” (van Lente, 2012, p. 778). This could also be expressed as a “predisciplining of the imagination” (Borup et al, 2006, p. 293), by which former expectations and futures become the basis for new planning endeavors.

Interestingly, this may have effects on power relations (van Lente, 2012; also Nahuis and van Lente, 2008). The available and circulating repertoires of expectations are more often than not based on the expectations and future imaginations that are held or accepted by established actors and networks. Hence, though urban planning and futuring exercises might involve new stakeholders (a.o. Ache, 2011, 2013; Vermeulen, 2015), the dynamics of expectations might ultimately limit the degree to which these stakeholders actually contribute to a proper re-imagination of the future. Moreover, if one takes futures as being performative in the present, this would consequently mean that, on the whole, power relations and networks largely do not change, neither in the present nor in the future.

In line with this, it is also important to consider the influence of existing and circulating collective imaginaries when analyzing the dynamics and performative effects of futures within urban planning. Future expectations and imaginations of the city and urbanity within urban planning are undoubtedly related to broader, collectively shared imaginaries (Cabanes et al, 2014; Konrad, 2006). Collective imaginaries might even frame and partially structure expectations and expectation dynamics (Borup et al, 2006; Cabanes et al, 2014). One such imaginary is particulary interesting here, given the intrinsic relationship between the city and technology and the abundance of ‘smart city’ images nowadays (see a.o. Kitchin, 2016; Vanolo, 2014; Tarr, 2008): the socio-technical imaginary, defined by Jasanoff (Jasanoff and Kim, 2015, p. 6) as

"collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of social life and social order, attainable through, and supportive of, advances in science and technology". When researching futures and futuring in urban planning, one should thus be on the lookout for these imaginaries and their potential influence.

While the above might seem to indicate that the dynamics and performative effects of expectations play out primarily on the imaginary-ideational level, this is not the case. The sociology of expectations precisely indicates that it is important to consider how expectations can become 'inscribed' in texts, bodies, actions, objects, materials, and machines; how they can become materially embedded within and embodied by structures, systems, routines, and more (Borup et al, 2006, p. 292). This means that potential path-dependencies and performativities are not only be found in the domain of the imagination, but also in the realm of the socio-material. That is exactly the performative power of futures: they reciprocally affect both the ideational and the material in an ongoing dynamic.

So, taking the above together, the sociology of expectations provides a specific contribution to the outlined task to deconstruct urban futures and urban futuring in urban planning. In particular, it directs attention to the dynamics and performativity of the futures that are constructed and circulated within urban planning. Futures, both uttered and inscribed, can affect action and agency in intended and unintended ways, and are at the same time also affected by, for example, existing and circulating repertoires and collective imaginaries. Thus, futures influence futures as well as futuring in a continuous interaction between diverse ideational, representational, material, and practical elements. Only when this is taken into account and analyzed can one properly deconstruct the ways of thinking, doing, and organizing the future within urban planning.

3.3 THE SOCIOLOGY OF THE FUTURE

The sociology of expectations thus gives body analytically-conceptually to the overarching view of the critical futures approach. By conceptualizing and concentrating on how the futures within urban planning interact, circulate, and become performative, the expectations-perspective gives a more concrete form and focus to the aim of deconstructing 'futuring' in urban planning. However, a deconstruction along these lines would be incomplete and too one-sided. Futuring, or anticipation, cannot be fully understood and opened up by only examining future ideas, imaginations, and representations and their subsequent performative effects on practice and materiality. One also needs to consider the reverse relation: materiality and practice obviously influence representations of the future (and future representation-making) too, explicitly but also tacitly

(Groves, 2016). Anticipation is a combination of both representational and material elements, and both the material and representational are constitutive of anticipation. So, alongside the more explicit, represented, performative future, attention also needs to be paid to the more implicit, unconscious, and material dimensions of futuring. This material side to anticipation extends beyond the performativity of actual futures, and also has to with the various future dispositions and potentialities that are 'scripted' into environments, technologies, practices and bodies. Accordingly, a thorough analysis of anticipation (futuring) does not confine itself to already 'operative' futures alone, but examines the reciprocal interplay between futures and the materiality and practices of futuring: it studies "futures-in-the-making" (Adam and Groves, 2007; Groves, 2016, p. 3). An analysis of urban futuring, or urban anticipation, therefore, should not only draw on a sociology of expectations, i.e. futures, but on a broader 'sociology of the future' as outlined by Adam and Groves (Adam, 2005; Adam and Groves, 2007; Groves, 2016).

As Groves (2016) states, much of the research into futures and anticipation has followed the sociology of expectations in focusing on the roles and performative effects of images and representations of the future. Such approaches usually go together with a tendency to focus on language and more conscious aspects of anticipation, and thus, with an overall inclination to 'humanise' anticipation too much (Groves, 2016, p. 2). Anticipation, however, has a dual character, and is just as much shaped by material dimensions as by 'human' dimensions. Therefore, it is important to take into account the "more than human" (Groves, 2016, p. 2) and the non-representational, material aspects when examining anticipatory action (i.e. futuring).

The influence of 'more than human' and material dimensions on anticipation operates on multiple domains and in various ways. Crucial point is that specific interpretations of the future and modes of futuring are

‘afforded by’ and inscribed into material environments in an often implicit and unconscious manner. One can roughly distinguish four interrelated spheres in and through which this occurs.

Firstly, there are ‘future horizons’ (Adam and Groves, 2007; Groves, 2016) or ‘styles of anticipation’ (Anderson, 2010). In short, these concepts designate the sets of practices and knowledges through which the future – in a specific place and time – is approached and anticipated. Within future horizons or anticipation styles, various types of social action, knowledge practices, and normative frameworks implicitly align into working compositions that generate and predispose a certain way of dealing with time and the future. Examples would be religious hermeneutics or empirical methods and ways of theory-building within science (Groves, 2016, p. 4). Such overarching attitudes are made up of several intersecting and mutually constitutive elements – practical, material, epistemological, ideational, normative -, which, together, enable time and the relationships between past, present, and future to be made sense of in specific ways. To a certain extent, the ways of knowing and acting that combine into ‘styles of anticipation’ can become rather routinized, and can thereby lead to the development of tropes and relatively entrenched temporal orderings. Analytically, the development of more concrete imaginaries and representations of the future can thus not be seperated from this wider setting of anticipation styles, which are diversely sedimented into the materialities and practices of social life.

Yet, the styles of anticipation themselves do not come out of nowhere either, since they are inherently bound up with the material environments in which they are situated. The ways of knowing and acting the future are partly “stitched into” their surroundings. Most notably, this is apparent on a socio-technical and socio-natural level (Groves, 2016, p. 4). Socio-technically, one can discern a ‘technological unconscious’ in anticipation, by which scripts that are imprinted within infrastructures and technologies lead the future to be perceived and performed in specific ways. Socio-naturally, an ‘environmental unconscious’ can be postulated, where biophysical systems and conditions constrain and enable practices and ways of futuring. Technologies and environments are not simply tools and resources with which anticipation is carried out, but they are constitutive of anticipation (Groves, 2016, p. 4); of both the ways of futuring and the futures produced and circulated. They thus form the second and third domain where one can discern the influence of the more than human, material dimension on anticipation.

Fourthly and lastly, in between the more ‘human’ and more ‘environmental’ dimensions, anticipation is also influenced by various forms of emotion and affect. As Groves asserts, people are “invested subjects (…) whose engagement with socio-technical-natural environments is affective and emotional” (Groves, 2016, p. 4). They experience feelings such as fear or hope, and feel attached to or dissociated from certain places, practices, and ideas, including those that relate to the future and futuring. Hence, such affective aspects need to be taken into account as more ‘environmental’ (non-representational) factors implicated within anticipation.

When both the material and representational dimensions of anticipation are brought together, it becomes possible to conceive of anticipatory assemblages (Groves, 2016): heterogeneous compositions in which material, practical, representational, ideational, epistemological, and normative elements all work together to continuously constitute and enable each other as well as specific forms, contents, and ways of anticipation. Such assemblages are continuously produced, reproduced, and potentially reshaped through an interplay of the various forces and elements.

Importantly, anticipatory assemblages can become (temporarily) stable in their combinations, and thus, by extension, in their approach to the future. Through all kinds of connectivities, scripts, performativities, and co-constitutions, anticipatory assemblages can thus contain an implicit or embedded way of engaging with the future and its construction. When this is the case, and when the assemblages take on a rather self-sustaining, reproductive dynamic, anticipation can become patterned (Groves, 2016). Like a kind of template, anticipatory assemblages may order anticipatory action in such a way that a specific take on time and the future is dispositioned. Simultaneously, other ways of knowing, performing, and organizing the future are then not dispositioned; anticipatory assemblages can thus work to shut off other possibilities, futures, and ways of futuring.

Thus, the assemblages of anticipation operate and “hang together in specific ways at different times and in different places” (Groves, 2016, p. 4). Inspired by Foucault (1991) and Deleuze (2006), Groves (2016, pp. 4-5) conceives of the particular constellations of anticipatory assemblages as ‘diagrams’: specific sets of heterogeneous elements, which interconnect and perform in and through particular patternings, and

thereby predispose the ways in which the future is drawn into the present. Through such "diagrams of anticipation" (p. 5), the future is understood and acted on in specific ways, and not in others. A concrete example of how such a diagrammatization of the future might work is provided by Groves in relation to energy infrastructure planning and energy security in the UK:

> *"In policy responses to this problem, the future is brought into the present chiefly through the socio-technical apparatus of demand forecasting, a combination of knowledge practices, techniques, and particular socio-technical apparatuses (such as modelling software, demand measurement technologies, and so on). (…) this assemblage produces a disembodied view, a 'present' future in which is represented a snapshot of the future as the necessary product of a set of known mechanisms. This then allows the future to be cast in a concrete, congealed form, such as a demand scenario" (Groves, 2016, p. 5).*

If anticipation – its futuring and its futures – is conceptualized along the lines of assemblages and diagrams, another significant facet emerges: the political dimension. After all, the notion that the ways of knowing, doing, and organizing the future are patterned implies that this might come to the benefit of some actors, while it can disadvantage others. Indeed, the specific patternings of anticipatory assemblages and diagrams also pattern the capability of actors to affect and act on their futures. Following Groves, the "socio-material organization of anticipation" should not be seen as a neutral process (2016, p. 2). The distribution of anticipatory capacity within and through particular anticipatory assemblages is uneven and unequal. One consequence of this is that the future tends to be selectively framed and translated in unfolding anticipatory processes, so that some aspects are turned into objects of public concern for the present as well as the future, and others are not. Evidently, this is a vital aspect of political struggle, in which anticipatory elements and assemblages can converge and connect but can also come into conflict and become contested. Seen in this fashion, it becomes necessary to consider the political implications of anticipation and anticipatory assemblages, and vice versa, to acknowledge and scrutinize the styles and configurations of anticipation when wanting to understand political conflict (Groves, 2016).

In line with the political aspect, a final feature that needs to be pointed out here is that of power. When specific anticipatory assemblages and diagrams are dominant, it means that particular distributions of futuring capabilities are generated and preserved, and that certain representations and interpretations of the future are produced and sustained. Anticipatory capabilities and interpretations of the future are likely to be connected here in a link of relative 'necessity' (Groves, 2016, p. 6): particular constructs of the future need specific actions, decisions, discourses, and actor and power relationships to be in place, and the other way around. A contemporary phenomenon which might be interpreted this way is the proliferation of 'risk' related representations and interpretations of the future. These 'risk futures' and discourses explicitly and implicitly establish a link between the idea of dangerous or undesirable prospects on the one hand, and the 'necessity' to counteract or manage such risky futures through certain acts, beliefs, and systems of mitigation, adaptation, and governance on the other hand (a.o. Adam et al, 2000; Anderson, 2010; Beck, 1992; Groves, 2010; Levitas, 2000). By implying the need for particular actions, decisions, discourses, and actor relationships and roles, and not others, such future dynamics can confer power onto some actors, while disempowering others.

Moreover, in a similar vein, specific modes of futuring and specific types of futures can tie in with the construction and distribution of expertise (Groves, 2016; also e.g. Anderson, 2010; Barry, 2001; Inayatullah, 1990; Seefried, 2013). To a certain extent, the contents and ways of anticipation that emanate from dominant anticipatory assemblages and diagrams of anticipation 'rely' on certain knowledge practices, socio-technical infrastructures, and networks. In other words, prevailing anticipatory assemblages go together with certain legitimized, standardized, and authoritative ways and techniques of futuring through which specific futures are made legible. Some actors (and non-human 'actants') can perform the needed practices and deliver the required knowledges, technologies, methods, etcetera, and others cannot. Thus, 'futuring expertise' is constructed and granted to some actors, organizations, and actants, and not to others. When certain ways of futuring are constructed as the 'standard', 'legitimate', and 'authenticated' way of doing things, in line with dominant anticipatory assemblages, then expertise also becomes bestowed upon those actors and elements that can 'future' in this way.

Expertise, in this fashion, can help to underpin, reinforce, and perpetuate certain ways of thinking, doing, and organizing the future. When anticipatory assemblages and diagrams effectively and continuously

operate to establish particular futures and ways of futuring, and when such modes of futuring also get to concentrate themselves around specific forms of power and expertise, the assemblages and diagrams can become even more effective and obdurate than they already were (Groves, 2016). The 'expert' styles of futuring thereby not only constitute but also strenghten and reproduce the anticipatory assemblages of which they are part. Of course, this has additional implications for power and further 'reproduction' capabilities, strategies and effects (of assemblages, ways of futuring, and power relations, in the present and towards the future), both on conscious and unconscious dimensions.

The picture that arises is one in which heterogeneous anticipatory assemblages have the potential to become strongly generative and performative, especially when they develop into 'diagrams of anticipation' and become intertwined with forms of power and expertise. This is not a problem in itself, but it can become problematic when certain actors and actants are deprived of any anticipatory capability, and when only certain futures can be imagined and produced. In such conditions, it becomes important to reflexively and critically deconstruct and open up the assemblages and their futures and ways of futuring. If one translates this to the field of urban planning, and the current struggles with its limited and inadequeate future engagement, it is exactly a deconstruction of urban planning's anticipatory assemblages and diagrams which appears to be necessary. Only then can planning practitioners and theorists truly break out of their entrenched and increasingly questioned and criticized ways of knowing, doing, and organizing the future, to engage with the future more openly, more competently, and more effectively.

3.4 INTEGRATING THE THREE APPROACHES

Based on the sections above, it becomes clear that an analysis of urban futures and urban futuring within urban planning as formulated in this paper needs to draw on the three outlined approaches and weave them together in an overall analytical framework. In such a framework, the various conceptual elements of the approaches need to be taken into consideration: from the critical post-structural futures approach, especially the focus on epistemes, discourses, language, and discursive spaces and practices; from the sociology of expectations, the attention to futures (expectations) and their dynamics and performativity, and in relation to that, the presence and potential influences of broader 'seas' and repertoires of expectations and collectively shared imaginaries; and lastly, from the sociology of the future, the scrutiny of 'more than human', more material dimensions of anticipation and the conceptualizations of heterogeneous anticipatory assemblages and diagrams of anticipation.

The framework that emerges from drawing together these elements is clearly constructivist in its perspective. It regards urban futures as actively constructed in the present, and suggests to deconstruct and dereify urban futures and urban futuring by critically examining the (normalized) discourses, forms of action, and socio-material assemblages through which the future is understood, constructed, and performed. To this end, attention is directed to the epistemological, discursive, and rhetorical construction of futures, as well as the performativity of those futures. Moreover, attention is also paid to those dimensions and aspects of urban futuring that are 'beyond human', and more material, unconscious, and implicit, such as scripts inscribed into technologies.

Thus, the ultimate proposition is to dissect 'urban futures-in-the-making' on all its dimensions: the conscious and the unconscious, the material and immaterial, the discursive and non-discursive, the 'in-the-making' and the performative. Much like Groves' (2016) notion of anticipatory assemblages and diagrams, all these dimensions and elements are regarded as mutually constitutive and co-evolutionary, making up dynamic and mobile ensembles of 'becoming', in which they interrelate, connect, and interact with each other and can potentially crystallize into relatively performative and generative compositions or systems of urban futuring. Following this, a theoretical-conceptual perspective develops which invites a conceptualization and dissection of 'dispositifs' and/or 'assemblages' and 'diagrams' of urban anticipation (after Foucault, a.o. 1980, 2007, 2008; and Deleuze, a.o. 1992, 2006, see Groves, 2016; also Anderson, 2010; Braun, 2014; Hillier, 2011; Legg, 2011; Pløger, 2008, 2010).

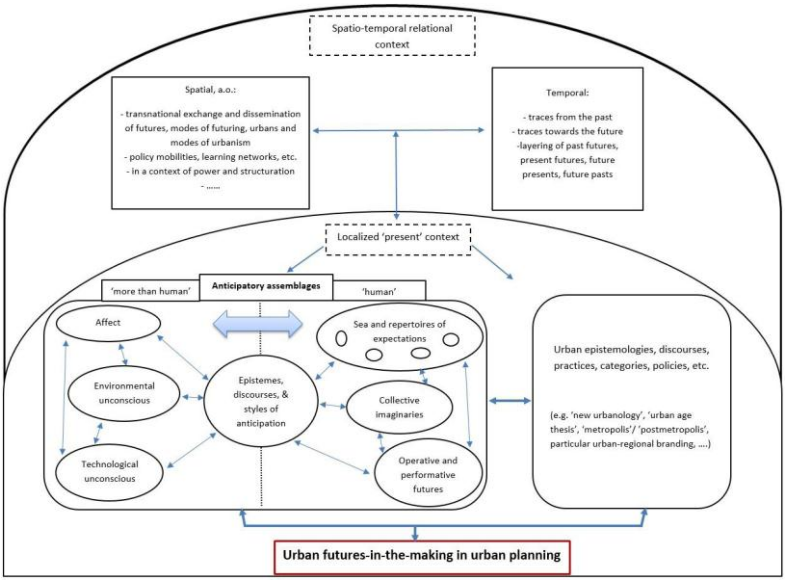

Figure 1. Visualizing the analysis of urban futures-in-the-making in urban planning.
Source: Author.

As figure 1 indicates, such an analysis of urban-futures-in-the-making within urban planning understands and examines any particular urban futuring exercise as constructed and influenced by heterogeneous assemblages, in which epistemologies, imaginaries, seas and repertoires of expectations, active and performative futures, and various material dimensions and aspects (practical, technological, biophysical, affective) all play a reciprocally constitutive role. Specific anticipatory and futuring efforts of urban planning are thereby situated within a broader environment, both in abstract-conceptual terms and in empirical spatio-temporal terms.

Concerning the empirical side, it is important to acknowledge that particular anticipatory exercises in urban planning, like a visioning process, are not isolated as one-time, bounded exercises – bounded both in time and space. Neither spatially nor temporally, specific futuring efforts are secluded from broader environments and developments. On the contrary, they are essentially relational, time-wise and space-wise. Regarding time, a futuring exercise does not simply take place in a defined 'time-space' in the (extended) present –with a clear beginning and ending -, but is inextricably tied to past and future events. For example, part of the futuring in a visioning process has already been done long before such a process starts, since the contents, directions, and shape of the futuring exercise have all been influenced by how the future has been constructed, understood, and performed before. This is why it is important to perform 'genealogies of the future' (Groves, 2016; Inayatullah, 1990) when analyzing contemporary urban futures and futuring: a genealogical historicization of the future engagement in the now is necessary to trace past influences on the current ways of thinking, doing, and organizing the future. Thus, analytically, one should not take the 'beginning' of an anticipatory exercise at face value, since the seeds for its futures and futuring have been partly planted in former times.

In a similar vein, futuring exercises are never really 'finished' either. In the very act of anticipation and futuring, traces towards the future are formed, strenghtened, or disrupted in various ways and to various degrees. Most clearly, of course, there are the decisions, actions, and created futures resulting from many anticipatory exercises, which somehow concretely affect the present and thereby the unfolding future on both the ideational and material level. This relates closely to the very purpose of many futuring and strategy-making attempts in urban planning: to somehow give direction to the future through planning action. More abstractly and implicitly, however, the anticipatory action taking place within particular efforts of futuring can also help to create, reproduce, or break open anticipatory assemblages, dispositifs, and diagrams. In this way, futuring exercises and their futures can get bound up or come into conflict with existing and ongoing patternings of anticipation. They thereby become partly immanent and imminent to forthcoming developments, i.e. to the future, as well as to forthcoming anticipation, i.e. to the future of the future. This concerns a clear case of the future 'in the making', the future underway in the present, the future in process, the "immaterial future real" of latency and immanence (Adam, 2005, p. 11), and has to do with 'future presents' (Adam, 2005; Adam and Groves, 2007), which denote futures that are "already

set on the way" (Adam and Groves, 2007, p. 33). So, just as every futuring endeavor in urban planning is linked to future traces in the past, it is also always implicated in (future) traces towards the future (see also e.g. Hillier, 2011).

Alongside this temporal relationality of urban anticipation, one can also identify a spatial relationality. An urban futuring exercise is in all its dimensions (discursive, non-discursive, material, immaterial, etc.) never only unfolding in a specific, bounded institutional or local context or setting for a specific amount of time. On the contrary, it is related to and intertwined with all kinds of futures and futures epistemologies, discourses, repertoires, practices which are constructed and circulating intra- and inter-regionally, -nationally, and –globally; between cities and regions, nations, governments, institutions, people, learning networks, including summits, conferences, and so on (e.g. via the field of 'futures studies' or national and international futurist associations). At the same time, because of their 'urban' focus, these exercises are also related to and intertwined with all kinds of 'urbans', 'urbanisms', 'urban categories and concepts' and 'urban epistemologies, discourses, repertoires, and practices', which are also constructed and circulating between cities, regions, countries, institutions, cooperation networks, etcetera (e.g. via the field of urban planning, the OECD, the UN New Urban Agenda, the C40 network, etc.[1]).

Certain institutions and actors, and urbanism and urban discourses and practices; how 'western' approaches to the future have become 'normalized', and have also found their way into urban policy, practice, and discourse, which influences the way that the urban planning profession and field has developed and has been engaging with the future/futures (see e.g. Ahlqvist and Rhisiart, 2015; Inayatullah, 1990; Kuosa, 2011; Mitchell, 2014; Seefried, 2013; Slaughter, 1993, pp. 843-845; 1998, 2008; Son, 2015; Stevenson, 2008; Veenman and Leroy, 2016; Williams, 2016); think here of e.g. the 'ideograph' of progress, and its link to cities and urbanism, for example still detectable in the 'new urbanology' (Gleeson, 2012); think of e.g. 'discourses of risk and utopia' (Levitas, 2000; also e.g. Beck, 1992), and their links to 'urban resilience' here, and looking at the 'urban' from a perspective of vulnerability; and more.

Every particular, localized, empirically distinguishable case of urban futuring – e.g. a visioning exercise for London 2050 – therefore takes place in an broader environment which is very diverse, relational, and expansive in both its temporal and spatial dimensions. Wherever and whenever produced and performed, urban futures and urban futuring are thus fundamentally relational. This relationality does not only include the heterogeneity of elements that make up anticipatory assemblages, but also involves the variety of spaces and times with which urban futures and futuring are entangled. Hence, the relational dimension should always be taken into account if one aims to understand and transform the futures and ways of futuring within urban planning.

Of course, any specific, empirical case will also always stand on its own, in the sense that it has its own contingencies and particularities. A particular, localized effort of urban futuring will always be 'unique in its relationality': the ways in which 'future' and 'urban' practices, discourses, epistemologies, etcetera, that are constructed and circulated across times and spaces combine, translate, and interact with 'local', currently existing specificities, such as 'environmental' factors of the place in question, the specific actors and their anticipatory capabilities and frames, place-specific histories and histories of the future, and so on, will always be unique for that specific urban futuring exercise only. Analytically, an integrative balance therefore needs to be struck between studying the wide-ranging spatio-temporal relationality and localized particularity of urban futures and urban futuring.

Nonetheless, bearing in mind the spatio-temporal relationality of urban futures and urban futuring helps to account for the larger contexts in which urban anticipatory action takes place, and to be critical and reflexive about these. It is one thing to dissect urban anticipation by analyzing how all kinds of epistemes, repertoires, assemblages, imaginaries and other elements perform, align, and/or collide in specific futuring efforts, but it is another thing to also somehow try to find out and explain how these efforts are potentially expressive of and influenced by broader historical-geographical conditions of power and dominant forces of structuration (a.o. Brenner et al, 2011). It is rather safe to assume that the various socio-material

[1] Think here e.g. of the article by Theodore and Peck (2011, p. 1) on the framing, development, and 'coordination' of a "transnational mode of neoliberal urbanism", and similarly, McCann, 2013, on policy mobilities, policy boosterism and 'Vancouverism', and "global-urban policymaking"; think here of e.g. the historical development of futures studies and 'futures expertise', and the interrelations between specific epistemological approaches towards the future,

elements that assemble in particular efforts and places of urban anticipation do not just arbitrarily come together, but that their convergence and functioning ties in with larger societal contexts, 'structures', and relations of power, domination, and control. Hence, one should not turn a blind eye to these societal conditions if the goal is to properly understand and deconstruct why, when, and how specific anticipatory assemblages, futures, and ways of futuring are at work, and others are not. What this means is that an analysis of urban futures and futuring as proposed here should not remain stuck in mostly descriptive, presumably neutral accounts of all kinds of assemblages and relationalities at play in urban futuring, but that it should critically and reflexively engage with the (geo)political-economic contexts, formations, and forces against which urban futuring takes place. For current times, this would surely entail a critical view towards the dominance and impact of neo-liberal capitalism, which, in its various forms, guises, expressions, and 'structurations' arguably has had and still has a strong influence on everything related to urbanization, including the way the urban future is – and can be – addressed (a.o. Brenner et al, 2011; Fisher, 2009; Harvey, 1989, 2000, 2001; Lefebvre, 2009; Theodore and Peck, 2011).

Yet, while such notions of structuration should not be overlooked, it is simultaneously interesting to note which transformative implications the fundamentally relational understanding of urban futures and urban futuring might have. Before, it has been described that the various elements in an anticipatory assemblage can get to connect and perform in such a way that they become generative, performative, self-sustaining, and thereby potentially hegemonic, and restrictive in the futures and ways of futuring that they produce, predispose and allow for. However, the relationality inherent in such a view simultaneously points towards the contingency, fluidity, and variability of urban futures and urban futuring. By definition, the notions of relationality and assemblages imply continuous processuality and interdependency. Transferred to urban futures and futuring, such an interpretation counteracts blackboxing, and helps to see that the ways of knowing, doing, and organizing the future are not fixed but flexible. This means that, by extension, urban futures and futuring are mobile and changeable. In principle, the diagrammatization of anticipatory assemblages and patternings of anticipation are always temporary, and can be disrupted, reconfigured, and transformed through both inherent "lines of flight" (after Deleuze) and external impulses (see a.o. Deleuze, 1992; Groves, 2016; also Braun, 2014; Brenner et al, 2011, pp. 235-236; Hillier, 2011; Legg, 2011).

Admittedly, this transformative potential might be limited and difficult to actualize. Entrenched ways of understanding, acting, and organizing the future are not so easily overcome, particularly not when they link up with varieties of power, expertise, and political-economic structuration. Capitalism, to take an overarching as well as deeply rooted example, is renowned for its extraordinary resilience and its capacities to reappropriate shocks, innovations, and resistance (e.g. Fisher, 2009; Peck, 2010; Schumpeter, 1947; Wilson, 2014; Zizek, 2009): nothing truly new ever seems to be under the capitalist sun, which continues to burn unceasingly and widely, and, no matter how stormy the weather, always conquers the horizon again. Yet, despite this apparent obduracy, or, in fact, exactly because of it, it is surely critical to pursue transformation; especially if one considers the current predicament that urban planning and society find themselves in with their future engagement, and if one recognizes the promise that an improved future engagement holds for both urban planning and society. To this end, one needs to look at urban planning and its futures and futuring critically and reflexively, and, in the first place, aim to deconstruct the current ways of knowing, performing, and organizing the urban future. That is exactly what the framework proposed here makes possible.

4 CONCLUSION

This paper consisted of two main sections. In section 2, I explained why it is interesting and important to examine the 'futures dimension' in urban planning. Urban planning and the city were described to be intrinscially future-oriented, and the future engagement of urban planning was identified to be a prominent and contested but as of yet underexamined and unresolved issue in contemporary debates and practices. In light of this, it was postulated that an increased comprehension of urban futures and urban futuring was necessary, not only to be able to understand urban planning better, but also to enable transformations and improvements in urban planning practice and theory. In section 3, I brought forward a theoretical-conceptual framework to analyze urban futures and urban futuring within urban planning. This framework makes it possible to expose, focalize, and investigate the crucial roles and workings that the futures dimension has in urban planning, by drawing upon those approaches which explicitly engage with the future and anticipation. It integrates the critical post-structural futures approach, the sociology of

expectations, and the sociology of the future, and is based on the ambition to deconstruct the ways of knowing, doing, and organizing the future in urban planning.

Here, I want to reflect on some of the challenges and refinements of the suggested approach. To begin with, this paper mostly focuses on deconstructing the future and futuring in urban planning, but, in 'urban futures and futuring', the urban side should not be forgotten. 'The urban' and 'the future' are deeply intertwined in a study that follows the approach described in this paper. Thus, a deconstruction of urban futures and futuring does not only disentangle discourses, epistemologies, assemblages, and so on related to the future, but, at the same time, it should also 'denaturalize', for example, urban epistemologies, discourses, practices, conceptual assumptions and frameworks, and the naturalization and dissemination of specific urban concepts, practices, policies, theses, etcetera. Importantly, it needs to be taken into account here that futures-related discourses, epistemologies, practices, and assemblages and so on can entwine with urban-related frameworks, concepts, epistemologies, and assemblages, and that these can influence and mutually constitute each other. This is for example clear in Gleeson's description of the contemporary 'new urbanology' and Brenner and Schmid's depiction of the 'urban age thesis': both accounts show how various 'narrow' conceptions of 'the urban' can also imply and have embedded within them certain 'narrow' or very particular conceptions of futures and future possibilities (Brenner and Schmid, 2014; Gleeson, 2012). So, a deconstruction of urban futures and futuring should always be about both how the future is understood, imagined, and performed, as well as how the urban is understood, performed, and imagined, and, crucially, about how these two dimensions interconnect.

Secondly, an analysis based on the framework proposed in this paper should be cautious in its application of 'assemblage' thinking. As Brenner et al (2011) have rightly argued, an assemblage-inspired approach may overstate and exaggerate the relationality within concepts like assemblage to the point of relativism and "naïve objectivism" (Brenner et al, 2011, p. 233; also Sayer, 1992, p. 45). When almost all attention is directed to descriptively tracing and mapping the materialities and connectivities of assemblages and their elements, one risks to overlook how these particular relations and compositions are situated within historical-geographical conditions of power and structuration. Such an effort would present a decontextualized picture in which assemblages seem to be assembled and disrupted almost automatically and anonymously, as if they are detached from, for instance, political-economic forces and power dynamics (see also Bender, 2010, p. 305). Accordingly, it is not enough to only expose that elements connect to each other, but also necessary to analyze how and why they form (or disturb) functioning assemblages, and who (or what) is doing the connecting and 'structuring' to whom (Brenner et al, 2011, p. 236).

At the same time, however, it would also be too simple and inaccurate to explain the emergence and functionings of certain assemblages by broad-brushly referring to political-economic 'systems' or overarching forces like capitalism. It is exactly here that the assemblage-approach can help to specifically identify how various forms of 'power' and 'structuration' concretely and continuously perform through and within 'assemblages' of heterogeneous elements and actors, which generate particular ways of doing, knowing, and organizing, and not others. Hence, assemblage-thinking can add to and simultaneously needs to integrate perspectives that deal with the more political-economic dimensions of social life (a.o. Brenner et al, 2011).

Thus, regarding the framework brought forward in this paper, the assemblage-approach should not be pushed too far when analyzing urban futures and futuring in urban planning. It should be applied in such a way that it is conceptually, empirically, and methodologically useful, while acknowledging and incorporating political-economic aspects (Brenner et al, 2011): it should help to diagnose how and why all kinds of elements and actors connect into particular assemblages that perform in such a way that they predispose futures and ways of futuring that are, most likely, in line with hegemonic arrangements of power and structuration. Simultaneously, by deconstructing urban futures and futuring in this way, the perspective should also help to identify openings: ways out of the dominant anticipatory assemblages themselves, and by extension, ways to counter and reshape the broader systems and relations of power and control.

Thirdly, another challenging aspect of this paper's theoretical-conceptual cadre is the relation between past, present, and future. These temporal categories and their relationships and dynamics are never fully accessible or re-traceable. When analyzing urban futures-in-the-making, one should consider a whole set of layers of past futures, present futures, future presents, and future pasts that interpenetrate each other

(Adam, 2005). However, these various futures and their processes of emergence and functioning are not so easily susceptible to empirical research. This is a key reason why it is so difficult to sociologically and analytically engage with the social future and processes and effects of futuring. For example, this difficulty also permeates efforts to undertake 'genealogies of the future': it is never possible to truly 'reconstruct' the history of the future, and the traces that are found and formulated in such genealogies will always be partially subject to selection and interpretation by the researcher (see e.g. Kearins and Hooper, 2002; Tamboukou, 2003). So, although the theoretical-conceptual framework provides several concepts and insights to expose and analyze the interplay of futures and temporalities, this will always remain a topic of concern that should be acknowledged and reflexively and truthfully addressed.

Fourthly and lastly, it should also be noted that analysts of futures and futuring are themselves part of the world of futuring that they attempt to investigate (a.o. Adam, 2005; Borup et al, 2006; Brown et al, 2005). Researchers cannot freely detach themselves from the various futures, temporalities, and ways of futuring that that they experience and enact and that are variously embedded within them and their own practices, knowledges, bodies, and minds. This means that it would be misleading and almost hypocritical to claim a neutral, non-normative stance in futures-related investigations. Analysts of the future are always also future makers, implicated in the 'futures of our making' (Adam, 2005, p. 14). They consequently also need to consider their responsibilities, accountabilities, and moral and ethical obligations, ambitions, and impacts (Adam, 2005; Adam and Groves, 2007). A study of urban futures and futuring within urban planning along the lines suggested in this paper, therefore, should also be commited to the 'ethics of the future' (Bindé, 2000). Moreover, this ethical concern does of course not only involve the researcher's own positionality (his or her futures, futuring, actions, decisions, knowledges, research designs, and so on), but actually constitutes a significant additional factor to take into account when studying his or her actual cases of urban futuring: how do the studied urban futures and ways of urban futuring relate to future ethics or ethics of the future, and how can ethical resources towards the future be increased (Adam, 2005; Adam and Groves, 2007, 2011; Bindé, 2000; Groves, 2009)?

Clearly, multiple challenges accompany the exploration of the futures dimension within urban planning that is proposed in this paper. However, I contend here that, on the whole, the advocated approach is very valuable, and deserves to be pursued. Its value, moreover, does not only lie in the increased understanding it will bring about urban futures and futuring in urban planning. A research project along these lines also has clear practical value.

An increased understanding of the natures, roles, dynamics, and effects of futures and futuring in urban planning will provide insights that will also create to possibility to change and improve the practices, processes, and products of urban planning. Already at its base, for example, an increased awareness of the 'sea' of expectations in which urban futuring occur is valuable, since it strengthens the reflexivity of the relevant actors involved, allowing them to take this into account when imagining and acting upon city futures and future cities. Based on a better insight into how and why these processes work, it will become possible to open up the field of futures and futuring for urban planning, thus eventually allowing for more imaginative, creative, and therefore potentially more effective planning practices, processes, and products.

This link towards the more 'practical' value of the approach can also be described in conceptual terms. When futures and futuring are conceptualized as being at the heart of urban planning, and, more importantly, as being crucially performative, constitutive, and generative of urban planning, then it follows that it is also in this futures dimension where transformation can be brought about. In other words, the future becomes an important site of transformative action. It therefore makes sense to target the future engagement within urban planning when changes or improvements are sought. This is another reason why the proposed theoretical-conceptual approach offers a meaningful, innovative, and crucially significant perspective for the analysis of urban futures and futuring within urban planning. To come back to the beginning of this paper: by looking at the future, opportunities for improving the practices of looking into the future open up. By extension, the capacity to construct and realize better and more desirable futures rises on the not-so-distant horizon.

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ID 1439 | SHAPING THE CITY OF TOMORROW IN EAST ASIA: CONCEPTS, SCHEMES AND IDEAS FOR URBAN DEVELOPMENT FROM 1960S TO 2010, AND BEYOND

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1 INTRODUCTION

There is a growing interest about the urban visions and architectural ideas and vocabulary behind the formation of the large urban conglomeration in Japan, South Korea and China, and how the seeds of Western planning theories and architectural design practice have helped shaping and building the contemporary cites along the vast regions of Asia Pacific Region, and frame a local language in envisioning the city of the future.

Fuelled by an unprecedented economic boom in the recent decades, China has carefully planned a process of urbanization at a gigantic scale, supported by political will and determination in promoting a radical transformation of the economic system by shifting progressively from industry to services, and promoting the city as a fundamental element for this transition. South Korea and Japan are the models for this sort of urban transformation, both for the overall dynamics and the design and planning methods implemented, as South Korea experienced her fast urbanization process in the late 1980s whilst Japan has witnessed a great urban growth during the 1960s. Somewhat “old” concepts and ideas imported from the Western planning traditions, such as the design of new towns, neighborhood units, gated communities, green belts and garden cities, high-rise living etc. are still essential practical elements implemented for the planning and design of the modern/contemporary urban landscape, and are largely adopted in the planning processes used in the structuring and organization of the cities and suburbs built in the region. New progressive concerns related to environmental, social and technological issues such as the Climate Change, growing pollution, the need for sustainable planning and more energy efficient, smart and eco-friendly devices for transportation and domestic use, the constant ageing of the population, among others, call now for very new ideas and bold and innovative schemes in the design and development of cites in East Asia, as well as around the world.

Reflecting on the contributions from East Asia to the discourse of planning and design a city for the future as promoted by single actors, larger cultural movements and national elites fostering economic ambitions and political agendas of autocratic forces (e.g. from the experimental cities by the Metabolists in Japan, to the more “pragmatic” urban development projects fostered by local and national governments in South Korea and China), it can be worthy trying to explain some of the key socio-economic factors and planning engines which have dramatically and radically transformed the skylines of the most dynamic and growing influential area of the world at the dawn of 21st century, as well as briefly describe the origins of the various forms and elements of the modern built environments which have been shaped and molded by these same forces, and how/whether these urban forms embody a true genuine East Asian vision of the city of the future, and what is the current trend in terms of new urban forms and architectural design research at the beginning of 21st century.

1.1 BACKGROUND OF THE URBANIZATION IN EAST ASIA IN THE LATE 20TH CENTURY

Built on the lessons of other developed and developing nations which have adopted mass apartment buildings as strategy to foster modernization (Urban, 2012), a real estate revolution, driven by a powerful government-sponsored construction industry and the use of new technologies available, has been the engine which has led the processes of radical industrialization and frantic modernization from the second half of 20th century in Japan, and then in South Korea and China; this factor has consequently prompted a huge restructuring of the pre-existent urban fabrics and the progressive reshaping of city form, inner structure and urban landscapes. People mobility, infrastructure development, industrial modernization, growth of consumerism and of the service sectors, social restructuring have led an unprecedented

urbanization in this part of the world both in scale and rapidity, with very relevant implication in geo-political and economic terms.

Growing mega cities must accommodate a new class of urbanites and more immigrants from rural areas, with housing shortage being one of the foremost important issues. House as shelter and especially as status symbol characterizes the aspiration of the middle class generated by the economic success of Japan, China and South Korea, which follow a path set by other developed and developing nations, most notably the US, which adopted large scale planned communities and mass apartment buildings as strategy to foster modernization and create cohesive communities (Ellin, 1996; Urban, 2012). The Japanese live, work and move in the super-conurbation called Megalopolis of Tokaido, integrating infrastructures, productive zones and an intricate extension of residential urban fabric well represented by Tokyo skyline, which has developed in a sort of mainly horizontal and decentralized multi-polar urban entity (Kornhauser, 1976; Hirai, 1996; Sorensen, 2002); South Koreans live in a sort of "Republic of Apartments" whose main "smart" and "radiant" hyper-connected cities are composed by clusters of uniform and repetitive high-rise, dense residential compounds filled with shops, schools, services, landscaped areas and infrastructures inspired by Western planning strategies (Gelezeau, 2003; Lee, Choi, Jeong, Soon, 2015); likewise in the last decades, to fuel its urbanization and shift towards a market economy in a more globalized world, the Chinese government, to consolidate its political agenda has orchestrated the development of many modern new towns and futuristic eco-cities, reshaping the urban forms of many cities through the creation of vast extensions of new residential, commercial and business districts in the suburban areas around the major cities in order to promote both a modern urban development and lifestyle, and further support a larger industrial output and economic growth to foster their profile as true global cities on the international scene (Rowe and Kuan, 2002; Friedmann, 2005; Lu, 2006; Wu, 2007; Gregotti, 2009).

2 JAPAN: URBAN METABOLISMS OF A MEGALOPOLIS

Contemporary urban Japan was born from the ashes of the cities destoried during the WWII. The economy didnt recove till early 1950s, in coincidence with the start of Korean War and in the climate of the Cold War, and by the beginning of the next decade a new vision for the country, both modern and prosperous, unified the efforts and solidarity of the Japanese population and the central government. By the early 1960s all the strategic economic plans promoted by the government to recover from the war were completely fulfilled, and Japan joined the group of the most dynamic and advanced industrial power among the developed countries. The rapid economic growth brought the development of a modern system of urban infrastructures, a general improvement of the living standards, a unprecedented increase in the national wealth and fuelled investments to pursue a comprehensive technological progress. The economic success of the period however also caused new serious urban problems which posed a severe threat to the social life in the Japanese metropolises, which tried to keep the balance between the needs for a modern life with the persistence of the tradition (Woswo, 2002). Frequent cases of environmental contamination caused by high the levels of pollution (Ita-ita; Minimata, Yokkaichi) were reported, as direct consequence of planning flaws which for instance allowed for the co-presence of an high concentration of factories and industrial plants in urban residential areas alongside an high population density in the big industrial cities. The reason behind this was the need sustain an accelerated urbanization during the years of rapid economic growth which asked to privilge the industrialization and the economic development, which meant it was fine to set the industrial complexes in close proximity to each other and to the workers' residential areas (kombinatos). In the early 1960s the rampant urban immigration and uncontrolled urban sprawl led to the formation of the so-called Tokaido Megalopolis, but also resulted in serious problems related with these phonomena, which became source of serious concern for the Japanese government.

Metabolism as architectural and urban avant-garde movement was a product of the post-war economic growth condition of Japan in the 1950s. In the context of the country's economic regeneration and cultural innovation, Japan pursued a further stage of modernization through urban development, which fostered the construction of huge and extensive systems of infrastructures in the cities as urban and interurban networks of movement, communication and energy supply integrated with public spaces, industrial and residential zones, to support the fast urban growth. The Metabolist city, inspired my the myth of Futurism' New City and the fascination for Le Corbusier's Radiant City, intended to overcome the fixity and the mechanical structure of the Modernist City, whose theorethical fundamentals were in a state of crisis following the social and functional failure of many of the modernist urban renewal projects and schemes actually built in the postwar years. Many of the projects by the Metabolists presented high rinse mega-

structures made of support clusters of prefabricated apartment capsules, which could be modified and replaced according to their life cycles and the social demands and fashion. Rejecting the Modernist methodology based on the principles of Athens's Charter which focused on the use of a fixed master plan and zoning, Metabolists tried to control and plan the city through the tools available from industrial design methodology instead of the architectural principles. Indeed the idea of metabolic cycles of the Metabolist architectures, such as Arata Isozaki's plan for clusters in the air, derives from the vision of the world of technology and the functionality and flexibility of the assembly line of the industrial production system (Pernice, 2006; Koolhaas and Obrist, 2011).

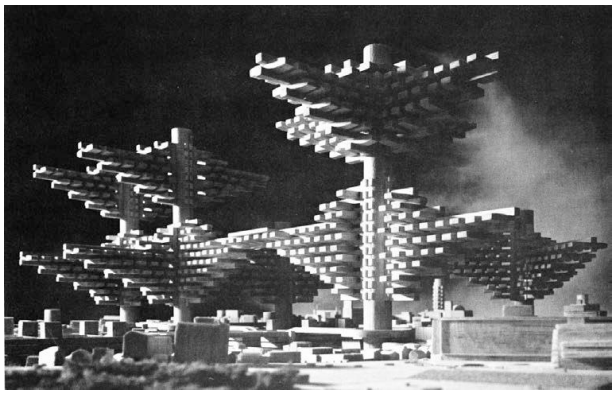

Figure 1 - City in the Sky 1962 (Isozaki.co.jp)

The idea of mega-scale and of a total controlled urban system conceived on the acceptance of a hyper-dense and highly technological built environment, in order to control urban sprawl and give visual coherence and order to the process of city growth, as proposed by Metabolistsand other visionar Japanese architects and planners was counterbalanced by a more pragmatic approach towards a regional and urban development, which found in the UK lesson of new towns development and the new research for mass housing provision the main response of the local and national authorities.

The first modern new town built in Japan was Senri in 1958, which was followed by 15 new towns developed after a new law for the development of new residential areas was passed in 1963. Tama new town, the biggest of these cities designed as a satellite town of the main conurbation on the outskirt of Tokyo, was built thanks to both private and national capitals and its scheme based on a system of neighborhoods, and approach further refined in the following decades focused on the promotion of various new technopolises.

Figure 2 - Tokyo townscape (the author)

The cities which constitute the Tokaido Megalopolis, a super urban conurbation stretching from Tokyo to Fukuoka, offer a vivid example of what has been termed "railway urbanism", a form of urban growth where a regional area is organized as a sysyem of cities structured as a hierarchical network of mass transport pathways (expressways, metro, railway lines), which intersect in sub-node-points always connected to major nodes of services and movement (major railways and subway stations) and which are central functional and visual points of large residential urban areas. Indeed the transportation infrastructure and especially the railways development have had a strong impact on the formation and development of the modern Japanese urban environment (Kornhauser, 1976), which present the main central urban areas of the cities, especially Tokyo, as the core of the national socio-economic system. Here new multi-level and multi-functional urban spaces were created in new districts of the cities especially since the 1980s, which

contributed in creating a complex urban townscape in which huge patches of extensive residential fabrics merged with newer residential developments in the form of clusters of towers integrated with cultural facilities, offices, retails and restaurant to form a multipolar urban structure in the city in order to organize key reference central nodes and balance the growing suburban sprawl (Sorensen, 2002).

Indeed the process of urban growth in Japan in the last decades has been driven by an unparalleled expansion and integration of the transportation development in the structuring of the city, well expressed by the case of Tokyo. As capital and most important cultural, political and economic center of the nation, Tokyo is a model of megacity whose urban landscape extends at regional scale, which needs an efficient, capillary and very extensive transportation network for the daily activities of the residents, who typically commute long hours from suburban residential districts to central working areas. The city is a clear example of what has been termed “railway urbanism”, a process of urban organization which disregard cars as main means of movement and, heralding the modern T.O.D. design approach and planning methodology, conceiving the city as a hierarchical network of mass transport pathways (expressways, metro, railway lines) which intersect in sub-node-points always connected to major nodes of services and movement (major railways and subway stations). The easy access of commuters and the special linkages between private railways/metro companies and commercial and market groups has created an urban landscape where the location of the main chains of department stores and shopping malls is essentially close or literally built around huge decks/plazas in front or above subway and railway stations or interchange stations, which are truly fundamental urban nodes and fundamental interchange link points of larger residential and mixed-used districts. The necessity to rely entirely on the efficiency of mass transport system in terms of movement and services has inevitable consequences on the development of a very peculiar urban landscape and lifestyle in a high-density city like Tokyo and other Japanese cities, whose dwellers are more and more compared to “urban nomads” living their existence commuting between vast artificial habitats of fragmented realities, often on the urban rural fringes (Desakota) of the large metropolises.

The challenges of constant natural disasters and the constraints of the limited space available in the city due to the rising costs of land and services, have both been functional in an approach to technology as a necessary tool to improve and make safer the daily life in the large metropolises, and in the appreciation for a living in low rise dwelling. Therefore the Japanese city, retaing from the past just the finer urban grain of historical residential areas and the apparent irregular layout of the streets and conplexity of the townscape, is mostly defined as a complex mosaic of fragmented landscapes composed of scattered high-rise and high densities mixed used blocks, and vast districts of detached houses or row house residential enclaves.

What is peculiar to Japan is the limited number of large apartment blocks in the city. In contemporary Japan most people still preferred to live in ordinary low-rise single family houses, a trend quite interestingly different from the rest of East Asian countries. Indeed by the late 1990s, and after the 1980s economic downturn, it was not the apartment block but the (suburban) single family detached house with private garden and parking plot was the favorite urban residential typology as indicated in a survey of 70% of the Japanese, a trend further consolidated by the progressive transformation of Japan, like many other developed nation, in a ageing society (Hirai, 1998; Inabe and Nakayama, 2000). Less population, the need for more daily-care and a certain natural predisposition for acceptance and interest among the Japanese in new robotic technologies, spell clearly of a future of highly technological advanced “shrinking cities” in this part of Asia.

3 SOUTH KOREA: COMPACT APARTMENTS FOR SMART CITIES

The rapid modernization of the Republic of Korea become a priority for the Korean government in the second half of 20th century, following the end of four long decades of Japanese colonial rule in 1945 and the end of subsequent Korean War (1950-53), which split the country in two blocks. The priority was to promote a comprehensive modernization of many aspects of the traditional Korean society, from economy to industry and life-style, on the model of what Japan did at the end of 19th century. The development and construction of large housing complexes received a particular attention as this related directly with the necessities of larger redevelopment projects in the cities which could be planned, organized and integrated with new urban infrastructures and in general related to the broad process of industrialization, economic growth and eventually modernization of the country. Since the late 1980s and early 1990s the design of

new and larger (complex) high-rise apartment blocks was especially encouraged, and the Korean apartment block (Apatu Tanji) became also extremely important for the development of a strong and influential construction industry, and being functional to the formation of a growing middle class, especially in order to sustain the economic growth of Korea, turning the country in what many foreign observers define a “Republic of Apartments” (Gelezeau, 2003).

The evident and sometimes annoying repetitiveness in the design of the identical facades and exteriors of the Korean apartment blocks, and the standardization of the interior layouts of the apartments, presenting the same basic spatial organization/features in several parts of the big cities and regions throughout the country, is balanced by the soundness of the structural technology implemented for high-rise buildings and by the high standards in terms of comfort and management, with organizational schemes of the residential towers which show several fundamental elements derived mostly from the British and the US planning traditions (Lee, Choi et al., 2015).

Figure 3 - Apartments complex in Daegu (the author)

Where South Korea have shown an original contribition and a pioneering spirit in promoting new forms of urban planning and design is in the pormotion of Smart Cities. Koreans distinctive approach for this city model has been largely support by the capitals and know-how of large industrial conglomerates (chaobol) of interntional renown brands, mostly active in IT, such as Samsung, LG and Hundai. As the one of the most connected country in the world and a powerhouse in the production of semiconductors and investments in IT research, South Korea has embraced the ideas of Smart Cities and Smart Dwellings design with an enthusiasm which has few equivalent elsewhere. The most clear exemple of the infatuation for this idea of city is the city of New Songdo built from scrath near the port town of Incheon, East of Seoul. Songdo was built from 2005 on reclaimed land from the Yellow Sea as an industrial park and then a special economic zone in order to attract foreign direct investments of multinationals and international corporations, with low taxes and less regulation, in open competition with similar zones in East Asia. High tech industries and the government sponsored most of the works, with the idea of creating a fully networked and automated city, whose omnipresent sensors, diffuse cctv cameras, digital technologies and wireless connections assure a constant monitoring and instantly interaction between users and services (Townsend, 2013). In spite the loud slogans and the artificial appeal of the original project, this typical smart city planned for smart people presents a un-impressiver plan for mobility organized on grid of roads, with clear zoning and vast park-like green spaces separating various discticts. The typology chosen for the residential buildings is the apartment tower, which add the sense of vertical growth of the city, in stark contrast with the surrounding natural landscape which is essentially flat and with very few hills.

Figure 4 - New Songdo (sogdoidb.com)

Bundang new town is a good exemple of a series of new towns developments undertaken by the Korean government to consolidate the large area of Kyonggi-do, the regions which surrounds Seoul and is the economic, political and industrial core of the nation. (Shane, 2011) Together with a few more planned and developed new towns, Bundang was built as a large size satellite city set in the ring of land around the capital, which is a green and mostly restricted area where new housing could not be built, a zone clearly insired by the scheme of English green belt, which was established in the UK with the 1947 Town and Country Planning Act and initially was proposed by Patrick Abercrombie’s Greater London Plan in 1944.

Inspired by the need to promote a modern blueprint in terms of city of the future, and developed by combining Western planning methods (mostly from the Anglo-Saxon lesson in regional planning), Japanese emphasis on transportation development and Singapore and Hong Kong well known approach to urban vertical growth centered along the main mobility hubs (subways, metro stations), South Korean planners and urban designers rush to implement the most updated know-how into the delivery of large and hybrid urban schemes of high density and strictly organized new towns, of which Bundang , designed and built by Korea Land Corporation in 1989-1996 is an exemplary model. The city was designated to host 1 million people and is organized as a linear settlement gathering a collection of neighborhood units as high rise residential and office towers enclaves, mostly gated, organized as a chessboard of superblocks. Most multistory and dense commercial zones are organized around the main streets axes, with the city presenting an elongated development along the main river and the metro line to Seoul, and with the major street network running N-S, an axial scheme which is surrounded by several different green areas constituting a system of urban parks for local residents. Here is very evident the idea of (re)creating the townscape as image of the city in a park, or a vertical city in the garden, a clear homage to Le Corbusier' Radiant City conceived in the late 1920s.

More recently South Korean government has embraced the idea to move the national capital from Seoul to a new site in the center of the nation, and the urban model chosen for the planning and design of the new capital is the Eco-green city. Since 2007 Sejong city has been developed as a multi-functional administrative capital city as an attempt to decentralize and decongestion activities and people from crowded Seoul. The program proposed by received a major setback though the plan to relocate most of the ministries and governmental offices is still on-going. Among other reason for the construction of Sejong city, which is still largely unexecuted, is the scope to create an urban pole able to promote a more balanced regional development of the country, as this new city is located in central area between Seoul and Daegu-Pusan metropolitan area, the second larger conurbation of South Korea. Like for many similar scheme of eco-cities, the key element of the project if the design of many energy efficient and futuristic shaped buildings integrated in a larger system of circulation avenues; the masterplan has been arranged with a loop-shaped lay-out and the city in the blueprints and renderings shows a somehwat conventional urban image made of towers insert in a series of layers of grids of low-rise eco-buildings featuring organic shapes and green roofs, long vistas of green parks and a fast mobility on broader road arteries, a sort of hybrid combination of Chandigarh and Milton Keynes.

4 CHINA: VERTICAL URBANISM OF GATED COMMUNITIES

Since the start of the policy of "Open Doors" in 1978, China has witnessed the largest urbanization process of history, with more than 300 million people moved from rural regions to urbanized areas, compressing in much shorter time what western countries and other Asian developed nations, especially Japan and South Korea had achieved over longer periods. This process of sustained urbanization in China during the last 3 decades is also the direct consequence of a radical shift in the economic structure and the massive phenomenon of immigration from the rural areas of the country piloted by the central government, which constatly operates in order to assure a progressive process of modernization and assure a more relevant geo-political role of the nation in the world economy (Rowe and Kuan, 2002; Friedmann 2005; Wu, 2007). Large numbers of works have moved from the West and central areas of the country towards the coastal cities, richer in services and infrastructures, real engines of the socio-economic life of China, and cultural cores of resurgent Chinese ambitions. The need to implement a specific plan to control the growth of the economy and the expansion of the main cities has fostered the development of planned cites and new towns in their suburban areas, though what effectively controls and influence the planning approach of the Chinese cities is the fact that the land is still property of the govenrment and is "sold in leasing" for 70 years to private developers and individuals, and the system of Hukou, the household registration system, which in practice discriminate between the legal local residents and the external workers, to whom many urban services are precluded.

Among the most representative urban projects which have inundated China in the recent years and well represent the rush to modernize cities and view of the urban future for most Chinese are for instance the construction of SIP Industrial Park in Suzhou, a series of new prototypes of green and eco-cities, as well as bold program for new towns development around Shanghai Metropolis, the most global of the Chinese cities.

Figure 5 - Gated community in Suzhou (the author)

Shanghai municipality promoted the design of a series of model new towns called “1 City, 9 Towns Plan”, a system of satellite cities on the outskirts of the larger metropolis to be completed by 2010, whose design was based on different foreign styles and city planning traditions, in order to both create new growth poles and decentralize people from the congested center and to foster external investments and marketing the city and her position in the global economy (Den Hartog, 2010). Among these new towns set on the fringe of Shanghai, the most relevant are Anting (German Town), Pujian (Italian Town), Thames Town (English Town) and Gaoqiao (Dutch Town). In the case of Thames Town and Gaoqiao Dutch Town architects and planners designed these new towns as places for public consumption and for marketing the new urban revolution of China. The new towns projects in Shanghai like elsewhere, were proposed as the optimal solution to what are considered a series of fundamentals issues in the context of current urban planning approach in China: foster city branding in order to promote the image of a modern and prosperous country and attract foreign investments; introduce and diffuse a more international and modern (Western) urban life-style, rich in amenities as well as in urban services to promote social activities and thereby consumption of an expanding middle class, which ask for a luxury design and attractive, confortable and visual appealing urban scenes.

In the effort to support further urbanization and escape from the chocking air of heavily polluted industrial cities, China has funded the construction of new susburban districts and eco-cities and green towns, oftern resulting in desolated built areas of ghost towns. Eco-city Tiajing, a model of sustainable city ispired by the T.O.D. system and the integration of carefully planned and well landscaped and organized urban disctricts inspired by Singapore model of urbanization, and the plan for a new high density and vertical Forest City, a linear system of high rise blocks containing hanging gardens of trees and plants conceived by Stefano Boeri for Shijiazhuang, well represent the trend of adopting external green-sustainable planning concepts as well as the consultancy of foreign professionals hired to propose innovative design and technical solutions.

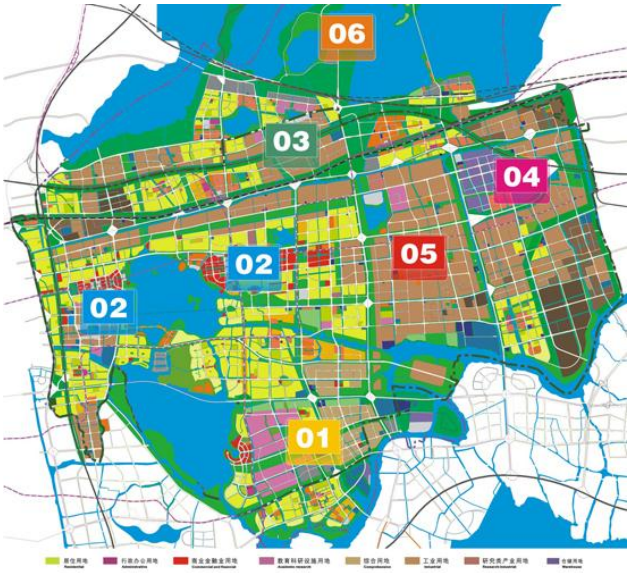

Figure 6 - Suzhou SIP Masterplan (Suzhou Planning Bureau)

The district of Suzhou Singapore Industrial Park (SSIP, now named simply SIP-Suzhou), set up in Suzhou, Jiangsu Province in 1994 as a joint venture between Suzhou Metropolitan government and Singapore government, was proposed as a prototype of a modern industrial park conceived on the most advanced

planning strategies and up-to-date urban design concepts, becoming a true model for other Chinese cities, in order to provide Suzhou with first class industrial infrastructures, clusters of heavily landscaped self-secluded residential complexes (mostly gated communities inspired by the concepts of Clearance Perry's Neighbourhood Unit) and high-standard services, while promoting and "branding" the image of the city at a domestic and international level. The entire park is a huge grid of roads and public parks constellated by foreign high-tech companies, industrial facilities integrated in a system of public services, research institutes, residential zones and green university campuses, inspired by a car-oriented urban development. As part of a good sample of planning experience, Singapore community planning patterns, the organization and design of neighbourhood centers, and public housing design methods were also introduced into SIP via regular visits by local management training teams to Singapore. Especially the model of Singaporean neighbourhood center, as a pivotal core of the local district social life and planned as a system of mixed used spaces filled with essential services to support a small population and with a very easy linkage to public transportation routes and metro stations, and the model of gated communities designed as dense blocks of high rise residential towers enbedded in well mantained semi-public gardens and green spots, and integrated with communal spaces and collective facilities (a model also extremely popular in Hong Kong), have proved to be of particular interest and successfully implemented in the context of the fast growing Chinese urbanization, more and more inundated with copycat architectures and public space design projects mimicking Western or other exotic styles.

It appears that in contemporary China the urban morphology of the cities is more and more defined by the organization of newly built large urban blocks as secluded enclaves and gated communities of high rise towers (dis)-connected by broad avenues and streets, given that for several decades the only form of urbanization for Chinese cities was trough the development of socialist working units (danwei) which combined factories, residences and other services, based on former Russian self-contained residential superblocks models (microdistricts or microrayon), which were transplanted to China since the early 1950s (Lu, 2006), and largely inspired by precedent 1920s concepts such as the German' Siedlungen and Vienna's Hofe, as well as the American concepts of Neighborhood Unit and Clarence Stain's Radburn's model of urban block (1929).

5 CONCLUSIONS

Among the several models proposed in the recent past to structure the growth of the city, 3 are for sure the most influential in the 20th century, namely the schemes prosed by Ebenezer Howard (dispersion), Le Corbusier (concentration) and Frank Lloyd Wright (extension)(Choay, 1965; Fishmann, 1977). Of these it seems is Le Corbusier' image for a city of towers in the park organized around a clear separation of mobility routes, with a preference for car transportation, that most than others has completely (re)shaped the current city development in East Asia, focussed on the needs of economic growth to foster a rapid transformation.

The models of urbanization and modernization of China and South Korea since the late 20th century show these countries followed a very clear pattern which was first evident in the case of Japan. Similar is for instance the prominence granted by the central governments which were driven by a strong ideological component based on the notion of importing models and schemes from more developed countries essentially from the West in order to promote and accellerate the modernization of the society and the culture, with inevitable consequences on the transformation of the pre-existent urban environment. The traditional elements of the natural landscape, and of the local urban milieu and the surviving relics of the old cities are, especially at the beginning of the urbanization, mostly removed or drastically replaced by the new urban and suburban developments.

Some peculiar cultural differences are evident in the form of urban life-style and the view of the city and urban landscape among Chinese, Koreans and Japanese. The process of fast urbanization in China during the last decades has disclosed several problems and contradictions which are typical of a country and a society that strives to modernize its economy, urban environment and cultural features rapidly: mobility and car-oriented urban development versus the preservation of the fragile pattern of the traditional city; industrial development versus the need to protect the eco-systems and natural environments; the social harmony endangered by the extremisms put forward by a rampant capitalistic model of economic growth, are among the most impellent issues to the fixed. Korea and Japan.

High densities, congestion, verticality, emphasis on circulation mainly intended as car mobility, and distance from the aesthetic and urban local traditions for sake of the myth of the Western culture which brought a rapid pseudo economic progress, are the key notes of current urbanization in East Asia, and still these appear to drive the view of the city in the near future, though new issues such as ageing society, crisis of wild globalization, ecological problems related to the unstoppable deterioration of natural environment and the inevitable transformation of the current economic model for the years to come may progressively dictate a new urban agenda and new concrete and truly innovative solutions in East Asia and all over the world.

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ID 1476 | RESEARCH ON THE RELATIONSHIP BETWEEN SPACE OF PLACES AND SPACE OF FLOWS - EMPIRICAL ANALYSIS BASED ON GLOBAL SCALE AND LOCAL SCALE

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1 INTRODUCTION

In the process of reform and opening to the outside world and economic globalization, China has taken the initiative to integrate into the world economic system and has become the world's second largest economy. At the same time, the establishment of information and communication networks has greatly accelerated the process of global integration, and promoted the flow of information, knowledge and capital flows among cities all over the world. " Space of flow is constantly manifesting and becoming an important force to promote the world economic structure and the evolution of the urban system. From the original growth pole model to the central hierarchy, and now to the urban network, the development and evolution of the urban system has entered a new era. Since 2000, the research of urban network abroad can be divided into two major directions: enterprise organization and infrastructure. Among them, the former research is more mainstream, this is because the essence of urban network is the economic relationship between cities, and enterprise actors is the starting point of economic relations. In recent years, Chinese scholars have also conducted a series of urban network research based on the space of flow (Tang Zilai, Zhao Miao Xi, 2010; Zhu, Wang de chazon, 2014), and achieved certain results.

In fact, space of flow is not a unique product of globalization. From the origin and development of the city, city area as the economic subject, relying on the foundation to meet the demand for goods and services sectors outside the city to achieve its circulation and accumulation. The economic links between the city is inherent in the space of flow has always been there, just under the influence of globalization, enterprises can realize the function of deeper integration in a wider geographic range (Dicken, 2011), the economic ties are greatly strengthened and obvious, showing a trend of network. The space of flow is the economic network formed by information and capital flow, while the city as the space of place is the pivot or node of the economic network (Tang Zilai, Li Can, et al., 2016), and the two are interdependent. However, the current domestic and foreign academic research are mostly spatial logic expression quantitative description and visualization of city network based on space of flow and rarely consider the space of space and their relationship (Wall, 2009), it is difficult to explain the city regional spatial organization formation and evolution mechanism.

Can space of flow really replace space of place and become the dominant form of global and regional urban system? What is the relationship between space of flow and space of place? Based on the above doubts, this paper tries to construct the theoretical framework and analyze it from the perspective of enterprise organization, along the dual logical main line of space of flow and space of place, and deeply discusses the relationship between them to provide theoretical and empirical basis.

2 SUMMARY OF RELEVANT THEORIES AND STUDIES

2.1 SPACE OF PLACE

The space of place can be traced back to the cultural and geographical traditions of the regional differences opened by Kande, Humboldt and Hertner, where the "region" is a relatively bound, closed, and entity. Exploratory field surveys can explain in depth the differences between regions or regions. Based on the space of place of urban-regional studies, a number of important research results have been formed. For example, since 1980s, foreign scholars have come up with concepts such as world cities (Friedmann, 1986), global cities (Sassen, 1991), and global cities (Scott, 2001). These studies focus on cities or regions with geographical features, emphasizing the evolution of the attributes of cities or regions within the context of Globalization. In parallel with this, Chinese scholars since 80s began research on city or city group system, the majority of city size, population and economic attribute index based on the analysis of spatial organization of the city or city group system using qualitative and quantitative methods (Yao Shi plan, 1992; Wang Guanxian, Wei Qing, et al, 2003; Zhao Yinghui, 2010).

In the age of globalization, the space of place still has irreplaceable value. Space of place is rooted in the specific region, the one and only, the day-to-day activities of human beings(Michael, 2005), used to describe the difference in economic activities and the process of global, geographical space (Derek, Ron, etc., 2009). This geographical space is of great significance for the social organization process, especially for the production organization of enterprises (Dicken, Thrift, 1992). On one hand, the regional factor endowments of different space of place is different, is able to provide the geographical proximity, economic agglomeration, knowledge spillover, institutional thickness and other specific conditions, effects of location selection and the growth path of the enterprise. On the other hand, in the process of production organization, enterprises are reshaping the attributes of space of place. Therefore, the study from the perspective of enterprise organization under the city should not only focus on economic ties, but also must pay attention to the geographical space and attributes (Knoben, 2008), the traditional logic of the inheritance and development of the space of place.

2.2 SPACE OF FLOW

Space of flow first appeared in the Castell's "information city" (1989), and later in "the rise of network society "(1996) described in detail the "space of flow" concept, that the city no longer rely on its own things, but through the" through "the East West to get and the accumulation of wealth (Castells, 1996). In the space of flow logic, with regional or local features of the space of flow of the importance in the global city network tends to weaken, the city is become out of the zone, to the place of the node (Hill, Kim, 2000; Smith, 2014).

Space of flow concept, to a certain extent, the subversion of the traditional based on local spatial logic, greatly promoted the world city system and global city network research. Some scholars even propose "the death of distance "(Cairncross, 1997), "the end of geography"(O'Brien, 1992). These statements are not without foundation. For the production organization of the enterprise, the technological progress makes the capital under the control of the enterprise get rid of "the shackles of distance" because of "high mobility", and is no longer bound to a "place". For people's activities, people no longer need to be crowded in the narrow geographical space, and all social activities can be extended geographically. This means that local economic and social activities have lost their grounding in a particular place, and that the traditional space of place has been replaced by the new space of flow (Castells, 1989). Accordingly, in the process of economic globalization, the research on urban system has shifted to the quantitative calculation and visualization of the information flow, capital flow and network structure represented by urban nodes. With GaWC as the typical representative, of city network to the internal network based has been widely used, although criticized by some scholars, but it is still the most convincing quantitative research framework. As for enterprises and enterprises outside the network research, as data acquisition is difficult, mainly for a particular area of case studies, yet universal promotion.

2.3 COUPLING OF FIELD SPACE AND FLOW SPACE

Space of flow provides a new perspective and tool city network logic support on the city system under the background of globalization, however, the "hypothesis localization" is gradually challenged and questioned (Smith, Doel, 2011). Some scholars believe that, in addition to a small number of the most top tier Global City, more of the city in order to cope with the increasingly fierce global competition, better embedding efficiency of economic network, not only from the development of the region, but to strengthen the joint development and the region, forming a new space organization unit of economic globalization -- "global city area" (Scott, 2001). Thus, a "global city region" as a whole with local characteristics and advantages of the space of place into the global city network, there are complex networks on the other hand, the internal space of flow, as Castell's view, space of flow is folded into the space of place(Castells, 1999).

Bathelt put forward the " local buzz and global pipeline" model in specific geographical space in the relationship between enterprise agglomeration behavior and knowledge network formation, with convenient and frequent flow of information, knowledge communication, cooperation and competition between many closely related enterprises, the formation of rooted in the "local buzz". At the same time, the process of globalization to promote enterprises to expand the market, seek knowledge and increase profits, prompting global non adjacent geographical space to start communication through transnational and trans regional strategy, the formation of the global pipeline across geographical restrictions "(Bathelt, Malmberg, etc., 2004; Barthelt, 2007). In essence, "local buzz" and "global pipeline" occur in space of place and space of flow respectively.

Therefore, the localization logic of space of place is not opposite to the logic of space of place. As Halbert and Rutherford pointed out, space of place and space of flow are not separable in the analysis. Space of flow can shape the space of space, and the space of place can also form space of flow (Halbert, Rutherford, 2010).

3 THEORETICAL FRAMEWORK

According to the theory and research above, under the background of globalization, the single dimension of space of flow under the logic of city network research is not thorough interpretation of city regional spatial organization formation and evolution, but also should be combined with the "flow" generation, operation environment, specific space of place to conduct a comprehensive analysis in order to get understanding, close to the real world. In view of this, the continuation of space of space and space of flow coupling logic, attempts to construct a "spatial-behavior-process" framework. According to the logical level of "space-behavior-process"(Table 1), the following assumptions are proposed: First, dialectical unification: space of place and space of flow are relative concepts, nested and concomitant with each other; Spatial agglomeration: multi location enterprise actor in the region, to promote the space of flow and space of place cooperative space reconstruction aggregation and dispersion; Action process: space of place can

influence the generation of space of flow, and space of flow can in turn reshape the attributes of space of place and be affected by specific social processes.

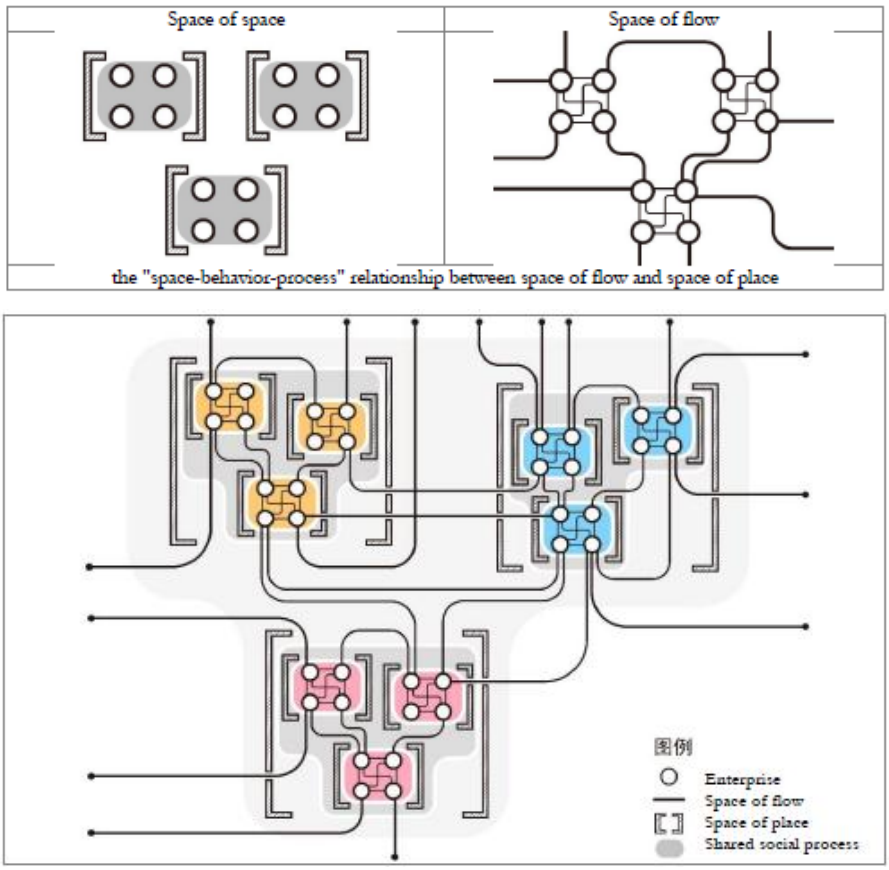

Table 1 - Framework to explain relationship between space of flows and space of places

In the following, we will discuss the relationship between space of flow and space of place and verify the hypothesis based on the perspective of enterprise organization and the combination of global scale and local scale. According to the above, the enterprise organization contains three kinds of relations, namely the enterprise, the enterprise and the enterprise external (Yeung, 1994), but some scholars have pointed out that the internal relation between flow than with other enterprises (Taylor, Hoyler, etc, 2001), considering the data available for this study, this paper mainly refers to the internal connection.

4 EMPIRICAL ANALYSIS AT THE GLOBAL SCALE

4.1 DATA AND METHODS

The related research pointed out that the analysis can start from the four dimensions of global scale city system: capital and capital control center service center, headquarters agglomeration and network related degree, outward radiation degree and agglomeration, within the central city and the gateway city (Tang Zilai, Li Can, et al, 2015). Taking into account the modern manufacturing industry developing city has an important position and the production service industry is relatively mature, the industry wide capital control from the perspective of analysis may have more explanatory power. Therefore, the paper selects Forbes's 2000 industry wide company's headquarters concentration degree (2014) and the Fortune 500, whole industry company's network correlation degree (2010) as the main data of the empirical analysis: the concentration degree of headquarters is used to describe the characteristics of space of place, using the algorithms of Taylor et al (Taylor, NI, et al., 2011); The network association degree is used to characterize the feature of space of flow, using the algorithms of Alderson et al (Alderson, Beckfield, et al., 2010). Among them, the degree of network correlation is composed of the degree of extraversion and the degree of inward clustering. The greater the number of corporate headquarters in the cities, and the more

branches that are sent by the headquarters, the higher the extraversion of the city; The greater the number of branches of a multinational corporation, the greater the city's introversion. The calculation is as follows:

$$O_i = \sum_{j=1}^{k} Tij \quad (j = 1,2,3,\ldots,n;\ j \neq i) \tag{1}$$

$$I_i = \sum_{j=1}^{k} Tji \quad (j = 1,2,3,\ldots,n;\ j \neq i) \tag{2}$$

$$N_{ij} = T_{ij} + T_{ji} \tag{3}$$

$$N_i = I_i + O_i \tag{4}$$

Tij is the number of corporate headquarters in the city of i, branches in the city of j; Tji is the number of corporate headquarters in the city of j, branches in the city of i; Oi is calculated, said corporate headquarters in the city of i, branch structure in the region of all other city the number of enterprises; Ii into, said the branches in the city of i, headquartered in the region all the other city the number of enterprises; Nij between the city i and city j network connection; Ni city i network correlation degree, and the correlation degree of city network is i and all other areas of the city.

To the whole industry company headquarters agglomeration characterization space of place features, with the network association city to characterize the degree of space of flow characteristic, correlation and difference analysis of the two on a global scale.

4.2 RESULT

On construction of headquarters agglomeration degree and network correlation, outward radiation degree and two yuan a cluster within the linearity of the regression equation, the coefficient of determination R2 were 0.571 and 0.492, the regression model of F test P value was 0, with statistical significance of the model. The residuals of the unary linear regression are further aggregated to represent the difference between the predicted and actual values. On the whole, the headquarters of the city agglomeration has significant positive correlation between the degree of association with the network, means that the company headquarters industry highly concentrated space of place is often corresponds with the other city is widely related to space of flow; a network correlation degree and out degree also has a certain positive correlation. But this positive correlation is weaker than the former. Some cities all over the world have high penetration and high output, and some cities in the world do not fully match their penetration and output. Specifically, the Shanghai headquarters of the standardized residuals associated with the degree of agglomeration of large network means, far greater than the concentration degree of Shanghai headquarters network related to this conclusion, and some scholars (Tang Zilai, Li Can, and other similar, 2015). The reason, in the company's headquarters in Shanghai agglomeration and no advantage, less local headquarters of multinational companies, the lack of control force field space ", but by promoting the reform of market economy and by 2001 Chinese the chance of joining WTO, to attract the modern manufacturing industry and producer service industry foreign direct investment, has been the development of agglomeration a large number of branch offices of multinational companies, greatly enhance the" flow space "penetration, so network correlation is also increasing.

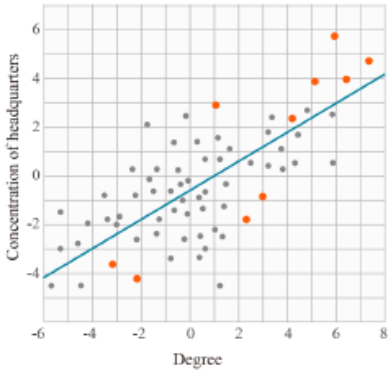

Figure 1 - Scatter plot of headquarters index and degree

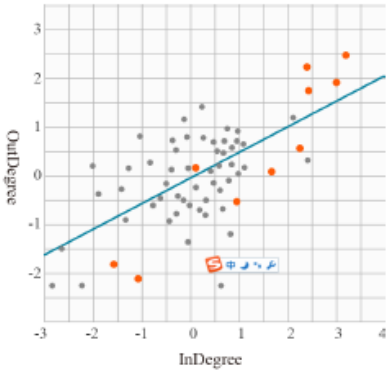

Figure 2 - Scatter plot of outdegree and indegree

In contrast, the concentration of the headquarters in Beijing is much higher than that in Shanghai, but the network relevance is slightly lower than that in Shanghai, which is similar to the conclusions of some scholars (Tang Zilai, Li Can, et al., 2015). The possible reason is that, in the context of a particular national system, Beijing gathered a large number of state-owned enterprises (Tang Zilai, Li Can, etc, 2016), has a broad and powerful control force in the country, but multinational state-owned enterprises index is not high, big but not strong, leading to "flow space" is not a high; at the same time, the development of foreign manufacturing industry in Beijing Tianjin Hebei region is relatively backward in the Yangtze River Delta, Beijing branch to attract multinational companies slightly lower than Shanghai, leading to more general network penetration, so the overall association degree of no obvious advantage.

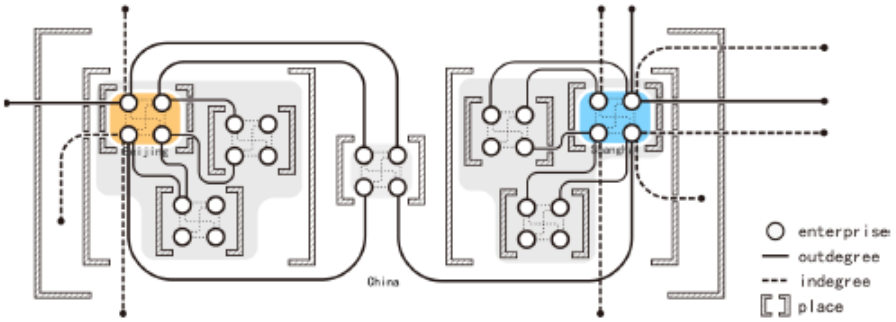

Figure 2 - Relationship between space of places and space of spaces in global scale

To some extent, the empirical analysis in the global scale reflects the interaction of space of place and space of flow and the influence of social process: (1) space of flow can reshape space of place. Although the Shanghai headquarters less local multinationals, space of place property is not strong, but the policy opportunities and make full use of the rules of market economy, by actively attracting foreign direct investment to construct a high penetration and low degree of space of flow, also created a branch of multinational companies highly concentrated space of place. Presenting a "gateway city"; the space of place can affect the space of flow countries affected by institutional factors, state-owned enterprises in Beijing headquarters are highly centralized, with space of place advantage, but this advantage has not been fully played, the local state-owned enterprises foreign force. The force is also more general for foreign multinational companies, resulting in the space of flow space is mainly confined in the country, and the degrees are in general, both center city and the door Characteristics of households and cities.

5 EMPIRICAL ANALYSIS AT THE LOCAL SCALE

5.1 DATA AND METHODS

The research scope of local scale under the selection of core areas in the Yangtze River Delta, including Shanghai, Hangzhou, Nanjing, Ningbo, Suzhou, Taizhou, Wuxi, Wenzhou, Shaoxing, Jiaxing, Nantong, Changzhou, Yangzhou, Zhenjiang, Huzhou, Taizhou, Zhoushan and other 17 cities. The main source of data for the second national census of basic units (as of December 2001), the second national economic census (as of December 2008), the third national economic census (as of December 2013) of the enterprise information. Through the establishment of enterprise information database, SQL statement is used to screen out the matching relationship between the head office and the branch. At the same time, because of the large amount of data, referring to the existing scholars based on the industry category division value added (Tang Zilai, Zhao Miao Xi, 2010) and simplified enterprise into the low-end manufacturing industry, high-end manufacturing and producer services in three categories, which enhance the value of successive segments.

5.2 RESULT

5.2.1 CHANGING TREND OF SPACE OF PLACE

From 2001 to 2013, the spatial density of enterprises in three value regions of 17 prefecture level cities in the Yangtze River Delta region increased significantly, but the growth rate was different. Calculate the density growth rate to characterize the magnitude of the change. For the low-end manufacturing enterprises and high-end manufacturing enterprises, the growth rate of the larger is mainly Nantong, Yangzhou, Taizhou, Suzhou, Taizhou, Hangzhou and other cities, and the outskirts of the city and suburban growth is greater than the center of the city, with significant diffusion trend. For the life of service enterprises, the growth rate of the larger for Shanghai, Suzhou, Nanjing, Ningbo, Hangzhou, Nantong and other cities, and the city center area increased more than the rural and suburban, has significant agglomeration trend.

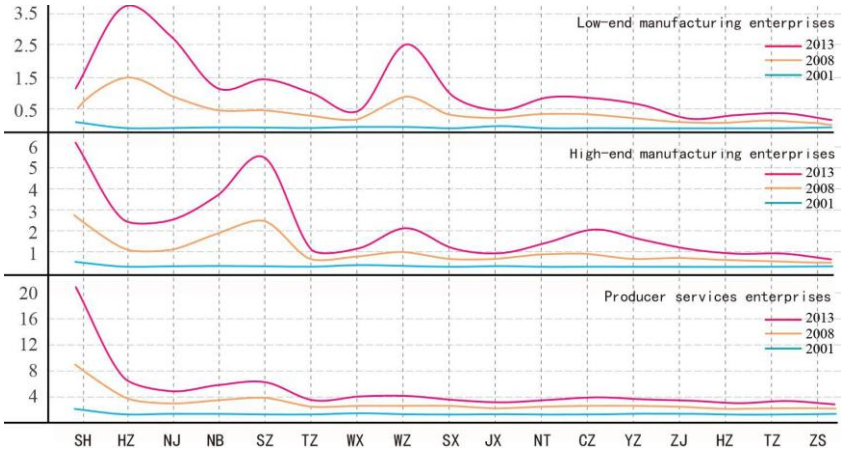

Figure 3 - 2001-2013 spatial density of enterprise in different value chain sections

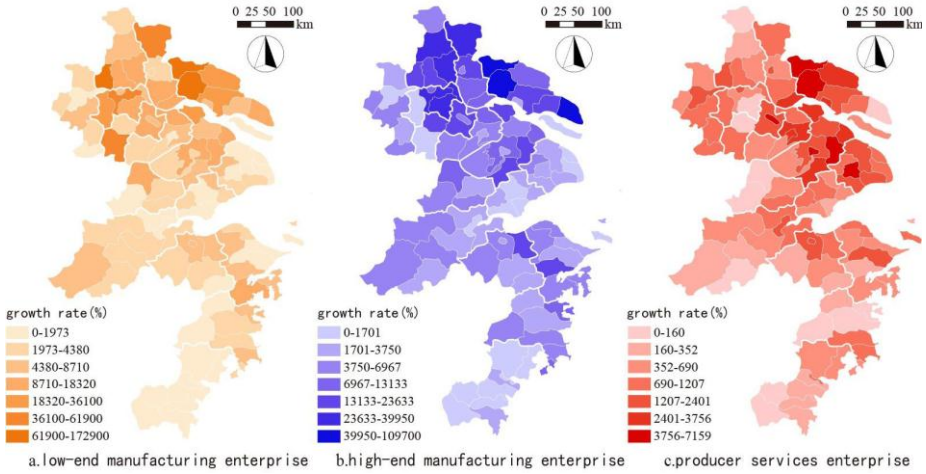

Figure 4 - 2001-2013 spatial density of enterprise in different value chain sections

5.2.2 CHANGING TREND OF SPACE OF FLOW

Using the former formula (1), (2) and (3) to calculate the penetration, the degree of dissolution and the degree of point of the 17 cities, the following results are obtained. From 2001 to 2013, the penetration and output of each city have been remarkably improved, and the economic ties among the cities have become increasingly close. The space of flow in the Yangtze River Delta has been constantly manifested in the process of globalization.

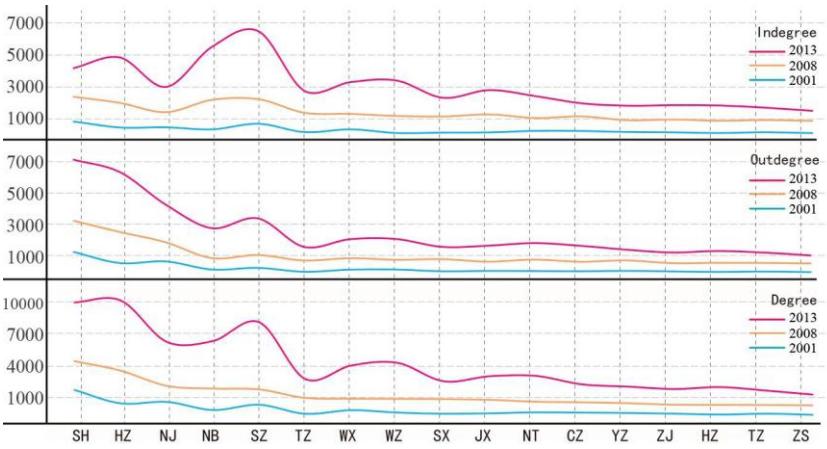

Figure 5 - Changes in indegree, outdegree and degree of cities from 2001 to 2013

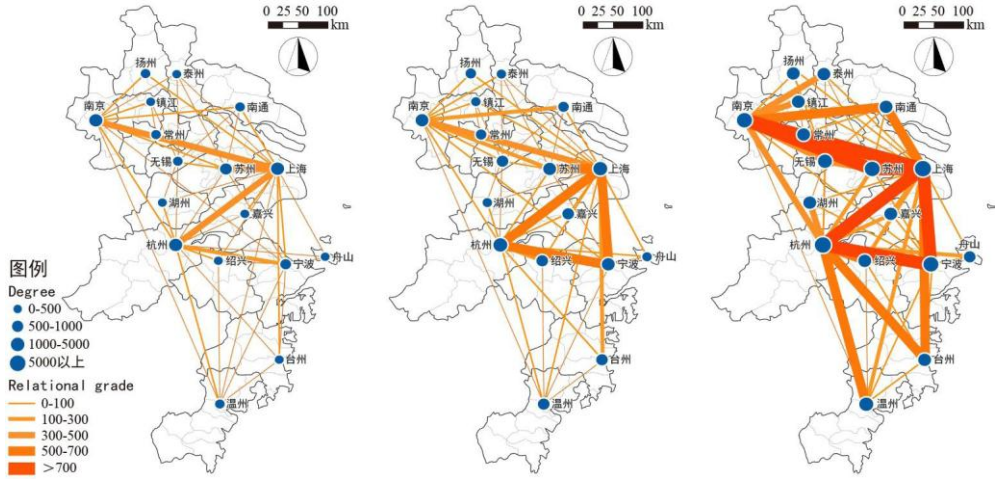

Figure 6 - Corporate networks of YRD from 2001 to 2013

From 2001 to 2013, the spatial pattern of the network in the Yangtze River Delta became obvious, based on the enterprise related urban network. The city between the space of flow experienced from no to have, from weak to strong development process. This is similar to the findings of other scholars (Cheng Li, Zhang Yishuai, et al, 2016). However, the barrier of the administrative division boundary to the space of flow has not been completely eliminated. That is, for the cities between Jiangsu and Zhejiang, there is no obvious change except for the network relevancy between Nanjing and Hangzhou. At the same time, the evolution of space of flow also shows the characteristics of agglomeration, mainly embodied in the "Z" corridor of Nanjing - Shanghai - Hangzhou - Ningbo, especially along the Shanghai Nanjing plain. Therefore, strengthening the economic ties within the enterprise is spatially selective, non equilibrium selection of space of place to the development of agglomeration space of flow, produce large flow of "corridor", city network skeleton structure increased branch differentiation. This change is synergistic with the strengthening of the "core periphery" pattern of space of place.

5.2.3 RELATIONSHIP BETWEEN SPACE OF PLACE AND SPACE OF FLOW

Linear regression analysis was conducted on the spatial density, penetration and yield of enterprises in different value periods under two time sections in 2001 and 2013. The regression model, F test, P value is 0, the model has statistical significance.

（1）Relationship between spatial density and penetration in low-end manufacturing enterprises

There is a positive correlation between the spatial density and penetration of low-end manufacturing enterprises, but the correlation between the spatial density and the degree of output is not significant. The space of place with more low-end manufacturing enterprises often corresponds to a higher degree of

space of flow. To a certain extent, it reflects the law of enterprise spatial organization based on the value section, and also confirms the spatial diffusion of the enterprises in the low price region of the Yangtze River delta. From the micro perspective of enterprise organization, industry value chain link not only has low labor intensive, capital intensive features, also usually enter the area of non core city or suburban areas to form branches. Although the level of economic development in these areas is not high, but local governments actively create supporting facilities, preferential policies, skilled workers and other rich conditions to attract more developed regions, the headquarters of the company's branches settled. Therefore, the space of place and the space of flow of enterprise agglomeration in low value areas are gradually formed. Compared with 2001 and 2013, the positive relationship between the two is more significant as time goes on. Visible based on spatial economic structure the value chain is the formation and significant, further confirms the conclusion of existing research (Tang Lai, Zhao Miao Xi, 2010).

（2）Relationship between spatial density and penetration in high-end manufacturing enterprises

Different from the low-end manufacturing industry, high-end manufacturing industry penetration, density and spatial correlation degree reached a significant level, and the degree of positive correlation. The space of place with more high-end manufacturing enterprises often corresponds to the higher and higher degree of the space of flow. This reflects, to some extent, the higher value segment attributes of the high-end manufacturing sector relative to the low-end manufacturing sector. The high-end manufacturing enterprises demand higher level of technology, human resources, system environment and so on. Both the headquarter and the branch are more likely to gather in the space of place of the value zone, share the agglomeration economy and overflow the knowledge. When the gathering of high-end manufacturing company in the form of regional headquarters in the core city or city center, will be formed and strengthened high value section of the space of place, and through the branches sent professional to the surrounding area, resulting in high degree of space of space. And when it is gathered in the form of a branch in a specific space of place, it produces a higher degree of space of flow. Therefore, the spatial density of high-end manufacturing industry is positively related to penetration and output, and the trend of agglomeration of headquarters companies in space of place is stronger, leading to a positive correlation with the degree of output.

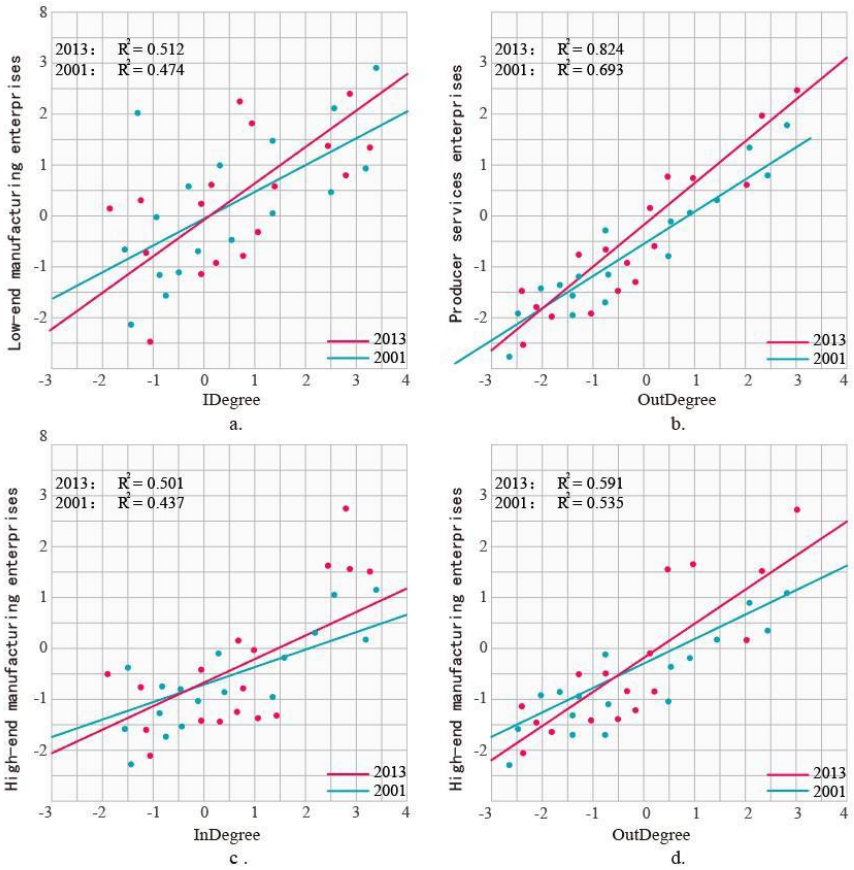

Figure 7 - Scatter plot of corporate spatial density and outdegree, indegree in 2001 and 2013

（3）Relationship between spatial density and penetration in producer service enterprises

Compared with the high-end manufacturing industry, the spatial density of producer services has a stronger positive correlation with penetration, while the correlation with the degree of output is not significant. The space of place with more production service enterprises corresponds to the higher degree of space of flow.

This is in relation to the highest value segment of producer services. Although some scholars believe that the producer service enterprise's location is not completely follow the other company headquarters location (Sassen, 1991), but in order to provide more efficient services, based on geographic proximity "face to face" is very necessary. Therefore, the two are still closely related in the space of place. At the same time, the production service enterprise itself is more inclined to the headquarters of Companies in the form of agglomeration in the region of CBD, continue to form and strengthen the high value section of the space of place, and sent branches to the surrounding areas, derived from the height of the space of flow. Over time, the high value section of the space of place and high degree of spatial interaction evolution, will exacerbate the region space of place core periphery pattern and alienation space of flow of the skeleton branch structure. It further confirms the conclusion that the high-end core agglomeration of the regional core city and the strengthening of the "Z" corridor.

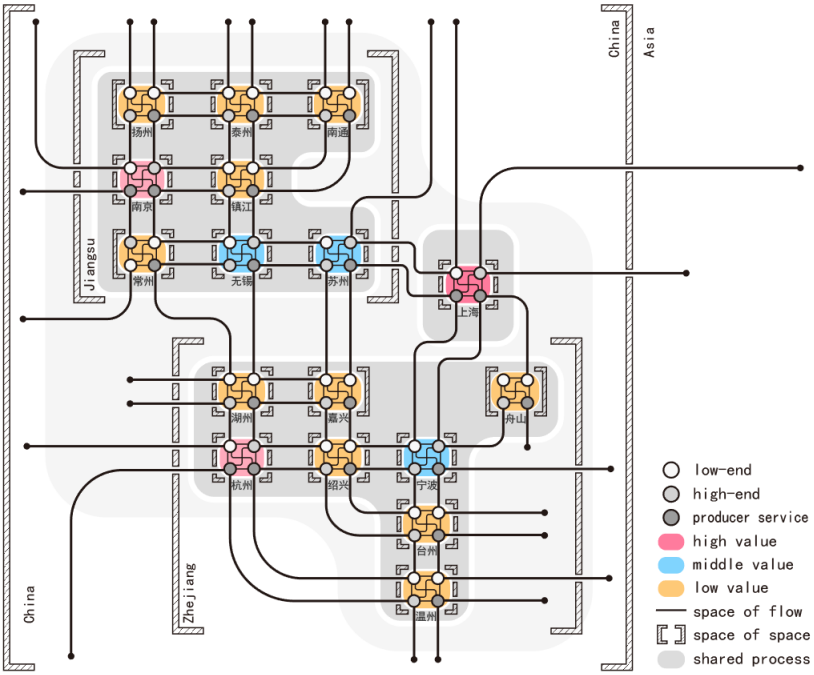

Figure 8 - Scatter plot of corporate spatial density and outdegree, indegree in 2001 and 2013

In the positive local scale to a certain extent reflects the space of place and space of flow the dialectical unification relations and spatial agglomeration behavior: (1) the space of place and space of flow is a relative concept, the two forms in different spatial scales will change. On the one hand, the Yangtze River Delta as a whole space of place in the global city region competition, on the other hand, the Yangtze River Delta from the second level of the space of place and space of flow, formed a relatively complete and mature city network, and with a reconstruction of the change of internal time. (2) the multiple choice of enterprise actors in the region promotes the coordinated evolution of space of place and space of flow. Gather different value chain enterprises in the area of some of the space of place, and selectively and some other space of place to establish economic relations within the enterprise, the unbalanced accumulation and diffusion result, space of place of the "core periphery" pattern and space of flow skeleton branches structure was strengthened, the two is the process of collaborative behavior of enterprises.

6 CONCLUSION

Space of place and space of flow are dialectically unified and concomitant. The two forms change in different spatial scales. As an empirical local scale, the Yangtze River Delta as a frontier area location and economic development, both as a whole space of place to participate in the global city region competition, and its own space by secondary and space of flow, has a relatively complete and mature city network, and with the reconstruction of the change of internal time. From this point of view, both now and in the future, space of flow will not replace space of place. The two will only change with the spatial scale of information and traffic technology innovation.

The space of place and space of flow in the collaborative process of agglomeration and diffusion, the result is the space of place of the "core periphery" pattern and space of flow and skeleton branches in strengthening structure. The common internal cause is the multi location choice of enterprise actors in different value areas. The space of place in the high-value sector is more likely to attract headquarters companies to gather, and through the branches sent to the surrounding areas, the space of flow of higher degree is derived. The space of place in low value areas is more likely to attract branches to gather, and to produce highly penetrating spaces of flow. Therefore, the space of place, which is mainly made up of low-end manufacturing industry, often has a high degree of space of flow, and the space of place, which is mainly composed of production services, often has a high degree of space of flow. Of course, the empirical analysis at the global scale also shows that for the top and highest value segments of global cities, the flow space will be both highly penetrating and extremely high.

The interaction between space of place and space of flow is influenced by specific social process. The empirical, as a global scale, on the one hand, the flow space can reshape field space, Shanghai by grasping the reform and opening up and joining the WTO the opportunity to vigorously attract foreign investment, to construct a high penetration space of flow, to obtain higher concentration degree, and shaping the multinational affiliates of highly concentrated space of place; on the other hand, the space of place can affect the space of flow, Beijing affected by institutional factors, although the space of place headquarters of state-owned enterprises are highly centralized, but the external force is insufficient, space of flow of a sort, a low degree of outward radiation. Obviously, the interaction between the two is the influence of specific social processes in different places, which leads to great difference in the function, path and form of space of place and space of flow. In addition, the empirical analysis of local scale reflects the influence of social process to a certain extent. For example, the cities between Jiangsu and Zhejiang, in addition to the network correlation between Hangzhou and Nanjing have increased, the other has not changed significantly. Even in the deepening of market economy reform today, the boundaries defined by administrative divisions still hinder the process of space of place and space of flow to some extent.

There are still some shortcomings in this paper. Due to the huge amount of data, the industry based on the value range is roughly classified, and the low-end manufacturing and high-end manufacturing industry may be subjective. The space of place property is a complex concept, this paper uses spatial density characterization section of the enterprise value of different field space property, simplified, ignoring the enterprise scale, and the value of other attributes. The linear regression used in this paper simply reveals the correlation, and the interpretation of residuals and outliers needs more case based discussions. These deficiencies need to be improved in subsequent studies.

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ID 1607 | INTERNET+ URBANIZATION IN LESS-DEVELOPED AREAS - CASE STUDY ON TAOBAO TOWNS AND VILLAGES IN CHINA

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1 INTRODUCTION

1.1 URBANIZATION & CHINESE STRATEGY

Nowadays more than 50% of the world population has already been in urban areas and the rate of global urbanization are expected to be more than 70% in the next four decades, with about 90% of the urban expansion occurring in the developing countries. As a result, New Urban Agenda-Habitat III and other influential urban conferences have led to pay more attention to a better urban life. However, the development of rural areas should be emphasized as well. On one hand, although the proportion of rural areas is declining, they have their significance of existence, such as the supplies of food or other products, rural culture, etc. On the other hand, although there seems be a wide gap between urban and rural areas, they still have their characteristic advantages which provides more possibilities for their dignified development.

The Chinese strategy to deal with the relationship between urban and rural development is called Integrated Urban-Rural Development. Its specific performance covers all kinds of fields, such as accessibility of traffic system, same standards of infrastructure and public service facilities in urban and rural areas, etc., which could reduce the distance between urban and rural areas, what's more, realize coordinated development and mutual progress. Smart rural development will be a tendency in China even around the world and will be a new symbol to measure the levels of urban development. So, Integrated Urban-Rural Development is so meaningful to provide a strong basis for the smart rural development. Zhejiang Province and Jiangsu Province are two good examples to practice Integrated Urban-Rural Development, whose towns and villages are much wealthier relatively.

1.2 CHINA'S RURAL DEVELOPMENT IN THE PAST

In 1990s, rural enterprises raised abruptly and played an important role in promoting the development of towns and villages. It's a bottom-up mechanisms that the grass-root government and farmers are spontaneous to push the process of urbanization. However, with the development of globalization, the process of urbanization took megacities as key points to have a breakthrough in the global competition. It was effective and efficient to promote the urbanization rate to be about 50% in China. The unbalanced development strategies between urban and rural areas, on one hand, waver the dominant role of rural enterprises and deepen the gap between urban and rural areas, while on the other hand, a large amount of rural population migrated to the cities which contributed to the empty and decline in many towns and villages.

Without any doubts, information revolution is a miraculous turning point in global development, which collapses the space-time distance and reorganize spatial network. Rural areas as well as other less-developed areas should seize this chance to build a new relationship with their close megacities or even any transnational strategic partners around the world.

1.3 TAOBAO TOWNS AND VILLAGES IN CHINA

Taobao is Chinese Amazon, an electronic commerce and cloud computing platform. To keep up with development of the information age, many towns and villages in China have developed e-commerce, one of which is Taobao. Suddenly, "Taobao Villages" and the further "Taobao Towns" has been more and more popular in the past decade. According to the Chinese Taobao Village Study (Ali Research Institute, 2014; 2015; 2016), the development of Taobao Villages started from 2009 and had a slow growth until

2013(Figure 1). However, Taobao Towns and Villages have been booming rapidly from 2014 until now. As of the end of 2016, there have been 135 Taobao Towns and 1311 Taobao Villages, covering 18 provinces or province-level municipalities. As excellent practicers in Integrated Urban-Rural Development, Zhejiang Province and Jiangsu Province have 506 and 201 Taobao Villages respectively, ranking 1st and 3rd in those provinces or province-level municipalities.

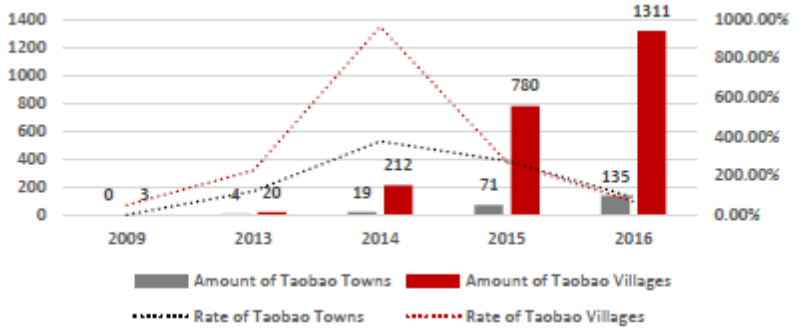

Figure 1 – Amount and rate of Taobao Towns and Villages(2009~2016).
Data from Chinese Taobao Village Study, 2014, 2015, 2016.

The outstanding economic and social value of Taobao Towns and Villages is the main reason why the amount has been rising so rapidly and spontaneously. It provides an open platform for the grassroots to obtain employment or even start their own business. While adding 1 online store, it will create 2.8 employment opportunities. As of the end of 2016, there have been over 300,000 active online stores and it could be estimated about 840,000 employment opportunities (Ali Research Institute, 2016). As a result, it has been a fast and feasible path for rural areas to cast off poverty and achieve the goal of prosperity. As of the end of 2016, there has been 18 Taobao Villages in state-level poverty-stricken counties, rising 80% over 2015.

Because of the valuable and sustainable development pattern of Taobao Towns and Villages, the government also has a series of policies to encourage and guide their or other e-commercial ones' development, such as "About positive guidance and promotion of Internet+ Actions", "Opinions on speeding up the development of rural e-commerce", "Action plan for promoting the development of agricultural e-commerce" ,etc.

2 ANALYSIS OF TAOBAO TOWNS AND VILLAGES

2.1 INHERENT ADVANTAGES AND DISADVANTAGES OF RURAL AREAS

2.1.1 CHARACTERISTIC NATIVE PRODUCTS

Different from the common products in urban e-commerce, there are many other local ones with characteristic culture and native natural resources. For examples, some villages abounds with Xuan Paper (Figure 2(a)) which is specially used for traditional painting and calligraphy (Figure 2(b)). As a characteristic Chinese product and national intangible cultural heritage, it has a long history about 1,500 years and a precious technological process, which will become a cultural name cards even brands of those villages. Some other villages has a craze of traditional ink paintings. They may buy Xuan Paper and other painting tools or produce some by their own, then train famers to be skilled painters, which also could improve the historical and cultural value of those villages.

(a) Xuan Paper (b) traditional ink paintings
Figure 2 – Characteristic native products in Taobao Towns and Villages. From Baidu, 2017.

However, the way of sale in the past is not advantageous for those characteristic native products to some extent. The process of traditional agricultural sale could be concluded as a chain - “production – transportation and distribution – wholesale market – distribution – retail”(Figure 3). It is so long that it leads to many problems. For example, the villages could not learn about the feedback information from markets freely, causing the mismatching between supplyments and demands; the mediation agents would like to earn lots of share which cut down the profit space of farmers; the expansion of market is limited by distance, etc. They are the reasons why so many farmers chose to give up this way and prefer a job in the cities.

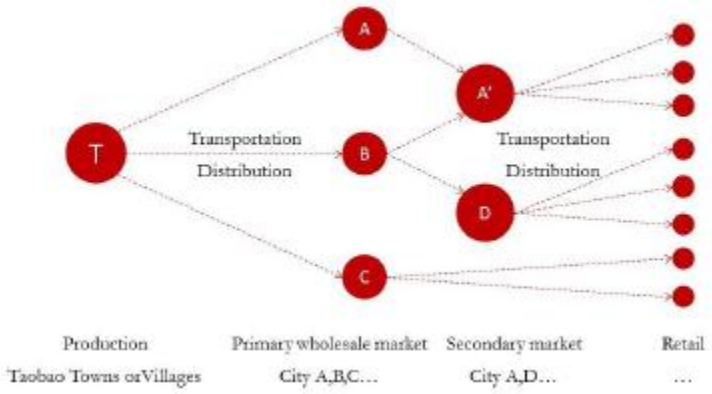

Figure 3 – Analysis of traditional agricultural sale chain. From author.

2.1.2 LOW COST

The cost of products is much lower than those produced in urban areas. The products obtain cheap local material and save transportation cost. They are made in factories or by handicraftsmen whose rents or salaries are low. It not only could create large profit space but also encourage farmers to have a try without any worry about failure.

The cost of rural life is another advantage. It’s one of reasons why many migrant workers earn money in urban areas but go back home and consume in rural areas. It’s a typical choice of farmers in China, because of conditions in both urban and rural areas. On one hand, cities especially megacities provides much more employment opportunities with higher salaries and more beautiful environment than towns and villages, which absorbs a large amount of migrant workers. However, owing to high price of housing and consumption but low deposit, migrant workers nearly have no chance to have a good life in cities. On the other hand, the cost of rural life is much lower. With the salaries from cities, migrant workers and their families could improve their life standards. In addition, the property of rural house and farmland is also an important reason why they have to go back no matter where they work.

2.2 NEW ADVANTAGES OF INTERNET+ RURAL AREAS

2.2.1 INTERNET+ CHARACTERISTIC NATIVE PRODUCTS

The Internet opens up a new outlet for those chatacteristic native products and changes the traditional way of agricultural sale. The e-commerce is a good way to solve those problems and improve the advantages of traditional agricultural production and management. Now the farmers just need a computer on the Internet. They could learn about the dynamic situations of market and make an adjustment of prices or supplyments at any time. Their incomes have an obvious increase, because it breaks the real economic chain and creates a new one – "production – retail – distribution"(Figure 4) which not only reduces the share of mediation agents but also enhances the efficency of the whole transaction process. Also, the Internet will open up broader markets and absorb much more customers, no matter the location is far or close. As long as the profits is greater than the cost of production and transportation, the trade could be taken into consideration.

Figure 4 – Analysis of new sale chain of Taobao Towns and Villages. From author.

In fact, the new chain is not as simple as mentioned. There are many divisions in the part of online retail, such as the network propaganda, quality testing, customer service, after-sale service, inventory management, finance, etc., all or parts of which are simultaneously holded by farmers. Although it seems difficult, the farmers have more initiative to run whatever they want. The flattening of sales management creates relaxing and frendly work atmosphere which is better to inspire some valuable ideas about the productions or oganization form.

What's more, it promotes competition and cooperation which inspires more optimization and innovations. With the improvement of life standards and demands, the products would better improve their qualities and integrate with innovation to satisfy all kinds of requirements and follow the trends of market environment. The competition in market is always fierce and it must be a kind of driving force to develop the current products. Meanwhile, it also provides a cooperative platform for many industries and professionals in different fields.

2.2.2 INTERNET+ LOW COST

There is no doubts that the medium-sized and small online enterprises or stores provide an accessible entrepreneurial threshold for the towns and villages. Those enterprises and stores consists of family members so the scale is very small even tiny. The investment could be high or low, so it provides more possibilities for those who have smart minds but no much money. Meanwhile, the Internet could create much larger profit space and broader market. As a result, it has been a driving force to spread and reinforce the development pattern of Taobao Towns and Villages in rural areas.

Low cost of the products and life is the main physical basis especially for those low-income farmers to start an online store or a Taobao Village in the initial stage. Even if it suffers a great failure, it doesn't matter that the loss is not much and the influence on their life is just slight. Every entrepreneur has to challenge once

and once to adjust to the markets. So what's important is to analyze the reasons of failure and develop the next steps.

Also, low cost of time provides the possibility of part-time jobs for farmers. With the great progress of agricultural infrastructure and technology, the efficiency of farming has been improved. The farmers would like to use such much leisure time to get additional income. According to the field survey, as storekeepers, the farmers change their schedule of work and rest. In general, the working hour gets longer and it has a close relationship with the activity of online customers.

2.3 DIGNIFIED PERFORMANCES OF TAOBAO TOWNS AND VILLAGES

2.3.1 LIFESTYLE: CLOSE URBAN-RURAL INTERATION

The communication of information between urban and rural areas has been stronger and stronger, which provides more possibilities to have a deep interaction. "Double 11", "Double 12" and other shopping festivals organized by Taobao Enterprise also become the important days of farmers in a year. Their busy seasons keeps pace with the sales promotion in urban areas. So they have a closer communication with the urban areas and start a new life with the urban pace to some extent. Some farmers said that they loved their new life nowadays and they thought it even better than urban life, because they could take an enough rest in slack season and enjoy rurality in their beautiful farmland.

The accessible traffic system under the policy of Integrated Urban-Rural Development makes the actual connection more convenient. It's the basis of logistics transportation which supports the management of Taobao Towns and Villages. It's also the bridge between urban and rural areas. The farmers could go to enjoy the facilities of entertainments in cities, which will become a new part of rural life.

2.3.2 SPACE: BOTTOM-UP COUNTER URBANIZATION

Urbanization could be concluded into 2 main kinds. One is a top-down mechanisms planned and controlled by government, such as urban expansion, new towns, satellite town, etc. The other is a passive expansion because of excessive population and industrial aggregation, which presents mainly as urban sprawl. With the trends of urbanization, it leads to vast blind construction with a series of problems, such as land wastage, land leverage and so on, which make it meaningless and inefficiency. Taobao Towns and Villages find a new way to achieve the goal of development and prosperity.

In the last 3 years, the amount of Taobao Towns and Villages has been rising rapidly which has a strong agglomeration effect(Figure 5). From a few points to a network, it forms a spatial network of prosperous towns and villages which could not only divide into different groups with various divisions gradually and increase economic benefits, but also attract more towns and villages to join. It's a way to reinforce and develop the rural areas and control the excessive urbanization in China. However, as can be seen, the main agglomeration just appeared in the coastal areas instead of the whole nation land. It shows that the development of Taobao Towns and Villages depends on that of its surrounding cities to some extent.

Figure 5 – Agglomeration effects of Taobao Towns and Villages.
From 2016 Chinese Taobao Village Study, 2016, p. 8-10.

What's more, their internal mechanisms are presented mainly as a few new patterns, such as bottom-up development of their own, linkage of towns and villages, etc., which keeps balance of government-market-farmers Partnership.

2.3.3 INDUSTRIES: SERVICE MODERNIZATION

The traditional industrial development in rural areas is to follow the routine of industrialization of urban areas, then further promote the development of tertiary industry when secondary industry is full-developed relatively. The tertiary industry consists of some low-added value service industries, such as retails, hotels,etc. It could just meet the internal requirements of farmers and some tourists, but it couldn't have a close communication with urban areas, which contributes to its limitation of industrial expansion.

The internet could reconstruct either physical space or industrial structure. It provides a shortcut to leapfrog industrial development stage and develop tertiary industry innovatively. Because of the oganization of Taobao Towns and Villages, it gathers a series of relative high-added value service industries, such as productive service, storage and logistics transportation.

3 REVELATION FOR EUROPE

In summary, "Internet+ less-developed areas" has been a successful and dignified match. Towns and villages have abundant characteristic native products and the low-cost advantage, which are an important foundation for an accessible entrepreneurial threshold and characteristic construction. Their three dignified performances are close urban-rural interaction, bottom-up counter urbanization and service modernization.

In some countries or territories in Europe, there is a wide gap between urban and rural areas, as well as developed, relative less-developed and developing countries. It worth considering and bringing the Internet+ urbanization into those less-developed areas in Europe. The Internet may be a significant catalyst to promote the development there. Comparing with in China, the life standard and economic development in the European rural areas are better in general, which is an advantageous physical basis to develop with the Internet and e-commerce.

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ID 1609 | EXPATS AND THE CITY: THE SPATIALITIES OF THE HIGH-SKILLED MIGRANTS' TRANSNATIONAL LIVING IN THE CITY OF MOSCOW

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1 INTRODUCTION

In the transnational discourse, an assemblage of broad-ranging immigrant groups and their transnational practices are explored throughout multiplicity of issues. Emerging mobilities are generated by a range of factors, including among others employment and education, and involved in notable changes in urban environments. In particular, they find reflections in the new perspectives of transnational living and residential practices. Along with international workforce, new highly mobile lifestyles, cultural habits, and residential practices are being imported. Many scholars now examine the challenges that transnational living lay on the globalizing cities and their built environments, along with processes of segregation and advancement of human capital.

This paper presents the findings of the qualitative study of the high-skilled transnational migrants living in the increasingly globalizing city of Moscow. It focuses on the migrants from the Western world who moved to Moscow to live for the extended time. The paper aims to investigate the spatialities of their everyday living and the relations between the settlement patterns and localizations of social practices with the urban development process of the city.

A case of Moscow has shown an array of the transnational lifestyles localizations, bringing two main findings: the general pattern of scattered settlement, and the diversification of sociocultural practices highly dependent on communication strategies and lifestyle types. The scattered settlement of the high-skilled transnational migrants in Moscow counterparts and adds on the explored trends of clusterization of the transnational elites in some other globalizing cities.

The paper is divided into four main sections. Firstly, following a review of the literature, the context of globalization and migration processes in Moscow outlined in order to provide the reader with the background information about the skilled international immigration in this city. Secondly, the general structure of the expats' living in the Moscow is outlines, focusing later on the residential strategies of the expats that ultimately result in the scattered settlement structure. In the process, key neighborhoods of choice for transnational living are highlighted, and the question of whether these neighborhoods correspond to the localities of inner urban globalization process of the city and to the settlement patterns of other migration flows. Thirdly, the spatialities of the use of services by the expat communities are uncovered, with reference made to the particular sociocultural backgrounds and lifestyles. Finally, the paper suggests a discussion of the relations between the scattered settlements of expats as a part of urban remodeling progress.

It seeks to contribute to a number of fundamental literatures: the overreaching globalization in the world cities (Sassen, 1991), the increasing importance of global circulation of skills, and the crucial significance of transnational urbanism in explaining urban complexity (Smith, 2001).

2 FRAMEWORK

The emergence of the class of high skilled international migrants is one of the outcomes of the processes of globalization and transformation of the labor practices around the world. Since the late 1980s, international skilled mobility has become a topic of academic inquiry, examining it from the perspectives of different disciplines (Scott, 2006) bringing together migration studies, urban studies, economics and social geography.

The issue has grown its importance in the latest decades (e.g. Keil 1998; Smith, 2001; Sklair, 2002; Ploger & Becker, 2015). In the current debate in the research field, there is a duality between homogenization and integration trends can be observed, which finds reflection on many scales from global networks of capital and labor to the adaptation of local and translocal spaces within the city. Specifically, it is claimed by many authors (e.g. Beaverstock, 2002, 2011; Pow, 2011; Tandogan & Incirlioglu, 2004) that transnational migrants tend to integrate more with their international communities without investing significantly in local ties and environments and tend to hold to detached lifestyles. On the other hand, other authors (e.g. Moores & Metykova, 2010; Schiller & Caglar, 2013) argue that due to transnationalism many migrants demonstrate more integrity with international connections, but also with local ones, and they tend to develop attachment and sense of belonging in the framework of hosting localities. Thus, as identified by some authors, it is necessary to study both the dynamics of mobility and those of rootedness (Andreotti et al., 2015, p.6).

2.1 GLOBALIZING MIDDLE-CLASS PROFESSIONALS

While there is no agreed concept or definition of the high skilled, it can be discussed with the focuses on the circulation of capital, migration of skills and 'brain drain' approach, or through the acceptance of the idea of networks, human capital and global mobile workforce (Vertovec, 2002). Within the topic, authors might broadly refer to transnational elites, globalizing professionals, expatriate workers, nomads, global managers, service sector workers, etc., also considering a variety of professions and lifestyles. With these multiple levels of definition, it is important to clarify the borders of the phenomena adopted in the proposed research. One exhaustive definition is suggested by Vertovec (2002). By skilled migration, he means most broadly defined migrants 'in possession of a tertiary degree or extensive specialized work experience – including architects, accountants and financial experts, engineers, technicians, researchers, scientists, chefs, teachers, health professionals, and – increasingly – specialists in information technology'. He also emphasizes that the term 'migration' – particularly with regard to the highly skilled – may not be the most accurate. Instead, it is more suitable to talk about 'movement' or 'mobility', as migration has veins of permanence or long-term stay, while nowadays the movement of many highly skilled professionals tends to be intermittent and short-term (Koser & Salt, 1997). Furthermore, transnationalism of skilled migration advocates the approach to consider 'the attachments migrants maintain to people, traditions and causes outside the boundaries of the nation-state to which they have moved' (e.g. Bash et al.; 1992; Smith & Guarnizo, 1998). Illustrative to that, according to Portes (1997), 'through these networks, an increasing number of people are able to live dual lives. Participants are often bilingual, move easily between different cultures, frequently maintain homes in two countries, and pursue economic, political and cultural interests that require their presence in both'. That class of transnational high-skilled migrants is under consideration.

For the purposes of the current research, the term 'expatriate' is endorsed and applied throughout the paper in reference to the high-skilled transnational immigrants living in Moscow. Having said this, the paper acknowledges the deficiencies of the term limiting the scope towards the privileged migrants exclusively. However, the vast majority of the interviewees have themselves claims to be considered as expatriates rather than migrants.

2.2 SOCIOSPATIAL BEHAVIOR

Whereas there are a large number of studies on residential patterns of international migrants and ethnic minorities, particularly with regard to the spatial segregation in the cities, the localization patters of the highstatus migrants were out of scope of academic focus before the 1990s. This negligence was explained with the fact that their arrival and integration are less 'problematic' then of the low-skilled migrants, which are considered potentially threatening for the social cohesion and national identity (White, 1988).

Initially, it is important to mention that the 'home-host context' has influence on the transnational outcomes, and therefore, the localization strategies. On the one hand, the spatial isolationism of the western expat communities has been proven to be typical in the globalizing cities of the east, like Dubai, Singapore, Shanghai, where the cultural and mental barriers between the migrants and local population were robust. At the same time, there are studies illustrating spatial heterolocalism in the contexts when the host and home countries of migrants had social and cultural proximity, e.g. British in Paris, Spanish in Brussels, etc. (e.g. Scott, 2004; Favell, 2008). In this respect, not only identity frontier matters, but also the geographical

proximity between two countries and the possibility for frequent flights. Thus, relatively small geographical and identity divide might be potentially seen as a factor reducing the need of localized transnational exchanges in the city. Particularly interesting to consider this notion when exploring the spatialities of expatriates in Moscow, the city that lies culturally, socially and geographically in between the 'east' and 'west'.

In the vast part of the transnational literature, general discourse about the spatialities of the expats in the host cities is focused on the discussions of localization and homogeneity of residence, work, and social activities, that consequentially lead to the formation of 'bubble living' (Kennedy, 2007; Beaverstock, 2011) in social terms, and 'expat enclaves' (gated communities, expat districts in Dubai, e.g. Walsh, 2009) in geographical terms. On the other hand, within the western contexts more diversity and variety is taking place in terms of sociospatial behavior of expats (Scott, 2004).

Spatial localization of the immigrants in the host cities has been explained by a number theoretical concepts taking routes in 19s century. However, along the evolution of views from assimilation and pluralist models, the helerolocalism model (Zelinsky & Lee, 1998) is the one that taking over the ideas of transnationalism. The model advocates that ethnic communities of immigrants can exist without any significant clustering, in other words when members of a particular group are scattered throughout a city. Four main attributes of heterolicalism claim that: spatial dispersion of immigrants is taking place in the host country; residence and work are usually spatially separated; community ties are maintained via modern technological means and visits in urban, national, regional and transnational scales; heterolocalism is conceivable only in modern socio-economic and technological conditions.

There is a need to examine the relations between skilled migrants and urban structures, since the contentious increase in numbers of international skilled migrants in the globalizing cities might have significant effects in many cities, for example, as it is illustrated already by some authors, they might trigger rise of housing costs in some urban areas and might potentially lead the transnational gentrification (e.g. Paris, 2017). Hence, guided by the established tradition in urban studies (Hannerz, 2003; Savage et al., 2005; Kennedy et al., 2007), it is important to explore transnational mobility practices together with more stable residential practices. As Andreotti (2015, p.25) puts it, 'living conditions and experiences are always embedded in the particular city'. Thus, the paper brings the light to exploring the interactions of high skilled migrants with hosting urban systems, dedicated to the spatial differentiation (White, 1998; White & Hurdley, 2003; Andreotti, 2015), residential choices and relations with the housing markets (Pow, 2011; Beaverstock, 2002; Tandogan & Incirlioglu, 2000) and localized activities that are making the experience and lifestyles (Hannerz, 1996; Smith, 1999; White & Hurdley, 2003; Scott, 2006) of the transnational skilled migrants in the cities.

3 CONTEXT

While Moscow is one of the largest European cities with a multicultural population of over 12 million people[1], the globalization processes here have left a rather distinctive imprint on the urban fabric than in other major European cities. In order to examine the current set of conditions that the high-skilled transnational labour flows had been driven into after the dissolution of the Soviet Union and continued to evolve in since then, it is important to investigate which major economic, political and cultural forces and processes were composing these conditions. This section presents the context of Moscow at first positioning the city within the network of other world cities, then it discusses the involvement of the city in international economic and business processes, and circulation of skills and migration, and then canvass the globalization in the scale of urban environment.

3.1 GLOBALIZING MOSCOW

First of all, globalization came to Moscow rather late. However, ever since the concept was introduced Moscow has always been on the list of the world cities (Kolossov et al., 2002). Preliminary, in the Soviet

[1] Source: Mosgorstat, 2016 http://moscow.gks.ru/wps/wcm/connect/rosstat_ts/moscow/ru/statistics/population/ (Accessed on 09/05/2017).

times Moscow has always been considered as an important world city for being a capital of the Soviet Union as a superpower. Later on, when Moscow has first appeared in the world cities rankings based on the statistical data, it took a highest position among the post-socialist cities (Beaverstock et al., 1999). Later on, Taylor and Hoyler (2000) in their factor analysis of corporate service complexes of 53 European cities included Moscow in the Eastern European cluster of "beta" world cities. Similarly, Fossaert (2001) again put Moscow in the list of cities within a "Europe in transition" zone in his analysis of the world system. At the same time in the "The World According to GaWC" rankings[1], Moscow was steadily strengthening its positions: while in 2000 and 2004 it was classified as a "beta+" city, already starting from 2006 to 2016 Moscow took a rightful place among "alpha" cities, along with other European cities like Milan, Frankfurt, Madrid, Amsterdam and Brussels.

Particularity of globalization process in Moscow is preconditioned by the rapid transition to the market economy after the disintegration of the Soviet Union and the subsequent alteration of involvement in global networks. In terms of economic changes, in the 1990s Moscow has undergone the process of rapid deindustrialization restructuring the economy towards the tertiary sector. Kolossov & O'Loughlin (2004) point out that during this process it was necessary to withdraw obsolete, polluting and labour-consuming branches of industry the city that nourished a major growth in employment in the fields of research, banking and insurance, telecommunications and construction.

As a consequence, firstly, of being a centralized node of power and functions for Russia and the whole post-soviet space, and, secondly, of acting a medium between the West and post-soviet space, Moscow managed to take advantage of its favourable position to establish control over the vast financial and commodity flows in the new capitalist conditions. That is particularly noticeable in the high concentration of global business services, presence of transnational companies, and rapidly developed financial sector. Particularly, by the end of 2002, two thirds of the world's largest companies in the financial sector had offices, subsidiaries or partner companies in Moscow (Gritsai, 2003). In Russia, business services are strongly concentrated in Moscow providing about 30–45% of national employment in this sector. Moscow hosts offices of many transnational companies. Despite the fact that the number of Western companies entering Russian market remains relatively small due to the political reasons, yet some major Russian companies are performing their activities transnationally: for example, firms like PAO Gazprom (gas), Lukoil (oil), RAO UES of Russia (electricity), Rostelecom (telecommunications) and some banks have become transnational companies (Kolossov & O'Loughlin, 2004).

Furthermore, as an indicator of gradually expanding after the Soviet times involvement of Moscow in the interaction within the complex world system of cities, the number of international flights has increased considerably. Remarkably, only by 1996 the number of passengers of Moscow international hub – which included three international airports – had exceeded the number of domestic passengers. In 2012 the air hub of Moscow was used by 64 million passengers, placing Moscow on the third position among the most congested hubs of Europe, after London and Paris[2]. By 2016 the number of airports serving Moscow has increased to four. Moscow increasingly orients towards the Western countries: the largest increase in the share of flights from 1985 to 1997 was with the Western Europe – up from 4% to 28% (Kolossov & O'Loughlin, 2004).

By and large, Moscow represents a large European megacity that for over two decades has been undergoing an accelerated globalization process along with the restructuring of the economy. Along with the political instability it brings the particular features to the globalization of the city on the other scales.

3.2 MIGRATION SPECIFICS OF MOSCOW AND RUSSIA

Moscow is a city of migrants and it has been one historically. It is very common to hear in the conversation the question "Where are you from?"; however, the salient feature is that this question is asked in Russian. The reason for that is the extensive migration flows supplying Russian capital for many decades sustained primarily by an internal migration from the regions and later on enlarged by the flows from the post-soviet states. Next to the enormous migration inflows 'from the inside', the exchange with other countries, which

1 Source: GaWC, 2016 http://www.lboro.ac.uk/gawc/ (Accessed on 09/05/2017).

2 Source: Expert, 2013 http://expert.ru/expert/2013/28/stalo-tesno-dazhe-v-nebe/media/201528/ (Accessed on 09/05/2017).

would represent the inclusion in the international circulation of skills, has always remained relatively low. The inflow of a transnational elite – professional and managerial workers, which formed a completely new type of community within the city, was an outcome of the expansion of the global BS companies in Moscow in the post-soviet period (Gritsai, 2005), and continued to expand in other sectors later.

Thus, the UN Report on International Migration has shown that Russia[1] is in the list of the major countries for international migration occupying the third place after the US and Germany. There is a large share of inflow migration that reached 11,6 mln people in 2015 (UN, 2015), which accounts for 8,1% of the country's population. The major source of this flow is a migration from the CIS countries coming to the major Russian cities in a search of a job and better living conditions than in their own countries. Along with that, refugees contribute to this number, with a major increase of migrants from Ukraine in 2014-2015. Another contribution to the inflow of migrants is related to the so-called ethnic repatriation, standing for the return of ethnic Russians who lived in the former Soviet Union countries other than the Russia – 2/3 of immigrants over the period from 1998 to 2007 were ethnic Russians (Nozhenko, 2010).

One of the strains for any study aiming to investigate quantitatively the skilled labour migration in Russian cities concerns the paucity of data. In part, accessible data sources can contain information about nationalities of the immigrants in Russia, or the skill levels without association with the departing country. Even less data available on the level of international migration in the urban centers.

As mentioned above, migrants coming from the CIS countries are the main contributors to the international migration in Russia (over 90% from the overall net migration) with Ukraine as a main donor. Historically, the number of the migrants from far abroad[2], was rather low but it was steadily increasing in the post-Soviet period. However, the political and economic situation of 2013-2014 caused a major drop in number of foreigners coming to Russia. Since then the number of foreigners from developed western countries keeps falling: from 2014 their number decreased by nearly 60%, while by some countries, even more (Table 1). So, the number of foreigners from the US and Spain fell by 80%, while that from the UK, by 83% (Florinskaya & Mkrtchyan, 2016).

	13.11.13	01.10.15	01.10.16
Germany	352335	148414	116948
Spain	77200	23144	16011
Italy	77193	34908	28114
The UK	174061	50478	29739
Finland	108312	47360	94557
France	65559	38645	29697
The EU as a whole	1177829	546341	513367
The US	220086	68367	53978

Table 1. The number of foreigners from some EU countries and the US staying in Russia as of the specified date, persons[3]

The average annual number of foreigners coming to the Russia for work (the purpose of visit is specified in the migration card at arrival) amounts to about 4 million people: about 3.8–3.9 million labor migrants from the CIS countries and 170,000– 180,000 are from far abroad countries (Florinskaya & Mkrtchyan, 2016).

At the same time, the number of high-skilled foreign specialist keeps falling as well. In 10 months of 2016, about 29,4 thousands of work permits have been issued for the skilled and high-skilled migrants – it is four times less than of the respective period of 2014 (there were 121,5 thousand permits issued). Among the donor countries for the high-qualified specialists (HQS) first place belongs to China. The major difference for the high-skilled migrants from the far abroad comparing to those from the CIS countries is the need to receive a special type of visa for HQS granted for 3 years, while for the former CIS countries there is simplified regime of patents that they can buy in order to work in Russia.

According to the estimations based on the annual data of inputs and outputs of international migration in Moscow and the data from Census 2010 on citizenship, the number of the international migrants in

[1] In terms of international migration, the city of Moscow and its metropolitan area, together with St. Petersburg region, are the main centers attracting migrants (e.g. Florinskaya & Mkrtchyan, 2016).
[2] From far abroad' is a category in the official statistics of Rosstat Bureau.
[3] Source: Main Department on Migration of the RF Ministry of Internal Affairs, CDAFNSP

Moscow not coming from the CIS countries is around 33 thousand people[1]. However, it worth noting that international migration in Moscow has been undermined in the recent years when after the economic crisis and political situation of 2012-2013 the major outflow of expats has started. In 2015-2016 the situation has slightly improved but still the levels of inflow international migration are not nearly similar to the period before the crisis.

Nonetheless, being a particular type of international migration makes it harder to grasp high-skilled transnational migrants with the official statistics. Temporality of their movements and strong transnational ties, on the one hand, question the very affiliation with the notion of migration as a type of spatial mobility. On the other hand, some of them for various reasons do not acquire the suitable visa (for the HQS) and instead prefer to renew the touristic one every three months.

4 SPATIALITIES OF EXPAT LIVING IN MOSCOW

The qualitative analysis of the expatriates is derived from 32 semi-structured in-depth interviews conducted in 2017, participant observation in the expatriate locales, and three months of Moscow-based fieldwork. Methodologically, as the adepts of 'transnational turn' advocate the necessity of the in-depth research of everyday life experiences of the migrants (Conradson & Latham, 2005; Scott, 2006), the major part of the evidence presented in the paper is acquired primarily from interviews and ethnographic data. One of the targets of the research was to access the manifold of expatriate types varying in terms of family status, occupation, age, sex, pertaining to both upper and middle classes, as well as diverse countries of origin. The interviewees were recruited through the snowballing personal contacts, the involvement in various expat community meetings, and the informal communication in expat locales.

Throughout the fieldwork a number of expatriate types were distinguished (Table 2). The first type represents young international professionals who have their work as a main priority, and use the employment opportunities in Moscow to build a career. The majority of them speaks Russian on a good level and has been interested in Russia's economic, political and cultural agenda for many years. For them, the relocation is a long-term though-out step that potentially could become permanent. In terms of sociospatial strategies, they show to be more sensitive about the qualities of the areas around their office and home, as they tend to spend more time there. The second type of expatriates is formed by the western families who moved to Russia for the work reasons of one of the spouses: for them, the contract is often limited to 2-4 years, their lifestyle largely exclude rooted experiences, the social circles are confined to the work connections or expatriate community.

With respect to the spatialities, the neighborhood of residence appears to be important, with easy access to a number of urban facilities (parks, sports, restaurants, shops). Additionally, the quality of the accomodation itself is significant: they choose spacious, well-maintained apartments; in some cases they even bring furniture with them. Type III is composed of mixed-relations families, which often had been formed before the foreign partner moved to Russia and that was partially a relocation motive. This type is to a great extent socially integrated, and in terms of sociospatial behavior follows the lead of local partner. Thus, the spatialities predominantly replicate the localizations of the middle-class muscovites. Type IV corresponds to the cohort of the early wave of expatriation of 2000s (before the economic crisis of 2008-2009) when the local economy was in demand of the western expertise, later on they stayed and in due course have transformed into the local market experts: in many cases, the field of their expertise is very place- and time-dependent, e.g. commercial real estate finance, so their expert value has become higher in Moscow than in their home countries. To some extent they intersect with the previous expatriate type, but the difference is that their spatialities have formed and evolved independently. The last type includes a mobile group of migrants that lead rather detached lifestyle, for them employment opportunities appear to have principally sustaining function for their transnational lifestyle, rather than add up to an international career path. Spatially, they give preference to the transnational places with a large diversity and density, in their choices they typically rely on the knowledge of expat community. All five types of expatriates contain the representatives of various western countries, with no clear evidence of relation between ethnic backgrounds and the chosen lifestyle. It is worth noting that a similar typology but with a larger number of

[1] Calculations of the author.

outlined types has been devised by Scott (2004) for the British expats living in Paris, that reinforces the likeness and comparability of various skilled transnational communities in other globalizing cities.

I. Young professionals (7)	II. Expatriated western families (3)	III. Mixed families with Russian partner (6)	IV. Russified experts (5)	V. Transient migrants (people "on the move") (8)
Career-oriented professionals, mostly two-folded relations between Russia and their country of origin	Characterized by isolated lifestyles ('bubble living') and predominantly expat social circles	Most integrated group, tends to reproduce sociospatial practices of Russian middle class families	Came in 2000s during the boom demand for western expertise and converted into local experts	Lead highly mobile detached lifestyles, often lived in several other countries before, mobility as a way of living
Permanent/ transient	*Transient*	*Permanent*	*Permanent*	*Transient*

Table 2. Lifestyle types of the expats in Moscow

One of the important dimensions of expat living is its geographical spread. Expatriate residents in Moscow demonstrate a range of locational options in terms of residence and also economic and social activity. As a general rule, they tend to follow the pattern of spatial dispersion, with minor degree of clustering. In this vein, the constraints of the housing market, the advancement or shortcomings of economic and technological facilities, and the diversity of local ethnic context all impose certain limitations on sociospatial behaviuor of migrants.

While the geography of their transnational living is dispersed, however, there is a trend that expatriates to a greater extent tend to gravitate to the city center, either in terms of their social activities exclusively, or both their residence and activities.

> *"For me, Moscow is inside of the Garden Ring almost. A lot of my friends are artists or creative people, so they work sometimes and they hang out after work, but they all live in the centre… It seems to me that, at least socially, everything is either within or very close to the Garden Ring, and any place that I'd want to hang out in is definitely inside the Garden Ring." (T., 32 y.o., corporate lawyer from the US, Type I)*

In part, this trend might be related not solely due to the livelihood and diversity of the city center, but also due to the differences in comprehension of the city size induced by their backgrounds. Hence, for some newcomers, Moscow might seem too large[1] in terms of territory to think of it as a whole city, so mentally they reproduce their own understandings of reasonable urban size and utilize only that part of central city.

> *"I guess Moscow stops where the new circle line stops (MCK - Moscow Central Ring), and then outside are suburbs maybe. That's because I do the analogy with Paris, because we have a big motorway that encircles Paris: inside is Paris and outside is not Paris anymore. … Moscow is so large. Actually for us, Europeans, it's impossible to imagine that the city could go on… It's already so big and it still goes on. So I guess that for me after certain point it's difficult to count it as Moscow itself, though it is Moscow." (R., 24 y.o., Engineer student from Paris, Type V)*

4.1 GATED SUPER-RICH

While this paper is primarily focusing on 'middling transnationalism', however, in order to illustrate a general settlement structure of expatriates in Moscow it is important to indicate the presence of gated communities among the residential patterns, both in the city and in its suburban settlements. Residential isolationism of the 'transnational elites' has been broadly researched in various cities by many authors. The residential patters of expatriates living and working in the cities like Dubai (Walsh, 2009), Singapore (Beaverstock, 2002; Pow, 2011), Shanghai (Sander, 2014), and others, consort the processes of

[1] The area occupied by the city of Moscow is 2,511 sq km.

'homogenization' and 'ghettoization' in urban environment caused by the skilled transnational actors, that consequentially enlarges social polarization in the city.

There is a large presence of suburban communities with foreign involvement in the western and northwestern directions from Moscow. The northern-western inclination of these compounds is also noticeable inside the city of Moscow. This type of residence is represented by the exclusive townhouse communities that were built initially for diplomatic families. One of the developments of this type is Pokrovsky Hills, a gated community with over 200 detached and semi-detached houses and rents ranging from 6 to 10 thousand USD (Medvedkov, 2007). Another example is Rosinka, similar community located in the northwestern suburbs of Moscow and composed of 217 luxury town-houses scattered around a lake with a sandy beach. All settlements of this type provide a set of high-end facilities (Table 3), including 24h security, sport centers and swimming pools, tennis and yacht clubs, medical centers in line with western standards, and more importantly, international schools. For instance, the direct access to the largest Moscow Anglo- American School from its territory is claimed as competitive advantage of the prestigious housing estate Pokrovsky Hills, and consequentially pulls the settlement of expatriates. Rosinka residents can easily access the British International School.

Compound	**Rosinka International Residential**	**Pokrovsky Hills, townhouse residential**
	Compound 5 km from Moscow (from MKAD), the closest metro is Mitino	**community** Moscow, Pokrovskoe-Streshnevo area, between Tushinskaya and Voikovskaya metro
Offered facilities	- 20 clubs for sports, social and cultural activities; - Private beach; - 24h security; - 2 swimming pools; multifunctional sports courts; - medical center, school, kindergarten.	Adjacent to the forest reserve park "Pokrovskoe-Streshnevo"; Close to the Khimki water reservoir, the Moscow Canal and the Khimki river; - 24h security; - Premium class townhouses; - medical center, school; - Yachting facilities.
Expatriate community targeting	• Website translated on 5 languages, • Main motto is "Your home in Russia"; among the advantages of the compound, the presence of international community is indicated; • Residents are diplomats, businessmen, top managers of leading Russian and foreign companies; • Families from more than 30 countries; • International School of Moscow is located here.	• Designed to meet the needs of business elite and diplomats" • International architectural firms are involved in design of the complex; • Secured direct access to the Anglo-American School campus; • European Medical Center (EMC) on its territory

Table 3. Characteristics of two gated settlements with expats presence in Moscow[1]

To a large extent, the residential choices in favor of gated community are driven by the ambitions of expatriate families to maintain the suburban lifestyle residing in private single-family houses while still living in a metropolitan setting, instead of inhabiting an apartment in multi-story buildings that represent the predominant housing model in Moscow.

Nevertheless, these residential scenarios have extreme constraints related to the high housing costs. The living costs in the gated compounds include the monthly rent of over 200,000 RUB (above 3200 EUR) on average. Moreover, these compounds tend to lack the direct connection with the public transportation system, thus, owning a car is highly anticipated from the residents. As a consequence, just as for the local population the residence in the gated townhouse compounds is extremely exclusive scenario, in the same way, this residential strategy is attributed only to a narrow group of transnational super-rich.

Having said that, it should be stressed that the presence of geographical residential enclaves is not representational of the expatriate ghettoization process. On the contrary, the spread of the upscale gated communities is typical for the local context of Russia, and this issue has been investigated in a number of studies (Lenz, 2006; Medvedkov, 2007; Zotova, 2012; Polishuk & Sharygina, 2016). In addition, even while

[1] The information is taken from the official websites of the gated settlements: http://www.rosinka.ru/en, http://pokrovskyhills.ru/en.aspx (Accessed on 09/05/2017).

living in the gated compound expatriates are comingled with the local population, although of the upperstatus background.

4.2 SCATTERED SETTLEMENT

As described before, there is little evidence found of the geographical enclavism of the expatriate living in Moscow. However, a certain level of differentiation has been observed between patterns related to the localization of the residential choices and the geographical spread of the leisure localities. Below follows the examination of, firstly, the basic locations, such as housing, work, and schooling, that correspond to the 'necessary' fixations in the city, and then, secondly, the locations of optional choices, related to socialization, sports and leisure.

One of the things that has proven to be crucial for defining the localization patterns is the companyprovided relocation packages, however, currently their determining role is decreasing, giving space to the other factors. In the previous waves of high-status migration, an extensive employer involvement in the housing provision or search was taking place. However, nowadays in the face of economic crises and outflow of investments from Russia, these all-inclusive relocation contracts are losing its weight in determining the expat localities. There is still a number of jobs that suggest particular residence for the expatriate on their arrival, for example, diplomats and the workers of international organizations, like Red Cross, can rent apartments with special prices in the buildings for diplomat residence, that often have central location, gated entrance and short-term contracts. However, to a greater extent the employers tend to include in the relocation package a particular monthly amount of money assigned for renting, and the expatriate worker is responsible himself of finding a place to live within the determined price range. That mostly applies to the top managers of the multinational companies. However, the expats that occupy lower career positions and salaries are not entitled to have these benefits, having to arrange the housing on their own.

In the current state, the ways used by the high-skilled transnational migrants to find apartment are diversified. Generally, there are four main ways detected how the expatriates have found the apartments where they currently live: 1 – pre-set accommodation: either they move in the apartment owned by a local partner, or in the apartment suggested by the employer; 2 – online search sources: this includes the use of aggregative platforms that collect rental options (like CIAN, The Locals, Domofond), and the public posts in social networks (in relevant Facebook groups and Couchsurfing); 3 – through friends: both locals and from the expatriate circles; 4 – real estate agents: not very popular option, there are frequent complaints against the choice or prices of apartments found by the realtors. Thus, the search of the apartments is diversified in terms of sources, sometimes expatriates use more than one way. As a rule, the process takes around 1-2 months; some of them declare that they had seen over 10-15 apartments before making a decision.

Accordingly, it could be asserted that the difficulties associated with the search of apartment are representational of the existing mismatch between the housing expectations of the expatriates and the opportunities of the market in the respective price categories. In addition, throughout the period of living in Moscow, among those who stayed for more than a year, the majority of expatriates have changed the apartments a couple of times. The only expat from interviewed who has never changed the apartment in 11 years since he moved, emphasizes that he was very lucky and it is important to keep good relations with a landlord.

> *"I was lucky because I like the flat and also the owner. Because I think the biggest problem in Russia is the landlords, since it's very unstable, they come to you, they say I need a flat, you should move out. A lot of friends had this kind of problem. Or - I want 10'000 RUB more a month - take it or leave it. My landlord is very decent. … I've lived in the same apartment for 11 years now." (S., 44 y.o., real estate finance expert from Italy, Type IV)*

At the same time the choice of the apartment is not directly contingent on the distance between the residence and the workplace. The proximity to work is among the potential factors that could explain the residential choices of the expatriates. However, the findings show that the distance from residence to the workplace varies significantly: from 10min walking to 1-1,5h by metro or car (due to the traffic congestion). On average it takes them about 30-40 min to get to work. Interestingly, the vicinity of metro, that could

potentially reduce travelling time, was not that crucial either: in many cases the apartments are located in 10- 15 min walking distance from the closest metro station. Therefore, the factor of the location of the office does not show to be significant for the residential choices.

> *"I spent six years living in Yuzhnoe Butovo, which was a good experience … I've commuted for 2 years to Khimki, through the whole city, it was a nightmare. My record journey home, I believe, it was 11 hours from Khimki down to Butovo. It was close to the New Year, and the whole Moscow was 10 on Yandex[1] …[On average] If I left at 6 o'clock in the morning, I could be there [in the office] around 7:20. But if I left at 6:30, I could be there at 10 o'clock in the morning. It was impossible to predict. And in the evening, if you didn't leave by 5 o'clock, it could be anything from 7:30 to 9 o'clock at night. You had to leave at 5 o'clock." (S., 33 y.o., construction consultant from the UK, Type III).*

Another factor relates to the range of prices for rental housing and prices could be a limiting factor. They vary significantly, depending on the social and family status, area, and size of the apartment. On average, the middle-class expatriates pay from 80 to 120 thousand rubles (around 1200-2000 EUR) per month for an apartment of 2 and more rooms in central areas, while upper-status families often pay 200 thousand a month and more (above 3200 EUR). Some exclusive offers in prestigious areas, targeted at superrich, might reach 350 thousand rubles (5600 EUR). At the same time, there are strategies to diminish the costs, for example, single expatriates can share the apartment with 1-2 flatmates, occupying one room each, and splitting the overall rental price accordingly. This scheme is especially popular among young professionals of the Type I, who prefer to share but live centrally and in a lively area. Another way is to save on housing is to live separately but in the outskirts of the city, however, due to the high commuting time (can reach 1,5h), the majority of the expatriates prefer not to use this option.

As described by some authors the location of international schools might drag the residential choices of expat families. However, in Moscow the locations of international schools do not correspond to the residence localizations of the high-skilled transnational migrants. In 2017 there were 27 international schools in Moscow, and over a half of them have English as a main language of instruction (the clear western inclination is observable). Nevertheless, not all expatriate families send their children to these schools, as the fees are extremely high. It varies from school to school but on average the yearly fee for one child is around 25,000 EUR. Importantly, the fees are fixed in euros, while many expatriates, especially those out of multinational corporations employment, have their salaries in rubles. Thus, the economic crisis of 2013-2014 and the devaluation of ruble affected severely the schooling opportunities in expatriate families. At the same time, there is a significant number of mixed-families, in which children can speak Russian. For that reason, these children often get registered into local schools, although the foreign spouse would prefer them to keep dual language and cultural identity. For example, Frenchmen with children of Type III finds it difficult to cope with expensive school prices with the existing economic situation:

> *"When you are a foreigner, you always have some fees in your native country. For example, if I take my case, I also have to pay the school of the children here. …It's a significant amount, and it's in euros. … So that's why many foreigners with the local contracts left in 2014, and also in 2015 when the ruble devaluated very strongly. … I don't travel much now. Mostly because of the crisis, and because it has reduced [the number of] business trips. Also my fees are always in euro, I have to do some savings." (C., 46 y.o., project manager from France, Type III).*

Among the common reference mentioned across the expats with respect to the housing are the complaints about the poor quality of the housing supply. In general, there are three most repeated dissatisfactions with the housing in Moscow: 1 – bad quality of the infrastructural details, like dysfunctional wire system, bad plumbing and water pipes, high sound conduction of the walls; 2 – impractical layout of the apartment and irrational organization of furniture, appliances and finishing in the apartment; 3 – negligence and deprivation of the communal areas of the building, like staircases and entrance hallway. Also, it has been articulated in the interviews that inviting friends over to their houses for common dinners, parties, etc. is

[1] Yandex Traffic provides real time information about the congestion levels on the roads: from 1 – free road to 10 – traffic stopped.

less common here in Moscow, than in their previous experiences in their countries of origin. Particularly, all that might contribute to the fact that the vast majority of expatriates prefer to socialize outside of their homes, preferably in the areas in the city center.

Overall, the expatriates living in the city of Moscow have not proved to produce any noticeable residential concentrations, neither in central, nor in suburban city locales. When asked about having any neighbors who are foreigners as well, no one could mention more than one or two families within the same residential units. While there is no clear residential concentration of expatriates, however, in terms of preferred areas to spend time in, there are several districts that many expatriates articulate as attractive. They include Patriarshy Ponds, Kitay-Gorod, Chisty Prudy. These areas are described as the places to spend time but the expats not necessarily choose to live there. One of the possible reasons for favoring other locations for residence, less appealing areas, might be the housing market restraints, related to the high rental prices and the shortage of diversified rental supply in popular areas. However, these neighborhoods are extremely lively, providing multiple choices of bars, cafes, clubs and restaurants. One of the residents of Kitay-Gorod sketches the appealing side of that area:

> *"It has this really good feel about it. I mean there is a lot of diversity of people there, and shops, there are hipster bars and high-end restaurants and street bars. There's just so much diversity: there are drunk people, there are young people, business people. I really like that. There are probably other nice neighbourhoods where I could live… There are all sorts of other neighbourhoods, but this feels much more diverse, much more interesting. I like feeling that diversity of life." (T., 45 y.o., area director of hospitality company, from the UK, Type V).*

In terms of social practices the circulation of information about the locales is of great significance. The choice of places where expats go is highly dependent on the social relations they maintain. Accordingly, the communication strategies tend to have the direct impact on the localization of the social practices. Crucially, the Russian language proficiency partially determines the expatriate communication strategies, and consequentially the localization of their activities. The knowledge of language is not that obligatory for the use of places, but it is important through which circles they get to know about the places.

5 CONCLUSION

The settlement patterns of the expats living in Moscow can be embedded in the heterolocalism model, as the evidence reflects the presence of four main principles of the sociospatial model: spatial dispersion, disjuncture between residence and workplace, ethnic community ties are sustained remotely, and time-dependence. The emergence of heterolocal model for the settlement of Moscow-based expatriate workers has shown to be relational to the urban planning structure of Moscow. Bringing into focus the city of Moscow - a large postsocialist European city with a growing international orientation striving to integrate itself into transnational economic structures (Brade & Rudolph, 2004) and global labour circulation – helped to discuss the theory of sociospatial intergation of migrants in the comparative perspective. The research intends to extend the understanding of the influence of the migrant class of globalizing middle-class professionals on the spatialities and social geography of the destination cities and its contribution to the globalization process.

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ID 1631 | TECHNOLOGY USE AND ITS INFLUENCE IN TRAVEL BEHAVIOUR AND URBAN FORM

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1 INTRODUCTION

It is likely that the current generation that is growing up immersed in a technology filled world can perceive space and distances from a different perspective than those that come before. The speed by which technology is evolving increases day by day and, moreover, people and companies are discovering and consolidating different ways to take advantage of the current available possibilities that the devices with internet connection can offer.

In this context, an important concept is the “mobile ecosystem”, that in accordance with Berger et al. (2016) is composed of a set of tools that can be used while people are moving around to communicate and obtain information online independent of the person's location, i.e. devices that can easily be carried anywhere and have the ability of staying online at any time. The mobile ecosystem has changed the way by which people set about in their daily activities and interact.

According to Inman (2012), despite of the already existing literature on digital consumer, the growing diffusion of smartphones expands the possibilities of studies through researches on how an “always connected” environment can influence consumer cognitions and choices.

Kuhnimhof et al. (2012) highlights that the impact of Information and Communication Technologies (ICT) on travel behaviour is not clear and so, it should be studied focusing on those young adults who grew up with ICT and developed their mobility habits in the presence of such technology.

In this context, the mobile device with internet connection is re-defining, in some extent, the space, when activities are detached from specific places. The consequences of these changes have a high potential of impact in a city’s layout and mobility patterns for the current and next generations. According to Castells (2000), the format of the cities is changing, having the network of communication as a guide, where the technological infrastructure that builds up the network defines the new space, very like railways defined

"economic regions" in the industrial economy. The distance intra and inter cities might be considered in a different way due to internet connection/access, making people, nowadays, ponder living in places that are not well connected by transit because the increase in easiness of obtaining reliable and real-time information about the services (including transport services) and buying products without the need of travelling.

As for companies, beyond the transport connection, that is highly important particularly in cases where its product should be delivered, the quality of internet connection available is a factor that is being taking into account when defining where the companies should be installed, aiming to lessen the risk of losses of data or laboring interruptions due to connection problems.

In this sense, this study sought to examine prospects for the future related to possible changes in mobility and living patterns due to technology for the current and next generations and what could be its implications in city's layout and mobility patterns. To achieve it, a literature review was developed aiming to identify tendencies and changes that have occurred during the last decades which affect the way people move around and choose places to stay. This work contributes to the knowledge by studying the links existent between these concepts and the evolution/variations in their relationships.

2 CITIES, TRANSPORT AND TECHNOLOGY

Since the beginning, the cities and transportation systems had a close connection, where their mutualism could be observed through their interaction: the development of one tended to lead to the progress of the other. If in earlier times the urban form was limited to what was considered suitable for mobility by walking or animal powered vehicles, after the introduction of motorized transport, accompanied by its infrastructures, this radius increased considerably, favouring the expansion of cities. It is also true that the opposite occurred: changes in the spaces and land uses have a significant impact on transportation, as such changes in the use of land or buildings, renovation of areas or deployment of new buildings that attract large flows of people (Trip generation hubs). As the functioning of a city is extremally influenced by the networks that compose it, Banister and Hickman (2013) highlight that the transport system in a city should be carefully analyzed and implemented as an integral part of city design, because it can generate adverse impact on the quality of the city.

Mok et al. (2010) discussed about these intrinsic relationships, adding the advent of the internet to the equation. They discuss the possibility of the cities and, the concept that they carry (physically concentrated networked area) lost their importance due to the internet. They expose that, in past, while cars, public transport and telephones had extended the possibilities of interaction to outside the metropolitan area, people remained restricted by the speed of transport modes or the level of interaction (only voice in case of telephones) and, in both case, had budget constraints to access it. However, for them, the popularization of the internet introduced the high speed of connection combined with the small cost that made such a revolution, only remaining time-zone differences to generate some constraints for immediate communication.

It means that, to certain extent, the space as a barrier has had its influence diminished along the years and only time constraints are still making difficult the real-time interaction between people physically apart.

Including the technologies and, more specifically, mobile technologies in this scenario, what we have nowadays is the possibility of an "always connected" environment, where people have smartphones working as "pocket computers" that can easily be carried anywhere, have access to internet at all times. It is clear to see that mobile technology has an impact on people on a daily basis.

The integration of technology allows cities to keep their character of "interaction maximizer", but in an adapted way. The combination of local interaction with long-distance connectivity, dissolved the boundaries of cities, turning them into hubs (Mok et al., 2010). At the same time that spatial mobility is decreasing due to telecommunications, the telecommunication produces the desire for more personal face-to¬face contact and hence physical mobility (Wegener, 2013).

In this sense, it could be said that the distance ends being re-signified for the new generation, as the concept of human extensibility developed by Janelle (1973) who presented the idea of lessen the distance

between places not through the travel in the space, but using the technology and communication to do it, i.e. virtually projecting/presenting/interacting as they and their ideas were physically present. It is about to expand the opportunity for human interaction, but dissociated from the space.

Due to its intrinsic features, this revolution has the potential to produce some effects in both urban form and mobility patterns. Janelle and Gillespie (2004) comment on “space-adjusting technologies”, arguing that when they are combined in different configurations, huge effects on patterns of human settlement, production, and trade can be achieved. The integration of ICT with the transportation systems, according to them, have impact on two areas of human social dynamics, beyond the transportation systems itself: individual mobility and urban form dynamics/development.

Knowing that, the following topics will approach new possibilities for daily life generated by advances in technology, as well as its present and future/expected changes and its existing/potential impacts in urban form and mobility patterns.

2.1 E-WORK AND E-LEARNING

Many studies have approached the subject of E-work (a.k.a telework) that consists in allowing the workers to develop its paid activities from their own home instead of commute to their workplace (Mokhtarian et al., 2004). For Dal Fiore et al. (2014) nowadays only a small amount of workers needs to be at their workplace, because the technology that provides the opportunity for individuals to choose where they want to be and access work and information from there, removing place-based constraints and consequently lessening the need of traveling. As some professions are being renovated and many are emerging due to technology advances, there is a strong belief that this trend of allowing employees to telework should continue to expand in the future.

Moreover, the positive results found in some studies (Dutcher, 2012; Pearce II, 2009; Hill et al., 2003) related to teleworking reinforce this believe. Golden (2006) found that the extent of telework (proportion of an average workweek that workers spend teleworking) is positively related to organizational commitment of the worker, and a negatively related to turnover intentions (the rate at which employees leave a company and are replaced by new employees). The author highlights also that not having to commute means accumulation of extra time and savings in energy resources: both are interesting products that teleworkers can allocate for work and/or family needs, improving their well-being and outputs.

The possibility of telecommuting has a huge potential of impact urban form and mobility patterns, because once commuting to work is no longer necessary (or, at least, not on a daily basis), people will travel less for mandatory work purpose and will have less constraints in choosing a place to live; without the need to consider the constraint of good connection between home and work places, the residence location choice becomes in some sense disassociated from the work-place and the effect in the urban dynamic is the decrease/mitigation of over demand for housing close to working related/concentrated areas.

Mokhtarian et al. (2004) found in their study that investigated ten-year data about telecommuting and residential/job changes of 218 workers in California that the residential location of telecommuters is much more probable to be in peripheral areas than in the city center. The authors were not able (based on the available data) to determine whether longer commute distances boost telecommuting or, telecommuting allows for residential relocation, allowing people to move away from their work locations. However, they believe that the supremacy is related to the second possibility of causality, because to moving towards distant locations were actions more likely to be avoid if they have to commute to their workplace rather than telecommute (Mokhtarian et al., 2004). According to Shen (2000), the flexibility in residential location can lead to a decentralization of the population; unregulated urban sprawl and polarization in residential location. The author also argue that the coverage of public transport will still characterizes a restriction on location flexibility for some population groups, as the city and the transportation network are strongly related and will still influence the remain activities need.

Similarly, to what occur with workers, it is happening also with students, that already have the opportunity of attending some courses without having to be in a specific classroom. As the easiness in dealing with technology and take the maximum advantage of it is a remarkable characteristic of the current young generation, this model of learning is a very interesting option to them. Leaving aside the discussion about

gains and losses in this model of study, what it allows is access to education without borders, which leaves the cost and time availability as the only constraints. As for University students, that sometimes no longer live with their parents, it means that they can choose the place where they want to live without having the university location as main driver and then choose for better benefit vs. cost deals around the city. In this sense, Zhou (2012) found that the greater the commute distance for university students, the higher are the utility of both carpool and telecommuting.

As for mobility patterns, knowing that these travels are not an end in itself, but rather happen because of the need to perform a mandatory activity at the destination, both cases are related to frequent travels that will no longer occur (totally or partially), meaning that travel patterns will change, with potential impacts on congestion, pollution, mode choice and more productivity in urban areas. Julsrud and Priya Uteng (2015), found that there is a strong belief between Norwegian experts that the distribution of commuting traffic (over the course of the day) will be possible due to the combination of the increasing trend of flexibility of the workplace and imposition of congestion charges.

Regarding urban form, without having to consider that much the distances for working places or studies, living place choices ends up being influenced primarily by budget, personal preferences and land use restrictions defined by local authorities. Being the budget, in general, the main definer of where to live, sprawl might arise. The differences of location will have less negative impact in mandatory activities regarding the accessibility to transport due the possibility of telework.

It is noteworthy that this does not mean that some places will no longer remain as the most desirable (as city centres and already consolidated areas that carries special meaning for the people -related to culture and subjective thoughts/norms established by the society) and some people will still choose these however, but the negative impacts of living outside the most desirable areas might have less of an effect on the daily mandatory activities of its residents due to technology. The higher the level of technological integration a city has, the higher the possibility of mitigation of negative impacts generated by low accessibility on its residents.

2.2 E-COMMERCE

E-commerce (a.k.a. online shopping) consists of a type of trade where products are made available online and purchased by people to be delivered at a specific place (usually the buyer's home). According to Zhou and Wang (2014) it is rational to expect that this technological form of acquisition of goods could lead to a reduction in the need of shopping trips, since the goods are accessible via door-to-door deliveries. However, one can argue that despite the decrease in personal trips, this process generates substituted trips that are the freight trips to deliver tangible products (Mokhtarian, 2004).

According to a research conducted by Weltevreden and Rotem-Mindali (2009) in the Netherlands, the business to consumer (b2c) e-commerce led to a decrease in the net number of personal trips for shopping related purposes and also lessened the distance travelled by consumers. However, they highlight that the effect on mobility could be positive or negative depending on the form of e-commerce, the trip-chains, modal split and the kind of products purchased.

Zhou and Wang (2014) found that e-commerce reinforces shopping trips while the opposite is not true, i.e. shopping trips lean towards the suppression of online shopping tendency. The study conducted by Ding and Lu (2017) had similar results, finding that people who frequently buy products online tends to perform more trips to shopping, making e-commerce complementary to in-store shopping rather than a competitor. They added that a change was visualized in mobility pattern related to "when to shop", because people who buy online, usually go in-stores shopping on weekends rather than weekdays, which may affect the distribution along the time of travel demand (Ding and Lu, 2017).

Farag et al. (2006) found that the group that are more likely to buy online are composed by people that live in very urbanized areas. Moreover, people who have relatively low accessibility to in-store shopping buy more products online. This way, as presented in the discussion about the impacts of telework, people who live in those areas end up facing less problems to develop their daily activities, as the E-commerce increases their accessibility. Wee et al. (2013) argue that some groups of people have a potential of be

more likely than average to use ICT as a substitute for physical accessibility (e.g.: online shopping, social media communication).

Rotem-Mindali and Weltevreden (2013) conclude that the existing academic literature suggests diverse inferences about how the e-commerce influences mobility. For them, it is important to pay attention in the respondents' sample, because choosing, for example, only respondents that potentially have affinity with internet use can impact the results in an undesirable way. Moreover, if both personal and freight trips generated/attracted are not analyzed the resultant scenario cannot be entirely constructed and then, the remaining aspects not included in the study should be exposed. They also argue that product type should also be taken into account when analyzing this subject.

As e-commerce is a relatively recent option, the entire picture contemplating all the factors that have influence and all the consequences generated by it on travel patterns and urban form remain unclear. Mokhtarian (2004) believes that online shopping will substitute in-store shopping in a limited way, nevertheless both trade forms will probably continue to increase and co-exist. Despite it, Rotem-Mindali and Weltevreden (2013) believe that considering a long term perspective, the freight transport resultant from e-commerce may act positively towards sustainability, through the optimization of distribution that overcomes the avoided trips.

As for urban impacts, it could be said that the E-commerce (including frequently deliver needs, e.g. groceries, personal products) and online services (e.g.: access to Social security, health care system for schedule appointments, bank account) are also contributing to lessen the constraints when deciding where to live. Products and services could be accessed and scheduled or purchased without the need of traveling. The desired mixed land use place could be replaced to some extent by the online environment, almost without borders.

Moreover, the time concept ends being put into a different perspective as the online world turns some products possible to be bought 24 hours per day, making some services/activities detached from both space and time. For the distributors, the E-commerce also have consequences in generating the necessity of restructuring and relocation (stores and/or warehouses) of some companies, as well as development of appropriated logistics for freight delivery travels and analysis of location of parcel lockers for last mile deliveries. Thus, the results of E-commerce in a city might mitigate the problems associated with living in not well connected places that have low accessibility to shops. (Mokhtarian, 2004) defends that the use of ICT allows the spatial and temporal fragmentation followed by their recombination.

As for trends in E-commerce, Ding and Lu (2017) found that age is a significant explanatory variable, related to individual socio demographic characteristics, being the younger adults the ones that are more likely to buy products online. This tendency may be related to the fact that those groups are more familiar with technological tools and therefore that as the population is being renovated, the E-commerce will increase, having more potential new customers each year.

It is important to highlight that the expansion or more rapidly growth of this form of trade is more likely to happen for some kinds of products that are not so dependent on visual assessment or experimentation or that have not much time constraints related to its delivery (e.g.: electronic goods, airplane's or event's tickets).

2.3 ICT FOR COMPANIES

For some companies that are immersed in a "fully connected globalized" world, beyond a good transport connection, it is essential the quality of internet and telecommunications available -Information and Communication Technologies (ICT). Yazar et al. (2016) argue that companies may require using fully fiber optical wire, which allows for high speed Internet connections. Thus, it could be said that optical fiber availability is nowadays a constraint for choosing the location of some businesses, being taken into account when defining where the companies should be installed, aiming to have faster interaction possibilities, less risk of interruptions in the work or videoconferences due to connection problems.

As the globalization have a crescent impact in world, it is expected that companies become multinational and the already multinational companies expand themselves into different countries. To enable this

growth, it is essential to keep an easy, fast and accessible communication between the main office and its local branches. Videoconferences allow companies, especially multinational ones, to schedule meetings without the need of all people involved travel to a specific place, generating less mobility in a wider scale.

In this sense, if in the past for a city be attractive and competitive for the location of companies, it should have a good transportation network, nowadays the integration of a good information and communication network is also essential to create an environment favorable to the development of activities.

The impact of it is mainly related to the urban dynamic, that is defined according to the level of technological connection that each zone offers. The companies' location ends up being restricted or more desired towards determined areas that gathered the best quality of ICT infrastructure. Despite of being decisive nowadays and probably have more impact, this is not a new trend, as it could be seen in the work of Goddard and Pye (2007), who argue that the office functions should be relocated to centers in order to avoid communication problems, common for offices in the development areas. As for mobility, the ICT allows the decrease in business travels, that are substituted by videoconference.

2.4 INTEGRATION OF ICT IN TRANSPORT

About the impacts of technology in public transportation system, due to internet and mobile communication, people nowadays are facing less problems living in places that are not well connected by transit, because the increase in information quality and quantity and the improvements in the easiness to access them, notable reliable and real-time information about the services, i.e., the restriction of transit schedule could be mitigated by transit information access, although peripheral areas could have simpler systems, with less quality and quantity of information provided. Brakewood et al. (2014) conducted a before¬after survey for evaluating the impacts of real-time transit information on bus riders in Tampa (Florida), and found a significant change in the waiting time and the feelings associated with the waiting time after the availability of real-time information.

Nowadays it is possible to access public transport information through applications that can use the GPS system in the device (e.g. smartphone) and deliver door-to-door real-time information according to the travelers' movements, facilitating the trip. According to Hwang et al. (2006), improvements in the tools of the Geographic Information System (GIS) have enabled transport agencies to provide a variety of different map views and tools for its customers to meet the different needs and preferences.

Julsrud and Priya Uteng (2015), said that new technologies are the main significant parameter for future mobility, being essential to analyze it. Using Delphi techniques, they developed a web based survey involving 280 Norwegian experts, and found suggestions that the next decades may witness changes in choices and preferences regarding urban mobility due to technologies (notably mobile ICTs), as people already have access to real-time information and suggestions for optimal travel routes based on personal preferences, and the operators are using the information for continuously improving the management of public transport. Today the possibility of full time anywhere connection can lessen the cognitive effort associated to perform a trip, reducing the barriers associated with the use of public transportation, making this mode more attractive.

According to Lyons and Harman (2002), the public transport users are concerned about the convenience from the origin to the destination of the trip. Therefore, providing this information can make the physiological effort generally made to find the directions and important points during the trip to be dramatically decreased, since it is only necessary to follow the steps as indicated in the tool. Wardman et al. (2001), argue that a trip is inconvenient when it involves unexpected or unwanted physical, cognitive (or mental) or emotional stress efforts. In this context, the provision of clear and reliable information influence in the way of decreasing the cognitive effort, since this relates to the effort required to collect and process information before and during the journey. On the other hand, if the trip requires search for information or interpretation of information, this effort is likely to increase.

The information is important not only for travels in public transport but also for trips made by private modes. Consulting traffic conditions for different possible routes makes the travel less uncertain and increase the sensation of controlling it.

Another important amplification of possibilities generated by technology is to broaden the options to active use the travel time during trips (Frei et al., 2015). Previously the travel time on public transport would have been used mainly to sleep or read a book/newspaper, today this time can be used for a wide range of activities, such as checking emails, buying something online, getting information about the weather, accessing social media and even to follow the current journey in real time, such as their current position and estimated arrival time. This increase in multitasking and fragmentation of activities can be considered as an advantage in opting for public transport trips compared to driving.

Combining these changes mentioned above, the way people perceive the system, experience the travel and take advantage of the travel time in public transport, may potentially have affected also the perception that people have about its service, making them more likely to perform more travels by public transport and altering their mobility patterns.

It is important to mention the current observed flexibility in young adults' choice that show propensity to have a multimodal travel behavior that combined with integrated ICT on transport, potentialize this mobility trend. Figueroa et al. (2014) found that car use by young adults (18-64 years) in Denmark was transferred to other modes in high density settings. Kuhnimhof et al. (2012) discuss about "peak travel" in industrialized countries, highlighting that the decrease in automobile travel of young adults in Germany is due not only to changes in mode choice which thus reduce car ownership but also due the increase in multimodal travel behavior as reasons for this stagnation. It is worthy to reference that despite both countries cited being developed countries, one is well known for encourage soft modes (Denmark -walk, bicycle) and the other has a long tradition on car use (Germany), which evidence that this trend is not only due to local specificities, as such infrastructure and policies towards a specific mode. Wee (2015) defends the hypothesis that we are living a transition period that will led us to a more ICT-based activity pattern and accessibility; being the trend of decreasing in car use and the changes in travel behavior (in general) the signs of that.

Out there the traditional public transport system, the technology also allowed the conception and development of new forms to move around collectively. Systems of car sharing and bike sharing have been made available in several cities around the world. Through the GPS of mobile devices combined with internet access, it is possible to schedule a ride in few seconds choosing between total or shared expenses with other uses of the services (e.g.: Uber, Cabify, Lyft, Blablacar). These new travel options increase the physical accessibility of areas and constitute more affordable alternatives from a financial point of view.

Knowing that accessibility is an index that translates the relation between people, land-use and transportation, the urban dynamic becomes more homogeneously distributed due to the increase in the transport offer variety available. For Wee et al. (2013) ICT has the potential to impact on the awareness of activities' location at numerous locations.

Beyond the impacts in urban form and mobility patterns, Wegener (2013) highlights that it is possible to identify an increase in heterogeneity among urban lifestyles, mobility and location patterns and social networks, due to the increase in individualisation of society. He refers also that due to this dynamic, less emphasis should be put on preferences and choices and more on needs and constraints, that are more constant during time, when modelling.

2.5 TECHNOLOGY AND CARS

There is a crescent discussion about the negative impacts related to the intensive use of cars in cities. The climate changes and energy scarcity in the world are leading to the development of several policies to support sustainable choices, encouraging the decrease in car use and adoption of "more environmentally-friend" vehicles combined with mixed land use design.

Mácario and Marques (2006) points the currently commercially available Hybrids cars as one existing option to cut consumption and carbon emissions (30% less), as these cars do not require specific supply infrastructure in urban environments.

In this context, thinking about the future and motorized vehicles, Wegener (2013) predicted a future with scarcity of fossil fuels and climate changes, so the energy for transport will be limited and expensive, which will affect mobility and location behaviour in cities through households moving closer to their work-places and firms closer to their customers, suppliers and workers. Higher-density and mixed-use of land, according him, are essential to it. Fermi and Fiorello (2006) found in their simulations, which considers scarcity of energy supply, that in all scenarios simulated there was a tendency of decrease in the average travel distances per capita and by car, returning to levels found in 1990s and 1980s, respectively; contrasting with the number of trips by public transport that more than doubled. For Fermi & Fiorello (2006) climate changes and scarcity of fossil fuels are interrelated through the need of decrease in the carbon fossil fuels/emissions and changes in mobility and location behaviour, i.e. the solution for the problems can be achieved by a combination of technological and behavioural changes.

On the other hand, according Arbib and Seba (2017), these problems will be solved by technology, with the use of TaaS (transport-as-a-service) that will provide the availability of on-demand door-to-door transport autonomous (or self-driving) electric vehicles. They also believe that the shift is motivated by technology, not climate policies, expecting that Taas will be cheaper than most forms of public transportation and 10 times cheaper to run than fossil-based cars (near-zero marginal cost of fuel and an expected lifespan of 1.6 million kilometres), being the more convenient form of transportation in a close future. This scenario is in agreement with the argued by Lyons (2014), who already drew attention to the fact that we are living a transition toward a phase that will have as main features the decrease in the importance of ownership and use of cars (as we have nowadays) and the incentive of shared use of mobility resources. This scenario tends to favour less congestion.

The searching for flexibility in travels, notedly for youngies, could be evidenced in the work of Karlsson et al. (2016), who developed and tested in Sweden one service based on the concept of Mobility-as-a-Service (MaaS). It was offered for families personalized transport services appropriate to the needs and requirements of each individual traveler, including as options the use of the local PT authority, one taxi company, one car rental company, one car sharing company, and one bike sharing company. They found that the users value very much the flexibility resultant from having multiple options available to use, being possible to select a mode according to each trip requirement. Moreover, the users reported that owning a car, bicycle or transit pass make them feel as they have no choice rather than choose that mode regardless specific conditions of each trip (Karlsson et al., 2016).

The expected impacts on mobility and accessibility conform said by (Arbib & Seba, 2017) are the improvements in the mobility for people who cannot drive or afford cars and for the population who lives in suburbs and the low density of public transport infrastructure, what can favour more urban sprawl.

3 CONCLUSION

The table 1 synthetizes the topics discussed in this work. It can be noticed that the technology and its possibilities related to transport, city and people has potential to transform/impact, above all, areas with low accessibility to services and goods, because it can mitigate the negative effects inherent to living in those areas. Banister and Hickman (2013) argue that there is a strong belief that technological solutions will be developed to solve/mitigate what are essentially social problems.

Technology associated product	Trends	Impact on mobility patterns	Impact on urban form
E-work / E-learning	Increase in percentage of employees that are allowed to telework: some professions are being renovated and other created by technological advances. Increase in e-learning possibilities: current and probably next generations have such a facility in dealing with technology and taking the maximum advantage of it.	Less frequent daily travels (that usually happen in peak hours) Public transport less crowded (more comfort in the trip – potential impact in mode choice). **Sustainable derivate impacts:** Less traffic congestion. Less air pollution and more productivity in urban areas. Decrease in energy consumption.	Residential location disassociated from the work-place/University. Coverage of public transport still as a restriction for some population groups on residential flexibility. Decrease of over demand for housing close to working/university related/concentrated areas. Unregulated urban sprawl might arise. Residential location influenced primarily by budget, personal preferences and land use restrictions. Less negative impact regarding the accessibility to transport in suburban places.
E-commerce	As the population is being renovated, the E-commerce will to increase, having more potential new customers each year. It is expected that online shopping will substitute in-store shopping in a limited way, nevertheless both trade forms will probably continue to increase and co-exist.	Reduction in the need of shopping trips and generation of freight trips. Mobility effect can be positive or negative, depending on the form of e-commerce, trip chains, modal split and kind of products. E-commerce reinforces shopping trips, but the opposite is not true. Change in mobility pattern: people who buy online, usually go in-stores shopping on weekends instead of weekdays. Long-term perspective: freight transport resultant may act positively towards sustainability: optimization of distribution, overcoming the travels avoided.	People who use to buy more online: live in very urbanized areas and/or have relatively low accessibility to in-store shopping. E-commerce increase their accessibility, contributing to lessen the constraints for people when deciding where to live (residential location). The desired mixed land use place could be replaced some extent by the online environment. Distributors need to restructure and/or relocate, as well as develop appropriated logistics for freight delivery travels and analysis of location of parcel lockers for last miles delivers.

ICT for companies	Globalization: companies become multinational or expand themselves through the countries. It is essential to keep good internal communication.	Decrease in business travels, that are substituted by videoconference.	Optical fiber availability: constraint for choosing the location of companies: more desired areas have good ICT infrastructure. The urban dynamic is defined by zone, according to the level of technological connection. To be attractive competitive for the establishment of companies, the city should a good ICT network.
Integration of ICT in transport	Access of real-time information and optimal travel routes based on personal preferences. Flexibility in young adults' travels: propensity to have a multimodal behavior potentialized by integrated ICT on transport. Transition period towards a more ICT-based activity pattern and accessibility, being the trend of decreasing in car use and the changes in travel behavior the signs of that. Development of new forms to move around collectively.	Consulting traffic conditions for different possible routes makes the travel less uncertain and increase the sensation of controlling the travel. Increase in multitasking and fragmentation of activities + more and easier to find information, resulting in less cognitive effort = potentially change the way people perceive the public transport system, experience the travel and take advantage of the travel time in public transport, what may potentially affect the perception that people have about its service, making them more likely to perform more travels by public transport and altering their mobility patterns.	Increase in information quality and quantity and improvements in the easiness to access them, notable reliable and real-time information about the services make people face less problems living in places that are not well connected by transit. The new travel options (car sharing, bike sharing, Uber, Cabify, Lyft, Blablacar) increase the physical accessibility of areas and constitute more affordable alternatives from a financial point of view. The urban dynamic becomes more homogeneously distributed due to the increase in the transport offer variety available
Technology and cars	Futures: scarcity of fossil fuels and climate changes and/or presence of Saas. Availability of on-demand door-to-door transport autonomous electric vehicles. Searching for flexibility in travels, notedly for youngies: decrease in the importance of car ownership and use and the incentive of shared use of mobility resources.	Future with scarcity of fossil fuels and climate changes: Tendency of decrease in the average travel distances per capita and by car, returning to levels found in 1990s and 1980s, respectively; contrasting with the number of trips by public transport that more than doubled Saas: improvements in the mobility for people who cannot drive or afford cars and/or lives in suburbs and the low density of public transport infrastructure.	Future with scarcity of fossil fuels and climate changes: households will move closer to their work-places and firms closer to their customers, suppliers and workers. Higher-density and mixed-use of land are essential. Saas: improvements in the mobility for the population who lives in suburbs and the low density of public transport infrastructure, what can favour more urban sprawl.

Table 1 – Summary of trends in technological solutions and its mobility and urban impacts

The relationship between transport and ICT, as discussed, seems to have a more complementary nature. However, Mokhtarian (2003) argues that it is necessary to study the longer-term complementarity effects of travels suppressed and generated, because for her all are happening simultaneously: substitution, complementarity, modification, and neutrality.

As for the urban impacts, Wegener (2013) believes that cycling and walking should be encouraged in cities and anti-sprawl legislation should be implemented and enforced. He also highlights the necessity of provide minimum standards of access to basic services (e.g.: health care, education) for the all strata of the population in urban, suburban and rural areas.

Shen (2000) argue that urban planners should take advantage of the moment and guide the metropolitan areas, conducting the possible growth to outside the ecologically complex sites and keep them spatially, economically and socially integrated.

The authors recommend further study on the spatial relationships between telecommunication and transportation. It is recommended also the development of empirical analyses in future in order to confirm or not the tendencies/forecasts presented and discussed.

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ID 1648 | WHAT ARE THE NEW MEGA PROJECTS? AN ASSESSMENT OF THE DIMENSIONS OF NEW LARGE SCALE DEVELOPMENT PROJECTS

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1 THE NEW MEGAPROJECTS

The spread of neo-liberal political and economic ideology and the proliferation of global capital have created new opportunities and challenges for cities everywhere (Sassen 2012). Within the urban planning discourse, it is generally assumed that globalization leads to the same type of transformations and urban development trends everywhere in the world. However, it cannot create a certain prototype for spatial development or a new spatial order for cities. Rather, it gives a variety of spatial patterns, also called "global urban forms". Recently, these forms have identified themselves spatially within a series of "mega-projects", their intensity being felt in today's global cities, north-American and west-European, but with a domino effect, especially in the cities situated at the periphery of these capitalist economies.

In the last two decades, we witness a renaissance and reinterpretation of "mega projects" within the global cities as an exclusive model for urban development (Swyngedow et al. 2004). In the European and American context, after a hiatus during the 1980s, many of these cities have responded to the economic pressure and the process of globalization through major projects and mixed-use developments to attain investment opportunities, building new CBDs for multi-national companies and new sites for living[1]. Total global megaproject spending is assessed at USD 6-9 trillion annually, or 8 percent of total global GDP, which denotes the biggest investment boom in human history. Never has systematic and valid knowledge about megaprojects therefore been more important to inform policy, practice, and public debate in this highly costly area of business and government. It is argued that the conventional way of managing megaprojects has reached a "tension point," where tradition is challenged and reform is emerging (Flyvbjerg, 2011).

As a response to the crisis of the comprehensive plan as the classic policy instrument of the Fordist age, the large, emblematic project has emerged as a viable alternative, allegedly combining the advantages of flexibility and targeted actions with a tremendous symbolic capacity. Essentially fragmented, this form of intervention goes hand in hand with an eclectic planning style where attention to design, detail, morphology, and aesthetics is paramount. The emblematic project captures a segment of the city and turns it into the symbol of the new restructured/ revitalized metropolis cast with a powerful image of innovation, creativity, and success. And yet, despite the rhetoric, the replacement of the plan by the project has not displaced planning from the urban arena. In fact, the literature reveals that in most examples there is a strong strategic component and a significant role for planning. However, in the process, there has been a drastic reorganization of the planning and urban policy-making structures and a rise of new modes of intervention, planning goals, tools, and institutions.

1.1 GENESIS AND DEFINITION OF MEGA PROJECTS

After WWII, the Fordist state engaged in a series of "mega projects" for the restructuration of urban tissue, the efforts to create a modern society with express ways and high rise buildings. Jane Jacobs (1961 pg. 25), ironically named those efforts and the city: "radiant garden city beautiful". Surpassing these critics on the left, critics on the right argue that these developments are an unnecessary intrusion of the forces of the government and have led to unjustified expropriations of private property. (Anderson 1964) Overcoming the social movements of 1960-70s, the restrictions of the government and the decentralization associated with neoliberalism, these types of developments unwind, but they do not totally disappear (Altshuler si Luberoff 2003).

[1] Definition here of "mega projects" is a comprehensive one; it includes essentially extensive costs and procedures, reconstruction, regeneration, rehabilitation. The implementation expands within a long period, involving a multitude of actors from different milieus- public/ private. Still, a fundamental condition is the change of functions of the existing territory.

Megaprojects are large-scale, complex ventures that typically cost a billion dollars or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people. Therefore, these developments are not just magnified versions of smaller projects; rather they are a completely different breed of projects in terms of their level of aspiration, lead times, complexity, and stakeholder involvement (Flyvbjerg, 2011).

Large-scale projects have a calamitous history of cost overrun: since the past 70 years, one out of nine projects have cost overrun. Flyvbjerg calls this phenomenon as the “iron law of mega projects”, representing over budget and overtime. The "break-fix model" of megaproject management it is introduces as an explanation, therefore, these kind of developments are "easy to begin and difficult and expensive to stop" (White, 2012; also Cantarelli el al., 2010; Ross and Staw, 1993, Drummond, 1998).

One may argue, of course, as famously done by Hirschman (1967a: 12-13) with his theory of Hiding Hand, that if people knew in advance the real costs and challenges involved in delivering a large project, "they probably would never have touched it" and nothing would ever get built. Sawyer (1952: 199, 203) – in a study of early industrial infrastructure projects that he called a work "in praise of folly" – similarly identified what he called "creative error" in project development as, first, "miscalculation or sheer ignorance" of the true costs and benefits of projects and, second, such miscalculation being "crucial to getting an enterprise launched at all."--- "creative error" was key to building a number of large and historically important projects like the Welland Canal between Lake Erie and Lake Ontario, the Panama Canal, the Middlesex Canal, the Troy and Greenfield Railroad, and early Ohio roads

However, these theories are in fact corrupting for megaproject thinking, both academically and at policy level. An optimistic cost estimate is low and leads to cost overrun, whereas an optimistic benefit estimate is high and results in benefit shortfalls. Thus errors of estimation do not cancel each other out, as Hirschman would have it; the exact opposite happens, errors generally reinforce each other. Flyvbjerg (2009: 352) call this “inverted Darwinism”, i.e., the "survival of the unfittest".

The concept- mega project- assumes two main typologies: major constructions with symbolic value for the city (Hamnett si Shoval 2003); huge development sites, complex in result (mixed-uses, smart technologies etc.) (Orueta si Fainstein 2009)

The existing new wave of mega projects does not represent a disappearance of old types of large-scale urban interventions, the major infrastructure (dams and reservoirs, river diversions, power plants, etc.), which are closely related to urban development. These, together with the construction of highways, tunnels, high speed trains are connecting the urban areas (Naredo 2006) and are part of the contemporary development model.

Depending on the type of the intervention, the new mega projects can be included in one or more of the following categories: urban waterfront regeneration; re-use and transformation of industrial sites[1]; construction of new transportation infrastructure or extensions of the existing ones; renewal of old city centers and close neighborhoods; usually for attracting the middle-upper class (Zukin 1998; Loures 2001);

But what drives the megaproject boom described above? Why are megaprojects so attractive to decision makers? The answer may be found in the so-called "four sublimes" of megaproject management: political (megaprojects are manifest, garner attention, and lend an air of proactiveness to their prooters); technological (is a term variously attributed to Miller (1965) and Marx (1967) to describe the positive historical reception of technology in American culture during the nineteenth and early twentieth centuries, but Frick (2008) introduced the term to the study of megaprojects and here describes the technological sublime as the rapture engineers and technologists get from building large and innovative projects with their rich opportunities for pushing the boundaries for what technology can do); economic (given the enormous budgets for megaprojects there are ample funds to go around for all, including contractors, engineers, architects, consultants, construction and transportation workers, bankers, investors, landowners, lawyers, and developers. jobs etc); aesthetic (is the pleasure designers and people who appreciate good design get from building, using, and looking at something very large that is also iconically beautiful, like SanFrancisco's Golden Gate bridge or Sydney's Opera House)

[1] Generally, these include residential areas with a more or less office space, hotels, malls, conventions center, museums etc.

There is a striking physical similarity of the development of space- involvement of innovative design forms and international architects; and of the strategies and schemes of involving the private sector- the orientation towards real estate trends. These aspects are stated to be passive towards the geographic and political context. However, mega projects differentiate themselves by the way they combine social and environmental goals with the economical ones, the planning process and impact, reflecting in the same time the level of commitment that the host city has towards the concept of social equity (Fainstein 2009).

Hirschman (1995: vii, xi) calls such projects "privileged particles of the development process" and points out that often they are "trait making," that is, they are designed to ambitiously change the structure of society, as opposed to smaller and more conventional projects that are "trait taking," i.e., they fit into pre-existing structures and do not attempt to modify these. The framework of “exceptionality” associated with these initiatives favors a more autonomous, if not autocratic, dynamic marked by special plans and projects that relegate statutory norms and procedures to a secondary and subordinated place. “Exceptionality” is a fundamental feature of the new urban policy, based on the primacy of project-based initiatives over regulatory plans and procedures. These changes involve, as stated before, among other things, the emergence of new policy tools, actors, and institutions, and they have important consequences for urban policy-making in general and for local democracy in particular, considering the increasing inequality in access to decision-making.

These kind of projects often take place within fragmented and entrepreneurial forms of governance (Harvey 1989; Healey 1997; Gordon 1997a, 1997b; Feldman 1999; Feinstein 2001; Granath 2005; Butler 2007) represented by public-private partnerships, in a societal environment of increased capital mobility and inter-urban competition (Malone 1996). Hence, it is argued, that mega projects have been examples of new governance styles and policy targets, but also object of intensive local planning debates and conflicts based on different actors (authorities, planners, residents, environmental groups, developers, etc.) holding an equal number of views (Hoyle, 2002) which are often difficult to reconcile. Brenner and Theodore (2004) argue that an important analysis aspect to identify the impact is the role of the state in these kinds of interventions (provision of subsidies, land or special treatment in the tax, etc.) and the level of involvement and its loyalty towards the goals for the public.

2 URBAN WATERFRONT REGENERATION IN ISTANBUL: HALIC/ THE GOLDEN HORN

2.1 CONTEXT: PLANNING IN GLOBAL ISTANBUL AND DYNAMICS OF URBAN REGENERATION

Since the 1980s in Turkey´s milieu, national policy intended to make Istanbul the focal point of a neo-liberal strategy approach to integrate the Turkish economy with global markets. This was visible also in the accelerating transformation of urban space, making it the showcase of the country’s new era of internationalism (Enlil 2011; Uzun 2010, Çınar, C et al, 2006; İnalÇekiç and Gezici, 2005; Keyder, 2005; Karadag, 2010). Under this context, during the last thirty five years, investments have been located within the city in order to change the local landscape pushing it towards the global city image. Therefore, the city has been expanding with multiple mega-projects and naturally, a strong representative symbol of the global, emerged: waterfront regenerations in the valuable "soft" space of inner city usually modifying natural coast profiles.

In order to understand the planning processes of the regeneration of Halic's waterfront, a reflection is done upon the peculiarities of Istanbul’s urban regeneration policies and the institutional framework at city and national level that have facilitated it. Urban regeneration is steered as a tool for development within a special legal framework (Law of Conservation- Law No. 2863) and while the purpose of the projects seem to be in the name of upgrading the built environment and improving the living conditions of the poor, the top-down approach, reduce the projects to just transformation of physical space and neglecting the social, economic and environmental dimensions, which along with the unwillingness of government to allow grassroots participation in the planning process become the focus of discontent and protest.

2.2 DECISION MAKING PROCESS: LATEST URBAN WATERFRONT DEVELOPMENT ALONG HALIC/ THE GOLDEN HORN

The first attempt to officially create a plan to regenerate the area of Halic, Camialti and Taskizak shipyards is in 2011, when all three shipyards come under the authority of Istanbul Metropolitan Municipality (IMM). The final goal is to create a comprehensive urban regeneration project and reconnect Beyoglu district with its waterfront along the Halic.

Being declared as a Conservation Area, the development is managed by the Department of Historic Environment Protection (DHEP, in Turkish Tarihi Cevre Koruma Mudurlugu is the representative body of Istanbul Metropolitan Municipality in the areas declared for conservation. It is empowered by the Decision No. 313 in 04/06/1999 and has a management role within the project, making sure that the project it is accomplished in line with the requirements of the Law of Conservation), which focuses on the restoration of the historical buildings on the site and change of the current functions in new ones according to the needs of the citizens. DHEP designates through a bid the task of making and designing the plans to Istanbul Metropolitan Planning (IMP- Bimtas S.A., is a semi-private company and also a research center for Istanbul Metropolitan Municipality. It has long lasting collaborations with academia, neighborhood associations and wide experience in planning in Istanbul, being also it is the company that made the last Master plan of Istanbul 2009 and many other important development projects).

In line with the requirements of the Law of Conservation, the Conservation Board No. II is added to the decision-making process. This Board is linked directly and represents the interest of the Ministry of Culture and Tourism, has great power on the project's outcomes, evaluating the plans and being able to cancel them.

The plans done for a preliminary project (in Turkish "avan proje") start on January 2011 and finish in June 2011, but without any request for participation from the citizens side and no reflection on the surrounding neighborhoods. The proposed functions for the area are: cultural, recreational, social services and commerce functions and are approved by the Conservation Board No. II in July 2012. The next step in planning process after the preliminary project, according to Main Law of Construction (Law No.3194), is the implementation project (in Turkish: "uygulama projesi") which did not continue with all three shipyards. Here a shift in the governance forms of the project changes the planning process along with rising concern on the project's future outcomes: just one of the shipyards went further to the implementation phase under the name of Halic Shipyard Conservation Project, when the area of the other two shipyards is being privatized. Holding the ownership of the land of Camialti and Taskizak shipyards, the Ministry of Transport Maritime Affairs and Communications (MTMAC) decides to withdraw the project from the authority of IMM.

In 2013, a new urban waterfront regeneration project is declared for privatization and classified by the Prime-minister Tayyip Erdoğan as: "miraculous project" ("muhteşem proje") which appears with the name: Halic Port Project. The urban waterfront regeneration project is initiated by the MTMAC, under the Law of Privatization, known as Built Operate and Transfer (Yap Islet Devret- Law. No. 3996) and is approved by Higher Council of Privatization (HCP); this also being possible because, according to the Law of Privatization, since 1994, the authority to make and approve plans concerning estates included in the privatization program was transferred from local authorities to the HCP.

The area is given to auction and is announced in the Official Paper (Resmi Gazete, page 28646) on 13 May 2013. The tender is taken on 2 July 2013 by "Sembol International Investment","Ekopark Tourism" and "Fine Otelcilik Girişim Group"(Sembol Uluslararası Yatırım-Ekopark Turizm-Fine Otelcilik Girişim Grubu) for 49 years: 4 years for building and 45 years for usage. The requirements of the project are given beforehand to the investors, being decided by the MTMAC and approved by the HPC. These are: "two yacht ports, two five stars hotels, small shops, offices, museums, culture and a congress center". Taking into account these foreseen outcomes of the project, it can be argued that this development is not designed for the interest of all citizens of Istanbul or the neighboring community, but rather for tourists and high-middle income class. The promised outcomes of the project are presented in the media through the political discourse as the only information channel for citizens and therefore raised a big wave of criticism from academia and other expert's side, questioning the way decision is being taken.

Therefore, the planning process is lacking transparency and the Privatization Law gives central government power to privatize public land without any consideration of the civil society. Also local municipality has been taken out from the planning process and also the 1/1.000 plans that should be done

for the Camialti and Taskizak shipyards are developed by the private investor, this raising questions concerning the conservation of the shipyards.: The only actor from the government side having decision power over the outcomes of this project remains the Conservation Board No.II.

In contrast, the area of Halic shipyard is developed further by IMM within the Halic Shipyard Conservation Project. Major actors in the planning process here are: IMM, the initiator of the project, owner of the land and also the provider of the finance in realizing it; the DHEP managing the project, having mainly the responsibility to assure the conservation and restoration of the historical monuments in the area; the Conservation Board No. II, representative of Ministry of Culture and Tourism, having also the main responsibility to assure the conservation and restoration of the monuments; IMP in charge of the plans and design of the project and also IDO (Sehir Hatlari) - a private company of public transport on water, having currently the tender over the area of Halic shipyard.

In the interviews with representatives from the planning department of IMP, the team planning Halic Shipyard Conservation Project, it is revealed that the outcomes of the project will take into consideration the previous suggestions and that the project will respect the 1/1000 Plans of Beyoglu in terms of conservation of the shipyards, along with the recommendations of implementing cultural and recreational activities. Moreover creation of green spaces is emphasized, the vision being to open the waterfront for the broad public, the citizens of Istanbul. Proposed strategies concerning the development are: "conservation of the buildings, enhancing the transportation in the area, introduction of recreational and exposition areas, bringing the city to the waterfront, protection of green spaces and ensure the participation of the local people of the area."

However, the project contains no analysis of impact assessment such as: environmental, economic or social, this showing the physical focus of urban waterfront regeneration in planning, putting in doubt the success and purpose of this project. There is also no information provided for the broader public about the project or the request for any collaboration from the citizen's side. The chance to challenge decision making is possible at the end of the project. As all projects made by municipality, also this one is presented to the community at the end of the planning process, plans are hanged in the Istanbul Metropolitan Municipality building and within 30 days the interested parties have the right to contest the project through court. This leads to questioning the outcomes of the project because of this type of non-transparent planning process that leaves no input from the citizen's perspective.

Therefore, as seen and criticized in other examples of projects along the Halic, the project could also potentially enhance existing socio-economic problems, a matter that will be presented in the following part of the article, by analyzing the neighboring community in rapport to the project.

Looking at the current state of the transformation of the three shipyards, there are two urban waterfront regeneration projects with different governance forms. The area of Camialti and Taskizak shipyards is under the authority of a private investor and it can be argued if the project will benefit the broader public of Istanbul. The area of Halic shipyard remained under the authority of the government, but the planning process is un-transparent and the project is not shared or questioned within the interested public. In an attempt to compare the projects from the perspective of the information available, paradoxically, the Halic Port Project is much more known by the public than the project made by the municipality because of the exposure in the media. However there is a major gap of good quality information for citizens regarding both projects.

This was reflected in the questioners conducted with the neighboring community, academia, planners from Istanbul Metropolitan Planning and citizens participating to forums organized by the representatives of the resistance to the regeneration of the shipyards. An urban social movement appeared on 23 August 2013 under the name of Halic Resistance (Halic Dayansimasi). Other opposing parties are:

Bedrettin Neighborhood Association, Chamber of Architects, Chamber of Urban Planners, Assembly of Architects and Engineers, Chamber of Shipbuilding Engineers, Academia and other urban social movements.

2.3 THE STRUGGLE OF THE NEIGHBORING COMMUNITY: BEDRETTIN NEIGHBORHOOD

Bedrettin Neighborhood is a low income neighborhood (according to median monthly household income 2010) at the shores of Halic, in Beyoglu District. It was strongly connected to Halic, Camialti and Taskizak shipyards, being occupied by blue collar workers. Therefore, the neighborhood was much affected by the clearance process done by mayor Dalan in 1983, the first regeneration along Halic, its current problematic economic condition being outcome of the forced deindustrialization process of that time. Today, approximately 1500 people live in Bedrettin Neighborhood and are mostly divided as retired workers from the shipyards, people coming from Anatolian side of Turkey during the industrialization period and a considerable group of roma minorities.

Bedrettin Neighborhood was declared as Renewal Area in 2005 and, according to Law of Renewal, the neighborhood will go under a process of regeneration which will put in danger of displacement the poor citizens. Although 80% of the citizens living there, own their land, the houses built are not in good condition, being classified as "gecekondu", squatter housing, and have to be renewed and improved for their safety, this being a hard task for the majority of the community which is poor.

The reason for opposition, from the citizen's perspective was not only the fear of displacement, but also the difference between the new proposed plans and their actual needs. In the questioners conducted during the meetings of Halic Resistance, besides the fear of displacement answers also as: "to learn the truth", "because this project is being used strategically against us" were given.

Although, the citizens of Bedrettin Neighborhood are against the Halic Shipyard Conservation Project, outcomes of the questioners regarding what they would need in the future development were: green spaces, culture and education facilities, keeping the working shipyards, health facilities. In the discussions with the community, especially with the group of mothers, mostly staying home and taking care of their children, the need of closer public space and green areas was emphasized. It was found that families go to other parks along the Halic and make barbeques or just bring their children to play, this being the only recreational activity for these families. An intriguing vision of the children is the one of the "fisherman", a symbol of the waterfront of Istanbul which should not be blurred in the landscape of waterfront development for global economic gain given by projects in name of tourism and consumption.

Taking into account the vulnerable position of the neighborhood in terms of economic situation, the on-going gentrification process at Halic's waterfront and the renewal project in the agenda of the government, it can be argued that Halic Shipyard Conservation Project will contribute to this picture considerably, creating social and economic impacts on the community. The community of Bedrettin Neighborhood is an important actor being the most affected by the project, but also by its potential to give inputs to the project. Due to the lack of consideration of this neighborhood in the planning process the true benefiting outcomes of the project will not be achieved.

2.4 GOVERNANCE DYNAMICS AND RELATIONSHIPS AND POSITIONS OF THE ACTORS

Relationships of the actors are "crucial in understanding the direction of the planning processes."(Nuissl and Heinrichs 2010). The relationships were established as outcome of the interviews conducted by the researcher and through participatory observation. When mapping the relationships, there are two clusters of actors that do not come together, this situations are reflected on the clash of interests and gap between civil society representatives and the government. One group represents the actors involved directly in the planning process and the other represents the strong opposition. The first ones has hierarchical vertical relationships by territorial responsibility of different governmental bodies and market based relationships by contractual agreements. The other group in opposition to the project is represented by collaborative and horizontal relationships of the non-governmental organizations, social movements and other civil society representatives.

Analyzing the actors in opposition and the horizontal network-like relations, overlapping interconnections among them can be observed. The boundaries between these actors are hard to be defined as they cooperate and interconnect with each other rapidly, using innovative means of communication in exchanging of opinions and in deciding common action. When the main actors from opposition, and ones involved in the planning process are considered for their relationship, there is a long lasting conflict between them which resulted from the interviews conducted with representatives of both sides, this

making also harder for the two groups to come together. It can be argued that even though the resistance is engaging with the community into a fight against the urban regeneration agenda of the government, undertaking an advocacy planning role, it is also creating a barrier between state and citizens.

2.6 CONCLUSIONS

At the first glance, urban waterfront regeneration in the context of Istanbul reveals the same features of the popular contested cases of North and Western examples .The privileged governance structures identified in the literature review of urban waterfront regeneration projects aiming economical gain over the conception of a new city image and planning focusing on mostly physical transformation, ignoring the social problems of the neighboring sites and not taking the opportunity to resolve them can be seen also in the case study.

However, the form in which these outcomes reveal themselves, are different. Much of the literature on urban waterfront regeneration warns about the entrepreneurial governance forms, the private-public partnerships and the active role of private sector in the development of the projects, which lead to displacement of the communities, gentrification and other negative impacts. In the context of Istanbul, the leading factors are an entrepreneurial government and also a national policy on urban regeneration designated by the central government. In contrast with other urban waterfront regeneration projects around the world, which reveal citizens struggle with displacement, job opportunities, social housing opportunities and public space at waterfront as reasons for opposition, the case study presents also other encompassing motivations. The strong and constantly growing opposition is also part of a leading strategy of the citizens of Istanbul to get back the rights to the city. This is owed to long term accumulation of tensions facing the current urban planning practices in Istanbul, Turkey. The resistance, therefore, is not outcome of the particular regeneration of Halic shipyard or the privatization of the other two shipyards, Camialti and Taskizak shipyards (part of Halic Shipyards- Tersane-i Amire Arsenal), but rather of a bigger picture of urban regeneration projects done in Istanbul.

Hence, there is a waterfront regeneration project made for public interest, but the rights of the future users of the space, of the neighboring community and mostly of the citizens of Istanbul are in this way lost behind a neo-liberal agenda of the central and local government, un-transparent planning processes and the fight of the strong opposition parties gaining ground of governance landscape.

3 PICTURES

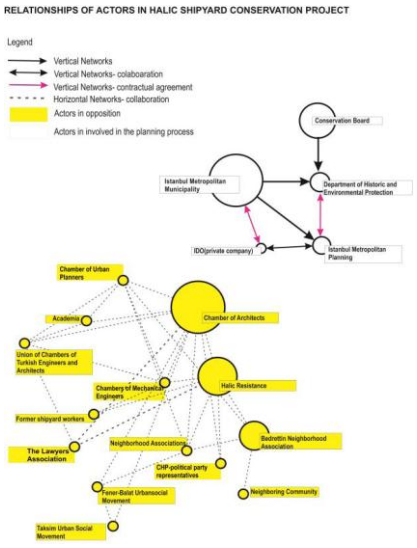

Figure 2: Relations among actors in Halic Shipyard Conservation Project; Source: author (adapted after computer mapping with graphscommons: http://graphcommons.com/graphs/1417)

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ID 1664 | GREEN GROWTH AND TRANSFORMATION TO SUSTAINABILITY: SUPPLEMENTATION OR CONTRADICTION?

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1 INTRODUCTION

The decisive impact of mankind on ecology from global to local scales has resulted in describing the current epoch as 'Anthropocene' (Crutzen and Stoermer, 2000: 17). In this sense mankind is considered 'a major geological force' (Crutzen and Stoermer, 2000: 18) which will continue to shape natural processes in the millennia to come. Thus, developing sustainable and inclusionary systems (Sachs 2015: 9) becomes 'one of the great future tasks of mankind' (Crutzen and Stoermer, 2000: 18).

Global development and environmental issues such as famine, illiteracy, the lack of access to clean water as well as global climate change, soil degradation and deforestation are two sides of the same coin (WCED,1987: 12-16): They are the result of spatially and temporally short-sighted actions and decisions (Nelson, 2010: 497) which have let to resource intensive practices, processes and systems that in sum exceed natural regeneration rates and result in megatrends that threaten human lives, biodiversity and ecosystems (WBGU, 2011: 33-45). Current trends of energy production and consumption and 'the enormous and continually growing use of natural resources' (Haberl et al., 2011: 5) represent an unsustainable societal trajectory which will further increase the speed and magnitude of climate change (Haberl et al., 2011: 5-8).

It becomes evident that sustainable development cannot be a question of iterative changes and technical adaptation to a changing natural environment. Rather, it requires the transformation of major societal systems and processes such as production and consumption, mobility and land-use patterns as result of an approach shared and promoted by the majority of current society. In other words, a transformation to sustainability is required. In order to realize this demand for fundamental societal change, the transformation has to occur in the three pillars our society is based on: energy systems, urban areas as main emitters of greenhouse gasses and global land-use systems (WBGU, 2011: 48) which can also be identified as the main fields of intervention to pursue broad societal change (WBGU, 2011: 265).

The spatial patterns of cities and city regions are urban systems which consume vast amounts of land and resources that exceed natural regeneration rates while degrading the environment. Furthermore, the vulnerability of cities and regions to climate change impacts and other biophysical and societal stressors such as the degradation of ecosystems and poverty (IPCC, 2014: 182) are consequences of long existing unsustainable societal structures and processes.

The concept of Green Growth intends to promote sustainable development through a more efficient use of natural resources and the application of green economies and technologies. It is considered to be a suitable approach to practically promote and implement sustainable development. This is reflected in

existing policies and strategic approaches on supra-national, national and sub-national levels. As such the concept of Green Growth unfolds considerable impacts when it comes to spatial development especially on regional levels which functions as crucial levels of implementation. Therefore, the current praxis of Green Growth strategies and conceptions nowadays influences urban and regional development. This raises questions regarding the impacts of Green Growth strategies on spatial development and more specifically on their ability to transform cities and regions to sustainability.

This paper aims to critically examine the correlation of Green Growth with sustainable development analysing their overlaps, focuses and effects on societal transformation processes. This is carried out by considering the required transformation process at the theoretical framework, and by elaborating how cities and region, the key to implementation, can be part of such processes.

Following the introduction, the concept of sustainable development as a normative concept to guide development is explored in chapter 2. The dimensions of sustainability and possible paths to realize sustainable development are also discussed. Then, in chapter 3 the concept of Green Growth as a path to implement and promote sustainable development is examined and current methods to practically implement Green Growth at the policy level are illustrated. Against this background, chapter 4 discusses the suitability of Green Growth as a practical approach to implement sustainable development. Focuses and weaknesses of existing Green Growth implementations are identified. The importance of the special level to implementation is discussed. In chapter 5, the theoretical understanding of transition theory and the idea of societal transformation are introduced to further enrich the discussion on processes of societal change to a more sustainable state. Transition theory is used as a theoretical basis to conceptualize transformation. Furthermore, the relevance of space, e.g. city or region, is introduced with regard to transformation and implementation. This allows discussing the relation between Green Growth and transformation in the final chapter 6 and to derive questions for further research.

The paper is based on desktop research and analysis of scientific papers, reports, documents of international institutions and think tanks and monographs covering the topics Green Growth, Green Economy, Sustainability and Sustainable Development. Scientific documents of relevant institutions such as the OECD and EU were included in the analysis. The paper discusses the concept of Green Growth on a meta-level based on the document analysis.

2 SUSTAINABLE DEVELOPMENT

Sustainability and sustainable development are words that are used a lot in politics, economy and society to mean any number of different things from ‘slightly less harmful to the environment’, to ‘a net plus for the environment’. There seem to be as many different meanings of the term as there are organisations that use it. However, if we are to successfully discuss sustainable development and sustainability in this paper, it is necessary to set the boundaries of what we are discussing. In this chapter, we will first define and discuss the meaning of sustainable development. Following that, a similar discussion of the term sustainable development occurs in 2.2. Finally, the possible paths to sustainable development are looked at in 2.3.

2.1 SOME CONTEXT

The UN report ‘The Limit of Growth’ (1979) thematised the planet’s ecological boundaries and the risks associated with these and crucially shaped the concept of sustainability. For the first time unchecked resource consumption and increasing environmental pollution were shown in relation to continuing population growth and unfettered economic growth (Meadows et al., 1972). This link between the economy and economic development and the environment was emphasized by the World Conservation Strategy in 1980. This formulated the need for an integrated approach to sustainable development (International Union for the Conservation of Nature 1980 cited in Hardy and Lloyd, 1994: 774). Such an integrated perspective leads to the recognition of the environment as the foundation for living and economic development. This key-thought was emphasized by the German WBGU (1994: 186). Guiding on this idea, the WBGU stated in 2011 that economic development within planetary boundaries means preserving natural resources with regard to their respective regeneration times. The regeneration capacity of the ecosystem is thus the key-element of sustainability.

The increasing globalisation of environmental problems, and thereby the time gap between cause and effect, requires complex and inter-generational problem analysis (Paech, 2006: 45). This approach was taken for the first time by the Brundtland Report in 1987 as concept of sustainable development with the definition: ‘Sustainable development [is] on approach to development that 'meets the needs of the present, without Compromising the ability of future generations to meet Their Own needs 'and highlighted the potential role of market mechanisms in securing on integrated approach to economic change and the environment ‘(Hardy, Lloyd, 1994: 774).

The model of sustainability must be understood as a ‘contested concept’ (Jacobs, 1999 cited in Heilmann, 2015: 50). The concept of sustainability only takes on concrete form and becomes problem relevant with discussion and argument (Heilmann, 2015: 50). This is because it´s a holistic concept, which integrates sectors across borders and generations and emphasizes the interconnected nature of the economic, social and environmental aspects of any action. This suggests that sustainable development as a concept will also require discussion to be relevant, the observation of spatial and temporal dimensions, an understanding of the world as a system (van Zeijl-Rozema, 2011: 11). This system view is to be applied to different sized spatial and temporal frameworks. The system can be described as a complex adaptive system with characteristics such as a ‘large number of nonlinearly interacting components, scale multiplicity in structure and dynamics, and self-organizing capacity’ (Levin, 1999 cited in Wu, 2013: 1004). Taking the world as a system implies that smaller spatial areas can be viewed as sub-systems in the global systems context. Each spatial area can be viewed separately using the concept of sustainable development, but is always connected to the global system level. Sustainability at the local level can therefore not be viewed without an understanding of its place in the global sustainability milieu. Although sustainable development is grounded in the material and spatial needs of society and the spatial context is vital for specific applications (Morgan, 2011: 88), these always need to be considered as part of the global environment.

Sustainability can therefore be understood as a forward-looking process of social learning, research and design according to best usage-patterns (Lucas 2000: 19). Sustainable development can be considered as a (spatial) modernisation program (ibid.: 17) and evolutionary development of potential. This interpretation of sustainable development is based on the theory of ecological modernisation as developed by Huber (1982) and Jaenicke (1985) (Gibbs, 2000: 11). According to Huber (1982) there is need of a change in the relationship between the economy and the environment if a transition from an industrial society to an ecological organisation of production is to occur (Gibbs, 2000: 11). On the one hand, the concept of ecological modernisation can be used as a theoretical framework for the analysis of changes in key social institutions in the context of solving ecological crises, and on the other hand as a pragmatic political program, which is intended to produce a change in environmental policy (Gibbs, 2000: 12). This analytical framework approach is based on the concept of continuous learning processes. The concept of ecological modernization includes three core ideas (Gouldson and Murphy, 1996, Huber, 1985 cited in Gibbs, 2000: 12):

- A restructuring of production and consumption in relation to the environmental objectives: Use of clean production technologies and decoupling of economic development from resource use (input), resource use and emissions.
- The economization of ecology: Installation of an economic value on the nature and evolution of structural tax reform
- Connection of environmental policy objectives with other policies.

According to Hajer (1993 cited in Gibbs, 2000: 12), interpretations these three core elements of ecological modernisation fall into two main categories: first, the techno-corporatist approach with the ‘economisation of nature and elitist decision-making’ and second, a stronger understanding of sustainability, which includes not only considers changes in production and consumption, but also in democratisation, redistribution and social justice (Gibbs, 2000: 12). The practical implementation of sustainability can thus be viewed as a process of searching for sustainable utilization concepts, with the economy and economic processes seen as a key driver.

To enable further discussion, an understanding of the distinction between sustainability, development and growth is needed at this point. Holling (2001) defines sustainability as ‘the capacity to create, test and maintain adaptive capability. Development is the process of creating, testing, and Maintaining opportunity ...'sustainable development`, thus refers to the goal of fostering adaptive capabilities and creating

opportunities. [...] Sustainability requires both change and persistence' (Holling, 2001 cited in Wu, 2013: 1004). According to the Brundtland-Report the term `development´ includes economic, ecological and social change, which takes place within the balance of these three dimensions. Development always refers a change in quality and thus on the unfolding of potentiality (Schepelmann et al., 2010: 9). Growth emphasizes the measurable and physical dimensions of development. When considering these three definitions together, it becomes clear that an 'economy […] can grow without developing, or develop without growing, or do both, or neither' (Lawn, 2000: 29 f. and Schepelmann et al., 2010: 9). Economic growth does not equate to development or progress; an increase in GDP does not automatically lead to an increase in quality or potential. However, it is very common for development to be automatically equated with growth and mapped by the GDP of an area (Daly, 2006: 41). Thus, measuring spatial development with GDP data, based on this incorrect conclusion, leads to a distorted and limited perspective.

Having explored the different understandings of the term sustainable development, the following section illustrates dimensions and interdependencies of sustainable development.

2.2 DIMENSIONS OF SUSTAINABLE DEVELOPMENT

More than one hundred definitions of sustainability can be identified in literature (Marshall and Toffel, 2005 cited in Wu, 2013: 1000), each with different priorities and perspectives. The three best-known models are the 'Triple Bottom Line' (A), 'Weak sustainability' (B) and 'Strong Sustainability' (C) (Wu, 2013: 1002). While the 'triple bottom line' model defines sustainability as the intersection between three dimensions, the model 'Weak sustainability' understands sustainability as the balance of these dimensions in a triangle. Both models give the three dimensions economy, environment and society an equal footing. 'Strong sustainability' defines the environment as the all-encompassing system, within which society with its economic process exists (C). This model shows similarities with the idea of acting sustainable if ecological barriers are respected, as defined by the WBGU (2011).

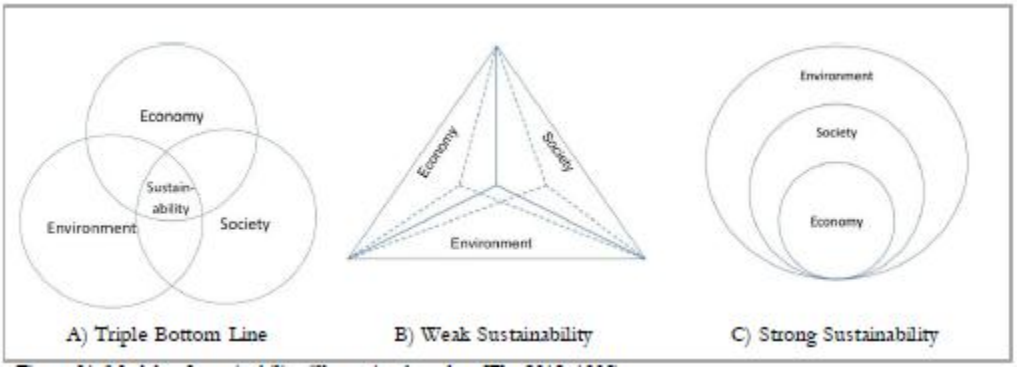

Figure 01: Models of sustainability (illustration based on Wu, 2013: 1002)

For the following discussion, we will work with the model of 'weak sustainability'. Although this model is criticised as being 'business as usual' (Cumming et al. 2013 cited in Wu 2013: 1004) and is associated with the triangle balance of sustainability, it shows the various interdependencies and interactions between the economic, environmental and social dimensions. This is important because of the need to consider all three aspects and how they are systemically connected, as explained below.

Figure 02 shows these interdependencies and interactions between the three dimensions as well as the three main conflicts. There are dependencies and conflicts between economic growth, environmental protection and social justice. What this model shows, is that in order to follow environmental goals, for example, economic and social goals need to be adjusted and the primacy of these goals reconsidered. The at least theoretical alternative is the decoupling of dependencies. To be emphasised is that these economic, environmental and social actions can only be considered in a spatial context (Lucas, 2000: 17). A society, its economy and environment always exist within a specific space. Thus the specific spatial embedding of the three dimensions of sustainability, together with the whole sustainable development concept (Morgan, 2011: 88) is the only way to consider the application of these ideas.

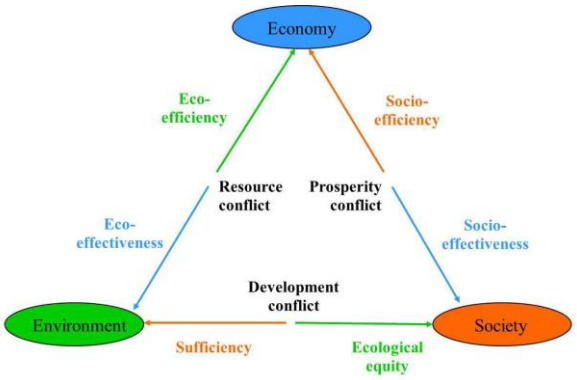

Figure 02: Three dimension and Interdependencies
(own presentation modified and based on Hansen, 2010: 23; Campbell, 1996: 298)

The three dimensions in the context of this spatial dependence can understood as follows: The economy can be summarised as being local production, consumption, distribution, innovation, the labour market and new industries, around which local and regional competition occurs (Campbell, 1996: 297). The term society sums up, for example, communities, organisations and labour unions. In a spatial context a wide range of conflicts can arise between the society and the economy spheres, such as over the distribution of services or among different social groups (ibid.: 298) but also about property distributions and resulting segregation. The term environment includes all natural goods and resources. In the context of the economy, spatially differentiated material flows and resource usages lead to a resource conflict. This conflict exists because of the difference between the 'economic utility [of resources] in industrial society and their ecological utility in the environment' (ibid.: 299). This conflict is also closely linked to the growth-equity conflict (ibid). This is the conflict between resource use to improve living conditions and resource protection in order to preserve the environment, although Vazquez-Brust and Sarkis (2012: 8) dispute whether there is a trade-off between societal well-being and environmental quality. Campbell (1996) defines economic growth as the basis for progress and development, and thus a force for social justice and environmental protection. His equal positioning of the three dimensions of sustainability is based on this argument. The thesis that economic growth measured by GDP does not necessarily imply improvement and development has already been discussed in section 2.1. GDP does not consider quality and potential.

2.3 APPROACHES TOWARDS SUSTAINABILITY

Sustainability as it is understood today is the result of a discussion on the environment which has gradually progressed over decades. According to Healey and Shaw (1993: 770 f.) there have been 'five environmental discourses' in the past century:

- A welfarist utilitarian approach (from the 1940s onwards): Nature as a resource to be used. Conservation linked to moral obligation to maintain an 'ideal' British landscape.
- A growth management approach (from the 1960s onwards): Conserve natural resources for exploitation to enable economic growth and technological progress.
- An active environmental care and management approach (from the 1970s onwards): Enhancement of natural resources linked to economic benefits of improved environmental quality.
- An asset management approach (from the 1980s onwards): Natural resources to be improved as part of an enhancement of 'asset value'.
- An adoption of the rhetoric of sustainable development (from the 1990s onwards): Planning limited to some extent by environmental considerations based on concern of human impact on nature.

The different attitudes and ways of looking at the environment and natural resources over the last 80 years progress from a moral consideration of a nature that should be tamed (from the 1940s onwards), towards nature as a resource for economic progress and technological developments. Nature is consistently and continuously seen as a resource, which is used extensively, despite ecological recovery times. Ecological regeneration ability is not respected and preserved in practice. This resulted in current global economic and consumer power exceeding the planetary limits by a factor of 1.5 (Global Footprint Network, 2014).

Welzer describes this economic and consumer power as a phenomenon where the system consumes its own conditions for existing (Welzer, 2013: 93). If we intend to reach a point where resource use does not destroy the environment, such a fundamental transformation to sustainability would have to adjust global economic and consumer power to be within planetary boundaries (factor <1).

The question is therefore what visions and means of action are available to meet the objectives of sustainability. Hansen (2010: 21) and Paech (2006) distinguish between two perspectives:

- The qualitative or 'technical' dimension
- The quantitative or 'cultural' dimension.

The qualitative dimension involves technical processes and the ways in which a particular need is satisfied. Going this route would involve reducing or ideally elimination the effects of economic growth on the environment by means of technical (e.g. increasing efficiency), process (e.g. closed cycle production) or systems innovations (e.g. considering sustainability risks in innovations management) (Hansen, 2010: 21). The growth paradigm is not questioned in this regard and the focus is completely on the availability of possibilities for adapting technical and organisational means (Paech, 2006: 48). This results in a problem solving focus on technical innovation without changing societal aims or values. 'Eco-efficiency' follows this line of argument with the aim to decoupling of economic growth and resource use (Boulanger 2010: 4). This approach has been criticised as effectively 'business as usual' with eco-products, thereby overwhelming resource savings (ibid.). The technical or qualitative dimension route follows the principles of efficiency and consistency. Efficiency is the increase of throughput rather than output (Nejkamp et al., 1991: 15), which involves minimising resource-use and innovating in the face of scarcity, which is a key principle of capitalism (Stigler, 2008). Consistency is the principle of changing the quality of material flows to the point where they are compatible with natural resource cycles (Gerlach, 2003:6). Harmful material flows should be replaced or made a closed-loop use of resources, in which all resources going into a product or service can be reused at the end of the product lifecycle. According to Schneidewind et al., (2013: 10) however, these dual principles alone have yet to show that a significant reduction of resource demand is possible while maintaining current paradigms.

The quantitative dimension or social route focuses on social aspects with regard to the extent of need (Hansen, 2010: 21). This route is linked to criticism of the growth paradigm and requires an adjustment of aims, following the principles of sufficiency (Paech, 2006: 50-52). Sufficiency is based on the 'how much is enough' strategy (Gerlach, 2003: 5) and suggests we need to adjust our consumption pattern towards what we need and away from consumption for consumptions sake, for example by replacing products with services (cars to car sharing, etc.) (Hansen, 2010: 21). Paech (2006: 51) sums it up with the following sustainable lifestyles aspects:

- What – the range of products available and the question of sustainable alternatives
- How – consumption routines and the possible replacement of products with services
- How much – how much do we need and the level of consumption

The qualitative path of following eco-innovation to solve environmental problems can be seen as an adjustment of the economy to suite ecological capacity. The quantitative route of changing lifestyles and consumption patterns will result in completely stopping consumption of some products. A great deal of power to create change and influence the markets rests with consumers in their ability to choose alternatives, through changes in patterns and reflexes as well as a desire to know more about each product.

The German Federal Environment Agency stated in 1997 that society's consumption practices are responsible for 30-40% of all environment problems (UBA, 1997: 221). This means our consumption practices are closely linked to our sustainability deficit. Given the above mentioned failure of the qualitative path of efficiency and consistency to reduce resource demand with its inherent environmental impact, the quantitative path also needs to be trodden to deliver sustainable development. So 'sustainable development [will] involve changes in existing patterns of consumption and investment in order to acknowledge the environmental dimension to economic and social welfare' (Pearce el al., 1989 cited in Hardy and Lloyd, 1994: 779). The challenge is to combine the ideas of sufficiency, efficiency and consistency (Gerlach, 2003: 6) with an attractive and dignified lifestyle, without moralising.

3 GREEN GROWTH

In this paper, the key concepts of Green Growth are discussed and how well Green Growth fits with the ideas of sustainability. The following chapter starts by showing the range of concepts currently being considered as possible solutions to current ecological problems in section 3.1 and where Green Growth fits within this range of concepts. Following on from this in section 3.2, green growth is examined in more detail and its key concepts defined. We look at the ways in which the concepts of Green Growth are promoted in policy in section 3.3. Finally, in section 3.4, Green Growth is critically examined based on its claims and sustainability criteria.

3.1 WHY GREEN GROWTH IS OF RELEVANCE

In the last few years, a number of concepts and approaches have been discussed and developed to deal with the increasing ecological and climate problems we face. Meyer et al. (2012: 7) distinguishes between four approaches as named below: growth orientated welfare (1.) also termed Ecological Modernisation – for example the Europe 2020 strategy or Green Growth concepts as proposed by the OECD and UNEP. This is based on continual economic growth combined with a 'greening' of the economy. A second proposal can be called comprehensive transformation strategies (2.) – e.g. the Great Transformation (Heinrich-Böll-Stiftung, WBGU, Vision 2050 by WBCSD). These additionally propose a comprehensive societal change and are critical of continued economic growth. Proponents' arguments are based on ecological and preservation imperatives and follow the path of sustainable development with its quantitative and qualitative dimensions. A third approach can be called Zero-Growth (3.), as proposed by Jackson (Prosperity without growth 2009) and Victor (Managing without Growth). This approach completely drops the economic growth paradigm on the basis that continued growth cannot and should not be allowed. The fourth concept is De-growth also known as Décoissance (Latouche 2010, the term was originally introduced in 1979 by Jacques Grinevald and Ivo Rens) or the Post-growth Economy (4.) (Paech, 2009). These go even further and propose that the economy needs to shrink for the common good, because if it does not, we will destroy the basis for humanity to exist (Meyer et al., 2012: 7). All four concepts have in common that they more or less focus on the economy as the main area of action. A new type of economy is required, ranging from slightly greener to completely transformed, with associated societal changes.

With regard to these four approaches, many international and political bodies seem to consider the concept of Green Growth or of Green Economy to be an adequate route to take, by transforming the economy to meet climate and ecological goals. Consequently, this concept is given much consideration in policy. A plethora of political programs and papers have adopted the concepts of Green Growth, for example the Europe 2020 strategy or the EU 2030 policy framework for climate and energy (BMUB, 2014). Institutions that have published papers on green growth include the OECD, the World Bank Group, the Global Green Growth Institute, UNEP, the UN, Green Growth Leadership and the International Chamber of Commerce (ICC). The United Nations Environment Program (UNEP) developed a Green Growth program for the Far East with a focus on 'environmentally sustainable economic progress to foster low-carbon, socially inclusive development'. Equivalent concepts amongst European states go under the name Green Economy (Vazquez-Brust and Sarkis, 2012: 7).

The Organisation for Economic Co-operation and Development (OECD) is one of the main proponents of the Green Growth concept and actively pushes for the acceptance of Green Growth in politics, with the result that most Green Growth political agendas are based on OECD concepts. In 2005 the OECD called upon its members to develop coherent policy for environmentally friendly growth (OECD, 2005 cited in Shim, 2009: 3). In 2009 the OECD started its Green Growth initiative and responded to the 2008 financial crisis with its Green Growth strategy. As part of this, the 34 OECD member states signed a memorandum for environmentally friendly growth with the aim of mitigating the crisis and stimulating economic growth (Federal Statistical Office of Germany, 2013: 8). Thus the green, environmentally friendly growth concept is also promoted as a solution to the financial crisis in politics.

The fact that so many institutions are considering the concept shows a change in thinking amongst economic decision makers (Meyer et al., 2012: 13). In the following chapters we will examine the now widely accepted Green Growth concept and analyse how well it meets its claims of sustainability.

3.2 DIMENSIONS OF GREEN GROWTH

Green Growth is a term that has been used to describe a number of different concepts in recent years. From Green Economy (UN, 2008) to Low Carbon Economy, from the Green New Deal (Think Tank New Economics Foundation, 2008) to growth strategies such as green investment, Green Growth covers a spectrum of ideas (Prognos, 2014: 6). The basic premise of Green Growth is to improve the economy by increasing resource productivity to the point of (eventually) decoupling growth from resource use. The concept is based on the theory that resource use and environmental damage can be decoupled from economic growth and that environmental protection offers economic opportunities (SRU, 2012: 9).

The Green Growth idea was originally based on the concepts of ecological modernisation (Bina, 2013: 1033). Ecological modernisation proposes to support social and technical innovations that allow the combination of economic growth and ecological sustainability. The concept implies a 'greener consumption and lifestyles, eco-efficiency and dematerialization' (Vazques-Brust and Sarkis, 2012: 4). Most political papers and definitions therefore have an economical and industry outlook and barely distinguish between Green Growth and the Green Economy. The OECD, for example, describes green growth as ' […] promoting economic growth while reducing pollution and greenhouse gas emissions, minimising waste and inefficient use of natural resources, and maintaining biodiversity. Green Growth means improving health prospects for populations and strengthening energy security through less dependence on imported fossil fuels. It also means making investments in the environment a driver for economic growth' (OECD, 2012). The indicator set proposed by the OECD to measure green growth progress amongst its member states highlights the fact that resources and technology are the focus. The success of green growth is measured purely by an increase in resource efficiency and a circular use of resources.

In another description by the World Bank (2012: 2), Green Growth offers the potential to increase resource efficiency, minimise negative environmental impact and cope adequately with disasters. By managing natural capital, organisations can be more resilient in the face of environmental dangers and disasters (please note, that the World Bank understands the concept of 'resilience' to mean a sort of comprehensive risk management). According to the German Advisory Council on Global Change (WBGU, 2011: 177), Green Growth stresses the compatibility of economic growth and decarbonisation combined with an inherent economic potential. This type of growth is proposed as a post-financial economic paradigm to reinvigorate the economy, focusing on investments of capital in environmental goods and services and the development of natural (i.e. green, sustainable) infrastructure (Vasquez-Brust and Sarkis, 2012: 8).

A number of publications have analysed and characterised the key concepts of green growth according to the available literature. Bina (2013: 1028) describes the main characteristics of Green Growth as a science and technology orientated progress with a focus on efficient growth and environmental economics. According to Vasquez-Brust and Sarkis (2012: 2) the discussion about green growth 'goes beyond growth balanced with environmental protection; green growth is quality-oriented, low-carbon, energy efficient growth with a focus on creating value through clean technology, natural infrastructure and innovation in markets for environmental goods and services. Green growth means making investment in the environment, as a driver for economic growth'.

Hammer et al. (2011: 15) have carried out a comprehensive literature review and systematically analysed key words that are linked to Green Growth. In 25 different reports discussing Green Growth, the most common links where industry and production focused, of which the main focus was on energy and utilities, green building, transportation, Clean-tech manufacturing and green manufacturing. The lifestyle consumption side of the equation is only poorly covered, by comparison.

According to Vasquez-Brust and Sarki (2012: 10 ff.) the quality of Green Growth depends on dimensions such as: policy integration, multi-stakeholders governance, flexibly regulation and dynamic policy mix, competitiveness, adding value, inclusion, justice and social cohesion, trust and collaboration and entrepreneurship. The main drivers of growth are: innovation, globalization and ecological urgency.

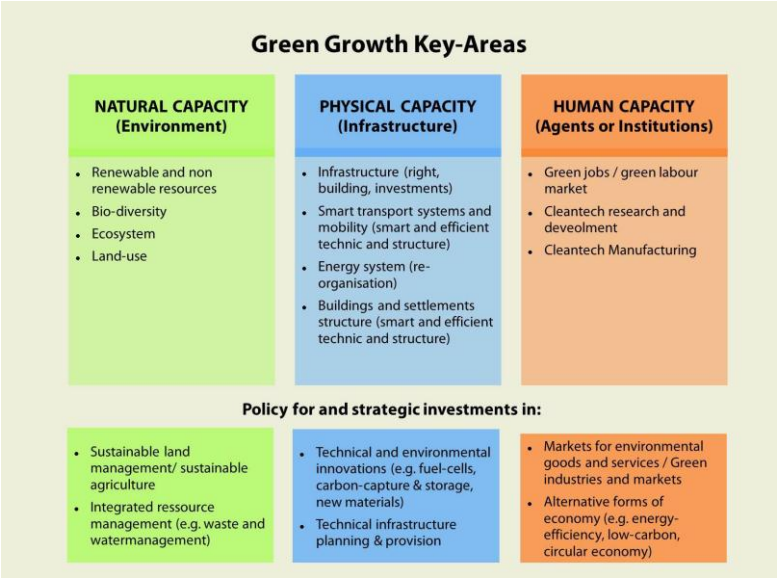

Figure 03: Green Growth Key Areas (own analysis according to World Bank, 2012, Hammer et al., 2011:15; Vasquez-Brust and Sarkis, 2012: 8)

Definitions of Green Growth can be broadly categorised as having either a wide or a narrow scope. The wide definition includes all areas of eco-innovation and economic growth in the environmental sector. Here the focus is on economic growth in green industries with no distinction made between sustainable and non-sustainable production methods and practices, applying the current growth paradigm to green industries. This paradigm has been criticised for fixating on growth in all production and turnover related areas regardless of method or environmental impact (SRU, 2012: 9). The narrow definition of Green Growth, on the other hand, includes a distinction between sustainable and non-sustainable production methods and practices, of which the latter should shrink and vanish over time. Although an increase in sustainable production methods can be promoted by policies and certification, a good deal of power lies with consumers who can decide not to purchase unsustainable products.

The key components of Green Growth, as synthesised from World Bank documents (2012), Hammer et al. (2011: 15) and Vasquez-Brust and Sarkis, (2012: 8), are represented in the diagram below.

3.3 PRACTICES OF GREEN GROWTH

We are of the opinion that environmentally friendly and sustainable practices must be a key building block of the Green Growth concept in order for it to be truly green. However, Green Growth policy seems to agree more with the wide definition of the term.

Green Growth policy aims to promote environmentally friendly resource efficient technologies with targeted subsidy programs. New developments are supposed to lead to economic growth without damaging the environment and using resources frugally (OECD, 2011). With the concentration of resources in ‘green’ branches, economic growth is to be promoted while simultaneously reducing greenhouse gas emissions. In this vain, the focus is currently on ‘greening growth’ and ‘more efficient use of resources to minimise environmental pressures’ (ibid.: 10).

According to WBGU the Green Growth framework focuses on national policies with the aim to canalise public investments in, for example, low GHG emission energy systems, climate mitigation activities (WBGU, 2011: 177). The Green Growth framework therefore offers government stimulus packages. Political measures to introduce Green Growth to enable a transition to sustainability therefore focus on political strategies and the creation of suitable financial instruments. These measures are included in climate and energy policy, economic, labour market, social and development policies as well as land use policy (ibid).

A literature review by Bina (2013) shows, that Green Growth policy is mainly concerned with ‘market mechanisms, investments in Innovation and green technology, and green consumption and production’

(Bina, 2013: 1035). According to research carried out by Vasquez-Brust and Sarki (2012: 10-18), the promotion of Green Growth in policy involves the stimulation and promotion of green technologies and market segments. Environmental aspects are limited to a consideration of environmental compatibility, a reduction of resource use and energy efficiency.

In summary, the practically implemented form of green growth is therefore concerned with promoting 'green' technology and 'green' innovation through market mechanisms and financial instruments. Little distinction seems to be made between green technologies and their production methods and, according to the definitions above, social aspects are not explicitly considered.

Research by Machiba (2010: 363), however, shows, that a technology alone does not determine how sustainably it is used. The way society functions and how it meets its needs determines how technology is created and used and therefore how sustainable it is. System innovations (a fundamental shift in societies' outlooks and way of functioning) can be assisted by tools such as technology. A focus on green technology without considering social structures and cultural values cannot make much difference.

It can therefore be argued that the focus of any policy aiming to create sustainability through Green Growth should be more on changing social structures and values. Changes in social structures and values are more likely to lead to the kinds of system innovations needed, rather than solely trying to solve problems with the same technology and growth orientated approach, which created them in the first place.

4 GREEN GROWTH AS APPROACH FOR SUSTAINABLE DEVELOPMENT?

Before we start considering the sustainability credentials of Green Growth, a summary of our understanding of Green Growth so far based on the above chapters in necessary. According to the definitions and policies mentioned in the previous chapter, the current Green Growth approaches and related policy focus on technology, growth and resource use. A desired direction is to be achieved by financial instruments and market forces. Social aspects are either briefly mentioned or not included at all in the definitions and policy documents mentioned above. A detailed proof of whether Green Growth as currently considered can lead to a truly resilient economy and consumption pattern remains open (Schneidewind et al., 2013: 10). One key point of discussion in this regard is whether growth and resource use can actually be separated at all (Jackson, 2009: 95). The success of the concept would be proven when economic growth is decoupled from resource use and carbon emissions. This would be shown by positive growth coupled with a stagnation or shrinking use of resources and reduced GHG emissions (WBGU, 2011: 177). Even then, the idea that a direct correlation between GHG emissions, environmental protection and Green Growth can be established should be viewed critically, given the complexity of the systems being considered.

The concept of the green economy is considered to potentially function as a central implementation strategy of sustainable development (Simon and Dröge, 2011: 4). This is despite the fact that it has been criticized for narrowing the notion of sustainability as defined at the Rio Conference in 1992 and thus only inadequately integrates the central aspects of sustainable development into the concept of Green Growth. Green Growth covers the adaptation of economic systems to new demands such as resource scarcity and increasing environmental impacts. Green Growth, however, focuses mainly on resources and technology and mostly ignores the social side of the equation (as shown below).

When considering the concept of Green Growth as a practical approach to reach spatial sustainable development, it becomes evident that the three dimensions of Green Growth (as discussed in chapter 3) overlap and show similarities with the dimensions of the sustainability concept. Both emphasise the interrelations between the environment, economy and society and try to influence these to shape them to allow future development. However, while the concept of sustainability (see figures 01 and 02) seeks to create a balance between social, environmental and economic aspects, Green Growth focuses on ecologic and economic aspects with technologies as an intervening factor between those elements (see figure 04). Thus, the social aspects of sustainable development are only indirectly covered by Green Growth conceptions; they are considered to result indirectly from an economic development that increases human well-being by cleaning up the environment with improving air and water quality. Improved environmental conditions are supposed to directly affect human well-being (The World Bank, 2012: 34). Additional human wellbeing is seen to result from economic growth based on green technologies

(although, as mentioned above, economic growth does not necessarily lead to development and the expected effects on the job market is contested (see below; Tol, 2012). Following this understanding, human well-being is only the result of a chain of effects of increased environmental conditions. Furthermore, the understanding of human well-being is fairly narrow focusing on green economic growth, improved environmental conditions and the creation of jobs and social welfare. However, well-being includes more than better environment quality – there are the specific living conditions, non-material aspects, health etc. (Wuppertal Institute, 2010: 18) which are not included in the Green Growth approaches.

As a growth-oriented development concept the notion of Green Growth is inherently connected with maintaining processes of continuous quantitative growth and the greening of economic processes. Ecologic systems are considered resources for economic growth and technological development. As such, the concept of Green Growth focuses on reaching sustainability through changes in systems and processes through technical progress. The decoupling of economic growth and environmental degradation is supposed to become possible as a result of technical, procedural or systemic innovation. As a technical approach it targets at increasing the efficiency and consistency of production and consumption processes based on minimizing resource input while increasing resource productivity and closing material cycles. Thus, the concept of sustainable development which implies qualitative change in the social, economic and ecological dimensions of processes is narrowed to an understanding of economic, quantitative growth. Technical and organizational adaptation and innovation is considered to solve existing problems of unsustainable production and consumption patterns and systems allowing basically business-as-usual societal processes and structures. Consumption patterns and the fundamental goals of economic processes i.e. quantitative economic growth are not questioned. Moreover, the underlying assumption of decoupling economic growth and resource consumption as well as generating continuous growth by increasing the efficiency of processes is contested by critics. They argue that rebound effects over-compensate efficiency gains and that decoupling economic growth from resource consumption is impossible (Jackson, 2009: 95; Santarius, 2012: 3).

On the other hand, the quantitative dimension of action to reach sustainable development (as defined by Hansen, 2010 and discussed in chapter 2.3) is not directly targeted by current Green Growth strategies. The current understanding of Green Growth neglects the cultural dimension of social change for sustainability such as the change of individual behaviour, consumer habits and lifestyles. Reaching sustainability through sufficiency, questioning the growth paradigm, adapting goals of economic development and targeting the sufficiency of (economic) processes, is not addressed. Current Green Growth approaches follow the techno-corporatist interpretation of ecologic modernization (see chapter 2.1) resulting in the ‘economization of nature’ (Hajer, 1993 cited in Gibbs, 2000: 12). Changes in (global) production and consumption patterns which are intertwined with questions of redistribution and social justice are neglected. Opening up new approaches to battle poverty and promote human well-being by promoting societal change towards an economy that is built on sufficiency, sharing and solidarity is not addressed (Meadows et al., 2005: 261). Thus, current Green Growth approaches distort the concept of sustainability towards its economic and environmental dimensions (see figure 04).

Besides not directly covering the social dimension of sustainability and cultural aspects of production and consumption processes, there are further risks connected with the technical approach of current Green Growth strategies. Even when consequently followed, greening economic processes and increasing technical efficiency is a contested approach when it comes to its implementation and effects to broader social and economic processes: In general, the Green Economy concept is considered to potentially function as implementation strategy for sustainable development (Simon and Dröge, 2011: 4). However, the actual implementation so far has been criticised as lacking consequence in implementing green technologies and reducing environmentally harmful practices (ibid.). Narrowing the multi-dimensional concept of the Green Economy to the environment and energy sectors is considered risky as this may result in neglecting the goals of ensuring market stability and fighting poverty (ibid.). The Green Economy Roadmap published in 2012 emphasises the role of the economy in combating challenges of climate change and promoting development (ICC, 2012). However, following Vazquez-Brust and Sakis (2012: 9) the concept of Green Growth can be criticised as only re-branding traditional neoclassical economic concepts. These apply the understanding of key factors of growth laying in eco-innovations.

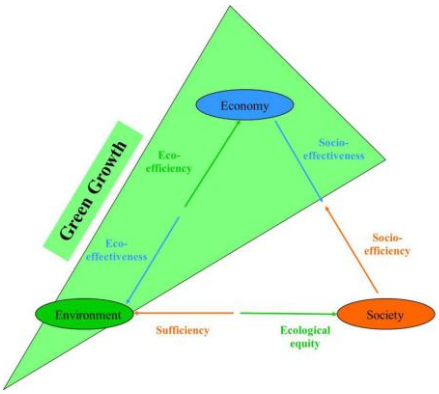

Figure 04: Green Growth and sustainability (own presentation modified and based on Hansen, 2010: 23)

Furthermore, the technical focus of Green Growth bears the risk of triggering large-scale investments in technical infrastructures e.g. of the energy and transportation sector. With this comes the risk of creating path dependencies and lock-inns due to their long lifetimes which determine future action (Freeman, 1992 cited in WBGU, 2011: 79). Moreover, the current practice of dealing with the climate crisis has been dominated by reactionary action. The perception of the climate crises often results in short-sighted actions which counteract the concept of sustainability – especially after the global financial crisis (Bina, 2013: 1034). A central challenge of pursuing sustainability is proactively promoting sustainable development by connecting it with concrete mid- and long-term concepts.

Many scientific sources deal with the concept of Green Growth in relation to the energy system. For example, Tol (2012) argues for the energy sector constituting the core of Green Growth. The opportunities of Green Growth are considered to lay in the growth potential of the energy sector and related growth potentials in the labour market, increasing energy security as well as the need for GHG reduction (ibid.: 151-154). Tol critically discusses the first three arguments and notes that the energy sector only constitutes 3% of the overall economy. Thus, claimed effects on economic growth and job creation are relatively small and may thus not result in benefits for the labour market (ibid. 2012: 153). Thus, the underlying assumption of the concept of Green Growth that economic growth and technical progress will result in human well-being is contested when it comes to practical implementation.

Finally, the energy sector can also be used to illustrate the narrow focus of Green Growth on changes in sub-systems instead of overall societal change. It is now generally acknowledged that energy transition is not only a technical matter of energy efficiency, (renewable) energy generation and distribution but has broader social, economic and political implications (Berkhout et al., 2012: 109; Meadowcroft, 2009; Miller and Richter, 2014; Westly et al., 2011: 762) that constitute the ‘social dimensions of energy transitions’ (Miller and Richter, 2014: 82). However, the discussion often follows a quite narrow focus on how social and policy issues ‘drive changes in energy transition’ (ibid.: 77) and the process of technology development and diffusion (Berkhout et al., 2012: 110). This has resulted in approaches to energy transition which are too technical and do not take the various interconnections between energy systems and society into account (Haberl et al., 2011: 8). It has been argued that a comprehensive approach towards energy transition requires not only ‘a radical reorganization of energy systems [but] simultaneously a radical reorganization of society’ (ibid: 8).

To sum up, the ability of Green Growth approaches to promote sustainable spatial development is limited, due to its one-sided focus on the economic and environmental aspects of development hampering cultural and behavioural change and the establishment of new paradigms on economy. It builds on the unproven notion that economic development can be decoupled from resource consumption. Connected with the Green Growth approach is the inherent risk of not being able to meet this goal due to rebound effects and the lack of change of individual behaviour and consumption. Moreover, the assumption that investments in technologies and greening the economy will lead to job and wealth creation to a broader extent has already been contested. Positive effects might be strongly limited to specific branches and spaces without unfolding effects on economic processes in general and wider social and spatial dimensions. Additionally, even current Green Growth policy has not necessarily led to Green Growth initiatives (Vazquez-Brust and Sarkis, 2012: 7), with economic growth the main focus of much economic policy (Jackson, 2009). Finally, not directly addressing societal change may limit the opportunities to reach sustainable development, as

the reorganization of societal structures and processes is excluded as a source of innovation and transformation. Thus, Green Growth tends to promote economic growth for specific cities and regions with good initial conditions, rather than broader spatial sustainable development.

5 PROMOTING THE TRANSFORMATION TOWARDS SUSTAINABILITY

As illustrated above Green Growth strategies show some weaknesses and risks when it comes to promoting sustainable development. Rather than addressing the notion of sustainability in a holistic way, it distorts the concept toward its economic and environmental dimensions by applying a mainly technical approach targeting qualitative not quantitative systemic change. In order to understand the implications of this focus for its ability to reach change towards more sustainable systems and spaces, it is necessary to apply a broader understanding of systemic change. For this purpose this chapter builds on transition theory, which explains systemic change as result of a socio-technical transition processes (Geels, 2001). On this basis, the chapter aims to identify possible approaches to practically promote transformation processes to sustainable development by applying Green Growth strategies.

5.1 TRANSFORMATION TO SUSTAINABILITY

Transition theory (Geels, 2001 and 2005; Grin et al., 2010; Kemp and Loorbach, 2003; Rotmans et al., 2001) applies a socio-technical systems perspective and provides an explanation for processes of societal change within these systems. It suggests that dealing with persistent problems which result from a system's unsustainability, such as climate change and the need for climate change mitigation and energy transition, requires 'fundamental changes in the societal system and its subsystems' (Franziskani et al., 2012: 21), so called transitions or transformations. The term 'transition', which has been defined by the scientific discussion related to transition theory (Geels, 2001 and 2005; Grin et al., 2010; Kemp and Loorbach, 2003; Rotmans et al., 2001), is here used synonymous with the term 'transformation' (Rotmanns, 2005: 11).

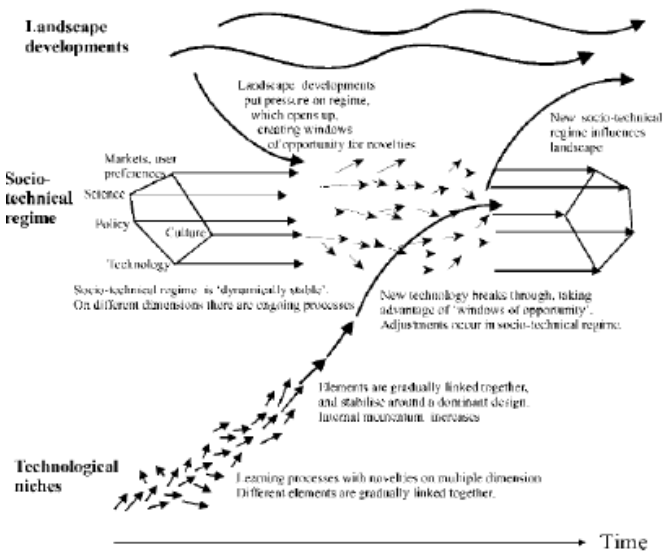

Figure 05: Dynamic multi-level perspective on transitions (Geels, 2005: 452)

Following the understanding of transition theory, fundamental system changes may result in the transformation of the overall system and the creation of a fundamentally new system configuration (Grin et al., 2010: 11; Park et al., 2011: 3). Thus, the transformation of a system is the result of cumulative effects of various actions of a multitude of actors affecting technology, economy, institutions, behaviour, culture, ecology and paradigms, introducing regime shifts and consequently new regimes (Kemp and Loorbach, 2003: 7; Westley et al., 2011: 763). Innovation in products, services, processes and projects which may occur on a rather small scale of sub-systems are assumed to lead to system innovation which drastically alter the relationships between societal actors. Thus, system innovations are characterized by new forms

of organization, cooperation and dependencies among actors on a comprehensive system level. These system innovations in turn may lead to broader structural societal change which involves changes in technological, economic, institutional, environmental and cultural structures, processes and developments (Rotmans, 2005: 11). This reinforcing process of different types of innovation on different systemic levels is also described as a 'cascade of innovations' (ibid.) resulting in structural societal change or societal transformation.

The idea of societal transformation as result of innovation is not unique to transition theory. In scientific debate on transformative change it is stressed that transformation to sustainability cannot be solely based on technical innovation but needs the introduction of 'social innovation as key factor for a sound transition to sustainability' (Mancebo, 2015: 3). It requires a new social contract as a basis for and a result of a social movement for change that simultaneously addresses the social, environmental and spatial dimensions of sustainability (ibid.). Transformation processes require breaking with unsustainable societal trajectories and establishing new development models as sustainability is 'impossible under socially and economically unsustainable conditions' (Haberl et al., 2011: 11). This needs a specific type of change, i.e. transformative change, which comprises a 'fundamental change in a system, its nature, and/or location that can occur in human institutions, technological and biological systems' (IPCC, 2014: 1107). Changing the distribution of wealth, risks, power and authority as well as establishing new forms of social organisations and a new shared agreement and vision of future societal development is an integral part of this transformative change (Miller and Richter, 2014: 79 ff.). This has led to the demand for a comprehensive societal change which goes way beyond technical innovation and has to constitute the third Great Transformation (Haberl et al., 2011; WBGU, 2011). As mentioned in the introduction, this transformation has to occur in the three pillars our society is based on: energy systems, urban areas as main emitters of greenhouse gasses and global land-use systems (WBGU, 2011: 48) which can also be identified as the main fields of intervention to pursue broad societal change (ibid.: 265).

Transition theory applies a multi-level-perspective (see figure 05) on complex societal systems as analytical tool and explanatory model for transformative societal change. Within this model transformation processes are the result of the interaction of niches on the micro-level. These compete against existing socio-technical regimes of established structures and processes on the meso-level. New developments and innovation which arise in social and technical niches may change regime structures when broader and global developments on the landscape level put established structures under pressure (Geels and Kemp, 2005: 13; Geels and Schot, 2007: 400).

To sum up, as current Green Growth approaches rather promote (technical) changes on the level of sub-systems of the economy (see chapter 4) their ability to promote comprehensive societal transformations to sustainability is questionable. Promoting social innovation and changes in institutions, behaviour, culture and paradigms is not sufficiently targeted by Green Growth strategies. Thus, the socio-technical systems perspective of transition theory and the understanding of transformative change outlined above can be used to indicate opportunities to further develop and broaden existing Green Growth strategies. The following chapter will highlight opportunities that cities and regions have to implement and affect the transformation process.

5.2 GREEN GROWTH AND TRANSFORMATION TO SUSTAINABILITY

As mentioned in section 5.1, transition theory proposes that transformations are initiated through niche innovations and their interactions at the micro-level (Geels and Kemp, 2005; Geels and Schot, 2007). These niche innovations, which can be either of a technical or social nature, can lead to much wider system innovations at the regime level, which in turn can result in a comprehensive transformation. Niche innovations are not necessarily spatially limited, but rather temporally, as they exist over a much shorter time frame than the regime level (Gibbs and O´Neill, 2014: 204). According to Gibbs and O'Neill (2014), towns and regions can be seen as having optimum factors required to promote niche innovations and can also create the link between the niche and regime level (Coenen et al., 2010; Truffer and Coenen, 2012 cited in Gibbs and O´Neill, 2014: 204). Gibbs and O'Neill refer to Cooke (2009) in their research who ascribes to towns and regions the authority and capacity to create administrative areas within which niche innovations can be supported politically. These created areas form a sphere within which the niche innovation is protected to a certain extent from regime pressures. Thus, towns and regions can act 'as the

source of niche innovations that will eventually transform regimes' (Healy and Morgan, 2012: 1049, emphasis in the original, cited in Gibbs and O´Neill, 2014: 204).

Given the importance of niche innovations for initiating transformations and the importance of towns and regions to niche innovations, it therefore seems likely that towns and regions will be the main action level within which a transformation to sustainability could be initiated and take place. Gibbs and O'Neill (2014) go so far as to say that towns and regions are the key level to enabling a sustainable transformation. Cooke (2009) describes these regions as 'transition regions', which can offer support for green industries at the sub-national level (Cooke 2009 cited in Gibbs and O´Neill, 2014: 204).

The various stakeholders and actors within spatial and regional development can therefore play an important role in enabling and supporting such a transformation process. Baker, Marston and McClure (2013) offer two action areas in this regard. On the one hand, a regulatory framework can be created to reduce regional vulnerabilities and increase resilience (Meyer et al., 2010 cited in Baker et al., 2013: 874). This is a solution orientated 'technical' approach. On the other hand, socio-political processes can be fine-tuned at this level (Davoudi et al., 2009: 16 cited in Baker et al., 2013: 874). Spatial and regional development actors have the ability to create arenas in which priorities and sustainability criteria can be discussed and decided upon. Thus, according to Baker et al. (2013) spatial and regional development offers a good combination of communicative participation and regulatory information. One of the main rolls of the state, whether at the regional or national level, is to support green branches via appropriate innovation policies and the development of new sectors (Barry and Doran, 2006 cited in Gibbs and O´Neill, 2014: 213). Moe (2012: 8) also describes this kind of political action as an elementary important top-down component of Green Growth. But he also demands that national political aims go beyond the support of technical innovation and investment programs for infrastructure (such as water, energy and transport) to include social aspects such as poverty reduction (Moe, 2012: 8). The Green Growth concept with its focus on the promotion of a green economy and technological development can be viewed as an incremental system changes. Moe (2012: 9) is critical of national policies which, up to now, have concentrated solely on the subsidisation of green branches, markets and innovations and view the acceptance of these subsidised market components as a requirement for their diffusion. This approach ignores that, according to Machiba (2010: 363), technology will only have an impact with associated with social structures and cultural values. Policies only see one way to include a comprehensive transformation of social aspects, namely the top-down approach. A comprehensive transformation to sustainability will also require a number of different bottom-up processes combined with niche developments that allow an alteration of lifestyles and consumption patterns.

Figure 06, below, shows a condensed form of the various approaches to sustainability and the societal choices or decisions that go along with them. Business as usual is what the current Europe 2020 strategy looks like currently. The strategy relies on classical market-oriented economic theory which explains that an economic advantage and growth can be achieved by innovating in times of resource insufficiency. The Green Growth strategy described as aims to create a 'green bubble' within a defined geographical area (the EU). The advantages that are envisioned within a specific green space (in this case the EU) are achieved at the costs of external spaces (e.g. resource extraction and refining areas). It can be argued that this kind of Green Growth simply replaces the 'vocabulary' used to describe the current system (e.g. 'growth' and 'competition') with one more acceptable to society (e.g. Green Growth and eco-efficiency) (Brand, 2012: 32).

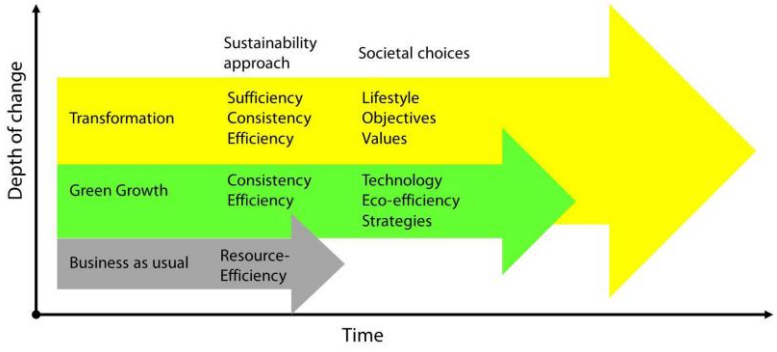

Figure 06: Green Growth, Transformation and the depth of change (own concept based on Khosla, 2013: 22)

The Green Growth approach in figure 06 is along the lines of the narrow definition described in section 3.2. However, given that growth does not automatically lead to a betterment of the human condition (as mentioned in section 2.1 and 4) and the highly controversial nature of the 'decoupling of growth and resources' theory, relying on this route alone to achieve sustainability is most uncertain. Figure 06 illustrates that Green Growth is not appropriate to promote, guide and implement a comprehensive transformative change to sustainability. Rather, it targets (technical) changes on the levels of sub-systems of the economy. The final transformation described above involves a changing of lifestyles and values together with a sufficiency approach to consumption and a stagnation of growth or even shrinking. In order to develop practical approaches to promote transformation processes to sustainability, the concept needs to be supplemented with further concepts which more strongly target social and cultural innovation as a driver for change, as well as changing the distribution of wealth, risks, power and authority. This will only be possible with a combination of top-down and bottom-up approaches combined with deep social engagement.

Actors and stakeholders in spatial and regional development are well placed to support this combination of top-down and bottom-up approaches. The two action areas available to town and regional development stakeholders fit well with the required approaches. The regulatory framework can provide top-down information and regulation on the one hand, with the possibility of creating safe spaces and direction, for example to desired niche innovations. On the other hand, a bottom-up approach can be supported with communicative participation promoted, for example in specially created arenas and networks.

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ID 1689 | THE RIGHT TO THE CITY IN TIMES OF BIOPOLITICS - TACTICAL URBANISM IN A TRANSITION PROGRAM

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1 INTRODUCTION

The city is the greatest field of action of capitalism, but also the most possible field of resistance to it. Capitalism and urbanization feedback in a process where the former is always expanding, producing and concentrating geographically and socially its surplus in the city.

Harvey (2014) points out that to think of an alternative form of urbanization, it is necessary to build possibilities for an anti-capitalist turn, thus pointing to the urgency of recognizing the common and its potency. And it suggests that this route of escape must start from a convergence between the microcosm of the body and the macro space of globalization, two important topics of the current neoliberal phase of capitalism.

This convergence can be achieved in the affirmation of human and individual rights, a perspective that reinforces the importance of the concept of the right to the city, developed in the 1960s by Lefebvre (2016). A more collective right than individual, which encompasses all other human rights, claiming the participation of all in the construction and use of space and urban life.

Thinking about the global world has made it possible to recognize a common world with which to worry, to produce, to appropriate, and which is shared by all. For Hardt & Negri (2016), the idea of 'common' was also potentialized with the understanding of the concept of biopolitics, whose subjectivities will always be produced by apparatus of power, whether of the sovereignty of the Empire or the resistance of the multitude.

Thus, the 'right to the city' is considered as a strategy of transition from the current urban situation of the cities towards a situation of justice, of full realization of the common well-being. For the institutional redesign, necessary for this transition, Boaventura de Sousa Santos (2003) argues that, besides state and formal law, the forms of informal and unofficial law that he attributes to 'subaltern cosmopolitan legality' must also be considered. And to avoid wasting social experiences that seek to declare and exercise the rights that matter to them.

In this perspective, the author's Master dissertation research, from which a partial communication is extracted for this article, explores the potential that so-called 'tactical urbanism' has in promoting the right to the city. Here, tactical urbanism is understood from the studies of Certeau (2014), where the tactical action is determined by the absence of power, a calculation of strength that does not isolate the subject from the environment and that acts with no autonomy in a territory that was imposed. It is believed that the scale of the tactics better represents the biopolitical production by the multitude.

Thus, we seek to identify in the urban tactics used today, as in the immanent desires of the multitude, the ways it finds to move, inspire, emancipate and build itself in the full realization of the right to the city. In a collaborative cartography, actions of tactical urbanism were collected and organized according to a standard reading format, which information nexus was elaborated by Rosa (2015), exploring the local potentiality, the articulations created and the new possibilities generated. From then on, it became possible to visualize, discuss, and analyze the collected experiences in order to apprehend paths to the fullness of the right to the city.

Therefore, this research links a discourse that establishes the common as a desired utopia; the right to the city as the main strategy to achieve it; and the level of urban tactics as the time of experiencing possibilities that could lead the multitude to a condition of urban justice.

2 THEORETICAL AND METHODOLOGICAL REFERENCES

According to Harvey (2014), if in the Fordist capitalism the exploitation was centered in the factories, today it focuses on the cities, promoting from the financialization of the access to the earth to the production of subjectivities that control the desires and the daily life of the people.

Neoliberalism, the current stage of world capitalism, acts for economic liberalization in favor of free trade and the private sector. It acts on a global scale and, for this, depends on the regulations articulated by the states, counting on privatization policies and reduction of the state apparatus, and with the deregulation and fiscal austerity on the citizens. This way, dominant national and supranational organisms articulate themselves according to the logic of biopolitics to guide desires and ways of life that suit their interests. Thus space, or urbanization of cities, is also produced through the control and expropriation of the common wealth - nature and all cultural, social, subjective and artificial production common to all, which the idea of a globalized world allows us to perceive.

Biopolitics, according to Foucault (2015), is the way to govern populations from the 'management' of life through discipline, and the production and consumption of subjectivities that guide desires and instincts. Pelbart (2011) clarifies that biopolitics can be exercised through biopower, a power invested in life, dominating it and subjugating it to a sovereign. Or, through biopotency, the potency of life emanating from the multitude and thus representing its resistance.

The biopotency of the multitude is, from this perspective, the source from which forms of resistance must emerge from the predatory logic of exploitation of capitalism and, likewise, from the unfair logic of the production of space in contemporary urbanism. Hardt and Negri (2016) emphasize the necessary intellectual task of organizing the political immanence of the multitude, in the sense of apprehending the subjectivities it produces, which would point desires for other forms of life. In order to do so, it is necessary to build visions of a world socially shaped and encompassing all, the collective, the multitude. This is where the notion of 'human rights' comes in.

Despite several important counterpoints to the idea of 'human rights', Harvey (2015) relies on the body's political potential to defend the discourse of universality of rights as a way of uniting local singularities in search of global political and economic alternatives. Hence, the 'right to the city' today assumes renewed importance as a possibility of resistance to neoliberal urbanism.

It was Lefebvre (2016) who in the 1960s elaborated the concept of the right to the city as a demand of the expropriated class and understood as the right to the work, that is, the right to use the city as a space that accumulates the material wealth of human production, including knowledge, techniques, monuments and artistic sensibility. The right to use the city also for celebration, pleasure, prestige, enjoyment of freedom, socialization and individualization - right to habitat and living, to urban life; possibilities that capitalist production reduced, if not eliminated over time. However, this right should not be understood as a melancholy feeling of returning to the traditional city nor the acceptance of the city that is there, but the right to a dynamic city, capable of renewing itself, the right to a transformed urban life, to a different genuinely desired city.

Harvey (2014) updates the concept of the right to the city by proposing an approach where it is understood as the collective right to democratically control the production and use of the surplus produced in the urbanization process. An eminently political task of fighting for the right to the common, the production of space, the imagination and the experience of a new city. A task for the multitude.

Despite some legal apparatus and supranational agreements already formulated for the right to the city, it must be understood that rights are always demanded and permanently watched for their maintenance. The registration of any right in the books of justice does not guarantee its compliance nor does it guarantee that, in compliance, the previous condition of injustice will be overcome.

In this perspective, Santos (2003) raises the importance of observing the wide and diverse experiences of initiatives, groups, social movements, networks that already act against hegemony, facing neoliberal policies that are essentially excluding, and finding ways out. The author recognizes, in this space of struggles, the privileged field for such disputes against hegemonic, denominating it as subordinate cosmopolitanism.

In the same way, the interest of this research by the so-called 'tactical urbanism' starts with recognizing it as anti-hegemonic manifestations of neoliberal urbanism, and seeks to learn from it.

2.1 TACTICAL URBANISM - POTENCE AND TRAPS

This term is understood as the rebellious urban practices, in different measures, to the order and the bureaucracy imposed by the institutions, pointing to the city's wishes to which its practitioners aspire. Also considered here as tactics, these practices that are not necessarily rebellious, but act in a bottom-up direction in the processes of space production, sometimes even in collaboration with 'official urbanism', yet expressing new ways of doing it, forcing an adjustment of its modus operandi to the local realities of the most disadvantaged.

Observing various everyday practices such as cooking, talking, walking, Certeau (2014) defined the concept of tactics as the cunning of the weakest in capturing opportunities for action in the gaps of the dominant, strategic system. Ways of doing that resignify through the use, products, rites and spaces imposed by the dominant systems.

Activations of public spaces promoted by organized or unorganized communities, new ways of living the urban, time banks that subvert the capitalist logic of profit, engaged urban art and activism, reconstruction of landscapes according to the needs of a given community, made by the community itself - are examples of tactics used to escape the sovereign domination of the state and capital in the production of urban life and space.

And they are experiences in which the body plays an active, effective and affective role in space. Actions that reflect disputes in public spaces, which, by definition, are also political spaces, where conflicting individual needs are disputed. Hence, it is in the repositioning of the body in the political arena of the urban, and essentially in the experimentation of the otherness of the body, that the actions of tactical urbanism show their great potential in being an instrument of struggle for the rights of the body - in the contemporaneity, of the collective body, the multitude - for the construction, use and enjoyment of the polis.

However, apart from the enthusiasm expressed by many authors and practitioners about the potential of tactical urbanism, it is also important to note their weaknesses and possible traps. It is worth noting the overwhelming criticism made by Neil Brenner (2016) about an exhibition held at the Museum of Modern Art - MoMa in New York between 2014 and 2015, amid a period of great explosion of these practices, worldwide.

The third in a series of exhibits aiming to discuss issues beyond the themes commonly discussed in architecture, "Uneven Growth: Tactical Urbanisms for Expanding Megacities" featured a wide selection of projects and experiences that pointed new ways of intervening in six megacities (Hong Kong, Istanbul, Lagos, Mumbai, New York and Rio de Janeiro), in the current context of hyper-urbanization and the high level of informality of urban spaces. The curators' intention was on the collective and innovative experience of the multitude through urbanism in its considered tactical scale, believing in the capacity of these actions to promote social justice in the processes of urban space design and appropriation (BRENNER, 2016).

From the writings that made up the exhibition catalog, Brenner (2016) listed the following points of convergence on the understanding of tactical urbanism, as of the historical and urban context in which it is being discussed: a crisis of governance of cities, where the states and the market failed to deliver basic public goods and services; tactical urbanism encompasses a wide diversity of emerging, temporary, and experimental urban practices; they are practices conducted in a bottom-up direction; tactical urbanism deals with urgent problems through interventions of immediate effect; they are projects of great flexibility and openness, in contrast to the rigid codes of official urbanism; the actions of tactical urbanism promote participation, are based on practices, stimulate the Do It Yourself (DIY) culture, generally use open source and aim at the re-appropriation of urban spaces.

Thus, the practices of tactical urbanism were presented there - and consequently also discussed in different spaces - as an alternative to neoliberal urbanism. However, the author questions the real potential

of tactical urbanism to present some kind of difficulty to neoliberal urbanism, or even to corrupt it. In order to develop his analysis, he draws five possible scenarios of interaction between tactical urbanism and neoliberalism, among which only Scenarios 4 and 5 would offer, in the author's perspective, some kind of difficulty for neoliberal urban politics:

- Scenario 1 - Reinforcement: tactical urbanism alleviates the failures of neoliberal urbanism, but without facing its regulatory milestones;
- Scenario 2 - Entrenchment: tactical urbanism internalizes the neoliberal agenda of reducing the role of the state or opening up to market action, for example, contributing to its rooting;
- Scenario 3 - Neutrality: tactical urbanism coexists with neoliberal urbanism, acting in spaces that are not functional, without presenting risks to its processes;
- Scenario 4 - Contingency: tactical urbanism offers experimentation in the regulatory sphere, subverting neoliberal projects;
- Scenario 5 - Subversion: tactical urbanism interrupts the logic of urban governance growth, opening the agenda of inclusion, equality, democracy and social justice.

Thus the author warns of the risk of the varied and much localized tactical actions to diminish the capacity of facing the major challenges. For instance, the necessity to participate in institutions to broaden the reach of public interest actions and the importance of gaining public support for the social demands that actually contribute to socioeconomic inclusion (BRENNER, 2016). In this regard, design has a great role to play in the redesign of the city, the co-creation of new forms of living together and coexistence.

What is clear in Brenner's (2016) criticism is the necessary tactical approach to strategic policies if one wishes to achieve social justice and the fullness of the right to the city. Therefore, it is necessary to know how, where, under what conditions, methods, consequences, for whom the actions of tactical urbanism operate their new ways of making the city and of being urban.

2.2 STRATEGIES FOR RESEARCH ON TACTICS

This research seeks to understand the practices of tactical urbanism and to analyze the possibility of its effects satisfying the right to the city. Starting from a large and heterogeneous range of examples of these practices, it needs to map them according to categories that demonstrate connections, tensions, and trends.

Accordingly, a Taxonomy of Tactical Urbanism was setup on an online platform[1] , aiming to list experiences and classify them according to criteria relevant to the objectives of the analysis. The examples are mapped according to the professional experience of the authors, who manage an urban interventions studio based in Goiânia/Brazil, and have an academic work through field surveys, research in specialized magazines and websites. Many are the biopotent aspects of tactical urbanism and the action of mapping their various manifestations demonstrates an enormous complexity and consequent wealth of particularities and points of convergence useful for future analysis.

The first steps of this research were guided by the interest in understanding the desires and subjectivities that motivate the actions of tactical urbanism, being this the first layer of categories created in this taxonomy. Identifying the desires of practitioners - the subjectivities that permeate their actions - is fundamental to understanding the biopotency expressed in their tactics. Next, a categorization was created to identify which types of practices are made. In this article, we discuss the addition of another layer to this taxonomy, a categorization that seeks to demonstrate the frictions between tactical urbanism and neoliberal urbanism, according to the five scenarios designed by Brenner (2016). Table 1 lists the categories proposed for the three layers and Figure 1 shows the connections arranged on the Taxonomy of Tactical Urbanism platform.

[1] Kumu is a platform that organizes complex information in a rhizomatic way, allowing the visualization of maps or relational views. Available at <https://kumu.io/>, is offered in open source and without costs for projects that do not aim at any kind of profit.

LAYER / THEME	CATEGORIES[1]
Desires / Subjectivities	[common] [participate] [anti-consumerism] [belonging] [singular] [transience] [daily life] [imagine] [empathy] [equality]
Types of Practices	[economy networks] [overcome lack of infrastructure] [new ways of life] [green agenda / brown agenda] [exploring the city / research] [art activism] [activation of public space / micro environments] [strategic tactics] [Political arrangements]
Tactics X Neoliberal	[reinforcement] [entrenchment] [neutrality] [contingency] [subversion]

Table 1 – Categories used in Taxonomy of Tactical Urbanism

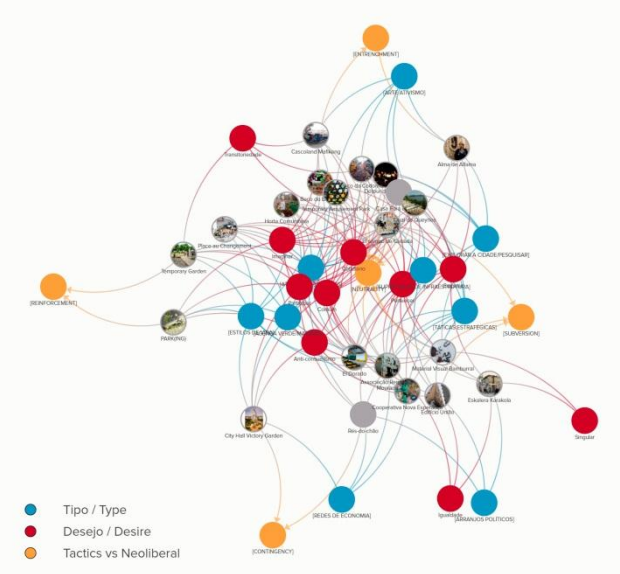

Figure 1 – Main visualization of Taxonomy of Tactical Urbanism platform

It is worth emphasizing that the layers of categories proposed in this research aim to elucidate the complexity of the tactical actions in the city, contributing to a delimitation, even at an initial stage, of the concept of tactical urbanism. And in addition, the categories aim to provide criteria for analyzing these tactics from the hypothesis that tactical urbanism can be used to fight for the right to the city - which may be or not confirmed. Thus, the performance of the observed practices does not mean, for the research, an analysis of good and bad, right and wrong, more or less 'tactical', but levels, objectives, different ways of doing this tactical urbanism that, not always, has itself the objective that the hypothesis launched in this research tries to verify.

In addition to collecting examples and observing their arrangements, it is also important to learn from the experiences of those who seem to point to an urban reality of social justice, democratization of the city's means of production, and enjoyment of the city that is a piece of work.

Therefore, a reading standard[2] created by Rosa (2015) was adopted to demonstrate emerging urban practices organizing its characteristics according to three blocks of interest: 1) local potentiality, which seeks to identify the specificities of the fields of action (urban morphology), as well as of the project or action developed, and its actors; 2) articulation, which deals with the practice itself, seeking to understand the arrangement of objects, actors and their connections in concrete space; 3) and the opportunities that arose, seeking to understand the new physical and social codifications generated. It is suggested that the

[1] In order to better understand the proposed categorizations for the Desires / Subjectivities and Types of Practices layers, see the article "Tactical Urbanism and the Production of the Common - an Approach to Emerging Urban Practices" available at <http://sobreurbana.com/pesquisa/>.

[2] A caracterização das práticas adotada nesta pesquisa recorre a uma versão simplificada do padrão oferecido por Rosa (2015), cujo padrão completo, mais abrangente do que esta pesquisa exige no momento, está detalhado na bibliografia de referência ao final deste texto.

characterization of the practice precedes its categorization according to the proposed themes, in order to allow a more coherent inference with the action.

From here it is possible to analyze the ways of doing of the practices. This way, it is intended to contribute to the understanding of the tactical practices that emerge in contemporary urban centers which, once it was possible to perceive, offer great potential for renewal of the urbanism discipline in order to internalize agendas such as social participation, right to the city, inclusion, and urban justice.

3 PATHWAYS

Due to the interest in understanding the complexity of the arrangements made with the urban tactical actions, it was decided not to establish, for the assembly of this panorama, no territorial or temporal cut. The interest in this vast field of investigation is justified by the possibility of recognizing in different locations and times, similar solutions to the same problems, useful for strengthening common struggles.

From the contacts established between the researchers and their objects of interest, twenty-one practices have been collected so far from countries like Brazil, Colombia, the United States, France, South Africa, Portugal, Spain, Portugal, Italy and Peru. However, there is a greater number of Brazilian and Portuguese practices, two territories of interest and action of the researchers. It worth noting that the platform used in this research allows for connections as varied as possible and from them to extract partial views by crossing the information that currently interests the researcher, which makes this research strategic but open to tactics.

For the communication of this article, it is proposed the demonstration in Table 2 of the practice "Associação Renovar a Mouraria[1]" , based since 2008 in Mouraria, a traditional neighborhood of Lisbon/PT. Figure 2 shows an image of the Association's main space of action.

LOCAL POTENTIALITY	
FIELD	Small pedestrian-restricted access between residential buildings up to 5 floors, in a neighborhood under gentrification process located in the historical center of Lisbon.
DESCRIPTION	The Association was created by a group of neighborhood 'friends', some of whom do not even live there. In order to host the activities it offers to the community, it rehabilitated a dilapidated building (which it called Mouradia) and thus activated the wide area in front of it, with the installation of furniture, decorative elements, events and the installation of a vertical garden. For the accomplishment of the activities, counts on the financing of the associates and public financing for specific projects.
CONCRETE SPACE/ CONTEXT	Square, stairs, alley, housing, nursery, local access, no vegetation, no urban furniture. Multicultural resident population, large number of daily tourists, and other sympathizers for the characteristics of the neighborhood.
NEGOTIATION/ OPENING	The rehabilitation of the building and the improvements carried out in the area have boosted the association's relationship with the community, providing greater interaction among its members, neighbors, workers and tourists. The improvements made in the square added layers of use to the space, previously used only as spaces of passage.
NEW CODIFICATIONS	The Association provides a meeting place, inside the building and in the square, stimulating the social integration and dynamizing the cultural diversity of the place. Through its social services (literacy training for foreign adults, community dinners, legal support for people and associations in situations of social vulnerability, etc.), it contributes to social inclusion. It also works as a point of support for the mediation of local conflicts, mediating interests between the various actors of the neighborhood dynamics and between these and the parish council.

Table 2 – Characterization of “Associação Renovar a Mouraria”

[1] Mais informações sobre a Associação Renovar a Mouraria aqui: http://www.renovaramouraria.pt/

Figure 2 – Mouradia –Headquarters of “Associação Renovar a Mouraria”

From the reading of the practice and its unfolding it is possible to infer about the categories with which it is compatible. In relation to the 'desires/ subjectivities' manifested by the practice, it is considered that it is driven by: the desire to appropriate the cultural production [common] of the individuals who live or work at Mouraria and to produce and inhabit the space where they are; [empathy] for the problems experienced especially by the residents in social fragility; desire to value and consequently to [belong] to recognized identities in the locality; inclusion and [equality]; playful experimentation of the city, attention to the ordinary, to the ordinary life of ordinary people, valuation of [daily life]; desire to collaborate, gathering intentions and collective actions, to [participate] in the solutions and in communicating, sensitizing, spreading the other.

Regarding the types of practices used by the Associação Renovar a Mouraria, we can observe the following: micro-interventions in urban space, provoking [activation of public space]; promotion of [new ways of life], based on the offered community and cultural activities; offer of social services that try to [overcome lack of infrastructure] that should be offered by the public power; [research] - practices that promote the experience of the urban spaces of the neighborhood, which seek [exploring the city], as well as collecting social and economic data that support claims and highlight issues of local interest; support actions, training and diagnosis of local commerce, strengthening a local [economy network]; and finally, it is considered that the practices of Associação Renovar a Mouraria, although understood in the tactical scale, are linked in a continuous planning that has a larger, medium-term purpose of social inclusion, besides seeking responses also in the public power (financing programs and other types of support) for community problems, thus characterizing themselves as [strategic tactics].

For the categorization according to the possibility of friction between the tactical practices used by the Association and neoliberal urbanism, it is important to observe the capacity of these actions to touch regulatory frameworks that support the neoliberal ideology - reducing the role of the state, expanding the role of the market, idea of development from unlimited economic growth, urban governance guided by urban marketing and other aspects. Although the Association offers important social services that in fact achieve a greater inclusion of the residents of the neighborhood, many in conditions of social and economic vulnerability, and although the improvements made in the area in front of Mouradia have contributed to increase the quality of that urban space as a space that serves for the social gathering, its actions do not impose needs of the political and urbanistic system, nor the market, to adapt to its demands.

On the other hand, the Association values the autonomy of its common space, in order not become hostage to either the state or the market: it leads to discussions that question government actions; it seeks its sustainability through the own generation of resources with the offer of services; it supports the traditional businesses of the neighborhood, strengthening the local economy network against big international brands, etc. Therefore, it is considered that their actions, at the present stage, offer [neutrality] to neoliberal urbanism. To contribute to the struggle for the right to the city, it must offer a greater dose of confrontation with the powers that operate in its territory, especially the touristification of the spaces and the gentrification of the neighborhood.

Thus, there are three paths, which are already sighted by Associação Renovar a Mouraria, that can lead to this confrontation: the combination of their actions with other entities fighting for the right to housing, in the current gentrification context of Lisbon's historic center; the legal and dignified integration of the immigrants, in the process of their reception in the neighborhood and in the city; and the creation of an 'alternative market' in Mouraria, through practices such as the time bank and the creation of an autonomous currency.

Leaving the observation made on one example and using the magnifying glass over the platform that hosts the Taxonomy proposed in this research, it is possible to observe that, considering the criteria raised by Brenner (2016), few examples collected so far offer some kind of difficulty to the maintenance of the modus operandi of neoliberal urbanism.

However, it is considered that from the reflections provoked by this act of mapping, characterizing and categorizing tactical practices, it is possible to observe the strengths and weaknesses of these practices, according to the analysis criteria used. And also, to infer possible ways to reinforce or redefine their ways of doing, according to their desires and purposes.

In this sense, it is important to note that, among the desires and subjectivities of the practices, there is a greater frequency of desire for the [common], followed by desires for [participation] and [belonging]. The least frequent desires in the collected sample are those related to [singularities], [equality] and [transience]. Of course, these occurrences depend on the eye of the cartographer and the collected sample.

On the layer that organizes the types of practices found in the collected examples, it is observed a greater frequency of those actions that promote the [activation of public spaces], followed by practices in favour of the [green agenda/brown agenda], the promotion of [new ways of life] and [strategic tactics]. The least practiced are those relating to [new political arrangements] and [new economic arrangements].

Location, scale, method, levels of participation, types of agents and sources of funding are themes that are not yet categories, but of relevant importance for this research. Information that should still be processed in the continuity of this investigation.

4 CONCLUSIONS

There is still much to explore in research on emerging urban practices, given the variety of their expressions and the complexity of arrangements they trigger. The data collected and crossed in this research, still in its initial stage, demonstrate, however, that if there is the goal of breaking the oppression and exploitation of neoliberal urbanism through urban tactics, much more remains to be done.

It is important not to forget what Pelbart (2011) says about the fact that even the affections of revolt can be kidnapped. In times of biopolitics, one must be careful and try to differentiate what is resistance and what is assimilation of the imposition of a hegemonic way of life. The plurality and singularization of individualist agendas, characteristic of postmodern society, hinder the universalization of the rights to vindicate and are a challenge for political action.

The predominance of practices that, at most, are limited to mitigating the harmful effects of neoliberal urbanism reveal the need for critical thinking to better subsidize such actions, rather than combating and weakening its tentacles, so that they can take the next step in the desired process of community empowerment, towards full capacity to build and manage the space in which they live.

This is a very open possibility when one observes who are the founding agents of these practices. There is a predominance of actions carried out by hybrid collectives of artists, architects and designers, in a process of reinvention (or adaptation?) of their professional practice.

That is to say, the committed background of the urban architect, the designer, the artist, and other areas, such as social assistance, law and communication, can be an important stimulus - especially when supported by useful tools - to carry out more and more experiences that question and subvert the harmful neoliberal practices of contemporary urbanism.

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ID 1755 | PROJECTIONS: 100 KM2 OF CAATINGA BIOME

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1 INTRODUCTION

This communication will address the transdisciplinary research that I develop today, where I transit through architecture and visual arts, collective properties and other forms of communal ownership and management of the land. I conducted a series of interviews with activists, architects, artists, lawyers, indigenous people in different locations around the world, proposing to them a fiction: Assuming that a few hectares of land are available in their context for the development of occupation and livelihood projects, what would you imagine doing with such an area? This provocation seeks, through the imaginary, to know and debate forms of social organization of space distinct from private property, in order to be constituted as a collection of utopias.

We are facing a process of expulsion and a growing number of conflicts related to access to land, which makes the space increasingly restrictive and destructive of collective responsibilities, in the Brazilian and world context. Struggles and resistances trigger new regimes of sensibility and experiences of land repossession, and thus, the proposition of new forms of spatialization are necessary. What practices of land sharing can we imagine? What utopias can we construct to amplify the repertoire of the modes of occupation of the territory? These are the key issues. A construction of a map of utopias is an attempt to point out future social transformations.

In this context, the Thislandyourland artistic brazilian group, formed by me and Ines Linke in 2010, develops projects in the field of visual arts, with the theme around the use and access to land. Projections: 100 km2 of Caatinga biome is a work in process, which investigates diverse imagery related to the Caatinga, an specific brazilian biome. Starting from a fiction that suggests that an area of 10km x 10km of Caatinga is made available and donated for the development of projects, several people or groups are invited to receive this fictional land donation and during interviews, idealize and expose their projects to this land extension. In this presentation I I will show some excerpts from interviews.

2 BRIEF WORDS ABOUT THE CAATINGA

Caa tinga, in the language of the Tupi-Guarani brasilian indians, means "bare forest" or "white forest", due to the loss of leaves in the long drought seasons, thorny vegetation and numerous xerophilous and deciduous species with branches calcined by sunlight.

The Caatinga is a biome characteristic of areas of northeastern Brazil, where the semi-arid tropical climate predominates, with few rains and presenting varied landscapes due to the geomorphological and climatic factors. During most of the year the plants appear as if they were dead, the environment has intense heat and great luminosity. For decades, the Caatinga imaginary has developed in Brazil as an inhospitable, desertic and miserable environment, receiving titles such as terra-nua, terra-seca, terra-hostil, among others. Compared with the other Brazilian biomes such as the Atlantic Forests or Amazonian Forest, known worldwide, the Caatinga was culturally and politically devalued.

However, it is an environment of great biodiversity and an exclusive brazilian ecosystem. Researchers have been revealing the richness and importance of the Caatinga. Besides, it presents various forms of human occupation, both rural and urban. In this way attention must be paid to the endless layers of the Caatinga's environment, as specific local contexts, ways of life and modes of occupation and production, rich and diversified landscapes, as well as the knowledge and development of alternative technologies that allow the permanence and inclusion of the populations on earth.

Currently, rural sector has been transformed by the continuous introduction of systems that integrate technologies and capital, geared to the external market, such as agribusiness. Thus, we could imagine, in a simplified way, that the imaginary about the region passes from barren desert to a region favorable to the financial and agribusiness market, as a symbol of earth's saviors and richness. We need to be aware of this, to create forms of resistance and to produce other imaginary, closer to the history and the inhabited space, and to understand other meanings of richness.

3 THE POLITICAL CONTEXT OF LAND IN BRAZIL

Data from Incra (National Institute of Colonization and Agrarian Reform), raised from the owners' self-declaration, point out that land concentration and unproductiveness increased in this early century in Brazil. Data from 2010 indicate that 130 thousand landowners concentrate 318 million hectares. More than 100 million hectares have passed, in less than a decade, to the control of landowners, who average more than 2,400 hectares. The data also shows that the register of unproductive areas grew more than the productive areas, which points to the expansion of areas that disregard the social function.

Many of these landowners speculate on the land, use political "protection", are outlaws and avoid compliance with the Constitution. This one determines that areas that do not fulfill their social function are destined for agrarian reform. The constitutional text of 1988 positived the inseparable union between property and its social function.

Art.186 The social function is fulfilled when rural property meets, simultaneously, according to criteria and degrees of exigency established by law, the following requirements:

I-rational and adequate use;
II-adequate use of available natural resources and preservation of the environment;
III-compliance with the provisions governing labor relations;
IV-exploitation that favors the well-being of owners and workers[1].

Rural property has an even more evident social function, given its importance as a mean of producing goods necessary for human survival and social prosperity. In this way, rural property will fulfill its social function by producing in a conscious and adequate way, aiming at protecting the environment and respecting existing relationships. The conception was born of the idea that, as part of a society, man must make efforts to contribute to the well-being of the community to the detriment of solely individual interests.

[1] http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm

Property is seen as an instrument to support the attainment of social ends, whose essence is its service to the community.

Thus, the concept of social function, like that of property, has undergone evolutions. At first, it was only considered the economic character of the property, that is, the economic productivity of it. The economic side remained, but other atributes were added to characterize the sociability of the function of the good.

It is important to distinguish the meanings of productive and unproductive in the context of the social function. It's usual to hear people talking about the Amazon Forest or the Caatinga, referring to them as "useless land", and claiming the necessity to transform it into "productive" land. Extensive areas are deforested for the purpose of planting soybeans and corn and raising cattle in the Amazon. These practices promote landscape transformations, not only in space, but also in the ways of its use and life of the population. The territory is redrawn by economic forces, which stimulate deforestation and the purchase of cheap and "useless" forest. Likewise in the context of the Caatinga.

The geographer Rogério Haesbaert points out that the hegemonic territorial paradigm "sees space as mere extension or surface to be transposed and substrate to be explored." Adopting an absolute vision, the company and the State homogenize and unify the space, making it equal and decontextualized. Land-territory is an "instrument of domination, a merely functional resource, within an economy based on the agro¬extractive-export model", and the Capital speculation. This would be the concept of productivity in the hegemonic context.

Haesbaert points us to another paradigm -the counter-hegemonic -in which what matters is the inhabited, lived, diversified space of social relations. Unlike the homogenizing view, it sees the space densified by the multiple social and cultural relations that make the bond society -land. Therefore, from this point of view, productive land is not opposed to "useless land" because its function is not to enslave workers, to serve individual interests and to promote the expulsion of people from the land, but rather to generate livelihoods, labor, occupation of land and social emancipation.

4 PROJECTIONS: 100 KM2 OF CAATINGA

While traveling through Bahia in 2012, the group Thislandyourland crossed an área with the Caatinga biome, in the highlands of the southwest region, where the agropolo of potato plantation is located in an area of 70 km by 140km. A flat expanse of land with sparse rectangular volumes of eucalyptus plantations, pipes for conducting water for irrigation and some sparse cows composed the plastic landscape. On the way, only one truck carrying potato sacks for processing. In the fields, no one, not even a village. Just the signs of what is needed for production: water, flat relief, road and truck for product disposal. These elements give us the information of the type of production that has been developing in the territory; they inform us a kind of new geography without the society living within it, or rather, eliminating the historical time of the inhabited space.

Faced with this imminent disappearance of a biome and a culture, the Caatinga, the Thislandyourland group initiated a project in 2016, Projections: 100 km2 of Caatinga. It is a work in process, which investigates diverse imagery related to the earth, starting from a fiction. It is suggested that an area of 10km x 10km of Caatinga is made available and donated for the development of projects. Several people or groups are invited to receive this fictional land donation, such as businessmen, representatives of the public power, third sector, class entities, politicians, activists, artists and researchers, and with them are made meetings and interviews, where they have the opportunity to idealize and expose their projects to this land extension.

What are the projections made by the most representative economic and political sectors of the country? Which perspectives point to the future? How do people think land is political?

5 SOME PROJECTIONS

Here are some excerpts transcribed from two interviews given by brazilian environmentalists Paulo Petersen[1] and Fabio Feldmann[2].

Thislandyourland: Paulo Petersen, you receive this land of 100km2 in the Caatinga region. What would you do? What is the nature of your project, production, preservation or both?

Paulo Petersen: Both. We have the great challenge of reconciling the two things: developing economically and conserving nature. This path of conciliation has been very difficult because politics normally see things very far apart. Policies for economic development are very environmentally degrading and preservation policies are very socially exclusionary because they end up penalizing exactly those who have retained a certain region. The perspective of preservation does not see the human being interacting with the ecosystem. A population, which for generations has been in an area and has commitment, knowledge of the biodiversity and the resources of a place, is penalized. Therefore, conciliation is necessary and possible.

Thislandyourland: How would you implement a project?

Paulo Petersen: The first thing to know is if there is a local population. Assuming they exist, there is already a way of occupation, and do not need settlements. Very often this population has a regime of collective use of the land. This type of community-based land use exists even in Bahia, where there are pasture communities. Indigenous, quilombola and peasant people have many difficulties. A series of conflicts exists exactly because the Brazilian state has difficulty in recognizing. Legally there is even a national policy of traditional peoples and communities that has a lot of difficulty in implementing it because the land issue is poorly resolved, although the Brazilian Constitution foresees this type of mechanism. Recognition by the state is still very limited.

For example there is a case also typical of babaçu coconut breakers. How do the women make the appropriation of land? They have an area that is of common exploit use of babaçu and the access comes from generations. Then they used to come in to remove the babaçu, but the owners of the land began to block the access of these women. It started to create conflict, but they are not invading the earth. These populations are then very vulnerable, but they exist in Brazil. So our land regime is very much hidden. Not legally, there is a forecast but it is not regulated. The Constitution of 1988 predicted this type of situation but because of the political game in the congress, dominated by a ruralist group, this was not regulated.

There are many situations of groups of populations who manage the territory in a common way. This is a very interesting way, but it is very little explored from the point of view of possibilities, including economic ones. Politicians and ruralist groups say that there is a pocket of poverty but it is not a pocket of poverty because they work in this system, but because they are abandoned. If they had schools, electrification, access to cultural goods, roads, etc., you would have another pattern without detracting from the nature of that kind of economy. The problem is not associated with the type of economy that leads to poverty. This is an interpretation that is always done: the peasant is poor and then he/she must be an entrepreneur. They are not poor because they are peasants, but because they are abandoned.

It then, at first, needs public and social policies, and investments in infrastructure, to create productive chains of resources of the biodiversity partner. To explore, in a sustainable way, the potential that biodiversity itself has in medicinal plants, in fruits and in agriculture, handicrafts, ecotourism. There is a set of possibilities of valuing the amenities of nature, of what it generates, and which at the same time heats up the economy, on the basis of it, conserving nature.

Thislandyourland: Fabio Feldmann, if you receive this land of 100km2 in the Caatinga region, what would you do?

[1] Petersen is the coordinator of AS-PTA, non-profit Civil Law Association for Family Agriculture and Agroecology, that since 1983 has been working to strengthen family farming and promote sustainable rural development in Brazil. AS-PTA participated in the constitution and works in various civil society networks aimed at promoting sustainable rural development.

[2] Feldmann was the articulator of the "parliamentary green front" and responsible for the creation of the chapter dedicated to the environment of the Federal Constitution. Elected federal deputy for three terms; candidate to the government of the state of São Paulo by the Green Party (PV) in the 2010 elections. Acts as a consultant on issues related to the environment and sustainability.

Fabio Feldmann: First, a campaign to try to put the Caatinga in the constitutional text, with the purpose of drawing attention, therefore, although this does not guarantee anything, would be an important step. The Brazilian Constitution of 1988 has an article dedicated especially to the environment, article 225 which considers, in its fourth paragraph, some biomes as national patrimony, such as the Atlantic Forest, Pantanal and Amazon Rainforest. What is the idea of equity? Something that has to be preserved. One of the important issues is to put the Caatinga in the constitutional text, even if this is not a guarantee of conservation. The 1988 Constitution will turn 28 years in October and the only biome that has its own legislation is the Atlantic Forest, because there was too much pressure from the society at that moment.

And second, perhaps a Caatinga legislation, to valorize these remnants of area, their species of plants, their history in the context of the country, the cultural issues of the Brazilian semi-arid.

I have the impression that there is a shortage of Conservation Units in the Caatinga. Every biome has a number of Conservation Units. For example, the Amazon may be the most valued area today. The

Atlantic Forest has some protected areas, but the Caatinga, as far as I know, would need to be certified as an important area in order to create parks and reserves for sustainable development. Also, find out what would be the best ways to protect these areas. And eventually even classify them as a Biosphere Reserve, which would have an international status.

Thislandyourland: Since you are talking about conservation, in the case of developing a project for the 100km2 Caatinga, would you propose something around preservation, production or both?

Fabio Feldmann: There are several categories of Conservation Unit: there are those of integral protection, which do not allow human presence. There are those that are too restrictive and those that are less restrictive. Then I thought of RDS (Sustainable Development Reserve), because eventually you have activities that happen in the Caatinga biome, which you could even admit to remain as economic activities.

If I were to do this, first I would consult the map of the Ministry of the Environment and check what are the most important areas in the Caatinga from a biodiversity point of view and see which conservation sites already exist.

Thislandyourland: Do you think it is interesting a system that puts together preservation and production? Would that be an interesting prospect for the country?

Fabio Feldmann: The choice of the category depends very much on the peculiarity. In São Paulo we have a case that is the Juréia Ecological Station. The coast of São Paulo is a mosaic (the concept of mosaic), and has an area that is relatively intact, which goes from the coast to the mountains. So, since this area is the only left over, we have opted for integral preservation. But there are other areas where it is perfectly possible to coexist with traditional populations, or even with economic activities that are within the concepts of sustainability, which could be ecotourism, agroecology -depending on what exists in the area.

Thislandyourland: What would you do with a land with the dimensions of 10km x 10km in the semi-arid already thinking about a future perspective?

Fábio Feldmann: I would propose to design a sustainable development project, since it is a large area. In Brazil we have always worked with a very large territorial scale, so sometimes we think 100km2 is not much, but it's really big. I would think about creating a sustainable development project where I would have all the elements of complexity, with some totally protected areas -assuming they are very important and have a rich biodiversity -and would think about economic activities that would generate jobs and income for the population that is there. If I were to win this land, I would try to make a project that could be a reference for Brazil and for the world of sustainable development.

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